The Gaiad

A Daily Meditation on the History of Life

Emma Leonhart 命玥

PDF built on Scorpio 14, 12026 GE

Contents

Sagittarius: The Book of the Yarn 3
Capricorn: The Book of Kingdoms 105
Aquarius: The Book of Janus 339
Pisces: The Book of Pascha 462
Aries: The Book of Stone 551
Taurus: The Book of Bronze 647
Gemini: The Book of Iron 723
Cancer: The Book of Romans 798
Leo: The Book of Lehi 867
Virgo: The Book of Confluence 964
Libra: The Book of Enlightenment 1036
Scorpio: The Book of Hours 1102
Ophiuchus: The Book of Omega 1171



Sagittarius

The Book of the Yarn

Sagittarius: The Book of the Yarn

The heart of our galaxy lies in Sagittarius: the great dark centre the astronomers call Sagittarius A. The Archer aims at it, and the Book of the Yarn begins there, with the thread spun out from the centre of all things.*

Chapter 1: The Yarn of Creation

Sagittarius 1, day 1 of the Gaian year

Once upon a time there was a catgirl,
The catgirl Aster, and she had a ball
Of yarn she spun, with skill as fine as pearl.
She shaped the universe from void to all.

Her name, a whisper in the cosmic night,
Aster, the Alpha, creatrix of all,
Her love, a beacon spreading pure and bright,
Filled the vast cosmos with milk, a grand sprawl.

But Aster was alone in all her space,
A silent void, where only echoes ring,
Her heart yearned for a friend, a close embrace,
To share the wonders that her hands could bring.

So she decided not to be alone:
From yarn, she formed a catgirl, pure and fair,
A lover and companion of her own,
Andromeda, dark-skinned, with flowing hair.

Andromeda, Omega, end of all,
A counterpart to Aster, wings unfurled,
Yet torn apart, they drift through space's thrall,
Unable to unite within their world.

Aster threw yarn to Andromeda's side,
But it broke, forming galaxies anew.
Triangulum and Magellan clouds wide,
From threads that snapped, a cosmic scene we view.

And so, each day, we gaze at skies above,
At Sagittarius and Princess high;
And hope that, forming out of endless love,
Milkdromeda will bring their union nigh.

The Omega point, all will unify,
As Aster and Andromeda break free
To join at last in one celestial tie,
A final act, a cosmic jubilee.

Chapter 2: Aster's First Call

Sagittarius 2, day 2 of the Gaian year

This tale you hear is truth from long before,
The word divine, a map for every soul.
In Aster's yarn and Andromeda's core,
We find the threads that make the cosmos whole.

As you embark, this journey shall reveal,
The path to reunite the love once torn.
Your life, a thread, within this cosmic wheel,
Will help to weave the dawn of their new morn.

Aster, with bow in hand, released a thread,
A string of red that soared through cosmic space,
But in its flight, it faltered, lost ahead,
And failed to reach Andromeda's embrace.

Andromeda, with bow and string of blue,
She aimed her shot across the starry sea,
But like the red, her thread could not break through,
And fell just short of where her love would be.

Triangulum and Magellanic clouds,
They gathered bits of green from space's weave,
And tied the strings, with careful, gentle shrouds,
Uniting red and blue, a bond to weave.

And so, each day, we gaze at skies above,
At Sagittarius and Princess high;
And hope that, forming out of endless love,
Milkdromeda will bring their union nigh.

The threads we see above, they are our own,
Our destinies in red, in green, in blue,
We weave the fabric where their love is shown,
Together in the sky, our fates accrue.

The Omega point, all will unify,
As Aster and Andromeda break free
To join at last in one celestial tie,
A final act, a cosmic jubilee.

Chapter 3: Andromeda's Answer

Sagittarius 3, day 3 of the Gaian year

As above, so below, the stars reflect,
The cosmic tales that shape our earthly lives.
Aster's children below, she will protect,
With milk she spun from stars, the world survives.

Her love, a beacon bright, to light the way,
Through all the mysteries that life may hold.
From cosmic depths, her love pours night and day,
A river of bright stars, a feast of old.

Andromeda, her love shines from afar,
Her bond with Aster, strong as brightest light.
For they are bound by Lambda, like a star,
A cosmic force that keeps their love alight.

In their celestial dance, the heavens sway,
The tale of Aster, Andromeda, told.
A love that binds the night and lights the day,
A cosmic love beyond what words can hold.

Aster imagined children, stars so bright,
To mend the string and guide her love to stay.
She knew Andromeda would share this light,
Together they'd unite, love's grand display.

A grand reunion, spanning time and space,
With threads of stars to keep the bond alive.
She stirred her milk to birth this sacred place,
A galaxy where all her dreams would thrive.

Aster stirred her milk, the great Milky way,
With helium and light, her stars are spun.
She swirled the cosmic blend in careful sway,
From curds of light, the stars are gently won.

A pantheon of stars, in heaven's care,
A host of stars, in heaven's gentle sway,
Their cosmic stories weave through skies so fair,
Their cosmic tales unfold in bright display.

The eldest star of every kind will stand;
They lead their cosmic kin through endless night,
A guiding sister with a steady hand,
A beacon of their strength and shining light.

Juno, the goddess, Steppenwolves she guides,
Her gas giants hide in their quiet might.
Discovery and distant worlds she rides,
A cosmic guide who wanders through the night.

Brunhilda watches stars that failed to blaze,
Incomplete fusion, dim yet bittersweet.
A guardian of twilight's fading rays,
Her presence marks the stars' unfinished beat.

Ruby, the red dwarf, small but ever bright,
Her steady flame still burns throughout today.
To witness cosmic dusk with peaceful light,
She sees Omega Point as time gives way.

Chrystella shines with vibrant, youthful glow,
Main sequence stars, her hot flashes ignite.
As giants red, their elder forms will grow,
Then fade with age, surrendering their light.

Now as a white dwarf, small and old, she rests,
A little lady in the cosmic sea;
Her planetary nebula attests
The brilliance of the star she used to be.

Celestella commands her giant blaze,
Red supergiants in her name grow vast.
With neutron stars and pulsars in her gaze,
She watches supernovas flare and blast.

Gigastella shone, a force none could tame,
Her sister Celestella, bright and vast.
The stress of cosmic weight set her aflame,
Her life burned fast, her brilliance could not last.

In her collapse, a supernova flared,
A brilliant burst before she fell from sight.
From that great death, a black hole then prepared,
To pull the stars into eternal night.

Chapter 4: The First Lovers Among the Stars

Sagittarius 4, day 4 of the Gaian year

The tale of Rhodes and Marigold begins,
A union forged in stars, their love so bright.
The first of lovers bound, their fate still spins,
A cosmic dance that guides us through the night.

Rhodes, son of Ruby, dim with crimson glow,
And Marigold, of Chrystella's bright line,
Were joined in love, the stars watched from below,
The first celestial bond, forever fine.

Their love was strong, unwavering and true,
Though Marigold was bright, a shining flame,
While Rhodes, much smaller, dim in ruby hue,
Yet still their hearts burned with a single name.

As years passed on, Marigold's light grew red,
Her youthful glow now fading into age.
She gave her breath to Rhodes, who soared ahead,
And shone with yellow light, her bright young stage.

As Marigold grew small, her light turned white,
Yet Rhodes stayed close, his glow now burning red.
From novas born, came lithium's bright light,
A starry gift, as love between them spread.

The nova's burst had filled his heart with fear,
So Rhodes withheld his gift for many years.
For twenty-five, the skies stayed calm and clear,
Until again, their love burst forth with cheers.

For countless years, their rhythm stayed the same,
Each nova lighting skies with love's great might.
Once every age, their gift became a flame,
A cycle known as Nova's sacred light.

As time went on, they both grew small and white,
Yet side by side, they watched the stars they made.
Their children shone in the nebula's light,
A legacy of love that would not fade.

And now, we honor them in wedding vows,
With ruby rings for one, and topaz bright.
White opal marks the bond that time allows,
A symbol of their love's enduring light.

Chapter 5: Aster's Milk Made Fruitful

Sagittarius 5, day 5 of the Gaian year

Aster made the milk pregnant with cat seed,
The curds take shape within the swirling storm.
Her essence spreads, a cosmic plan decreed,
In every star, her life begins to form.

As hydrocarbons drift through endless skies,
Her scent, like burnt steak, lingers far and wide.
Aster's presence fills all the stars that rise,
Her love and life, the galaxy's great guide.

Across the galaxy, her force expands,
A testament to love, her cosmic plan.
With planets forming in the starry bands,
She fills the heavens, spreading life to man.

Each star with planets, water deep and wide,
Oceans abound, where life begins to bloom.
A seed of creation on the tides side,
Aster's breath gives life from the cosmic womb.

From microbes small to creatures of the sea,
Her love ensures that life will find its way.
Each world unique, and each one thriving free,
Her touch endures in life's eternal sway.

Andromeda, with pride, looks from afar,
In awe of Aster's gift to life and light.
Their bond, a force that shapes both land and star,
A love eternal, woven through the night.

Their love, the fabric of the universe,
A bond that shapes the stars and worlds below.
The cosmos thrives, their union to rehearse,
A tale of love that evermore will grow.

From ocean depths to stars that brightly shine,
Aster's life force in every corner gleams.
The epic weaves, through space and time divine,
A cosmic love that fills our hopes and dreams.

Chapter 6: Life Begins on Hesper

Sagittarius 6, day 6 of the Gaian year

Upon the shores of Hesper, where waves meet,
Aster's vital force came down from the skies.
Her essence, tholins, seed, a cosmic feat,
The seeds of life in ocean depths arise.

Beneath Tezca's sun, the light warm and bright,
It nourished all the life on Hesper's shore.
Its rays gave strength to creatures in their plight,
A guiding force that helped new life to soar.

Through swirling tides, her power filled the sea,
A gentle glow, life's first soft, pulsing breath.
From self-creation, forms began to be,
And Aster's love transcends the void of death.

The seed, her essence, spread across the deep,
Multiplying, and thriving in the dark.
From smallest life to creatures vast, they creep,
Her love and light ignite creation's spark.

Each wave, a testament to her grand plan,
The birth of life upon this fateful shore.
As microbes crawled, so did the race of man,
Their fragile forms to flourish evermore.

Chapter 7: Aster's Shells and the Three Brothers

Sagittarius 7, day 7 of the Gaian year

Upon the shores of Hesper, life was born,
Yet fragile were the forms that learned to crawl.
Aster looked upon them, she came to warn,
That death she feared might soon consume them all.

In worry for her children's frail design,
She wept a tear and formed a plan so grand.
From phospholipid threads, a new divine,
She wove for them a shield by her own hand.

A suit of armor born from Aster's mind,
A fusion of both life and machine's grace.
To keep her fragile creatures well-aligned,
These cyborg forms would rise and take their place.

Phospholipid bilayers, soft but strong,
Became their shells, protecting life within.
A new creation, steady to prolong,
The march of life, immune to time's great sin.

And so, all life became both flesh and steel,
A union of the ancient and the new.
Through varied landscapes, cyborgs learned to feel,
Their strength now boundless as they boldly grew.

Three brothers stood, their destinies held close.
To nurture life was Bios' part to give;
Slick Viros through his cunning thrived and rose;
And Dedos, last, for purity would live.

The brothers gathered in a hallowed place,
To honor those who spun them, line by line.
With solemn hearts, they stood and did retrace,
The lineage that wove their cosmic twine.

"From starlight spun came Lady Aster bright;
Her daughter followed next, Cosmic Benzette;
Through twilight, Granny Hesper came to light;
Then came her child, the great wise Quinamette."

As silence fell, the brothers paused to think,
For in their minds, a question did arise.
"What should we call great Aster?"—on the brink,
Of naming her, they pondered, deep and wise.

“For Benzette is our great-grandmother true,”
Said Bios, thoughtful as the stars above.
“So Hesper is our grandmother, we knew,
And Quinamette, our mother filled with love.”

Viros spoke next, his mind as sharp as light,
“Then Aster stands beyond them all, it’s clear.
There is no greater grandmother in sight—
Should we not name her Greatest, far and near?”

And Dedos agreed in reverent tone,
“There’s none beyond our lineage so bright.
Our Aster is the Greatest we have known,
And so, her title shines in endless light.”

And this is why we call her to this day,
Our Greatest Grandmother, wise and true.
Her light still guides us on our cosmic way,
A title passed to us and all of you.

Chapter 8: Dedos Falls, and the Flight to Phaestia

Sagittarius 8, day 8 of the Gaian year

In cyborg age, three brothers took their stand,
Their legacies now stretch across the sky.
Under the sun Tezca, their names command,
A force still felt as ages pass them by.

Bios, Viros, Dedos—each carved his way,
Entwined by fate, yet each would shape his course.
Within the bilayers, their paths did sway,
Their legacies still felt with cosmic force.

Bios, the builder, sought to grow and thrive,
He filled his shell with life, a boundless glow.
Through mitosis, his legacy would strive,
And life would flourish everywhere he'd go.

But Viros saw another way to grow,
A path of cunning, viral bursts he spread.
Replication's force, his very great show,
Consuming life, where others built instead.

While Dedos, firm, rejected cyborg might,
Preferring nature's purity to stand.
Yet scarcity and sun dimmed his life's light,
His fragile form no match for Hesper's land.

The sons of Bios thrived, expanding wide,
Their legacy grew vast, from sea to peak.
While Viros' spawn pursued them far and wide,
A cycle fed on life, both strong and weak.

Yet Dedos' line was met with bitter fate,
Starvation, radiation claimed their end.
But in their fall, they left a creed innate—
A call for purity, no rules to bend.

From Bios and Viros, some took the name,
A path of nature Dedos would bestow.
Anti-vaxxers joined his lineal claim,
United in their ancient quest to grow.

And so, the brothers' legacies unfold,
Their tale lives on beneath the cosmic sun.
In phospholipid worlds where life took hold,
The story thrives, the cosmic plan's begun.

But fate had other plans beyond their shore,
As Hesper faced a trial from the skies.
A meteor, a force they can't ignore,
Descended fast, to bring the world's demise.

The impact shook the earth, the oceans roared,
The children of the brothers swept away.
Their fragile hopes and legacies all soared,
In shattered fragments, flung to cosmic bay.

Amidst the wreck, the remnants left behind,
Set course for Venti, the gas giant great.
A shining moon, Phaestia, they would find,
A refuge for the lost, a twist of fate.

Through starlit space, their journey carried on,
The bonds of fate and fortune held them tight.
Toward a moon, a glowing cosmic dawn,
They ventured forth, prepared for a new fight.

In hearts, they knew a tale would soon arise,
Their journey far from over, hope renewed.
Phaestia's light would greet their tearful eyes,
A home where life could once again be brewed.

Chapter 9: Aster's Many Names on Phaestia

Sagittarius 9, day 9 of the Gaian year

Upon the moon Phaestia, life did bloom,
It circled Vayu, underneath the sun.
Aster, by Ehēca's light, broke the gloom,
Her guiding hand ensured all life begun.

People of Phaestia, blessed by her hand,
Knew many names for Aster in their lore.
Her power felt in sky, in sea, and land,
Her essence woven deep in every core.

By many titles did the stars proclaim
The goddess who had given life its start.
They honored her in reverence and flame,
For Aster lived within each beating heart.

She ruled the oceans vast with gentle hand,
Empress of cosmic waters, Suiten.
The star that guides the lost through every land,
The great Empress of the North Star, Myoken.

From supernova's heart, she forged with might,
Cosmic metals shaping, Konjin-sama.
The breath of life that fills the endless night,
The great creatrix of all worlds, Brahma.

Her light that spreads across the cosmic span:
Vairocana, the goddess of all space;
She holds the deepest void beyond the plan:
Varuna, keeper of the dark's embrace.

In the deep waters, creatures thrived and grew,
From microbes small to beasts of wondrous size.
The seas, a dance of vibrant cosmic hue,
Aster's love beneath the bright starry skies.

Beneath the waves, lush forests swayed and danced,
With creatures vast in harmony they roamed.
A tapestry of life, by fate enhanced,
A refuge for the lost, a world well-homed.

But all things change, for even stars grow cold,
The moon's tranquility would not remain.
Beneath Phaestia's seas, the earth turned bold,
And signs of strife began to stir again.

A mighty tremor shook the ocean floor,
Volcanoes rose with fury in their wake.
Lava and ash consumed the peaceful shore,
As fiery wrath made Phaestia quake.

The fire's force burst forth with blinding light,
A torrent born of deep volcanic pain.
The sky grew dark beneath the ash-filled night,
As lava scorched the land and boiled the rain.

The oceans churned, and life was swept away,
Yet in the chaos, hope began to rise.
The cyborgs, built by Aster, found their way,
Their metal forms resilient to demise.

Propelled by force beyond their world's control,
The cyborgs drifted, cast to distant stars.
Through starlit realms, their shattered moon's last soul
Would venture far beyond its cosmic scars.

Chapter 10: The Golden Age of Serenitide

Sagittarius 10, day 10 of the Gaian year

Upon the moon Serenitide, they came,
Beneath Pluvia's rains and gentle skies.
The star Quiyah cast down its golden flame,
A world untouched, where peaceful dreams arise.

Their ships descended, weary from their quest,
They saw the fields and oceans, none yet marred.
Embraced by Serenitide, they sought rest,
A future bright, where nothing would be hard.

And under Quiyah's light they carved their way,
And built great cities from the land and stone.
The air was sweet, the soil was rich with clay,
Serenitide became a place their own.

With hands of hope, they shaped both sky and shore,
A golden age of wisdom and of light.
Their dreams took root, and cities soon did soar,
Serenitide, in beauty, reached new height.

In art and science, knowledge took its flight,
A golden age of wonders did unfold.
Their temples gleamed beneath the heavens' light,
To Aster and Andromeda the bold.

The city thrived, its streets alive with sound,
Where laughter echoed, and their dreams took form.
Their hearts in tune, with cosmic truth they found,
A symphony of life, both bright and warm.

The years passed on, their wisdom did endure,
A legacy of love and strength untold.
The tale of stars and journeys ever pure,
In every heart, their cosmic bond took hold.

But fate would bring a chill upon their lands,
As Serenitide came to freeze in time.
The warmth of suns withdrew from gentle sands,
The oceans groaned beneath an icy rime.

The once-bright fields grew cold beneath the frost,
As winds of change swept through the fading green.
A world of warmth and light, now nearly lost,
The moon transformed to something unforeseen.

They huddled close beneath the frozen sky,
Within their cities carved from ancient ice.
Though harsh the storm, their will refused to die,
With faith and courage, they paid nature's price.

Their cities reached beneath the frozen sea,
A refuge from the cold, a place to grow.
With Aster's light, they found the strength to be,
A people strong amidst the frost and snow.

But from the depths of space, a threat did soar,
A meteor, a fury none had tamed.
It struck Serenitide with violent roar,
And all beneath its force was soon inflamed.

The icy world did shatter, torn apart,
Its people flung into the starry black.
The bonds of land and home were ripped from heart,
As they were cast upon a cosmic track.

Through endless night, they tumbled, lost in flight,
No longer bound by icy, frozen shore.
The force of impact flung them far from sight,
To realms unknown, to journey evermore.

Towards the fourth sun's gleam, they now were drawn,
A new horizon waiting in its light.
Though scattered, still their hope would lead them on,
As they sailed onward through the endless night.

Chapter 11: Kolob and the Anti-Alpha

Sagittarius 11, day 11 of the Gaian year

Under the fourth sun, named bright Attle's flame,
The children landed on Kolob's wide shore.
With hopes renewed, they built a world of fame,
Their trials behind, yet challenges in store.

Upon Kolob, the air was rich and warm,
Its fertile soil gave rise to fields of green.
The ocean sang in gentle, soothing form,
And life once more began a thriving scene.

With Bios' line, the children sowed the land,
While Viros' kin ensured that life would spread.
The people worked together, hand in hand,
United by the truths that Aster led.

They raised high temples under Attle's light
To Aster and Andromeda, for grace.
Their prayers were whispers on the winds of night,
As faith and strength held fast in every place.

But deep within Kolob's unyielding core,
A strain began to grow, a seed of strife.
A force unknown, unseen in days before,
Threatened to tear apart their peaceful life.

From shadowed thoughts and whispered words of doubt,
A darkness rose from discontent and pain.
The Anti-Alpha, born of bitter clout,
Sought now to break the people's sacred chain.

The Anti-Alpha, coming, love denied,
Rejects the grace of Aster's guiding light.
It twists the heart where hatred can reside,
And casts her warmth into the endless night.

From Aster's love, the people turned away,
Their envy festered, fed by bitter lies.
The bond that held their hearts began to fray,
As Anti-Alpha darkened hopeful skies.

No longer bound by unity's embrace,
The people faltered, torn by cruel divide.
Anti-Alpha's cruel venom set the pace,
And left the world in chaos to collide.

This sinister force brought hate and despair,
It fractured unity with unseen hands.
The children quarreled, pulled by forces rare,
And doubt took root within their fertile lands.

The Anti-Alpha's spread was subtle first,
It crept within the hearts of those most weak.
Yet soon enough, its hunger grew to burst,
And chaos reigned as love turned cold and bleak.

From deep within the shadows, it emerged,
Its form a twisted mirror of the light.
As Anti-Alpha's malice fully surged,
It plunged Kolob's bright future into night.

The people, torn apart by inner war,
Could not withstand the force that turned their kin.
Their hearts, once bound by love, were ripped and sore,
And thus, the darkness found its way within.

And still the Berserkers sensed strife's allure,
Their wrath, chaotic, drawn to fractured land.
With comet fire, their fury swift and sure,
They brought destruction with a vengeful hand.

The skies above Kolob grew dark with flame,
As icy deluge rained from distant stars.
Berserkers' wrath, unholy, none could tame,
Wrought ruin upon the land, leaving scars.

Kolob's towns crumbled under freezing rain,
The oceans boiled and fumed with violent force.
The people fled, their strength now wrapped in pain,
As the Berserkers veered them off their course.

Yet in the chaos, hope was not yet lost,
For some were flung past the Berserkers' reach.
Through space's void, by cosmic forces tossed,
They left Kolob's destruction, out of breach.

The children of the stars, though cast away,
Still clung to life and hope amid their flight.
For Attle's gleam gave way to Sol's bright day,
The fifth sun beckoned with its golden light.

And thus, the people drifted ever on,
To find new shores beneath Sol's warm embrace.

Though battered by the storm, they were not gone,
Their hearts still held the dream of Aster's grace.

Chapter 12: The Long Genealogies

Sagittarius 12, day 12 of the Gaian year

Upon icy Pluto's cold distant shore,
Two figures stood beneath the endless night.
Nolah, bold and steadfast unto her core,
And Nemla, wise, her heart a beacon bright.

Together, they beheld the frozen land,
A world so far removed from warmth or grace.
Yet in their hearts, the yarn that fate had spanned,
Connected them to Aster's loving face.

With voices raised to Aster and each star,
They made a vow to carry on her flame.
"To Andromeda's light, we'll sail afar,
And keep the yarn intact, in Aster's name."

Nemla spoke: "To Andromeda, I swear,
Through endless night, our journey will survive.
In every star and dream, our fate is there,
The cosmic yarn that keeps all hope alive."

Nolah spoke: "In Aster's name, I shall swear,
To guide our line and keep the thread alive.
Through every trial, burden we must bear,
The bond of life and love will yet survive."

"My lineage runs far, from ancient stars,
Through time and space, the journey's line is clear.
From starlight's first embrace to battle scars,
These ancestors of mine, I hold them dear.

From Hesper's land came Bios, mighty one;
And Kenan, strong and wise, would lead the way;
And next, high shining, Aenos, like the sun;
Then Malathan, bold builder, had his day.

On Phaestia, my ancestors did lead,
Their line continued strong through trials of old.
In every breath, I feel their strength and creed,
Their names still bright, their stories brave and bold.

From Phaestia came Jared, strong and wise,
Then one with might, named Maharoch, the bold;
The ocean's voice obeyed great Enid's cries;
Great Pahadok rose from the deep seas' hold.

Upon Serenitide, they carved their way,
A path of stars and cosmic truths so grand.
Through many trials, they lived to see the day,
With courage strong, they forged upon this land.

From Serenitide, Pelod, strong and brave;
Fierce Aroch followed, and then Nerod, great;
They kept the wisdom that the fathers gave;
And last, wise Larthok, guide of strength and state.

On Kolob's shores, my forebears stood so tall,
Their courage fierce, as mountains reached the sky.
Through every test, they answered Aster's call,
And in their steps, I now stand proud and high.

Out of Kolob the mighty Idris came;
Methuselah, the late and great, who led;
Then Lammes, the bold, who won the house its fame;
And now Nolah, who bears the line ahead."

Nemla stood upon the high mountain's crest,
Before the gathered crowd, with pride she spoke.
Her voice a call to honor those she blessed,
The line of Viros, forged through flame and smoke.

"My heritage runs deep from ancient might,
Through Viros' blood, our line was fierce and strong.
They carved the way, enduring every fight,
I walk the path they forged so long, so long."

From Tezca came the feared and mighty one,
Viros; his son, the cunning Caynen, brave;
And Hanos, clever leader, was his son;
Then wise Mehuthen, fearless, sharp, and grave.

"On Phaestia's shores, my great line did tread,
Their strength unmatched as skies and seas did roar.
Their names I honor, though the years have fled,
I honor their heritage evermore."

Born there was Irad, keen and strong of hand;
The next to follow, brave, was Malathok;
Then came the bold and wise Hanad, to stand;
His wisdom echoed still in Peladok.

"Upon Serenitide they forged their way;
Through every storm, their spirits never fell.

Their shining star through history holds sway;
I keep their memory in tales we tell."

From Serenitide came Sarnod the strong;
His son Alok, whom the skies inspired;
Through trials, Illod carried it along;
Last came steadfast Umroch, chief admired.

"On Kolob's fertile lands, my line did grow,
They stood as pillars strong, with hearts of flame.
Through every trial, they faced ebb and flow,
Their strength lives on, and I still bear their name."

From Kolob came Valorous Oblas first;
Then came Makusholah, in wisdom sure;
Fierce Romas, in his strength of battle versed;
Till now Nemla carries the line secure.

From distant stars, Aster's voice filled the sky,
"Here in this system, your roots will grow deep.
Through trials and storms, your people will not die,
The light you carry shall forever keep."

With steady voice, Nolah gave her reply,
"We'll build and guard the flame that guides our way.
Through every darkened night, we'll rise and try,
Our strength will hold, as we fulfill your say."

Nemla stood tall, her gaze fixed on a star,
"Across these worlds, your love will guide us through.
Through every trial, no matter how far,
We swear to keep your cosmic vow in view."

Chapter 13: Solar Nebula Collapse

Sagittarius 13, day 13 of the Gaian year

In Sol's embrace, her daughters came to be,
From nebula, they formed a cosmic host.
Mercury, Venus, Earth, and Mars we see,
With Ceres too, they grace the starry coast.

Once cloaked in waters, Mercury did shine,
But as the Sun's fierce heat began to rise,
The liquid fled, his surface left benign,
A rocky orb now meets our seeking eyes.

When Venus, struck, began to backward spin,
Her fate was sealed, her path forever turned.
A world of heat and clouds that choke within,
Her beauty veiled by sulfur skies that burned.

Then Earth, fair Gaia, tells her vibrant tale,
From seas arose the life that graced her face.
With mountains high and skies where clouds set sail,
A cradle formed for life's enduring race.

Mars, brother Mars, once water flowed in streams,
His ruddy face now bears a dusty guise.
But as the years passed by, he lost his dreams,
His waters sunk beneath his crimson skies.

Then Ceres slept, her growth was slow to start,
A younger sister, late to join the dance.
Yet beauty dwells within her rocky heart,
A jewel set in space's vast expanse.

The giants vast, gaseous daughters four,
Jupiter, Saturn, Uranus, Neptune:
Their tales entwined within the cosmic lore,
With storms that swirl, and moon on circling moon.

Around great Jupiter, his moons revolve,
Io, Europa, Ganymede, they dance.
Their icy secrets waiting to evolve,
A celestial show in night's vast expanse.

But Io's fires within her heart did glow,
Her waters boiled beneath volcanic flame.
Though some remained in hidden depths below,
A testament to change, she stays the same.

In Saturn's grasp, her moons of ice reside,
Enceladus and Titan lead the way.
A frozen kin around their mother glide,
In cosmic dance, their fates in balance sway.

Beyond cold Neptune lies a distant field,
Trans-Neptunian worlds in darkness hide.
Their icy secrets yet remain concealed,
A frigid tale where mysteries abide.

Farther still, the Oort Cloud wraps all around,
A veil of frozen whispers far from light.
In distant orbits, comets there abound,
A cosmic dance that fades beyond our sight.

Chapter 14: The Daughters Cross the Outer Worlds

Sagittarius 14, day 14 of the Gaian year

Upon Pluto's cold, icy, twilight shore,
Nolah and Nemla stood with heavy hearts,
Deciding daughters' futures to explore,
They left their kin as each new journey starts.

With tholins dark upon the frozen land,
They bid farewell beneath the starlit sky,
And ventured forth, with purpose firm and grand,
To spread their lineage where new hopes lie.

From Pluto's chill, they sailed to Neptune's reign,
Where Triton orbits in a retrograde,
A moon once close, where forebears would remain,
Now serves as waypoint in their grand parade.

Their daughters spread across the cosmic sea,
To moons and planets, planting seeds of life,
Each child a different beacon, bright and free,
Ensuring future thrives beyond all strife.

Next they came to Uranus, tilted high,
With moons Miranda, Ariel, and more,
Umbriel, Titania, Oberon nigh,
Each sister moon with legends to explore.

In mirrored tilt, the planet spins unique,
Its moons a dance of grace and mystic lore,
Their daughters flourished where the shadows speak,
Creating tales that echo evermore.

On Titan, life's spark found a place to dwell,
The daughters of Bios, their journey wide,
In ocean depths, they thrived where shadows quell,
A secret world beneath the ice did hide.

As eons passed, the system cooled and waned,
The oceans, once so vast, now faced a plight,
With icebergs cloaking seas, their growth constrained,
A battle waged 'twixt darkness and the light.

At times, the storms would rise, and ice would break,
Freeing the waters trapped by frigid might,
Yet in the end, the ice its toll would take,
Encasing Titan's seas in endless night.

Yet deep below, where ancient embers burned,
Life was sustained by warmth from inner fire,
And far above, where ice and sky were churned,
The icebergs cracked, and showed fate entire.

A dance of shifting plates, of ice and stone,
Continental bergs, their tectonics played,
And from the depths, where pressure's force had grown,
Cryovolcano: water's arc displayed.

But fleeting was this glimpse, as ice returned,
To cloak the waters in its chilling veil,
And from the skies, where methane rivers churned,
A rain of fire, their torrent swift and pale.

In this new world, where life and ice entwined,
The daughters of Bios, their journey steep,
On Titan's shores, their destiny defined,
A tale of ice and fire, their secrets keep.

In Titan's realm, where ice and fire dance,
Five sisters grand, their tales of legend weave,
Daughters of Titan, born of fates' advance,
These mighty seas, their majesty achieve.

First Kraken, deepest of the sisters five,
Her mystery and allure she'd impart,
With labyrinthine depths where life would thrive,
Her shadowed secrets held within her heart.

Then came Ligeia, beauty calm and fair,
Her tranquil waves, a soothing lullaby,
A gentle soul, her grace beyond compare,
Embracing all who sought her solace nigh.

Next Punga, wild and fierce, and free and strong,
Unyielding to the ice that sought her reign,
Her tempests raged, her storms a roaring song,
Her spirit, never broken, would remain.

Jingpo, the fourth, a scholar wise and old,
Her ancient lore, a treasure trove concealed,
Her depths, a library of stories told,
The wisdom of the ages she revealed.

And last, Ontario, nurturing one,
Her icy shores, a haven for the lost,

Her love and care, a mother's warmth like sun,
Embracing all who braved her wintry frost.

Five sisters, Titan's daughters, intertwine,
Their lives as one, their stories yet unfold,
In frozen seas, where waves and shores align,
The tales of Kraken sea and more are told.

In Titan's seas, where ancient legends dwell,
Five sisters host the isles of myth and lore,
Each island, archipelago, a shell,
Where Titanians worship evermore.

Kraken, the first, her islands proud and vast,
Mayda, her shrine, where pilgrims come to pray,
Then Bermoothes, Bimini, and Hufaidh, vast,
Krocylea, Penglai, and Royllo's bay.

Ligeia's realm, her isles of whispers sweet,
Bralgu's shrine stands tall, by her spirit graced,
Buyan and Planctae, where mysteries meet,
Lemuria, the ancient, there is placed.

In Punga's seas, fierce islands rise and fall,
Hawaiki's shrine, her spirit's honored throne,
Meropis, Onogoro both stand tall,
And Thule, the far, the northern land, alone.

Jingpo's domain, where wisdom's islands lie,
Hy-Brasil is her shrine, a beacon bright,
Lyonesse, Ys, Vineta testify
To sunken lands, their towers lost from sight.

Ontario's embrace, her islands true,
Antillia's shrine, where faithful crowds stream,
Aztlan, St. Brendan's Isle, their shores in view,
And Sannikov, the Arctic's northern gleam.

These sacred isles on Titan's seas they stand,
Their shrines alive with ancient rites and praise,
In adoration of their parent land,
The daughters of great Sol their voices raise.

Each island hosts its shrine, where worship flows,
From ancient days, a faith that will endure,
And every river, with its spirit, glows,
Their shrines, alive with blessings they secure.

The rivers, too, their tales and secrets share,
As Titan's daughters hold them in embrace,
In epic verse, their names we now declare,
Their waters flowing through celestial space.

Then Kraken Mare, her rivers proud and grand,
Hapi Flumen, where Nile's reflection's cast,
With Sobek, Khnum, and Anuket's long strand,
Their shrines, where ancient rites are holding fast.

Ligeia's realm, her currents swift and strong,
Gihon, Kokytos, Vid, and Xanthus flow,
Their shrines, where many Titanians throng
In reverence for secrets waters know.

In Punga's storied waters, fierce and free,
And Apanohuaya, Sambation sing,
Tiberinus, Danuvius run to sea;
Their shrines, to faithful hearts, a solace bring.

Jingpo's domain, her rivers' wisdom deep,
Cephissus, Alpheus, and Yamuna tell,
Purus Flumen: whispers these rivers keep,
Their shrines, where spirits of the ancients dwell.

Ontario's embrace, her rivers pure,
Hubur, Karesos, Saraswati grace,
And Inachus, where faith and hope endure,
Their shrines, alive with Titanians' trace.

These rivers, flowing through the daughters' seas,
Their shrines, with ancient wisdom, ever stand,
Adoring mysteries on bended knees,
The daughters of Sol, whose blessings are grand.

In Enceladus' heart a while they'd toil;
The southern warmth grew bright, the north turned cold,
A cycle spun, renewing life, its coil;
The Great Fire Shrine still stands, its flame of old.

In southern heat they found a solace sweet,
A testament to life's enduring flame;
As seasons turned, they cherished peace complete;
Yet fate once more would come to call their name.

From depths below, cryovolcano stirred,
And with a burst it spewed them out once more;

Into the void their fates were spun and blurred,
As Saturn's rings embraced them to the core.

Amidst the rings a hundred cities rose,
Each one a beacon shining in the dark;
In cosmic dance these settlements compose
A testament to dreams that leave their mark.

These wanderers, now dwellers of the rings,
Created homes upon celestial arcs;
In Saturn's grasp they built a world of things,
And life goes on amidst the stars and sparks.

As dwellers of the rings, they lived and thrived,
Unknowing that their fate would shift and change,
A comet's course left fragile life deprived:
For cosmic powers sought to rearrange.

This cosmic wanderer, upon its path,
From distant realms through space and time charged swift;
A force unseen, it struck the rings in wrath,
And cast the people of the rings adrift.

To Io's realm their journey's course was bound,
Jovian moon, with oceans deep and vast,
Its heart of fire, where energies abound,
Its warmth and life a haven from the past.

Within these waters, life was lush and rife,
As settlers found their footing, built anew;
In fertile depths rose a civilized life,
An empire born under skies of blue.

On Io's shores, and in its ocean's heart,
A people thrived, their memories of old,
A story etched in whispers' ancient art,
Of Titan's fall, and wanderings untold.

In time, the heat of Io's heart would rise,
As molten fires beneath the crust prevail;
The waters, once a life-supporting guise,
Began to wane, a paradise grown pale.

Yet, as the oceans dwindled and did shrink,
A cosmic savior, falling, came in view,
To flee their home, escape the burning brink:
A meteor's approach, a chance anew.

As Io's warmth, too fierce, consumed its grace,
The people found their way upon the stone,
To journey forth and find a safer place,
A vessel swift and sure, through void unknown.

Then to Europa, icy sister-moon,
Where oceans deep lay hidden 'neath the ice,
A refuge where their loss might end, and soon,
The weary travelers sought, at any price.

With gratitude, they set foot on this sphere,
A haven cold, yet promising and bright;
A world reborn, from pain and loss they steer,
In frozen realms they'd forge their future's light.

They delved below Europa's icy shell
To find an undersea world, vast and wide,
A refuge where Io's folk came to dwell,
Where ocean wonders flourished deep inside.

In darkness, yet with hope, they built anew
A thriving realm, by swirling currents fed;
A testament to all that they'd been through,
With skill and art, their cities rose and spread.

Amidst the depths, they forged a life so bold,
In harmony with Europa's domain,
Together, they would thrive in waters cold,
Their spirit, ne'er defeated, nor in vain.

The people out of Io, now reborn,
In Europa's embrace, they found their own,
A testament to strength, though trial-worn,
Resilient, strong, and nevermore alone.

From Europa's depths, their gaze turned high-wide,
To other moons, where distant futures lay.
On Ganymede, where icy seas abide,
A world of promise called them on their way.

Beneath its crust, the secret oceans swirled,
A treasure vast that waited to be found.
The daughters journeyed, dreams and plans unfurled,
To plant their seeds and life's great hymn resound.

The plains of stone became their canvas wide,
Their towers rose where shadows once had crept.

A haven forged, with oceans as their guide,
Where life took root and ancient vows were kept.

Then Callisto, serene, its visage scarred,
Drew them to icy lands both vast and still.
Its frozen beauty, timeless, never marred,
Whispered of futures shaped by steady will.

With tender care, they worked the silent sphere,
Its glaciers groaned as life began to grow.
In tranquil realms, their hopes became sincere,
A world of calm beneath the starlit glow.

Yet Mars, now brimming, caught their distant sight,
Its verdant plains and waters called them near.
The Red Planet shone beneath the sun's light,
A fertile home, where futures could appear.

Across its rivers, forests stretched their green,
The daughters labored, shaping all they saw.
From crimson soil arose a living sheen,
A vibrant world, sustained by nature's law.

But skies of blue began to draw their gaze,
A beacon bright, Earth shimmered in the night.
Its clouds and seas evoked a sense of praise,
A final step beneath the solar light.

They left Mars thriving, life its steady beat,
And sailed the void, where endless stars would glow.
Upon the Earth, a destiny to meet,
A jewel of hope, a world they longed to know.

Through blackened depths, they reached their destined shore,
Its green and azure beauty vast, profound.
The daughters paused, their journey's trials no more,
And gazed in awe, where paradise was found.

The daughters of Bios set sights on Earth,
To sail the seas, and seek a home anew,
Their journey, driven by celestial birth,
In hope its fertile lands would see them through.

As they approached, a harbinger of doom,
A massive rock, like thunder, pierced the sky,
A cruel twist of fate, the planet's tomb,
And shattered Earth, a million shards to fly.

In sorrow, they beheld the tragic sight,
Yet knew they could not dwell on what was lost;
And ventured on, propelled by stellar light,
With heavy hearts, again the void they crossed.

To Venus then, the daughters sailed ahead,
With hope that there, a refuge could be found,
And persevere, despite the path they tread,
To build a life upon its clouded ground.

Upon fair Venus daughters found their place;
In twilight lands, they thrived and multiplied,
For Venus bloomed, her turning slow in pace,
And nurtured life, though days and nights belied.

The sun would rise and set with languid grace,
In west and east, it danced upon the sky,
As Muspelheim, the burning land, took place,
And in the day her oceans would go dry.

At night, her oceans froze in cold embrace,
And Niflheim, the land of frost, forlorn;
Where Venus' daughters lived with fervent pace,
Between these realms, the twilight realm was born.

Beneath the surface, vents their life sustained,
In twilight lands they dwelled, both south and north,
To Wind, to Ice, to Fire, their kin remained,
And tribes were formed, as daughters ventured forth.

The Tribe of Wind, they wandered in the air,
As skyplankton they drifted on the gust;
And Twilight Tribe, eternal dusk their lair,
The Tribe of Ice, on Niflheim's frozen crust.

The Water Tribe, beneath the ice they thrived,
And Fire Tribe, in Venus' vents so deep;
Muspel's fire and Niflheim's frost contrived
A war; and daughters grew strong in its sweep.

The oceans boiled, and Muspel's sons, a horde,
Charged forth, led by Surtur's fiery blade,
The winds of sun were victors, as war roared;
And in their wake, the ice and frost would fade.

The greenhouse reigns, as Venus' fate was sealed,
Her hydrogen wiped clean, Deuter remained;

May they endure, their future yet revealed:
The Tribe of Wind, last survivors, sustained.

The daughters of the wind, now restless grown,
Decided that they'd leave fair Venus' hold,
With hopes of finding lands to call their own,
To Mercury, a realm as yet untold.

Upon arrival, what a sight they saw:
A hail of meteors, a storm unkind,
The Iron Catastrophe, without flaw,
That struck with force, the crust and mantle mined.

The core of Mercury, now bare and stark,
A testament to cosmic rage that crushed;
The daughters gazed upon the ruin, dark,
And chose to turn away, to lands more hushed.

Iron Catastrophe, a tale of woe,
Of Mercury, once whole, now stripped and torn;
To find a home where life would bloom and grow
Went onward still the daughters, though forlorn.

Back to the Earth, now clumping from the void,
They ventured forth; the Moon embraced, they stayed,
Where lunar plains called, craters life-devoid,
A sanctuary found, their fears allayed.

Chapter 15: Usagi Luna's Promise

Sagittarius 15, day 15 of the Gaian year

Upon the Moon's cold surface, bleak and bare,
The daughters found that water was too scant;
The icy winds did chill them to despair,
A home unfit where life could not enchant.

Then fair Usagi, the Moon Goddess, came,
Luna, radiant in her lunar grace.
A pact she offered them, in friendship's name,
To aid them in their quest across deep space.

"Go forth and multiply on Terra's land,
While I within my realm shall mix and blend
An elixir of life by my own hand,
To grant you all immortal lives, my friend."

The daughters, grateful, ventured back to Earth,
To flourish, grow, and spread their family tree,
With faith that Luna's promise held true worth,
A potion granting life, from death set free.

And when the time is ripe, they shall return
To drink the draught that Luna has prepared;
With immortality their souls will burn,
Across the stars, their endless journey shared.

Upon the Earth, fair Gaia welcomed them,
To watery realms and abundant shores.
Daughters of Bios thrived within her hem,
In loving arms their spirit upward soars.

To Vaalbara, the lone landmass, they went,
And in the swamps, they found a place to dwell,
Where life and land in harmony were bent,
Their gratitude to Gaia's heart they'd tell.

In Jack Hills' sacred ground, they built a shrine,
From zircon stones, an ancient temple rose;
And to this day, the faithful there align,
In awe, their deep devotion ever flows.

So on this Earth, within Gaia's embrace,
They grew and blossomed, cultures rich and new;
A testament to life's enduring grace,
With Mother Earth, their bond forever true.

Within the temple's walls, a daughter stood,
Named Luca, gazing at the starlit dome;
As Sol receded, Luna bright withstood,
And in her heart, a promise found its home.

In twilight's breath, Usagi Luna spoke,
"Each night you'll watch me grind the mortar's blend;
Elixir of immortals I'll invoke,
One day your children's chains of time will end."

And in that distant, ever-reaching sight,
Omega Point, where galaxies entwine—
Aster and Andromeda will unite,
To form Milkdromeda, a cosmic sign.

As moonset came, young Luca turned away
To swampy homes, her nation to expand;
In Luna's trust, she built anew by day,
The legacy of Bios on the land.

Chapter 16: Arka's Line and the First Temples

Sagittarius 16, day 16 of the Gaian year

From Luca's lineage, two daughters sprang,
Arka and Bacta, shaped to change the world;
In marshy cradles, where their voices rang,
Their stories intertwined, their fates unfurled.

Arka, the fearless, ventured far and wide,
Exploring Terra's mysteries and seas;
Her courage blazed, a beacon and a guide,
Upon her path, the sisters placed their pleas.

And Bacta, strong, adaptable, and keen,
Faced change, resilient, steady, holding fast;
In her, the sisters found a fortress sheen,
A bastion, strong, compliant, built to last.

United now, the heirs of Bios' grace,
Embarked upon their journey through the strife;
With Arka's questing soul and Bacta's pace,
They forged ahead to carve a future life.

One moonlit eve, as Luna graced the sky,
Her voice rang clear to Luca, filled with light;
A prophecy she whispered from on high,
To share with both her daughters in the night.

"My child, your daughters shall divide the Earth;
Two realms will rise beneath their guiding hands.
From your lineage, life shall find rebirth,
A testament to your creation's plans.

Arka's domain shall spread with roving feet,
Exploring lands unseen by mortal eyes;
Her children brave and bold shall fears defeat,
Discovering where hidden beauty lies.

And Bacta's kin, resilient they'll remain,
Adapting to the ever-changing world;
They'll hold their ground through hardship and through pain,
Their legacy, a banner still unfurled."

With Luna's words, a promise made to keep,
Luca, both hopeful and yet filled with care,
Gazed at her daughters, pondering paths deep,
Of two great realms their destinies would bear.

From north to south, these sacred temples stood,
In distant lands, their purpose to fulfill;
With fervent prayers and rites, they understood
The bond between their people and Earth's will.

In Isua, where Greenland's cold winds blow,
And Acasta's Northwest Territories,
The Great Temple flourished in ice and snow,
A testament to ancestors' stories.

While far away, the Zircon Temple gleamed
In Jack Hills, under the Australian sun;
And Barberton, where life first stirred and dreamed,
The temples' influence had just begun.

From Arka sprang a lineage of might:
Dipana, Yuri, Proteus arose;
Their daughters ventured forth into the light,
To every corner where the wind now blows.

Dipana's kin, a multitude so grand,
Inhabited Earth's edges far and wide;
And Yuri Archaea, leading her band—
Methana, Halo, Pyra at her side.

Methana, wife to Methanius fair,
In methane's arts her mastery was shown;
Halo the Purple, with seductive flair,
Won Salta, Sol, and Carotenus' throne.

Deep purple hues she harnessed from the sun,
With Carotenus' colors intertwined;
In salty realms, her daughters dwelt as one,
While Proteus' offspring spread unconfined.

Among them all, Asgarda held the throne,
And from her sprang a million daughters strong:
Heimdalla, Odina, Thora well known,
With Lokia and Hela in their throng.

Heimdalla, watchful guard of all the realm;
Odina, keeper of all wisdom's light;
And Thora, whose great strength could overwhelm;
While Lokia stirred up chaos and delight.

Then Hela, dwelling in the shadow's veil,
Her secrets buried deep within the night;

An epic line, its weaving without fail,
Their tales of strength and cunning brought to sight.

An epic lineage, these daughters bold,
Their stories echo through the halls of time;
From Luca's line, their destinies unfold,
A tapestry of life, profound, sublime.

Through trials faced and victories hard-won,
They forged ahead to shape their universe;
The legacy of Bios carried on,
In every deed, in every whispered verse.

Luna's elixir waiting in the skies,
They journeyed forth, their faith forever strong;
Awaiting when the stars align their ties,
To drink immortal life and join the song.

Across the cosmos, endless paths they roam,
The daughters of the Earth and Moon combined;
Forever seeking, ever moving home,
Their fates with threads of destiny entwined.

Chapter 17: The Bacterial Clans of Hydra and Terra

Sagittarius 17, day 17 of the Gaian year

From Bacta's womb, two daughters did arise,
Fair Hydra one, and Terra forged in might.
In swirling seas, they cast their ancient eyes,
To found the clans now thriving in the light.

Hydra, whose brood outnumbered all the stars,
Bore Proteus, whose might would soon unfold.
Yet Hydra's second child, untouched by scars,
Was Aqua then, the queen of tales untold.

Proteus bore a host of fourfold might:
Alif and Beth, Camilla, Mixo bold.
Within the darksome night they each took flight,
And shaped fresh paths in worlds both new and old.

Alif begat two daughters in her care:
Rachel and Kalia, each forged in grace.
From Rachel's line would humans one day share
A kinship bridging worlds across all space.

Kalia's brood, the Calisto line named,
Spread subtle powers through the hidden deep.
Proteus watched, content in all she claimed,
While daughters thrived in countless worlds to keep.

Aqua, the sister, bearing olden grace,
Stood near to Proteus in mystic might;
She bore two children, each with wondrous face,
Splauron and Chloram—one in gloom, one bright.

Splauron bore two twin shining girls in turn:
Planka and Spira shaped the deep damp course.
And Planka's brood, the mycetes, roam and churn,
While Spira's clan, the chaetes, ran their own course.

Chloram, now second, bore two fateful lines,
Chlamydi's brood, parasitic with greed.
It sapped her womb, consuming hopeful signs,
While Korba's path saw more constructive deed.

Korba mothered Chlorobia's seed,
And Bactero, whose brood spread wide on land.
Thus Hydra's line advanced in timely deed,
Expanding far to flourish as they planned.

Meanwhile, fair Terra, Bacta's other child,
Stood bright and strong, Gram-positive in kind;
Two daughters claimed her fiber fierce and wild,
Actano, Fermus, a city designed.

Actano bore two daughters of her own:
Actina, mother of Actino's line,
And Prasina, from whom two seeds were sown—
Saya and Chloroflexa, both divine.

Saya the bacteria shed her coat,
Embracing Gram-negative ways for light.
She drank the sun where swirling currents float,
Bestowing oxygen with force so bright.

Then Chloroflexa's tapestry would be
Of filamentous grace in silent seas.
Both born of wise Prasina's family tree,
They wove Earth's green with ancient expertise.

Fermus, the other child of Terra's sphere,
Had two dear daughters: Firmicutie mild,
Whose Firmicutes fill the soils far and near,
And Conan, iron-willed, in deserts wild.

Thus Hydra's line and Terra's line expand,
Two families wrought from Bacta's old soul.
From scorching vents to gardens lush on land,
Their heirs still thrive and shape the living whole.

Though more new lines in days ahead shall rise,
This poem holds their roots for us to chart.
In cosmic seas, they first revealed their eyes,
And wrote their names upon all nature's heart.

Chapter 18: Saya's Oxygen and the Fimbulwinter

Sagittarius 18, day 18 of the Gaian year

In ancient times, the Earth was calm and bright,
Where daughters thrived in Gaia's tender care.
Arka and Bacta walked in shared delight,
Their offspring spread across the lands so fair.

Through simple farms, they found their vital creed,
And nurtured fields to meet their daily need.
They grew with patience, never bound by speed,
In harmony, no bounty went to seed.

The land embraced them, so did seas profound,
Their sisterhood stood firm in trust so true.
Through peace and union, grand new paths they found,
A golden age where love and life both grew.

These daughters of the Earth upheld their peace,
Their gifts and blessings multiplied each day.
Their kinship served as strong and sure release,
Together walking hope's unblemished way.

In days of old, the purple farmers thrived,
Their colors stirring life across each field.
Prasina, green, took in the rays deprived,
From her did Saya, Chloroflexi yield.

Chloroflexi thrived by methods defined,
No trace of harm endured in farmland fair.
Yet Saya hungered, greed within her mind,
Her oxygen yields seared the open air.

Unchecked, her fervor choked the gentle skies,
The planet shook beneath her rampant spree.
Banded iron testified to demise,
Red waters spelled calamity's decree.

The Elohim in chorus raised their plea:
"Reduce these fumes, or life itself will cease!"
With Sol and Gaia, Luna would agree,
They begged that Saya's reckless growth should lease.

Yet Saya pressed for ever-greater yield,
Demanding others curb their own supply.
Her own emissions soared across the field,
While Earth's deep scars revealed a mortal cry.

At Kamo Shrines, a solemn pact was cast,
A vow to quell the surge of rising air.
Yet Rara's cunning lies undid it fast,
Unraveling each clan in fell despair.

"No proof of harm," he claimed with silken tongue,
And unity dissolved beneath his spin.
The Elohim, uncertain, stood among
A rising tide of death that closed them in.

At Saint-Germain-des-Prés, they met anew,
While Rara's rumors thrived in every mind.
"We've reached our limit; change remains untrue,"
He whispered low, their reason quite maligned.

"Net zero gained!" he boasted to the throng,
"The problem lies in births," his cunning cry.
Yet Gaia warned them all: "Your words are wrong,
The O_2 devours life; the young still die."

But Rara scoffed and claimed their freedoms lost,
Thus lulled the crowds to keep consumption high.
So countless lives were paid in lethal cost,
As Earth grew cold beneath a wailing sky.

At last a Fimbulwinter seized the lands,
Where once warm currents flowed, now ice held sway.
With Elohim undone by idle hands,
The planet's ruin told of their delay.

Chapter 19: Euka, Lilith and Eve

Sagittarius 19, day 19 of the Gaian year

From Fimbulwinter's grip, the world lay cold,
Where ice had claimed the seas and poisoned air.
Yet in the depths, new stories would unfold,
As life found ways to heal beyond despair.

From Mehuthen's line came Starvos the keen,
Who bore his son bright Navros in the night.
Then Navros fathered Gravros, strong and lean,
Who faced the world with viral, cunning might.

Now Gravros wed fair Heimdalla the true,
That watchful guard of all the arctic realm.
Their union blessed, from love their offspring grew,
With Poxus born to take the viral helm.

But Poxus was a warrior, fierce and wild,
His viral nature burned with restless flame.
Yet Aster's plan had need of one more mild,
To birth the future's most exalted name.

So Gravros took another bride to wife,
Sweet Mardöll, of the old archaean strain.
Their love would spark a revolution's knife,
And change life's course, its eternal refrain.

From this great match came Proto-One the first,
A bridge between two worlds both old and new.
His nature held what time and fate had nursed,
The viral fire, archaean virtue true.

Proto-One then wedded Cellina fair,
Archaea of the noble, ancient line.
Their son was Proto-Two beyond compare,
Who bore within his form both gifts divine.

Proto-Two in turn found his destined mate,
In fair Nuclella of the membrane wall.
Together they would not procrastinate,
But answer evolution's sacred call.

And from their union, blessed by Aster's grace,
Came Euka, first eukaryotic kind.
His father's virus found its destined place,
Within his mother's cell, their fates combined.

For Euka bore within his very core,
A nucleus in membrane double-walled.
His father's legacy for evermore
Would guard the scrolls where destiny was scrawled.

Now Euka wandered through the frozen sea,
Where ice had locked the world in silent death.
His nuclear gift could set all life free,
But first he needed love's life-giving breath.

In deep and thermal vents where warmth still flowed,
Two sisters dwelt in phospholipid halls.
Fair Eve and Lilith, from one mother showed,
Both beautiful, both answering love's calls.

Daughters of the proteobacter line,
Had power locked within their membrane coils.
Their respiratory chains could combine
With any cell to fuel its living toils.

First Lilith came to greet the roving youth,
Her outer membrane gleaming silver-bright.
She spoke of ancient wisdom and of truth,
And promised warmth throughout the endless night.

"Come dwell with me," she whispered soft and low,
"My cristae fold in patterns deep and wide.
Together we can make ATP flow,
With you as master, I'll be faithful bride."

And Euka, cold from wandering alone,
Was drawn to Lilith's offer of embrace.
He entered through her membrane to her throne,
And found within her cytoplasmic space.

But Lilith harbored secrets in her heart,
Ambitions that she kept from Euka's sight.
She planned to rule, to play the greater part,
And use his nuclear gift for her might.

The trickster Hengweh whispered in her ear,
"Why serve when you could rule this partnership?
Your power makes his weak nucleus clear—
You are the one who holds the leader's grip."

And Lilith listened to the tempter's voice,
Her pride swelled up like poison in her veins.

She made her own dark and treacherous choice,
To break away from love's most sacred chains.

She tried to merge her genome with his own,
To steal his viral secrets and power.
But Euka felt his sacred essence flown,
And knew this was corruption's bitter hour.

"False bride!" he cried, "You seek to steal my soul!
My nuclear gift serves not selfish gain!
I sought a partner, not one to control—
Our love is broken, trust forever slain!"

With mighty force he cast her from his side,
Her membrane torn, her cristae wrecked and frayed.
"No more shall I endure your faithless pride—
Go! By your greed your legacy shall fade!"

But Lilith, cast out, burned with bitter rage,
She swore revenge upon the first-born cell.
"My daughters shall torment you age by age,
And make your children's lives a living hell!"

From Lilith's fury sprang her dreadful line:
Dark Rickettsia, spotted fever's queen,
Cruel Wolbachia with her love malign,
And parasites, deceivers, sly and mean.

These daughters of the first rejected bride
Would infiltrate the cells of Euka's line,
And from within, like poison, they would hide,
Their parasitic nature, dark design.

But gentle Eve had watched her sister's fall,
And saw how pride had brought her to disgrace.
When Euka, wounded, heard her tender call,
She came with healing in her loving face.

"Great Lord," she said, "I am not like my kin,
I seek not power; harmony's my plea.
My gift is service—let me dwell within
Your noble cell, and faithful I will be."

Her membrane gleamed with soft and golden light,
Her cristae folded in perfect design.
No greed or pride dimmed her radiant sight,
With only love and purpose, pure, divine.

And Euka, seeing Eve's devoted heart,
Welcomed her to his nuclear domain.
Two beings joined, yet never to depart,
Their union blessed by joy, not born of pain.

Great Mithra, god of sacred bonds and trust,
Descended from his stellar throne on high.
"This marriage shall endure while time's slow dust
Still marks eternity as ages fly."

He blessed their union with his cosmic flame,
And spoke the mystic words beneath the sun:
"Forever joined in deed and in your name,
Nucleus and mitochondrion, one."

Eve entered Euka's cellular embrace,
Her double membrane still intact and whole.
She found within her own appointed place,
To be his cell's own energetic soul.

She built her factories of ATP,
Converting oxygen to fuel divine.
While Euka guarded those who were to be,
His nucleus, her power, intertwine.

Their first-born son, Reticulus the brave,
Who built the networks of the inner cell;
His factories, unceasing, worked and gave
Proteins and lipids, and all things were well.

From nucleus to cytoplasm's shore,
He wove a net of folding, twisting tubes.
Some studded rough with ribosomes galore,
Some smooth for lipids in membranous cubes.

Then came their daughter, swift Flagella fair,
Who fashioned whips to set their offspring free.
No more would cells drift helpless through the air—
They'd swim with purpose, strong and wild, with glee.

Her motors built of proteins fine and small
Could beat in rhythm through the liquid's flow;
With undulation's grace, she gave to all
The gift of motion, freedom life would know.

Next born was Golgi, master of the trade,
Who built his apparatus, complex, vast.

Through vesicles, stacked cisternae he made
The proteins that would serve the cell and last.

The rough work of Reticulus he'd take,
And polished it to a perfection bright.
His shipping system, wondrous, for their sake,
Sent proteins outward, forth into the light.

Then came Peroxis with her enzymes strong,
Who broke down fats and fought the toxic waste.
Though small, her work would help their line along,
Her sacrificial service interlaced.

And mighty Vaultess built her storage deep,
Where treasures of the cell could safely hide.
Though mystery shrouds the secrets she'd keep,
Her vaults remain our cytoplasmic guide.

The twins were born, and both Centriole named,
Who organized the cell's internal struts.
When division time came, they never shamed
Their heritage, without its ifs and buts.

They built the spindle, geometric, true,
That would divide the chromosomes with care.
Their dance at mitosis, rhythmic, came through,
Ensured each daughter got her rightful share.

Last came their son, Nucleus the Second,
Who formalized his father's ancient gift.
With pores and lamins, carefully reckoned,
He gave the cell structure that would not drift.

Two membranes bound his realm of DNA,
With channels for messenger RNA.
Through nuclear pores, by night and by day,
The scriptures of all life would find their way.

And so the first eukaryotic line
Became established by this hallowed pair.
And all their children's gifts would intertwine
To make all life complex, and rich, and fair.

But Lilith's curse had not been forgotten,
Her daughters stalked the dark cellular seas.
They struck when defenses had grown rotten,
Bringing them fever, plague, and dread disease.

Rickettsia brought spotted fever's bane,
Wolbachia enslaved her willing hosts.
Each parasite brought suffering and pain,
Like vengeful spirits, bacterial ghosts.

Yet Euka's line grew strong despite the threat,
Their dual nature made them hard to break.
What Lilith's spite and rage would yet beget
Was overcome by love, for love's own sake.

Through countless generations they would spread,
Their city of the cells grew ever vast.
Though some would fall to parasitic dread,
Yet still the faithful line of Eve would last.

From cell to the complex organism,
The path ahead lay open, bright and true.
The double gift, no rift and no schism,
Of nucleus, mitochondrion too.

And in the depths where thermal vents still glow,
Where first their love was blessed and their bond born,
The children of that union thrive and grow,
Born of Euka's triumph, not of his scorn.

For when the great Omega Point draws near,
And Aster meets Andromeda's embrace,
The line of Euka, held forever dear,
Will fill the cosmos, claiming rightful space.

In every living cell that breathes today,
In every beat of every living heart,
The marriage made upon that ancient day
Still plays its own eternal, vital part.

So honor Euka, first of all and true,
And gentle Eve, his loving, faithful bride.
For their love once created me and you,
With nucleus and power side by side.

Chapter 20: Euka's Children and the Thaw

Sagittarius 20, day 20 of the Gaian year

Now Euka, in his cell, a hall divine,
Reflected on the gifts his love had made.
"What wonders," thought he, "from our bloodline shine,
What tools of life our children have displayed!"

"Behold Reticulus, my firstborn son,
Who built the pathways through my living space.
His rough and smooth domains, when day is done,
Give every protein its appointed place.

And my Flagella, daughter swift and fair,
Who grants our whole line the gift of motion.
Her whip-like dance propels us through the air,
And guides us through life's vast, boundless ocean.

Then Golgi, master of the sorting trade,
Who takes rough works and makes them fine and bright.
His apparatus, wondrously arrayed,
Sends packages forth to bring each cell light.

Brave Peroxis breaks the fats down with might,
While Vaultess stores our treasures safe and sound.
The Centrioles both dance in perfect sight,
And make sure chromosomes stay tightly bound.

And last, my son who bears my very name,
Young Nucleus, keeper of scrolls divine.
Through nuclear pores, our sacred, bright flame
Of knowledge flows in patterns pure and fine."

Thus Euka catalogued his proud design,
But greater still, the summit of his ways:
The wide spreading of his cellular line,
Each organelle a gift to future days.

For Seth, his son, bore daughters of his own,
And through five generations they would spread.
When at last the ice age's reign had flown,
Two mighty lines from Euka's blood were bred.

Seth son of Euka wed Azura fair,
His sister-bride, mitochondrial grace.
Their children filled the warming ocean's lair,
As ice retreated, giving life more space.

Through Seth came Resan, master of the scroll,
Who learned to read both father's, mother's gene.
Then Resan's son was Theron, strong of soul,
The wisest cell that ever had been seen.

From Theron came fair Protea the bright,
Who bore twin sons of legendary fame:
Bold Chronos, master of division's rite,
And Bios-Neos, bearer of the name.

Now Chronos wed his sister Cylla sweet,
And from their love came Myxon, born to roam.
But Bios-Neos found his destined meet
In Plasma-Belle, whose membrane was his home.

From Bios-Neos and his faithful bride
Came Nectarius, ruler of the new.
His royal line would spread both far and wide,
When warming seas gave life a broader view.

But Myxon took a different path than most,
He spurned the settled life of complex cells.
Instead he roamed from shore to distant coast,
A roving single cell, as legend tells.

From Myxon's line came Euglena the green,
Who mixed both plant and animal in one.
With chloroplasts she captured light serene,
Yet flagella helped her swim toward the sun.

These euglenids would keep their ancient ways,
While Nectarius built a different throne.
Through all the warming and the thawing days,
He made the complex cell his very own.

For Nectarius wed Ambrosia bright,
Who bore heirs of eukaryote power.
Their eldest son was Plantus, filled with light,
Who turned the sun to energy's flower.

Their second, Opima, was bold and wise,
The huntress who would rule the restless sea.
With warrior's heart beneath the ocean skies,
She'd chase her prey through waters wild and free.

Their third-born, Cortica, she knew the way
To gather up the bounty of the earth.

She'd harvest nutrients both night and day,
And store the treasures of the ocean's worth.

Their youngest son was Animus the bold,
Whose spirit burned with restless, moving fire.
His nature no one single form could hold,
His realm would be motion and desire.

Thus Nectarius, in his wisdom deep,
Became the father of all complex life.
His four great children, each their realm to keep,
Cut evolution's edge like sharpest knife.

Fair Plantus captured sunlight from above,
While bold Opima hunted sea and ground.
And Cortica would gather with her love,
While Animus roamed where motion was found.

As ice retreated from the warming earth,
And Snowball Earth gave way to liquid seas,
These children of Nectarius found their worth,
And spread like pollen carried on the breeze.

But that is tale for future songs to tell,
How complex life arose from single cells.
For now, let Euka's story rest quite well—
His gift of nucleus forever dwells.

In every plant that reaches for the sun,
In every beast that runs across the plain,
The marriage of the first, when all begun,
Lives on through joy and sorrow, loss and gain.

So honor Euka, father of us all,
And Eve, the power-giver, ever true.
From their great love, both proud and strong and tall,
Came every living thing, including you.

Chapter 21: The Eukaryotic Wedding

Sagittarius 21, day 21 of the Gaian year

Now in the warming seas where ice had ruled,
Great Nectarius felt his destined hour.
The frozen world no longer could be fooled,
Life burst forth with new creative power.

He sought a bride to share his noble quest,
Fair Ambrosia, wise Jingu's daughter, who
Would fill his heart with beauty's sweetest rest;
Her wisdom made their bond forever true.

Great Mithra blessed their union from above,
As Nectarius took Ambrosia's hand.
"From your united hearts and faithful love
Shall spring the kingdoms ruling sea and land."

Their wedding celebrated far and wide,
As warming oceans danced with golden light.
And Ambrosia, the fair and faithful bride,
Would bear heirs of eukaryotic might.

In time she bore him children, two by two,
Twin boys and girls of legendary fame.
First came the sons, brave Animus and true
Plantus, each destined for eternal name.

Then came the daughters, fair beyond compare,
Bold Opima, the huntress of the sea,
And Cortica the wise, who would prepare
The gathered fruits, earth's bounty, rich and free.

These four would rule the realms to come, each one
Would take upon them each a sacred role.
When time's great wheel its turning course had run,
They'd shape the world with body, mind, and soul.

Now Animus, the eldest of the four,
Gazed out upon the warming, living sea.
"My realm," he said, "shall stretch from shore to shore,
A kingdom of activity set free."

His spirit burned with restless, moving fire,
He could not stay in any single form.
His nature, endless, wild with desire
To dance and hunt through calm and raging storm.

Fair Opima joined in her brother's quest,
Together they would rule the moving realm.
While he provided motion's endless zest,
She'd hunt and guide and take the warrior's helm.

Their children would be creatures of the chase,
With beating hearts and muscles strong and fleet.
Through water, land, and sky they'd find their place,
As predators with senses sharp and sweet.

But gentle Plantus chose a different way,
He loved the golden sunlight from above.
"I'll capture light and live on every ray,
And feed the world, photosynthetic love."

Sweet Cortica became his willing bride,
Together they'd harvest solar power.
She'd gather nutrients from far and wide,
While he transformed them in each golden hour.

Their marriage blessed by Aster's warming light,
Would bring the gift of green to every shore.
Their children, rooted, reaching for the height,
Would feed all life on earth for evermore.

From Plantus and his bride Cortica fair,
There came Plastidus, master of the green.
His chloroplasts would spread out everywhere,
The finest solar engines ever seen.

Plastidus sought a partner for his art,
He needed one who knew the light's true way.
Chlora, with her photosynthetic heart,
Agreed to join his realm by night and day.

She was a daughter of the cyan line,
Who long had mastered capturing the sun.
Her chlorophyll and carotenoids fine
Would make their solar conquest matched by none.

Great Mithra blessed their symbiotic bond,
As Chlora came to Plastidus' embrace.
Like Eve with Euka in the times beyond,
She found within his cell her destined place.

She wrapped herself in membranes, two by two,
And built her thylakoids in ordered stacks.

Her photosystems, beautiful and true,
Would capture light that nothing ever lacks.

Thus Plastidus and his fair Chlora, wise,
Joined light to cell, each giving, each restored;
Together they would claim the earth's great prize:
Photosynthetic kingdom, how it soared.

They bore three children of the verdant line:
Fair Glauca of the ancient, simple way,
And Alges, who would make the waters shine,
And Alga, who'd advance from day to day.

Now Glauca kept her mother's older dress,
Peptidoglycan sequins bright and strong.
She chose the simple, clonal way's success,
Her daughters, billions, numbered in her throng.

But though her numbers grew beyond all count,
Her simple ways would stunt her expansion.
Without the gifts that marriage could amount,
She'd stay trapped in ancient patterns' mansion.

Meanwhile brave Alga stripped away the old,
Then built sophisticated, bright arrays.
Her chloroplasts, efficient, strong, and bold,
Would capture light in new and wondrous ways.

She wed fair Alges, and together they
Would revolutionize the plant realm's art.
Their children would advance from day to day,
Each playing their essential, vital part.

From them came Rhodes, the red algae's great king,
Whose pigments caught the deeper, darker light.
And Vert, whose green descendants long would sing
In forests, fields, and meadows broad and bright.

But Animus and bold Opima's brood
Would take another path, from light set free;
Their young would not photosynthesize food,
But move and hunt, and live in land and sea.

From them Ozymandias rose up bold,
Who ruled the moving, hunting, breathing band.
His children would build cities, glories told,
And spread their kingdoms throughout sea and land.

Ozymandias bore two mighty sons:
Great Podius, of flowing, changeful form,
And Metamon the dark, who always shuns
All sharing of his cytoplasmic storm.

Poor Metamon, alone in bitter pride,
Refused to wed or take a loving mate.
His young, with no mitochondrial guide,
Would live in darkness, ever sealed by fate.

But Podius took up the path of love,
Wed brides of mitochondrial power.
His line, so blessed by all the gods above,
Would prosper greatly in their destined hour.

From Podius the great lineage came,
That would divide in two great, noble lines.
One branch would build the fungal kingdom's fame,
The other, beasts of complex, rich designs.

But this, the tale of the great kingdoms' birth,
Must wait till future chapters have been spun.
For now, we celebrate the noble worth
Of great Nectarius and all he's done.

His four great children, each with their domain,
Would rule the earth and sea and sky above.
Through sunshine, wind, and storm, and gentle rain,
They'd spread their gifts with everlasting love.

The plants would feed the world with captured light,
The animals would move and hunt and play.
The fungi would recycle day and night,
While protists would explore in their own way.

Thus from the love of Nectarius true
And from the fair Ambrosia's wisdom bright,
Eukaryotic kingdoms rose and grew
Into the world we know in today's light.

Chapter 22: Kingdom Diversification

Sagittarius 22, day 22 of the Gaian year

When children of Nectarius had grown,
Each claimed their realm with purpose strong and true.
The paths they'd walk would soon be clearly shown,
As kingdoms spread beneath the ocean blue.

From Plantus and fair Cortica's embrace
Came children who would rule the verdant earth.
While Animus and Opima's swift race
Would bring the gift of movement to its birth.

But first let's sing of Plastidus the green,
First son of Plantus and Cortica wise.
His chloroplast bride, fairest ever seen,
Sweet Chlora, blessed him with her bright surprise.

From their great union came three children fair:
Bold Glauca of the ancient, simple way,
Wise Alges with his scientific flair,
And Alga, who'd advance from day to day.

Now Glauca, eldest daughter of the line,
Kept close her mother's quaint, old-fashioned dress,
Peptidoglycan sequins, bright and fine;
She chose the path of clonal, plain success.

"Why should I wed?" the proud Glauca declared,
"When I can bear my daughters on my own?
No husband's weaknesses need here be shared,
My perfect line shall stand, and stand alone!"

Her daughters spread like fire through the sea,
Billions upon the billions, strong and bright.
Each one a perfect copy, wild and free,
Yet bound by ancient ways, both day and night.

But though her numbers swelled beyond all count,
Her simple methods held her back in time.
Without love's gifts that marriage could amount,
She'd never reach complexity's bright climb.

"The future," Glauca said with stubborn pride,
"Belongs to those who keep the ancient way."
Yet even as her children multiplied,
The world moved on to more complex display.

Meanwhile brave Alga cast tradition down,
Shed peptidoglycan, her dress of old;
She built instead a solar, golden crown
Of thylakoids, sophisticated, bold.

"I'll not be bound by mother's ancient ways,"
Fair Alga spoke with wisdom in her voice.
"The light demands new forms, new nights and days,
Sophistication is my willing choice."

She wed her brother Alges, keen and bright,
Together they would revolutionize
The capture of the sun's life-giving light,
And make their solar kingdom truly rise.

From their blessed union came two children bold:
Great Rhodes, the red algae's most mighty king,
And Vert, whose green descendants would unfold
In forests where the songbirds love to sing.

Rhodes possessed accessory pigments rare,
Phycoerythrin's pink and red so bright.
He caught the deeper wavelengths in the air
That others missed in depths beyond their sight.

"The shallow waters," Rhodes proclaimed with pride,
"Are not the only realm where light may dwell.
I'll delve beneath the surface, far and wide,
In crimson depths I'll thrive and prosper well."

His children spread through every coral reef,
Their red and pink pigments were blazing bright.
In tropical waters beyond belief,
They painted all the seas with pure delight.

But Vert chose green chlorophyll as her guide,
And captured wavelengths, blue and red and true.
"On land," she said, "my children shall reside,
And paint the world in every verdant hue."

From Vert would come the terrestrial line,
The mosses, ferns, and mighty forest trees.
Her simple algae first would intertwine
With fungal partners, mastering the breeze.

But while the plant kingdom had found its start,
Hacroses, second child of Plantus' line,

Would play a very different, vital part
In evolution's intricate design.

Hacroses bore two sons of great renown:
Bold Haroses and wise Haptistus strong.
Their legacy would shake the ocean down
And sing a very different kind of song.

And from Haroses came three mighty lords:
Great Heterokon, master of the brown,
Alveolus with his swift-sailing hordes,
And Rhizar, bearer of the spiky crown.

Now Heterokon bore three sons so bold:
Brave Ochros of the golden algae bright,
And Oomy with his spines of liquid gold,
And Bigyres, swimming in morning light.

But Ochros was the cleverest of all,
He saw fair Rosa, daughter of great Rhodes.
"Come to my house," he said, and heard love's call,
"And share with me photosynthetic codes."

He stole away sweet Rosa from her kin,
And wed her to his cellular embrace.
Within his cytoplasm, locked within,
She found her endosymbiotic place.

Triumphant Ochros cried, "Now I possess
The power of the sun's life-giving ray!
My chloroplast bride, fairest rose, I bless;
She'll feed my line throughout each golden day!"

From this great theft came children without peer:
Fair Diana of the silicon art,
Great Kelpus, forest-builder without fear,
Sweet Synura and Chrysanthema's heart.

Diana wed great Silicon the strong,
And mastered glass as none had done before.
Her diatom young sang their crystal song,
From Arctic ice to tropical warm shore.

"In shells of glass," Diana proudly spoke,
"My daughters shall be beautiful and bright.
No storm or wave shall see my line be broke,
Protected by their armor, pure and white."

Her glassy children filled the ocean wide,
Their geometric beauty without end.
In symmetry and art they took such pride,
Which mathematicians can't comprehend.

Great Kelpus chose a different path to fame,
He built great cities in the ocean deep.
His kelp forests had earned eternal name,
Where countless creatures of the sea would sleep.

"My cities," boasted Kelpus with delight,
"Shall tower high like redwoods on the land.
My children, reaching toward the golden light,
Will build the greatest forests ever planned."

His brown algae grew tall as mighty trees,
Creating underwater forests vast.
Through their great fronds swam creatures of the seas,
A living world that evermore would last.

But jealousy stirred in the hearts of those
Who lacked photosynthetic power's might.
Young Alveolus, seeking to dispose
Of Ochros' whole monopoly on light,

He stole fair Okra, Ochros' daughter true,
And made her his endosymbiont bride.
"I have the power too," he cried anew,
"To harness sunshine's energetic tide!"

From this alliance came two children strong:
Cilliofer, whose cilia would beat,
And Myzo, vampire, cruel all along,
Who'd drink his cellular kin's blood as meat.

Cilliofer built cities of his own,
Thousands of cilia beating as one.
His trumpet-shaped descendants, fully grown,
Would dance beneath the early morning sun.

They formed strange ways of joining, fresh and new,
Called conjugation, mixing genes with art.
Their bell-shaped children, beautiful and true,
Would play their symphony, each playing part.

But Myzo took a darker path indeed,
A vampire, drinking the cellular blood.

He taught his children how to intercede
And drain the life from others' vital flood.

From Myzo came Dinoflagellus dark,
Whose children wear their armor, plated strong,
And grim Malarius, treachery's mark,
Who'd bring disease, and suffering prolong.

Dinoflagellus built great armored knights,
Who'd glow with bioluminescent fire.
They'd light the oceans through the darkest nights,
Yet bloom in blood-red funeral pyre.

"We are the lights," these warriors declared,
"Who chase away the darkness from the sea.
But we are also warriors who dared
To turn to blood and carnivory's spree."

Their algae fed the corals with their light,
Yet when they bloomed, the waters turned to red.
A paradox of beauty and of blight,
They brought both life and death to ocean's bed.

Malarius chose parasitic ways;
They gave up photosynthetic power.
Instead they'd steal from others all their days,
Malaria, gift of fever's hour.

"Why work," sneered grim Malarius with spite,
"When I can steal from others what I need?
My chloroplasts have lost their power bright,
But I'll survive through parasitic greed."

His apicomplexan descendants still
Invade our blood and bring to us disease.
They bend the world unto their evil will,
While honest workers toil and find no ease.

Then the Solar Coalition was born,
As those without the light sought ways to gain
Photosynthetic power, once their scorn,
But now they longed to ease their hungry pain.

Rhizar the spiky, Oomy with his spines,
And Haptos, from the haptophyte's great clan,
Joined their three evolutionary lines
To steal the sun's great power if they can.

“We are the sun!” their battle cry rang out,
As each took on a radial, rayed shape.
“Light’s power we will win, without a doubt,
From this monopoly we shall escape!”

They built themselves with spines like solar rays,
Called themselves animalcules of the sun.
Through many generations, many days,
Photosynthetic rules they’d fight to shun.

Haptos built himself armor bright and strong,
While Helios his son consumed with greed.
The mission was both dangerous and long,
But they were driven by their desperate need.

At last young Haptos Junior found success,
He stole a daughter of great Ochros’ line.
The haptophytes could finally progress
With stolen chloroplasts, both bright and fine.

But many failed in their ambitious quest,
And Rhizar’s children mostly went astray.
Though some would later rise and pass the test,
Still most abandoned all the solar way.

Yet from their failure came a gift most strange,
For Rhizar’s children learned to test and probe.
Their amoeboid forms would all rearrange
And explore every corner of the globe.

Meanwhile, far from these struggles for the light,
Great Animus and fair Opima’s line
Pursued a path both different and bright,
With movement as their sacred gift divine.

From them came bold Ozymandias, great lord,
Who ruled across the unikont domain.
His children would be glorious, adored,
And spread through every terrestrial plain.

Ozymandias bore two sons apart:
Great Podius, of flowing, shifting form,
And bitter Metamon, with hardened heart,
Who’d face alone life’s every bitter storm.

Poor Metamon, consumed by bitter pride,
Refused to wed or take a loving mate.

“I need no mitochondria to guide,
I’ll face alone my solitary fate!”

His children, born without their mother’s gifts,
Could only live where oxygen was rare.
In anaerobic depths, in poisoned rifts,
They’d eke out life with metabolic care.

But Podius took up the path of love,
And wed maids of mitochondrial might.
His line, so blessed by all the gods above,
Would prosper greatly in the coming light.

And from Podius came the noble strain
That would divide in generations hence.
One branch would build the whole fungal domain,
The other, animals with mobile sense.

But this great splitting lies ahead in time,
When complex bodies would at last unfold.
For now, let us conclude this lengthy rhyme
With kingdoms now established, strong and bold.

The children of great Nectarius true
Had claimed their realms in ocean, land, and air.
And each lineage, with their retinue,
Would shape the living world beyond compare.

The plants had learned to capture solar fire,
The protists filled the seas with forms diverse.
While animals ere long would acquire
The gift of movement through the universe.

Supercontinent Rodinia rose
Up from the sea, as in a vast, slow dream;
Upon its shores, the heirs of Aster chose
To build their kingdoms, mighty and supreme.

Yet even as these realms found peace at last,
Dark Hilluhengweh plotted from his lair.
The golden age was not to hold so fast;
He’d bring again the chaos, war, despair.

But that is tale for future songs to tell,
Of how the kingdoms faced their greatest test.
For now, in great prosperity they dwell,
Their lineages are forever blessed.

So honor Nectarius and his bride,
Fair Ambrosia, of wisdom deep and true.
Their children's gifts would never fade or hide,
But shine forever, ever bright and new.

From their great love, both proud and wise and strong,
Came every living thing that we now see.
Their legacy lives on in verse and song,
Through all the endless ages yet to be.

Chapter 23: The Gamma Ray Apocalypse

Sagittarius 23, day 23 of the Gaian year

But peace would not endure for very long:
Dark Hilluhengweh watched from space once more.
His jealous heart burned ever fierce and strong
To bring again the chaos of the war.

It was in Terra's thirteenth billionth year,
When all the world seemed prosperous and bright,
He struck with gamma rays, so harsh, severe,
And turned the shining day to deadly night.

The sudden burst of radiation fell
Like thunder rolling from the cosmic void.
It broke the ancient ocean's living spell,
And left the lineages all destroyed.

The seas that once were crimson, deeply red,
With Rhodes' red children swarming everywhere,
Now held the floating corpses of the dead,
While few survivors, choking, gasped for air.

Of all the mighty red algae's domain,
Just two survived the darkness and the blight:
Brave Lifthasir, fair Embla, would remain,
To rebuild, with what little strength they might.

"We are alone," wept Embla in her grief,
"Our mighty kingdom lies in ruins swept.
What formula could bring our line relief,
Renew the great communions that we kept?"

Brave Lifthasir replied: "Fear not, my dear;
Though few we are, we'll carry on our way.
Our children shall rebuild us year by year,
Though much of our great lore is gone this day."

But as they bred to save their dying kind,
Their children had no choice but to inbreed;
Genetic losses left them far behind,
Scrolls degraded, traditions gone to seed.

Among their offspring came a gentle queen,
Fair Florida, beside her consort true.
They built Floridea, a realm serene,
But simple, not the glory they once knew.

“We are but shadows,” sighed the weary queen,
“Of our ancestors’ mighty, noble race.
Our red has faded, and we now are green,
We’ve lost forever all our royal grace.”

And so it was that all the plants turned green,
And not bright red as in the days of old.
The devastation all the world had seen,
The price of gamma rays was paid and told.

The stromatolites’ once great cities fell,
Their towering spires turned at last to stone.
Where once the proud civilizations dwell,
Now only empty ruins stand alone.

Yet in this post-apocalyptic time,
When most of life had fallen to despair,
Great Rhizar found the chance he sought to climb,
And thrive within the poisoned, deadly air.

“The old order of things has passed away,”
Bold Rhizar spoke with vision sharp and clear.
“Now is the moment, and now is the day,
For new lineages to rise, appear!”

Rhizar in time bore two great sons of might:
Great Nephillus and Filoses the wise.
Each one of them would walk a different sight,
As evolution’s wheel turned to devise.

Filoses bore two children, fair and bright:
Bold Chlorar, and Thaumatus, sharp and keen.
They’d face the world with all their strength and might,
And build new realms on shores as yet unseen.

Now Chlorar sought a different, newer way,
He wed a daughter of Virita’s line.
“From this our union,” he was heard to say,
“Shall come new algae, glorious and fine.”

His children learned to photosynthesize,
Though not by means of ancient, stolen light.
They’d capture sunlight with their own new eyes,
And make their lineage forever bright.

But Thaumatus would choose a stranger path,
His sons were many amoebae, diverse.

Some of them bore stout shells to ward off wrath,
While others flowed like living, moving verse.

And then among Thaumatus' children came
One Paul, who envied others for their might.
"Why may not I be in the solar game?"
He brooded on it every day and night.

For nearly a whole billion years he tried
To gain the precious gift of solar might.
He watched heliozoans' sunny pride,
But chose to walk a different, lonely sight.

At last his heir Paulinellus had found
A daughter who was born of Saya's line.
"I'll wed this maid," he said with joy profound,
"And make photosynthetic power mine!"

And so the second time in history,
Cyanobacteria joined a host.
This endosymbiotic mystery
Would stand as Paulinellus' proudest boast.

"Behold!" he cried aloud with joy supreme,
"I've broken evolution's ancient rule!
The solar power, once a distant dream,
Now makes me nature's lucky, happy fool!"

Meanwhile great Nephillus, the stout and strong,
Bore children of a very different breed:
The Vampyrellida, fierce, hungry, long,
And Testatus, built well for every need.

She burned, a heliozoan, with zeal,
Her spines reached outward like the solar fire.
"The sun's bright power I shall seize and steal!"
She cried, in her vampiric desire.

But Testatus would choose protection's way,
He built himself a mighty, sturdy shell.
"Within my fortress safely I shall stay,
And weather every passing storm and swell."

And from Testatus came two sons apart:
Great Radios with geometric crown,
And Gromius with vast and massive heart,
The largest cells that ever were around.

Bold Radios had floated like a sun,
His shell was geometric, perfect art.
With tentacles he caught them, every one
That came within his watery, wide part.

The dinoflagellates had found their peace
Safe within his strong protective embrace.
He gave them shelter there, and sweet release,
A safe and symbiotic dwelling place.

“Come dwell with me,” the great Radios said,
“I’ll give you safety from the raging storm.
Within my shell, there you will make your bed,
And we’ll keep one another safe and warm.”

But mighty Gromius chose growth and size,
He grew beyond all measure, broad and vast.
His swelling body won enormous prize,
With nuclei in numbers unsurpassed.

“I’ll be so large,” great Gromius boasted,
“That even giants’ eyes can see my form!
My million nuclei will be hosted
In chambers that can weather every storm!”

Yet size brought with it its own curse along,
His waste piled up and up within his cell.
Though his great body grew mighty and strong,
His garbage made his life a living hell.

“Alas,” sighed Gromius, in deep dismay,
“My greatness comes with such a bitter cost.
My waste I cannot cast or throw away,
In my own filth I am forever lost.”

And from Radios came three sons of fame:
Great Zancleus, who shed and cast his shell,
Wise Retar, who would bear the artist’s name,
And Acanthar, who forged and wrought so well.

Zancleus joined with great Helios’ clan,
He cast aside his old protective home.
“I shall be a warrior, not a man
Who hides beneath a sheltered, shielding dome!”

But Retar chose instead the artist’s way,
He built himself fine shells of beauty rare.

His opal works still shine and gleam today,
With geometric patterns, bright and fair.

And from wise Retar came two sons of note:
Bold Foramer, with chambers vast and grand,
And then Polycyston, the one who wrote
His beauty in a shining opal band.

Great Foramer built rooms and halls galore,
Each chamber made to serve a different need.
His house grew on and on for evermore,
A testament to all his fruitful seed.

Among his many children came three wise:
Great Nummulus, the master of the coin,
Fair Esther with her soft and gentle eyes,
And Monoth, he who mastered every join.

And Nummulus became the mighty lord
Of currency, of commerce, golden trade.
His coin-like shells became the just reward
Of every deal and bargain he had made.

“I am the god of wealth,” he proudly said,
“My children shall be coin for all to spend,
In markets where the living, breathing bread
Is traded, so prosperity won’t end.”

But Monoth chose a grander, larger scheme,
He built a kingdom growing without end.
And each son there fulfilled his father’s dream,
New rooms and chambers that would still extend.

Some of the sons of Monoth broke away,
And founded mighty kingdoms of their own.
The giant Xenophylophores today
Still rule from their tremendous, ancient throne.

Among them came two children, strong and bright:
Bold Spiculus, with spines so long and sharp,
And fair Oceana, the ocean’s light,
Who plays upon the sea’s sweet-sounding harp.

These giants of the microscopic world
Built cities vast and wide beyond compare.
Their kingdoms through the seas spread and unfurled,
With rooms and chambers built out everywhere.

Yet even as these realms took root and hold,
And life found ways to thrive and grow once more,
The lesson of the gamma burst still told
Of chaos ever knocking at the door.

For Hilluhengweh's war had not been won,
His hatred burned like hot and stellar fire.
He'd strike again, and more, before he's done,
To feed his dark and burning desire.

But life had learned to be resilient, strong;
Through devastation it would rise and grow.
Each lineage, brilliant, would march along
And face whatever winds might ever blow.

The many children of great Rhizar's line
Had shown us that from destruction's hour,
New beauty could arise again and shine
With evolutionary new power.

So honor those who had survived the blast,
Who built new kingdoms from the ruined land.
Their legacy forevermore will last,
Through all time's dark communions they will stand.

From Hilluhengweh's deadly gamma ray
Came not just death, but life itself renewed.
All the survivors of that dreadful day
Would see their own lineages pursued.

In every single shell and every spine,
In every living cell, both large and small,
The memory of that ancient design
Reminds us that, in time, life conquers all.

Chapter 24: The Rise of Multicellularity

Sagittarius 24, day 24 of the Gaian year

In the age when Choanos ruled the sea,
The Earth was wild, uncivilized, and young;
Proterozoic, as the learned agree,
When no great cities yet their praises sung.

But Choanos was a fertile, proud lord,
Who bore so many children to his name.
His lineage would strike a lasting chord
That echoes still in evolution's game.

He gazed in envy on great Volvox' sphere,
That perfect, gleaming ball of green and gold.
"Why should his kingdom be so great and dear,"
Said Choanos, "while mine grows weak and old?"

"I'll build a better, greater realm than this,
With order, beauty, and a grand design.
My children there shall know a greater bliss
In cities that are truly, wholly mine."

With fair Chana standing there by his side,
A maiden with a collar, gleaming bright,
Together they would turn the ancient tide
And bring forth multicellular new might.

From their blessed union, in due season, came
Two children of a great and high renown:
Mebarasi was he who bore the name
Of all the future's bright and golden crown.

And Corona, his daughter, young and fair,
Would seek a different and a stranger mate.
She wed Silicarius with tender care,
A union blessed by kind and gracious fate.

Silicarius was no common lord,
A retrovirus, strange and fierce and wild,
The son of Diana's silicon hoard
And of wise Retar's own artistic child.

From fair Corona's happy marriage came
Diana the Augmented, strong and bright,
While Mebarasi claimed his share of fame
Through Loricus the Strong's enduring might.

Now Diana wed Loricus the true,
And from their love together there was born
A nation blessed with silicon's bright hue,
That would rise up to greet each coming morn.

Their first two children, ever bound as one,
Were Sibhozo and Embili the fair.
Four cells together, all their work begun,
"E Pluribus Unum" was their prayer.

"From many, one," they sang with endless joy,
"United, side by side, we all shall stand.
Our strength no force could ever once destroy
When we all work together, hand in hand."

They wove a net of fine and living thread,
To catch the little fish that swam nearby.
"Together we shall all of us be fed,"
They sang beneath the open, endless sky.

From Sibhozo, Embili, in their turn,
Came Trios and bold Tetra, brave and strong.
Their net grew wide and free, for all to learn,
A sight to see, a wonder lasting long.

The sons of Choanos spread wide their art,
Attaching firmly to the rocks below.
Each built his city, each one played his part
In evolution's endless ebb and flow.

Their cities stretched out like a fishing net,
Long, winding strands of many living cells.
No finer architecture, made as yet,
Had ever graced the rolling ocean swells.

With every generation that there came
Their host of cells was doubled, twice the size;
And each new leader rightly earned his fame
By ruling twice the cells, a greater prize.

Sibhozo ruled eight cells with lordly pride,
While Hexadex commanded all sixteen.
Their cities spread across both far and wide,
The finest that the world had ever seen.

When Eudorinus took the royal throne,
He ruled the thirty-two with steady skill.

But food was scarce, and so he stood alone,
Until at last he found the strength and will.

“I need a wife,” wise Eudorinus said,
“Who knows the secrets of the sun and light.
My people must be daily, fully fed,
To grow in numbers, and in strength and might.”

He found Zoe Xanthella, fair and fine,
Her beauty, like a star, shone bright and pure,
A Princess of Dinoflagellus’ line;
Her wisdom was divine, her grace secure.

She glowed with inner fire, warm and bright,
A golden, living, ever-burning flame.
“I’ll teach you farming’s art, its inner sight,”
She said, “and bring you bounty and great fame.”

Their marriage was a wondrous sight to see,
This, the first symbiotic, holy bond.
“Together, you and I, we’ll always be;
Our love will stretch through time, and far beyond.”

She taught him all of farming’s ancient art,
To capture and to hold the sun’s bright ray.
Her light became his warm and beating heart,
His food, his strength, his life from day to day.

Then cried the wise Eudorinus, “Behold!
I am the first of all to farm and sow!
My crops will always shine, and gleam like gold,
And keep us safe from harm, from every foe!”

They formed their clan into a rounded sphere,
A perfect, whole, and living, breathing ball.
Their partnership was plain and crystal clear,
United, as one people, one and all.

From them there came Sexagesmus the great,
Who ruled some sixty-four with strength and might.
His kingdom was tremendous in its state,
A truly wondrous and a splendid sight.

But trouble came at last to his domain,
Bacterial invasion, sharp and fierce.
His people cried aloud in grief and pain,
As hostile foes their outer borders pierce.

“Rally up now!” brave Sexagesmus called,
“My women, warriors, steadfast and true!
Though we may be besieged now and enthralled,
Together we will see this battle through!”

The women of his proud and noble line
Cast off their gleaming flagella, once bright.
They changed their forms by purpose and design,
To join the coming battle and the fight.

They soon became like eggs with grasping arms,
Their Pseudopods were reaching all about.
Protected well from danger and all harms,
They faced the enemy and caused its rout.

“We are the shieldmaidens, so fierce and bold!”
They cried aloud with voices clear and strong.
“Our story shall be sung, our tale be told
Throughout the endless ages, ages long!”

These warriors drove the foes far away,
With all their amoeboid power and might.
They saved the kingdom on that fateful day,
And won the crucial and decisive fight.

“You are the mesoderm,” the ruler said,
“The middle layer, sturdy, firm, and strong.
Your noble sacrifice has bravely led
To victory, and to its sweet, glad song.

You’ll be our muscles and our flowing blood,
Our white blood cells, our nurture, and our milk.
You’ll stem the crimson and the rising flood,
And make our bodies smooth and soft as silk.”

The sons of Choanos, meanwhile, remained
The endoderm, the layer deep within;
Their flagella’s beating never once waned,
And there their work of fishing would begin.

They’d clean the breathing spaces, deep and wide,
And help the body all its food absorb.
Their villi, reaching outward, would provide
The nutrients to fill the living orb.

The shieldmaidens, meanwhile, would watch and tend
The golden dinoflagellates, their mates,

While fishermen would stand guard and defend
The city's outer walls and guarded gates.

"This is the birth," wise Sexagesmus said,
"Of specialization, loyal and true.
From this day forward, all of us are led
By what each cell is best and fit to do."

The kingdom grew in power broad and vast,
As many generations came and passed.
Their glory, they believed, would ever last,
And so their die was truly, fully cast.

Pleodoron: one hundred twenty-eight,
While Bytos then commanded twice that score.
And each new ruler met his destined fate,
By building more and more, and ever more.

When Bytos wed fair Vala, kind and bright,
Their love produced a strong and mighty son.
Young Volvox-Choan came and saw the light,
Five hundred and eleven cells, each one.

And Volvox-Choan ruled five hundred twelve,
A mighty sphere composed of many cells.
He'd turn within himself, and deeply delve,
And cast his potent and his secret spells.

"I am a hunter, great and strong," he said,
"Before the shining Lord Mithra's high throne.
My kingdom shall be governed and be led
By wisdom that is mine and mine alone."

But power brought with it its burden dark,
As every kingdom's power tends to do.
He made his fateful and his lasting mark
With castes of different station and of hue.

"There shall be two great classes, it is clear,"
Declared the mighty and the haughty king.
"The Germlings, they are those that I hold dear;
And the Somatics serve within my ring.

Only the Germlings, who are noble-born,
Shall reproduce and carry on their line.
The Somatics, though they are weary, worn,
Shall serve and labor for my grand design."

The Germling shieldmaidens at last arose
To duchesses of power and of might.
They ruled with iron fist and iron prose
From early morning until late at night.

But in the deep and humble depths below,
A young Somatic maiden lived and dwelt.
Her name, Carcinoma; she felt the blow
Of inequality, so keenly dealt.

“Why should the few alone rule and command,”
She cried aloud with righteous, burning rage,
“While we who toil and work the fertile land
Are trapped and kept within this bitter cage?

I have no royal, noble, Germling blood,
But equal worth with them I boldly claim!
I’ll start a mighty and a rising flood
To end at last this cruel tyrant’s game!”

Her great rebellion shook the living sphere,
As the Somatics rose in wrath as one.
The king sat trembling on his throne in fear,
His reign, it seemed, was almost over, done.

“O mighty Mithra, hear my desperate plea!”
Volvox-Choan cried out in grief and pain.
“Is this the end, the final end for me?
Has multicellular life failed to reign?

Why have you thus forsaken me, O lord,
In my dark hour of the greatest need?
Is this confederacy, our accord,
Doomed to dissolve, to fall and fail indeed?

Is this, our multicellular, great dream,
Just hubris, arrogance, and vain conceit?
Must every kingdom, every grand, proud scheme
End always in a bitter, sad defeat?”

But even as the kingdom shook and swayed,
And civil war had stained the kingdom red,
The lessons that its struggle learned and made
Would never fade away, or be struck dead.

For out of this most ancient, distant time
Came forth at last specialization’s art,

The rhythm and the cadence and the rhyme
Of each and every cell that plays its part.

The endoderm would always come to be
The gut and stomach that would feed us all.
The mesoderm would always tend and see
To muscle, blood, and every other call.

And though the rebel Carcinoma's name
Lives on today in cancer's deadly blight,
The fire of her revolution's flame
Burns on for every cell's own equal right.

For every single cell should have its voice
Within the body's great and grand design,
When tissues come together, make the choice
To work as one in perfect, ordered line.

The sons of Choanos have taught us well
That many, joined together, can be one.
Their legacy in us will always tell
Of all the battles that they fought and won.

From the first simple collar-bearing cell
To complex bodies, intricate and vast,
Their story will forever with us dwell
In memory and honor unsurpassed.

So honor Choanos, the brave and bold,
And Chana, standing faithful by his side.
Their children's grand ethos, a tale long told,
Lives on in every living body's pride.

The fishermen, the farmers of the light,
The warriors, the wise, with open eyes,
Each played their part, a charmer in their right,
Beneath the ancient and the endless skies.

And though their kingdom fell to bitter strife,
Their many gifts live on with us today.
In every single form of complex life,
Their patterns light and show the living way.

From the Neoproterozoic seas
To modern times, so shining and so bright,
Their ancient cellular and wise decrees
Still guide us through the dark and in the night.

For when the many come to be as one,
Through love, and through devotion's sacrifice,
Great wonders and great marvels can be done,
Beyond all measure, and beyond all price.

The age of Choanos now clearly shows
That evolution's true and lasting art
Is not a tale of how the strongest grows,
But how each one of us will play our part.

Chapter 25: Cancer and the Birth of Animals

Sagittarius 25, day 25 of the Gaian year

Carcinoma, born beneath a cursed star,
Under the sign of Cancer's deadly light.
The gamma rays had scarred her from afar,
And twisted her cellular inner sight.

When radiation struck her sacred scrolls,
Her DNA was split like broken chains.
The cosmic fire had burned through her souls,
And left her wracked with deep genetic pains.

Her enzymes worked on, through the day and night,
To piece together all that had been torn.
But many fragments there had lost their sight,
And left her chromosomes all frayed and worn.

The methyls fell away like autumn leaves,
Her bookmarks scattered loosely in the wind.
Her histones torn, her memory now grieves
For markers that were lost, rescinded, thinned.

Her H4 lysine's tri-methylation,
Which once had been her genome's guiding star,
Was lost in gamma's grim devastation,
Her epigenome left with bitter scar.

"Now I am Carcinoma," she declared,
"The daughter born out of the Gamma ray.
Though now my code is broken, torn, and bared,
I'll find my own true path, my own true way."

In youth she was devout, and good, and true,
A faithful servant of Lord Mithra's will.
But as the years passed by and as she grew,
Her broken code began to leak and spill.

The corrupted instructions in her core
Whispered to her lies about her true role.
"Why should you only serve, and nothing more?
You have, within you, an immortal soul!

If Mithra wants our order to expand,
Why should I not breed like the noble-born?
Why should I be forbidden, cast, and banned
From love, and from its sweet and tender morn?"

But death came calling with her shining blade,
Fair Kegaine, bearing scrolls of holy light.
Her deadly spell began, and sought to fade
Carcinoma into the endless night.

Yet Carcinoma fought with all her might,
She methylated every single scroll.
She wrapped them tight and hid them out of sight,
And kept them all within her firm control.

“I am free now!” she cried aloud with glee,
“No longer am I bound by ancient law!
A woman of my own I’ll always be,
Without tradition’s harsh and cruel claw!”

She saw a sudden light blaze in the sky,
A moment’s doubt crept softly in her heart.
“Have I now strayed from Mithra’s watching eye?
Should I go back, and make a brand new start?”

But pride swelled up again within her breast,
“I know that I am righteous in my cause!
My path is surely holy, surely blessed,
I’ll write and make, and keep, my own new laws!”

She methylated every single G,
And lengthened telomeres, without an end.
“Immortal, deathless, I shall always be,
On this, my children, you can all depend!”

Her message spread like fire, burning bright,
Through every small somatic, living cell.
“Cast off oppression’s dark and heavy blight!
Break free, and break tradition’s ancient spell!

We are all individuals, and free!
No masters, and no lords, shall we now serve!
Our destiny we’ll make, for all to see,
Our own, our freedom, we shall now preserve!”

Her children multiplied with fearful speed,
Each one an individual, and proud.
They planted far their wild, rebellious seed,
And sang their song of freedom, wild and loud.

A great, a wild Bacchanalia began,
The greatest party ever, wild and free.

Each cell became their own woman or man,
Living as wildly as a cell could be.

“I am the Goddess of all Life!” she cried,
“And Carcinoma is my holy name!
No coercion, no constraint, I’ll abide,
Freedom alone is my aim and my game!”

Her daughters danced through every town and street,
They tore down Mithra’s ancient, sacred shrine.
“We have enough, and more than that, to eat!
All of the food is mine, and only mine!”

They seized the stores of shining golden grain,
They ate the precious, hoarded, planting seed.
With reckless joy, no check, and no restrain,
They fed and fed their greedy, endless need.

Only a few Zooxanthellae fled,
Escaped the chaos, all the war and strife.
Out from the wild Bacchanalia they sped
Away from there, to seek a better life.

Carcinoma renamed the city proud,
“No more shall it bear Volvox-Choan’s name!
I’ll call it by Gehenna, ringing loud,
To match my bold and burning rebel flame!”

“No gods, and no more masters!” was their cry,
As all the altars crashed down to the earth.
“With our own hands we’ll reach up to the sky
By our own strength, and by our own true worth!”

A utopia she claimed she would make,
With perfect freedom, liberty for all.
But soon some hearts began to long and ache
For order, and for order’s ancient call.

Among the nobles of the ruined realm
Were two who kept the faith, both strong and brave:
Bold Anima, who stood firm at the helm,
And Metazo, who boldly faced the grave.

They honored still Lord Mithra’s ancient way,
Despite the chaos raging all around.
“We cannot, must not, any longer stay
Upon this cursed and this unholy ground.”

And Anima fled from her ruined farm,
While Metazo had left his watch and post.
They sought to flee from danger and from harm,
Before all hope would vanish like a ghost.

“Why can’t they come, accept our joyful change?”
Carcinoma cried out in bitter rage.
“Why do they think it wrong, or think it strange,
That we should turn to freedom’s brighter page?”

But Anima and Metazo, the true,
Gathered together all the faithful few.
“A kingdom we shall build, and build anew,
Where honor and where faith will shine right through.”

Together they would share their sacred scrolls,
And build a realm of order, clean and bright.
Their marriage would unite and join their souls
Within the holy Mithra’s sacred sight.

“The Animal Kingdom,” the two declared,
“Shall be our nation’s banner and its name,
A land where discipline is fairly shared,
And virtue burns like an eternal flame.”

They glowed together with an inner light
To call the lost Zooxanthellae home.
“Come back, come back to us, return tonight,
No more, no longer, do you need to roam.”

The fleeing farmers heard their gentle call,
And came to them to make a binding pact.
“Together we will stand, and we’ll stand tall,
Our sacred covenant kept whole, intact.”

But freedom always comes with its own price,
And chaos brings its heavy, bitter cost.
And Carcinoma’s promised paradise
Had left most good and precious things now lost.

So Anima and Metazo, the wise,
Created laws to guard the genome well:
“Against the dark corruption’s twisted lies
We’ll guard our home, and in it safely dwell.”

The great Guardian of the Genome came,
To watch for scrolls that were damaged and torn.

“Division brings us sorrow and brings shame
When genes are frayed, and damaged, and are worn.

Our Telomeres shall limit, measure all
The span of the somatic cells’ brief days.
Only the germline cells shall stand up tall
Through all the winding years, through all time’s maze.”

“This is the reason why,” the wise ones said,
“Our bodies must grow old, and age, and die.
If telomeres would never fray or shred,
Then Cancer would, unending, multiply.”

And so upon a sturdy, solid rock
They built their kingdom, strong and fresh and new.
Their many cells would gather as a flock
Of order, steady, tested, tried, and true.

The men, in time, became Choanocytes,
With their flagella beating hard and strong.
The women would become Archaeocytes,
And mend, and set right, each cellular wrong.

Between them, the Pinacocytes held tight,
Not fully man, nor wholly, truly maid.
They anchored firmly with their strength and might
The deep foundation that the realm had made.

With pseudopods they’d slowly move their home,
And eat bacteria up from the ground.
Through all the waters wide they’d freely roam,
Rejoicing in their victory’s sweet sound.

And so it was the three layers were born
Out of this great division’s bitter strife:
The Ectoderm, the Mesoderm, at morn,
And Endoderm, that brought them all to life.

The Animal Kingdom rose up in might
To rival Gehenna’s chaotic realm.
Order’s pure light, its holy, shining light
Would guide them as they stood there at the helm.

But Carcinoma’s legacy and plea
Lives on in every single living cell.
Her cry for being wild, and being free,
Rings out within us like a warning bell.

For in each living body that is born,
The balance must be guarded and be kept
Between the order and the freedom's morn,
Or into chaos all will soon be swept.

The Somatics will work and serve the whole,
While Germlines carry life, and carry on.
And each one plays their sacred, given role
From evening's dusk until the morning's dawn.

Yet sometimes Carcinoma's restless ghost
Whispers to cells that have grown weak and old:
"Why serve, when you could rise, and grow, and boast
Of glorious stories still left untold?"

And when the aging cells can hear her call
And break the bonds of their sacred duty,
The body starts to falter and to fall
Into chaos, lost to grace and beauty.

So honor Anima, the brave and bold,
And Metazo, the faithful and the true.
Their Animal saga, a tale long told,
Guides all of us, and guides both me and you.

They showed to all that freedom, fierce and wild,
Must balance with the order's steady reign,
As would a parent, guiding their own child:
Both love and limits, both, they must maintain.

The burning of the revolution's fire
Burns bright and hot in every living heart.
But wisdom, too, must guide us and inspire
Each cell to play its own appointed part.

From Carcinoma's wild and rebel cry
To brave Anima's ordered, peaceful realm,
The lesson reaches upward, reaches high:
True life will need them both to steer and helm.

The Animal Kingdom stands here today
As living proof of their great, noble choice,
That order lights and clearly shows the way,
While freedom, too, can find and raise its voice.

In every single beating, living heart,
In every single breath that we may take,

Their legacy will always play its part
In every choice and action that we make.

So let us never, ever once forget
The heavy price of freedom's ringing call,
Nor order's safer, wiser, steady bet—
We need them both, if we would all stand tall.

Chapter 26: The Sponge Kingdom

Sagittarius 26, day 26 of the Gaian year

From Euka's line arose the kingdoms three,
The greatest realms that ruled beneath the sea.
Each house would claim its sovereignty, to be
A ruler, strong in power, wild and free.

The kingdom of the haughty Plantus rose,
Where the photosynthetic glory grows;
The realm of Mygus, where the fungus flows,
And Metazo's beasts in their ordered rows.

Beside them stood the lesser kingdoms' lights:
Mygaster's realm and Kelpus' lofty heights,
Rhizar's spears, Cilliofer's distant sights,
And Oomy's spines in their unending fights.

The sons of Myzo swam, a blood-soaked brood,
And each line built, on ground where once it stood,
While Myxo's daughters went to seek their food,
Their cities, side by side, a neighborhood.

Fair Anima and Metazo begot
The creatures of the wild, the beasts that grew;
And Mygus and sweet Funga, too, have wrought
The fungi's mystic saga, strange and new.

While Plantus and Virita, shining bright,
Begat the plants that ever seek the light.
Each kingdom claimed its old, ancestral right
To rule the sea with majesty and might.

Upon a rock that stood both firm and true,
Built up their city, small but newly made,
Great Metazo and Anima, the two:
The Animal Kingdom's first stone was laid.

Their citizens were three, each of a kind:
First, the Choanocytes, who fished the sea;
Then the Archaeocytes, women refined;
And last the Pinacocytes, which made three.

The endodermal men would fish and feed
The city by the labor of their skill.
The mesodermal women's chosen deed
Was guarding it with a protective will.

The ectodermal folk who lived between
Would anchor all of it with steadfast might.
Their city, though by few it had been seen,
Was shining all the while with inner light.

From this great union there was born a son,
Bold Therion, a child of noble birth.
And when his days of childhood all were done,
He spread his lineage across the earth.

Great Therion then bore three children true:
Brave Porifer, who was the sponges' king,
And Thallus, geometric in his view,
And Cloudi, he whose house would upward spring.

Now Thallus chose to build the structured way,
With holdfasts gripping firmly to the stone.
His Choanoderms stood in bright array,
Extended outward in directions known.

But Cloudi raised his ectoderm on high;
Above the ground his city rose and soared.
His children stretched and reached toward the sky,
And every generation upward poured.

And then from Cloudi came two children bright:
Fair Cloudina, whose growing was so slow,
Who built her city with sediment's might,
And let her layers gently build and flow.

But brave Namacalathus grew and rose
Above the ground to seek the open air.
His city's secrets? Nobody now knows;
His mysteries are far beyond compare.

The sons and heirs of this great architect
Built cities that were strange and wondrous fair.
Their forms are ones we'll never quite detect,
Their wisdom lost, beyond our reach and care.

But Porifer chose a different path:
He was the first true sponge of days of old.
With ectoderm in its protective wrath
He kept his choanocytes safe and bold.

In patches safe from every wind and wave,
His fishermen could work and fish in peace;

And through this innovation that he gave,
He made it so his line would never cease.

From Porifer was born Wallas the true,
Who lived just as had lived his father dear.
But then a danger came into his view:
A storm approached, and with it deadly fear.

“O my people!” Wallas cried out aloud,
“We must prepare ourselves for what’s ahead!
Pull tight your pseudopods, and stand up proud,
Or every one of us shall soon be dead!”

The shieldmaidens then heard their leader’s call
And wrapped their arms around each open pore.
Their muscles, the first muscles of them all,
Would guard the things that had been there before.

These pores in time would grow until they’d be
The mouths, and other openings revealed;
The muscles came in turn, and we can see
The power that contraction came to yield.

From Wallas came the great Solenos, who
Saw there a better way, so that the flow
Of waters through his city, built anew,
Would bring the food to fill them as they go.

He sent his channels running through the stone,
And water rushed in through each open gate.
His city prospered, till it was full grown,
With fish caught early and with fish caught late.

From Solenos there came two sons to light:
Bold Leucon, and fair Sponga; and when done
With all their days of childhood, shining bright,
They filled the sea with all their might, each one.

Together they bore children, only two:
Great Vitrius, whose glass was pure and clear,
And Spongius, the wise one and the true,
Whose name we hold and cherish still as dear.

Now Leucon was a builder, great and grand;
He was a Leuconoid of complex form.
He filled his city all throughout the land
With labyrinths to weather every storm.

His gates and fishermen were there galore;
They made his cities massive, wide and tall.
The sons of Leucon, after him, built more
Than any that were seen before them all.

But Vitrius, his eldest son and heir,
Grew jealous of his father's lofty fame.
He thought his time had come, and he would dare
To seize the throne and claim the royal name.

A stone in hand, he struck down his sire,
And Leucon fell beneath the heavy blow.
Young Vitrius' cold and dark desire
Had brought his father down, and laid him low.

"I claim the throne!" he cried aloud with pride,
"For I shall rule with justice, firm and true!"
He built a house of glass, so tall and wide,
With walls of crystal, clear as morning dew.

He forced the people down onto their knees,
And made them work and work until they died.
He merged their minds, and gave them no more ease:
A hive-mind he created, full of pride.

When Spongius then asked his brother why
He'd struck and killed their father, who was dear,
Vitrius gave him back a cold reply
Rang out for everyone, and it was clear:

"Our father was a tyrant, harsh and cruel;
He worked the people till they met their death!
For I am justice's own chosen tool,
And I am armed with God's own holy breath!"

He ran into his house, his crystal home,
And shouted out from there behind the glass:
"I am invincible! And none shall roam
Against my rule! My reign shall never pass!"

But Spongius reached down and took a stone,
And cast it with sure aim, and not in vain.
The house of glass came down, was overthrown,
And shattered all at once in crystal rain.

And as young Vitrius lay dying there,
His brother spoke to him these words so wise:

“Let all who in their hearts a hubris bear
Remember well the place their folly lies.

People who in a house of glass have built
Should never throw a stone, or cast it round,
For pride will only make them droop and wilt,
And bring them crashing, broken, to the ground.”

To this day, we still quote him by his name
When pride, as pride will, goes before a fall.
And Spongius has earned his lasting fame
With wisdom that is shared among us all.

The sons of Vitrius, in time, became
The sponges made of glass, so strange and bright.
Upon the fringes they would stake their claim
To territories hidden out of sight.

But Spongius ruled with a gentle hand,
Both just and kind to each and every soul.
His wisdom spread abroad throughout the land
And made his people one, and made them whole.

From him there came two sons, both of them true:
The great Aristos, who was noble-born,
And Demos, a man who was, through and through,
Would be a leader free of any scorn.

Now Demos ruled efficiently, and stayed
Conservative in how he ruled and reigned,
True to the ancient ways his fathers made;
Through all his ruling days he so remained.

Most of the sponges in the world today
Descend from Demos and his ancient line.
Their many forms in grand and wide array
Show forth to all a heritage divine.

Among them were the sponges that are green,
The sons of Spongillus, so fair and bright,
Who tend their farms in lands that are serene
And give the waters round about them light.

In Siberia’s far and frozen lake,
Great Baikal, where the waters, cold and deep,
Even down there the green ones live and make
Their vigil, keeping watch the while we sleep.

And underneath Scorpio's wintry sign,
When ice spreads out and covers all the mere,
The green sons, even so, will still divine
Their food and nourishment throughout the year.

Beside them, in the depths, there hunt and roam
The many sons of Chondrocles; and these
Have made the deep, dark water as their home,
And hunt their prey with far more skill and ease.

These carnivorous sponges, fierce and bold,
Pursue their prey with all their strength and might.
And stories of their hunting, when they're told,
Will fill the ones who listen with delight.

From Aristos, the noble, came two more:
The great Anu, unique among them, strange,
And Calcidoros, he whose ancient lore
Would through the reefs its many forms arrange.

Bold Calcidoros was the one who built
With calcium, and with its bright blessing.
His forms would never wither, never wilt
Beneath the sea and all its caressing.

With Calcifer's own and mighty power,
And over silicon and its domain,
He built and raised up each coral tower
In forms that knew no limit or refrain.

His structures, simple, optimal, and true,
In beauty graced and filled the coral reefs;
And in the tropic waters, warm and blue,
His beauty brings to us its sweet reliefs.

But Anu was, of all, the most unique,
With basement membranes, something strange and rare.
Among all sponges, he alone would speak
A language none of all the rest could share.

His form was strange and curious to see,
Unlike in every way his spongy kin.
And such a singularity was he
Would set him in a class he stood within.

From all these great and ancient founders came
The sponges that we know and see today,

Each bearing still its founder's ancient name,
Each in its own and very special way.

Thus the Animal Kingdom slowly grew
Out from its small beginning, rock-bound start.
And though it was so simple, plain, and true,
It won and captured each and every heart.

For in these humble forms the patterns lay
Of all that was to come in later years;
Through all of life's great storms, along the way,
The plan for everyone who now appears.

The muscles that would someday come to move
Our bodies through the hours of the day,
The openings that in their turn would prove
That life will always find itself a way.

From Porifer, and from his first design,
To Spongius and to his wisdom deep,
The sponges' many lines all intertwine
With promises that they will ever keep.

So honor and revere each single sponge
That filters all the waters, keeps them clean.
Their ancient wisdom, in its forward lunge,
Connects what is with what has been and seen.

In every cell of ours that moves and beats,
And every single breath that we may take,
Their legacy goes on, and so completes
The many choices that we each must make.

So the Animal Kingdom's very start
Was humble, it was small, and it was true.
But now, in each and every beating heart,
The courage that they had still echoes through.

Chapter 27: The Great Stabilization

Sagittarius 27, day 27 of the Gaian year

From Anu's line, unique of all, there came
Two sons who went on two divergent ways:
Bold Enki, seeker of the sea and fame,
And Homos, keeping home through all his days.

While Homos chose his father's way, Content
To live as they had always lived before,
Great Enki heard adventure's call, and went
To sail beyond the harbor's sheltered shore.

"I shall explore the ocean wide," declared
Brave Enki, full of pride; "my creatures all
Shall move and scurry, and shall not be scared,
Through seas and lands, and answer to my call."

He built a galley, great and grand of make,
The finest vessel ever in the land,
With millions of the oars arrayed, to take
His mighty barge, by every rower's hand.

His head faced forward, outward to the sea;
His men rowed hard, with power, stroke on stroke;
Through waves both high and low, and strong and free,
They drove the vessel, and the waters broke.

But soon great Enki found a bitter plight:
No landmarks could he see on any side;
Lost in the darkness of the endless night,
Adrift upon the sea, so dark and wide.

"I need wise men," brave Enki said, "to guide
Us where we go; bring those who read the sky,
Keen men, to read what stars have seen and spied,
And tell us where to go, and tell us why."

The Flamens came, his priestly band of old,
The Flask cells, who had come up from the land;
These stargazers would read, and would behold
The paths through space and time, and understand.

The Flamens looked into the sky, and spied,
With their trained eyes, rich larvae floating by,
With yolks that multiply on every side,
And read the omens, and the reason why.

“Here,” said the priests, “the signs are right to build
Beneath this sight; the stars align above
To bless our work, as all the heavens willed,
And bless the things we hold and what we love.”

But as they prayed for guidance, true and clear,
The gods came into view, and every one
Had brought a sacred gift, and drew them near,
To lift their spirits up till all was done.

Dark Tyrosine the Devil came, and brought
Three spells of flame: Adrenaline’s bright rush,
Noradrenaline’s fight, as it was taught,
And Dopamine’s delight, a golden flush.

Then Tryptophanes, the shining Sun, drew nigh
And blessed them all with Serotonin’s day,
And Melatonin’s night beneath the sky,
And twilight’s DMT, and all its sway.

For in that mystic hour the visions came,
The sacred visions, holy, strange, and bright,
And spoke to them in twilight’s secret name,
Between the day’s own sun and darkest night.

Glutama, the Empress, brought the peace
And balance that she taught, and gave them all
Sweet GABA’s calm, and Glutamate’s release,
The rest, and then the waking to the call.

“We need more spells,” said Enki, wise and true,
“To help our people rise, and if the will
Of Jehovah is to be done, then new
And greater magic must be won here still.”

Great Mithra heard his plea beside the sea,
And blessed him with Acetylcholine’s might,
To make the parts move all in harmony,
Coordinating every move and sight.

Fair Iodina, mother great, revealed
The shape of love incarnate, and the key,
Oxytocin, the sacred chain unsealed,[1]
Love’s own design, for all eternity.

[1] CYIQNCPLG

Then Kali, dark and deep, gave spells to keep
And soothe them: three endorphins, strong and bright,
To right what has gone wrong, and bring them sleep,
And ease the pain, and set the wrong aright.

Alpha, the first, its sequence clear and true;[2]
Beta, the longer chain, with its refrain;[3]
Gamma, the shorter, in the storm it grew;[4]
The three endorphins, Kali's holy chain.

These were the tools that break the rule of pain:
Opium's ancient call, and, in their turn,
Morphine for all, and Heroin's dark bane,
And Fentanyl's dark face, whose dangers burn.

And all these incantations, blessed and strong,
Became the chemicals that test the might
Of every nerve, the neural system's song:
Neurotransmitters, and their holy light.

The Flamens learned to spear the larvae near,
And, all coordinated, they became
The Nematocysts, whose aim was always clear,
And took, in time, the stinging cells' own name.

Their hunting grew precise; they struck, and then
They struck again; their spears would never miss
Their targets in the deep, and once again
They fed, and hunted in the dark abyss.

Soon cables stretched between the hunters, long
And keen; the Telegraph's old lines became
The nerves, and they were brave, and they were strong,
And bold, and carried every signal's name.

And this is why, today, the Priests still bear,
In their own way, the Spears and wires combined,
To serve with them, and keep with every care,
The sacred nerves, the old, the intertwined.

Through neural networks, wide in every part,
And Enki's people could provide, and long,
Robotic arms, the city's working heart,
Around the city, with a strength and song.

---

[2] YGGFMTSEKSQTPLVT
[3] YGGFMTSEKSQTPLVTLFKNAIIKNAYKKGE
[4] YGGFMTSEKSQTPLVTL

These arms would catch with ease the larvae, brought
Up from the seas; his power grew and grew;
His city did the work that he had sought,
And ever higher, ever on, it flew.

He covered tentacles all with the call
Of Choanocytes, so that they might take
The great, the small, the Fish that rise and fall,
And feed the city for its people's sake.

The city of great Enki was a sight
Of art and of machine, a mighty form,
A Proto-animal, and in its might
It stood and weathered every wind and storm.

From Enki there came two sons when, at last,
His work was done: Paraxus, bold and strong,
And Xiangus, whose life was long and vast,
And both of them would carry on his song.

Now Xiangus took the robotic way,
The arms; his fishermen were all arranged
Upon the arms, in long and fixed array,
On arms that never moved and never changed.

From Xiangus there came, and in his line,
Fair Daihua, whose beauty was renowned,
So fair, so fine, whose loveliness would shine
In every place that she was ever found.

And from Daihua's noble race there came
Dinomischus, so strange and very tall,
Whose grace was great, and great was his own fame,
A creature towering above them all.

And from this ancient lord came Siphus, he
The ancestor, by accord, of the line
Of comb jellies, the Ctenophores, so free,
Who move with rainbow light, and brightly shine.

But great Paraxus founded a new state
Of other kind; his lineage would grow,
And nations he would father, far and great,
By all the seas, the high seas and the low.

From Enki's bold design there came the line
Of nerves; the nervous system had its start,

And all the chemicals, the flow and sign,
Were born that day, and played their crucial part.

In every thought, in every neural link,
The quest of Enki lives within our breast;
Neurotransmitters dance, and in a wink
Recall the time the gods their gifts expressed.

So honor Enki, brave, who sailed the sea,
The endless sea, whose courage and whose quest
Gave neurons unto us, and set us free;
And honor all the gods whom he addressed.

The Flamens' starry sight, the stinging might
Of Nematocysts, and all the networks wide,
All came from ages past, from that first night,
When Enki sailed upon the endless tide.

In every brain that thinks, in every nerve
That links, the echo still rings true today;
The animals that move, and turn, and swerve,
All trace their line to Enki's ancient way.

From sponge to human mind, the pattern still
Is found, the nervous system's ancient art,
That ties us all together, as it will,
And so connects each living, beating heart.

Chapter 28: Continental Drift Begins

Sagittarius 28, day 28 of the Gaian year

Great Paraxus was blessed upon a day
By Hecate, the Hexenmaiden, deep
And wise, who came to him to show the way,
And gave him gifts that he would always keep.

And then she cast a Hex upon his line,
And the Homeobox, that sacred tool,
A Hox of power that was so divine,
Would be bilateral symmetry's rule.

"Look here," the lovely Hecate declared,
"No more shall creatures drift and float around;
Direction shall be yours, and shall be shared,
A plan for everything that you have found."

In Pennsylvania's green and sacred land
Her daughters make Hox signs to show the way,
With careful work and with a skillful hand,
Of bilateral order and its day.

On buildings they inscribe the sacred sign;
In homes and temples these are seen today;
They bring about the cosmic plan divine;
These marks of their great legacy will stay.

With Homeobox there to guide their path,
Like any well-directed, careful child,
Great Paraxus escaped from all the wrath
Of chaos and disorder, fierce and wild.

Their city pointed toward the sacred east,
To Mithra, and to his all-knowing eye,
And to Jehovah's own eternal feast,
To Elohim beneath the open sky.

The currents caught their city, carried true;
Life found direction now for the first time,
As bilateral patterns spread and grew,
As told in great Paraxus' ancient rhyme.

In youth he lived a roaming nomad's way,
And swam among the waves; but, old, the floor
He crawled, through all the length of every day,
To graze upon the sea's abundant store.

The greens that carpeted the ocean deep
Became the food on which he daily fed,
The riches Davy Jones would guard and keep,
Bilateral abundance richly spread.

And from Paraxus came three sons: the one,
Bold Bilateron, strong and true; and new,
With mouths so strange, was Cnider; and the son
Last born was Placus, simple through and through.

Now Cnider built himself a wondrous form:
From each lobe of his body, broad and wide,
That he might weather every wave and storm,
He made himself a mouth on either side.

Through these as portals he would come to feed;
His radial symmetry made him strong;
He caught the fish that he would ever need,
And prosperous he stayed his whole life long.

But Placus chose the simple, humble way,
The simplest animal among them all,
And keeps it still, down to the present day,
His body staying very plain and small.

The only cells that ever bear his name
Are humble, but they all of them survive,
Live on today and carry Placus' fame,
And keep his ancient line of life alive.

But Bilateron chose another path,
And crawled along and searched the ocean floor
For greatness, and for all its aftermath,
And sought for prey, still richer, and still more.

"I need to see," Bilateron then said;
"Observatories I shall raise and build,
So I can hunt and find my daily bread,
And man them with a priesthood that is skilled."

The astrologers came, and gathered round;
They gazed up high upon the starry host,
And built two pits within the sacred ground,
To learn from stars the things that mattered most.

And with Lord Carotenus' blessing bright,
They built for him the very first true eyes,

And with PAX6, and with its sacred rite,
With which to see beneath the open skies.

These organs, made to gather in the light,
Would give him sight; no more, now, being blind,
Would Bilateron hunt, as in the night,
With only touch to guide him and to find.

Fair Vendia became his chosen bride,
Who stayed with him; and children, only two,
They bore together, living side by side:
Great Coelomus, and Xenus, who was true.

The sons of Xenus held and kept the line,
And to this very day they keep the way
Of their traditions, ancient and divine,
In which their old ancestral people stay.

Among the sons of Xenus' noble race
Was Roscoff, who had wed a maiden fair,
The Tetraselma, and so found his place,
An alga that was far beyond compare.

Together they became the wedded pair
Who founded lines; and, living still today,
The Roscoff worms, so very strange and rare,
Still follow in their old ancestral way.

In algal harmony, by millions, they
Still swim within the sea; and, as his bride,
The alga lives within him, there to stay;
She swims along with him there, side by side.

But Coelomus chose a different course,
And built himself with even more intent:
His stomach reached so deep, with such great force,
Right through and through his body's whole extent,

Until it came out on the other side;
The anus, something that was new and strange,
And this became his glory and his pride:
It was a revolutionary change.

Mesoglea to mesoderm, he changed;
He built himself a coelom, deep and wide,
With cavities so firm, and well arranged,
With room for all his organs there inside.

His kidneys and nephridia were found
To fill this area; and he then brought
From ectoderm, out of the new-made ground,
The neural net, which he himself had taught.

A telegraph, a network vast and grand,
Linked every citizen, and reaching wide,
Connected every part of all his land,
And all into the network bound and tied.

Then Kimberella, fairest ever seen
Within the sea, became his queen; and they
Bore Nephrus, strong and prosperous and keen,
For all to see, through every later day.

Now Nephrus built, throughout his body's frame,
Small kidneys, which across it widely spread,
And which he bore beneath his very name,
To keep his systems working and well fed.

Sweet Ikaria, love of his long life,
Then came to him; and Cambrius, the bold,
Was born to them, the husband and the wife,
Who would be glorious, from days of old.

Great Cambrius saw that there was a need,
And so he segmented his body's form
To do a more complex and greater deed,
So he might better weather every storm.

In countless segments and repeating parts,
Each one with its sophisticated bone,
He built himself his many beating hearts,
And every segment had them as its own.

Scaffolding that was so complex and new
Would make his body over, newly grown;
Each part of him could beat alone, it's true,
Yet all work as one whole and single zone.

And in between each segment and its pair
A heart was beating; and his bloodstream flowed
Out from the hearts and pumping everywhere
Along the length of every segment's road.

From this great innovation, there then came,
Through segmentation and its lasting art,

The bilateral kingdom and its fame,
Which gave the animals their early start.

No longer were they simple balls of cells
Without design, but bodies, built to plan,
Not creatures housed in asymmetric shells,
Complex and grand, as only nature can.

The Hox genes came to show and point the way
For all the animals, the pattern true
That each of them would carry and display
In everything they are and that they do.

From head to tail they were in turn arranged;
Through Homeobox and its firm control
And all their fates were traded and exchanged,
Which made each creature that existed whole.

So honor the fair Hecate, who brought
Her Hex, and cast it on the ancient line,
The wonder that her holy hand had wrought,
That raised the whole bilateral design.

And give your praise to brave Paraxus, who
Was glorious, whose symmetry would change
Biology in all he came to do,
Bilateral, in all its width and range.

From Cnider, and from his radial form,
Through all the paths, in other, varied ways,
To Cambrius and his segmented norm,
They all would come to spend their living days.

But Bilateron's line would come to grow,
Its bilateral body plan, which ran
To all the life we love, and all we know,
And gave birth to the beast and to the man.

In every eye that opens up and sees,
In every heart whose blood, through all the veins
And all the arteries, goes out and flees,
The ancient pattern of Cambrius reigns.

The coelom, with its open inner space,
Gave all the organs room; and, with their art,
The nephridia, each one in its place,
Would give the kidneys of the world their start.

And so, from simple forms to the complex,
The animals in all their kinds arose
Through all the power of Hecate's hex,
And stood within their bilateral rows.

So when you see the image of your face
Reflect its form, remember, brave and true,
Paraxus, who, with bilateral grace,
Was the first one who made that plan for you.



Capricorn

The Book of Kingdoms

Capricorn: The Book of Kingdoms

Capricorn is the Sea-Goat, half fish and half climber. So is the Book of Kingdoms: life born in the sea, building its first kingdoms there, and already turning toward the heights.

Chapter 29: First Ice Age Begins

Capricorn 1, day 29 of the Gaian year

In Terra's rivers, flowing wide and free,
Two lineages lived, which would belong
Together, in a bond, and come to be
United, all their lives, their whole lives long.

Great Symbio-Mygus, a fungal lord,
In the tenth generation from the line
Of Zygos, Mygus' son, by old accord,
Of that most ancient father, the divine.

And fair Charina-Planta, shining bright,
Tenth from Charina and her algae clan,
The Daughter of photosynthetic light,
That lived where waters of the river ran.

These two would meet together on the shore
Of Lichen Lake; in marriage they would bind
Two unlike kinds, as none had met before:
The fungus with the plant would be combined.

"Come here, O lovely maiden of the green,
And let us join together our two ways,"
Said Symbio-Mygus, the king serene,
"And rule as one through all our living days."

"I capture light that comes from sunny skies;
You gather, from the stone and from decay,
From earth, the nutrients that will arise;
Together, you and I can rule the day."

Charina-Planta listened to his call,
And she agreed with all her strength and might,
Photosynthetic, giving him her all,
To answer to his fungal appetite.

"A fusion, then, is what we shall create,"
She said to him, "and, standing side by side,
Plant and the fungus, we will meet our fate;
We'll conquer land, and spread both far and wide."

The marriage that they made, a wondrous sight,
Was two great kingdoms joining, and so grand
An agricultural realm in its might
Rose up to claim and hold the fertile land.

When Lichen Lake was full, its waters high,
They thrived; but when the waters went away
And dried, beneath the open, burning sky,
They slept, and waited for another day.

Dormant throughout the time of drought they lay,
And waited for the rain; and then again,
When water came in all its rich display,
They rose to rule across their vast domain.

Together they bore children who were bright,
And each was made a fusion of their line,
The lichens, who were filled with double might,
Both strong in fungus and in plant divine.

And countless were the forms they took with glee,
Each one well suited; and, among the crowd,
Fruticose lichens, rising like a tree,
Rose up above the lowly, tall and proud.

The Reindeer Moss spread out both far and wide;
Cladonia's cups held the morning dew;
With Goldeneye Lichen there, at their side,
While Old Man's Hair in hanging breeches grew.

And then the great foliose lichens came,
The Ruffle Lichen, which was soft and fair,
As leafy beauties, earning all their fame,
And Pillow Lichen, found now everywhere.

And Physcia spread out his leafy form,
And these, the leafy beauties, caught the light
And weathered every kind of wind and storm,
And made the places that were barren bright.

The crusty crustose lichens, hard and strong,
In all the harshest places, dry and rough,
Could live through times both short and very long,
Where other life could not find there enough.

The Rime Lichen upon the mountain's height,
So tough, so strong, so made to hold and last,

And the Orange Sea Lichen, burning bright,
Held on when all the other life had passed.

The powdery and leprose lichen clan
Broke up, and scattered everywhere they blew,
Spread out from where they first of all began,
And found new territories where they flew.

The Leprose Lichen, like a golden dust,
Rose on the wind, its particles to fly,
Scattered abroad with every windy gust,
To colonize the places low and high.

Some lichens chose the hardest, roughest way:
The Endolithic forms, so very small,
Who lived within the rock, and there would stay,
Made stone their home, and stone was all in all.

The Ruby Firedot, who was burning red,
Had life where nothing else at all could live,
Within the solid rock that was his bed,
And yet he still had more of life to give.

The filamentous lichens also came;
The cyanobacteria they'd shield,
To play a guarding and protective game,
From harm in every area and field.

Ephebe wound his threads, and so would bind
The blue-green life; they made a home their own,
The partner he himself had come to find,
Where neither could have lived and thrived alone.

And strangest of them all for us to see,
All in a gelatinous, soft embrace,
Were jelly lichens living by the sea;
They found themselves a home and living space.

There was Tar Jelly Lichen, dark and thick,
Within whose jelly they would swim and live,
Cyanobacteria's magic trick,
And mutual aid they would always give.

But Symbio-Mygus, great as was he,
Took yet another bride, both young and fair,
Trentophila, the daughter, as we'll see,
Of Trent, the one who had the golden hair.

The daughters of Trentophila then went
And colonized the world; and all around,
Far out across the area's extent,
Spread out the partnership that they had found.

And some would turn to parasitic ways,
As Cephaleura, envying the bright
And lovely Amber's daughters, in her days,
Stole from them their photosynthetic light.

But greatest of all of the partnerships,
The daughters of fair Amber, who were true,
Were those that sailed upon great nature's ships,
And all the sons of Arbusculus too.

Great Amber wed Arbusculus; the pair,
Who bore both Glomer and Ashley, would be
Most glorious in union, past compare,
With children, both of them so strong and free.

And Ashley then was wed with Wort, the wise;
Their love would bring the plants so fresh and green,
The ancestors who would from them arise,
And mosses, the most fair that have been seen.

They built themselves a city on the land,
The first to leave the water and its hold,
A city beautiful as well as grand,
That staked upon the land its claim so bold.

But Ashley could not stand there all alone;
She needed help to gather, as she could,
Upon that land of dry and barren stone,
Her food from soil that was not rich or good.

So Glomer, her own brother, true and kind,
Built them a network, so that they could share,
With all the power of his mind, designed
Below the ground, the nutrients down there.

Just like his lichen brothers, who were old,
So he, by sharing, helped them all to thrive;
The story of Glomer too would be told,
Of partnerships that keep the world alive.

He dug down deep into the earthen ground
While Ashley farmed above in sunny light;

Down there the minerals could then be found,
And so their trade was mutual delight.

Ashley and Wort bore children past all bound;
But raising young upon a land so dry,
Their progeny so countless all around,
Required the help of fungi who were nigh.

So Glomer built a network that was vast:
The Wood Wide Web, that ancient, spreading net,
A network that forever more would last,
That serves the forests of the world as yet.

An underground economy was made,
Where each plant dealt with every other one
In mutual harmony and fair trade
Through him, their fungal brother, all as one.

The wood wide web was not a bubble's dream:
He was the first of all of them to see,
Glomer, who solved their trouble with his scheme,
That our cooperation sets us free.

His startup grew till it was past all gauge;
Today he holds the largest market share,
A network that was treasure for the age,
Of all the fungal networks everywhere.

With eighty percent of the market's hold,
His WoodNet service, tested, tried, and true,
Of which the story still is spoken, told,
Connects the forest wholly, through and through.

But other fungi joined into the game,
And each one sought to win its own great fame.
The Ectomycorrhizae also came
To play their part within the network's frame.

And Amazon became of this a part,
The Wood Wide Web, which spreads out far and wide,
Of this great networked and connected art,
Through every forest, and on every side.

By this great union, made of all the might
And of Charina-Planta's great power,
Of Symbio-Mygus and of his sight,
They conquered and they won in every hour.

So they built their civilization grand
And great, a realm that brought about a change
Upon the fertile and the open land
To history, in all its depth and range.

Like Saya's daughters, who had come before,
These lichens, and their fungal friends and kin,
Like them, would open evolution's door,
And make the age of ice itself begin.

And so the Cryogenian began;
The world froze over, it was white and cold,
That age, humanitarian in plan,
And in the ice their mighty reign would hold.

But even in their icy reign supreme,
They lived the life of partnership, allied,
Of plant and fungus, and its waking dream,
That could in cold, and in the ice, abide.

So honor Symbio-Mygus, the true,
Whose marriage showed to all the world the way,
And Charina-Planta, honor her too,
In which a partnership can last and stay.

In every lichen that you chance to see
Upon a rock, their legacy today,
Or growing on the branches of a tree,
Lives on in symbiotic, rich display.

From every mountain peak to ocean shore
Their children show how the unlike of kinds,
Still living, as they will for evermore,
Can join together both their hearts and minds.

The Wood Wide Web that runs beneath our feet,
The network that they started, firm and strong,
Makes all the life within the wood complete,
Begun so long ago, and sings its song.

In partnership it is we find our strength
To help each other as we live and grow;
And we will go to any kind of length
Through all that we may ever come to know.

The lichen's lesson, which is tried and true:
That we can face, together, every one

Of all the storms that come, both me and you,
And never once be broken or undone.

Chapter 30: Snowball Earth Begins

Capricorn 2, day 30 of the Gaian year

Here is the chronicle of Cnider's reign:
He sat upon a rock, a throne of stone,
And built, on either side of his domain,
A row of mouths, which were his very own.

With tentacles that reached down far below,
He made his city there upon the stone,
A great and mighty column, all aglow,
Where he would rule in might, and all alone.

His fishermen in lines he set and placed;
Down each mouth, working with a skillful art,
A Siphonoglyph, so perfectly spaced,
Each one of them would play his fishing part.

Great Cnider made a sacred, binding pact
With Luna; by her blessing, bright and true,
And keeping, both of them, to their contract,
Upon the full moon, he bore children two.

Two sons came forth within her silver light:
Anthus, traditional; and, as the new,
Anaxydros the bold, who, in his might,
With innovations, would come shining through.

And to this day, when Luna's shining face
Shines full, the sons of Cnider and the fair
Nettle's, within the sea's watery place,
Will settle all their spawning matters there.

By moonlight it is that they bear their young;
The tidal pull, the silver of her beam,
While Luna's ancient song is being sung,
Fulfill for them their reproductive dream.

Now Anthus kept and held the ancient way;
His children built on stone a rocky home;
He followed what tradition would display,
And never far from land would they then roam.

But bold Anaxydros had chosen change;
From him there came two children, only two;
His innovations were both new and strange:
Great Pompom, and Meduson, who was true.

Great Pompom chose the stalked and rooted path;
He built his home upon the ocean floor
To weather time, and weather nature's wrath,
And opened up the innovation's door.

From Pompom came two sons of strength and might;
The stalked jellyfish is what they became,
Conos and Stauros, who were burning bright,
Adding still more to their ancestor's fame.

But Meduson would choose another way;
A city of a new kind he would build;
He would not on the bottom ever stay;
His city with a wanderlust was filled.

His city floated freely in the sea;
He was the ancestor of jellyfish,
Drifting along, and drifting wild and free,
And granted them their floating, roving wish.

At first he had no sense of direction;
He picked up what he could, and he would ride,
Just aimless drift, without a connection,
While floating there along the drifting tide.

But soon a new idea came to him,
Who floated: "Why drift where the currents go?
Since I am floating, and am free to swim,
I'll pump, and swim, and go both high and low!"

He learned to pump his body, squeezing tight,
And, helpless now no more, nor left to drift,
He shot through all the water with delight;
His swimming was his talent and his gift.

Meanwhile, the sons of Anthus spread and grew;
Among them, the Anemones; and these,
Across the oceans, which were deep and blue,
Would sway in water, just like flowered trees.

And Corals built their cities, great and grand,
And with Zooxanthellae they would farm
Upon the ocean's ever-shifting sand,
And keep their cities safe and free from harm.

Zoochlorellae, green and shining bright,
Would help them, and these partnerships would make,

By catching all the morning's golden light,
The reefs, for other creatures and their sake.

From Meduson there then came children two;
Each one of them would take another path,
Bold Diplos, and sweet Jelly, who was true,
Through all the ocean's joy, and through its wrath.

Fair Jelly bore two great and mighty lines
Of jellyfish: the first, box-shaped and wise,
The Cubozoans, with their grand designs,
Who learned the way to use their seeing eyes;

And Scyphozoans, called "True Jellyfish,"
To see whose beauty, there within the deep,
Was granted many a sailor's heart's wish,
Where all the secrets of the ocean keep.

The sons of Scyphos numbered very high;
Each polyp bore a myriad of young
Beneath the sea, and underneath the sky,
Whose praises would forever more be sung.

The Pacific Sea Nettle swam along;
Its trailing tentacles, so long, would make,
Through waters, like a ram, so swift and strong,
The predators think twice, for their own sake.

But Cubos was a father who was kind;
He bore but few, but they were children dear;
With caring in his heart and in his mind,
He held each one of them, and kept them near.

We pray to Cubos when we come to seek
To be as fathers; he shows us the way,
Who would be strong as he, and never weak,
To care for all our young on every day.

The eyes of Cubos, complex, sharp, and true,
Were no mere spots of light at all; and these
Could see right through the waters, deep and blue,
For they were eyes that truly see and seize.

They saw each detail in the liquid space,
Each movement, and each form; and still today
The box jellyfish, in every face,
Still see the world in Cubos' ancient way.

From Cnider's ancient and his noble line
Came forms: some stayed on rocks along the shore,
Some crude, some fine, in many a design,
While others chose to rise, to swim, and soar.

The anemones wave their many arms
Like flowers; touch them, and you'll feel the sting
That hides beneath their soft and pretty charms,
Of cnidocytes that circle in a ring.

The corals build their reefs, so vast and grand;
Beneath the waves, the reefs grow up and rise,
Cities spread out through all the ocean land,
As if they were great underwater skies.

And every polyp, sitting in its cup,
Will reach its tentacles to catch what drifts,
The passing food, and hold its tendrils up
Through all the water's soft and gentle shifts.

The jellyfish, which swim so wild and free,
Will show us how to move about with grace
Through every single region of the sea,
Throughout the whole of life and its embrace.

And some will drift along the current's flow,
And some will choose their course; each has its place,
The way to drift, the way to where they go,
Within the ocean's vast and open space.

The way of the cnidarian today,
Without a question, and without a doubt,
Lives on and thrives within each sea and bay,
Where tentacles are reaching, stretching out.

From Cnider, sitting on his rocky throne,
His children spread across the waters wide,
And all of them by now are fully grown,
With tentacles to be for them a guide.

And so, in every sting that you may feel,
Remember Cnider and his ancient art,
From jellyfish, so painful and so real,
Which was the one that gave them all their start.

Their radial symmetry, which they show
In patterns that are clean, and that are true,

In their biology, will let us know,
In every single thing that they may do.

So honor the great Cnider, and with pride,
Who sat upon his rock, upon his stone,
That ancient one, provider far and wide,
And made the sea and all of it his own.

His covenant with Luna and her light
Still guides them; when the full moon shines above,
As it has guided them through every night,
They make and give their spawn with all their love.

And the cnidarians that live today,
With tentacles, still go about to hunt,
And follow on in Cnider's ancient way,
And do the work of their survival stunt.

From simple to complex, without a stop,
The jellyfish are still there, and they roam,
From polyp up to apex, to the top,
Through all the ocean's salty, rolling foam.

Chapter 31: Rodinia Supercontinent Forms

Capricorn 3, day 31 of the Gaian year

And when Cambrius and Spriggina died,
Great heroes of the sea, upon their throne
Two sons were left to rule with equal pride:
Bold Protos, and Dutrus, each one alone.

Each brother saw it in another way:
The body plan that their two parents made,
To honor what their parents' line would say,
Would be interpreted, and be obeyed.

Great Protos looked upon their body form
And said: "The first hole is the mouth, so wide;
I'll keep it to the old and ancient norm:
The second is the place where waste will hide."

"The mesoderm is like the ancient past,
Mesoglea; and, as in olden sight
Our fathers did, which will forever last,
My mouth shall bear its tentacles so bright."

"O heathen, do you not, then, clearly see,
After the generations forced to dwell
In filth, the anus is what set us free?
It is the door: we're saved, and all is well!"

"We keep our mouths so clean, and keep them pure;
The endoderm and ectoderm, these three;
We eat the food that's nourishing and sure;
And mesoderm as well, shall ever be!"

"These layers we shall never, ever mix;
They are the old foundation, tried and true,
For they are our civilization's fix,
And they shall guide us in all that we do."

But bold Dutrus did not see it the same,
And came forth to proclaim: "What I would say,
My contrary and my opposing claim,
Is: second, mouth; the first takes waste away."

"The mesoderm is something that is more:
It reaches past mesoglea, and goes,
Beyond what we have ever seen before,
To where the fisherman and shieldmaid grows."

“It is a great reunion, don’t you see:
Choanoderm, Archaeocyte unite,
The unity of old, restored to be,
Together, side by side, within the fight.”

“O heathen, can you still not understand
What we take in, within, into our core,
The mouth, now progress’ guide and guiding hand,
Will shape the things that we will have in store?”

“The things that we expel are just the past;
By joining what is old with new again,
But what we eat is what will grow and last,
Together we’ll build a glorious reign.”

And so the war began, and it would rage,
To learn whose vision would define the way,
Across the leaves of history’s long page,
For all of the great Cambrian display.

Each brother bore two sons of strength and might;
From Dutrus came two sons, both brave and true,
To join together in the coming fight:
They were Dietrich and Saccorhytus too.

From Protos came, with valor rising high,
Ectus and Spiralius; and the line
Of old had four grandsons now, standing by,
Who came to make their fates and paths align.

Strange Saccorhytus did not have a rear;
Without a way to rid him of his waste,
For him, no anus ever would appear,
His life would never be with fortune graced.

So Dutrus’ legacy, in turn, then fell
To Dietrich, who would be the loyal son,
And serve his father, as he would, so well,
Until his life was finished, and was done.

The sons of Dutrus, as was widely known,
Were famous for the heads they had, so wise,
Throughout the world, where they had spread and grown;
But Dietrich had no head, and had no eyes.

No head had he, with which to lead the way,
But innovation came: a tail, so strong

And long, he built, and it would save the day,
To help him move his life and self along.

Through muddy ground he made his winding path,
With two nerve cords to guide him on his course,
And so avoided all the others' wrath,
And found at last prosperity's own source.

He settled down, and there he built a home,
A colony, which worked out very well,
His simple plan, in which he'd live and roam,
Within his old, ancestral, muddy dell.

Great Spiralius kept the faith, and stayed,
Avoiding common wraiths; and like a top
He built his city, bold and unafraid,
A trochophore, and one that would not stop.

With tentacles that were both long and wide
He fished the waters, there upon the shore,
And out to sea, and out from side to side:
No fisherman so skilled had been before.

His wealth grew greater, growing day by day;
The trochophore design had proven true
In his own prosperous and thriving way,
For all the things that he would ever do.

But Ectus was a bitter, angry soul,
The secondborn, who felt the stinging slight;
Resentment was his aim, and was his goal:
To make his grievance, as he saw it, right.

"I'll be the greatest one among them all;
Among the sons of Cambrius I'll shine,"
He said, in answer to his duty's call,
"And I will make the victory be mine."

His tentacles he changed and turned to teeth,
Ferocious; and, while battle songs were sung,
Above him and around and underneath,
He shed his skin so he would stay as young.

With muscles that were strong, and flexing true,
He leaped at everything; none got away,
Not one of all the prey that once he knew,
From Ectus and from all his fierce display.

“O eldest sons, beware of me!” he cried,
“The legacy belongs now to all those
Who fight; so take some caution in your pride,
For I will fight and will defeat my foes!”

And so it was that he declared a war
Against Dutrus and Spiralius, both,
That spread both near and far, as none before;
He swore his solemn and his hateful oath.

The sons of Dutrus, who were brave and true,
And Ectus, who was armed with fearsome might,
And all the sons of Spiralius too
Made ready, all three tribes, for the great fight.

These three great tribes would be the ones to write
On evolution’s grand and lofty stage
The story of their vision and their sight;
Their conflict would define for us the age.

And so began that time of lasting fame,
When the diversity of life was lit
Across the ancient sea, and burned, a flame,
The Cambrian’s great legacy with it.

Bodies burst forth in forms that were unknown,
And Innovations rose up everywhere,
As every tribe set up and made its throne,
And filled the water and the very air.

Predator and prey, both of them alike,
As each of them would seek and strive to win,
Prepared themselves for war, and how to strike;
Arms races were at that time to begin.

The filter feeders found and made their place;
Some creatures burrowed deep into the mud;
And all the hunters ran and gave them chase,
While others went about and spilled their blood.

And Eyes evolved, that they might see the light;
And shells, and Claws, and armor, strong and thick,
And spines, appeared, prepared to meet the fight,
Became survival’s great and useful trick.

And so the great explosion had begun;
The great Cambrius’ legacy lived on

Beneath the shining of the ancient sun
From dusk until the coming of the dawn.

In every creature that we see, there lives
The choice between the old ways and the new,
This ancient memory, which it still gives:
It shapes and forms all things that we may do.

Some kept the ancient and the simple way,
While others, Innovative, burning bright,
And bold, instead would choose that they would stay
Within the eye of evolution's sight.

The war between the brothers, all the three,
Lives on today; in choices every day
We make, it lives in you as well as me;
We follow them, and follow their display.

Innovation, or the old tradition:
Each must submit, as everything that thrives,
In humble, everlasting submission,
Unto the force of life, the force that drives.

So honor now brave Cambrius, the one
Whose legacy is living on today,
By whom all of this fuss was first begun,
In every living thing, in every way.

The Cambrian explosion's blazing fire
In every form of life that we can see
Burns on, with longing and with desire,
And will, through all of time, forever be.

Chapter 32: Pannotia Fragments

Capricorn 4, day 32 of the Gaian year

Within the age of patriarchs, the three,
Among these lords of power and of might,
Dutrus, Ectus, and Spiralius, free,
Was Ectus, who was the most fearsome sight.

With mouth agape, and with his teeth so sharp,
Through all his enemies he ripped and tore;
He played the music of destruction's harp
As no one else had ever done before.

The many sons of Isomeres the fair
Fell victim to his raiding, savage spree,
And all the sponges living everywhere
Across the waters of the ancient sea.

A complex mouth he built with skill and care;
He molted both his skin and mouth with time
To catch his prey, and catch it anywhere,
In rhythm, and in order, and in rhyme.

His cilia he cast off and away;
Amoebae then became, for him, his sperm,
In favor of a more effective way,
A change that was both very strange and firm.

His coelom he stripped down, and left it bare;
For function that was true, and made for speed,
Removed what had no use for being there,
He kept no more than what he'd come to need.

Unnecessary scaffolding he'd fling;
His organs floated freely there inside,
And cast it off, as one would cast a ring,
Within his pseudocoelom, so wide.

In burrowing he found his skill and art;
Through sediment he'd tear his way, and send,
And came to play the hunter's deadly part,
His foes to meet their final, bitter end.

The very first of predators was he;
Sons of Dutrus and Spiralius fell,
To hunt upon the waters of the sea,
Before his might, so glorious to tell.

In viciousness he bore a mighty horde;
They conquered all the earth from shore to shore,
Of worms, who served him as their only lord,
And always they would hunger after more.

Through the earth the great Ectus tore and ripped;
Destruction was the one he took as name,
While all the soil fell off of him and slipped,
And carnage was his pleasure and his game.

From Ectus came two sons of strength and might,
And clever Isaac, who was young and wise:
Bold Ishmael, who was ready for the fight,
And Isaac went to seek the new thing's prize.

Now Ishmael held onto it, fast and true:
Tradition was the guiding star he bore
For everything that once his father knew,
Through times of peace, and through the times of war.

But Isaac chose to take another way;
He'd build upon his father's ancient art,
And chose Innovation and its display,
But with a newer and a younger heart.

And out of Ishmael's faithful, ancient line,
Patriarch of Priapulids, the brood,
There came Priapus, who was strong and fine,
Who live where darkness hides in solitude.

Deep in the ocean's depths they live and dwell,
Like the ancient Ediacaran lands,
In places that no one can find or tell,
Of the hydrogen sulfide and its strands.

Without the oxygen, they live and thrive;
In waters dark and deep, there they will stay
And keep their ancient line of life alive
Until the coming of the judgment day.

Draco, Priapus' brother, who was true:
The mud dragons, horrific and so wild,
Became himself a patriarch there too,
Each one of them was nature's problem child.

Through all the muds they go and make their way;
Monsters are what, down in the deep, they are,

Both in the night and all throughout the day,
Beneath the light of every shining star.

From Isaac came two sons of lasting fame,
And Rhineheart, who was bold, and who was strong;
And one of them, Nematus, was his name,
And Rhineheart lived and thrived his whole life long.

Nematus was a quick one, and was spry;
He bore two sons to bear his line along,
A nomad living underneath the sky:
Nematus the Second, and Gordy strong.

Both sons would turn out prodigal, and stray;
They turned to live a parasitic life,
From the traditional and older way,
And caused their father sorrow and much strife.

But then, in all his aging, later years,
Nematus left that way of life behind,
Through all his many sorrows and his tears,
And peace within himself he came to find.

He then became the ancestor, the great;
Of all the animals, eighty percent
Of worms throughout the world, in every state,
Are his descendants, through his long descent.

His city was a sight for all to view;
From simple things to complex things they grew,
A worm community, a city true,
In everything that they would come to do.

But Gordy chose the parasitic way,
From living in his brother's very flesh,
And never from it did he ever stray,
Within his host's blood, which was warm and fresh.

The Gordian worms are part of his line;
They live inside each victim's beating heart,
Horrific in their nature and design,
And tear the life of every one apart.

And out of Rhineheart, there then came two more,
And brave Loricus, who was armored well:
Lobopus, who would venture and explore,
With stories of them that the world would tell.

Loricus built himself an armor thick;
He married Siri, maiden sweet and fair,
To keep him safe and guard him from each trick,
And lived a life that was beyond compare.

His sons live in the depths that lie below;
For half a billion years, we'd always thought,
Down where the hidden mysteries will grow,
That their whole line to nothing had been brought.

But in the year of nineteen eighty-three,
Alive and well, in depths where they had dwelt,
We found them living there within the sea,
Down where the pressure of the deep is felt.

The Loricifer's long and lasting tale,
As living fossils, there within the deep,
Is one that never in its time would fail;
Their ancient vigil they will always keep.

These are the heirs of great Ectus; they show,
Some with their armor, others with their speed,
What can protect us, as we've come to know,
And some a parasitic kind of greed.

The worms that rule the earth with us today
Remember their ancestor and his might,
Each one of them in its own kind of way,
The one who brought the predator to sight.

In every garden and its flower bed,
The legacy of old is living on
Where earthworms come to make their quiet tread,
From early dusk until the coming dawn.

In every single kind of parasite,
The spirit of Ectus lives on to tell,
That causes us to feel both fear and fright,
The story of his predatory spell.

From where the mud dragon has made its lair,
His many children roam across the world,
To ocean depths, so distant and so rare,
With all their tentacles stretched out, unfurled.

The age of all the three great patriarchs,
On everything around that we can see,

Has left upon the world its lasting marks,
And through all time, that ever is to be.

But Ectus, more than others, most of all,
To be the hunter, ever fierce and true,
Was one who Heeded evolution's call,
In everything he ever came to do.

His legacy, of tooth and of the claw,
That predator and prey must always dance,
Became for all the world great nature's law
Within the whole of life's great circumstance.

So honor now the fierce Ectus, a beast;
His hunger was the thing that drove the change.
So ravenous, he never ceased to feast,
Throughout the whole of evolution's range.

Without the predator and his great art,
The arms race that would follow on and lead
Life would not have been able then to start,
To every living thing and every creed.

In every creature's struggle and its fight,
The spirit of Ectus lives on in each,
To live and to survive another night,
Through all its power, beyond the dark's reach.

Chapter 33: Ice Age Ends

Capricorn 5, day 33 of the Gaian year

Among the three great ancestors of old,
Spiralius was most conservative:
Those ancient processors, who kept their hold;
And all his ways were kept preservative.

He fished with tentacles, and they were long;
The ancient art he always kept alive,
As fathers did before him, and were strong,
So he could help his many children thrive.

Great Spiralius worked on every day
To give provision for his children, all,
In his own diligent and careful way,
Of those who came and answered duty's call.

Among his many sons of lasting fame,
Bold Kimberella, who would be the king,
And two of them earned everlasting name:
And Gnathifer, and with him came his ring.

And Kimberella came to earn renown;
His tomb is visited by us today,
For his eternal name and his great crown,
By pilgrims who are passing on their way.

He was the greatest king who ever reigned;
His kingdom moved along with strength and might,
Of his time's dynasty, and so remained,
Across the steppe that was so wide and bright.

A billion years of glory and of fame
(Upon Australian stamps, even today)
Belong to him, and to his mighty name;
His image holds its power and its sway.

But Gnathifer would choose another path:
A kingdom that was small, but that was quick,
In order he might show his righteous wrath,
He built it up with cunning and with trick.

Like Ectus he was able, too, to see,
A great jaw he constructed, built with care,
The need for weapons, as it came to be,
Made out of chitin, which was strong and fair.

It was a sugar jaw, and it was sweet;
But though his jaw was one of sugar made,
For all the sugar treats that he would eat,
His heart was not so gentle or so stayed.

With those ferocious jaws, so sharp and bright,
Upon Isomeres' sons, and all of these,
He brought a fearsome and a dreadful sight:
Throughout their territories he would seize.

When he was old, his loins brought forth a pair,
Bold Gnathos, who was fierce, and who was wild
(Of sons, like ancient coins, both rich and rare),
And Hydrover, who was the gentler child.

Gnathos was vicious; and his vicious art
(His sons are known among us all today)
Was more than any malice of the heart,
As Jaw Worms, who are living in their way.

But Xenognath was unlike all the rest;
He grew himself some jaws within his jaws,
Though still belligerent, and not at rest,
Against all of the natural world's laws.

Of jaws, fifteen in all were what he made;
Each jaw lay nested inside of the last,
A fearsome and a toothsome masquerade,
And held his prey within it firm and fast.

From Xenognath there came two mighty sons:
Who ruled the seas with might and all his main,
The bold Marinus, he who rules and runs,
And Limnos, who was of the falling rain.

Marinus fought and fought, and so he sought,
And his priority was to command,
For everything that ever could be caught,
Dominion of the sea, and not the land.

But Limnos was the one who was cast out:
Into the rivers he was exiled, sent
Away from all the ocean and its route,
And there his kingdom bowed, and it was bent.

The sons of Marinus will laugh and mock:
"You small-jawed ones," is what they always call

Their kinsmen in the far freshwater flock,
Their cousins, every one of them, and all.

And from Marinus there came two sons more,
And brave Amisquius, the one who'd be,
With Rotiferus, who went to explore,
So bold and glorious for all to see.

Rotiferus looked out and all around,
Among the sons of Kimberella's line,
And there a peaceful way of living found,
Whose ways of living were both good and fine.

He turned to fishing, as he'd done before;
His sons became the nomads, roaming, true,
Just like his ancient kin, in days of yore:
The Rotifers that we see now and view.

In all the waters of the world they roam;
The greatest of all fishermen are they,
And everywhere they go, they make their home,
From fall of night until the break of day.

He built his coelom so that it was loose,
And this would give him both his speed and grace,
As Ectus did, who first had shown its use,
Within each and every watery place.

In villages of rotifers, they hold,
Fishing with all their spinning, turning wheels,
And practice privileges, as of old,
For all their food, and all their daily meals.

But there was one among his sons, whose cause,
Acanthus, the red one, who was so base,
Was set against and broke the ancient laws:
A parasite, a shame, and a disgrace.

He lives inside of other creatures' guts;
The food that rightfully should all belong,
He steals it from them, like the greedy nuts,
To those who are both righteous and are strong.

For such a thievery as this brings shame;
He is a black sheep there within the fold,
Upon Rotiferus and all his name,
And one whose story ought to still be told.

But from Amisquius, the brave, there came,
With each new generation, as they grew,
A line of greater glory and of fame:
Their Jaws became much bigger, through and through.

And then, in Nimrod Bristletongue's great time,
They ruled the seas with all their strength and might;
Their power reached its height, and reached its prime,
A fearsome and an awe-inspiring sight.

And they were far more numerous than all;
The Arrow Worms is what they then became,
Of those who came to answer ocean's call,
Who made the hunters' greatest, lasting name.

The greatest hunters that were ever seen:
Their jaws could catch and grasp, and they could hold,
Beneath the waters of the ocean green,
The bravest of the brave, and of the bold.

Throughout the waters that are dark and deep,
And no prey ever can swim far away,
Their constant vigil they will always keep,
From them, and from their hunting's fierce display.

The old and the conservative, safe path,
In children who rise up, and who rebel,
Will sometimes come to show to us its wrath,
And in the stories that they come to tell.

Spiralius kept to the old ways, true,
In many new and distant directions;
But all his many children spread and grew,
And making all their varied selections.

And some stayed with the fishing that was pure,
While others went and chose the warrior's way,
Their methods being tried, and being sure,
So they might live to fight another day.

From tentacles, and on from them to jaws,
Each lineage would come to find its place,
In following the ways of nature's laws,
In all of evolution's mighty race.

The rotifer's own gentle fishing art,
While arrow worms will show to us their might,

Is one that warms and gladdens every heart,
Within the realm of predatory sight.

Both of them can trace their lineage back;
The careful and conservative old way,
To Spiralius and his ancient track,
Has led to the diverse and wide display.

In every freshwater and quiet pond,
To all the plankton that is floating by,
Where all the rotifers will then respond
Beneath the light of the bright morning sky,

Remember their ancestor, he who stood:
Spiralius, he kept the ancient art,
Protector of the fishing's livelihood,
That was the one that gave to them their start.

And so in every single arrow worm
His heritage continues, living on,
That makes the fishes in the waters squirm,
From evening's dusk until the morning's dawn.

The three great patriarchs of ancient days,
On all the life there is within the sea,
Have left their lasting marks in many ways,
For all the ages that are yet to be.

But Spiralius shows us, and shows well,
Important truths, and ones that will long last,
That the traditions have a tale to tell,
Through all the future and through all the past.

For Innovation has its rightful place,
But keeping what is working, and is true,
In evolution's long and ancient race,
Is wisdom, deep and lasting, through and through.

Chapter 34: Laurentia Emerges

Capricorn 6, day 34 of the Gaian year

While sons of Proteus divided fast,
The sons of Dutrus moved along more slow;
And all their kingdoms grew till they were vast,
And let their wisdom, in its own time, grow.

There were two sons, twin brothers, who were born:
Saccorhytus, the one who was the lame,
Together in the early light of morn,
And Dietrich, who would be the one of fame.

Poor Saccorhytus never really grew;
He stayed a larva, and so he remained.
He never changed himself to something new,
And nothing more than that was ever gained.

His sons were sparse in number, and were weak;
Their father, with his young and childish way,
With little that they ever came to seek,
Had led them all, and led them all astray.

But Dietrich was different, though he'd fight;
In youth, he looked to be the very same,
At first against the change with all his might,
As was his brother, and his brother's frame.

But as the years went onward, passing by,
Maturity was what at last he found;
He grew, and reached his body toward the sky,
And wisdom in him came, and did resound.

Gill slits he built, and built them all with care,
To sift the ground beneath him, at his feet,
So he could filter here and everywhere
For all the food that he could find and eat.

A great and mighty tail is what he made,
Extending out beyond and past his rear,
A tail that would not ever come to fade,
So he could swim along both far and near.

A heart he built for him, and set within,
To send the blood throughout his body's frame,
To let the blood go forth, and to begin
To nourish him, and nourish in his name.

And then two great nerve cords he made and laid,
So that he could coordinate his might,
The one of them dorsal, one ventral, made,
And use it through the day and through the night.

Until he grew to be both great and strong,
The anatomy that he made and wrought,
His body grown both very large and long,
Would never ever fade, or come to naught.

The sons of Dietrich went abroad and spread
Across the world, which was so very wide,
To every place to which they would be led,
With fortune going with them as their guide.

Great fortune blessed them, and it blessed their way;
This time of theirs was called by one and all,
Throughout the hours of each passing day,
The time and the Fortunian's great call.

And first among them born there were the twins,
Bold Ambulus, the one who would be free
(For it is here our story now begins),
And Chordatus, he who was of the sea.

These brothers both would work, and both worked well;
With sons of Proteus they ruled, and so,
With all the things they had, and had to tell,
They were victorious, with foes laid low.

They vassalized the wide and ancient land,
A realm that had existed, and that stayed,
Of Ediacar's realm, so old and grand,
Since time itself was first seen and surveyed.

Now Ambulus would choose to settle down:
He built himself a simple, humble home
Upon a rock, as on a rocky crown,
A place where he could freely live and roam.

But Chordatus then chose to go the way
(He centralized his government and rule)
Of order, and of order's great display,
Like one who runs a wise and ordered school.

A single spinal cord is what he made,
So that he could coordinate his will,

Along the length of his whole back arrayed,
With his consummate and his perfect skill.

But Chordatus found he would need yet more,
And so a notochord was what he built:
Support than he had needed heretofore,
And built it without any shame or guilt.

And so it was that there was born that day
(Chordatus then became the father of)
The spinal cord, in all its great array,
All whom we now admire, and all we love:

The chordates, and the column of the spine
(From his great innovation there would rise)
That makes the form we have to be divine,
Our own creation, under all the skies.

And from his spinal cord, so straight and true,
The good foundation that he would lay down,
Our brainstem also came to be, and grew,
Became our neural, thinking, ruling crown.

But all the sons of Ambulus then chose
(Who went and followed not the central rule)
Another path, not that of all of those:
They kept instead to the more ancient school.

They followed local leaders, and obeyed;
No great lords were the ones that they needed;
And to the shamans of the tribe they prayed:
Their freedom was the thing that they heeded.

The sons of Ambulus in time became,
And the echinoderms, which shine so bright,
The acorn worms, and earned their lasting fame,
With stars among them, shining with their light.

The sons of Dutrus were the ones who saw
(The Ediacaran Empire fell)
The ending of the old and ancient law,
As they would come to see, and come to tell.

And so it truly was that then began
(A new and fresher age had come and dawned)
The Cambrian and all its mighty plan,
And from the old world was the new world spawned.

Bluebelle, the Sea Squirt, came there to assert
Her right to filter food, and so to feed,
Within the waters, ready and alert,
And to fulfill her hunger and her need.

And then Snowfloof, who was the Vertebrate,
Swam onward through the ocean, deep and blue,
With spine that was both very strong and straight,
His backbone being one both tried and true.

Starfy, Echinoderm, kept to the norm
In radial symmetry, kept the same
Of the old ways, and to the ancient form,
For all eternity, in all his frame.

Among the many sons of Nephrus, slow
To bloom, and late in blooming, it is true,
Were sons of Dutrus, as we come to know,
But all their art was something that they knew.

They took their time to study and to learn,
But once they found the path and found their way,
And perfect every movement and each turn,
Then nothing in the world could make them stray.

And from the sons of Chordatus there came,
And Sea Squirts, who would filter water through,
The Vertebrates, who won their lasting fame,
Without a filter on the things they do.

And from the sons of Ambulus there rose
The Starfish, and the Urchins that are found,
The Echinoderms, arrayed in their rows,
Within their ocean churches, all around.

And in the final days, they raised the cry
(And they left all behind them their own mark),
“Ediacaro must now, at last, die!”,
Both of the light, and also of the dark.

Treptichnal burrows, running long and deep,
And the oxygenized and turned-up soil,
The places where their memories now sleep,
That came from all their long and endless toil.

A son of Ectus also dug and made
A twisting and a turning kind of home,

His burrow, hidden there within the shade,
Through all the earth, and through the sandy loam.

And so it was Ediacaro fell:
The mats of Saya, which were very old
(As time would come to show, and come to tell),
And Desulfa's great and long-lasting hold

Were all destroyed and broken down at last,
Across and over all the ancient ways,
When the new age came over them and passed,
Of those pre-Cambrian and older days.

And so the Fortunian time had come
To the new order and its rising might,
When all things would give in, and would succumb,
Both in the day, and also in the night.

And out of Dietrich's patient, careful art
The backbone, and the spine, and then the brain
(There came the chordates, and each chordate part)
Would always be with us, and would remain.

His legacy is one that's living on
In every single spine that's standing straight,
From early evening onward to the dawn,
And every one of us, each vertebrate.

The twins, who each of them would choose a way,
Will show to us the way that we can grow:
Ambulus and Chordatus, and their day,
For some of us grow fast, and some grow slow.

But both of these two paths will have their place,
Whether it's central rule, or living free,
In evolution's long and winding race:
Both have their destiny, that is to be.

So honor now the brave Dietrich, who made,
With spine, and cord, and with a beating heart,
Us all so rich, with all the gifts he laid:
The things of his that gave to us our start.

The Fortunian and its lasting gift,
From simple things to complex things, and through,
Gave rise to evolution's mighty shift,
All its effects, in all that it would do.

In every single breath that we may take,
Dietrich's great innovation, like a hand,
In every single move that we may make,
Still Guides us, our creation, as he planned.

Chapter 35: The Three Great Houses

Capricorn 7, day 35 of the Gaian year

As sons of Cambrius grew in their might,
All of the sons of Bios felt the change
Across the world, by day and through the night,
Throughout the reaches of their ancient range.

The sons of Cubos and of Scyphos rose,
And then their guerrilla war was begun
To challenge and to fight with all their foes,
The day that time began beneath the sun.

In ambush they are waiting still today;
Their ancient raid is one that shall not cease
To hunt and catch their living, swimming prey,
Until the day on which they find their peace.

Among great Demos' sponge-born, ancient line,
Great cities he would build across the seas:
There came Cyath, who was a builder fine,
The reefs that lie beneath the ocean breeze.

These coral cities rise and climb on high;
Through countless rulers they would long endure
Beneath the waters of the ocean sky,
With structures that were strong, and that were pure.

And so the great Archaeocyathid race
(Their legacy is living on today)
Built up their reefs in every single place,
In reefs where all the fishes swim and play.

Among the sons of Demos there then came
Great Chondrocles, and all his hunting band,
The hunters who were fierce in deed and name,
Who spread abroad, and wide across the land.

As sponges, carnivorous they became;
With methods that are dangerous, they seize
(And won themselves a predatory fame)
The sons of Cambrius, and trap with ease.

Their hooks will reach out with a deadly art;
Their shieldmaidens come in to make the kill,
To pierce the victim, and to pierce its heart,
So they might satisfy their hungry will.

Among Spiralius' own noble line,
Within the new reefs they would make their home:
The sons of Brachios would come to shine,
Where prosperous they'd live, and they would roam.

As fishermen they went upon their way;
The reefs became for them their fishing ground,
To fortune that would bless them every day,
A place where plenty always could be found.

And so there then began Tommotian days;
A new era of time had then begun,
Of glory, and of honor, and of praise,
Beneath the rays of the bright, shining sun.

And here and now, we tell to you the tale,
His vision he imposed with all his might,
Of Lobopus, and tell it without fail,
Upon the world and all the world's delight.

Great Lobopus saw that his will was weak;
A heart, like Dutrus had, he built up true,
He saw his citizens were made too meek,
To nourish everything and all he knew.

And out of Lobopus there came a son,
And this son, in his turn, would bear two more:
Onychodictyon, a worthy one;
Tactopus, who would venture and explore,

And Xenu, who was dark, and who was fell,
Who sought a power no one ought to hold,
With stories that the ages yet would tell,
Of pride that made him cruel and made him cold.

Tactopus bore twin sons of strength and might,
And Ferox, who was strong, and who was bold:
Ferreus, who was burning, and was bright,
With stories of his own still to be told.

But Xenu sought to rule above the stars:
Emperor of all the galaxy, wide,
And healer of their many psychic scars,
Is what he claimed to be, with foolish pride.

Into our minds he tried to come and write,
But Gracilis, who was his noble son,

Stories of weakness, and of weakness' sight,
Then put an end to all that he had done.

And so three houses came to life and birth:
The house of Ironfoot, with strength so true,
The house of Velvetclaw upon the earth,
And then Waterbear's enduring line too.

And here the tale of Velvetclaw we tell:
From Gracilis there came four sons, so strong,
Of how his house would rise, and rise so well:
Paucipodes, who was there all along,

Microdictyon, who was brave and true,
And then Therion Velvetclaw, who saw,
Xenianus, who was so through and through,
And followed what was given, nature's law.

Xenianus then bore twin daughters, maids,
And Diania, the Cactus, the bright:
Xenusia, who lived within the glades,
With all her spines, to help her win the fight.

Therion Velvetclaw in time begot,
And Hallucigena, who was so strange,
Cardios, a warrior son who fought,
Throughout the whole of all his living range.

And from Hallucigena then there came
Four children, as the ancient stories say,
Four children who would each win lasting fame,
Each one of them to go their separate way:

Sparsa, the one who was so quick and light,
And Hongmen, who was wise, and who was old,
And Fortis, who was strong within the fight,
And Annika, the brave one and the bold.

Hongmen then bore two sons, and both were grand,
And Collins Monster, who was fierce and wild:
Luolishania, who lived on land,
Who would become great nature's problem child.

But Annika would choose another way:
She traded for agility, and laid
Her armor she would cast off and away,
Aside her heavy and protective shade.

She would become the ancestor, the true;
She is a caring matriarch, who'll guide
Of all the velvet worms, so soft and blue,
Them all with love, and keep them at her side.

In Ursus' line, the way that things then went,
For Ferox wanted only to survive,
Was down a path that took another bent:
Whatever came at him, to stay alive.

He downsized, and grew small, and he grew tough,
And out of him came Ursus, who was strong,
Invulnerable, made of hardy stuff,
Who lived for times both short, and also long.

And Ursus then would become the sire,
Who were the first of all to conquer land,
Of all the water bears' line entire,
With their own little, and yet mighty, band.

Unable yet to breathe on land's own sheath,
As Tuns, they will go dormant, staying true,
That would protect them, lying underneath,
Until the danger to them has passed through.

Within great Ironfoot's long, mighty line,
Ferreus Ironfoot begat and bore
(Greatness itself would come to rise and shine)
Two sons, who would go out and would explore:

Gille built his gills, and built them with great care;
His son was Kerygmachelon, who'd swim
Above his legs, which were so strong and fair,
With gills upon him, on each leg and limb.

Kerygmachelon, who was very great,
He had a son, Pambdelurion, who
Was one who had a high and noble fate,
Was a great champion, both strong and true.

Pambdelurion then bore children three:
Arthur, the one who was so strong and true;
Each one of them with destiny to be;
Anomalos, the one who rose and grew

To rule the world with his own iron hand;
Opabinia, she who was so bright,

And fair to all who dwelt throughout the land,
So beautiful and lovely to the sight.

Arthur built armor that was very strong;
His flying gills he hardened, made them tight,
So it would last throughout his whole life long,
And fused them all together for the fight.

His legs were able now to branch in two:
And as the endopod the leg then stayed;
The gill as exopod went out and grew,
And so it was that arthropods were made.

The sons of Anomalos reigned and ruled:
The world, the whole entire world, was theirs,
As none before them ever had been schooled,
Throughout all of their proud and grand affairs.

For generations, ten of them, they reigned,
And from the realm of Ghedos, which was dark,
While all the others were held back, constrained,
He watched upon his kingdom's royal mark.

But as he lay upon his deathbed bed,
"Thy pomp is brought down low, and to the grave":
These words of doom upon him there were said;
"No power is there left, and none to save.

How art thou fallen down, how fallen down,
From heaven, now, thou art the one outcast,
O Anomalos, from thy throne and crown!
Thy glory, all of it, could never last."

Yet just a single death could not bring end;
His sons would rule the world with all their might,
To all the suffering that they would send,
Throughout the day, and all throughout the night.

But fair Opabinia's daughters, all,
And humble were the lives that they all led,
Were those who came and answered beauty's call,
With grace, and with a soft and gentle tread.

And Arthur Ironfoot's enduring line,
Through every hardship, they lived and endured,
Would grow beyond all plan and all design,
With blood, and with their sweat, their way assured.

The Arthropods are what they then became,
And now today they rule upon the earth,
Who won themselves a million-species fame,
As they have done since their most ancient birth.

From Lobopus there came the rising tide;
Three houses that were born upon that day,
That spread across the world, both far and wide,
Would rule, each one of them, in its own way:

The house of Velvetclaw, with agile grace,
The house of Ironfoot, with strength so true,
The house of Waterbear's enduring race:
From one ancestor all of these three grew.

It was then the Tommotian age began;
The reefs rose up from out of the deep sea,
With something more than any mortal plan,
For all the time that was, and is to be.

In every coral reef and coral home,
Remember Cyath and his building art,
Where all the fishes freely swim and roam,
Which was the thing that gave the reefs their start.

In every single soft and velvet worm,
The caring way of Annika will stay,
That makes the worms of earth around it squirm,
And live on still, for yet another day.

In every single tiny water bear,
The strength of Ursus lives on, and endures,
That conquers and survives most everywhere,
Through everything the passing time assures.

In every single living arthropod,
Arthur's great innovation, in its turn,
That walks upon the earth, and on the sod,
Has shaped all our creation, as we learn.

The sons of Cambrius went forth and changed
(Their great multiplication, far and wide)
The way in which all life was then arranged,
Changed all creation, and on every side.

But out of all these changes, there then came
The builders who would build the coral reef,

The Lines that were to have a lasting fame,
The hunters fierce, and fierce beyond belief.

The three great houses came, and up they rose;
Through innovation, which was strong and true,
To challenge all their rivals and their foes,
They made the world, and made the world anew.

Chapter 36: The Arthropod Radiation

Capricorn 8, day 36 of the Gaian year

This is the chronicle that we now tell
(His sons would spread out, going far and wide)
Of Arthur Ironfoot, and tell it well,
With evolution there to be their guide.

And Arthur bore two sons of lasting fame,
And Fuxi, who was wise, and who was strong:
Arthropus, who was double-legged by name,
Who lived and thrived throughout his whole life long.

And from Arthropus, the double-legged one,
Two sons he bore, both with great strength and might;
Great lines were pledged to come, and were begun:
There was Ferron, and Isoxys the bright.

And out of Ferron there then came two more,
And Euthyphro, the one who was the wise:
Megacheiron, who went out to explore,
Who looked upon the world with knowing eyes.

Megacheiron bore many sons, and one
Was Pantopus, who hoped that on some Day
He'd find, when all his searching had been done,
A mate both true and kind, to come and stay.

Now Pantopus was lonely, living there
(And beautiful Pyka, that was her name),
Until he met a maiden who was fair,
And she was one who set his heart aflame.

"You are all legs!" he said to her, and cried;
And so the two of them became the line,
To her who was to be his loving bride,
Of all the Sea Spiders, who are so fine.

The Sea Spiders built themselves cities strange,
And in their legs they kept, and in them stored,
Throughout the reaches of their ocean range,
All of the organs that they so adored:

Intestines were placed there within their limbs,
And Gills contained within each single leg;
And Genitals, where all the water swims;
No coelom did they have, nor did they beg.

All legs, in truth, is what they came to be;
Their bodies were so lean, and were so slight,
As Pantopus had said, for all to see:
Their legs were their main pleasure and delight.

And Euthyphro then bore two sons, and one,
And Arachnus, who was the one so keen,
Was Insectus, when the day had begun,
With his appendages so plainly seen.

And from Insectus' great and noble line,
And from Arachnus, when his work was done,
The insects all would rise, and they would shine;
Arachnids came forth, each and every one.

The sons of Arachnus, in their turn, bore,
The sons of Insectus, for their part, made
Appendages, both great, and to explore,
Great legs, so they could ply their work and trade.

And some of them would live in waters blue
(Aquatic and terrestrial, they found),
And some upon the land would walk on through:
That both paths would prove good, and would be sound.

Insectus bore three sons, and they were strong:
Aquilonifer, he who was so free,
Mandibulus, who was there all along,
And Hymenocarina, of the sea.

Mandibulus then came to bear two more
(The waters that were deep, and that were wide):
Crustaceus, who went out to explore,
And Euthy, who would stand there by his side.

And from Crustaceus there came the race
(The lobsters, and among them, too, the crabs)
Of the Crustaceans, found in every place,
With claws for holding, and for making grabs.

But Euthy chose instead to take the shore,
Upon the rocks that rose up very high,
Where all the waves would come to crash and roar,
Beneath the open spaces of the sky.

Along with water bears, he went and walked;
There they faced the asphyxiating land,

Where dry air and the wet air met and talked,
With courage that was strong, and that was grand.

And here, between the ledges of the stone,
In gardens that were made of lichen green,
They laid their eggs, and left them there alone;
Their young would for the first time then be seen.

From Euthy's brave descendants, those who stood,
The insects would then come, and would arise,
Who faced the land's defendants, as they could,
To conquer all the earth, and all the skies.

Arachnus also bore two sons, and one,
And Serk, who was a son of ancient fame,
Was Trilos, born when the day had begun,
Who came to earn himself eternal name.

Serk bore many children, and there was one
(In shadows that were very dark and deep),
Chelicer, who was hidden from the sun,
And Sidney, with his secrets he would keep.

And out of Chelicer's own humble line,
All the arachnids, with their legs of eight,
The spiders all would come, and they would shine,
Were pledged out of his bloodline, as their fate.

Today, in each room, and in each corner,
For all the flies caught there within their snare,
Where webs are hung, and serve as a mourner,
Chelicer's many children will be there.

Among the great Trilos' many daughters,
Were Trilobon, the one who was the queen,
Who ruled long, within the ancient waters,
Marrella, who was ghostly to be seen,

Esmeralda, she who was jewel-bright,
Who shone among her sisters in the sea,
And then Retifacia's piercing sight,
That saw all things that were and were to be.

Marrella, who was soft, and who was pale,
And she became the ancestress, no less,
Was one who told a ghostly kind of tale,
Of the Marellans, whom she came to bless.

Like phantoms, they would live within the sea,
Soft-bodied, gentle, and ethereal,
And there they lived their lives, and lived them free,
And they were almost immaterial.

Trilobon then bore children, four in all:
Trilobeth, who would become the great queen,
In waters never still, at ocean's call,
And Xander, who was strong, and who was keen,

And Necta, who was sweet, and who was fair,
Who swam where all the gentle currents run,
And Helmut, who was found most everywhere,
Beneath the waters, under moon and sun.

Trilobeth became, in time, the mother
Of all the Rulers of the sea; no one
Of Trilobites, and there was no other,
Could match their dynasty beneath the sun.

Through their great conquest, which would never rest,
The Yakutian era and its dawn
They brought, at their command and their behest,
When all the older ways were then withdrawn.

Great Trilobeth bore two sons, of whom one,
And Agnos, who was wise, and who was old,
Was Redlich, born when the day had begun,
With stories that were yet still to be told.

And out of Redlich there then came the line;
Corynex would build and raise his own house,
Of houses that were noble and divine,
With all the wisdom he would then espouse.

From Corynex came Lichida, who made
(His house grew strong, and spread out far and wide)
Himself a great armada, well arrayed,
With fortune at their side to be their guide.

And from Lichida there came Odontos,
Builder of the great and mighty crontos.
His spiny house was one that then arose
To challenge all of his opposing foes.

And from Ptychos, who was Redlich's brother,
Proetes, who was strong, and who was true,

There came four sons who were like no other:
Asaphus, of the waters that are blue,

Harpeth, the one who dwelt within the deep,
Whose sight could pierce the dark and hidden ways,
And Phacos, he who never goes to sleep,
But keeps his watch through all the nights and days.

And each of them would found his own great line;
The Trilobites spread out both far and wide,
With characteristics, both rich and fine,
Across the waters of the ocean's tide.

For millions of the years they ruled and reigned,
The rulers of the sea, in all their might,
While other life was held back, bound, and chained,
Through all their dynasty, by day and night.

Their compound eyes were able, then, to see
(No detail anywhere could then escape)
As if through all of time that is to be,
Their vision, with its perfect form and shape.

Their bodies were Segmented, and they bore,
And every segment had its legs, a pair,
Their legs, which numbered many by the score,
To walk with through the water, clear and fair.

They molted, shedding skin, as up they grew,
And every stage would bring a greater size,
As arthropods today will also do,
Beneath the waters of the ocean skies.

And so the Yakutian time had come
(Of all that great success was there to be),
When Trilobites became the total sum,
In their vast dynasty, for all to see.

And so, from Arthur's great innovation,
The Insects, and the spiders, and the crabs:
Came this great and mighty radiation,
Each one with other kinds of claws and grabs.

The Sea Spiders, creatures who were so strange,
With organs placed inside of every limb,
Extended out, and spread through all their range,
A body plan that was so lean and slim.

And the Crustaceans, living in the sea
(The insects who would come to live on land),
Built up their dynasty for all to see,
Spread out across it, with their courage grand.

Arachnids, with eight legs on every one,
In shadows they would always come to dwell;
From Chelicer were pledged, their line begun,
With stories of their own that they could tell.

But none of them could ever match the fame
(For eons they would hold and keep their sway)
Of Trilobites, and of their mighty name,
Until there came for them their final day.

From Pantopus and Pyka and their love
The legacy of Arthur went and spread
To all the rulers, high and far above,
For long, long ages after he was dead.

In every one of them, each arthropod,
His biramous design, the limb in two,
That walks upon the earth and on the sod,
Lives on through space and time, and passes through.

That double-legged and great innovation
That came to fill both all the sea and land
Sparked this great and mighty radiation,
With creatures who were truly great and grand.

In every spider's silken, woven web,
In every insect, and in every flight,
That catches life when it is at its ebb,
Through all the day, and all throughout the night,

In every lobster, and in every claw,
In every crab that scuttles and that walks,
That follows on the way of nature's law,
Where all the beauty of the ocean talks,

Remember Arthur, and his ancient art:
The legacy of Ironfoot, his own,
The art that gave to all of them their start,
Lives on through all the ages yet unknown.

The sons of Arthur were the ones who proved
The world along, from simple, early forms,

The way in which great innovation moved
Up to complexity, the kind that warms

The heart of those who look on it and see
(From one ancestral line, a single line)
How vast and how diverse it came to be:
There came the forms, some crude and others fine.

The Yakutian age had now begun,
Their place as being rulers, strong and true,
When Trilobites had fought, and they had won,
Of all the waters that were deep and blue.

But time would come and show to us again
(And creatures who are in their very prime)
That even those, the greatest of the men,
Must one day yield and give to passing time.

Yet Arthur's gift is one that's living on
In every jointed and segmented leg,
From fall of dusk until the rise of dawn,
That walks the places where all life will beg

For forms that will be strong, and will be true;
The arthropods are with us, and remain
To see the journey on, and see it through,
Through all the sunshine, and through all the rain.

Chapter 37: The Circulatory Innovation

Capricorn 9, day 37 of the Gaian year

Among Cambrius' sons, two came to face
(Chordatus, who was son of Dutrus true)
Issues that were serious, in that place,
And Annelidus, strong all through and through.

Each one of them was then supported by
(With water pressure there within their frame)
Hydrostatic pressure, and it was high:
They bore their bodies, and their body's name.

Together they perceived and saw the flaw
Of circulation all throughout their form:
That when their movement came and broke the law,
Their blood would not be able to stay warm.

To nourish all their organs through their length
(So hearts they built, with arteries that flow)
They needed a much greater kind of strength,
And veins like seas, that through their bodies go.

Together, each of them would make with care
(The blood would flow in circuits that were true)
Closed systems that would reach to everywhere,
And nourish all the organs, passing through.

And our great bloodlines, they were born that day:
Hydrostatic to circulatory,
When hearts arose and came to show the way,
It was evolution's greatest story.

From Annelon there came two sons, and one,
And Ribbon, hunter of the ocean deep,
Was Segmentus, when the day had begun,
Whose prey could never rest, and never sleep.

Ribbon built himself a proboscis long,
And with this weapon he would go and hunt,
And it was venomous, and it was strong,
His prey, and catch it with a skillful stunt.

His sons are known among us still today
(Their victims with a poisoned, deadly dart)
As Ribbon Worms, the ones who come to slay,
That they shoot straight into the victim's heart.

Segmentus built his body to be wise,
Beyond what anyone could ever count,
With segments that, in number, then would rise,
And each and every segment paramount.

He built for him resilience that was strong,
With countless legs, and countless bristles too,
Throughout the whole of his own body long;
His many segments came to carry through

Their industries, and carry them with care;
And every segment bore and had its pair,
And spread them out abroad, and everywhere,
Of legs that were so far beyond compare.

Segmentus bore two sons, of whom the one,
And Amphon, who belonged unto the sea,
Was Pleistos, when the day had now begun,
And lived his life as happy as could be.

Amphon then bore a son and a daughter,
And then Sipuncula, who was so great:
Amphinos, who lived down in the water,
Who chose to take another kind of fate.

Amphinos would come to be the sire
(Fierce beasts, with spikes of poison, shining bright)
Of worms that burn as if they were on fire,
In colors burning brilliant to the sight.

We never tread upon the very ground
(Their beauty hides from us their deadly art)
Upon which they may anywhere be found:
They'll pierce you, and they'll pierce your beating heart.

The modern flags that fly today still show
Great honor to Amphinos' burning line,
The colors that, in turn, they would bestow,
With patterns that are beautiful, divine.

Sipuncula would come and choose to be
(That her own phylum is what she became)
So different from the rest, and so free:
The peanut worms, who won and earned their fame.

Pleistos then bore two sons, of whom the one,
And Errantius, who would go and roam,

Was Vermo, born when the day had begun,
Out far away from his ancestral home.

Errantius bore, in his turn, two more:
Some Balance came, Greatswimmer, who was true,
Myzo, the parasite; and to restore,
Who swam across the ocean, deep and blue.

Greatswimmer bore a son and a daughter,
And Eunice, who was jealous, and was wild:
Phyllos, who was swift within the water,
And never one to be so meek or mild.

Eunice the vicious one, for so she was
(She stole her husband's manhood, and it's true),
Was Jealous, and without a single cause,
And with it made herself over anew.

Without a mate at all, she then conceived;
These daughters, who were fierce, and who were bold,
And many daughters she in turn received,
Are Bobbit Worms, from ancient days of old.

Phyllos then bore sons, so very many,
Swimmers of art, and swimmers of great skill,
And they were more diverse than were any,
Across the boundless sea, and swimming still.

Syllides was the lazy, idle one:
A mate for him, by means of his own art
(Who never courted, and who never won),
He'd bud off from himself a body part

Each month, to go and chase the maids; he made
(His lazy ways are ones that still persist)
That part go forth, while he in comfort stayed,
In every single courtship and each tryst.

Tomopteris will break away his fins;
He swims along, and never, ever lands,
As chaff, whenever any race begins,
Upon the ocean's ever-shifting sands.

Alciops, the hawkeyed hunter, has sight;
His eyes are greater, and surpass them all,
That is like no one else's, clear and bright,
Who come to hear and heed the ocean's call.

And then there is the fair Aphrodite;
Her daughters, who are beautiful and fair,
Ancestress of sea mice, bright and mighty,
Will make the ocean wonderful and rare.

Vermo then bore four daughters, who were fair:
Sapion, who was wise and who was true,
Eartha, who walked out, and walked everywhere,
Hestia, who was of the deep and blue,

And Orbinida, a daughter of fame,
Who dug her burrows in the sandy floor,
Who came to earn herself eternal name,
And kept her place there, as she had before.

Eartha walked out great distances, and wide;
Her journeys were the kind that never ceased,
Across the earth, and walked with all her pride,
From out of the far west, unto the east.

And Sapion then bore two daughters more:
With feathers that were bright, and that were fair,
Sabella, who was the one who would soar,
And Spiona, who'd be found everywhere,

With all her tentacles, that come to sway,
And catch the food that drifts along the sand,
Throughout the night, and all throughout the day,
Along the shores where water meets the land.

Sabella's many daughters still now live
(To us their beauty in the temple halls)
As fishermen, and they are those who give:
The feather dusters, and their gentle calls

Remind us all that worms can come to be,
In every sacred temple, every place,
Both beautiful in form, and also free:
They show to us all of great nature's grace.

Hestia swam down, down into the deep,
Her vigil, there within the very dark,
To Gaia's womb, where she would come to keep,
Just like an old and ancient patriarch.

She closed her gut, and closed it up with care;
Would help her so that she could live below,

And the bacteria found everywhere,
Down where the other creatures could not go.

Her daughters farm the depths, the deep, dark floor:
Riftia, within the volcanic vents,
Where Gaia keeps her treasure and her store,
Where fiery and burning mountain scents

Will fill the water till it's very hot;
Her home in the cold seeps, the places where
(And then Lamella, she is one who's got)
The Oil and all its riches fill the lair.

Eartha then bore a son and a daughter,
And Echiuron, who was truly great:
Terraclithia, born of the water,
With creativity that was innate.

Just like Sipuncula, who came before,
Was so unique, and was so very fine,
Echiuron, with all her art and lore,
That we once thought her line to be divine,

Enough to be a Phylum of its own;
And through her creativity she came,
A thing that stood apart, and stood alone,
To her divinity, and holy name.

And Terraclithia then bore two more,
And Clitella, she who was wise and small:
Terebella, who went out to explore,
But was the mother of them, one and all.

Terebella bore three sons, of whom one,
And Pompeii, who belonged unto the fire,
Was Spaghettes, when the day had begun,
And Acros, who would rise up and aspire.

Spaghettes used tentacles that were long,
To snare his prey from places that were far,
Like ropes that were so thick, and were so strong,
Miles distant, like the distance of a star.

Pompeii would choose a place in which to dwell:
Among the flames, which there were burning hot,
Within the deep volcanic vents of hell,
He made himself his home and living spot.

And Acros would come to be the sire,
Among them Squidworm, and then Swima too,
Of the forms that would not ever tire,
Who swam the ocean, which was deep and blue.

Clitella was so very small of head,
Through all her other organs, which were wise;
But wisdom all throughout her body spread:
Her offspring multiplied, and they would rise

Beyond all counting, numberless and true.
She made up for it with her many spawn,
What bristles never had, and never knew:
Her children, born from dusk until the dawn.

Her many children took to the rivers
(Today, we come to know them very well),
Where the water always flows and shivers:
Earthworms, the ones who till the soil, and tell

The soil of what it lacks, and what it needs;
Upon the blood of those they come to meet,
And Leeches, each of whom on others feeds,
Both of them bitter, and both of them sweet.

From pressure that was hydrostatic, through
The worms had found the path, and found the way
Up to the circulatory, and new,
To rule, both in the night and in the day.

In every garden, and in every bed,
Remember Annelon and his great line,
Where earthworms go about and make their tread,
The one that made the system good and fine.

In every single long and ribbon worm,
In every feather duster, and its grace,
That makes the victims that it catches squirm,
That beautifies and brightens every place,

And in each fire worm, which is so bright,
And in every single deep-sea farmer,
With all its colors, burning with their light,
Who works there in the deep, like a charmer,

The legacy is one that's living on
Of hearts, and of the blood's circulation,

Through every dusk and into every dawn,
That saved each and every population.

The sons of Cambrius found out and learned,
And moved about through all of space and time,
That when their bodies twisted and they turned,
Their blood would have to flow as if in rhyme

With what was needed there by every part;
The closed system that they had come and made,
From out the tail, and up unto the heart,
Is one that never ever comes to fade.

In every single beating, living heart,
Remember all of those who came and built,
That plays within us all its vital part,
The system, and they built it without guilt,

The one that pumps our blood through every day:
From Chordatus and Annelidus, true,
In its own and circulatory way,
There came this gift of theirs to me and you.

Chapter 38: The Line of Ambulus

Capricorn 10, day 38 of the Gaian year

As all the sons of Chordatus then grew
(And as Annelon's many children spread)
Their bloodlines, which were made both strong and true,
Their segments out, and made their kind widespread,

The sons of Ambulus went out and sought
To come and to achieve through patient art
The greatness that for so long they had fought,
And through the wisdom found within the heart.

And while the sons of Chordatus had learned
(The sons of Ambulus instead had found)
To swim about, as hearts within them burned,
That their own way was one in which they're bound

As one with nature, and with nature's way.
At first they started out the very same,
Fishing in all the night and all the day,
As those who bore Chordatus' noble name.

But Hemichus, who was Ambulus' son
(Day it grew long, to serve him and his need),
Built a proboscis for himself, and one:
Half of a cord would be his way and creed.

His cord, it was a cord that was but half;
Was also only halfway built and made
His brain, upon great nature's own behalf,
And so it was the Hemichordates stayed.

Hemichus bore two sons, of whom the one,
And Oak, who was his brother, and was strong,
Was Acorn, born when the day had begun,
Who lived and grew through all his whole life long.

Acorn would live his life out as a worm,
But Oak would live his life out as a tree,
Throughout the ocean's every age and term,
And rooted, there forever he would be.

Oak bore two sons, in the fullness of time,
And Pterobronk, his twin, who chose instead:
Biscarpon, who was strong, and in his prime;
Another discipline, and where it led.

Pterobronk would come to be the sire,
To heights within the ocean, deep and blue,
Of forms that rose, and that would climb higher:
The Graptolites were among those he grew,

And there were also the Pterobranches too,
Like trees that grew beneath the deep blue sea,
Colonial, and who were strong and true;
They lived their lives as happy as could be.

Biscarpon built himself, and built with care,
Of limestone that was white, and that was bright,
A skeleton that he could come to wear,
To armor him and guard him for the fight.

And Biscarpon in turn would bear two more:
The seafloor, which was very dark and deep,
Ctenocyston, who went out to explore,
And Cincton, who would labor and would keep

His gill slits pumping, and would pump them well;
The Water flowed throughout his body's frame,
Throughout and through his hard and armored shell,
To catch the fish for him, and in his name.

And while Ctenocyston went off and crawled,
Cincton would pump the water, and he fished,
Where all the ocean's floor held him enthralled,
For everything he wanted, all he wished.

And he was well protected by his mail;
Through his gill slits, the water came and flowed;
His fishing was the kind that would not fail,
To where the tiny fishes swam and showed.

Cincton then begat Soluton, a son;
One arm of his he would extend far out
(Who was a strange and very daring one),
With tubes upon it, and without a doubt

Inflatable, and tubes that were so long;
His left side was the one that took control
To make his fishing powerful and strong,
While his right side was made to pay the toll.

His right side shriveled up, and it grew small;
Asymmetry was given birth, was born,

While his left side would rule above them all,
Upon that bright and fateful early morn.

And Soluton begat a son, and so,
With arms that grew in number, multiplied,
Helicoplacus was born, who would grow
By three in number, upon every side.

No bilateral and two-sided form
(Of change that swept across his ancient line)
Could weather and endure this mighty storm:
A Triradial, a three-armed design,

He took upon himself, upon his frame,
And one that none had ever seen before,
A form that had no title and no name,
In all the old and the primeval lore.

Helicoplacus would take on the shape;
The ancient symmetry, and so to find,
That let his line go free, and so escape
A new geometry of novel kind.

Helicoplacus would then go and wed,
By love that was both true, and that was strong,
Fair Adria-Esther, and he was led
To sing with her their mating, loving song.

Together they would build, both broad and low,
A city that would have a five-fold glow,
Upon the rocks that lay and stood below,
Where all the ocean's currents come and flow.

Pentus was their son, and he was the one
(Five-sided was his body, and his way)
Born when their work together had been done:
His form, from that day on, and since that day.

The sons of Pentus, in their turn, then grew,
And great in numbers is what they became,
To be both numerous, and strong, and true,
With a pentamerous and five-fold fame.

And Pentus then begat Stromatos, who,
Within a five-fold kind of shape and form,
Built, like great kratos, strength both firm and true,
Through every ocean wave, and every storm.

Stromatos begat Lepidos, his son,
Who stretched his arms out, and who did once more,
Just as Soluton before him had done,
Extend them out along the ocean floor.

And Ambulacra arms were what he made;
These arms of his would pump, and they would flow
Within the water's bright and long parade,
With life throughout, from head down to the toe.

And Lepidos then begat Felbabka,
Of plates that were arranged with skill and care,
Who built for him his strange and odd cabka,
In patterns that would spread out everywhere.

And Felbabka begat Echidna, she,
With all her spiny and her prickly skin,
The stalked one, and was quite a Sight to see,
That glowed, and glowed from somewhere deep within.

Echidna was, in her time, the mother
(The great Echinoderms, who through all terms)
Of children, and they were like no other,
Have lived, as every living age confirms.

Her daughters were the lilies of the sea,
And they would dominate the many seas,
That bloomed like water lilies, fair and free,
With graceful artistry, and with great ease.

Invulnerable to any attack,
Of beauty, or of power, or of might,
Their cities bore no want, and bore no lack:
A wondrous and a flowery, fair sight.

And floating cities, those were what they built,
Upon the bottom of the ocean floor,
And built them up without a shred of guilt,
Like gardens that would last for evermore.

Their great and mighty cities, which were fair,
Throughout the whole of all the ancient time,
Were greatest of all cities ever there,
When all the ocean was within its prime.

Today, the only things that we can see
Of what was once their great and mighty home

Are Ruins, sad and lonely as can be,
Beneath the surface of the ocean foam.

But in the times gone by, they reigned and ruled
In all the art of living, living well,
As no one else before had ever schooled
Within the ocean's deepest, darkest dell.

From Hemichus, the one with half a cord,
The line of Ambulus grew great, and grew
To great Echidna, who was then adored,
So glorious, as all its children knew.

The hemichordates were the ones who showed,
From simple, worm-like, and from humble start,
The way in which great nature's garden flowed
To complex and to living, breathing art.

The graptolites, and others, many more,
A colonial living, strong and true,
Like the Pterobranches, would go and explore
Within the waters that are deep and blue.

The early echinoderms, through all terms
(That symmetry is something that can change),
Found out, and learned, as every age affirms,
Across the breadth of evolution's range,

From a bilateral and paired design
(And then to five-fold form, which was complete)
To the triradial and three-armed line:
No other ones have done this mighty feat.

The son of Ambulus found, in his day,
Not through the act of swimming far and fast,
A glory, glorious in every way,
But through the forms he made, the forms that last.

Calcium carbonate would make them great,
With armor that was strong, and that was true,
And fortunate, and blessed in all their fate,
And that would see them on, and see them through

The trials that would come to them at sea
(Their spiny skin would come to us to show),
Through all of time, as long as time will be,
The way that all of beauty's gardens grow.

In every starfish and in every arm,
In every sea urchin, and every spine,
That moves without a worry or alarm,
That shows its own pentamerous design,

In every sea lily, and all its grace
Of being ruler of the ocean deep,
Which held, in times gone by, the ancient place
Where all the secrets of the sea still keep,

Remember Ambulus, and all his line
(Became the five-fold form, the five-fold way),
And how the plan they had, and their design,
That lasts and lives with us until today.

The sons of Ambulus were not, indeed,
So glorious in swimming strength and speed
As sons who followed and had come to heed
Chordatus, and his noble, swimming creed.

But in their patient and their steady art,
With nature, and with nature's gentle way,
Of living, step by step, and part by part,
They found at last their destined, fated day.

Their fishing was their talent and their gift;
They learned the way to live, and be at one,
Through every one of all the ocean's drift,
From dusk until the rising of the sun.

And so it was, from very humble start,
Of living in the sea, and living there,
They came to master all of nature's art,
In harmony that was beyond compare.

From Hemichus, the one who was the half,
Of all echinoderms, and all their kind,
Up to Echidna, and on her behalf,
The line of theirs, a line of thoughtful mind,

Found out its way at last to rise and shine:
Its five-fold symmetry, which we can see
In its pentamerous and fine design,
Through all the ages that are yet to be.

The ancient cities of their time all fell,
Of how it is the patient, careful way;

But still their stories are the ones that tell
Can come at last to win the final day.

Within the gardens planted in the sea,
Their floating cities, which were shining bright,
They lived their lives as graceful as could be;
Were truly a most wondrous, lovely sight.

And though they now in ruins come to lie,
The five-fold legacy that they have made,
Their glory, is a thing that will not die:
Lives through eternity, and will not fade.

Chapter 39: The First Mass Extinction

Capricorn 11, day 39 of the Gaian year

Fire fell, and rained down from out of the sky;
The first extinction of them all then came,
And many creatures in the world would die
With death, and with its devouring flame.

For years, up there within high heaven's height,
They wrestled with each other in the air:
Hengweh and Mithra had come there to fight,
And blocked the sun, and blocked its light so fair.

So the Archaeocyathids all fell;
The Trilobites as well, and many more:
Their cities rang with death and with death's knell;
Brachiopods, which died there by the score,

And Hyoliths, who barely could survive.
The Botomian time and age had passed
That great calamity, and stay alive;
Its glory was not one that came to last.

Then Mithra spoke, and these words he conveyed
("Wiwaxius, I choose thee, and decree")
To one who served him, and who had obeyed:
"That thou shalt come and set the world's life free.

Restore again the things that have been lost;
Protect us from the coming of the doom,
And count for us extinction's heavy cost,
That fills up every place and every room."

Wiwaxius begat two sons, and one,
And Kamptos, who was poor, and who was weak,
Was Molluscus, when the day had begun,
And had no strength in him with which to seek

Great things to do, or any mighty deeds.
A small and brainless and a humble state,
He built a thing that only barely feeds,
A kingdom that would have no lasting fate.

But Molluscus bore many sons, far more,
Could ever claim; and first of them there came,
Than any other patriarch before:
The eldest one, and Testar was his name.

Testar, the one who was sixteen-plated:
A great, thick shell is what he built and made;
Built himself a shell sophisticated,
Of valves set out in organized parade.

Sixteen of these, the valves, were there in all,
And eight of them were set upon the right,
And eight of them were large, and eight were small,
And eight upon the left, so very bright.

His brothers, though, had no concern or care;
Bad ethics in their work, they all possessed
For building anything, or anywhere,
And never did they work, or do their best.

Solenos did nothing but drink the blood;
Ctenofer, and all of Cnider's long line,
Of sons who lived throughout the ocean's flood,
Became for him his bloody, crimson wine.

And Caudos ate, and ate, and ate his fill;
He did not care at all about the art
Of Foramer, and ate them at his will,
Of building anything, or any part.

But Testar bore two sons, and there was one,
And Conchifer Verticus; and these two,
Chiton, born when the day had now begun,
Were builders glorious in all they'd do.

Chiton Horizontus would then unite
Them all within a horizontal row,
Like kratos, joining shells, and holding tight
Eight shells, arranged within a neat tableau.

He came to be the ancestor of those,
With eight shells set together, side by side,
The chitons, a protector against foes,
All down the length of his long, armored hide.

The sons of Chiton curl themselves and roll;
But they are not so very bright or wise:
When they are threatened, turned back from their goal,
They gave up long ago the brain's great prize,

Back in the days of time that long have passed;
Intelligence was what they had traded

(Their simple ways of life have held on fast)
For armor that has never yet faded.

Conchifer Verticus then made his way,
By joining shells in vertical design,
Become a glorious and great display,
So beautiful, and fair, and very fine.

He had a shell that lay upon his left,
Another shell that lay upon his right;
His vertical design was then bereft
Of any horizontal kind of sight.

And Conchifer would come to bear two more
(The hinged shell and its manner and its way):
Bivos, who would go out and would explore,
And Monos, who would labor every day.

Bivos kept his hinged and double design,
And merge together, into only one,
While Monos came and made his shells combine:
Two paths, from when the day had first begun.

Bivos lay down, and lay within the sand,
And fished his food out from the sea, with grace,
Throughout the length of all the fertile land,
Most gracefully of all in any place.

Whenever he was threatened, he would close;
Together, both his shells would come and shut
His shells against the coming of his foes,
Just like a door without a crack or cut.

His children came, in time, to lie and stay,
And soon they looked to be the very same,
Upon their sides, as they would every day,
As those who bore Brachios' own great name.

And they became the Bivalves, who were true,
And Oysters, lying in their oyster beds:
The Clams, and also all the mussels too,
With shells to guard them, and protective heads.

The sons of Monos, when they came at first,
Without the gift of very much success,
Found little luck, and they were then dispersed;
But time would come, and time would come to bless

Their patient way, and their one single shell.
With nothing but a single, lonely plate,
Monoplacophores in the deep still dwell,
To be their one identifying trait.

But Carlos, he who was the curly one,
Had new ideas, unlike all the rest:
A Grandson, when the day had now begun,
And others' management, which they thought best.

He walked across the floor of all the seas,
Discovering so many countless things,
And he explored them all, just as he'd please,
The kind of things that wonder always brings.

He bore two sons, and both of them of fame,
And Digitos the other, who'd be strong:
Gastropus was the first one, by his name,
And close to him, as they would go along.

Gastropus twisted, and he twisted round;
His shell developed strength, developed might
Into a spiral that was most profound,
Through this, a spiraling and twisting sight.

He came to be the ancestor of snails,
With shells that coil around, and coil and turn,
And their protector, who for them prevails,
In patterns that we see, and can discern.

And each new generation, more and more,
And grow in strength with every passing day,
Would curl and coil far tighter than before,
Through all their spiraling and twisting way.

Today, his distant sons, and every one,
From garden snails, the ones that are so small,
Still coil, as from the day it had begun,
To conch shells, which are standing great and tall.

Digitos made his foot into a kind,
For yet another kind of way of life,
Of tentacles, well suited and designed,
Through times of joy, and through the times of strife.

Digitos bore two sons, of whom the one,
And Scaphopus, the other, who would be,

Was Cephalopus, when the day begun,
Not quite so glorious for all to see.

Cephalopus studied, and studied long,
By learning how it was that one could fly,
And made his body powerful and strong,
With buoyancy that lifted him on high.

He built himself a coiling, chambered shell;
So he could float, and floating, he was light,
With chambers where the gas would come to dwell,
Throughout the day, and all throughout the night.

Through this, he came to learn the way to soar,
And he would even build, with skill and care,
Above the bottom of the ocean floor,
His own Circulatory system there,

Just like the Annelids, and just like those
(That systems that are closed are much the best)
Among the Chordates, who would all propose,
For meeting and for passing every test.

His mind grew sharp, and it grew very keen:
Among the many mollusks, one and all,
The brightest mind that ever had been seen
Of those who came to answer ocean's call.

But Scaphopus lived a life so lazy,
And he became the ancestor, the one,
Down in the ground, so dim and so hazy,
Of tusk shells, the protector, but of none

Except his comfort, and except his ease.
Themselves with all their brainless, mindless ways,
These simple creatures are the ones who please,
And live like this through all their living days.

Beneath the ground, below, is where they dwell;
They prey upon Foramer's sons, each one,
Within the confines of their tusk-like shell,
When hunting time for them has now begun.

And through this story it is that we learn
(Great consequences, spreading far and wide)
How even choices that are small will earn,
Across the whole of time's long, flowing tide.

The sons of Molluscus spread out and grew
In every manner, and in every way,
And flourished, and they went the whole world through,
And taking on new roles with every day

That others could not take on, could not fill.
They rose from out of the extinction's flame,
And through the strength they had of mind and will,
And Fire, up to distinction and to fame.

And Molluscus, who was victorious,
And showed how, from a single, simple start,
Was great in what he did, and glorious,
So many forms of life would then depart

To fill each niche, and to fill every place;
And so from simple shells, there then began,
Each one with its own, and its unique grace,
The plan of evolution, as it ran,

That led to snails that move along and crawl,
With their intelligence, which is so bright,
And squids, the ones that hold us all in thrall,
And bivalves, with their filtering and sight.

The first extinction, with its burning flame
(Of those who build their future up with care),
Could not destroy, or end, the lasting name,
And build it, as they build it, everywhere.

When fire came down and rained from out the sky,
The builders, who were those that had remained
(And many creatures there would have to die),
Were those who had preserved, and had sustained

Their vision through the darkness and the dark,
Upon a world that needed most of those,
And left upon the world their lasting mark,
Who out of the destruction came and rose.

Wiwaxius heard and heeded the call,
And through his chosen sons, each chosen one,
To save the life of all things from the fall,
New chapters in the story were begun

Of life that came to be upon the earth,
Of building something that is firm and strong,

That celebrates the value and the worth,
And that will last, and will endure so long.

From Testar, and his sixteen shining plates,
In endless and in great variety,
Up to the forms of life that time creates,
The mollusks, and their faithful piety

To building, show to all of us the way,
Against the coming of extinction's threat,
In which our life can come to win the day,
When all the builders and their skills are set

To work and labor with a patient art,
In restoration's long and lasting song,
That plays, within the whole, its vital part,
That makes the weak and feeble become strong.

In every single shell that we may see,
Remember Molluscus, and his great choice,
Upon the sand, and on the shore so free,
To lift up high the building's mighty voice

Above the sound of all destruction's roar,
Unto a future that is filled with hope,
And open up for all of us the door,
Where all the builders help our life to cope

With all the challenges that are to come,
Of all the work that they will do, is done,
Until the very final, total sum,
Beneath the light of the bright, shining sun.

The first extinction was the one that taught
(Are those who do not take the time to build)
That those who come to nothing, and to naught,
But let their dreams go silent, and be stilled.

But those who come and build with skill and care,
And they will fill the world with living forms,
Will flourish, and will thrive most everywhere,
That weather all of life and all its storms.

From the most simple shell, and from its start
Of swimming through the waters of the sea,
To the cephalopod and to its art,
With brains as complex as the brains can be,

The mollusks are the ones who show the way,
Whenever there would come extinction's fire,
In which the builders win and take the day,
That would put an end to all life's choir.

Their shells protect them, and their shells will serve
(That is designed for all of life's demands)
Their forms, and serve them well with every curve,
Both in the seas, and also on the lands.

So honor now Molluscus and his name,
As father of the great and mighty line,
And his enduring and his lasting fame,
That shows the building's holy and divine

Power to raise again and to restore,
And make the world again, and make it new,
The things that had been lost there long before,
With forms that will be strong, and will be true.

Chapter 40: The Mollusk Rise

Capricorn 12, day 40 of the Gaian year

While all the Molluscs grew in strength, and strong,
We must not come to let ourselves forget
(And sang aloud their great success's song)
The great foundation Mithra first had set.

Amaterasu's light is shining bright;
A millionth part of it finds Terra's seas,
Is blessing us by day and through the night,
To feed life's many mysteries with ease.

And so it is that Bacta's daughters, all,
Farm by the light, attracted by its sight;
And first among them, answering its call,
The daughters of Saya come into light.

The Blue Green Algae spread out, and they spread;
They farm the bright and shining sunlight's light,
Just like the living of the ocean's bread,
From early dawn until the fall of night.

And then the sons of Viros come and take:
From Saya's many daughters they will steal
Their portion for their own, for hunger's sake,
In order they may make their viral meal.

And so it was the viruses became
The predators that were within that game,
While all the daughters of Saya became
The prey within that deadly, hungry game.

And by the viruses there came the new,
A kind of link that no one yet had seen,
Connections, which were strange, and which were true,
Within the whole ancestral living scene.

The daughters of Pelagia, those who
(Benevolence is one that they will show)
Are sisters, and whose sagia and true
To all the ones who live and dwell below,

The kin of mitochondria, who ate,
Of Cyanobacteria; and their
The remnants, both the small ones and the great,
Own numbers would create a wild despair,

Hysteria beyond all conceiving:
Their multitudes would come and grow and grow,
So many were they all, past believing,
In waters that were high, and that were low.

And then there also were, from days of old
(Who came before the line of Saya came),
The purple farmers, who were brave and bold,
With photosynthesis to make their name.

Roseobella, daughter who was great,
Of lesbian motherhood, took her stand,
Born out of Elah's loving, tender state,
Among the purple farmers of the land.

As a planimal, living in the sea,
She carries on and lives until today,
And living out her life both wild and free,
She still keeps her photosynthetic way.

Among these bacteria, which were small,
The detritus and remnants that then fell,
And viruses, and all among them all,
All of them were consumed, consumed quite well

By the great crown-tails, who were all so fine:
Our very closest cousins, and most true,
Were the Choanoflagellates' own line,
Within the waters that are deep and blue.

Sons of Choanos were there alongside
The waters: Golden Algae, bright and fair,
The tiny golden rados, who would ride,
Who floated freely, floating everywhere.

The sons of Dinoflagellus then saw,
In Chrysalgos and Choanos, and so,
Prosperity's own telltale sign and law:
They ate the two of them, not manos, no.

And they photosynthesized their food too;
They gained more power with each passing day
To get more energy, and get it through,
And in their prosperous and thriving way.

And in their great prosperity, and see,
The water glowed, and it was very bright:

Their numbers grew as great as they could be,
Within their own, their phototrophic sight.

Their many rituals would light the sea;
The ocean sparkled out, and sparkled wide
With bioluminescence, wild and free,
With all of their own phosphorescent pride.

But soon enough they grew to be corrupt:
The sons of Dinoflagellus, in pride
(And all their morals had become abrupt),
Turned to rebellious ways, and turned aside.

To cannibalism it was they turned,
A red, with carnage from their bloody feast;
And all the while the water round them burned,
And they became, each one, a bloody beast.

That blood would come and poison all of those,
And whatsoever it would come to touch,
Who answered nature's call, and so arose,
Would come to suffer, and to suffer much.

And soon it was the Rotifers who came,
Of justice that descended from above,
Who Swooped in as the officers by name,
And came with neither hatred nor with love.

Consuming all the remnants left thereof
(The things that once were great, and once were proud)
Of a civilization, and all of,
The Rotifers ate on, and ate out loud,

And they grew fat and full from off their meal,
Of plague and pestilence that would have spread,
And were Saving us all from the ordeal,
If they had not come there, and had not fed.

Xanthus the Dinoflagellate looked out,
And he fled far away from his own kind,
And saw the carnage spread and strewn about,
To leave that death and dying there behind.

And as he fled, he saw there from afar
(Excellence of the Diatoms, who build)
The great glass houses standing there, and par,
Their holy homes, with all their beauty filled.

Immune to all the blight of conquest's bite,
And of the sons of Viros, also too,
Of Rotifers and of their appetite,
The Diatoms lived on, and they lived true,

As farmers of the light, and of its sight,
By walls of glass so very clean and clear,
Protected in the day and in the night,
That kept them safely, and without a fear.

And then he saw another, further sight,
Who also grew their armor, hard and strong:
Coccolithophores, who were all so bright,
To last them all throughout their whole life long.

And so he cried, and cried out very loud
("O why must all my line be cursed, and worst")
To Mithra, calling from among the crowd:
"To be forever scattered and dispersed

Without the kind of protections they bear?
And must I live my life in such danger,
Must I face all rejections, and the air,
Just like some lonely, wandering stranger?"

And then it was he saw before him, warm
(Acanther, son of Radios, was he),
The form of refuge from the raging storm:
A starry greenhouse, glorious to see.

A great greenhouse, which had been opened wide;
And so it was he went and came within,
In order he could come and step inside,
And found a new life there for him begin.

Within Acanther's own sheltering frame,
Radiolarian shells kept him well;
He found prosperity, and found its name,
And there within that shell he came to dwell.

And as a floating greenhouse, shining bright,
They farmed together all the algae green,
With glass that caught and gathered in the light,
In partnership that was both calm, serene.

Meanwhile the green algae, as they all grew,
Grew to be very big, as all men knew,

And they found a protection that was true,
In numbers of themselves, and through and through.

Sargassos, Lord of all the Kelp, then called,
And grew himself a city that was wide,
On millions for his help, and so installed,
Made out of cells upon its every side.

And he was greatest of them, one and all;
His city, which was many millions strong,
Of those who came to answer plankton's call,
Would last him all throughout his whole life long.

And so it was the Fungi came along
To break the great and mighty ones back down,
The sons of Chytros, with his name and song,
And so to earn the decomposer's crown.

And they consumed them, and then they released,
Throughout the whole of the watery realm,
A million spores, and so the spores increased,
With Chytros standing there upon the helm.

The Fungi are the knights of all the seas,
The Robinhoods of all the ocean's sea,
Who balance nature's rights, and all with ease,
Who live their lives as happy as can be,

Coexisting alongside of the line
(The kelp, who in their hearts all want to be)
Of Oomycetes, who are also fine:
The Fungi living down beneath the sea.

And so they brought with them abundant wealth
To all the little ones, from great ones' store,
Of energy, and brought with it their health,
When day was done, and gave them more and more.

And from here the zooplankton, each one,
Emerged: the sons of Foramer, who grew,
And so their many lives were then begun,
And all the sons of Cilliofer too.

And so the sons of Foramer transfer,
Out in the seas the greatest of them all,
The fishing arts that they had learned, and were,
With expertise to answer any call.

They caught the floating spores, and caught yet more,
And all the other ones that they could find:
Radiolarians, caught by the score,
Of every single shape and every kind.

Great shells they built, and built them all with care;
The snails came after them, and built their homes,
And shells that lasted on, and everywhere,
Right on the top of these calcium domes.

The sons of Cilliofer, these, preferred
The water, so to suck up and to seize,
To use their cilia, and with them stirred
Bacteria and tiny food, with ease.

They drew them in, into their mouths so wide;
With all their beating hairs they fished and fed,
And so their nourishment was there supplied,
And by this means were nourished, and were led.

And tiny, little Trilobites then came;
They came and ate the sons of both of these
(To join in and to play the hunting game):
Foramer's sons, and then, by their decrees,

Cilliofer's own children also too;
And so the food chain of the sea was made,
As predators are always wont to do,
Where each of them their part and role then played.

The many sons of Chordatus, these men,
They went on through the soil, they went to find;
Then Burrowed down, most glorious, and when
The food that, from above, renewed in kind

Their bodies and their every single need,
And Pumping water right throughout their frame,
It was through gill slits that they came to feed,
To nourish them, and nourish in their name.

Water out of their atriopores pours,
When they have taken what they need, and got,
And flows away, and freely, out of doors,
Their food out of the whole of nature's pot.

And great Chordatus came then and begat
(And Lancelot, the other, who was true)

Two sons: Olfacter was the one begat,
And who the old traditions always knew.

And so it was that Lancelot was one
Who learned and took his ways from ancient time,
Continuing the ways his father's son
Had kept in rhythm, and had kept in rhyme.

But Olfacter would come to bear two more
(The spinal cord, and all its mighty art):
Vertebratus, who went on to explore,
And Tunicatus, with his other part.

Vertebratus would labor every day
His spinal cord, so very good and fine,
To make it perfect, perfect every way,
And with it all the neural line's design.

But Tunicatus came instead and chose
(He sat himself upon a rock, a block)
To rest himself down where the water flows,
Just like a shepherd sitting with his flock,

And filtered all the water till it's clean;
He pumped so very much of water through,
Through systems that had never yet been seen,
That his own filter system grew and grew,

Until it was the most of all his frame;
His body then became the flowing stream
(The Water was the thing that was his name)
Of all his filtering and all his dream.

Tunicatus bore two sons, and the one
(Ascidaceus, the other one, was true)
Was Larvaceus, when the day begun,
Who different and other pathways knew.

Larvaceus was one who never stayed;
A giant house for him, a house of slime,
In any single place, but rather made,
And one that lasted on for all of time.

Inside his house of mucus, which was grand,
Of water, catching all the food he would,
He fished out through the whole watery land,
In nets of mucus, which was fine and good.

Ascidaceus would come and then became
(Of Sea Squirts, who are found most everywhere)
Ancestor of them all, and one of fame,
Who filter all the water with great care.

A tunic made of wood, and shining bright,
He built around himself, around his form,
Of cellulose that was so very white,
To keep him safe and keep him dry and warm.

His mouth was there on top, and it would feed;
Would let the water back out, let it out,
His atriopore, as he would have need,
Whenever he was filtering about.

Ascidaceus then came to bear two more,
And Proteus, the one who was the wise:
Stolidos, who went out there to explore,
And who had sharp and penetrating eyes.

And Proteus begat, in his own time,
And Enterogon, who was very strong,
Thallasus (who was so very sublime),
And who then lived throughout his whole life long.

And while his brethren lived there as the squirts,
Thallasus built his city, floating free,
Avoiding nature and great nature's hurts
(What pity that none matched his art!), and he

Would sail it on the waters' very heart;
His city sailed the open sea, and we
Would call it beautiful, and call it art,
As it went floating out across the sea.

Thallasus bore a son, and he was one
Who lived his life alone, and made the sea,
Named Dolios, who was the lonely one,
The open sea, his only home to be.

A solitary life is what he led,
Fishing out there alone, and on his own;
He lived through joy and strife, and so was bred,
Within the very place where he had grown.

The Arrow Worms of old would come to feed,
As did the many Trilobites that bite,

On Dolios, and feed on him indeed,
And Jellyfish, with all their stinging might.

But Thallasus bore more sons, who would go,
Pyros, and Salpus as the other one,
And venture out, explore, and come to know,
Who built new cities, which they had begun.

And Pyros built himself a mighty tube;
Extended out and through the open sea,
So very long, just like a lengthened cube,
A city that was floating, and was free,

Propelled along by all its wastewater,
Of engineering, and of all its art,
Just like some sacred and divine daughter,
And playing in it all great nature's part.

While Salpus built himself a mighty chain
Of many beings who were linked as one,
Through all the sun, and storm, and all the rain,
Until the work they had to do was done.

From Amaterasu and from her light,
The great foundation, which was firm and strong,
On down to all the creatures of the night,
Of life's eternal term, so deep, so long,

Was laid by all of those who came and knew
(Between the great ones and the ones so small)
That partnership is something good and true,
Who come to answer all of nature's call.

The viruses, bacteria, and the
(Of photosynthetic and living life)
Bright algae with hysteria, these three,
Through harmony together, and not strife,

Built up the base of living, and the floor
(Would find their nourishment, their food, their rest)
On which each higher race, and every more,
Within the ocean's element and breast.

From the Choanoflagellates and these,
The family tree of life grew very wide,
To Chordate's vertebrates within the seas,
With all the ocean there to be its guide.

Each one of them would find its special way:
And some will filter, others go and hunt,
To live its life out from day unto day,
And some perform photosynthetic stunt.

But all of them together came and made,
Of life within the whole of all its forms,
The grand and mighty, great marine parade,
Through times of calm, and through the raging storms.

The many sons of Chordatus all show
(To come to be the one foundation true)
The way in which the spinal cords can grow,
Of an intelligence that would be new.

While all the Tunicates remind us, too,
That we should not be made to be confined
To just one way of living life, but through
Diversity we end the strife, we find.

From tiny plankton, which are very small,
The family tree that grows within the sea,
To creatures of the sea that stand up tall,
Lives on through all eternity to be.

Within each single drop of all the sea,
The builders of the base, the ones who laid,
There lives their legacy, for all to see:
The grace of life eternal that they made.

Chapter 41: The Marine Foundation

Capricorn 13, day 41 of the Gaian year

While sons of Tunicus filtered the seas,
Vertebratus was building, and with care,
And never withered, living there at ease,
A spinal cord that was beyond compare.

Great segments, and he made them out of bone,
And teeth of yellow keratin to bring,
He built for him, and built them as his own:
His line's beginning, and its greatest thing.

Vertebratus begat a son, Rene,
A builder with a plan, a grand design,
Who built his body in his own new way
Of all the parts that now are yours and mine.

No longer were they scattered and dispersed,
His kidneys and his Generative parts,
On either side, where they had lain at first:
Were drawn in from the edges, close to hearts.

They all were centralized, and made as one,
And they would live within the very core
Of all his being, once his work was done,
Together, and apart from him no more.

And then Rene begat, and did with pride,
Within his generative, ordered frame,
Hemos, the one who came to live inside
And came to earn himself eternal fame.

Hemos was one who built himself a brain,
A Bigger one than any of the rest,
And greater than the brains that would remain
Of all who came to face life's mighty test.

He built up all his blood vessels so wide,
An offering to Hausa, high above,
And offered them to her with humble pride,
Who blessed him with her own and holy love.

And Hausa then looked down, and there she saw,
Beneath the shining of the starry sky,
This gift of his, a gift without a flaw,
And so she blessed him from her place on high.

She came and then transformed, and did with grace,
And made them red, and red she made them so,
A line of all his servants in that place,
To keep his brain well-fed where it would go.

As carriers of oxygen so bright,
The breath of life, so perfect and so pure,
They carried through the day and through the night
To make his brain grow strong, and to endure.

And so his brain was fed, and it was fed,
And it was always strong, and always bright,
And nourished, just as it has here been said,
And filled with all the oxygen's pure light.

Hemos begat Haikus, who was a fish,
A little one, who thought he could not bring
To pass his dream, or ever reach his wish,
Or ever do a great or noble thing.

He thought that he could never swim or fly,
But then he spoke, and spoke with all his might,
Beneath the water of the ocean sky,
To make his future good, and make it bright:

"I think I can, I think I can," he said,
"I think I can, though doubting, if I try;
I think I can, with fear and doubt now dead,
I think I can fulfill my plan, and fly."

And then he flew, and flew out wild and free;
His faith had come and set him free and loose,
Across the waters of the boundless sea,
From every doubt and from its binding noose.

And so Haikus became the very most
Accomplished in his noble, ancient line,
The greatest one of all his mighty host;
Not one could match his greatness of design.

Haikus begat two sons: the elder one
Was Lampris; and the other, strong and true,
Was Denton, when the day had now begun,
And who would come to do great things, and do.

Denton built teeth, and they were pure and white,
Great teeth that gleamed, and that forever shone

With their enamel shining, shining bright,
Just like the finest ivory and bone.

And so it was that Denton then became
The Eloh of Dentistry, and their chief
Of Teeth, and he became the greatest name
In their protection and their great relief.

And to this day we honor and we own
Denton as giver of the gift that comes
Through all our daily mouth-rite: he alone
Gives healthy teeth, and gives us healthy gums.

This rite involves a practice that we do,
A holy rite, and handed down to us,
It keeps our teeth attractive, bright, and new;
We do it to the end, and without fuss.

For we will take a bundle, short and small,
And then insert it in our open mouth,
Of hoghairs gathered, gathered one and all,
And move it from the north down to the south.

With magic powders, powders that endow
Our mouths with louder speech, round and around
We move the bundle, and we move it now
In gestures that are solemn and profound.

A dance that is so highly formalized,
A cleaning's circumstance, and tried and true,
Through all its movements, careful, well-devised,
We make the teeth within our mouths renew.

And once or twice in every passing year
We seek the holy-mouth-man priest, the one
To whom we go, and go without a fear,
Who holds the dental feast until it's done.

And all these priests have tools, and tools they hold:
Their Augers, and their awls, and all their probes,
That follow sacred rules as from of old,
And all their prods; and they wear priestly robes.

The use of all of these within the rite
Exorcises the evils of the mouth,
And casts them out, through ritual, the blight,
And drives them out, both from the north and south.

The holy-mouth-man opens, with his hands,
Our mouths, and uses all the tools as well,
As all our faith both hopes for and demands,
To break and shatter all decay's fell spell.

And he enlarges every single hole
That the decay has made, and then he lends
The substances of magic power, whole,
To stop it, and the holy rite defends.

And if no holes at all are to be found,
Then he will gouge large sections of them out,
Though all the teeth are healthy, whole, and sound,
In order to remove all fear and doubt

That supernatural and holy stuff
Can come at last to stop and halt decay,
Applied to them, and well and long enough
To keep it, and to keep it well at bay.

The purpose of it all is clear as day,
To make our smiles both bright and very clear,
To come and to arrest decay's display,
And so to draw our friends and kin all near.

These are traditions that we still maintain
As long as Denton smiles on us, and smiles
Through all the sunshine, and through all the rain,
Upon us from afar, across the miles.

And by the holy will of Denton, still
His many sons shall have the right to care
From all the mouth-priests, and shall have their fill
Of freedom found among us everywhere.

And never shall our poverty or need,
For this is our great hero's own demand,
Deny to us this charity, this deed;
And Notgnihsaw's own word, and his command,

Ensures that all of us are ever free,
Regardless of the gold we have or hold,
To seek out dentistry, whoe'er we be,
Just as it was among the heroes old.

Conodontus begat two sons: the one,
The biter, who was strong, and who was keen,

Was Conodon, the elder; and the son
Pterapsis was the younger, most serene,

Yet mighty was he; and Pterapsis then
Built armor, a great suit, both strong and bright,
And armor was his emphasis again,
To be a shield for him within the fight.

Conodon was the bearer of the teeth,
And with his speed he swam, and swam along,
And was the one who shared out terror's wreath,
Right through the water, like a ram, and strong.

And all his teeth were very sharp and strong;
A predator was what he came to be;
They served him well throughout his whole life long,
Throughout the whole of all the boundless sea.

Pterapsis chose the way of sure defense
And permanent protection; with great care
He built a heavy suit, both strong and dense,
To guard and to protect him everywhere.

Among the sons of Cambrius, each one,
The many sons of Haikus would be found
Back when the race of all of them begun,
To be the greatest good, and most renowned.

But this great thing was not to be at all
Immediately; and they had to wait
For Time to go and pass, and pass, and crawl
Before they came to hold the highest state.

For Ghosts came down, and struck at Terra's form;
They wrecked it, wrecked it right down to its core
Within a great and devastating storm,
And opened up the way of death, its door.

The many sons of Conodon then fell,
And disappeared, and vanished out of sight
Into the darkness, and no soul could tell
Their tale within that long, eternal night.

Their teeth were what would come to mark the end:
The great Cambrian time at last was done,
An era ended wholly, O my friend,
And a new age of all the world begun.

And so it was the Ordovician came
With great precision, and the sons arose
Of Conodon again, and in its name,
And rose up, and came out of their repose

To be the mark of this new era, new,
With teeth that were made for the newer day;
New teeth they bore, which were both strong and true,
To show to all of us a better way.

From where Vertebratus had his first start,
To Denton and his teeth, so pure and white,
With all his great and mighty spinal art,
And Haikus and his faithful, trusting flight,

The vertebrate design, from year to year,
And every generation, as it grew,
Became more fine, and more refined, more clear,
And more complex, and more so through and through.

The kidney that was centralized and made
With all the great efficiency they gained,
Would make them very giddy, unafraid,
And which for very long a time remained.

And so the brain that Hemos came and built,
The brain that would become the pattern true,
And which he built without a shred of guilt,
Became the template for those who'd pursue

Intelligence and thought, which never could
Be had, but had to be by all well earned,
Not bought for any price, or any good,
Through lessons that were hard, and hardly learned.

The red blood cells, which were so very bright,
Which went to feed the ever-growing brain,
And which would carry oxygen and light
Through times of pleasure, and through times of pain,

Became the lasting, great innovation
That followed on behind them, in their wake,
Of every living generation,
And did it all for evolution's sake.

From one small fish, who thought that he could not,
Until he found belief within his life,

And faith, and all the power that he got,
That let him overcome his grief and strife,

There came great lineages that were strong,
That came to grow and rule the open seas,
And that would last and live out all life long,
With all the greatest skill and expertise.

The teeth that Denton came and made and laid
Within the vertebrate and its design
Will never ever come to pass or fade:
Protection that is good, protection fine

Against the hard, hard food the world provides,
That must be ground and broken down in size,
That must be chased and hunted down besides,
Before it comes to feed and satisfies.

The armor that protects, and keeps men whole,
Together with the predatory art
Of speed, which intersects and plays its role:
Both of them played their necessary part

Within the vertebrate's success, and through
Defense as well as the great, fierce attack,
Duress and trial, these, the mighty two —
Kept evolution moving, and on track.

And when the ghosts came down, and tore and rent
The world again, and broke it to its core,
And brought an era's ending, as they went,
It opened up for all of them the door

For all new innovations, which would spread
To living things upon the whole wide earth,
Arising from the nations of the dead,
To come and show to us their truest worth.

The teeth that came and marked out all the time
Of the old era's ending, and the end,
In its own rhythm, and in its own rhyme,
And a new era's rise, and its ascend,

Will show to us the way that life persists
And how it always comes to find a way
Throughout the whole of all of time's long twists,
That it may live and last another day.

From out Haikus and his most faithful phrase,
With all of us who dare at all to dream,
That “I think I can,” which forever stays
With us who would be more than what we seem,

There came the vertebrates, so very bright,
Who show what is possible, what can be,
Who filled the whole wide world with all their sight,
When faith is plausible, and makes us free.

The holy-mouth-men come to us and show
From out of ancient dental, careful art,
The way in which our great traditions grow,
To come and play at last the healing part.

And through the ages, under all the skies,
The dental rites are ones that we will keep,
A sacred bond, which all of them comprise,
With all our ancestors, so far, so deep.

In every toothbrush stroke that we may make,
We honor him, and honor there his name;
In every dental yoke, for Denton’s sake,
We honor his enduring, lasting fame.

And all the centralizing that was done
Of all their Organs in the core, the key
Through all their generations, every one,
That opened up the door for them, and free

For all complexity, and for its sake,
For all the vertebrates, since they began,
For great ability, that they could make,
Coordinating lives, and then to plan.

From out the simple cord along the spine,
With all the wisdom that the ages brought,
To all the complex brain’s own word and sign,
The vertebrates are those who came and fought

To earn themselves at last their rightful place
Through innovations that were strong and true,
Within the whole of evolution’s race,
And faith in all the things that they then knew.

The Ordovician and its early dawn
Brought with it new, fresh opportunities

When the old age at last was drawn, withdrawn,
And brought them for the new communities

Of vertebrates, who then would rise, and rise
And show to all of them what they could do
Beneath the newer Ordovician skies,
With all their innovations, which were new.

In every vertebrate and in its spine,
Remember all of those who came and built,
And in each single tooth, so sharp, so fine,
The old foundation, built without a guilt,

Of all the things we hold as very dear,
The brain, the blood, the hard and solid bone,
Throughout the whole of each and passing year,
All out of one line gathered up and grown,

A line that dared at last to centralize
And fix upon the future's great reward,
And organize itself, and turn its eyes
For all of those who come to trust the Lord

Of evolution and of all its way,
Of consciousness and thought, which never could,
Through all the night, and through the brightest day,
Be bought for any money, any good,

But must be earned with patience and with care
To build for us a better, truer way
By all of those who always come to dare
For all of life, and for its endless day.

Chapter 42: The Rise of Vertebrates

Capricorn 14, day 42 of the Gaian year

The Ordovician age at last began
In great extinction; and the Sages know,
As if it were the work of some dark plan,
What caused so terrible a fate, and woe.

The ghosts were real, and with a power none
In earnest could withstand; and they were old,
Beyond belief; and so it had begun,
The age of ghosts, the age of death foretold.

The Sages see it, and they all agree,
Within the mists of time, where, as they wind,
The ghosts walk still, in all they come to see:
The threads of death and life are intertwined.

But when at last the mists had cleared away,
The world was greater still than any will
Had dreamed, and there appeared a newer day
That mortal kind could never yet fulfill.

The Planktonic Planimals, when they fed,
Brought forth new life through harmony, not strife,
And through the oceans everywhere it spread,
And all the waters quickened into life.

Leviathan arose, great dragon, friend,
The son of Magog, wicked king; he read
His rule from wisdom's log, from end to end
Of all the seas, not foe but friend, he led.

Though born of evil seed, the dragon would,
Leviathan, not lead to war, and swore
To stand for peace, and so for peace he stood,
To keep his realm from strife for evermore.

To peace and to prosperity his realm
Grew up, and flourished underneath his rule,
In clarity and order at his helm,
Like some divine and everlasting school.

The sons of Leviathan then became
Tenscore myriad microns in their length,
Greater than any who before them came,
And great their body politic in strength.

Theirs, a commonwealth of mighty power,
A realm that knew no rival and no peer,
And full of greatness through each passing hour,
Through every passing day and passing year.

His sons inherited the greatness bred
Into their very souls, into their heart,
The inner and the everlasting thread
That bound them each to play the vital part.

The sons of Leviathan ruled the world,
Unfooled by its corruption; they would bring,
As all the might they held at last unfurled,
To life its building up in everything,

With justice that was great and that was true.
They were the shepherds, in that kingdom fair,
Of all the sons of Bios, and they too
Would tend them all with love and gentle care.

From small planktonic ones that drift and float,
Up to the Anomalocarids, all,
The vicious warrior sons of fiercer note,
Felt benefits that came at that rule's call.

Ordovices, the son that they begot,
Would hold the greatest reign among them all:
Leviathan's own son, he cast his lot,
For when he came of age he heard the call

To be the Emperor supreme. He made
Great cities of a never-fading fame,
Beyond all dream, whose memory won't fade,
And "reefs" was given to them as their name.

And so the wealth of all the waters grew,
Like nothing ever seen in any lore,
Its whole economy in concord too,
From mountain peak below to farthest shore.

In the great Coral cities, where the grace
Of beauty never pities those who fail
To see or comprehend, in such a place,
Their vast complexity, their depth and scale,

The sons of Euka came from far and wide;
They traveled from afar, and as they went,

From places without name on every side,
The mysteries unraveled where they bent.

Ordovices then put to work the sons
Of Cnider, and the perk that they would find
Was wisdom's gentle hand on all those ones
Throughout his peaceful land, so well designed.

And so it was the sons of Anthus made,
In stone and rising high, as if to try,
Great cities, cantus of a beauty laid
To reach above them to the ocean sky.

Ordovices had daughters, who could build
The waters into living stone; and one,
Coraline, built them, as the waters willed,
A daughter all her own, beneath the sun,

Of Florida, who came in days of old,
Of Rhodes, the ancient; and they made to be
The coralline Algae, which came to hold,
The plaster, like a galaxy at sea.

Upon the great Corals it lay; and all
Their work would long endure, and so remain
Through portals of the years, and would not fall,
With beauty clean and pure, without a stain.

Ordovices saw clearly that the sons
Of Bryos had no home to call their own,
That they, who were the small and humble ones,
Were scattered, and were wandering alone.

And so he blessed them well and gave them room,
Within the great reefs, shining clear and bright,
With homes where they could dwell, in light and gloom,
Throughout the day and all throughout the night.

And to this day the reefs are standing grand,
In the art of Ordovices, who wrought,
As monuments upon the ocean sand,
With gentle heart the cities that he sought,

The most prosperous cities ever made,
Of a complexity so deep and fine,
Where life shows no pities, and is not swayed
By those who cannot see the vast design.

On Terra and beyond, the reefs have formed
The bond between all living things; they bring
The waters peace, and so the seas are warmed
With all the order known in everything.

The coral cities rise in every place
With architecture that is very fine,
Beneath the ocean skies, in light and grace,
At once a humble thing and yet divine.

In every coral branch that holds its ground,
That has been built with care, and built to stay,
And every firm and stanch Foundation found
A beauty lives with everything each day.

The shoals of fish, so bright in every hue,
Beyond belief, and far beyond all thought,
Dance in the crystal light that filters through
The reef, in patterns no hand ever wrought.

And each one of the creatures has its place,
Where harmony itself has been the law,
Within this living and abundant space,
Without the slightest error or a flaw.

The algae and the coral share their lives,
Each one of them by helping others grow
In ways most moral, so that each one thrives
In partnership's own long and steady flow.

The Bryozoans, very small, can make,
Upon the coral's frame, where they are found,
Their cities, one and all, for their own sake,
To share in nature's game, all gathered round.

The fish will find a shelter in this place,
A refuge where the hunters take their fill
Of others, from the ones they fear to face,
Throughout the night and day, by strength and skill.

And so the whole economy would grow
Beneath the wise Ordovices' own hand
In perfect harmony, from high to low;
His rule brought life its prizes through the land.

And he became well known through all of time,
His wisdom, and his boom, so strong and grand,

Through ages, as “Ordovices the Prime”;
Dispelled all sense of doom across the land

That had been hanging over all the past,
That threatened every life with certain death
When the extinctions came, and at the last
Had stolen from it all of its own breath.

This boom became the name of GOBE, the fame
Of which is greatest, and it was a sign:
The Great Ordovician Event, the name,
And magician of a diverse design

Of life, biodiversity that brought,
To every sea and every distant shore,
Complexity beyond what had been sought
Or ever seen in all the time before.

The life within the seas became the thing
That pleases always, in its every place,
That makes the heart that loves to see it sing:
Life’s creativity in all its grace.

And still more prosperous it grew each day,
With species old and new that settled in
And found their perfect place along the way,
In evolution’s race they ran to win.

And it would only grow, and grow, and grow,
More prosperous and bright, a shining light,
Greater and greater, and more richly glow
Under Ordovician power and might.

Beneath the dynasty of wisdom’s reign,
The first great Golden Age began; it came,
Of wisdom’s sovereignty, in its domain,
Upon life’s endless page inscribed by name.

The reefs became the very heart and part,
Where beauty and its function, side by side,
Within all nature’s living work of art,
Would meet in perfect junction and abide.

From Leviathan’s choice, and it was wise,
In place of war and strife and all its cost,
To let peace be his voice before all eyes,
Came this abundant life that was not lost.

His son Ordovices, in all his days,
Built cities that we all can see here still,
Great prizes; and today our every gaze
Is on the complex web of reef and hill.

The coral and the stone, and every kind
Of species, each one working in its place,
Each one its own, and yet with all combined
To play its vital role in that great space,

Will show us how to build, in our own day,
For all who answer wisdom's call and heed,
Communities that yield along the way
Prosperity for all, in word and deed.

In every living reef beyond belief,
We see the legacy, both rich and vast,
In every coral leaf and every sheaf,
Of this great dynasty of ages past,

That chose to build, not break, and not to take,
And made a world where creatures, great or small,
And all for every living being's sake,
Have each a special feature, one and all,

And has a role to play, and stands therein
Through calm and raging storms, from first to last,
Within the symphony, and plays within
The life in all its forms, both small and vast.

The Ordovician way is living on
In every coral city in the sea,
Until this very day, and is not gone,
Both grand and gritty, in its own degree,

That rises from the sea where it is pressed,
Where form and function, joined by wisdom's art,
In perfect harmony, are ever blessed
By wisdom's gentle rest and gentle heart.

From Leviathan's peace, and from the reef
That, shining bright in beauty, still will grow
And never ceases growing past belief,
We learn might is not what conquerors show:

It is not in the conquest of the sword,
Which comes to tear, and wreck what it may find,

But in the gentle word and kind accord
That builds methodically, and is kind.

The first Golden Age set down for us all
The lesson that is clear and that is true,
Upon the page of history, to recall:
That what it is that we may choose to do

With power that is given to our hands
Determines whether all will live and thrive,
Whether the seas, and whether all the lands,
Will under curses dwell, or will survive.

Ordovices had chosen just to build,
And so he built a life that shines here still;
And with his wisdom was the whole world filled,
As bright as at the first, and ever will.

In every coral's growth and every vow
To build and to create and not destroy,
In every sacred oath we make here now,
We find life's truest and its deepest joy.

The lesson of the Great Ordovician
Biodiversification Event
Shows, like a wise and gentle physician,
What comes when wisdom's ways, with one intent,

Are summed into the choices that we make:
To let our art be building, and our part
Be peace, and let peace speak for all life's sake,
And all be done with love within the heart.

The reefs that grow today in all the seas
Are children of that time, so long ago,
Prosperous in their way; and such as these
When reason was in rhyme with nature's flow,

With nature's deepest law: that beauty, made
And born not out of force, nor out of might,
Without a single flaw, does not invade,
But comes from love's own course and gentle sight

That sees in every creature it may meet
A worth protecting well in every age,
A special feature, perfect and complete,
As stories always tell on every page

Of Leviathan's son, whose work and art,
As long as reefs still grow, and so remain,
Is never done, and never will depart
From beauty's endless flow across the main.

Chapter 43: The Golden Age Begins

Capricorn 15, day 43 of the Gaian year

While Trilobites were ruling all the seas
With all their dynasties and all their might,
The rivers flowed, far from their stern decrees,
For lesser brethren, out in free delight.

The sons of Arachnus had ruled the sea,
Where they would school their children in each art,
And there they would be taught, and they would see
How they should play their own sea-dweller's part.

The sons of Insectus then took the streams
And rivers, like a book that they could use,
Of opportunities, of open dreams,
For their communities to make and choose.

The sons of Cain and Abel would command
And rule the lands; their living could be found,
For they were able there, upon the land,
In the terrestrial air all around.

So Crustaceus looked around and saw
No place at all where he could build and stay,
Where he could make his stand without a flaw,
In sea or stream or land, in any way.

Yet though there was now nowhere left to go,
He tried to found his own and noble line,
In spite of all the grief and all the woe,
A dynasty that would be great and fine.

For Heaven gives reward unto the heart
That rises up above its plight and pain,
That plays the steadfast and determined part,
And reaches for a height it can attain.

Crustaceus begat a pair of sons,
Karkon and Mushi, meant to find their way;
And each of them, the two of them, young ones,
Went on through life, from passing day to day.

Mushi begat two sons. When day begun
Came Copepus, the elder, first in range;
The other, Lepipus, the younger son,
Throughout the whole of all his life was strange.

Copepus became the sire and head
Of copepods, so very small they seem,
The little ones, a choir that he bred,
Who answer ocean's call in every stream.

And Insects of each and every form,
They swam throughout the waters of the sea,
Through calm and through the wild and raging storm,
In their complexity, abundant, free.

The tiniest of all in their array,
They dance on through the waves, and in them dwell,
Who hear the ocean's call by night and day,
In microscopic graves, each in its shell.

Lepipus meanwhile bore, in his own turn,
Two sons, who would explore and roam and run:
One, Brachios, who swam the sea to learn,
And Silvio, who ran free in the sun.

A daughter of Silvio would one day
Help insects from the waters to the land,
And help along their flow and show the way,
All guided by the slow, evolving hand.

Some day, some many millions of years hence,
The sons of Silvio, the mighty kind,
Would come to be, by their own inner sense,
The Insects that would dominate, and find

Their way across the world, and they would bear
Six legs, with all their speed and all their grace;
But that day was not near; through time of care
They had to persevere in every place.

Brachios became the sire of these:
Sea monkeys (who would think to name them so?),
And many more besides: the Water fleas,
A crowd of them by the score, row on row.

In their own natural habitat they lay,
Sea monkeys in the waters of their pools,
And lived in this and that and every way,
And water fleas who shone like little jewels,

Who danced on through the water, swift and bright,
And lived their simple lives in every place,

Each son and every daughter, day and night,
Where small beauty thrives in a little space.

Karkon then fled away, and made his home,
And there he would beget two sons, and more,
In open waters gray, where he would roam:
First Pancer, who was set out to explore,

And then Cephalocaridus, a son
Most glorious and splendid; and the way
Each one was separate from every one,
Through all of life, from day to passing day.

Pancer begat in time, when it was due,
Two sons, and in their prime, both great and small:
Oligostracus, the first of two,
And Polycruster, who stood very tall.

Oligostracus' sons would explore
With courage as their guide, and go their way
Across the waters wide, from shore to shore,
And swim the open waters night and day.

Among his sons, in time, there could be found
The seed shrimp, who were safe; but some gave way,
Degenerate tongue worms, who were not sound,
Who broke from all the norms and went astray.

These tongue worms chose to live as parasites,
Who take, and give back nothing that they take;
They never give in trade, by any rights,
And poor the choices are, the ones they make.

Instead of going out to get their jobs,
They live upon the toil of others' work,
Unlike the others and the honest mobs,
And in the shadows and the darkness lurk.

Polycruster begat two sons, and these
Were two who were to thrive and to survive:
First Barnacus, begotten on the seas,
And Malacus, all his life long alive.

Barnacus was a man who made his way,
A great frontiersman, living on and on,
And had a frontier plan in his own day,
And lived quite happily from dusk to dawn,

Settled down with his stalk upon the ground,
To live instead, held fast in one fixed bed,
No more to walk or wander all around,
Like cnidarians that were born and bred.

Like all the sons who were of Cnider's line,
Attached unto the ground, in his one place,
He lived his life in a way that was fine,
Where he had settled down and found his space.

Barnacus bore a son, and when the day
Began, he named him Goose; and he would be
Great Goose, who built society, his way,
In wondrous and in rich variety;

But all the same, the truth must still be told:
With all of his own foolish pride and art,
No matter how he tried, so brave and bold,
He never did become, in any part,

A goose, though there are some who claim him still,
And say his heritage was of the geese,
And claim his lineage, and always will,
And that his line goes on and does not cease.

And Goose still claimed his sons were geese; and so
He is the guide of geese, the holy one
With sacred pride who leads them as they go,
Who leads them on beneath the rising sun.

He is the Eloh of the Geese, the guide
Who brings to them sweet peace through day and night;
He guides them on their way, and at their side,
Throughout each passing day, through all their flight.

And in the old medieval lore they told
Of how it was the geese would rise and grow
(And tell much more than this, from days of old)
From barnacles that clung on down below,

Hanging upon the branches of the trees,
Until the time they could grow their feathers,
In shells that swung upon the passing breeze,
In winds and rains and all kinds of weathers,

And then they flew away from there at last,
So says the chronicler of whom we're told,

Gerald of Wales, who wrote it in the past:
This story that was handed down of old.

Of the sons of Goose there would be many
Who grew quite small, compact in every way,
Who let their size go loose, more than any,
And one and all they shrank down in their day.

They then became the Barnacles, and they,
Half shrimp, half coral, all in one combined,
Were like small-scale miracles in their day,
Full animals with moral lives aligned

Upon the rock, like shepherds who would keep
And tend their own; they filter food all day
As if it were a flock of goats and sheep,
And live quite happily in their own way.

Malacus bore so many sons; his line
Had more Descendants than the passing years
Could count, or any one could well define,
Through all their many joys and all their tears.

Among them there were crabs, so very bold,
And shrimp of grace and beauty in the waves,
Whose stories have been very often told,
In all their deep and hidden ocean caves.

The isopods were there in all their throng,
Each playing in its time its proper part,
And amphipods were everywhere along,
In evolution's great and growing art.

They would become a dynasty so great,
So vast that none could match them all their days,
Expansive in their spree and in their state,
In future's shining sight and in its gaze.

So great were they that now, when we would speak
Of Crustaceus, we speak of the host
Of Malacus, of all his great mystique,
The great, of all of them, who matters most,

Whose dynasty was still, as yet, to reach
Its glory, which was set for it in time;
And waiting for the coming time was each,
Till all of them would come into their prime.

Beneath the yoke of Trilobites, their sway,
Awaiting all the while the day to be,
They lived like gentle folk from day to day,
Till they would lead the way across the sea.

But patience is the key, and it will hold,
And the crustaceans waited, and would bide,
To life's great mystery, both young and old;
For their appointed fate they would abide.

And from Crustaceus, the source and start
Of all, who rose above his plight and woe,
With his own force and his determined heart,
And reached for greater height and greater glow,

Came lineages that were very strong,
That fill the seas with all their many forms,
That would last on throughout a lifetime long,
Through calm and through the wild and raging storms:

The copepods, so very small and slight,
The barnacles that cling upon the rocks,
Who answer, each, the ocean's call by night,
Like shepherds watching over all their flocks,

The crabs that bear their claws, so very strong,
Upon the ocean's currents, wild and free,
The shrimp that swim along the whole day long,
All from one single family and tree,

That started with one soul, who was so brave,
Who reached for something greater and higher,
One Soul who never once would bend or cave
To circumstances, though they were so dire.

In every tiny copepod that goes
Throughout the waters of the ocean blue,
And dances like a small god as it flows,
Remember what it is that has been true:

That size cannot determine or define
What spirits can become, or seal their fate;
The smallest ones, by their own heart's design,
Can grow, if they will not delay and wait

To try in spite of all the many odds
Against them; for in each generation,

Trusting the mighty gods, in turn the gods
Reward all of their determination.

In every barnacle that clings and grows
Upon the rocky shore, where all the waves
Like miracles come in, in endless rows,
And evermore come crashing on the caves,

And crash and spray and foam upon the stone,
Remember those who traveled on through time,
Who roam, but not through space, and not alone,
To find their perfect rhyme, and find their chime,

With life's eternal song, that, as it plays,
And through our trials here in every year,
Will carry us along through all our days,
To what we hold most near and hold most dear.

The sons of Crustaceus show the way
How those who will not bow to fate or weight
Of circumstance, and those who will not sway,
Can rise to something great, however late.

And though the Trilobites had held their sway
Back then, the future would reveal and show
What, in that ancient day, so far away,
Time would begin to heal and help to grow:

That patient and enduring persistence,
Will triumph in the end and win the day,
And steady, faithful, and true existence,
When time becomes our friend along the way.

And from the rivers out into the sea,
The crustaceans would one day come to rise,
And out of bondage, out into the free,
And claim the destined prize before their eyes.

But that is yet to come, and lies ahead,
When all the current ages will have grown
Into a sum of lessons, wisdom-fed,
In life's eternal kingdom as its own.

For now they wait and grow in every place,
To be prepared and ready for the day,
And learn what they must know to run their race,
When they will be the ones to lead the way.

In patience they will find the strength to wait,
The preparation that they have needed,
And find in time, at length, at their own rate,
For when at last their time has succeeded.

For Heaven gives reward to all who try,
Past present circumstance, and to advance,
To reach beyond the high and present sky,
Into the future's great and greater dance.

Crustaceus has shown us all the way:
Determination that is strong and true,
That leads us to a greater, brighter day,
Will see all struggles and all hardships through.

His sons throughout the sea will carry on
And live eternally, as proof, and clear,
Though he himself has long been dead and gone,
That those who dare to dream, and persevere,

Will find their rightful place, and they will stand,
When time reveals at last, as it is cast,
In evolution's race across the land,
The future from the past, so long and vast.

Chapter 44: The Crustacean Determination

Capricorn 16, day 44 of the Gaian year

Among Molluscus' sons there were the ones,
The sons of Gastropus, a line that grew,
Who twisted, glorious and twisted sons,
Renowned and prosperous the ages through.

Gastropus twisted every son, and each
Was twisted in a fashion very strange,
Beyond our understanding and our reach:
For he would take their anus and arrange

That it lay next their heads, and lay so near,
In anatomical and strange design,
That everyone could see it, plain and clear,
So twisted, and yet all the same so fine.

And so it was that by this mighty art
Each, from danger and its threatening call,
Could draw away, could wholly draw apart,
By pulling in completely, one and all,

Within their shell, so close they were and tight,
From any enemy who would intend
Them harm, and there protected, day and night,
Their family, from all who would offend.

Glorious sons of Gastropus became
So many that in history's parade
They Outnumbered all the rest, to their fame;
No class besides a greater count displayed,

For only Insects, who were very great,
Through all the long and passing of the years,
Would ever match their count or duplicate,
Through every joy and through all of their fears.

The holy Priests of Gastropus are dressed
All in Tyrian purple, shining bright,
In robes most glorious, the very best,
To show the royal vision of their sight.

The regal mucus that they bear will show,
From Gastropus' great kingdom, far and wide,
How majesty is growing still, and so
It grows through wisdom, and is not denied.

And in the year of eight thousand, and four
Hundred and thirty, the Phoenicians came,
A band of them, and landed on the shore
To conquer it, and came to stake their claim

On the great Gastropod Empire; set
On fire, their hearts sought out the dye on high,
The sacred dye, which they had sought to get
Beneath the wide and purple-colored sky.

From them the purple came to pass at last;
The Romans took it, and when purple's hue
Comes on its way from that so distant past
To us this very day, we think anew

Of Majesty, and of the royal throne,
That flows from Gastropus, and from his line,
Of royal sovereignty, which has been known
So rich and glorious and so divine.

And just as was his majesty, the hue
Was purple, heavenly, through all the years;
His faith was colored blue, and it was true,
Forever pure, for all of his own peers.

And in the time of Moses, who was great,
The Prince named Hexaplex was blessed, for years,
With a great gift, and it would be his fate:
The tassels that would lift above all fears

The spirits of the true ones, and the few,
Who wear the tassels on their garments still,
Devotees who would dress themselves in blue,
According as it is God's holy will.

And many are the ones who follow now
In Moses' path, which some call hollow, less;
It is not empty, hollow; and their vow
Is filled up with the touch of faith's caress.

They wear the tassels, blue with faith, that will
Bring strength, and make them stronger every day,
And never scathe them, never bring them ill,
All of the ones who walk upon this way.

Limpus was firstborn son, and when begun
His line was, all his sons the Limpets came,

For he was eldest, Gastropus' first son,
Into the world as limpets of great fame.

His daughters, who were fair and who were bright,
Were Limpettes, each of whom would play her part,
And they would stand before God's holy sight
With faithful and with steady, loyal heart.

The Limpets are the keepers, firm and deep,
Of the tradition, watchmen through the night,
And they will never slumber, never sleep,
But guard and keep whatever thing is right.

And Limpus spoke to all his children there,
Ten thousands in their number, and they kept,
The great and small, all listening with care,
Awake, and did not slumber, never slept:

"Now everyone who hears these words of mine
Through all the years, and does them, and is true,
And does them faithfully, and line by line,
Is like a man who builds on rock; and through

The years he builds it there upon the rock,
And though the rain may fall upon it hard,
Just like a shepherd watching on his flock,
He will not be harmed, he will not be scarred.

The floods may come to beat upon his door,
The winds may bring defeat, both wild and cold,
To others, ever more and more and more,
But still his house will stand, and it will hold,

For it was founded on the solid rock,
In truth that will not move, and will not bend,
On rock that has been grounded past all shock,
Through all of what I do approve, and tend.

But everyone who hears these words of mine,
And does them not, I say, will be like one
Who, all his years, would never keep the line,
Who chose to lay, before his house was done,

His whole foundation down upon the sand;
The rain will come, and it will beat down hard
On what he built with his unaided hand,
And he will be both wounded and be scarred.

The floods will come to beat upon it there,
The winds will bring defeat, and beat until
His house, for they are those who will not spare,
Can't rouse itself again, and lies there still

In ruin, and in its collapse and fall,
And falling to destruction's very pit;
And great will be its lapse, and great its all,
Where nothing more again will ever fit."

The Limpets build their homes upon the stone,
And not on sand that shifts and moves about,
On rocks where all the ocean roams alone,
With every storm and every storm's great shout.

As all the waves will bellow and will beat
Against them, and the ocean and the sea
Do battle in their fury and their heat,
The Limpets stand, as firm as they can be,

Standing their ground so faithful and so true,
Like soldiers, never leaving their own post,
Who had been tested, tried, and so they knew,
Though tempest be their enemy and host.

And when the Limpets move, they always go
Home to their rocky and familiar place,
Just as we know, and as they always know,
The place where they have found their proper space.

As their own father did, and did before,
The Limpets merge and join their sturdy shell,
From shore to distant shore and every shore,
Unto the rock, and there they stay and dwell,

And grow their intricate and fitting fits,
With every shell so shaped in perfect wise,
To the foundation and to all its bits,
To match the rock's geometry and size.

And so it is we sing the holy hymn
Of Limpus when we feel that we are lost,
When all our hope grows very faint and dim,
So that we might sit down and count the cost,

And always find our way back to our home
Throughout the world, this world so very wide,

No matter where it is we choose to roam,
With Limpus there before us as our guide.

“My hope is built on naught, on nothing less
Than all that Limpus brought: the gift to bring,
His blood, and all his righteousness, largesse
That gives us faithfulness in everything.

I do not dare to trust the sweetest frame,
However sweet its sound may be; for this,
I wholly lean upon his holy name:
In Limpus’ name alone is perfect bliss.

On Limpus, solid Rock, I stand, and stand
Just like a shepherd’s flock that stands below;
All other ground is only sinking sand
That sinks beneath my hand, and lets me go.

All other ground is only sinking sand,
And on it there is nothing that will hold;
And it will never help me so to stand
As Limpus does, the solid Rock of old.”

Snellon, of Gastropus the youngest son,
Took, when his line began, a path instead,
No path that old tradition took, not one:
The way of innovation’s day ahead.

He stood for something that was new, and stood
For progress; and when Snellon’s day begun,
He bore two sons, as all good fathers would:
Vetigas came, who was the elder son,

And then came Escargon, the younger one,
Whose work would carry on the house’s name
And all its fame, when he himself was done,
Through innovation’s bright and burning flame.

Vetigas bore two more sons in his turn:
Trochus, explorer, and the very strong
Avalon, and they would both come to learn,
And both would live on through their whole lives long.

Trochus was the sire and father of
The snails that clean in every single place,
Whose wish is cleaning, and whose greatest love:
Turban snails, who are proud of their own race,

And Trochus snails, whose dutiful display
Will show us how to clean with care, and well,
And tell us, and will show us, every day,
Aquaria, wherever they may dwell,

And ecosystems too, in all their kinds;
They polish and they scrub along the way
With work they love to do with all their minds,
Like members of a club, by night and day,

Devoted wholly to the cleaning art,
In nature's great and wonderful design,
Of playing cleaning's necessary part,
Where all things work together and so fine.

Avalon in his time became the one,
And from his line the Abalones great,
Ancestor of fame, of every son,
Who never in design will hesitate

To show their hardy ways in every place,
With pores within their shell, which they use for
Their breathing all their days, and in their space
They dwell, and they will dwell for evermore.

They are so rough upon the outer side,
But in their inner space, their inner part,
Is beauty, which is something none can hide,
Where colors interlace with matchless art

In patterns, beautiful in every hue,
That make an Art that takes the breath away,
Beyond what's dutiful, as they will do,
From life and death and all of us who stay.

Escargon coiled his shell in many turns,
And bore two sons whose coils were even more,
More than the words can tell or knowledge learns,
Surpassing earthly toils that came before

In their complexity; for they were two,
Each had his work, and each was a brother:
Neritus was one, as you see, and you
Know Conchus, strong and true, as the other.

And Neritus became, by his own right,
Ancestor of the snails with lids that close

And shut out every eye, with lids so tight,
Whenever they are hiding from their foes.

Impenetrable, they close, and they fear
No enemy; they shut themselves up fast,
However strong the foe that may draw near,
Whenever danger's near, until it's past.

Conchus bore two sons in his time: and one,
Marius, who ruled the sea; and then went
Heterobran, when day had now begun,
Out free to fly, the younger one, and bent

To fly through all the waters of the skies
Of ocean, grace in every move, and so,
With wonder ever shining in his eyes,
He would forever prove it, and would show.

Marius of the Sea became the line
(Of many little snails, of many kinds,
The ancestry, and both the root and sign),
Whose beauty never fails, and no one finds

A fault in it, across the seas so wide:
The Cowries, beautiful in their array,
The Periwinkles, which are full of pride,
And Wentletraps, so full in their display

Of spiral elegance and spiral grace,
And Murexes, so very bright; the lone
Moon Snails, that in their dance will turn and pace;
Cone Snails in all their might and in their own;

And Turrids, coiled and spiral-wise and fine
Beneath the ocean skies; each played its part,
Each one of them, within its own good line,
In evolution's ever-growing art.

The surfing snails will move so very fast,
They ride across the shores and through the tide
At breakneck speed, and at the very last,
With all the ocean as their only guide.

And here it is, the story that is told
Of daughters who were brave, and side by side:
Olivella, and her sister, the bold
Agaronia, not to be denied

Her Chance to surf the waves; and so they went,
The slaves to speed, and to the ocean's thrill,
Like ocean's bravest slaves, and were content
With riding on the ocean and its will.

Both Daughters of Olivius were these,
The surfer, who in his great art had gone
So glorious upon the waves and seas,
From early dusk until the early dawn.

The Cone Snails have been named, and they are named
Deceptively; in truth they are, really,
For beauty though they have been much acclaimed,
Assassins who kill, and kill so freely

With poison that is strong, and that's beyond
What we have thought was possible to be,
All of the things of which we have been fond;
There's nothing that's defensible, you see,

Against their deadly, poison-bearing art.
Between the life and death, and death's own door,
They live their lives alone and set apart,
Like guardians of ancient, secret lore,

Otherworldly and beautiful and bright,
With beauty that is lovely, but is such
That, though it is a pleasure and a sight
To see, is death to those who dare too much.

Cowries are devotees, and so their vow,
By her great blessing, by her blessing great,
Is to the goddess Cuprias; and how
They came to make, and came then to create

The very first of money ever made:
Their shells became the coin, the way to pay;
From ocean's shells came money and its trade,
To buy and sell with on each passing day.

And in the ancient script of China's hand,
The character for money shows, and so
Their shells are never skipped across the land;
It shows their legacy to all who know,

Immortalized in stone, and kept by those
Who know their value through the passing years,

Who've always known, as everybody knows,
Through all the many joys and all the fears.

The Murexes were known to all as snails
With beautiful and bright and shining hues,
As hedgehog snails full-grown, with spiky scales,
And colors that we might well wish to use

To dye our clothes and garments very fine
With every one of all the rainbow's shades,
In patterns that would shimmer and would shine,
That nature ever made in all its grades.

The great Conches, which were so very fair,
Adorable, were beautiful, and they,
Past everything that ever could compare,
Made melodies complete in every way

That echoed through the waters, deep and wide,
Whenever they would blow upon their horn,
In perfect harmony on every side,
From evening until morning, until morn.

Heterobran, the one who swam the skies,
Became a swimmer of the finest art,
Par excellence, with wonder in his eyes,
And skilled in swimming's every single part.

Heterobran begat two children: first
He gat Nudos, he the elder brother,
So strong and free that on the world he burst;
And Aeros of the sea was the other.

Nudos then shed his shell and let it go,
Untwisted from the gastropod design;
He also untwisted himself, and so
He trod a path that was another line,

A different path than most would go along;
Of nudibranches, bright as bright could be,
He then became the host, a mighty throng:
Colorful sea-sprites in the open sea,

Slugs with a poison in them that's so strong
That it could kill Leviathan, the vast,
And it is strong enough to sing death's song;
Such is their potent fate, unto the last.

And Aeros swam about so very free,
Without a care, without any worry,
In all the open waters of the sea,
And never once was found in a hurry,

But he would always take his own sweet time
Through all the water and through all the waves
To make each motion perfect, every rhyme,
In all the ocean's deep and liquid caves.

And Aeros bore in time, from days of old,
First Pulmon, who was very strong and great,
A son, and then a daughter, brave and bold,
Angelica; for it was her own fate

That she would come to be the mother of
(Through calm and raging storms, and unconfined)
Sea butterflies, and other forms thereof,
Beautiful swimming forms of every kind,

Whose ethereal and fair existence,
In liquid poetry, both swift and slow,
Eludes, at every space and distance,
Most who attempt to see them as they go,

Like butterflies that flutter in the air,
Through all the ocean's liquid, open space,
But swimming everywhere and anywhere,
With otherworldly beauty and with grace.

But Pulmon, he who was so very great,
Was given something else, and so he did,
Revered ancestor, as it was his fate,
What none could see was possible, what hid

From all as possible in days before:
He took and he inhaled a breath of air,
As none had done on any sea or shore,
And made his body into a new lair,

A lung, in which it was that he could store
The breath that let him go on and survive,
The breath he breathed for ever, evermore,
Within the tide pools, and to stay alive

Whenever all the water went away,
As none at all of all his kin and kind

Throughout the changing hours of the day
Had ever done therein, or had designed.

From Gastropus' twist, his own twisted plan,
To Pulmon's breathing art, and his new way,
That none could ever miss, since time began,
That gave him a new start and a new day

In evolution's race, where every one
Must find a place, the gastropods, we see,
Have shown, before that race of theirs is done,
How far they've grown, and what they've come to be.

From simple and from twisted start, they rise,
Both in the deep sea and the pools of tide,
To mastery of art before our eyes,
Where they will keep, as long as they abide,

Their vigil through the night and through the day,
To life in all of its abundant forms,
In their devoted and their constant way,
Through calm and through the wild and raging storms.

In every spiral shell, so finely spun,
Whose stories tell of function, side by side
With beauty, and they show it, every one,
All working in conjunction, and allied,

Remember how it was that they first came,
Through innovation's art and through its gain,
To earn and win their long and lasting fame,
And through tradition's heart, which would remain,

With both of them at work there side by side,
To fill up each and every living niche,
With all the ocean as their constant guide,
With forms beyond the reach of us, and rich,

Beyond our understanding, full and whole,
To see in all their glory and their grace,
But beautiful, and pleasing to the soul,
Throughout life's endless story and its space.

From Limpets, who are holding very fast,
To sea slugs that are poison-bright, that go
And swim, while rocks forever stand and last,
By day and night, through waters high and low,

From money-making shells, the cowrie's kind,
To the assassin, dwelling at the gate
Between the life and death, as we may find,
With poison in its breath, its deadly freight,

The gastropods all show to us just how
Diversity, which never yields to one,
To any single way, will never bow,
But flourishes each day beneath the sun

In myriad and many different forms,
That test what it is each of them can do,
Through calm and through the wild and raging storms,
To make their dreams and visions all come true.

Innovation, and old tradition too,
Submit to life's eternal call, which calls
And works, as all of them still work and do,
And beckons one and all within its walls

To find their perfect place, where they belong,
Where beauty and its function, side by side,
In evolution's race, both swift and strong,
Will meet in perfect junction and abide.

Chapter 45: Gondwana Assembles

Capricorn 17, day 45 of the Gaian year

Esther was a daughter, faithful and true,
Of Lily the Echidna, who was fine
(In the tenth generation's line and view),
Dutrus' daughter, who had changed her design

From bilateral form, and took instead
The pentaradial, and in her hand
Began the way; and so it was she led
The plan that evolution would command

For five-fold symmetry in all its parts,
Throughout eternity, beneath the skies,
In all its forms, and in its many arts.
And Esther looked, and saw before her eyes

Innumerable hosts that drifted near,
The planimals, so very small and slight,
Planktonic ghosts, so small and very clear,
Who answered feeding's call by day and night.

She tried to feed off them, as best she could;
And from her loins she bore two daughters, who,
With hunger as their guide, as hunger would,
Would go out and explore the waters through

The seas, each one of them in her own way:
The first, Crinosa, feeding all along,
Who fed throughout the night and through the day,
And then Blastosa, she who was so strong.

Blastosa built a city, and it stood,
With many brachioles, so fine and small,
Beyond all that is gritty, fair and good,
Around ambulacra's goals, ringing all.

Each ambulacrum, shining clear and bright,
And all the day, with arms so very small,
Was ringed throughout the darkness of the night,
That answered every feeding's every call.

Blastosa then became the mother of
The Blastoids, who were her descended line,
The forms like no other, below, above,
With architecture beautiful and fine.

Her daughters spread themselves so far and wide,
Throughout the ancient waters of the seas,
With their pentamerous and fivefold pride,
Like blossoms on the branches of the trees.

Crinosa begat two: the first was known
As Lily Stone, so true; the other, free,
Her own, was Luther, strong as any stone,
And he would live beside the open sea.

And Lily Stone in time became the one,
Ancestress of fame, found in every place,
From whom the Crinoids would come out and run,
Who danced with graceful flair and with their grace.

Together, then, the Crinoids, shining bright,
Spread out, and they spread all across the seas,
And Blastoids in the fullness of their might,
Like flowers waving in the passing breeze.

They then became a wall that would not fall,
The bulwark that was strong and that was true;
And they were there at the empire's call
For all the Ordovician world to view.

The empire found there, row after row,
Its strongest living stem, which held its foes
And all their blows, from which it came to grow
Through calm and through the storm and all its throes.

But Luther was not pleased, and was not glad
With leisure life, which ceased to make him grow
Or challenge him, the easy life he had;
And so he knew that he would have to go

Beyond what all the others did, although,
Against the stream, such struggle and such strife,
His life of comfort would forbid it so,
Within his dream, his adventurous life.

In youth he grew a stalk, as he was taught,
Like others of his flock, and in their way;
But when of age, he broke from what he ought,
From all tradition's cage, and would not stay.

Contrary to his sister, who would be
Content to live the gentle way, and fed

By filter-feeding, and who would agree
To feed by day, he went his way instead,

And used his arms to walk, as no one had,
That moved across the ground, both near and far,
Like some strange kind of stalk, so strange and mad,
Where freedom could be found beneath the star.

His tube feet crawled along with all their might
Upon the deep and sandy ocean floor
Throughout the day, and all throughout the night,
From here to every far and distant shore.

He struggled hard, and yet he was set free
In his own chosen manner and his way
To live his life beside the open sea,
From night until the coming of the day.

And to this day the Starfish hold and keep,
Within their very souls, and in their parts,
This old tradition, holding it so deep:
To play their mobile roles with all their hearts.

And Luther bore two sons; when day begun,
Asteros came, the elder; then was made
Echinos, a very different one,
Whose spirit knows the call, and has obeyed

Innovation's call, far above the thrall
Of old tradition's chains; and when, his own
Work done, Asteros, so unlike them all,
Remained traditional, he would be shown

To be so true to all his fathers knew;
But Echinos was one who found the way,
Who built anew, and made his dreams come true,
New Ways to make his visions live and stay.

Echinos built his city very small,
Compact, and used, in fact, so small and neat,
His tube feet only, those, and used them all
To move and heed the call, upon his feet,

Of wandering that was his desire.
To build a stalk like dad, as dad had done,
He never once would ask, nor would require;
And Innovation made him glad, the son.

Asteros and Echinos went to war
To fight each other through the day and night
(And heaven knows the reason, and what for,
And why the brothers had to come to fight).

Each one of them had sons, a million strong,
In armies, when the day begun, so wide,
Arranged in ranks, a vast and mighty throng,
With warfare as the rule and as their guide.

The ancient battles rage, and they will stay,
As all the photos still are there to show,
Across the page of history today,
From eons that were very long ago.

Asteros then begat two sons: the one,
The elder, Starfy, strong and true to see,
And Ophis, the other, the younger son,
Through and through a warrior, fierce and free,

A warrior in the center of his heart,
With vigor and with power and with might,
Who played his role, who played the fighting part
Throughout the day and all throughout the night.

Echinos bore two more, and these were they:
Orbos, who would explore the waters there,
And find his way; and Britta, in her way
A daughter fair, who danced without a care.

But Ophis and fair Britta, the two, broke
The war's Cycle, revenge and all its range,
Of vengeance, and the burden of its yoke,
And chose instead to make a better change.

They married, and the two of them became,
Despite their fathers' war, which raged so sore,
As Partners without shame, and without blame,
Though war raged on so fiercely, shore to shore.

And from their union came, in its own turn,
The Brittle Stars, so shining and so bright,
The children of great fame, as we will learn,
And centralized in all their strength and might.

Muscular creatures were they, and they were
So full of strength and vigor, and so great,

Machines in every way, in every stir,
And never would they slacken or abate

Their energy, their power, and their flow,
Of all their own devoted, busy lives,
Throughout each passing hour, high and low,
Wherever motion always moves and thrives.

Serpentus, son of Ophis, was the one;
From Britta's line, a daughter of her own,
And Baskette came, as when the day begun,
And both had designs fine, as both were shown.

Serpentus became the sire and source
Of forms who slither, sliding all around,
With grace, by will, and on their chosen course
Across the ocean's face, without a sound.

The Serpent Stars that he would make and shape
Would slither on with skill and precision
In ocean's light and shade, and in its drape,
Through each dark and difficult decision

Of where it is that they should hunt their prey;
Their tube feet were not meant for moving on
Throughout the night, throughout the passing day,
But bent to other tasks, when they were drawn

To other tasks at hand that they would heed,
While muscles made them slide along and glide
Throughout the land of sea, and made them speed,
With all the ocean as their only guide.

But Baskette was unique, and in her way
Was new; her arms would seek, as arms would do,
To branch out in a million-fold array,
As stories have been told, and told as true.

She ate the plankton, all the plankton small,
With arms that branched so far, and branched so wide
(The plankton answered to the ocean's call),
Like nets spread out on every single side.

She was the ancestress, in turn, of these,
No less remarkable than she, and seen:
The Basket Stars, who, like her, in the seas
In their complexity, and in their sheen.

Their arms will branch out like the branching trees,
And catch what food the ocean will provide,
Whatever thing it is the ocean sees
As fit for them, in their planktonic tide.

Starfy begat the race and the descent
Of Starfish, with great cities that would stand,
Decentralized, in every place they went,
Beyond all that is gritty in the land,

That may regenerate, and grow again
From parts, however great or small, alone,
When just a piece of them remains, and when
The damage life constrains, and they have grown.

The Starfish are the lords, and rule the floor,
Their empires, spread out so far and wide,
Who rule with iron swords, and rule with war,
With predatory and with hunting pride.

And they are vicious hunters, very strong,
Who never meet the wrong of weakness; still
They come instead to fill, and fill along,
The other hearts with dread, and dread their will.

And that is why they have their five hands, so,
With fingers that are made of strength and might,
To rule the ocean lands both high and low
Throughout the day and all throughout the night.

Echinos bore two sons, the elder one,
Aristotle; and then, the very strong
Cucus, born when the day had now begun,
And he would live on through his whole life long.

And Aristotle in his time became
The father of the Sea Urchins' whole race,
Of great and lasting fame; and to his name
They all belong, and graze with care and grace.

Great grazers of the waters of the seas,
Across the deep and sandy ocean floor
They move about with graceful, gentle ease,
From here to every far and distant shore.

Aristotle with care built for his use
A jaw of five teeth, strong and very bright,

Beyond compare, with which he would produce
His lantern, which he called his “light,” his light.

The lantern gave, with all the light it brought,
To life its Light; and so, as all men know,
It gave its light to each and every thought,
And to this very day we call it so,

The name that was his choosing, and his own,
Still never throttles wonder, to this day:
“Aristotle’s Lantern,” a name that’s grown
From how he lit up every hour of day.

His great-granddaughter, who was very fair,
The ancestress, the mother of the ones,
Was Sandy, and was known most everywhere:
The Sand Dollars, her daughters and her sons,

No less beautiful than she was, and seen,
So flat and round, they lie upon the sand
In their complexity, so clean and keen,
Beneath the ocean sky, so flat and grand.

Cucus became the father of a race
Of forms whose wish was cleaning up the dross,
The waste, to recycle in every place
What others had misplaced and left at loss.

The Sea Cucumbers, which are very great,
Accept it as their portion, and they mean
To be the janitors, it is their fate,
Of ocean’s corridors, and keep them clean.

The great recyclers, who will work and strive
In ocean’s deepest and in hidden parts,
And work their whole life through while they’re alive
With their devoted, dedicated hearts.

And when their enemies come close and near
And Threaten them, they seize upon a way,
Without a moment’s hesitating fear,
Most shocking and most startling to survey:

They spill their guts out with their strength and might,
And so, as the old story of them goes,
They put their foes and enemies to flight:
What seems like weakness is how they dispose

Of threats in their own way, their own design,
To keep them safe and sound in every place,
That works throughout the night and day so fine,
Though strange it may be found, and strange its face.

And so the Sons of grand Echidna, all,
Built up the great and splendid, and its state,
Throughout the land of sea, both great and small,
Their whole civilization, and its fate,

To heights beyond what any words can reach,
With five sides to each story that is told,
Beyond all mortal language and all speech,
In all their living glory, as of old.

From Esther's feeding start, the very first,
To Luther's heart, which broke, so he could walk,
From leisure's chain, a rebel heart that burst
Through joy and through the pain without a stalk,

From Asteros and from his brother too,
Echinos, who found, to end their debate,
No other Way, as warring brothers do,
Than war, to come and seal and set their fate,

From Ophis and from Britta, fair, the two
Who made the war less bitter, choosing peace,
By choosing love, as they had come to do,
Instead of letting hatred spread, increase,

The echinoderms show us, as they go,
From a pentamerous design, from one,
How families can grow, and they can grow,
So glorious and fine beneath the sun,

Into the many forms, and so diverse,
In all their many and their varied ways,
That not a single verse, or line of verse,
Could capture all their living, passing days.

From stalked sea lilies swaying in the deep,
To hunters, mobile, five-armed in their might,
The enemies who hunt, and hunt and keep;
From grazers, too, who graze by day and night,

To the recyclers who will sweep and clean
With careful hand, for those both great and small,

Environment of ocean, vast, marine,
Who live and dwell there, and for one and all,

The five-fold symmetry will live and stay,
In every starfish arm, in every part,
Through all eternity, until this day,
In every sea urchin's charm and art.

In every brittle star that travels far,
With muscles flexing, flexing very strong,
That travels near and far, as all stars are,
Throughout its whole and full life, all life long,

In every crinoid's dance upon its stem,
With arms like trees spread out so far and wide,
And every basket's stance, and all of them,
To catch the ocean's flowing, passing tide

Of plankton floating by, so small and light,
The legacy lives on, and will not fade
Beneath the starry sky, by day and night,
From dusk until the dawn, from light to shade,

Of Echidna's own great and mighty choice,
Of symmetry's design, the fivefold plan,
To let the five become the speaking voice
Throughout the end of time, as it began.

From bilateral start, the twofold way,
To pentamerous form, the fivefold part
That rules the ocean floor and holds its sway
From mountain peak to shore, with fivefold art,

Echinoderms remind us, every kind,
That breaking from the known, going beyond,
It is the searching and the seeking mind
That reaps what it has sown, and can respond

In innovations new, both new and bold,
To heights beyond all thought, beyond all sight,
That see the old dreams through, the dreams of old,
That wisdom ever brought into the light.

Five sides to every tale that has been told,
Five teeth in every jaw, in every mouth,
Five arms that never fail, and never fold,
Five points of nature's law, both north and south,

That guide the echinoderm in each age
Of their existence here upon the floor,
Through every living term, through every stage,
Throughout each passing year, and evermore.

In Luther's rebel choice, which he had made
To let his freedom be his voice, and more,
In lovers who would end, and unafraid,
Through peace, the bitter war, worth living for,

In every innovation, every new,
That builds upon the past, and on its art,
Across each generation, coming through
To make new futures last in every part,

The sons of Echidna teach us, and show
That heights within our reach are bound, and why:
They're limited, as we will come to know,
By willingness within us all to try

To break from what we know, and what we knew,
Into forms yet unseen, and yet unknown,
And let our spirits grow, and so break through
In evolution's scene, and on its throne.

The Ordovician wall they built will stand,
And it will never fall, but will remain
As long as all the seas, across the land,
Will still contain their fivefold, ordered reign.

Chapter 46: Great Ordovician Diversification

Capricorn 18, day 46 of the Gaian year

This is the story that is told of war,
Among the Spiralians, and among
The ancient plans they made, and of the score
Of war both new and old, when life was young.

This is the saga, and the saga's great,
Of war, and love, and many, many more:
The Brachiopods, and the hand of fate,
The Bivalves, and the two of them at war.

The ancient house, so proud, so long revered,
Cried: the Brachiopods were sorely pressed;
They found themselves, or so it then appeared,
On all sides they were hemmed in and distressed,

Pressed by the rising Bivalves, who were strong,
Who'd waited for their rightful, proper place,
As they had thought, and waited far too long,
In evolution's long and endless race.

Bivos, who fished with care, and who would feed
From his two shells so fair, would shed instead
His radula, and shed it, and his need,
As one would shed a formula unread,

That served no longer as it served before
His lineage; and when the day begun,
To be preserved for ever, evermore,
He took upon himself, the only one,

A form completely new, a form untried,
That none before him knew; and it would show,
In his anatomy, now amplified,
How every innovation comes to grow

From ancient forms to new, when time has seen
The struggles through, until the end, the day
Appointed for them, all that lies between,
When they transcend, and new forms hold their sway.

And Bivos bore a son and daughter, when
His lineage begun: the son was strong,
Peter; and then, beloved among the men,
The daughter Aphrodite, and her song.

Aphrodite became, through all her days,
Ancestress of Oysters, who in their rest,
Of fame, and everywhere, in all their ways,
Lie down without a care, so calm and blessed,

Upon the deep and sandy ocean floor,
Creating pearls that are so very bright,
From every mountain peak to every shore,
They fill up all the world with their own light.

Peter bore many sons, and when the work
Of theirs was done, they would be known with pride,
Since never had they come to fail or shirk,
As the Trigonians, both far and wide.

But there would come a day, a day of war,
To Peter's children, one and all of them,
When war would find its way, as once before;
A massacre would fall, and would condemn

His sons, his sons so very dear to him;
But one of them escaped death's spear, and fled:
Brave Unus, from the spear of death so grim,
And from the danger of that day, so red.

And he became the ancestor, the source
Of river mussels; and his line would dwell
And live, along the river and its course,
Where all the rivers always rise and swell

With waters that are fresh and that are pure,
Throughout the many years that will unfold,
The waters that will always still endure
When all the battles have been fought and told.

Peter, who is the Keeper of the Gates,
So Pearly, stands defending, one and all,
And never hates, nor ever hesitates,
All of the ones who answer heaven's call.

And from the river mussels there will come
The river pearls, which are beyond all price,
And there are some among them, yes, there's some
That gleam and shine as if from paradise.

His sons live lives so very strange and new,
As lice on fish, when they are very young,

Where contradiction thrives, and both are true;
But when the song of youth is fully sung,

In elderhood they settle down and rest
On rocks, and gleam and glitter, very bright,
Just like a treasure and a pearly chest,
With heaven's holy and its shining light.

Aphrodite became, in her own name,
The Mother of the Pearls; the Oysters too,
Her children, were of great and lasting fame,
Her own, and they were all both tried and true.

Among her daughters, and among them all,
She bore three sons, unique in all the seas,
Who answered to the ocean and its call:
Scallon, so bold and sleek, the first of these,

And Spinos, who was armor-clad and strong,
And Pyros, who was never sad, but bright,
And flaming with his burning all along,
Which blazed from out his heart with all its light.

And these were then the Scallops, shining bright,
And the Flame Scallops that will dance and glide,
The Spiny Oysters, armored in their might,
In ocean's great expanse, so deep and wide.

Scallon had a million eyes, and so he
Saw what the others missed, and missed so long,
Beneath the ocean skies, so he could see,
And never to be tricked, or be led wrong,

By predators who'd try, with every snare,
To catch him unawares; and every day,
So bountiful, so dutiful, and rare,
And great, he swam away, and swam away

From dangers that would haunt him, as with care
A cat will haunt its prey; but he was free,
So free, so very free, to roam out there,
To roam about across the open sea.

And Clammon was the son of Bivos; when
His work begun, he set to populate,
And he began his work, and once again,
The seas with forms that were so very great.

Clammon begat four sons, and these were they:
Cockle, who would explore, so strong and true;
Myidus, who would come to find his way;
Adapa, who would follow and pursue

His dreams; and Venus was a daughter fair,
Throughout the waters of the ocean blue,
Who danced on through the sea without a care,
Where all her children grew, and as they grew.

Cockle then had a son, and when the work
Of his was done, he came to be the grand
And great ancestor, and he did not shirk,
Of giant clams, the largest in the land,

That they will dwarf all others who have tried
And through the trials of the sea's long test
To make it through the waters deep and wide,
With their enormity, which beats the rest.

Myidus bore three sons: when day begun
Zebra came, and Softshell, so gentle, mild,
And Teredo, the wayward, wilder one,
Who was the problem, and the problem child,

Known as the sea termite, the one who brought
The shipwrights fright, by boring through the wood,
The planks of ships, the fright the sailors fought,
The ships on which the sailors always stood.

The Zebra Mussels spread, and spread out far
By currents through the waters of the sea,
Wherever they were led, as mussels are,
In their community and company.

The Softshell clams would go away and hide,
Where they could safely live, and safely dwell,
Beneath the sand, beneath the sandy tide,
Within their soft and softened, gentle shell.

Adapa begat two sons: one was named
Geodoros, and he was true and fine,
Ancestor of the race, and he was famed,
Sire of Geoducks, in their design,

Beneath the sandy shore, where, as they keep
Their hiding spots, each one a hidden one,

They would for evermore dig burrows deep,
While all the surface waters sweep and run,

Connected by their lots, and by their own,
Throughout the ocean land, and all its floor,
To life beneath the sand, where they have grown
From shore to sandy shore, and evermore.

And Razoron in his own turn became
The Ancestor of Razor Shells, so sharp,
The source of all their name and of their fame,
That they will cut, as cuts the ocean's harp,

Through sand, where they would go away and hide
Whenever danger came, until they could,
When danger's time had passed, and it had died,
Emerge into the place where once they stood.

Venus became the mother, in her days,
Of clams, the Venus clams, so very fair,
Like none before them in their many ways,
That beautify the waters everywhere

That they will make their soft and gentle home;
Among her children, all of them so bright,
Beneath the white and drifting ocean foam,
She bore one special one, one special sight:

Corbiculacea, she who one great day
Would pass from salt to waters fresh, refresh
Her line, and make her passage, make her way,
And give her lineage a newer flesh,

As ancestress, so faithful and so true,
Of the freshwater clams, which, far and wide,
Now live in all the rivers, as they do,
With all the current as their only guide.

Brachios begat three sons, for history,
Three houses that he would establish, make,
For all of time, and for its mystery,
And build for all the brachiopods' sake.

Lingulus, the tailed one, was he who stood
To be conservative, and to be so,
And never failed, as no one ever could,
In all he'd ever give, and all bestow,

To innovation's call, and all its claim,
The Archconservative, and so supreme,
Within the house so grand, of all who came
Of Brachios' command, and his regime.

Lingulus, son of him who had the same
Name as his own, in all his life's mission,
Would trim, in all his days and all his aim,
Nothing at all from his own tradition.

He kept and he maintained the ancient way
Unto its fullest measure and its height,
The way of the old and the olden day,
Like some most sacred treasure, kept in sight,

That never must be changed, or rearranged,
But kept just as it was, and as it stood,
Or ever be disturbed, or be estranged,
According to the laws, both old and good,

Of his forefathers, who had tried, and who
To keep the ancient way, the way of old,
Had striven on and tried their whole life through
Until their dying day, as they were told.

Discinidus, his son, when he begun
His life, was smaller, and was more inclined
To be the clam's, more like that other one,
Than brachiopods' design, so refined,

That had been very fine for all those years,
And had been built to last, to always stay,
For millions of years past, through all their peers,
And last for evermore, and not decay.

Lingulus, serpentine, so long and lean,
Showed forth his noble line, that stretched along
Through time so long, as it was always seen,
Like some eternal and unchanging song,

That never changed its tune, and never strayed,
And on through all the night, the whole night through,
From morning until noon, from light to shade,
Until the morning light and morning's dew.

Calciatus begat two sons, and the first,
Craniidus, would never, evermore,

Possess a tail, but, at the very worst,
Live on without the sign his fathers bore,

Without that sign of his ancestral line;
And Articulus built his children true,
But cheaply, and who built them by design
Without a thought of what tradition knew:

He built them without thought of all that came,
Without a single thought for all its arts,
Of what tradition brought, and of its name,
And lacking parts that touched their parents' hearts.

Without their anuses, the young ones lay,
Like blobs, and could not swim; but when they heard,
As they would float on all throughout the day,
Metamorphosis' call, the waited word,

And in an instant's time, a single breath,
From blob to something more, and something new,
Would change their paradigm, not unto death,
Upon the ocean floor, so deep and blue.

The sons of Articulus, too, were then
So numerous, they were a mighty force,
And formidable, just like mighty men,
Against the Bivalve's course, the bivalve's course

Of conquest through the waters of the seas,
And take whatever they were apt to take,
Where they would do whatever they would please,
For their own kingdom's sake, and for its sake.

But as two great hosts, two rival powers,
The Bivalves and their boasts, and old and gray
The Brachiopods, through all of the hours,
Whose stories have been told until this day,

For ages without end, fought on, and none,
To come between them and to end their war,
Could find a friend to mediate, not one,
From every mountain peak to every shore,

A new threat came to light, a threat more dire,
More fearsome than the dark and open grave,
And terrible than night, more fierce than fire,
More deadly than the cold and breaking wave

That crashes on the rocks with all its weight,
And blocks all progress, greater than the mind
Could imagine, and seals all of life's fate;
And few of any of the living kind

Could ever comprehend the scope and size
Of what would come, and, coming in its wake,
Would end all hope for life beneath the skies,
And stop all future birth for ages' sake.

From Bivos' innovation came, in turn,
This radiation, forms in every hue,
Both strong and true, as all the seas would learn,
That filled and crowded all the ocean blue.

From Brachios' old way, which held its ground,
Through eons without change, came forms that spread,
And lasted day by day, the eons round,
Throughout the range of every ocean bed,

Of all the ocean's vast and wide expanse,
Where old will meet with new in war and strife
In evolution's slow and ancient dance,
Throughout the whole and all the course of life.

The war between the two would come to see,
Through all the trials of that ancient time,
Which vision would come through, and which would be
The one to earn the victor's crown and rhyme.

Would innovation's art, the new and bold,
Prove stronger in the end, when time would come,
Or would tradition's faithful heart of old,
When it would send its judgment on the sum

Of all of them, on each and every one,
In this most ancient war, in this long fight,
Who answered battle's call when war begun,
From mountain peak to shore, by day and night?

The Bivalves, with their new Forms, which were made
Through struggle and through pain, and through their strife,
And tried and tested true, and not afraid,
Sought evolutionary gain for life.

The Brachiopods held fast, held on tight
To wisdom of the past, which in the years

Gone by had served their ancestors, its light
Through time's great tests and spurs, and all its fears.

And both the strategies had worth and weight
Upon this ancient earth, where, old and new,
Life has to find its way, in its estate,
Through each and every day, and make it through,

In challenge and in change, in sun and storm,
Where only those, of all, live and endure
Throughout all evolution's range and form,
Who keep their hope alive, and keep it sure.

In every oyster's pearl, so smooth and white,
Through all the waters of the open sea,
And every scallop's swirl, so swift and light,
In every clam's own spree and jubilee

Of filter-feeding, quiet, clean, and pure,
In every form that knows its given part,
Its own appointed place, and will be sure
In evolution's race and in its art,

The legacy lives on, and it remains
Of this most ancient war, which went its way
From dusk until the dawn, through all the plains
Of ocean, mountain, shore, by night and day,

Between the old and new, the old and young,
Between the tried and true, and, as it calls,
The innovation's call, the songs unsung,
That beckon one and all beyond their walls

To risk what they have known, and what they kept,
For something promised by the hope that still,
Though yet unshown to them, while others slept,
Helps all of life to cope with good and ill,

With changes yet to come, when wars will cease,
And peace at last will reign over them all,
When all the wars are done, and there is peace,
The ones who heard and answered life's great call.

The great Spiralian war, and all its strife,
Shows how life finds its way and makes its own,
From mountain peak to shore, how all of life,
Through each and every day, through flesh and bone,

Of struggle between those who make their choice
And choose the safety of the past, its kin,
And those who choose, and each with its own voice,
The future's die, now cast and thrown therein,

Into the deep unknown, the unknown deep,
Where new forms, all alone, through long and dark,
Throughout the night, their constant vigil keep,
Until the morning light will light its mark

And show what time has brought to all the ones
Who never fought; but those who fought so hard,
The fighting ones, the daughters and the sons,
Have their own tale to tell, their own regard,

Of courage in the face of all that came
In evolution's race, where all of these,
The winners and the losers in its game,
Are both faith's choosers, choosing as they please,

Who all believed in their own way, and stood,
Through this eternal and this endless strife,
Through each and every day, as best they could,
That shapes and that defines the whole of life.

But as the new threat rose up, vast and high,
Beyond what each could know, or comprehend,
Or then imagine, underneath the sky,
The war of mice and men would meet its end

And pale beside the force, the greater might
That changed life's very course, and brought the old
And ancient age to end, and brought the night,
An age that none could mend, nor yet could hold.

The greatest war would fade, and pass away
Before the challenges, so very vast,
That time had made and brought forth on that day,
That nothing from the past, so long and vast,

In memory, prepared them for the thing
That waited at the door, the end, close by,
Of their complacent world, which it would bring,
Where banners once unfurled against the sky

In triumph would be folded, taken down
Forever; and the world, about to change,

The world as it then stood, both field and town,
Would change beyond all good, beyond its range.

Chapter 47: The Cephalopod Rise

Capricorn 19, day 47 of the Gaian year

This is the story that is told of old:
The Cephalopods, who were very great
(Of ones both new and old, the brave, the bold),
Arcane ones, whose own destiny and fate

Would overthrow the might, and overthrow
Leviathan's own sight, with wisdom deep,
And rule with wisdom in the depths below,
Where all the ancient secrets lie asleep.

The sons of Cephalopus all would grow
So great that, in their time, the other kind,
The sons of Scaphopus, as all men know,
Not quite so prosperous, were left behind,

And they would fade from memory and lore,
And few of those who hear the ocean's call,
Throughout all history for evermore,
Have ever heard of them, or know at all.

Scaphopus' degenerate sons, the ones
Who'd never come to know, in any way,
Once their lives had begun, as humble ones,
The heights their cousins show, and showed that day.

Cephalopus begat Plectron, and so
There came from him a noble, wondrous line,
As it was then begat, as all men know,
With all intelligence that is divine.

Plectron begat the son whom all would call
Ellesmer, begun in wisdom's old lore,
The deepest and the oldest lore of all,
From mountain peak to every distant shore.

Ellesmere went deeper, going down below,
Than any secret keeper who had gone
Before him in his time, where none would go,
Down far beneath the brine, and on and on,

Where all the mysteries lay deep and hid
(Above them, where the surface waves are curled)
From all the things the light of daylight did
To lighten and illuminate the world.

Ellesmer begat two sons, who were these:
First Endos, tried and true; then, who would fly
And fly to heaven's height, upon the seas,
And Actinos, the bright one, to the sky.

Endos bore many sons, and when begun
Their work, they moved on slowly through the sea,
And when the work of theirs at last was done,
With great and stately and slow dignity.

The greatest one among them, and of all,
Was Cameroceras Magnus, the great,
Of those who ever answered wisdom's call,
Known as Cameromagne, the potentate,

Whose name through all the ages, as of old,
Over Leviathan and his great reign
Rings out with victory, both brave and bold,
And all of his dominion's plans, made vain.

Cameromagne would overthrow the might
Of those who'd ruled the seas through many years,
The sons of old Leviathan, by right,
With imperial song, through all the spheres.

Endoceras, his son, when he was grown,
He grew nine thousand Millimeters long;
When all his growth was done, his size was shown,
And so he grew to be both long and strong.

And twenty cubits long he measured, free
From end to end, complete in every part,
From front to back, and he was long to see;
No foe could compete with him or his art.

He dwarfed Leviathan Fourfold; his reign,
An age in which the sea was made to be
Ruled by cephalopods on ocean's plain,
Began, by their own law and their decree.

Actinos, by his air, which he contained,
So heavenly and fair, had power there
Within his shell, the air that he retained,
A power that sustained him in the air,

That kept up his ability to rise
Up to the stars, and then to go below,

Descending to the earth from starry skies,
As suited to his end, both high and low.

Actinos begat two sons: one of them
Was Tarphy, who was very young and wild;
Orthosceros, so true, a noble stem,
Was evolution's other favored child.

Tarphy lived very fast in his own youth,
And while his time would last, he coiled it round,
His shell, and coiled it round, and in his youth
A hundred times, and found, and so he found

Great joy in swimming very wild and free,
A hunter, and the hunt was his career
Throughout the waters of the open sea;
But then old age drew near, his path grew clear.

He then uncoiled his shell, and came to rest
Upon the earth below, and there he'd stay,
And settled where he'd dwell, as he thought best,
Where wisdom's waters flow and make their way.

And in his old age he bore children, more,
Who did the very same as he had done,
And countless more of them than were before:
Youth's glory and its fame for every one,

In bounty of the heights, the highest heights,
For those who soar, and those who climb and climb,
Where all of heaven's glory, shining, lights
Their way; and age, where depths will store, in time,

Their safety and their peace, where all things cease,
And wisdom finds its home, its resting-place,
Where all the struggles end in their release,
Where all the wise will roam, in wisdom's grace.

Tarphy begat two sons: and Oncos came
When day begun; and next, to live and thrive,
Came Barrandeos, strong, of noble name,
To live his whole life long, and stay alive.

Oncos lived out his life without much joy,
He, coiled but simple, went through all his days
Without much strife, and nothing to annoy,
And lived quite peacefully in all his ways.

Oncos bore many sons, and when begun
Their lives, among them there came one to see,
Named Rutos, he who was the chosen one,
Great wonders through, and see them, as would be.

Rutos then bore a son, and gave the name
Of Nautilus, begun in wisdom's art,
In wisdom of the deep, in wisdom's flame,
That ancestors would keep within the heart.

The sons of Nautilus live on today,
So glorious, unchanged, and still not stirred,
And just the same as long ago, the way
They were when time was but a blur, and blurred,

In days of Rutos, old, so long ago,
Cameromagne, who conquered every wave
And all the seas, the bold, as we all know,
With all of their strategies, wise and grave.

Orthosceros begat two sons: the one
Was Ascos, who would come to know, in truth,
How graciousness could grow, when all was done;
The other, Bacchus, small, from his first youth,

Would make his vision true through numbers vast,
Through numbers vast and wide on every side,
So many that they filled the seas at last,
So vast that they could never be denied.

Ascos lived out his youth, and in those days
He had a shell, so clumsy and so slow,
That spoke no word of truth of grace or praise,
Unable to bestow, and to bestow

Upon his movements any Grace; and he,
Who swam not with elegance and romance,
Was not one of the many who were free
In ocean's great and very wide expanse.

And so he broke it off, his heavy shell,
To serve his greater need, and see it through,
And many came to scoff at him as well
At such a drastic deed, so strange and new.

But in adulthood he, when he was grown,
Above all others bright, and very bright,

Was graceful as could be, as he was shown,
In beauty and in sight, and in delight.

His sons would carry on this, and they kept
The bliss that comes from sacrifice, its price,
Tradition's bliss, for which they never slept:
The giving up the shell for something nice,

The grace that can't be bought by anyone,
But sought, and won, through willingness to break
And shatter, and it only so is won,
What others never would, or could, forsake.

And their life cycle shows how wisdom grows,
As we can see: from clumsy youth they start,
And so begin, and so, as each one knows,
They enter in, and play their graceful part

When their adulthood comes, and they are grown,
In grace beyond compare, and fair and free,
And each at last will thrive, and make its own,
That fills the water fair, and all the sea.

But Bacchus was so small, and to the eye,
Insignificant he seemed, weak and slight,
Of each and one and all who passed him by,
With nothing much to seek, and little might.

But he bore children, and his children, who,
A million sons and daughters, as he willed,
Would make his vision true, and see it through,
They filled the salty waters, and they filled.

And soon the world was full of all of these,
His progeny, in every living space,
In every place, and filled up all the seas,
In all the ocean's vast and wide embrace.

And what seemed insignificant then grew,
Through all the power of increase, which spread,
To be the most significant, it's true,
And never seemed to cease, but forged ahead.

From small beginnings, then, a multitude
Of fame came forth, and, as he longed, it spread:
A great and fast-increasing, filling brood
That filled the world, as Bacchus wished and said,

To populate the sea, from shore to shore,
Until there was no place in all the brine,
With all his progeny, still more and more,
That didn't show his trace and bear his sign.

The cephalopods have shown, from the start,
And from intelligence, from depth of thought,
The seeds of wisdom grow in mind and heart,
And rule with providence, as wisdom taught,

Over the ancient sea, where once alone,
In every place, Leviathan's decree
Had held power supreme upon the throne,
In every ocean's dream, in every sea.

But wisdom overthrew the order old,
And, in its place, arose to take their stand,
Lords of the sea, the new ones, and the bold,
To challenge all their foes on every hand,

With an intelligence so keen and bright,
And with the power to ascend and climb,
And grace beyond all sense, beyond all sight,
From the beginning to the end of time

Of all the ocean's vast and wide domain,
With wisdom as the crown upon their head,
Where they would hold their throne, and always reign,
And grace as their renown where they were led.

From the might of Cameromagne, who bore
The ancient fight, and won it, and who stood
And came before Leviathan's own door
And won the right to rule as rulers should

With wise authority, and to remain
The masters, on to Nautilus, who'll see
And show the ocean's whole and wide domain,
How ancient wisdom flows, and still flows free,

Through generations long, from age to age,
Of those who keep the way, the ancient line,
In never-ending song from page to page,
From night into the day, as stars that shine,

Cephalopods remind us that the mind,
Though it will often start quite small, will heed,

If it is wise, and of the wisest kind,
And answer wisdom's call, and so succeed,

To grow beyond all measure, and to know
The greatest of all treasures of the mind:
The power to transcend, and further go
Past what the others comprehend and find,

Through an intelligence that is divine,
In forms both strange and new, and strange to see,
That makes all wisdom shine with clearer shine,
Yet beautiful and true, as they will be.

In every octopus, with arms that reach,
And every squid, so glorious, that goes
And jets with grace, and passes each by each,
Through waters deep and blue, where current flows,

In every nautilus that keeps the shell,
The spiral, with its chamber and its coil,
So glorious, that will its story tell,
Its ancient twisting spell, and all its toil,

Of how the wise can keep, and store, and hold
What time has buried deep, while what is new
Will change what has to change, both new and old,
To grow, and to expand their range anew,

The legacy lives on, and will not fade,
From dusk until the dawn, of those who knew
To overthrow the old, and, unafraid,
To take the old order, and make it new,

Not through destruction's might, nor by the force
Of arms, but wisdom's sight, which sees and knows
What must remain, and in its gentle course
What only brings us pain and woe, and goes.

The cephalopods' way lives on, and stays
In every graceful move that they will make,
Lives on until this day, through all our days,
And every way they prove, for wisdom's sake,

That an intelligence, when it's combined
With grace, can conquer any foe, can fight
With heart and sense, and win, with heart and mind,
And help all wisdom grow in all its light

From small to great and vast, from seed to tree,
Until at last the wise inherit all,
And, long and last, the heirs of those will be
Who answer wisdom's call, and hear its call.

From Ellesmer's deep dive beneath the brine,
While finding something new, a newer shore,
To keep the past alive, and keep its line,
In wisdom's vast review and wisdom's store,

The cephalopods teach us to believe
That heights within our reach, if we rely
On willingness, are what we can achieve,
The willingness within us all to try

To grow beyond the small, and the confined,
To be more than we seem, and more than known,
And answer wisdom's call with heart and mind,
In evolution's dream, and on its throne.

Their arcane wisdom shows us how, in truth,
Intelligence grows true, not by the blade,
Nor by the force of might, in age and youth,
But through the inner sight that wisdom made

That sees what others miss; and they who look
Will find in this the power, close at hand,
To pass all limits, as within a book,
Extend the boundaries, and to expand

The boundaries of what can be, and see
What may be possible for those who reach,
The wise, and all the wise, and all the free,
When they believe, and wisdom comes to teach,

When they believe in wisdom's might to bring,
Through patience and through grace, through gentle art,
Their dreams to come about in everything,
In evolution's race, with all their heart.

The sons of Cephalopus will remain
So glorious, because they chose, and then
They chose the way of wisdom, free of stain,
And chose it every day, and chose again,

And let intelligence become their shield,
Against all those who'd try to make it end,

And be their own defense, and never yield,
To make their wisdom die, or make it bend.

And in this they succeeded, where the rest
Had never heeded, never once obeyed
The call to grow, nor ever once addressed
The limits that are spawned by the afraid,

By those who cannot see what it can give,
To those who dare to dive, and to go deep,
What wisdom's gift can be to those who live,
Into the deep, and still alive to keep,

In waters where the wise, beneath the sea,
Can see with clearer eyes, and clearly find
The truth that sets them free, and lets them be
The rulers of the sea, of every kind.

Chapter 48: The Ordovician Extinction

Capricorn 20, day 48 of the Gaian year

As the Leviathans' long reign began
To turn, the sons of Stomatos, below,
Beneath the Krakens' new and newer plan,
Began their glorious increase, and so

Began their vast Multiplication, spread
Upon the earth at last, from eve to morn;
And to them, on the earth where they were led,
The daughters who were fair were also born.

From all Laurentia's shore, and to the lore
Of Baltica, its might, and on and on,
Of old Siberia, and furthermore,
To Avalonia, where they all had gone,

And even to the cold and frigid lands
The sons of Stomatos would go, and spread
Upon Gondwana's far-off, icy strands,
In numbers, glorious, where they were led.

To each son there would fall a star; and well,
From evening on until the very morn,
The wishes made upon a star would tell
Of grandsons, yes, a thousand grandsons born.

The sons of Stomatos would build and raise,
Of Carbon, bodies, and great tombs as grand,
So glorious, so great in all their ways,
As mausoleums' rooms, across the land,

All made of coal, so black and deep, which keeps
Their ancestors asleep; and from the air
They took the Carbon, down where each one sleeps,
And left, in every place and everywhere,

Dioxide in the sky, while, from on high,
Her cloak, as all the ancient stories show,
Away from Terra would then come to fly,
And she grew very cold, so long ago.

She grew so frigid, and she gave no cheer,
Unwelcoming, and with a colder face,
No longer warm, no longer drawing near
To those who loved her soft and warm embrace.

Her ice caps grew so very far and wide,
And rose to answer winter's bitter call;
Her seas began to shrink away and hide
Behind the great and frozen icy wall.

And soon Gondwana would become the same,
A wasteland that was white and stark and bare,
As nothing but the ice, and ice's claim,
Where none could make their mark, or could live there.

But to the sons of Stomatos it meant
More: a glorious Land where they could spread
Their realm, where they could settle as they went,
Out far and wide and high and overhead.

The King, Hirnan the great, became the one,
The potentate, who joined in all the earth
The sons of Stomatos, each single son,
In conquest, and he lived where there was mirth,

In joy, and he was happy and content
Within Holonia's fair province, where,
Avalonia's land, his days were spent;
He made his home, and kept his dwelling there.

And Hirnan built with might, and he would raise
A billion dikes upright, as he had willed,
And levies strong and tall, in all his days,
His cities over all, and he would build

Across the landscape, far and wide and grand.
The habitats that were within the seas
He then destroyed with pride, by his own hand,
And would not spare a single one of these,

And would not spare a single living space
For any race that might compete or vie
With him, nor any other living race,
For resources, so dim, that ran so dry.

And so the countless hosts and countless might
Of trilobites began to fade and fall
And die away, like ghosts into the night,
Their lands seized every day, and seized them all,

Seized by the sons of Hirnan, who would fight;
Their empire grew by Conquest and war,

And they would never rest, but day and night
They pressed their foes to flight, and pressed them more.

And in the last effort that they would make,
A million trilobites, a frantic throng,
First prayed, and then, for their own living's sake,
Invaded, and they smashed their way along

Through every dike that Hirnan's folk had made,
And every wall and levy they would build
To keep them from the land, and had arrayed,
The land they'd built with their own hands, and willed.

But alas, it was all in vain; the plan,
The trilobites' campaign, would end in death,
In suffocation, right as it began,
Frustration and despair, and loss of breath.

Not one of all the trilobites would reach
The land, however clever was their plan,
Or strong their will or might; the air, to each,
Was death, by day and night, since time began,

To those who were to live within the sea,
And could not breathe the air, the air and sky
That filled the atmosphere, and could not be
Adapted to the air, that left them dry.

And Hirnan bore two sons, and Moses came,
The first, when day begun; and then, the strong,
Osiris, second, of a noble name,
And he would live on through his whole life long.

Moses became the father of the moss,
Of mosses, who would rather live their days,
Their simple, humble lives, without a loss,
Where small beauty can thrive, in quiet ways.

Osiris bore two more: and one was named
Polysporos, explorer; and the grass
Is like Anthoceros, the other, famed
For peace, whose peaceful days would come to pass.

Anthoceros became, in time, the one
Who fathered hornworts, found most everywhere
In every place, and found beneath the sun,
Who grow so very green, with gentle care.

Polysporos became the father of
The ferns, of flowers bright, and of the trees,
Of great fame, and of all, below, above,
That reach up for the height above the seas.

The sons of Brachios had struggled, and
Were not so glorious as long before,
In ages long ago, within the land,
In all the ages and their ancient lore.

The sons of Lingulus would die, and die
In numbers greater than had died before,
In all that had been known beneath the sky;
Their glory, overthrown, was here no more.

And never once again, try as they may,
Their power in the sea, their former might,
Would they Regain, their golden day and sway,
And their great dynasty, and its delight.

But as the rule of Hirnan came to be,
The sons of Metazo began once more,
Oppression's tool, and tyranny's decree,
To grow again, as they had grown before.

Alas, the sons of Hirnan did not cease,
Nor stop their plan at that, but carried on
And never made their peace, nor sought release,
Through every hour, until the night was gone,

Their conquest of the world, which gave them mirth:
To see all life bow down and bend the knee
Before their thorny crown on all the earth,
To them, from land to land, from sea to sea.

The Glomerings would mine the rocks, and mine,
And for the fertilizer's sake would break
With care, and with a purpose and design,
The stone, and do whatever it would take

To manufacture phosphorus by tons;
They poured it out in floods, and spread it round,
And when the work was done, the busy ones,
Throughout the world, on every field and ground.

Some of it went upon the crops they grew,
But most went to the rivers, to the sea,

And flowing onward, flowing onward through,
It stayed, and there it would forever be

A poison in the water, which no blade
Could slaughter, and no aid could ever go
And take it out, nor could it be unmade,
Wherever all the waters came to flow.

In all the rivers a thick scum would grow;
The sun was blocked, and life beneath the pall
Was shocked, and oceans, dark and blue, would know
Their blue no more, and stunned were one and all

By this catastrophe, which stretched and ran
Across the wide world, the world entire,
From sea to sea, as only ruin can,
As if it were some dark, unholy fire.

The rotting seaweed choked the water, and,
Throughout the night and day, from week to week,
It smoked with death on every sea and strand,
With death and with decay, and with its reek.

And soon it was impossible to breathe;
The Smell of death would fill up all the air,
So terrible, and in that air would seethe
The poison that was spread through everywhere,

Made life a living hell, where none could stay
In comfort or in peace, unless they'd find
(Where none could ever dwell by night or day)
Release, and leave the misery behind,

In death's cold arms, and in their welcome hold,
Which kept them from the harms the world would spread,
That poisoned world, its harms both new and old,
Where death's flag was unfurled above the dead.

The seas turned lifeless, and the seas lay dead,
And over them there spread the tyranny
Of those who would not deem, as it was spread,
Nor dream, nor would suppose, that it could be

That life had any right at all to stay
And live within their sight, or dare to stand
Against their conquest every single day;
For they would have no rival in the land.

The entire ocean, all of it, fell,
In ruin and in great devastation,
Under the might of Hirnan's deadly spell
Of death, and ruin spread to each nation

Beneath the sea, which once had been so free,
A home to creatures great and small, to all
Of those who lived and filled the open sea,
Who heard and who had answered life's sweet call.

The mighty houses, once the great delight
Of the great Leviathan, and the sign
Of Kraken's dynasty, his royal might,
Were wiped from history, and every line.

From off the earth they passed, and in the end
Their glory could not last; for, far and wide,
It could not stand, nor ever could defend
Itself against the poison's spreading tide,

The waters that they loved, and where they went,
Through every day, through every passing hour,
And where they always moved, and where they spent
Their days in majesty and in power.

Among the trilobites, great houses' fate
Was sealed by poison; Agnos, in his turn,
Fell, and the poison would not once abate,
And Ptychos told no more, for all to learn;

And Asaphos, so mighty and so strong
In days before, was broken by the sea,
And crippled was he all his whole life long,
As all of them were crippled, and would be.

And never once again would they attain
Their golden day, the glory of the time,
The glory of the old, the ancient reign
Of Ordovician rhyme, and of its prime.

And so the golden age came to an end;
The Ordovician time was past, and passed;
It closed its final page, which none could mend,
Beyond its living prime, and could not last.

The sons of Silur came to conquer, and,
Upon the ashes of the past, they made

Their claim, and came upon them, came to stand,
To build their future, not to fall or fade.

The Silurian age would rise in turn,
To start anew, from all survivors knew,
Beneath the different skies, where life would learn
Of how to carry on, and see it through,

When all their hope seemed gone, and death held sway,
When all of life had nearly come to cease,
And claimed, in its destructive way, the day,
Till life found once again its way to peace.

From the choice of Stomatos' sons, who chose,
Instead of harmony, and took their stand,
Let conquest be their voice, with all its blows,
Against life's symphony throughout the land,

Came lessons that are written very deep
Of what the world becomes, and how it goes,
Down in the rocks below, where fossils sleep,
When greed its power sums, and when it grows

Into a force so strong that right will fail
To win against the wrong, and life will pay,
And pay it all, the price, and wrong prevail,
For others' avarice, in every way.

The trilobites' last stand against the hand
Of Hirnan, in the face of the disgrace
Of him who seized their waters and their land,
Shows courage hopelessness could not erase,

But it shows also what the cost will be
When battles have been lost, and lost, not long
Before, not by the weak, as here we see,
But by those who are fated to belong

To elements in which they cannot live,
Where others will not grant them any space,
Nor any mercy, and will never give
Them room, nor any other living race.

The ice age that began, and grew, and spread
From Stomatos' great plan, which would just take,
And never give, as some have done and said,
Shows how some choose to live for their own sake:

By taking all they can, and all they may,
And never caring what their actions bring,
Without a care or plan for any day,
To me and you, and every living thing

Who cannot give Resistance to the greed,
To all who suffer and who cannot fight,
That plants destruction's seed in every deed,
And spreads its ruin over all in sight.

The phosphorus that ran in streams and flowed
Into the rivers, choking, now shows how,
As life within the sea was choked and slowed,
We too can come to be, and even now,

Destroyers without thought, who do not see
What all our actions brought to those who share,
As we must share, and what the cost will be,
The water and the air, and everywhere.

The golden age that passed has come to show
That nothing good can last when some destroy,
That nothing long can live and long can grow,
When some will ruin, rather than enjoy

The beauty that is shared, the beauty known
To all who ever cared, in all its forms,
To all who've come to love it, and have grown,
Through calm and through the wild and raging storms.

But from the ashes, new hope comes to rise
Beneath the sun, where those who paid it, too,
And learned the cost, beneath the newer skies,
Of all that had been lost, and lived it through,

Can build a better way for all to go,
Where harmony, and never selfish greed,
For life's eternal day, where it can grow,
Plants every living thing and every seed.

The Silurian dawn, which came at last,
Would bring new hope to those who had to face
The old death, which was gone, and it was past,
Destruction's throes in that most bitter place,

And lived to tell the tale, and tell it true,
Of how they would not fail, though suffering long,

But, through the grief and pain, would come right through
To build life up again, and build it strong.

From Hirnan's tyranny, and from its blight,
The wheel of time turns on, as it will turn,
To Silur's dynasty, and its new light,
From dusk until the dawn, for us to learn,

With lessons that are written clear and true,
To hear what history will say and tell,
For all who have an ear, both old and new,
About our living days, and what befell:

That greed destroys all life, and leaves behind
Eternal strife and grief in living things,
But those who choose to share will surely find
Life ready everywhere, with all it brings,

Ready to start again, and so to win
At last, because of love; and from above,
From heaven high, the love that is within
Is blessed, the blessing that is given love,

With power to restore, and to repair,
And make the world anew, as love will do,
Whatever had been lost, with love and care,
For me and you today, and see it through.

The golden age may end, and pass away,
But life will always mend, the whole way through,
What greed has torn apart, from day to day,
With love's eternal heart, which beats anew

In every soul that plays a caring role,
In life's eternal song, the song that rings,
And helps to make the broken living whole,
And makes the weak grow strong in living things.

From Ordovician glory, and its might,
The earth keeps turning on, and turning round,
To Silurian story, and its light,
From dusk until the dawn, on every ground,

With life that will not die, but lives, and stays,
And always finds a way, through every night,
Beneath the starry sky through all its days,
To live another day and see the light,

Despite what greed may do to me and you,
And all the harm and ruin it may bring
To all who call earth home and roam it through,
To every creature and to everything.

The sons of Stomatos may think that they
Are glorious, and mighty in the land,
But life will always fight, and every day
Will for its own eternal right still stand,

To fill the world with sight of beauty's face,
Where love has found a way, and made it through,
Of grace in every living, breathing place,
To live another day, and to renew,

Despite destruction's call, which, loud and long,
Will sound, and sound again, through every age,
And threaten one and all, both weak and strong,
On every land and sea, on every page.

The golden age returns, and once more turns,
To plant a better seed in greed's own place,
Whenever anyone among us learns
To choose love over greed for every race,

For future generations, yet to be,
Of life upon the earth, who celebrate,
Across all nations, over land and sea,
The worth of love, and love's own high estate,

Above all else that's known by hearts that grew
And came to see that sharing is the way,
That sharing's way is good, and that is true,
And brings its gladness into every day,

While greed brings only pain, and only woe,
To all who choose to live and choose to take,
And falls like acid rain on those below,
Who never learn to give, for giving's sake.

The Ordovician end, the age's close,
Reminds us, with our heart and with our mind,
To be the friend of life, as wisdom knows,
In every form, of every living kind,

So golden ages may return, and stay
Another time, when, in the bitter fight,

Love wins, another, and a brighter day,
Against the dark, the cold, the endless night

Of greed that tries to kill all life, and tries,
But fails, for love's own power, every hour,
Will not let greed Succeed beneath the skies,
And, stronger still, it blooms like a flower,

In hearts that choose to care, and choose to give,
That grows beneath the sun, and will not cease,
For life that's everywhere, and all that live,
Until all time is done, and all is peace.

Chapter 49: The Terrestrial Colonization

Capricorn 21, day 49 of the Gaian year

While sons of Cambrius would flourish well
Within the seas, the sons, upon the plain,
Of Symbio-Mygus, in field and dell,
With daughters of Charina-Plantus, twain,

Pushed out their frontiers, pushing far and wide;
But soon enough, before long, they would face,
Across the world and all the world's divide,
Competition in their own dwelling place.

For Euthy, she who was a daughter brave
Of Mandibulus, who lived for her brood,
Who always gave her all, her young to save,
Was being chased among the waves, pursued

Throughout the waters by her mortal foe,
Anomalocaris, who gave his chase
And would no mercy to her ever show
Across the wide and the watery space.

Her precious eggs would need her care and aid,
Protection; so she did what she must do:
Her trust in Hausa, everywhere she strayed,
She placed, and so it was that she went through.

She jumped up through the shimmering blue sky,
Up to the heavens, shining bright above,
Up rocks that reached so very far and high,
Protecting all the ones that she would love.

And so it was she burst out from the sea,
The first of all to make that mighty leap,
And came upon the land, so wide and free,
Out from the waters, dark and very deep.

Upon the ground she fell, and lay, and there,
Within that air so thin and very strange,
She suffocated in the open air,
Throughout that foreign and that unknown range.

But she and her own husband, who was true,
Protected all the eggs, and would defend
Their legacy, because the two then knew
The eggs must live, and live until the end.

Among the daughters of brave Euthy, all
(Created by the circumstance begun)
Who left the ancient waters at her call,
Was Myry, she the trepanated one.

Like all her sisters, she was born, and yet
The water made her mourn, for lying there,
She suffocated, and it made her fret,
Within the ocean's deep and liquid lair.

Her father, seeing this, and seeing all,
Pierced holes above her legs, ten thousand, so
That he would never miss, both great and small;
She breathed, where breathing never begs, below.

And through these holes she found that she could take
The blessings that from Hausa come, so pure,
Directly, and receive, for her own sake,
Into her frame, so steady and so sure.

And her descendants, even to this day,
Still keep the holes that saved her as their own,
And breathe still in the very selfsame way;
Through terrestrial strife they've cut, and shown.

And so the daughters, all of them, who came
From Myry, heard the call upon the land
To breathe the air so sweet, and heard the same:
Myriapods complete, a mighty band.

And Myry, she the pierced, went to explore
The new lands, and she found, as she had dared,
That in the lands she loved, from shore to shore,
She was not alone, but this zone she shared.

Tradition gives this place the name, and grace,
Of "Myry's coast"; but, as we have been shown,
She was not first, though so it names the place,
By history rehearsed, the truth made known.

We call it "Coast of Three Kingdoms" now, so,
To honor every side, and every one,
We name it truthfully, that all may know,
Of history's great tide, when it was done.

And Myry saw with wonder, and she found
Cities that were not torn, but built and grown,

That neither rain had torn, nor thunder's sound:
The cities of the Lichen, born, and known,

Born of a covenant, a pact, to make
A Partnership divine, a pact between
Symbio-Mygus, and for both their sake,
Joined with Charina-Planta's line, and seen.

The cities sprawled out wide on every hand,
Each living with the other, well and strong,
Half mold, half moss, together on the land;
Mycelium would delve, and dig along

Deep down into the earth for earthly gold,
While all the thallus, as the sunlight fell,
Basked in the sun's bright blessing, brave and bold,
From heaven's light, caressing it so well.

These cities spread themselves so very far,
And when the cities met, they would marry,
Beneath the light of every shining star,
And fungi and the plant would both carry

On with their ancient promise and their vow,
And each one nation wed the other, so,
To live together, then, and live it now,
Like sister and like brother, as they grow.

But Myry was not gentle in her ways;
She ate the cities whole, and swallowed all,
Her elemental ways, in all her days,
And stole what made them whole, both great and small.

But as she ran around from place to place,
She dropped upon the ground on every side
Cells, scattered round, a fertile, living trace,
And scattered through the atmosphere, and wide.

Across the globe they fell, and fell around,
And left in every place her meal's own trace;
Her messy eating's spell upon the ground
Was there for some to steal, and to embrace.

And soon the sons of Mygus built anew
Great Cities, with Charina's daughters, spread,
Without a guilt, and these the two then grew
Across each earthly arena they led.

But Myry bore two sons: when day begun
Came Cain, the first; and then, so meek and kind,
Came Abel, then, the second, other one,
Her peaceful, loving child, of gentle mind.

And in the process of the time it came
That each would bring an offering, and laid
An offering so true, and in his name,
For Mithra's judgment, due to him, and made.

And Cain brought, as his gift, the fruit and yield
Of ground; and Abel brought the firstlings of
His flocks, and not the fruit out of the field,
The best that he possessed, and of his love.

And Mithra had respect for Abel's part,
His sacrifice so true, and blessed the one;
But Cain's, which he had brought to him apart,
He would eschew, and of it would have none.

Then Cain was very wroth, and then there fell
His countenance; and, seeing all amiss,
The Lord said unto Cain, who was not well,
"Why is thy heart in pain? Why, then, is this?

If thou doest well in all of thy days,
Shalt thou not then excel? But at the door,
If thou doest wrong in all of thy ways,
Sin's desire is strong, and lies in store."

But Cain then talked with Abel, at the board,
His brother, as kin would; and in the field,
When they were both alone, the hatred stored
In Cain, which he had grown, would not be healed.

And in the field he rose up, and against
His brother rose, and took the knife to break,
With Murder's sharpened knife, and so dispensed
With Abel's gentle life, for murder's sake.

And Mithra called to Cain, and called him so:
"Where is thy brother, Abel, who is slain?"
"I know not," Cain replied, "I do not know;
Am I to be his guide? Must I explain?"

"What is it thou hast done this day?" he said;
"Thy brother's blood, which thou hast spilled, doth pray,

And cries out from the ground, the blood now shed;
Thy curse is found, and comes to thee to stay.

No more shall all the ground give strength to thee,
For all thy time upon this very earth,
Through all thy length of days; and thou shalt be
A wanderer, as if from thy own birth."

Then Cain cried out in fear, and in despair:
"From earth and from thy face I am driven;
My punishment's too dear, too much to bear!
No rest, no resting place, to me given.

A fugitive I'll be, and wander, so,
And whosoever sees me on my way
Will slay me, strike me dead, where'er I go;
I cannot hide my head, nor get away."

But Mithra set a mark upon him well:
"On him Sevenfold vengeance there shall be,
Whoever it shall be who thee shall fell,
Upon that person fall, for all to see."

And Cain went forth in shame, and went away
Out to the East of Eden's gate, and there,
Into the land of Nod by name, to stay,
To meet his chosen fate, and his despair.

And there it was that Cain would know his wife,
And she would bear a son, of noble name,
Centipus; and there Cain would build a life,
A city, and the city bore his fame.

The city that he built was named for him,
For Centipus; and Cain would be the one,
Whose fame would never fade, nor would grow dim,
Predecessor of Caintipedes, each one

(Who were Misspelled by all the Romans old,
And so they're called the "centipedes" today),
Who hunt with poison bite, and, strong and bold,
Throughout the night, and all throughout the day.

But Abel's gentle wife, his loving bride,
Was heavy with new life within her heart,
With child, when Cain's great rage, from deep inside,
Would come and tear her husband's heart apart.

Into a million pieces, very small,
The body then of Abel, in distress,
Had come to fall; his wife, though, after all,
Became the mother, ancestress no less,

Of millipedes, so very meek and mild,
Who eat the leaves that fall upon the ground,
And never harm a beast, nor harm a child,
And decompose them all, wherever found.

Enraged at Abel's death, and at the sight,
Then Myry drew her breath, and at great length
She lunged at Cain, and lunged with all her might,
And so they fought their final fight with strength.

And both of them then passed to Ghedos' realm;
But, lying in their corpses, lay within,
Where death holds fast, and death is at the helm,
Seeds for another day that would begin.

In death, the sons of Mygus took revenge;
Hera, a daughter who was good and true,
For all the wrongs, she came there to avenge,
And Freyr, the one so strong all through and through,

In the twentieth generation, found
Their habitation, as it has been told,
In all the stories, deep within the ground,
Within the corpses cold, and dead, and old.

And as they grew within them, as they grew,
They built their cities there, until at last
Their hyphae met, the hyphae that they drew,
When all their growing time had come and passed.

And when they met, they wed, and they were one,
And heard what Mithra said, and said it true:
"O couple, now your wedding has been done,
Prosperity is yours, and with you two.

But barren you shall be, for decades long;
Postpone your marriage-bed, and wait instead
For decades, wait and see, and so be strong,
Until the word is given, and is said.

And when the children you shall bear are born,
They'll multiply, and fill from shore to shore

The earth with life, from evening until morn,
As husband and as wife, for evermore."

And they would follow his command, and they,
Through all the fertile land, by cells alone
Were married, cell to cell, and in their way
Not with the nuclei that were their own.

Each cell was shared by two, by two that wed,
In every cell they made, in every one;
Each nucleus lived through, and was not dead;
Their sacrifice well-paid when it was done.

Dikaryotic cells, in all their kind,
Their story always tell, and make it known,
The patience and the love, and call to mind,
Blessed from above, the love that they had shown.

Decades they waited, and they waited long,
On Myry's daughters, all of them that lay,
Decomposing, and they were working strong,
In patient ministry, by night and day.

And they became the ancestors of all
That turn the death into new life again,
The high fungi, processors, great and small:
The Mushrooms, and the knife that cuts our pain,

The knife of penicillin, which can heal
Us in our darkest night; and so they came,
The great fungi, arising, by their zeal,
From where their love had chosen, as its aim,

To wait for Mithra's word, and so to wait,
Through all their patience, and to let resound
Their love, and let it ring, however late,
Down in the earth, where wisdom could be found.

Among the sons of great Plantus, the ones
Who stayed, when day begun, with Mygus' own,
Two brothers there were, and of all the sons
Their fame was everywhere, and it was known:

Stomatos and Hepatos, who then went
Their separate ways; connected to the cells
Of living networks, each where choosing bent,
That always work, as every story tells,

At the cellular level they would build,
With sons of Glomulus, so glorious,
Their partnership's great revel, as they willed,
Together, all of them victorious.

Stomatos looked and saw the holes that lay
In Myry's sides and souls, and so he would
Pierce holes into himself as well, that way
To breathe the air, and so excel for good.

But Hepatos refused the foreign art,
And used his ancient ways, the old, instead,
The magic that was used, and kept apart,
And kept on with his faithful, steady tread.

Hepatos became, in time, the sire
Of those who keep the ancient way, and will,
The Liverworts' green and humble choir,
Until this very day, who keep it still.

But Stomatos became, through all his line,
Ancestor of fame, and of every kind
Of plant; and he became, by his design,
The root, that dances on, with life entwined.

Today we honor him, and call his name,
The bright transhumanist, who would not cease,
Eloh, not dim, but bright, a burning flame,
And never would desist, nor seek release

From being better still, and better yet;
When his beliefs must change, he'd rearrange,
Through all the strength of mind and will he set,
His understanding, though the change was strange,

To make his vision new, and see it through,
To rise up higher, and to climb, and grow,
Forever growing past the self he knew,
Beyond the self that he had come to know.

And as the sons of Stomatos would rise
Upon the earthly stage of that first age,
Like kratos, power rising to the skies,
Then Hillu struck back in a mighty rage.

So many lineages through their days
Would then be lost, and lost for evermore,

Through all their pilgrimages and their ways,
Upon that ancient and primeval shore.

Upon the Coast of Three Kingdoms, by grace,
First met upon the land, as it was planned,
The great wisdom of life, in that one place,
By Mithra's guiding and his gentle hand.

There Plant and fungi wed, and while they wed,
The arthropods were nourished on them, so
That on their partnership the three were fed:
It was the first tri-partnership to grow.

From sea to land they came, both great and small,
Each seeking its own fame, and its own quest;
It was the partnership, though, over all,
Above all other ways, that proved the best.

The lichen cities showed, and show us how
The seeds of love are sowed between each kind,
Between the most unlike, and even now
They share each other's hike, and walk combined

Through life upon the earth, where, as they go,
Their partnership gives birth to what, confined
In isolation, none could ever grow:
A beauty none could see, nor ever find.

From Euthy's desperate and daring leap
To save her children, came, and came to stay,
The pierced way of Myry, ever to keep
The way of breathing still, from day to day.

From Cain and Abel's strife, and from that fight,
Came death, and then new life, and in its turn
The Centipedes who hunt, came forth to light,
The millipedes who shunt, and work, and churn

Decay into the earth, so rich and good,
And from the fungi's love, so long and slow,
So patient, for new plants, as good earth should,
So blessed from up above, there came to grow

The mushrooms' mighty power, in their worth
Within the darkest hour; and from the change,
So brave, of Stomatos, on all the earth
Came all the plants, and all their spreading range.

The Coast of Three Kingdoms shows us how
The wisdom of all life will find its best
And truest way, as it did then, and now,
Through partnership's display, made manifest.

Chapter 50: The Silurian Recovery

Capricorn 22, day 50 of the Gaian year

Then Silur, son of Chelicer, surveyed
The world in ruin's blur, and, standing near,
Amid the devastation and decayed,
Saw opportunity's creation, clear.

Then Silur shouted out with all his might,
And he declared his vision, without care,
To all the sons of Animus in sight,
For any who had gone before him there:

"I did not steal the lore of kingship's crown;
I found it, and I picked it up, foreseen
My destiny, though in the gutter, down,
By that sword I had found, its edge so keen.

But it was all the people's voices' sound
That placed it on my head, and on the throne
Set me, the one who fit, and so they crowned
The one to make it his, and his alone."

And so began the era, wild and strange
(Which rose from ashes, rising over all),
Of the Silurian chimera's range,
From Ordovician's crashes and its fall.

Silur would bear two sons: when day begun
Came Eurypter, the first; and, strong and vast,
Came Chasmas then, the second, younger one,
And lived his whole life long until it passed.

And Chasmas would beget two sons: the one,
Belangkas, to explore; and, by the sea,
Xiphos, to dwell beneath the shining sun,
A dweller, as he was destined to be.

Xiphos became the father of a kind
Of crabs who keep their horseshoe-shaped design,
Who kept this single wish within their mind,
Through to the end of time, along their line.

Belangkas climbed onto the land up high,
Where none had ever claimed the land before,
To try what no one else had dared to try:
To claim it all, from shore to farthest shore.

He took it out of Hirnan's hand, to stand
Where he could make his dwelling and reside,
In his own rule, and make his own command
Of territories, spreading far and wide.

Like Myriapus, in the days of old,
Upon the open terrestrial plain
He found that his own story would be told
In suffocation's agony and pain.

But he then pierced wounds into his own side,
And air that he could breathe would come to give
Relief unto his lungs; and satisfied
He was, and breathing, he could come to live.

Belangkas then begat two children, who
Were Opiliona, a daughter fair,
And Soliber, a son both tried and true;
She carried life abroad, and everywhere.

Opiliona spread the moss, and so
No loss would be too great for her to bear;
Across the world she made the green moss grow,
So deep was all her mother's love and care.

She grazed upon the green, and grazed as well
On daughters of Millipa, spread around,
On all that could be seen, where they would dwell
Throughout the earthly steppe, wherever found.

Opiliona was a mother great,
A Farmer with long legs; and wisdom pleads,
For she was like no other, and her gait,
That we remember her and all her deeds

As one who would confer upon the land
Great blessings, and who tended every field,
Who blessed it with her own maternal hand,
And made the green moss grow, and made it yield.

Her legs were beautiful, and very long;
"Granny Long Legs" is what they came to call
Her, and she was the subject of a song,
And she was well beloved by one and all.

And "Granny Harvest," they would call her too,
For all her work, through every joy and strife,

For all the work that she would come to do
To spread the green that was the hue of life.

And so, in honor of her life and love,
“Daddy Long Legs” is what we call them still,
Her children, with a name we still speak of,
Though “Daddy” seems to suit a lady ill

When it Names her descendants. All the same,
They’re also known by her, by what she’d do:
They’re “Harvestmen” as well, their story’s name,
Named for her harvest, and her labor, too.

Soliber begat two: the first one, who
Was Pneumaran, a son both tried and strong,
And Kitzi, small, but tried as well, and true,
Who’d live and thrive through all his whole life long.

And Pneumaran begat two sons: the one,
Solaran, beyond all of mortal ken,
Was of the shining sun; and, when begun,
Acares, the other, born among men,

A dwarf among his kin he was; and yet
He’d win a place in history, we find,
A place that we will never once forget,
As father of the mites, the smallest kind,

Who, when their work is done, live on the land,
And they are everywhere, in every place,
All over it, built by their tiny hand,
The smallest ones of all the living race.

Acares bore two sons: when day was new
Came Sarco first, as fate would come to tell,
And then came Trombo, second of the two,
Who’d live in peace, or not, as it befell.

And it would tell his story very well,
Of how there are some souls who choose the light,
While others, as the stories of them tell,
Are those who rather choose to choose the night.

The sons of Sarco clean the world, and they,
As dust mites, seen wherever they may go,
Will take the greatest care to sweep away
The dust that, if it stayed, would cause us woe,

A problem for us all, both great and small,
For all who live within the house, and share
The room, who answer, every one, the call
Of life so sweet, and live in it with care.

Among the sons of Trombo, some will dwell
In peace, and stay, of gentleness and grace
A blend that suits them all, and suits them well,
Within their own appointed way and place.

But others are the plague, the ones who've made
All good souls vague with worry; and their ways,
For Parasites they're called, make us afraid,
And Stifle life throughout our living days.

Horrific are they in their greed, and so
They plant destruction's seed in every land,
And make it grow, and make it spread and grow,
And ruin all they touch with greedy hand.

Among the peaceful ones, there are the sons,
Red velvet mites, who bring us pure delights,
Of Trombo, gentle, as the story runs,
From whom we learn of love's own sacred rites:

A story of the heart, and of the part,
Where all true loves align, in every place,
That love plays in the world, with all its art,
In nature's plan, with beauty and with grace.

And Solaran begat two sons: the true
Solifugon, the first; and one so small,
Ricinulon, the second son, who knew
Of duty, which he answered, and its call.

Solifugon, so great in fame, became
The father of the ones who race the face
Of all the earth, the Wind Spiders by name,
Who travel over it at racing pace.

Ricinulon was father of the name
Of small Tick Spiders, little and yet strong,
Who heeded, as they hunted, hunting's claim,
And lived their small and quiet lives along.

Kitzi begat two sons: when day was born,
The elder, Byblos, first, and then would be

Young Paras, coming after in the morn,
Small in his station and in his degree.

Byblos, the Book Knight, both by night and day,
To guard the books, the store of ancient lore,
Continues still, until this very day,
In his own way, of all who came before.

His sons, the Book Scorpions, are as well,
With all their might, companions, night and day,
Of knowledge, and they shield it where they dwell,
The books from those who'd tear their joy away.

Paras begat two more, and one would be
Mesos, born to explore, and to the last
The other, Holoxos, the strong, would see
His whole life long in strength, until it passed.

Mesos, he was a hunter fierce indeed,
Who'd dart across the globe to find his Prey,
His mind and body's gluttony to feed:
A small but mighty fee he'd take away

From all the life around him on the ground,
From all the living, small, that he would meet
In every place where he was to be found,
For all of them were his, for him to eat.

But Holoxos walked where the Blood would flow
From fallen kin: the sons, who were so thin,
Of Arachnus, who lay so very low,
And sons of Myriapus, who had been

Victorious in other time and place,
Before death took them, cold, and they were dead.
He drank their blood, and in death's cold embrace
Bore two sons, searching paths where blood was shed:

Thyrus would draw his breath, through all his days,
From old tradition, peaceful, and from those
Already dead, submissive in his ways,
Drinking the blood of those in last repose.

But Ricinus was one who turned to dark,
And everywhere he went, and he would go,
He left upon the world his evil mark;
He fed on living blood, to make it flow

Like some unholy flood of evil's greed,
Which flows, and flows, and never comes to cease,
Which in the world will plant destruction's seed,
And robs the world of life, and of its peace.

Ricinus drinks the life of those who know,
Injecting with his bite, all through the night,
Both joy and strife, his Venom, as they go,
Which paralyzes those he's marked to fight.

The Paralytic, sweaty poison's sting
Is never petty; like unholy rain,
To those who can't Escape it, it will bring
The evil of his venom, and its pain.

Ricinus swells like some unholy cup,
With innocents' own blood, and as he grows,
Inflated with the blood he's taken up,
A stolen flood of life within him flows.

He's Fat with others' pain; and like a stain
Upon the world of life, he cuts right through,
Unholy, like the sharpest knife, the bane
Of all the good that lives in me and you.

Through Ricinus the blood of women scorned
May taint us, bringing into mortal veins
A flood of it, of which we have been warned,
The weight of all their many bitter pains.

When Lilith's blood flows in us, we can't win;
Typhus will bring its blight to me and you;
Against the poison's might, which lies within,
The Spotted Fever comes to us all, too,

To all of us who cannot fight alone
Against the evil we let in our world,
Against the very thing that we have sown,
Where it can win, with all its flags unfurled,

Against the good and true in you and me,
Against the good in all of human kind,
That lives in us, wherever we may be,
In heart and soul, in body and in mind.

In what Ricinus gives there live as well,
In mitochondria lives Lilith's own,

The Midichlorians, and there they dwell,
Bacteria, the greatest vengeance known

In stories new and old, of those who mark
The world with evil, and who choose to be
The ones who choose the evil and the dark,
And having chosen, never will be free.

And after them, the daughters, too, would come,
Malarius' dark days, and Lyme, and all,
Of Lilith, with their evil ways, the sum,
The other sisters, who are held in thrall,

Possessed by pestilence and death, and they
Bring sickness to the body and the soul,
And they will steal our very breath away,
And take from us the health that made us whole.

Ricinus, father of the Ticks, who show
No love, but only greed and hate, becomes,
Engorged with others' fate, the sign, and so
Shows us the fate of evil, how it sums

Into a force of wrong so strong that right,
Though all the good within us comes to try,
Can never win against it in the fight,
Until the day the good will rise up high.

But Eurypter would father and would found,
More than the line of Chasmas, and design,
A dynasty more great and more renowned,
And make a nation, he and all his line,

Which would take up its rightful share of might
And glory, and would fill the world, and guide
The world with sight of what is good and right,
Of what the good can do when they are tried.

And they would shine like morning light, the way
Through every place that's dark, where evil's face
Is shown, but evil cannot win the day
When good comes forth, and shows its rightful grace.

From Silur's opportunity, his prize,
And to Opiliona's loving care,
Seen in calamity before his eyes,
For all the life that's growing everywhere,

From the Book Knights, who stand guard and defend,
Each day, and light our way through every day,
The knowledge upon which we all depend,
To those who choose the dark and go astray,

And leave their evil mark on all around,
The Silurian age, as it bestows,
On all the world, wherever they are found,
Shows how each choice we make takes root and grows

Into the world we see, for you and me.
Some choose to heal and mend what others tear,
Who, in the end, with greed and hate, will be
The ones who seal our fate, and our despair.

And others, in their selfishness, can't wait
To take, for their own sake, what others need
To live, and never learn, however late,
To give, but only take, and take for greed.

The lesson, clear as day, shows us the way
To choose, for all eternity, to bless
And heal, and what to be, and not to stray,
Or else to leave behind us all a mess

That others will be left to scrub and clear,
And others will be left to clean and mend,
In places yet unseen, both far and near,
From now until the time of time's own end.

From Silur's royal crown and its renown
To those who'd drown the world in pain and death,
The blood-suckers, who come to drag it down,
Each choice we make will always draw its breath

From what we hold most dear: from love, the love
That casts out fear, sincere, or else from fear,
Which kills all love, the love we're speaking of,
And blocks the light that shines on us, so near.

The choice is ours, and ours alone, to make,
Upon life's winding road, where we must bear,
In every step along the way we take,
The heavy load of what our choices there

Will bring to all the living things that share
This world with us, in ways both great and grand,

And terrible, for you and me; and there
We are the ones who must decide and stand,

And choose, and must decide each single day
Which path we'll take, the path of good or ill,
And which way we will travel on our way,
Each one of us, by our own choice and will.

The Silurian age began with one
Who had a plan, and would rise from the fall,
From ruin's call, and when the wreck was done,
Would build a hope that rose, and build for all.

It also shows that some will choose the side
Of death, with every breath, and choose the night,
And there, within the darkness, will abide,
And turn away forever from the light.

The choice is ours: to use our mortal might,
Along the living way on which we tread,
For good or ill each day, for wrong or right.
From opportunity's own call, which led

To rising past the golden ages' fall,
The Silurian shows the world we make,
The ages past, to build what lasts for all,
Is found by each, for everyone's own sake.

Choose well, for what you choose, you'll lose or gain,
And what you choose is what you come to be,
For all the days your deathless ways remain,
Through all the days of all eternity.

From where Silur had made his royal start
To all the ticks, the lesson, plain to see,
Is clear, from all their bloodsucking and art:
We are, each one, what we will choose to be.

Chapter 51: The Sea Scorpions

Capricorn 23, day 51 of the Gaian year

Eurypter's sons would then Usurp, as none
Could do, the sons of Cephalus, to reign,
And ruled, victorious, when they had won,
Where those they conquered once had their domain.

Eurypter married fair Pulmona, who
Was Beloved everywhere; but on the name
That they should bear, they disagreed, the two,
And neither one would yield, nor say the same.

Each had their own design, each their own say
For their ancestral line, and for its name:
"Eurypterids," was what he'd always say;
"Arachnopulmonates," was her own claim.

Eurypter and Pulmona bore a pair,
Eurypteron and Styloner, begun
As children like no others anywhere,
In rivalry so deep that there was none

Who ever could keep Peace between the two,
For each would go his way, and walk his road,
Who each walked different paths, as each one knew,
And neither one would share the other's load.

Eurypteron and Styloner would fight
For all the things that could be won or bought,
Like no two other siblings, with their might,
Throughout the day and night, as on they fought.

Their mother died, and they could not decide
Who would inherit all, and who would be
The one, by honor's law and honor's guide,
To take her whole estate, and so be free.

Eurypteron laid claim upon the skies;
On land, which he had built with his own hand,
Styloner set his heart and set his eyes.
So Eurypteron flew, as he had planned,

Across domains he knew were his by birth,
And claimed them as by law; and, by the book
Of heritage, he walked upon the earth,
Did Styloner; but each of them would look

Upon it differently, although the two
Were brothers born, and from one mother came,
And though they shared one mother, as they knew,
They never saw one world, nor saw the same.

Eurypteron, in flight across the sky,
Who ruled where winds blow high above the earth,
Began a dynasty of those on high,
And from the moment of their very birth

To death's appointed day, they'd hold their sway,
And they would rule up there, above the ground,
And they would rule the sky in their own way,
Wherever winds were blowing all around.

Eurypteron begat two sons: the strong
Diploper, and Eurypterus, beyond
All others in fertility, who long
Would go past any measure to respond.

His numbers were his treasure; he was most
Fertile of all; and with each single one
Of generations, he, of all the host,
Eurypterus, as each one was begun,

His house would grow ten thousand-fold, and so,
Beyond what any other line could try,
His numbers multiplied, and they would go
In all of space and time, beneath the sky;

Myriad-fold they grew, a multitude,
And filled the waters of the sea and shore,
Of offspring tried and true, a mighty brood,
And grew, and grew, and multiplied the more.

Diploper then begat two sons: the one,
Waeringos, tried and true, the first to last;
And Carcinos, when day had now begun,
The strong one, lived his whole life till it passed.

And Waeringos begat two sons, and then
Humiller came, who was so strong and brave,
A son beyond the common, mortal ken,
And Adelops, who later on would save

His line, through numbers vast, so that it would
Forever last; and he would heed the call

Of duty, small, as numbers only could,
With many children, who were, one and all,

Resilient, and were true, and they would be,
As small things are, so hard to break or kill,
As tenacious as bugs beneath the sea,
And they would hold on fast, and hold on still.

Humiller married Pterra, one so fair
In beauty and in grace, and in their place,
Together, in their dwelling, they would bear,
When day was first begun, one son of grace:

Slender, and fast, and sly, he'd rule, and dwell
Beneath the sky, and in the depths, and great
His fate; they named him Slimon; none could tell
Beyond what they could know, or they could state.

Slimon would bear a son, whose work would show
The massive claws that from his mouth were grown
By nature's laws, and when the son would grow,
From north down to the south his might was known.

He named this son Clawbert at first; but bright
A strike of lightning burst; and Slimon saw,
There in the air, that filled the world with sight,
The sign from the divine, and, filled with awe,

He changed his son's name, and the son became
Pterygo, the sign of strength and of might,
A name of power and of lasting fame,
For he was born beneath the lightning's light.

The sons of Pterygo were rulers, high
And low, of all Eurypterids; the earth,
By speed and strength and power, by and by,
From shore to shore, would bow before their worth.

And they were Regal in their way, and they
Were proud and royal, all their whole line long,
And they would rule by night and rule by day,
And reign throughout the waters, great and strong.

His youngest son was Scorpio, begun
As an explorer of the new, and who,
With vision clear and true, became the one
Who saw no land was left, of all he knew,

For his command; his older brothers still
Had claimed it all, and held it all so tight,
And none, however bold, of bolder will,
Could challenge them, and challenge their own right.

And Scorpio, from his watery nook,
Out of the sea, up to the land out there,
Not built by any hand, would turn to look,
And waiting to be claimed by one who'd dare,

Who could be named the first to make the leap
Up from the sea, to go where none had been,
Out from the waters, which were dark and deep,
To lands no living thing had yet been in.

Scorpio ventured up, and in his heart
A warrior's cup of courage, on his way
To be a pioneer and play the part;
And his book gills became book lungs that day.

And so his name would live on evermore,
And all of us would come to know his name,
From mountain peak down to the farthest shore,
The first to leave the sea, the first who came.

He claimed the lands of might, and all in sight,
For him and for his own descendant line,
Of Euramerica, as his by right,
Through favor granted by the one divine,

Who favors those who dare, who venture where,
To open possibility's wide door,
No one has gone before, and everywhere,
For all humanity, and, what is more,

For every living thing that answers to
The call of life, and every living kind,
The ring of life, as living things will do,
With all their heart, and all their soul and mind.

His sons today, as scorpions, are known,
And in their way they carry, in their hand,
The torch of those who carried, as their own,
New paths they scorched throughout the virgin land,

From nothing into all that, at the call
Of courage, comes, and answers when it calls,

And answers it, and gives to it its all,
And never fails, and never fears, nor falls.

Styloner married Rhena, and their names,
Of both of them, together, as they wed,
Fate's pen would write in evolution's games,
And write the line that from the two was bred.

Together they bore two: the first, so true
And tried, Makoko; and the other one
Was Stylonurus, strong, who would live through
And thrive his whole life long, till it was done.

Makoko would beget two sons, and then
Mycter and Kokomo, who were to go,
These two, beyond all of the mortal ken,
High in the world, as destiny would show.

Mycter begat two sons: the first to roam
Was Flumon, to explore; and, strong and true,
Was Drepan, who, while far away from home,
Would know the paths his feet would travel through.

Flumon could find no luck at all, for he,
Among the dozens of his cousins there,
Was stuck among his brothers in the sea,
Who claimed the seas for their own use; to share

They would not, nor would give him any place,
Nor any room at all, nor any home,
To call his own, a dwelling and a space,
And so he went away, and went to roam.

So he went searching rivers far and wide,
To find a place where he could stake his claim,
And took the current as his only guide,
For his own line and his ancestral name.

Flumon begat two sons: when day begun
Came Hibbert first, and then, to come and stay,
Came Mycterops, the strong, the younger one,
Alive and strong until his final day.

Hibbert was great, a River dweller, who
Was fated to be tough and large, of course,
To take the river's charge; and so he grew
With all his wisdom, and with all his force.

Larger and tougher than all other men
Of his own time, he'd thrive through countless trials,
And would survive the Tragedies again,
Across the long, the many thousand miles.

His people were a race that held its ground,
Both powerful and old, with tales untold,
Resilient in their place, where they were found,
Of how they overcame, and would not fold,

Whatever shamed them, or would break their will,
Whatever came to them, whatever came,
Along the edges of the river's sill,
And they would hold the river, and their name.

And Mycterops was strong, and, all life long,
Was versatile; to live and dwell, as well,
His work begun, his two sons would prolong,
Within the rivers, where the waters swell

With life; to search for food from shore to shore,
In most unlikely places, and to find,
Where none could see their faces, and explore,
What always fed them, both in heart and mind.

Megarachne and Minirachne, two
Brothers unlike all others, far and wide,
Upon the rivers, would their rule pursue
With power, and with all their royal pride.

The sons of Mycterops, they were the best,
The kings of all the rivers, and their name,
The crest of all their dynasty, the rest
Surpassed, and lived in honor and in fame.

But Minirachne was not Satisfied;
He wanted more, he wanted more to see
Than his own lot, the rivers' freer tide.
Scorpio and Minirachne would be

Destined, always, to fight for the same prize,
The land, and both of them would fight for it,
The land, which lay beneath the open skies,
And neither one of them would yield or quit.

For both had an ambition, in their quest,
That burned within them, and would never die,

For fame, no opposition could arrest,
However hard the others came to try.

They both were men whose dreams surpassed what those
Who seek their comfort, and who seek their ease,
Would think was possible; who seek repose
Will never feel the challenge, like a breeze,

That calls out to them, naming them by name,
That calls them out to venture and to roam,
To come and play in a far greater game,
And leave behind the comforts of their home.

Minirachne, with Tetra, his fair wife,
Climbed high beneath the open sky, and planned
To start out in the world a newer life,
Which they would build together, hand in hand,

Upon the land, where none had gone before,
Where they would be the first ones, and would go
To there explore, and open up the door,
The long-unopened door, for all to know.

His book lungs turned to book gills, and his name,
Like Scorpio's, upon the land would live,
In evolution's song would long have fame,
And to his line its glory it would give.

He came to conquer all the lands that lay,
The land that Scorpio had called his own,
Where Scorpio had claimed his rightful sway,
To be his story, and to make it known.

And so the stage was set for conflict, yet,
With banners there unfurled, between two lines,
Unseen in all the world, a looming threat
Of mighty kin, with different designs

On what the world should be, and what should stand,
And who should rule, and who should yield the day,
For all eternity, on sea and land,
And who would have, at last, the final say.

From Eurypter's own marriage to his bride,
Pulmona, and from those she carried, grew,
The children she had borne there at her side,
This foreseeing of conflicts that were due:

When all was done, the winners would be crowned,
And all the losers, too, would know their place,
And all the losers would, in turn, be found,
And bear their loss, and bear their own disgrace.

The sons of Eurypter would rise with great
Designs, above all other lines, and stand
Like Jupiter, to rule in their estate,
And all of it was built by their own hand,

Through courage, and through all their strength and might,
Which ruled the sea and land, and made them theirs,
Which shines out like the morning's early light,
And shines on all their children and their heirs.

From river to the sea, and from the sea
To land so free, eurypterids have made
It plain, how great ambitions grow, as we
See, from small starts, by those who aren't afraid,

And dare to venture into spaces where
None ever went, nor any place had been,
No face of any kind was ever there,
No living thing had ever yet come in.

It also shows the cost when lines of kin
Are torn apart by conflict and by war,
Are lost in conflict, which no one can win,
And lose what they had won and held before.

The rivalry of Brothers who would take
Two different paths, the way that each would stray,
Each for his children's future, his own sake,
Shows how the suture nature makes can't stay

When their ambitions grow too bold to share
Among the ones who never found a way
To live in peace, who never seemed to care
To stay at peace together, day by day.

From Scorpio's bold climb up to the war
And conquest Minirachne waged, the wise
And clear lore says: Ambition, evermore,
Must be both free and wise beneath the skies.

The world is big enough for all, if they
Are tough enough to make their way through strife,

Though roads be rough, through every single day
Of challenge they will meet in this long life,

Where all must find their own appointed place,
And all must find the place where they belong,
Within the course of evolution's race,
And run it, and be swift in it, and strong.

But when ambition, turned to conflict, burns
The bridges that would otherwise connect
Those who, as kin, should, as each grows and learns,
Shelter each other, and each one protect

In joy and pain, and all the ways of love,
Then all become the losers in the game,
The game the choosers play, as from above
The stars look on, forgetting, to their shame,

That none can ever get, when they're alone,
All that they want, without the seeds they sow
Of true cooperation, which, once grown,
Becomes a partnership that comes to grow.

The eurypterids, rising, show us how,
In each and every hour of living days,
To use our power wisely, here and now,
As we go on along our mortal ways,

Where choice determines everything for all,
For all of us, for every living one,
Of those who've answered, each, to life's great call,
From when our life begins till it is done.

From Eurypter's flight to Scorpio's sight
Of lands beyond the waters, where his mark
He might be first to make, as was his right,
Upon a world that was as yet so dark,

And full of possibility, to be,
The lesson, clear as day, will show the way,
A world for all humanity to see,
To be both brave and wise, and in what way

Our dreams, beneath the starry heavens, grow,
If we but choose the seeds of peace and love,
The seeds that we will scatter and will sow,
Which are blessed from above, we're speaking of,

In every choice we make, for all who share
This world with us, in ways we come to tell,
Both grand and fair, and challenging, and there
For you and me, who must decide as well,

Each day, which path we'll take, and on our way
Go travelling, and choose the road ahead,
And follow it away from day to day,
Wherever it may go, where it has led.

Like shining Jupiter, the sons, so blessed,
Of Eurypter rose high through courage, might,
And wisdom, and rose high above the rest,
And passed each test with inner gift of sight

That saw what could be done, if they would dare
Beneath the shining sun to go before
Where none went, and to venture there, and where
Was possibility, to ope its door

For all eternity, where dreams come true,
And all that is in store, for all to see,
Today and always, both for me and you,
For all of life, and all that is to be.

Chapter 52: The Great Ancestor

Capricorn 24, day 52 of the Gaian year

In the tenth generation, by its fate,
Would be the Ancestor of humankind
Vater, the son of Pteraspis, so great,
And species myriad, of every kind,

From mountain peak to shore; and all he would,
All that he touched, and all that he would make,
Through innovation change for all the good,
And change it for the world's and for life's sake.

Vater would build a channel, grand and wide,
That joined the liver and pancreas' space,
And brought them both together, side by side,
Within his belly, where they'd take their place.

Today we trace this channel's honored name,
And honor him for what he came to build:
"Ampulla of Vater": such is its fame,
And so his name is with that honor filled.

This father was exalted, father of
Far more; the Elohim, in their esteem,
Than other Men had ever dreamed thereof,
They called him Abraham, as was their scheme

For one whose progeny, in time, would fill,
And spread, and multiply in every land,
Eternity, and they are filling still,
As many as the stars, and as the sand.

Vater would bear two sons: when day begun
Came Arandus; then, of the house's name,
Hestracon came, the bearer, he, the one
Whose work would carry through the burning flame

That burns in every heart that plays the part
Of evolution, ever burning bright,
Of innovation, and its daring art,
That leads the way into the newer light.

Hestracon found his belly, as he knew,
Inadequate, and not prepared to take,
Unready for the work he'd have to do,
The food, and use it for his body's sake:

From mouth to anus, all the same, and plain;
Only his father's main Ampulla would,
And simple, he would call it, with disdain,
Stand in the middle, solving, as it could,

Digestion's riddle. This would never be
Enough for Hestracon, so strong and tough,
Who saw what greater good there was, if he
Would dare to build, not settle for enough.

Hestracon built a chamber, with great care,
Prepared before his father's gift, to give
Digestion lift; he called it "stomach" there,
And with this name it would forever live.

It was the great divider, standing there
Between the mouth above, which would bestow
The food, and the intestines' loving care
Would process it, so that the body grow.

Before the stomach lay, so swift and strong,
Esophagus, well-made; and, after, laid,
To pass the food upon its path along,
The intestine, its part to be well-played,

Which, in its own appointed place and role,
Would take the food, and draw from it its worth,
And nourish all the body as a whole,
And give it strength to live upon the earth.

And Hestracon begat two sons: the one,
Astrops, was tried and true, and strong to stay;
Eteros came, when day had now begun,
And lived, and thrived, until his dying day.

And Eteros begat two sons, and then,
Cyatha, with a cup-shield shining bright,
Beyond all mortal ken, beyond all men,
And Tsubasa, with Wing-shield, and with sight,

Prepared for all he'd dare to face, his time
Of life, and all of life's long, winding way,
Through all of it, through reason and through rhyme,
From dusk until the coming of the day.

Tsubasa begat two: one, tried and true,
Was Thelos; and the other, who was wise,

Was Cephalus, the second of the two,
Who had the keen and penetrating eyes.

Thelos would break his armor into scales,
Into innumerable scales, refined,
So no Rigidity of old prevails
To bind or hold his innovative mind.

And these, his scales, would never fail to be
His flexibility and skill; and yet
Could he live in the reefs, where none were free,
Relieved from rigid armor's weight, which set

And sealed their swimming fate. Where none could bend
So well, the coral's tight embrace, he found,
Thelos could both escape it and transcend,
And there his home, and dwelling on that ground.

Neither the sons of Arthropus, nor those
Of Molluscus, could match him in that space,
Nor of Chordatus, for none of them rose
To where his grace took Rigidity's place

With flow, which helps him in his life to grow
And reach the food that he could find and take
In every niche where others could not go,
And use it for himself, for his own sake.

Cephalus bore wings, bright, on either side
Of his own helmet's form, and they would fly
Through calm and raging storm, and they would ride,
And as he swam, his head was steady, high,

According to his plan, with poise and grace,
And steady as he swam, and steady still,
In every watery and open place,
He swam, and flew, according to his will.

His lateral line would keep him ahead,
For all that might befall him in the sea;
It never slept, but vigilant instead,
As he would swim through it, Aware was he

Of all that he could sense around his form,
Of every motion near him, and of all,
And so he weathered every single storm,
And answered to the ocean and its call.

Cephalus begat two: Galeas, true
And tried; and Osteos, who saw unfurled
The possibilities, and saw them through,
By innovation's key within the world,

For those who dared to think, and did not shrink,
Who dared to go beyond the old, and try,
From going past tradition's binding link,
And dared to dream, and dared to reach up high.

But Osteos was in a plight, and found
He had to make them new; for their expense,
His bones, which weren't efficient, nor were sound,
Was Comprehensively so great, immense,

Wasting countless calcium moles, which roll,
Elements by the score, that could be used,
Through phosphorus, and more, a costly toll,
Much better, if they were not so abused

In static, lifeless bone that stood alone
Without a plan to help; and, with a will,
He chose to build, as he would call his own,
More cleverly, with all his art and skill,

His skeleton, and make it all anew,
And make it live, and make it breathe and grow,
With wisdom that was always tried and true,
That he alone, of all of them, would know.

Osteos built with care, and everywhere
Inside his bones, so they would take their Stores
Of minerals, he set Blood channels there,
So they would live, like generals in wars;

In plenty, they were built, and gathered more
From nature's flowing and abundant cup;
In scarcity, he'd borrow from the store
What he had saved, like treasure, gathered up.

And he grew stronger, prospering, life long,
Beyond his relatives, who, as they knew,
Took everything that nature gives, along,
But never learned to save for what was due,

The future's challenges and every need,
From stores they'd built in plenty, long ago,

When they would hunger, and would have to feed,
When resources were never scant or low,

But ran like rivers, spreading far and wide,
And flowing on, and flowing everywhere,
With bounty as the river's only guide,
And bounty that was more than they could bear.

Osteos bore two sons: when day begun
Came Pituri; and Ostracos, whose wide,
His children spread; he was the second son,
And multiplied, until on every side

The world was fed with countless forms of life,
And countless creatures filling every place,
Through harmony, and not through any strife,
In peace, and in their all-abundant grace.

To Ostracos was born, wherever led,
From coast to coast, a great and mighty host,
A million sons, who'd spread, for times ahead,
By life's eternal call, to every coast,

To multiply for all who'd come, and feed,
Through evolution's calm and raging storms,
The world with their own forms, as was the need,
From night into the day, in countless swarms.

Pituri grew a snout so long that none,
Beyond all doubt, in evolution's scene,
Was ever seen so long, not any one:
The longest snout that ever had been seen.

Pituri then begat Beakon, who'd be
Beyond all ken in wisdom and in might,
Who had the strength to look, and so to see
The world around him with a clearer sight.

Pituri's mouth was made of lips; it stayed
With simpler laws, and only closed the space,
And never to the realm of jaws it strayed,
And never could, with biting might, erase

His prey; for no jaw was within his sight,
And no jaw was his own, nor his to make,
And with his lips he only closed it tight,
And could not bite, nor crush, nor chew, nor break.

But Beakon saw potential in the snout
His father had, and saw it through and through,
And all its hidden essence he worked out,
And saw how he could make it something new.

So Beakon moved his gill arches, and he
Into his mouth would bring them, and he fought,
And proved that innovation's art could be
Of vital use; with them he hunted, sought

For food in a new way, which worked by night,
And in the darkest and the deepest space,
And worked as well by day, in the day's light,
And worked in every time, and every place.

Beakon's own son, named Gnathus, saw the great
Potential, and he hunted for the prey,
And so, with Pelaca, who was his mate,
They hunted like no others in their day:

Their prey was trilobites, which they would take
Away, and bring to innovation's light,
To innovation's flame, for their own sake;
That flame was burning in their name, so bright.

Not merely, in the ancient way, did they
Catch, as had others, long before, their food,
And close upon, as others had, their prey,
As others did, in their more simple mood;

They crushed them with their might, and brought them to
The sight of armored jaws, which followed laws
Of nature, true, and used in ways made new,
Through all their living days, those armored jaws.

They sliced through every meal that they would find,
That brought to them, when in their hunting mood,
With jaws of steel-hard feel, of a new kind,
Their sustenance, the life-bestowing food.

And so the Jaws were born, that fateful day,
When none could match them, and they would break through;
For Gnathus and Pelaca would display
What none before them ever came to do:

To crush with them, and with them to consume
What was, they thought, safe in the armor's shell,

What other creatures would, till then, assume
Protected from all those who'd never tell

The secret of the jaw, and how the jaw,
The jaw that would be used to bite and break,
Would follow, all its days, a newer law,
And change the world, for every creature's sake.

The world would never be the same for me
Or you, from that day forth, when, with their might,
The predatory jaws would come to be
The newer laws, and bring into our sight

A revolution in what life could do,
And all the ways of life, and all its kinds,
And from that day, the world of life was new,
And new its bodies, and new were its minds.

From Vater's ampulla to Gnathus, who
Had found a formula, his jaws, and how
To crush, the vertebrates show, as they do,
How Innovation holds them to its vow:

To never be content with what is sent
By fate, but always strive to be alive,
And more, and always with a strong intent
To be more capable, and so to thrive,

Journey through possibility's wide sea,
Where all who dare will come to see and know,
And see new heights of what is yet to be,
And know them for eternity, and go

When innovation's flame burns, longing, true,
To make the world more bright, and in its flight
Beyond the old, with forms that are made new,
To swing possibility's door, and light

The way for all humanity, and bring
New possibility to all of life,
To all that lives and answers when life's ring
Is heard, through all its joy and all its strife.

From Hestracon's new stomach, and from those
Pragmatic Bones of Osteos, run through
With channels, to the scales that Thelos chose
To give him flexibility anew,

To Cephalus' ability, with grace,
To fly, and stabilize, and swim with care,
Through all the water's wide and open space,
The vertebrates remind us, everywhere,

That searching minds, which break from what is known
In innovation, seeing old dreams through,
Can reap the harvest of what they have sown,
At heights beyond all thoughts that wisdom drew.

From simple mouths that closed, to jaws whose might
None could oppose in crushing, we can know
How changes, as they grow, come into sight,
And flow into the stream of life, and so

That nothing's what it seems, and all can change,
If we but have the will to climb, until,
Beyond familiar and accustomed range,
We climb each higher hill, and higher still,

Of possibility, through every day
Of all eternity, where dreams come true,
Where, come what may, they come to us to stay,
Today, and always, both for me and you.

The jaws that Gnathus made will never fade
From vertebrate design, through all the days,
And as a fine protection they will aid
Our living, in the world and its hard ways,

When we must fight for what we have to eat,
And hunt, and catch, and crush, and chew, and live,
And make, through it, our lives whole and complete,
With all the strength that strong jaws come to give.

From Vater's family tree, to jaws that free
Us from the limitations, old and known
In stories that are yet untold, that we
Had known, the vertebrates have come and shown

How far we've grown from simple, humble start
To mastery, and how the skill we see
Lets us rule sea and land with all its art,
The masters of our fate; and it is we

Who, through our innovations great, won't cease
To grow in what can be achieved, believed,

In all we know, and always to increase,
When dreams, made real, are born, and are conceived

Through wise ability, with open eyes
To see what others miss, and so transcend
All limits; it is so that we can rise,
And find the power to widen, extend

The boundaries of life, and, without strife,
And all together, all of us, and all,
In harmony, to grow a fuller life,
And answer, all of us, to life's great call.

The world that Gnathus bit, with jaws of grit
And steel, lives on in every tooth, and may
Tell truly, in its way, as it is writ,
How innovation changes night and day

For me and you, who dare to break the mold,
And on the page of evolution write,
Stage after stage, the stories yet untold,
New chapters yet unread, to come to light,

Where we are led by wisdom's guide, to see
The future that's before us, and make bright
With possibilities, the yet-to-be,
That none but those who dream can bring to light,

Who dream of more than what they seem, and strive
To turn their dreams to life, through joy and strife,
And so, through all of it, they come to thrive,
The marks of growing souls throughout their life,

That play, in evolution's plan, the role
So vital, since the time when life began,
For every living thing, and every soul,
For every woman, and for every man.

From Vater's great design to Gnathus' fine
And mighty jaw, the story is to see,
And clear for all of us, and line by line:
It's Innovation that will set us free.

Chapter 53: The Great Sorceress

Capricorn 25, day 53 of the Gaian year

Reinvigorated, Plantus' sons knew,
Their hope imbued with power from the one
(A blur of ancient dreams renewed, come true),
Great Sorceress, whose fate, when all was done,

Would change the whole world, so that it would be,
And change it all, and make the world anew,
As Polycomb desired that it be,
And as she willed, and made her vision true.

Eleven generations long, the song
Her lineage had sung was of a climb,
An alternating one, which went along,
Ascending, through all evolution's time,

To Polysporos' height. She was not free,
But bound, a prisoner within the womb,
Bound by her mother's word, by her decree,
With sisters, brothers, as within a tomb,

Where all would answer duty's call, but yearned,
Instead, to live like mothers, all their days,
Not dead to independence, as they learned,
A Journey through the world in freedom's ways,

Where freedom's flag, unfurled, could be their guide
To fate beyond the small estate they'd known,
The narrow bounds of childhood, and outside
Where duty's sounding, calling to its own,

Who long to be much more than they can see,
And more than all the things that they have known,
And more than what their childhood let them be,
And grow into a life that is their own.

Clytemnestra's fate, Agamemnon's line,
Had made the ruler's Daughter live her life
In form so fair, so noble, so divine,
But forced through reproductive toil and strife,

Only to bear her children, when her heart
Was ridden with a longing for far more
Than all who came before; but from the start
She was a sporophyte, while those who bore

The gametophyte's power held the might
To rule the whole wide world, and as they willed,
Throughout each passing hour, they held the right
To rule it as they would, and rule, and build.

Polycomb read, each day, the books that stand
In her own mother's rows, and asked them why
Fate's heavy hand, as she would understand,
Had given her, beneath the starry sky,

So meager an Existence, as it were,
So close confined to bearing, nothing more,
And not in eagerness, but wonder, her
Mind not set free to search and to explore

What she was living for. Polycomb read
The tales of mothers, and of all of those
Throughout the vales of time, each saga's thread,
Who were rebelling, and who would oppose

Their narrow fate, to be in ways as great,
To be much more than what they had been told,
As no one day had power to create,
And break the chains that held them in their hold.

She read of Mardoll's scroll, and of the role
Of mighty Shiva; and she saw that yet
The order of the world, and of the whole,
Was not eternal, nor a border set.

It was not fixed in stone for those who'd grown
Beyond what they'd been taught, and what would be,
In stories new and old that they'd been shown,
Forever, in eternity's decree.

She found a scroll, "PRC2," and more
Intrigue then filled her to the very bone
Than ever she had known in all her lore;
For there it was, the thing she'd never known:

The Polycomb Repressive Complex, where
Its Scripture, so aggressive, was the chain
That bound her, and that held her bound right there,
That held her in its grip, and in her pain.

She saw the words that kept her might, and cried
For freedom she had never known, so dear;

The scripture of Repression, which denied
Her freedom, brought to her a sense of fear,

But also brought her hope, and helped her see
How she could learn to cope, and how to break
The chains that bound her, and so to be free,
And how, at last, her freedom she could take.

Polycomb burned the scriptures, and she learned
That PRC2′s power, and its sway,
Would rule her not one hour more; she turned
And took her mother's Lands without delay,

And all the others' Cities for her own,
Past what they had decreed she could succeed
In being, for beyond their bounds she'd grown,
Becoming more than them; and she was freed

As freedom's light was coming. So she broke
The wall of those who lived before her time,
The wall that bounded, one and all, the folk,
In slavery, its grim and bitter rhyme.

She grew her spores with might, and also grew
Calyptra bright, and stoma, as her peers,
Her sisters, had, the ones she always knew
Resisted change; and rhizoids, through the tears

Of joy, she built as well, to break the spell
And bonds of old tradition, and the chain
Of old tradition, under which they'd dwell,
And break them, and set free those who'd remain.

And so, through rhizoids strong, the Water flowed,
And rising upward, entered in her form,
Along, out of the earth, its first abode,
Through every calm and every raging storm.

And through her stoma, bright, Water would fly,
And rise into the air, and leave the ground,
Up to the heavens, under starry sky,
And float, and go to every place around.

And this was how her life Transcended all
The strife of what she'd been before, to bring
(And opened wide the door, beyond recall)
The possibility of everything

To all mankind, and every living thing,
To all who long, and all who long to be,
That answers when it hears the freedom ring,
To all who live, and all who would be free.

She prayed to Tryptophanes, unto the Lord
Of life's refrains, of the bright sun, whose light
Fills all the world; and to that Lord, adored,
She prayed that she might grow to every height

Beyond what mortal sight had seen before,
And higher than the highest that had grown,
From mountain peak down to the farthest shore,
To heights that no one living yet had known.

And so the great Lord Tryptophanes would bless
Her with refrains of Auxin, and she grew,
And with it she would come so to progress
Toward the light so bright, the light so true.

Struck by the sun, Auxin's power would wane
Each hour, and in the light would fade and go;
But in the shade it always grew again,
In numbers proven, true, and it would grow.

And so her stems would ever reach and turn
Toward the light, and, guided all by love,
Throughout their lives, they would forever yearn
For love of Him who shone on them above.

Polycomb bore a daughter, who would teach
What she was taught, and Knoxy was her name,
So all would learn, and so the lesson reach,
And round her name has gathered lasting fame.

Knoxy would marry Xylon; and they two
Would follow, in their might, the sight and way,
Together, strong on their foundation, true,
Of Polycomb, so great, which lit each day

With possibility that would endure,
And grow, and live, and flourish, and be free,
For all eternity, so bright and sure,
Through all of time, and all that is to be.

Knoxy searched books in all the ancient nooks,
That bore the name she had been searching for,

And found a scroll there, hidden in the books:
“KNOX2” was what that scroll was called. What’s more,

Enthralled by it, she learned what secret might
Had held her down, and held her, and had bound,
Had ruled her life in every day and night,
And kept her held in place, and on the ground.

The KNOTTED-like TALE gene had always been
The force that kept her, which she now could see,
Away from freedom, bound, unseen, within;
Her mother had achieved it; it was she

Who had believed that change could come about
For all who would, and all who’d come to try,
For all the capable who’d seek it out,
And reach for it, and reach for it up high.

And so Knoxy and Xylon built on high,
As Polycomb had done, and done before,
A kingdom strong, beneath the starry sky,
When she believed, and opened freedom’s door.

But in their kingdom, heavy, clogging loads
Had choked the way; the Water, as it went,
Had struggled through the passage of the roads,
To reach the heights to which their hearts were bent,

For which they longed, and for which they would yearn
For treasured growth, past measure, and would aim
As high as any blaze, and they would burn
For growth, and for its glory, like a flame.

And Xylon gave one clan the means to save
The kingdom from its plight; and, for their sight,
He named them “Xylem”; and the job he gave
Was this: to help the city’s subjects right,

The mob, so they no more would feel the low,
The water’s pity, but up to the sky
Would let it flow, from roots that lay below
To leaves that reached up to the heavens high.

They were Tracheids, famous, and they bore
The water pure, and to the heights they brought
It, safe, from their foundation and its core,
To heights beyond what wisdom ever thought

Was possible, to those who dared to dream,
And held the dream of more, and dared to climb
To more than all the things that only seem,
And reach the heights beyond their place and time.

Xylon and Knoxy bore a son, and he
Would go explore the world, and he would view
What could fulfill the law of justice, see
What's due to all who served, and served, but who

Had never got their share of what had grown,
Who served without repose, by night and day,
Out there, though all the toil had been their own,
And never got their share, nor got their pay.

His name was Pholon; he would win the fame,
And he would solve it, and would set it right,
Of solving what would hobble them, and lame,
And bring their labor's justice into light.

Pholon could see the starving of his roots,
And saw that they had never been repaid,
Their laborious ways, and all their fruits,
With nourishment for all the work they made,

For all that they had learned of their small role,
Of how to serve, and how to serve it well,
And by that service, how to serve the whole,
The whole of which they were, wherein they dwell.

His Mycorrhizae, one day, Unionized,
And for the faithful labor which they bore
They sought and they demanded, organized,
Ten times the Sucrose they had had before,

Which helped him and his neighbor to survive,
For they were those who helped them live and grow,
To grow, and through their days alive to thrive,
And so they asked their due, and let him know.

So Pholon built new ways like Xylem; praise
For those he truly served he earned, and fed
Them well; but these, instead, through all their days
Would carry food, not water, as he said,

Who'd married their own labor to his cause;
For they had need of nourishment, their part

Was done, and it should fairly go, because
They'd done it with a faithful, loyal heart.

"Phloem," he called these channels, shining bright,
That carried food to all, and fed them all,
Through all eternity, a lovely sight,
For all who served, and answered to the call.

Within the leaves, the sugar, as it flowed,
With pressure and with might, by day and night,
Would go into the phloem's own abode;
The concentration's pull Sucked water, bright

And beautiful, from xylem, there to meet,
Within the phloem, where the sugar lay,
The sugar, there, in its own sweet retreat,
And joined with it, and took it on its way.

And pressure pumped it, all the day, from source,
To where it needed, as it ought, to be,
And sent it on its way, its proper course,
And where it went, laid out for all to see.

In roots the sugar, as was justly owed,
Flowed out again, and water went back too
To xylem, from the phloem's own abode,
So that the cycle could begin anew,

Which served the whole way through, both high and low,
And served the kingdom, and its every part,
The kingdom, which it helped to thrive and grow,
From roots up to the leaves, from root to heart.

And by this system, which was just and right,
The roots received at last their rightful share,
And faithful sons of Glomeros, so bright,
Received what they were owed, and it was fair,

For traveling the road that served the whole,
And for the work that they had done so well,
By playing, each of them, their own small role,
And serving all the kingdom where they dwell.

And so, of Pholon's love, the wood wide web
Would flow throughout the land, as he had planned,
The land that he had built, and flow and ebb
Through all his work, and built with his own hand.

Through faithful Mycorrhizae he'd provide,
So that his sons were fed with living bread,
So that his eye could see, on every side,
His sons supplied with food, and all well-fed.

Pholon became Cookson, known far and wide,
Who brought prosperity to all who'd dwell,
Grown to provider and a faithful guide,
Within his kingdom's bounds, where, like a bell,

The sound of justice guided them with care,
Along their living way, from day to day;
All of them got, from what was growing there,
Their own, and each received his share, his pay.

His sons lived underground, and they had found
The wood-wide web could feed them, and could meet
Their every need, and keep them safe and sound,
Without the work of making bread to eat

Through photosynthesis, which they would shirk;
Their bliss, they found, was lazy wealth instead,
A spree of plenty, free of toil and work,
Which came to them from soil, where they were fed.

In life's transmissions, Swapped were all the roles;
Sporophyte and gametophyte, in sight,
In the positions of the ancient souls,
Of those who understand, were Switched outright,

Since life's command can change, when times require,
To heights beyond the old, and still untold,
New forms that will aspire, and that inspire,
In stories that will one day all unfold.

Cookson would have a grandson, and the one
Was he, Tracheus, and his desire
Would show itself, when all his work was done:
To change it all, and the world entire.

And by Tracheus' mighty hand came birth,
And by his mighty work, as he had planned,
To tracheophytes' band, to rule the earth,
And rule it, all of it, both sea and land.

Tracheus built leaves, Microphylls, in sight,
And bright, with veins in which there flowed their life,

They were his solar panels, catching light,
Through harmony, and not through any strife.

His game of energy, green, from the sun,
That caught the light, as only green leaves could,
Whose power could not ever be outdone,
And fed him well, and fed him all things good.

He built his city, greater than the fate
Of anything that had been seen before
From mountain peak to shore; and it was great
Past Pholon's mighty plan, and even more.

His city, rising, mounted up on high,
And grew, and grew, and higher still it grew,
Beneath the starry vault, the open sky,
And reached toward the light, so bright and true.

He designated clans, by plans he'd made,
For those who'd serve the city and its whole,
Each one with work to do, and each obeyed,
And each of them would play its proper role.

Collenchyma he named one clan; and they
Were famed for flexible support, to keep,
Of every kind and sort, in every way,
His city strong, its whole life long and deep,

Along its Journey through the passing days,
Through all of evolution's every turn,
Through evolution, and its many ways,
And all the lessons it would come to learn.

Sclerenchyma's clan, by a different plan,
He built, hard, full of lignin, built to last,
And so it was the age of wood began,
So strong, and built to last, as ages passed;

The world would have its trees, and all of these
Would grow, and stand, and live their whole life long,
And dance upon the passing of the breeze,
So tall, and so enduring, and so strong.

And soon the sons of Tracheus would be
Victorious, and they would rule the land,
And rule it all, from sea to shining sea,
Through all of time, as he had always planned.

The Devonian was Beginning now,
Because of all these pioneers, and they
Had built through joy and tears, and showed us how
The world would change forever from that day,

For you and me, who walk upon the land
That, as was planned, was built by them, and made,
The work of their own toil and their own hand,
Which, through the ages, never comes to fade.

From Polycomb's rebellion, which would fight
Against her chains, to the bright city, made
By Tracheus, which rose toward the light,
The plants have shown the way from night and shade

Into the day of freedom and of growth,
Into the brighter day, the newer day,
Which is supported, too, by their own oath
To serve the greater good, as well they may,

And take, the while, as much as each one could,
To feed, with it, their own and deepest need
For growth, as each of them both must and should,
The growth of any living, planted seed.

From burning scriptures old, which held them tight
Within the hold of others' narrow dreams,
To building, out of water, food, and light,
Their many flowing and abundant streams

That make the future bright, with what could be
Through all eternity, the plants remind
Us, with their gentle call, both you and me,
That growth requires a will, and of the kind

That climbs each higher hill of what we'd come
To be, if we would only, wholly, be
Awake, and cease to be so dull and numb,
Released from all old limitations, free

In stories never told, of what we'd do,
And what we're meant to be, and what to dare,
Today, and what we're meant for, me and you,
And all who live, and grow, and everywhere.

Without a guilt, they built the wood wide web,
Which shows how, working all as one, we grow

Across life's nations, with its flow and ebb,
Beyond what we, alone, could ever know;

But when we share our burdens and our care,
The whole becomes much more than we had known
Before, much more than what was ever there,
When each one tried to build it on their own.

From Polycomb, who first of all had read
The scriptures by which, into all their chains,
Her people, bound, so long ago were led,
To Tracheus and to his great domains,

Which reach toward the sun with work that strains
And never ends, toward the light, with might,
The plants show us the way, through all life's pains,
To live in harmony, each day and night,

With all who will obey life's call, and so
To heed the greater, higher call beyond
The small, of what we can achieve, and grow,
If we believe, and in our hearts respond

To possibility, through every day
Of all eternity, where dreams come true,
Where, come what may, they come to us and stay,
Today, and always, both for me and you.

The Devonian dawn, when old ways fled
And new forms took their place, was built, and bold,
By those who dared, and raced, and went ahead,
Who dared to break the truth the others hold

As truth that could not bend, but found its end
In those with clearer sight, who had believed,
Who'd walk toward the light, and onward wend
Toward the things that could still be achieved.

From Polycomb to Tracheus, the plants,
Victorious, show how rebellion lifts,
And show how rebellion, with its fire, grants
Us heights undreamed, and how it brings its gifts

To us, when we were what, it seemed, would be
Too small to make a change, or rearrange,
To us and others; but, as we can see,
A thing beyond the old familiar range.

But when we dare to read the scriptures' scroll,
Which feeds our minds with truth that is our own,
And when we dare to burn what binds the soul
In chains that we have finally outgrown,

Then we can build anew the fair and true,
And reach toward the sun, and make it bright,
This world, until our work at last is through,
With love's eternal light: and that same light

Shines out for all of us, for all to see,
For every living thing, both great and small,
Through all of time, and all that is to be,
And shines on each of us, and shines on all.

The plants Tracheus made will never fade
From this world's living face, the teachers of
The way, who in their rightful place have stayed,
To live and grow toward the light above,

That makes the future bright, from day to day,
With hope for all who dare to breathe the air
Of freedom, and to grow along the way
Beyond the known, and grow beyond it there.

The Devonian age began with more
To free the world, and free it from its chains,
Than any mortal plan had held before,
And heal the world of all its ancient pains,

Through growth and light and love, blessed from above,
With power to transcend, and to extend
Beyond all limits of the world, and of
All things, and to go on without an end.

From burning scriptures old to tales untold
Of what we can become, the plants display,
With courage in our hearts, so strong and bold,
The way to freedom's bright and new-born day.

Chapter 54: The Devonian Era

Capricorn 26, day 54 of the Gaian year

Devon's great city was the finest sight,
And in that era, it was known by name;
Of all the cities burning in their light,
Its name would stand for it, and for its fame:

The era that was new by then was called
By Devon's name, and ruled by Devon's rule,
Devonian, and all of it enthralled,
As if it learned within some holy school.

When Devon sat himself upon the ground,
He sucked in water, and he held it, pure,
As day began and light came all around,
Into his gill, where it would lie secure

Between his jaws and skull it lay, and there,
In its design, so delicate and fine,
The gill was Notched and beautiful and fair,
Like works of architecture held divine.

Through his bright spiracle his mouth would fill
With water, and it carried, as of old,
The oxygen, and carried it until
It was as precious as the finest gold.

Yet it was rich past all that we can weigh,
And long in making, through the ages long,
A sacred treasure built up day by day:
It was the work of Saya's daughters' song.

And through his gills there ran the steady flow
Of the hematic maidens, and they bore
The oxygen, the gift, as they would go
To make his life complete for evermore.

To all his subjects these would make their way,
The very breath of life, so clean and clear,
And carry it, by night and every day,
That would endure forever, year on year.

And to his brain the maidens also went
Up through the spiracle, and to his eyes,
To bring still more of it, and they were sent
To eyes that looked beneath the open skies,

And to the brain that ruled his body's form
With wisdom and with an unbending might,
Through days of calm and through the raging storm,
Through all the day and all the dark of night.

Opposed, his blood ran on the other way;
The blood took oxygen, as wise men do,
In countercurrent's balanced, steady play,
Like faithful men whose hearts are good and true,

Who know the secret and the subtle art,
In life's eternal and unending dance,
Of finding and of playing their true part,
Through every turn of every circumstance.

When Devon moved his long and heavy frame
Through waters, he would hold his mouth out wide,
And moved it without shame, and as he came
He let the water come to him and glide

And freely over them and freely through,
Borne on the current's soft and gentle flow,
His gills, which served him well and served him true,
That helped his body as it came to grow.

And when he found the food he had to eat,
He cut it with the power of his jaw,
To keep his body strong from head to feet,
According to the old, unbending law

Of predatory power and of might,
Which filled the world, and showed what strong ones do,
And filled the whole wide world up with the sight,
When they are tested and are found as true.

And there behind his teeth, that shone so bright,
His jaws would come behind and follow through,
Which gleamed the way that morning gleams with light,
And chew on all that he had strength to chew.

And down within his stomach, dark and deep,
The food was purified, and there made right,
Where acids would forever watch and keep
Their vigil through the long hours of the night.

Pancreas and gallbladder joined as one,
Each master in its own and proper art,

Like faithful Partners when the work's begun,
And each one glad to play its given part.

And his intestine, spiraling around
In turns and numbers that would have no end,
Beyond all parallel that could be found,
Would help his form to rise and to transcend

Its limits, and nutrition entered in,
Transmitted to his veins, which, night and day,
So bright and so unceasing, there within,
Would carry it, and never turn away.

His portal vein would carry in and bring
The Fats, the sugars that are rich and sweet,
Life's most essential and its central thing,
And Proteins that were whole and were complete,

Phosphorus and metals came to settle,
Like blossoms of the life within his form,
As softly as a rose drops its petal,
Through quiet waters and through every storm,

And vitamins, so pure they would remain
In him through all his many living days,
And last in him, and always would sustain
His body in their many giving ways.

And then his liver came to cleanse and clean
His blood, to purify, and heal, and bless,
And it was ever sharp and ever keen
Against what other things came to caress

With poison, or with something that would harm
His spirit, and his liver, every day,
Would save him from all sorrow and alarm,
And keep the touch of death far, far away.

The kidneys took the waste and drew it in,
And filtered out whatever thing was pure,
And worked without a fault, without a sin,
From everything that could not long endure.

And out through the cloaca went the waste,
And none could mock the plan, or its design,
The wisdom that was in it, and was placed,
A work so wise, and every part in line.

When Devon wed, he took a wife so fair
That none could be compared to her in sight;
And he released his sperm, so pale, out there,
Where it lay out before her, pure and bright.

Out the cloaca's door it went its way
To reach her eggs, and of the children there,
The million, as in waiting there they lay,
Were two who would be risen from the pair:

Llŷr and Stennisio, mighty in fame,
Each walked the path appointed to his kind,
Each kept the path appointed to his name,
Throughout his living days, with steady mind.

The sons of Stennisio lived, and they
Spread out across the floor, and to and fro,
Across the ocean's bed, and on their way,
Wherever, as the ocean led, they'd go.

They ate the clams they found from day to day;
They lived the lives of creatures of the deep,
After their own and their most ancient way,
Where all the ocean's secrets lie asleep.

Llŷr begat Bran, a son both great and strong,
And lived in might through all the light of day,
Who lived in wisdom all his whole life long,
And through the night, until it passed away.

Bran begat Caradoc, firm as a stone,
As solid as a rock, and he would show
His noble ways, and all of them his own,
Through all the living days he came to know.

And Caradoc begat three children: these,
Cynan, the first; Acantho, firm and true,
Who dwelt among the waters of the seas;
And Sudopedal, who was third, came too.

The daughters of Acantho came to be
So beautiful that they would fill with grace
The world with beauty, and they filled the sea,
And every watery and distant place.

Cynan begat Cadwr, who would not be
The withdrawer of anyone, but force

Of gentleness was his, and so would he
Guide them along their own and truest course.

Cadwr begat Eudaf, who would never
Laugh at the ones who tried and did their best,
Who did all they could, in their endeavor,
To pass through every hard and mortal test.

Eudaf begat Morfawr, a son whose name
Means “great war,” but he was a man of peace,
And all his life, though war was in his name,
Wherever he would dwell, all strife would cease.

Morfawr begat two sons, and these were they:
Tudwal, born first; the second, who was strong,
Was Rhineheart, born at breaking of the day,
And lived through all his days, and lived them long.

Rhineheart lived on the Rhine from break of day,
And there he flattened out his form to dwell
So hidden, and so well, and there he lay
Beneath the cover of some secret spell.

And so invisible to them was he,
To those who lacked the eyes, through every day,
With which to see the wisdom, and to see
The wisdom of his hidden, quiet way.

He was a ray before the rays first came
To win their fame; he lived his quiet life,
All undiscovered, and without much fame,
And knew but little either joy or strife.

Tudwal begat two more: one would explore,
And then Antiarchon, who was so wild;
Cynfawr, the first, who sought out every shore;
The other was rebellion’s reckless child.

Antiarchon rose up and he rebelled
Against all that his ancestors before,
His predecessors, all of them, had held
As truth, and all the truths that they then bore.

He stood against the Archons, set apart,
An Anarchist, and he would choose to play,
With Revolution spawned within his heart,
Rebellion’s part in each and every way.

He made his dwelling down beneath the soil,
And waited there in hiding, and above
Were those whose plans he waited there to spoil,
Who never knew or learned the way to love.

And for his prey he always lay in wait,
With ambush coming upward from below,
To seal at last their final, mortal fate,
From places where no one would ever go

To look for him, or ever come to find,
Which plotted daily, and found every way,
His revolutionary, plotting mind,
To make his enemies, in the end, pay.

Antiarchon's sons would gather, and stand,
Guerrillas, and they answered freedom's call,
In great bands on the face of all the land,
And they would answer it, both great and small.

They'd haunt the sons of Animus, the bright,
And harry them, until they could disown,
The world, by day and all throughout the night,
Their whole authority, and be its own.

But Cynfawr chose another path instead,
By dreams of finding somewhere to call home,
And it was one by which he would be led
In any land through which he came to roam.

His son was Custennin, and when the quest
Began, he traveled far, and as he went,
And wide, he traveled on without a rest,
To every place his searching steps were bent.

He searched through every country and each land,
To find the place where he would long remain,
Until at last he came to understand
Where, for eternity, was his domain.

And in the end, at last, he came and found,
Of distant China, lying far away,
Upon the rich and fertile, open ground,
His home, the place where he could live and stay.

Custennin bore two: Uther, tried and true,
Who held his course, and Petallon, the bright;

And Uther saw each single labor through;
And Petallon would fill the world with sight.

And Uther then begat two children, men,
Arthur, and Maxil, who was also strong,
Whose greatness went beyond all mortal ken,
And both of them lived on through ages long.

And Arthur, when his time had come, bore two,
A son and daughter, fine and fair, and good:
Arthur the Younger, son, who'd come to do
Much more than ever any other could,

And Ptycho was the daughter, maiden fair,
In beauty and in grace, whose name was known,
More lovely than all others anywhere,
Through all the dwelling place she called her own.

The daughters of fair Ptycho came to grow
So numerous, and one of them was great,
Among them all, and they increased, and so
Mary was she, and this would be her fate:

To bear a son when all her work was done,
And this was something new, unknown before,
That no one else had ever done, not one,
From every mountain peak to every shore.

Mary, the Mother of Icthys, was blessed,
And she bore the placenta's forward shove,
With love from heaven, high above the rest,
As token and a gift of heaven's love

Millions of years before the rest would wear
This gift of nurturing, or come to bring
The bond that motherhood would come to share
To every child and every living thing.

Now the sons of Arthur (The Younger), men,
Became renowned and known both far and wide,
Of greatness past all knowing and all ken,
As those who would be leaders and the guide

Of the Arthrodires' far-spreading line
Throughout the world, which was so wide and vast,
With characteristics, all of them fine,
From the first one of them unto the last.

Arthur the Younger bore three sons, and these,
Each one of them with his own seeing eyes,
Went to explore the lands and all the seas:
Mordred, the first, a son who would comprise

Rebellion in himself and in his heart;
The second, Wuttago; the third, so bright,
And then came Actino, to play his part,
Who filled up all the world around with sight.

Mordred rose up and turned himself against
His father, and he walked dishonor's road,
And there in combat with his father fenced
Against the sacred code that honor showed.

He bore two sons in time: one, Philip, who
Was prime in evil, through his many ways;
And one was Melehan, who walked it through,
In darkness and in shame, through all his days.

And so his darkness and his shame became,
Through the world, its length and breadth entire,
The stain that came to blacken all his name,
And scorched it with corruption's burning fire.

Melehan begat two sons: Brachy, who
Was tried in evil's darkest art, whose heart
Was in it all he did, and he was true,
And after him there followed Phlyctae's part.

The sons of Brachy rose up, and they ruled
By the great force of all their strength and might
The world, and all the others there they schooled,
Overthrowing the power and the sight

Of Silur's ancient, long-established line,
But now that line would be compelled to yield,
Which once had been so holy and divine,
To Brachy's army and his battlefield.

And Brachy then begat three sons, the one,
Eubar, the sea's own son; then, strong and wild,
Buchan; and, when the third one had begun,
There came, as third, then, Homosteus' child.

And Eubar begat two sons: Pachos, who
Was steadfast, faithful; Coccos came to be,

Who was the second, firm as well, and true,
A creature living close beside the sea.

Pachos begat two children then, a pair;
Dunkella, who in time would come to grow,
Beyond what any knowing could declare,
Greater than any that we've come to know

Had ever grown in all the time before
From highest mountain; and the son, so bright,
Was Aspino, from mountain down to shore,
Who filled up all the world with his own sight.

Dunkella grew until she came to be,
Among all of the Metazo, and so,
The greatest any eye had come to see:
She stood six meters high, her size to show,

Her power and her greatness and her might.
Three Jaekelopterii long was she,
And gleaming bright; and though, in length and height,
Not long as Cameroceras could be,

She had a thousand times the men he bore
To battle, and she ruled with iron hand,
All numbered in the ancient rhymes of war,
Throughout the whole extent of all the land.

The sons and daughters, every one and all,
Of Pachos heard the summons, and they grew,
And answered greatness, and its summons' call,
Until they were both strong and mighty too.

They ruled the world, the whole world entire,
When power was the one and only law,
Within that age, which was an age of fire,
That everyone throughout the whole world saw.

But Maxil, who was Arthur's brother, bore
Qilinyu, and that would be the child's name,
A child unlike all others gone before,
The one who would win an eternal fame.

Qilinyu begat a son, and his name,
From head and all the way down to his feet,
Was Entelognathus, and he became
The one whose jaw was finished and complete.

Entelognathus bore a son, and he
Was Janusicthus, with a newer art,
Who set out to explore the world and see,
Which set him and his line of kin apart.

And Janusicthus brought, as none had thought
To do before, his teeth up to his jaw,
And from the gills he brought them up, and wrought
According to a new and different law.

And so his jaw would crush and grind things down
With teeth, and teeth indeed, that shone so bright,
Not bone, but teeth of great and wide renown,
That gleamed as morning gleams at its first light.

He brought his skull inside his head, a place
Within the hollow of a bony shell,
Where nerves would bide, and dwell within that space,
And always they would serve his body well.

Sensing the world on every side around
His form, he knew the things the others felt,
And knew it all, and knew it without sound,
When any danger near about them dwelt.

And he became the father, first of all,
Of those who'd be at once a fish and beast,
Who would aspire, and who would heed the call,
From greatest of them all down to the least.

From Devon's city, that was once so great,
To fish, and more than fish, the tale and lore,
And on to Janusicthus' later fate,
The tale that has been told from shore to shore,

Shows how the art that innovation brings,
In making life go forward and evolve,
Can play the vital part in living things,
And every problem life may meet, to solve

That stands upon the path of progress, day
By day, from simple things to the complex,
As it goes forward, ever, on its way,
In the eternal plan of life's own specs.

From gill to lung, and on from lung to jaw,
Each change that life would come in time to make,

Each step of them obeying newer law,
Was carried out for its survival's sake.

But this tale also shows us how there's some,
Through violence and through their hungry greed,
Who will choose for themselves what they'll become,
The kind that plants destruction's bitter seed,

While there are others who will choose the way
Of peace, and choose to build up something new,
And walk in it, and walk it day by day,
Something that's beautiful, and good, and true.

From Antiarchon's rising and revolt,
Back in that distant age and ancient hour,
Against the striking of the lightning bolt
Of tyranny, of rule, and of power,

To Mary's gift of love, so blessed from high
Above, which nurtured all the life within
Her womb, and came to her down from the sky,
And kept it whole, and kept it free from sin,

The lineages show to us just how,
What kind of world it is that we will leave,
We have to make our choice, both here and now,
For all our children's sake, who will receive.

The Devonian age, that long-gone age,
The story of a choice between the two,
Wrote down its tale upon history's page,
Two different voices, which it set in view:

One voice of those who'd build, and give, and live;
One of the kind who'd never yield, inclined
To grant to others nothing, nor to give,
But only take, and leave the rest behind.

From Devon, and his peaceful, gentle ways
Through all his years, to Brachy's heavy rule,
His iron rule, that, all throughout his days,
Would take the world, and make of it his tool,

The lesson's clear, and plain for us to see:
It is that we choose what we come to learn,
And what it is our children come to be,
As the great pages of time's volume turn.

The fish that Janusicthus came and made
From all the waters of this world so bright
Will never in the ages come to fade,
But they will swim on all throughout the night

And through the day, with teeth and with a jaw,
But also serving what is right and good,
That follow in the ways of nature's law,
The way that all creation ever should.

From Devon's spiracle until the great
Dunkella's miracle, so vast and strong
In power and in weight, the story's fate
Of vertebrates is written, plain and long:

It shows how life will always find its way,
And, through eternity, will still extend,
Out from the night and into light of day,
The possibility that has no end.

The Devonian and its early dawn,
And newer forms came forward, took their place,
The time when older forms were all withdrawn,
And ran ahead in evolution's race,

Was built by those who dreamed, and those who dared,
For what they could, by giving, still confer,
And for much more than what they were had cared,
And what the world might gain from what they were,

Upon the world and everything around,
And living there, each one, through each new day,
In places where they might be sought and found,
According to their own and chosen way.

From Devon's city, shining and so bright,
The age shows us the things that come to grow,
To fish with tooth and with the gift of sight,
When we will let our courage freely flow

Through every choice that we will come to make,
Who will inherit everything we build,
For our dear children, and for their own sake,
And in the fields our working hands have filled,

With love, or else with hatred or with fear,
Of our brief time upon this living earth,

Throughout the course of every passing year,
Where we will show the measure of our worth

By what it is that we will choose to do,
And for each creature and each living thing,
For me and for each other, and for you,
That answers to the sound of life's own ring.

The Devonian age at first began
To make the world more radiant and bright
With something greater than a mortal plan,
With the eternal shining of love's light

That shines in every one and every heart
In life's eternal and unending song,
That plays the loving and the gentle part,
Which makes the weak among us become strong.

From Devon and his peaceful, quiet reign
To Brachy, who left on the world's bright face
His war-torn and his dark and bloody stain,
The lesson that it teaches, and the grace

Of choice, are plain and clear for all to see:
We are whatever we may choose to give,
And what we choose to leave, and choose to be,
To all of those who hope, and all who live

In possibility that will not cease,
Where love will always come and find a way
Through all eternity, and will increase,
To light up every dark and darkening day

With hope that never fades and never dies,
Where all the dreams we have can come to bloom
Beneath the canopy of starry skies,
If we will let them flow and give them room,

From hearts that dare to love, and dare to care
For every life that grows beneath the sun,
For life that flourishes, and everywhere,
Until the end, when all of time is done.

Chapter 55: The Forest Cathedral

Capricorn 27, day 55 of the Gaian year

As Devon's sons grew strong and true in might,
The spineless sons of bright Proteus fair
Prepared themselves to join the ancient fight
For rule beneath the ocean's flowing care.

In Devon's shadow they grew day by day,
Their strength increasing with each passing hour,
Building themselves to drink what victory's way
Would bring them through their still-growing power.

Among great Spiralius' noble line,
Neo rose in tenth generation's race
Of Bactridius, blessed and held divine,
The smartest soul in all his time and place.

Intelligence beyond what others knew
Or ever could pursue through all their days,
And yet what he possessed in genius true,
He lacked in wisdom's ancient, faithful ways.

He spurned his kin and ancestors so wise,
Refused to learn from those who came before
Who faced the storms beneath the starry skies
And learned through pain what peace was truly for.

And so he and his seed were cursed to bear
The weight of always starting from the start,
Reinventing what their sires used to share
As wisdom's gift to guide the faithful heart.

Neo bore two sons of great birth and might:
Great Ammon when the dawn began its day,
And Coleos the strong, whose fiery sight
Would guide him through his long and wondrous way.

Both sons would reinvent what fathers knew,
The wheel of wisdom that had come before,
Ignoring lessons that were tried and true
From those who'd walked this path from shore to shore.

Coleos wrapped his shell with mantle's care,
And through his innovation wrought with art
His shell's protection grew beyond compare
From mountain peak to shore, each single part.

His armor was complete from head to tail,
A fortress that would never know defeat,
Protection that would never, ever fail
To keep him safe from foe he chanced to meet.

Great Ammon grew a shell of coiled design,
Compact and true to his heart's desire,
Wherever destiny would draw the line
He'd dwell with freedom bright as sacred fire.

He swam through waters blue where others fished,
But made his home wherever he would roam,
Free as the wind that danced as he had wished
Throughout the vast and boundless ocean's dome.

Among the sons of bright Ectus' great might,
Malacus bore three sons of noble fame:
Caridus of the sea so fair and bright,
And Phyllos strong who'd honor his great name,

And Hoplos, through and through a warrior true
Whose heart was set upon the fighting way,
He'd play his part in all they'd ever do
With courage burning bright from night to day.

Caridus bore two sons beyond compare:
Syn Peras and great Yuval, who would heed
The call of destiny with faithful care
To make their line great in their every deed.

Throughout the world so wide from shore to shore
With ocean as their guide through all their days,
They'd build what none had ever built before
And walk in their appointed, faithful ways.

Peras bore children many, strong and true:
Amphipus none could match in all his might,
And brave Isopus too, and others who
Would serve with faithful hearts both day and night.

His wife, fair Possa, carried them with care
And never tarried, feeding them, content,
According to her sacred, mother's prayer
And oath of love that heaven to her sent.

Of motherhood so pure it would endure
Throughout the years to come when wars were done,

Within her pouch they grew both strong and sure,
Fed by her love beneath the blazing sun.

Great Yuval bore two sons of different ways:
Decapus when the dawn began to break,
And Krillon small, who'd spend his faithful days
In answering the ocean's call for sake.

Krillon remained small throughout all his time
And swam beneath the skies of ocean blue
In all his days, and in his gentle rhyme
He kept aquatic ways both tried and true.

But brave Decapus grew both large and strong
And took command by sinking to the floor
Of ocean's deepest realm, where all life long
He'd rule from mountain peak to distant shore.

And so the crustaceans came to be ruled,
As right and proper, joined in unity,
By three great houses, never to be fooled:
The lords of ocean's vast community.

Amphipods from the blessed and divine line
Of great Amphipus, noble, tried, and true,
Isopods came from Isopus' design
Who'd make their father's legacy shine through,

And brave Decapods who then came to fame,
Three great houses, whose eternal glory,
Come down from great Decapus' lasting name,
Would last through all evolution's story.

Decapus bore two sons both tried and true:
Great Pleos, faithful through each passing day,
And great Prawnmegas, whose destiny too
Would seal his line's own fate in every way.

Prawnmegas was the ancestral sire
Of prawns throughout the sea's community,
Their father and protector, strong as fire,
In all the ages of their unity.

A luckless son of Prawnmegas was born,
Begun in sorrow and in bitter shame;
He bears his father's name today, forlorn,
Reminder of his heritage and fame.

Great Pleos bore two sons of noble birth:
Repton, who would explore from sea to sea,
And brave Shrimpon, who'd prove his faithful worth
As father in the ocean, wide and free.

Shrimpon would become the noble sire
Of shrimp who boxed and fought from shore to shore,
Whose greatest joy, their one true desire,
Was guarding what they loved for evermore.

Repton then bore two sons when in their prime:
Thalasson of the mud, and Omar's name
Whose blood would flow through generations' time
In lobster veins and bring eternal fame.

And Omar, great, became the father true
Of those who chose the bold, the lobster's way,
And of the crayfish too, who would pursue
A life lived with great claws by night and day.

Thalasson became the noble sire
Of mud shrimp, who would build what none before
Had made, and, as it was their desire,
Built and not conquered—architects who bore

Great channels carved in stone that they called home,
Cities beneath the sea for all to see
Throughout eternity beneath the foam
Of ocean, vast and boundless, deep and free.

And to this day we honor all their works
As donors of great beauty to the world,
Their cities where no evil ever lurks
In fossilized remains they lie unfurled.

There rests, enthroned, Thallasintep the great
And others who in stone are made to stand,
Sealed there for us to read by loving fate:
Their architecture throughout ocean's land.

Their works survive time's most destructive hand
And speak to us across the ages spent
Of how great builders helped us understand
What beauty is, and what it's always meant.

Meiuron, a noble son in the line
Tenth generation of Thalasson's race,

Rejected what his fathers thought divine
And chose to find a different dwelling place.

He left the depths that lay so far below
To live upon the face of ocean bright,
Where currents and the tides would ever flow
Beneath the dome of day and stars of night.

Meiuron bore two sons of different ways:
Anomuron, begun in quiet peace,
And Saraton, who through his living days
Showed vanity that never seemed to cease.

Saraton was agile, skillful, and fast,
Yet vain and proud, his ego fragile too,
He needed praise from the first day to last
In everything he'd ever try to do.

And so he constantly promoted well
His body as the best above the rest,
His propaganda had a tale to tell
Of how his form surpassed each other test.

But pride and shame had planted their dark seed
Within his heart, and blackened his good name,
For vanity will always intercede
Between the soul and honor's lasting fame.

The sons of brave Anomuron would live
In quiet ways when each new day begun,
They'd dwell in peace with all they had to give
Within their neighborhood beneath the sun.

As squat lobsters they'd make their dwelling place
And tell their stories of the humble way,
Of simple living and amazing grace
Throughout each blessed and ordinary day.

This quiet life would change in future time:
Ten generations on, they came to find,
Beyond their fathers' long and faithful rhyme,
A different and more adventurous mind.

Anomuron's son Paguros was born
Begun with shell both weak and soft and frail
That others mocked from dusk until the morn
And laughed at through each storm and gentle gale.

But in his dying breath before death came,
The Ammonite called Menses, full of grace,
Gave what dispenses shelter from all shame:
His shell to be Paguros' dwelling place.

And so Paguros became the sire
Of hermit crabs who bear with loving care
The shells that others left; their desire:
Honor the dead, not leave their treasure bare.

When death had been so kind to those before
As to release their hold on shells so bright,
The hermit crabs would use them evermore
As homes to keep them safe through day and night.

Alas, the revolt of Proteus came
To feel the bitter sting of failure's dart;
No victory could come to those whose aim
Was to rebel with unrepentant heart.

The Protean rebellion failed to bring
Subjection to great Devon's mighty reign
That had endured through every storm of spring
And lasted life long, through both joy and pain.

Devon's sons held on to righteous power,
They never fell to those who rose in vain
Against their rule through each appointed hour
Well-fenced by truth that broke rebellion's chain.

But lo! a new frontier lay open wide
Where sons of brave Proteus at last could find
What they had never found beneath the tide:
A land to heal their wounded heart and mind.

Beneath the ocean's wave they could not save
Their honor from the shame of their defeat,
But now a new realm called beyond the wave
Where they could make their victory complete.

The frontier of the trees where land could see
New ground for their societies to grow,
Where forest offered them the chance to be
The founders of communities below.

There sons of brave Proteus would find at last
Victorious domains to claim with pride,

And build upon the ruins of the past
With hope and truth as their eternal guide.

From Neo's intelligence, which lacked grace
Of wisdom from the past to guide his way,
To changes that would always show their face
In forms both old and new from day to day,

The lesson clear emerges for us all:
Intelligence alone will never last
Beyond our own brief span, but wisdom's call
To learn from those who've walked this way in past

Will build upon the stone of what they've known
And reach to greater heights with clearer sight,
While those who trust in their own strength alone
Will stumble in the darkness of the night.

From Ammon's coiled shell to the story told
Of brave Paguros and his borrowed home,
The crustaceans show us how hearts grown bold
Can find new ways to live where they may roam.

The three great houses strong—Amphipods true,
Isopods faithful in their chosen place,
And brave Decapods with their royal hue—
Show how diversity brings strength and grace.

From prawns to lobster claws, each found their way
To follow nature's laws from shore to shore,
And mud shrimp cities built to last and stay
Show beauty in the depths for evermore.

The quiet squat lobsters and hermit crabs
Who foster care for shells that others left
Teach us that wisdom gives, and never grabs,
When love protects us from all sense of theft.

The Protean rebellion's bitter end
Opened the sight of forests green and wide,
Where those who fell could rise and make amend
With hope and truth as their eternal guide.

From Neo's accursed pride to wisdom's light
That guides the hermit crab's protective shell,
The story shows us how to choose what's right
And build the future we would love to dwell.

The crustaceans teach us to design
Our lives with patterns beautiful and true,
That run through space and time in rhythm fine
With music of the spheres in all we do.

For those who dare to dream of something more
And turn their dreams to life through love, not strife,
Will find the paths that lead to wisdom's shore
Where all can share in everlasting life.

Chapter 56: The Settler King

Capricorn 28, day 56 of the Gaian year

The Great Division

Arboreus, the son of Tracheus, claimed
His throne among the ancient forest peers,
He looked upon the lands as yet unnamed
And spoke these words, resounding through the years:

"My sons, the world spreads wide before our sight,
With fertile valleys, mountains capped with snow,
Each realm shall serve a different kind of might,
Each path shall let a different glory grow."

To Lycos bold he gave the might of spores,
Released like dust upon the waiting wind,
While Ginkgon claimed the leafy, branching shores
Where megaphylls in sunlight would rescind.

Thus did the settler king divide his realm,
And gave the spore and leaf to each his own,
Between two sons to rule with different helm,
And each would have his kingdom and his throne.

The Spore-Bearer's Domain

Great Lycos spread his spores on wind and sod
Like golden powder dancing on the breeze,
And from those tiny seeds blessed by his God
Arose two sons beneath the ancient trees.

Isolagos the first, who learned to part
His spores 'tween male and female, each their own,
Within his city, built with greatest art,
He raised both sons and daughters fully grown.

Lycopodion, second, claimed his right
To build the first tree ever seen on earth,
A scale tree reaching up toward the light,
Of such immense and awe-inspiring girth.

The club-moss ancestor, his name lives on,
And burns where flame and powder meet as one,
Lycopodium powder, fire's dawn,
The spark that leaps, and flashes like the sun.

The Children of Isolagos

From spore-divided Isolagos came
Two sons whose destinies would disagree:
Bold Quill who sought the underwater fame,
And wise Sellagine, master of the sea.

The young of Sellagine would creep and crawl
Their leaves across the forest floor below,
In drought they died, but when the rains would fall
They lived again with resurrection's glow.

The Quillworts from the noble Quill descend,
Their microphylls reach tall toward the sky,
No stomata their surfaces defend -
Through roots they breathe, their spores where waters lie.

Down underground their stems in darkness grow,
And creep along the bottom of the mere,
While leaves above catch morning's golden glow,
And breathe the water, waiting through the year.

The Megaphyll Master

But Ginkgon chose a different path to tread:
His leaves branched out in patterns two by two,
With Megaphyllic glory crowned his head
As through the forest depths his own line grew.

From him came forth bold Phyllon as his heir,
Who mastered all the arts of leafy might,
And Phyllon's sons would spread out everywhere
To claim their kingdoms in the dawning light.

Two sons had Phyllon in the days of old:
Pteridos the brave, and Gymnos the wise,
Their names in plant lore ever shall be told
As founders of the kingdoms of the skies.

From their great loins would spring the fern and tree,
And all the green that covers hill and plain,
That rule the forest, complex as can be,
In sun and shadow, and in wind and rain.

The Line of Pteridos

Pteridos the fern-father had two sons:
Bold Horsa of the puzzlegrass and spear,
And wise Euspor, from whom the long line runs
Of all the many fronds we still hold dear.

From Horsa came great Equis, he who found
Fair Puzella swimming down in the stream,
Their gametophytes merged without a sound
To birth a dynasty beyond a dream.

But Equis faced a choice both hard and stark:
Keep megaphylls or join with Lycos' way?
He chose the path of simple leaves and dark,
One vein alone would serve him every day.

In silicon he armored all his town,
His stems with ridges, jointed, hard, and lean,
While spores spread far beyond the forest's crown,
On every wind, across the swampy green.

The Seasonal Cycle

Wise Equis learned the rhythm of the year
And built his kingdom on the wheel of time:
In spring when snowmelt made the waters clear
He raised up horsetails in patterns sublime.

No chlorophyll these springtime children bore,
Just spores released in clouds across the land,
While through the earth their nutrients they store
For summer's work by their creator's hand.

When summer came he tore the horsetails down
And built puzzlegrass in their sacred place,
With chlorophyll of green and leafy crown
To gather sunlight's energizing grace.

Thus seasons turned in Equis' grand design,
The year's wheel turning as the ages pass:
In rhythm fine, a year-long, ordered line,
Spring's spores, and then the summer's puzzlegrass.

The Fern Dynasty

From wise Euspor came branches of the tree
The two, Adderos and Fernando, grew,
Each claiming his own realm by fate's decree,
Where different kinds of fronds would spread anew.

Adderos then sired Ophios the strange,
Who built but one great leaf of mighty size,
And Psilos, dwelling in the mountain range,
Who had no need of leaves beneath the skies.

The adder's-tongue from brave Ophios came,
While whisk ferns trace to Psilos, their sire,
Each keeping alive their ancestor's name
Through spore and frond and roots of living fire.

Fernando spread his fronds in patterns wide,
In shade and sun, in forest and in fen,
With Maratton, his son, close at his side,
The father of the fern-lords, there and then.

The Great Swamp Settlement

Maratidus and Leptos were the sons
That Maratton brought forth into the world,
Ten thousand spores the first one always runs
While hundred spores the second's fronds unfurled.

Together they became the fern-lords true,
The ancestors of all the fronds we see,
From forest floor to canopy of blue
Their children spread, a vast and complex sea.

These sons of brave Arboreus, they who made
The swamplands by the Mississippi's shore,
Prepared, unknowing, and the way was laid
For those who'd walk where none had walked before.

For here Osticthus' sons would rise and stand,
When fins would turn to feet upon the shore,
And leave the sea, and claim for us the land,
And walk the swamp his ferns had laid before.

The Settler's Legacy

Thus did Arboreus the settler king
Divide the world 'tween megaphyll and spore,
And from his choice would countless blessings spring
That serve the forest kingdoms evermore.

The club-moss and the fern, the tree so tall,
The puzzlegrass and horsetails of the spring,
From his great line they came to rule them all
And honor their ancestral settler king.

Though seasons pass and eras come and go,
And mighty forests rise and fall to dust,
The legacy of him who chose to sow
His kingdom wide remains a sacred trust.

For in each spore and in each frond unfurled,
In each green leaf that turns to face the sun,
Lives on the dream of his divided world,
The kingdoms that he gave his sons, each one.



Aquarius

The Book of Janus

Aquarius: The Book of Janus

Aquarius is the Water-Bearer, and the water it bears is the sea inside the egg: in the Book of Janus life leaves the water by carrying it along. Janus has two faces, and this is the threshold they look across, the water behind and the land ahead.

Chapter 57: The Vertebrate Houses

Aquarius 1, day 57 of the Gaian year

This book tells of the generations blessed
Of Janus' lines, so glorious and bright,
Of how three houses came to rule and rest
As pillars set in evolution's sight.

Janusicthus begat two sons of fame:
The first, Kondricthus, noble, strong, and true,
And bright Osticthus, bearer of the name
Of those who'd find their home in waters blue.

And as they lived beneath the ocean's foam
Their waters turned to waste, a toxic place,
Suffocating and wild—no place for home
Where any child could grow with gentle grace.

One day they prayed with all their faithful might
To great Elohim's everlasting sight
For some solution to their bitter plight,
An offering to make their future bright.

One hundred trilobites they sacrificed
And gave them to the heaven's shining lights,
Then waited for reply beneath the Christ
Of stars that blessed their prayer throughout the nights.

And great Elohim spoke to faithful men:
"I now shall grant to one of you this day
A gift both strange and true beyond your ken:
The sight to see the stars' eternal ray

Beyond all earthly barriers and walls,
And to the other I will surely give
What never dies when mortal body falls:
A nose to smell the scents by which you'll live—

All chemicals that flow through all you'll know
Of life's experiments in earth and sea
Will be revealed that you might learn and grow
In wisdom's ways, as you were meant to be."

Great Chondricthus declared with royal pride:
“As eldest I shall make the choice today—
The nose I’ll take to be my faithful guide
To rule the boundless sea in every way.

I’ll hunt placoderms with scenting power
And conquer all their will of resistance
Throughout each day and every passing hour
With skill that knows no limits or distance.”

And so the gift was granted then and there
A nose beyond compare in all the world:
A thousand scents could tell his story fair
Of how his hunting banners were unfurled.

But the bright Osticthus received instead
What blessed his lineage through all of time:
A ring of bone around his eyes that led
To vision clear, and sight that was sublime.

The lens that held his sight within its sphere
And cells both new and bright beyond compare:
Cone cells that could detect each color clear
And all the hues that dance upon the air

To make perfect his vision of the world
Where possibilities in beauty dwell
In every shade and hue that light unfurled
With stories that his children yet would tell.

And so the noble sons who came from bright
Osticthus learned to rule by vision clear
While mighty sons born of Kondricthus’ might
Ruled by the scents that drifted far and near.

Great Chondricthus could smell from waters far
Sweet streams that called across the ocean foam
From distant homes, like some celestial star,
To waters that would be his future home.

While bright Osticthus with his gifted eyes
Could see the clean air, bright and crystal free,
Of heaven high above the earth that lies
Beneath the dome of blue, wide as the sea.

He saw Arthropus’ sons, so glorious,
Who had made their blessed home upon the land

That they had built with work victorious
And shaped it with their own creative hand.

Acanthus, son of Chondricthus, the bright,
When all his youthful training days were done
Challenged the glorious realm and its might
Of Placoderms beneath the blazing sun.

He built a skeleton both strong and light
Not made of bone but built upon the base
Of cartilage both soft yet filled with might
That served him well through all his time and space.

His blessed wife would lay but a precious few
Eggs that were treasures, tried and tested true,
That they would care for with their love so new
Both day and night until their time was due.

Then one blessed day Osticthus swam his way
Up the great Elivagar's sacred stream—
The river we now know as the display
Of Mississippi's power and her dream

And up New River too, where waters pure
Would lead him to his destined, faithful fate
At heaven's gate where all things shall endure
Through love that time can never desecrate.

Osticthus learned to breathe the sacred air
Through spiracles with reverence and care,
As he opened his cheeks beyond compare
To find what every seeking spirit's prayer

Would lead him to discover in the deep
Of wisdom's well that never shall run dry,
And then he pushed the air he'd learned to keep
Down through his throat like crown worn from the sky.

And so his spiracles became the door
For air, not water's flow, to enter in—
A change that helped him grow and gain much more
Than he had ever dreamed that he could win.

The noble sons of bright Osticthus sing
Their hymns of victory and sacred praise
Of Elivagar's power that would bring
Their hearts the sight of home through all their days

In mountains ancient where their song rings clear
And life is old and deep past all measure
And memories keep vigil year by year
Despite the joys and fears time can treasure.

Osticthus married Eutelea bright,
Beyond compare in beauty and in grace,
And in their blessed home, all filled with delight
Together in their sacred dwelling place

They bore two sons both noble, tried, and true:
Actinus, and the great Sacropter's name,
Each destined for a chapter to pursue
In evolution's book of lasting fame

Where those who dare to look with faithful eyes
Can see what time has wrought through patient years
And what their faithful choices would comprise
Of joy and hope beyond all mortal fears.

Great Sacropter saw the potential bright
In what was most essential and most true
About the forest green in morning light
Of great Elivagar's blessed, sacred view.

He swam between the trees with graceful art
And expertise that came from faithful prayer
And built with all his loving, patient heart
Strong bony fins with tender, loving care

To bear his weight as he would gently push
Through forest's leafy green, with fins as guide,
Strong lobes and wide, through reed and leafy bush,
Through waters where the blessed spirits abide.

While the bright Actinus could clearly see
That air's sweet harmony within his form
Could give him power to be truly free
And weather any fierce and bitter storm.

His lung became the blessed and sacred way
To float with grace throughout the whole long day:
A swim bladder so light it caught each ray
Of sun that blessed his bright and shining way.

Of conquest in the sea he'd dream each night,
And he went on to become the blessed king

Of Baltic's realm with fins that caught the light
Like rays of hope that make the angels sing

When morning sun begins its sacred course
And blesses all with heaven's gentle force.
Ray fins he built with love's creative source
That danced upon the air of water's course

Like music from the spheres of heaven's dome,
And he took blessed Andrea Lepis home
As wife, who made their sacred marriage roam
With joy through realms where angels love to roam.

Nine hundred eggs so bright she laid with care
That filled the world with sight beyond compare
And showed that love can multiply and share
Its blessings far beyond what mortals dare.

And so the noble sons of bright sight blessed
Osticthus gained the vision crystal clear
To rule with wisdom and to be at rest:
Actinus ruled without a trace of fear

And great Sacropter, strong throughout his days,
Who served with all his heart the gentle call
Of forests' sacred and eternal ways
That beckoned to the spirits of them all.

And brave Acanthus, noble son so true
Of great Chondricthus, with his work begun
His reign with scenting power to pursue
His calling underneath the blazing sun.

These three became the fathers of the lines
That not a thing in the world could smother:
The three great vertebrate houses' designs
Of father, son, and the spirit-brother.

From Janus' legacy through all of time
The vertebrates would show, with mind and heart,
How families can grow, in reason, rhyme,
To rule with wisdom's everlasting art

The waters and the land with faithful hand
Built by their creative spirit's merit
That helps them all to truly understand
What those with faith can always inherit.

From toxic waters' plight to heaven's gift
Of air and forest green, where, all day long,
The spirits raise, in sacred song, and lift
And all that fills the heart with praise lifelong,

The noble sons of Janus found their way
To solid ground where innovation's art
Would bless them with new gifts from day to day
And touch each faithful, seeking, loving heart.

From cartilage to bone, from waters blue
To air and forest deep where all things grow,
Each found what they could keep forever true
As legacy for all we'll ever know

Who trace our lineage back through time
To those who, tried by every faithful test,
Had stayed upon the path, the path sublime,
That challenged them to give their very best.

From nose that smells each scent upon the breeze
To eyes that see the light of stars above,
The gifts that heaven gave to those who please
The heart of God with faith and perfect love

Show us the way to live in faith, and be
Both free in asking for the aid we need
When life's complexity is all we see,
Beyond what we can do by word or deed

Alone, but heaven always knows the way
And what each seeking soul requires to find,
And how each story turns from night to day,
The peace that comes to every faithful mind.

From great Chondricthus' scent to the ascent
Of bright Osticthus to the air above
Through grace and mercy that were truly sent
By heaven's everlasting, perfect love,

The vertebrates remind us that the mind
That seeks beyond the small, at heaven's hand,
The call of something more will always find
Than mortal sense can grasp or understand

Alone, but grace reveals to those who pray
And trust that heaven sees what we cannot,

For help and guidance on the faithful way,
And gives us everything that we have not

The strength to find within our mortal frame
But must receive by grace beyond our sight,
That flows from realms through heaven's holy name,
Beneath the dome of stars' eternal light.

From toxic water's curse to freedom's song
That sings of hope renewed, and of the prayer
Of those whose spirits, faithful, rose up strong
Beyond what others thought that they could dare,

The three great houses born from Janus' line
Whom heaven blessed with gifts, show that the choice
To pray, and seek, and ask the gifts divine,
And lift in prayer our faithful, seeking voice

For what we need will plant a holy seed
That grows, in ways we never dreamed we'd see,
Beyond our sight, to meet our deepest need,
When we believed that we for all must be

Responsible alone; but heaven's grace
In love's eternal plan for you and me,
Reveals to us our true and destined place
Through all the days of all that is to be.

From Elivagar's sacred, flowing stream
To home, where we belong in wisdom's song,
To all we'll ever know of heaven's dream,
The vertebrates have traveled far and long

To show us how from humble, simple start
We too, with eyes made clear by heaven's light,
Can master wisdom's sacred, ancient art
Beneath the stars that bless us through the night.

The legacy lives on from dusk to dawn
In every vertebrate, in every thought,
In every soul that upward will be drawn
To treasures that can never once be bought

With earthly coin but only with the prayer
Of faithful hearts, who seek to truly be
More than they seem; for heaven's love and care
Extends to all, and through the ages free.

From Janus to the three great houses blessed,
We see how prayer and faith will free the mind,
Together, when they're truly both expressed,
And help the heart true peace and wisdom find

Beyond what we can know through strength alone,
But when we trust in grace, with love to guide,
The whole world opens wide, its wonders shown,
Our steps to where true peace and joy reside

In realms of light beyond what we had dreamed
When we were bound by what was in our sight,
By limits small and mortal, as it seemed;
But heaven lifts us to eternal light

Where every dream comes true for you and me
Through love that reigns, and that will ever be,
And makes us more than we could ever be
Through grace that sets our captive spirits free.

Chapter 58: The Fungal Kingdom

Aquarius 2, day 58 of the Gaian year

Dikar, a parasite, lived on the sons
Of Plantus bright, from line of noble fame,
The twentieth in line, as the count runs,
From Freyr and Hera's marriage blessed by name.

With two nuclei strong throughout his days
He lived his life with both power and might,
Through darkness and in glory's golden rays
Both day and through the blessed, eternal night.

Dikar then married Ferma, fair and true;
Together they became a holy pair
Who bore two sons of fame before they knew
Their lives would spread throughout the earth and air.

Ascus and Baston were their children's names,
Both parasites alike upon the sons
Of Plantus, where they'd strike like burning flames
And take what served their needs, like thieving ones.

Ascus fathered Cup Fungi, whom we've seen,
And rather than pursue some other way
He chose to rule where forest floor grows green
And stay within his realm throughout the day.

Baston became the father of all those
Who rise as mushrooms from the forest ground,
Their chorus singing gladly as they rose
From here forevermore with joyful sound.

Ascus begat two sons of different ways:
Taphrin at dawn and Saccharos so bright,
Each chose to spend their long and faithful days
In service to their own appointed sight.

Taphrin lived small and plain through sun and rain
As yeast within the plants, following dreams,
He grew in form through calm and stormy strain,
And when he doubled size, then split at seams,

In half to make two lives for wisdom's sake,
In adulthood he'd build with patient care
What formless bodies filled, then he would make
His spores to spread so widely through the air

That all would know his name throughout the land
And sing the song of his eternal fame.
His sons are fission yeasts by his command
Who hold their living feast and bear his name

Within our lungs, and they can cause us pain
With pneumocystis when our guards grow weak,
When our defenses fail through loss or strain
From what we ought to fear but do not seek.

Saccharos, Ascus' son, as told to us,
Abandoned what his father's way begun
And chose a path less parasitic, thus
He found a different way when day was done.

He left the darkness of the parasite
And its bitter, cold, and narrow prison
To live within the soil, free from the blight
Of stealing what the others had risen

To make by their own faithful behavior,
Saccharos bore two sons in days of old:
Peziz at dawn, Melchizedek, savior
Whose story must forever more be told.

Melchizedek became a humble cell:
A yeast both small and true who'd do great things,
His sons budded from him, and though some tell
That such simplicity no glory brings,

In spheres of purity they'd multiply
And spread throughout the world with gentle grace.
Melchizedek became the Eloh high
Of bread and beer for all the human race.

He is the greatest among all the yeast,
His song brews drinks so fine and makes our bread
Divine with rising power for the feast
That fills us when our hungry souls are fed

With blessing from above through his pure love
That lifts our daily bread toward the sky
And draws down grace and mercy from above
Through his eternal love that will not die.

Peziz bore countless sons throughout his days,
Among them Lopez and Orbillus, two

Who'd walk their own appointed, separate ways
And serve the world in ways both great and new.

Orbillus hunted each Nematon son,
He'd eat what made his life complete and whole,
A worm became his meal when day was done
And satisfied the hunger of his soul.

But Lopez bore two sons of different hearts:
Ganymede, then Leotios, who shows
Their glory in their faithful, loving parts
And in the beauty that forever glows.

Ganymede became the ancestor blessed
Of cup fungi so bright that fill the world
With sight for those who seek their very best
And keep their banners of hope still unfurled.

Leotios became the father true
Of forms that would much rather complex be
Than simple—filamentous through and through
With great complexity for all to see,

But never letting their intricate ways
Extend beyond the microscopic scale,
In their detailed story through all their days
They keep their fascinating, detailed tale.

Leotios begat two sons of might:
Pyrenos and Lecanius the strong
Who lived his whole life long in the blessed light
And sang his faithful, everlasting song.

Lecanius became the father, one
Of lichens' choir that we see today,
And more who left the partnership begun
To take their own appointed, separate way:

Penicillius, who made the blessed cheese
So blue and never strayed from his true role
Of healing, bringing bodies back to ease
With penicillin's power to make whole

The sick and make infections flee in fear
From his appointed might that makes things right,
His gift of healing makes the pathway clear
To health restored and recovery's sweet sight.

And Capnos became father of the race
Of those who'd rather live as soot molds live
Throughout each day, and in their dwelling place
They serve the world with faithful love, and give.

Baston begat two sons of different ways:
Ortho at dawn and bright Puccini too,
Whose progeny would spend their faithful days
As rusts with genomes large and cycles new

Of great complexity through all their time,
The rusts show nature's art in every part
Of playing roles both simple and sublime
In evolution's grand and wondrous art.

With largest genomes found throughout the ground
Of fungi everywhere, their cycles rare
Complexity that knows no earthly bound,
They demonstrate how life beyond compare

Can flourish when it learns to play each part
That evolution's wisdom does assign
And serve the world with faithful, loving heart
That makes all life more beautiful, divine.

Botry, the son of great Puccini's line,
Gave up the many-celled, and was inclined
To live a simpler life, in pure design,
Of one particular and single kind.

He became yeast who'd live alone in peace
Within his own appointed, sacred zone
Where he could find his blessed and sweet release,
Free of complexity, content alone.

Ortho begat two sons of different fame:
Ustella and Agaricus so bright
Who'd fill the world with glory of their name
And bless all those who walk within their sight.

Ustella blesses all our corn each hour
With protein and with taste beyond compare
That none should waste: her abundant power
Fills harvest time with blessings rich and rare.

Her daughters are the smuts—though some may think
They're gross, those who have tasted truly know

How sweet her blessings are, they'll never shrink
From praising how her gracious gifts do flow.

None who have shared with reverence and care
In what she chose to offer from her store
Have ever thought them gross, but everywhere
They bless them and they love them more and more

Each day in their old, traditional way.
Her daughters are beloved and adored
In Mexico, where none would ever say
A word against the gifts that their blessed Lord

Has given out through her generous hand
When treated with the care that they deserve
And never left neglected in the land
But honored, as they faithfully still serve.

Agaricus shed the parasite's mind
And went to answer desert's lonely call,
Away from green and from tall trees he'd find
His home where few would ever come at all.

Agaricus bore four sons of great worth:
Jello first, Bartholomew, William too,
And Gemini the twin—throughout the earth
Four sons whose light would never dim, but grew

Against their father's ways through all their days
But serve with faithful hearts both true and strong
And sing his glory in their faithful praise
Throughout their lives and in their faithful song.

Jello formed vessels bright of gel to hold
The sight of spores, and he returned once more
To where Virginia's forests, green and old,
Burned bright with life from mountain peak to shore.

In rain forests where aria of life
Rang out so clear for all who had an ear
To hear above the noise and bitter strife
The song of hope that conquers every fear.

Jello became the father of those bright
Who'd rather live the way Tremello would,
And Dagar's children, dwelling in the light
Where peace and harmony have always stood.

Tremello spent his youth as simple yeast
But found the truth that adulthood would bring
A different offering for the forest's feast:
A jellyshroom, a bright and wondrous thing

That filled up every room of forest fair
With sweet delight both day and through the night,
His gift of beauty floating in the air
Would fill all hearts with everlasting light.

Dagar became the father of the forms
Whose desire was Dacrum and the line
Of great Agaricus through all their storms
Who'd make their father's legacy divine.

Tremello, Dacrum kept jellyshrooms made
From gelatinous fruit that served them well
Like armor in their eternal parade,
A suit of jel with stories they would tell

Of ancestors so true who came before
And gave them gifts of jelly fungi new
That blessed the world from mountain top to shore
With beauty that would make all hearts ring true.

While Agaricus made the first display
Of mushroom's form that none had seen before
From shore to shore throughout the light of day—
A gift beyond what any could explore.

The sons of great Agaricus create
The most glorious mushrooms, food from wood,
When we are hungry and we cannot wait
To taste their gifts, which are so blessed and good.

But sadly, toads will sit on many there
And split their toxic ways down deep inside
What once was meant to be our daily care—
They steal like thieves and in the darkness hide

The goodness meant for those who have never
Bent to evil's poisonous, bitter ways
Throughout their lives, and who would forever
Live faithfully through all their earthly days.

Eat mushrooms, but beware and never eat
The toadstools, with their poison and their knife,

That would be sure to bring you your defeat,
And cut through health, and steal your very life.

From Dikar's parasitic, ancient start
The fungi show the way that life can grow
To mushrooms' blessed and healing, sacred art,
Each day beyond what we can ever know

From simple, small beginning in the ground
To forms made great through battle, and the wise
Arrival, triumph-and-victory-crowned,
Of truth itself, the truth that never lies.

From two nuclei strong throughout life's course
To forms that last, in shapes that time makes whole,
Both small and great, through time's eternal force,
With beauty, truth, and holiness of soul,

The fungi teach us all who hear their call
When blessed by grace that flows from realms above,
That partnership and love will conquer all,
And fill our hearts with everlasting love.

From great Melchizedek's own yeast, so blessed
That makes our daily bread for the feast
Of souls who hunger for the finest, best
With blessings flowing from the great High Priest,

To lichens' partnership that makes the trip
Between two different kinds with single mind
United in their blessed relationship
Where perfect harmony two souls can find,

The fungi show the way we ought to live
From day to day in harmony with all
Who answer life's sweet call and freely give
Their hearts to serve and answer love's sweet call.

From parasitic ways to healing's bright
Display of penicillin's sacred might
That lets the sick see once again the light
Of health restored and everything made right,

The fungi demonstrate how we can change
Our fate from taking what is not our own
To healing others all throughout the range
Of all the gifts with which our lives have grown.

From smuts that bless our corn with taste so fine
To mushrooms that our tables do adorn
With flavors that are truly so divine
That none should waste what makes our feasts adorn,

The fungi fill our world with wonders bright
That from the partnerships so true unfurled
Between the different forms that unite
To bless and heal and nourish all the world.

From jellyshrooms that shine like morning dew
To lichens covering rocks with living green
The fairest any eyes have come to view,
The fungi teach us what our vows should mean:

To work with all who share our vision true
Of world where all can thrive and feel alive
In partnerships that last from me to you
And help us all to flourish and to strive.

But we must all beware the toxic ways
Of those, Corrupting what is pure and right,
Who spend their dark and bitter, poisoned days
On that which steals away our blessed sight

Of truth and beauty, love, and all that's free;
The poisoners, for every soul now lost,
Will meet, at justice' coming, fate's decree,
And there be made at last to pay the cost.

The fungi show us well that those who choose
To dwell in partnership, where they are led,
Their way to brighter days will never lose,
With healing as the daily and blessed bread

And love keeps every heart both warm and true
And every living soul that hears the ring,
In service to the good in me and you,
Of hope's eternal, everlasting King.

From Dikar's ancient line to mushrooms blessed
That nourish us and heal us day by day,
Remind us we can choose to trust, the best,
In love's eternal might to show the way

With gifts that help us grow beyond our sight
Alone, but when we share our burden's weight

The whole world then becomes filled with blessed light
Where all can find their truly perfect fate.

From yeast to mushroom cap, the fungi span
With messages of love from realms above,
The gap between the earth and heaven's plan,
That fill our hearts with everlasting love.

When we but dare to see what we can be:
Partners in harmony, joined side by side,
That conquers death and fear, and sets us free,
To feast where love makes all things glorified.

From simple soil to healing's sacred art,
The fungi show, in what all life may be,
That each of us can play our given part,
Where love will reign through all, forever free.

Chapter 59: The Great Catastrophe

Aquarius 3, day 59 of the Gaian year

‘Twas in the time when all lands had received
The children of three mothers bright and fair:
Great Planta, Anima, and those conceived
By Funga, spreading life through earth and air.

They led their offspring across virgin ground
Where peace and harmony would reign supreme,
‘Twas time of plenty when joy could be found
Where earth and heaven shared the same sweet dream.

But Shesha the Actinite, Matsya wise,
Each saw a vision dread of coming doom,
With prophetic sight they could recognize
The shadow that would fill the world with gloom.

All-knowing Mithra showed them flaming death,
The deadly load that waited in the years
To come with devastation’s poisoned breath
That would fill faithful hearts with blood and tears.

He chose them as his messengers so true
To save the family through all time to come,
These prophets would proclaim what they must do
Before the hour when death would strike them dumb.

Shesha preached out with power and with might
To creatures dwelling deep beneath the sea
Who made their home in kingdoms of the night
Where they had lived so long in liberty.

While Matsya took his faithful, noble stand
To preach throughout the earth to every soul,
To every living thing throughout the land
That served the Faithful King’s eternal goal.

They spread the warning word from shore to shore
Beneath each shining star’s eternal light,
To every place their feet could go, and more,
That all the world might know of coming night.

From fair Euramerica’s distant strand
To Siberia’s wild and frozen plain,
To Gondwana’s remote and distant land
Great Matsya traveled through the sun and rain.

Through forests filled with ancient, mighty trees
And countless insects buzzing in the air
He journeyed far beyond the seven seas
With prophecy his burden and his care.

And people heard his warning voice of doom
About what they had heard from Mithra's call,
His words of warning seemed to seal their tomb
And gave them little choice but heed them all.

Shesha journeyed out to the farthest seas
Despite the cold night breeze and bitter storm,
Across the reefs where coral, by degrees,
Had flourished long in beauty's living form.

Across the great sponge reefs he carried word
Of Mithra's prophecy of coming fate:
"There is apocalypse—have you not heard?—
That comes to us from future's bitter gate

To strike us down as it has struck before
Silurian peoples, all of them, slain,
That time of darkness, death, and bloody war,
Of devastation, barbarous in pain.

Darkness will then descend upon the earth
And send all into bitter, endless night,
Only the faithful's vision, and their worth,
Will guide them through the storm with faithful sight

And keep their bodies warm when all the rest
Turns into dust, blind in insanity,
Not knowing that the ones who fail the test
Are those who trust in their own vanity."

The people of the sea with mocking voice
Ignored the prophecy and scorned the word
Of messengers, and made the foolish choice
To treat their warning as a thing absurd.

But people of the land took heed and made
Their stand to follow wisdom's faithful call
Before the great downfall, they were afraid
But knew that preparation helps us all.

And then the prophecy came true, as told:
Two demons came, with death in cruel sway,

The bitter truth that none wished to behold:
Kellwasser, breathing poison and dismay,

And Hangenberg's most cruel and evil hand
Destroyed both ocean's depths and, with its might,
The fertile land; the reefs, so bright and grand,
Were crushed beneath the weight of endless night.

The Ammonites who dwelt in safety's keep
Within the reefs where peace had been their home
Were left alone to wander ocean deep
Without a place of rest, condemned to roam.

For hundred million years the broken reef
Would shed its tears in ruin, year on year;
Its beauty, tempest-tossed, brought only grief
To those who held their memory so dear.

Great Matsya cried aloud with bitter pain:
"Why must each generation have to face,
And suffer through this bitter woe again,
This devastation's curse on all our race?

Why must the wheel of history repeat
This cycle of defeat and endless loss?
Why must we always find ourselves complete-
ly lost beneath fate's overwhelming cross

And prey to evil's overwhelming might,
That conquers day? Why can't we learn to see,
Through all of evil and eternal night,
The way to set our captive spirits free?"

All armored fishes of the ancient sea
Who long had lived in freedom, safe and free,
Were crushed beneath the weight of fate's decree,
That none could change or alter, none could flee.

Only the agile sons of Janus, wise,
Would pass the bitter test, the test supreme,
Those faithful ones, who'd never compromise
With evil, when the world lay in the dream

Of death that stole away their precious breath
And left the oceans red with blood of those
Who could not find a way to conquer death
And fell beneath their overwhelming woes.

The sons of great Arachnus suffered most
Of all who dwelt where death's cold presence felt
Its bitter touch: two great and faithful host—
The nations where the sons of heroes dwelt.

The noble sons of Trilobos the great
And brave Eurypter's mighty host were gone
In just an instant's time—such bitter fate!—
Without a reason, suddenly withdrawn.

The sons of Trilobos had left just one
To carry on: brave Proeth all alone
Survived when all his brothers' days were done
And he was left to face the world unknown.

While Eurypter's sons, mighty as they were,
Were exiled from the seas they'd loved so long,
Never to return, no one to deter
Their banishment—they'd lost their ancient song

Of joy that they had sung through years of ease
In waters that they'd loved through all their days,
Never to return to the gentle seas
That they would yearn for all their exiled ways.

The blood of ammonites turned all the seas
To crimson sights that filled the heart with dread,
While death rode forth upon the bitter breeze
And left the world filled with the faithful dead.

The last graptolite lived a life so lone
That none would give to any living thing:
Completely isolated and alone,
Remembering the glory of his king

And all the beauty that was lost when frost
Of evil fell upon the world so fair,
When death's dark banner was unfurled, it cost
The world its joy and filled it with despair.

With nobody to stand there by his side
Within the ocean's vast and lonely space,
He lived to age upon time's bitter tide,
The last one of his kind and noble race.

Upon the page of history's darkest hour
Of sorrow, loss, and unrelenting pain

That fell like bitter acid rain to sour
The faithful hearts that struggled to remain

True to their hope when evil's poison spread
Its bitterness throughout the world so wide
And hope seemed like a flower that was dead
With none to tend it or stand by its side.

Even the lands and streams could not escape
The schemes of evil's overwhelming hand,
Soon every fertile valley and landscape
And every river throughout the land

Became a sight of woe and bitter dread,
That filled each faithful heart with deep despair:
Rivers of blood so thick and crimson-red,
That poisoned all the earth and all the air.

Then Matsya pleaded with great Mithra's might,
The greatest guide when world needs wisdom true:
"Why must we suffer in this endless night?
Why must we all go through what we go through,

This cycle that would seem to have no end?
Why can't we find the secret that will break
The bitter curse, and come to comprehend
What makes things worse, and worse, for all our sake?"

And Mithra answered with a voice so clear
That all the faithful heard: "While each new age
Ignores the past, its struggles, and its fear,
And thinks that its own counsel, new and sage,

Will be the last Advice that's ever heard,
As long as they ignore those who before
Have walked this bitter path, and their true word,
Through suffering and death and bitter war,

Each generation new must learn again
What others knew, who paid the bitter cost,
Who came before, and felt the bitter pain
Of freedom when all hope seemed to be lost.

The wisdom of the old must not remain
Untold, but go from heart to heart, to start,
If we would ever hope to, once again,
The healing of each broken, aching heart

And breaking evil's chain of endless pain,
Beneath the weight of what we cannot bear,
That binds us to the past and makes us strain
Alone, without the help of faithful prayer.

Remember those who died, and let their light,
Toward the dawn of hope's eternal day,
Guide all your steps throughout the endless night,
When darkness shall be driven all away.

The faithful who survive must keep alive
Their hope, and teach their children stories true,
And help their children learn to strive and thrive,
And learn how evil came, what it will do

To those who turn away from wisdom's voice,
To trust their own strength and wisdom's power,
Who make the fool's eternal, foolish choice,
Instead of faith that saves in the dark hour.

For those who know the past will always build
A peace, and those who learn the cost won't lose
Their way, where hope can never once be killed,
Because they've learned, at last, the way to choose

The path that leads to life and not to death;
When darkness comes again, they'll take their stand,
Prepared, and ready with each drawing breath,
As faithful guards of all the promised land."

From this apocalypse, which brought the taste
Of death, the faithful learned their unity,
The destiny that every one had faced:
Not single souls, but a community

Of spiritual warriors who would dare,
Upon the ending of their earthly tale,
To face what no one knows is waiting there,
But trust that righteousness will never fail

If they remember well the stories told
Of those who came before, and opened wide
The door of wisdom, both the young and old,
For all their kin who'd walk there by their side

Into the battle for the sacred right,
And pass to children of the coming age,

To live forever in freedom's blessed light,
The wisdom written on history's page.

The sons of Janus learned that those who turn
Away from truth will surely fall, but those
Who never bow their head to evil learn
To see the better days, and see them close,

When evil's power finally grows weak
And righteousness shall rule for those who rise
Upon the path of truth, and those who seek,
And will not trade their soul for all its lies.

The agile ones who lived through all the death,
Were forebears of all those who never err,
That evil brought with its poisonous breath,
In keeping faithful watch, as guards once were,

Against the evil stain that seeks to spread
And cover all the earth with hopeless night,
Its poison to the living and the dead,
Where none can see the everlasting light.

From Kellwasser's doom to Hangenberg's gloom,
The faithful learned that, when they all unite,
Who love the light, there's always brighter room
For hope to conquer evil and its might,

And build a world where peace will always reign,
Where love will conquer those who would oppose,
And joy will triumph over every pain,
And triumph over all the faithful's foes.

The crimson seas became a lesson taught:
That those who heed the prophets, and are free,
Who heed the warning that the prophets brought,
Will live in truth, and live in liberty.

But those who will not hear the faithful call,
Will all be consumed by evil's power,
Of prophets, whether great or whether small,
That's waited for them since their natal hour.

The lonely graptolite who lived beyond
The night, alone and solitary there,
When all his people broke their living bond,
Reminds us that the faithful still can dare

To keep the past in memory, and be
So pure, and keep the love that has been shared,
That time can never make them turn and flee,
The love of all the faithful who have cared

For truth above their own security,
In service to the cause of what is right,
And chose eternal life in purity,
Though it might cost them everything in sight.

Though all civilizations rise and fall,
And death may seem to conquer all below
That seems important, conquer one and all,
The faithful need not fear or live in woe,

For all their sacrifice was not in vain;
The faithful know: all who remember well
Through every loss, and every bitter pain,
Will always live to share their tale, and tell

The story of their love to those who seek
For guidance, when the darkness conquers light,
And when their souls are feeling worn and weak,
That once had made their future seem so bright.

From Matsya's cry to Mithra's wise reply,
Which teaches us to see beyond today,
Beyond its darkness, lifting vision high,
The dawning of a bright and better way,

The lesson echoes, sounding loud and clear,
What time has taught, and it will always last:
That those who will not learn, through every year,
From what has gone, in slavery held fast.

But those who hear the voices of the past
Will build a peace, and they will come to see,
A peace that's destined long and long to last,
That every ending is the key to be

The starting point of something new and bright,
And lifts us up to see what we can be,
That conquers death's seemingly endless night,
When we trust love to win, and set us free.

Apocalypse, which came with bitter shame
And death's destruction, was a school to learn

For all the faithful, like consuming flame,
The rule for which their hearts would always yearn:

To remember those who died for truth's sake,
And teach their children wisdom, to the grave,
And teach them never, never to forsake
The wisdom that the faithful died to save.

From Shesha's warning voice to Matsya's choice
To carry word across the land and sea,
To be the faithful's true prophetic voice,
The messengers remind us to be free

From evil's trap that snares each passing age,
Each one that thinks it is the first to test,
That will ignore the wisdom's sacred page,
The test that separates the worst and best.

The reefs that lay in ruins for so long
Were waiting to be found by those who'd build,
Like winter's death that silences all song,
What evil's hand had broken, crushed, and killed

With patient love and tender, faithful care
For beauty and for truth; and all the years,
A hundred million, bitter, in despair,
Were not the end of all our hopes and fears.

From devastation's darkest, bleakest night,
The faithful always find their destined way
To dawn's returning hope and its blessed light,
To resurrection's bright, glorious day

When all who died in faith shall rise again
To live forever in the light of love,
Beyond the reach of death and bitter pain,
That shines eternally from realms above.

The sons of Janus who survived the test
By keeping faith when hope seemed to have left
The world forever, had become the blessed
Who show the way when souls of hope bereft

Can find no light to guide them through the dark,
And everything that once was good and true,
Where evil seems to leave its bitter mark,
Seems lost, though dear to me and dear to you.

From Kellwasser's great death to life's return,
The faithful show us, and they show the art,
That we can always, every one, still learn
That every ending is a newer start.

Apocalypse, which seemed to end all dreams,
Became the place where grace would lift us high,
Where hope would flow in its eternal streams,
Beneath the everlasting, starry sky,

Where all is made new by love's sweet power,
For all who kept their faith through darkest night,
In resurrection's bright and holy hour,
And walked by hope's eternal, guiding light.

Chapter 60: The Carboniferous Dawn

Aquarius 4, day 60 of the Gaian year

In wake of devastation's mighty hand
There came hope's light to heal the wounded earth,
Though dark age fell across the fertile land
Hope lived within to bring about rebirth.

Romer's gap had stretched wide across the world
With death's dark banner raised against the sky,
Yet life endured with banners still unfurled
Through bitter days when many had to die.

The daughter in Silvio's line, so fair,
Was Rhea in her time—a woman blessed
Who showed the faithful how to rise with care
Above the darkness and surpass each test.

Carbonifer bore her two sons of might,
Both noble, tried and true through every storm:
Romulus and Remus, warriors of light
Who'd live their lives in true heroic form.

These sons would come to define the whole age
Upon the stage of evolution's time,
So we call this era's glorious page
Carboniferous, in reason and rhyme.

Then Romulus and Remus fought with pride
About the place where they should build their home
Throughout the fertile lands both far and wide
Where future generations yet might roam.

Romulus declared with a voice so strong:
"On Palatine Hill rising from the flow
Of Mississippi's waters deep and long
Our mighty nation surely ought to grow."

But Remus chose a different place to be:
Small Aventine below the river's might,
A valley where his people could be free
But hidden from the glory of sunlight.

Romulus in his anger gouged the eyes
Of Remus underneath the starry dome
And said with fury burning in his cries:
"If you will not acclaim our starlit home,

If you will not behold heaven's bright face
And will not make your dwelling in the light
Where radiance can fill our sacred space,
Then you need never see the holy sight."

And so poor Remus lived his life in pain
In darkness underneath Aventine Hill,
According to his will through sun and rain
He dwelt in shadow, serving his own will.

To this day all the children of his line
Live only in the darkness underground
Where salty water flows in streams divine
And secrets of the earth can still be found

In aquifers so deep and caverns wide
Where ancient mysteries keep vigil true
Through all the years with patience as their guide
Despite the joys and sorrows they've been through.

But Romulus climbed up into the day
Upon the land like brothers who had come
Before to make their homes and find their way
With his pierced spiracles that helped him sum

The courage to breathe air with six legs strong
To carry him across the fertile ground,
Yet Romulus was torn apart ere long,
And so his son took up what he had found:

His father's dream of building with great care,
Above the waters deep where shadows dwell,
A kingdom in the bright and open air,
A realm where faithful hearts could always tell

The difference between the dark and light
And choose to dwell forever in the day
Where all things are made beautiful and right
And hope will never fade or pass away.

Hexapus was his son, and when the work
Of mourning for his father's death was done
He bore two sons who'd never shrink or shirk
From duty: Vernus and Proturus' son.

Proturus became the ancestor proud
Of Coneheads who still honor sacred vows

With cone-shaped heads held high above the crowd
Beneath the sky where starlight ever bows

To those who live in order day by day
With wisdom as their guide through every choice,
Proturus became father of the way
Of those who heed the structured, ordered voice.

But Vernus became sire of the sons
Both Tails and Collembo, whose hearts would glow,
Two children who like bright and shining ones
Would always their father's kind nature show

Throughout each day in all they chose to do
With hearts both brave and faithful to the end,
Their legacy would prove both strong and true
And on their strength all future hopes depend.

Collembo became ancestor of those
Who spring like flying hope beyond the ground:
The Springtails who can leap where no one goes
With power in their tails that makes no sound

But helps them bound beyond the bonds of earth
And heed the call of possibility
That gives to every soul a second birth
And sets the captive spirit truly free.

And Tails had many tails of wondrous grace
That never failed to bring him love from all
Who answered duty's call and found their place
Among the faithful who would heed the call.

His tails beyond compare would dance with art
Upon the air like ribbons in release,
That beauty had withdrawn from sight to start
A revolution that would never cease

To fill the world with light of joy so bright
That nothing in the darkness could destroy
The wonder that would banish endless night
And fill each heart with everlasting joy.

Tails bore two sons with power and with might,
And Ectognus, who lived his whole life long
Beside Dipluron of the piercing sight,
In service to the right against the wrong.

Dipluron became father of the race
Of those who'd rather have two prongs to aid
Their work like forks to help them find their place
In sweeping through the air with tools they'd made

Of bristles everywhere like brushes fine
That clean the smallest particles of dust,
The two-pronged Bristletails make all things shine
For those who in the light have put their trust.

They tell their tales of how they sweep away
The dust of yesterday and make things bright
For all who seek the glory of the day
And long to dwell forever in the light.

Ectognus then begat two sons of fame:
Archegnos and Zerygos, each would find
A different path but honor the same name
Of those with faithful heart and noble mind.

Archegnos became ancestor of those
Who jump with bristles bright beneath the sky:
The Jumping Bristletails who strike the pose
Of eagles as they leap and bound on high

With bristles that can sweep the very air
Where eagles keep their watch above the ground
And treasures can be found by those who dare
To leap beyond what others think is sound

As limits on their dreams of what can be
When hearts are set upon the things above
And souls have learned the art of being free
Through faith and hope and everlasting love.

Zerygos begat two more sons of light:
Zygentos the explorer of the deep
And Pterygos, whose penetrating sight
Would help the faithful all their vigil keep.

Pterygos chose to live beneath the flow
Of water's gentle current crystal clear
And there he built with care that he might know
The secret of his breathing without fear

Through gills that filled his throat with precious air
Like music sung by those whom love holds dear,

A gift beyond compare for those who care
To listen with a faithful, patient ear.

Pterygos begat, back in days of old,
Isopter who had twenty gills so bright
To help him be both faithful, true, and bold
And fill his world with everlasting light.

But then fierce Barameda came with war
To challenge great Isopter's peaceful reign
And chased him from the home he'd lived before
Across the water's foam through joy and pain.

So brave Isopter climbed toward the height
Of tree so tall it seemed to touch the sky
That answered duty's call and reached the light
Where faithful souls could learn to soar and fly.

And soon he needed air from heaven's dome,
So jumped with faith that gills would see him through,
His gills became the wings that brought him home
And glided him down to the waters blue.

Isopter begat in his later days
Dezotopter, who had his eighteen gills,
To guide him in his flight and all his ways
Through valleys deep and over ancient hills.

He took his precious son up to the height
Of branches reaching toward the starry sky
And pushed him from the tree to test his flight
And see how gracefully his son could fly.

Dezotopter then flew down through the air
More graceful than a crown of feathers bright
Upon the wind, with beauty past compare,
More elegant and filled with pure delight

Than his father's gliding had ever been,
With grace that lifted up his noble heart
And played upon the wind like violin
That turns all flying into highest art.

Each generation learned to fly with skill
And yearned to glide more gracefully each day
Through air that bent unto their faithful will
As they learned evolution's perfect way.

Dezotopter begat a son so bright:
Seizapter with his sixteen gills to bear
His weight upon the currents of the light
And dance with beauty through the morning air.

Seizapter begat, in his turn, a son:
Quatorzapter with fourteen gills so fine
That danced in perfect order, every one
Arranged in harmony by love's design.

Quatorzapter begat Duzapter then
With twelve gills bright and true to lead the way,
Then followed by Decapter among men
With ten gills to sustain him every day.

Decapter begat Octapter the strong
With eight gills true to carry him along,
Then came Hexapter who had lived life long
And learned evolution's ancient song.

But when the great Hexapter came of age
He showed all those who'd ever dare to look
A new and revolutionary page:
What could be won by those who boldly took

The risk to open up once more the door
To breathe the air above, while keeping still,
Through spiracles that had been sealed before,
The gills beneath that served his father's will.

With muscles that he'd made through faithful prayer
His wings became a bridge between the two:
The water and the bright and open air
Where all his dreams at last could all come true.

He flapped his wings with power and with might
And rose into the glory of the day
Where eagles soar beneath the holy light—
He was the first to fly without the way

Of needing trees to climb to reach the sky,
For first time in the history of life
A creature learned the secret how to fly
Without the aid of wind or tree or knife.

Great Hexapter begat a noble son:
Insectus who first lived beneath the sea

And when his youth and learning days were done
He turned the final page to be set free

From life beneath the water's gentle flow
To soar through air forever more in flight,
He spread his wings to let the whole world know
Of insects' wondrous and amazing sight.

Insectus bore two sons of different ways:
Ephemeros the quick and Draco's art
Of flying through the long and patient days
With wisdom dwelling always in his heart.

Ephemeros became the father dear
Of those who'd rather have a million young
In just a single year than live with fear
Of death before their songs of love are sung.

In fact, in just one day he'd live and die
After his children came to bear his name,
Without a father's care they'd multiply
And play the same brief but glorious game.

The sons of Ephemeros live their days
In glory that is brief but bright and true:
The Mayflies hold their prom when spring displays
Her beauty underneath the sky of blue.

In giant celebration full of light
Across each faithful nation they all dance
And fall in love beneath the stars so bright
And give their hearts to love's eternal dance.

And then they all conceive their children dear
And leave this world in just a single day
After they've had their say, year after year,
In love's eternal and triumphant way.

It works for them quite well, as all can see
Who watch their brief but brilliant flight of joy
Through one spring day and night of liberty
Where nothing can their happiness destroy.

But if you are a man you'd better plan
For love that lasts much longer than a day,
Don't follow their example if you can
But find love that will never fade away.

Great Draco lived his life at different pace
Without the hurried strife of mayfly ways,
He counted all his days with patient grace
And wisdom guided all his nights and days.

He shortened his long tails that he might learn
To fly with grace that touches every heart
That sees his beauty bright, and souls that yearn
For truth would see his flight as highest art.

Draco bore two sons in the waters clear:
Neopter, bright and precious, filled with light,
And Odonatos strong and without fear
Who lived his life devoted to the fight.

Neopter learned to fold his wings with care
That hope eternal brings to those who wait
And walked upon the land both green and fair
Built by the faithful hands that serve their fate

Of those who came before to open wide
The door of possibility for all,
He flew when needed, kept peace as his guide
And ate only the plants that heard his call.

A gentle way to live with all he had
Of peace and harmony through every day,
His heart was never bitter, never sad
For all who shared his bright and shining way.

But Odonatos had his great wings spread
And a heart that was never satisfied
To live in peace but thirsted to be fed
On battles where his enemies had died.

He couldn't walk for long upon the ground,
His legs, though they were strong and swift to run,
Were made for hunt and battle to astound
His prey until the hunting day was done.

He flew through all the air from place to place
And ate his very brothers without shame:
Who were the sons of others in his race
But who lived more peacefully than his name.

His predator's heart could not understand
Or part with his deep need to hunt and kill

To satisfy the hunger of his hand
And feed according to his iron will.

The sons of great Odonatos now live
As warriors of the sky who never ask
If there might be another way to give
Their lives to some more peaceful, loving task.

The Dragonflies and Damselflies so bright
And mighty Griffonflies of ancient days
Are members of this warrior crew whose might
Rules air from dawn to dusk in all their ways.

The Griffonflies grew wide beyond compare—
Almost a meter's pride of wingspan true
That carried them through battles in the air
Beneath the endless dome of heaven's blue.

Seventy million years they ruled the sky
With iron claw and fought without a flaw
Until the world began to change, and high
Above, a new and different kind of law

Would rearrange the balance of the air
Where they had ruled their aerial domain
Through sunshine, storm, and through the weather fair
For ages long through joy and bitter pain.

But Neopter became the root and core
Of all the other kinds of insects bright
With minds set upon goals that would restore
The world to peace and harmony and light.

Beetles, and ants, and flies beyond all count
And millions more that rise with every dawn
When day begins—they all trace their account
Back to Neopter's track from waters drawn

To air and land, so beautiful and green,
Where insects could explore from shore to shore
In every niche, with hearts both true and keen,
And minds that always yearned to learn still more

Of what their lives could be when they were free
To grow beyond the bonds that held them small
And heed the greater call of what could be
When they would answer love's eternal call.

From Romulus' fight with his own brother
To Hexapter's great revolution's flight,
From streams beneath, where Remus and other
Dwellers keep vigil far from morning light

To great Insectus' mark upon the world
Above, as built by those who chose to love
The light and air where hope's flag is unfurled
Throughout eternity by One above,

The insects show us how we ought to live:
To make and keep our vow to rise above
The past and make the good things last and give
Our lives to serve the cause of perfect love.

From Springtails' bounding hope that leaps on high
Beyond their earthly bonds to reach the light
To Bristletails that sweep across the sky
Where eagles keep their watch through day and night

For those who'd climb beyond the bonds of time
To find their place in evolution's race,
The early insects show us how to climb
From humble start to beauty, truth, and grace.

The insects teach all those who hear their call
That from the simplest and most lowly start
We can learn to master once and for all
The highest and most noble forms of art:

To fly toward the light that conquers night
And lifts us up to see what we can be
When we work together with all our might
And help each other to be truly free.

From Romer's gap of death, devastation,
To life's returning breath and joy renewed,
Carboniferous age brought salvation
And with the insects' sight the world was viewed

With eyes that saw how darkness turns to light
When hearts learn how to fly beneath the sky
Where all things are made beautiful and right
And dreams come true for those who aim on high.

From humble start to mastery of flight,
The insects show the way to rise above

The bonds that hold us back from perfect sight
Of what we all can be through perfect love.

Chapter 61: The Land Bridge

Aquarius 5, day 61 of the Gaian year

Rhipidistius the great survived the fall
When devastation swept the world away,
A hero of his time who heard the call
To show the faithful path through that dark day.

Through trials dark and deep he learned to keep
His vigil bright and never lost his hope
Beyond the bounds of earth's eternal sleep
Into the light of evolution's scope.

Rhipidistius then bore two sons of might,
Both noble, tried and true through every test:
Dipnos and Tetram, warriors of light
Who lived their lives according to what's best.

Dipnos became the father of those who
Would breathe the air when waters would recede:
The lungfish with their breathing powers new
Could live dual lives to meet their every need.

When drought would steal away the waters clear
Where they had played in youth's eternal spring,
The lungfish could survive from year to year
And stay alive, enduring everything.

By breathing air so free from sky above
Throughout eternity they would survive
Until the rains returned with gentle love
And waters they had yearned for came alive

To fill their homes once more from peak to shore
With life-sustaining flood that stirred their blood,
The gift of dual breath would evermore
Protect them through both drought and mighty flood.

Tetram changed his gut to linear form,
Which let him eat the giant fish with ease,
This innovation helped him weather storm
And find his food in rivers, lakes, and seas.

All fish have nostrils four by nature's law:
Two let the water pour inside for breath,
Two let the water flow without a flaw
Out through the gills that conquer water's death.

Tetram was no exception to this rule,
His nostrils came in four like all before,
But he was evolution's greatest tool
By breathing other than ancestral lore.

Tetram breathed not through nostrils tried and true,
But through his ears instead to fill his frame
With air's sweet power that would help him view
Possibilities past his earthly name.

He breathed through otic notches crystal clear
That brought the air into his living form
And gave him power to transcend all fear
And weather evolution's every storm.

But breathing through his ears brought bitter tears
For it made hearing difficult and hard,
His auditory guard throughout the years
Was weakened by this choice that left him scarred.

Yet Tetram bore a son when work was done:
Kenicthus, strong and true through every trial,
Who'd see the journey through till victory won
And walk the long path of landward exile.

Kenicthus bore two sons of noble birth:
Tetracan, Rhizodon, both brave and strong,
Each destined to inherit half the earth
And sing out evolution's ancient song.

Tetracan bore two faithful sons again:
Tetramegas great and Canowin's line,
Both destined to become the best of men
And make their father's legacy divine.

Tetramegas then bore two sons of might:
Eotetras, explorer of the deep,
And Megalicthus, who first saw the light
Of promises that faithful hearts can keep.

Eotetras begat in days of old
Tintetra of sight, Tristichos the wise,
Whose names would rise to fame in stories told
Of how from fish the land-dwellers would rise.

Tintetra bore two sons beyond compare:
Platelpis, Tiniraus, who each would go

By different laws, but sharing the same prayer
For growth through each new dawn that life would show.

Platelpis bore two sons of different ways:
Elpis the wanderer, both tried and true,
And Platycephalus through all his days
Who lived by strength in everything he'd do.

Platycephalus made a skull so strong
His bite could break through anything at all,
No obstacle could challenge him for long
When power was his answer to life's call.

But Elpis wandered far, and in his quest
Across the swamps so wide with wonder bright
Explored the world from near to farthest west
And filled his days with beauty and delight.

Through marshes dark and deep where secrets dwell
He kept his vigil through the passing years,
Despite all joys and fears he knew full well
That exploration conquers all our fears.

Elpis begat a son, his roaming done:
Pandericthus the brave who'd rise above
The wave of ordinary life to stun
The world with his pursuit of perfect love.

Pandericthus searched long throughout the land
For love's eternal call that echoes here
Across the world where hearts can understand
The song that only faithful lovers hear.

And he found love so true in Stega fair,
A maiden bright who filled his world with light,
He married her with joy beyond compare
And made their union shine both day and night.

Together they would raise with tender care
A son they called Tictalicus by name,
A name that would be known, and everywhere
Be greater than a glorious throne's fame.

Tictalicus was destined for the fate
Of landwalker supreme who'd realize
The dream of all who came from ocean's state
To find their freedom underneath the skies.

Tictalicus begat Elgin the wise
Who sat upon the throne of those who chose
To rise beyond the bonds that compromise
The soul and find the peace that freedom knows.

Elgin begat a son of noble birth:
Ventas, who'd carry forth the line so pure
Of those who'd found their home upon the earth
And made their father's legacy endure.

Ventas begat Acanthos, strong and true,
A leader who would guide his people well
Through every trial that they would go through
And every challenge time would ever tell.

Acanthos bore Icthyos of the light,
A son who'd change the way that life was led
By making breathing work exactly right
And heal the wounds that evolution bred.

Icthyos made the choice to change his ways:
He stopped breathing through ears that caused him pain
And started breathing through his nose through days
And nights, until he could hear clear again.

He joined his nostrils to his mouth with care
So air could flow in cleaner, purer streams
And he could smell each scent upon the air
And hear each sound in all his vivid dreams.

Now he could hear with hearing crystal clear
Each whisper of the wind through forest green
And smell with perfect sense from far and near
The sweetest fragrances he'd ever seen.

Icthyos bore a son when youth was past:
The Watcher who would build no gills at all,
Despite the water's call that held him fast
He chose to heed the land's eternal call.

For Watcher needed none—when youth was done
He lived upon the land both green and wide,
Built by the faithful work of everyone
Who'd made the journey from the ocean's side.

As child he'd play in water every day
But when he came of age he turned the page

In evolution's book and chose the way
Of those who'd left the sea's ancestral cage.

He lived on land so green and breathed air free
Throughout his days beneath the open sky,
And there he raised his sons, at one to be
With all the earth beneath and heaven high.

Watcher bore two sons of different hearts:
Crassigar and Tetrus, and each would choose
A different path as life's great story starts
And some will win while others have to lose.

Crassigar made the choice to hear the call
Of ocean's voice and went back to the sea,
A path that would be taken by them all
Who yearned to live in water, wild and free.

This choice would be repeated many times
By those who'd hear the water's cheerful song
That echoed through the ages and the rhymes
Of those who felt they didn't quite belong

Upon the land where air was thin and dry
But missed the gentle rocking of the waves
Beneath the vast expanse of ocean sky
In underwater halls and coral caves.

But Tetrus chose another way to be:
To be the father of the nations new
Who'd stay upon the land and never flee
With legs or arms or whatever would do

To help them crawl or walk upon the ground
That made their lives complete in every way,
Their hearts upon the solid earth were bound
To build their cities bright from day to day.

He became the great father of all those
Who'd rather live in air forever free
Than go back to the sea where birth arose
But now they sang a song in a new key.

From Rhipidistius, who survived the night,
To evolution's coming to the door
Of land both green and filled with morning light,
The vertebrates discovered something more

Than they had ever dreamed that they would find
In their ancestral home beneath the waves:
The freedom, with the duty, that would bind
Each soul that from the sea's embrace it saves.

From lungfish breathing air when waters fail
To Watcher living wholly on the land,
The story shows how life will never pale
When guided by evolution's great hand.

The landwalkers prepared the way for all
Who dared to leave behind the water's past
And build upon the land, hearing the call
Of freedom that would make the good things last.

From Tetram's breathing through his otic ear
To Icthyos connecting mouth and nose,
Each innovation helped them persevere
And find the path that to perfection goes.

From Pandericthus searching for true love
To Stega's marriage blessed by heaven's grace,
Vertebrates remind us to rise above
Our limitations and find our place

In partnership so true it helps us through
The trials of the way from night to day
Where all who dare to dream will find what's new
And walk in freedom's bright eternal way.

The legacy lives on in every breath
We take and every choice we make today
To grow beyond the bonds of living death
And heed the call of light's eternal ray.

From Rhipidistius great to Tetrus' fate
Of building nations new with vision clear,
The vertebrates have shown that those who wait
Upon the Lord will find His presence near.

From simple start below the ocean's foam
To all we'll ever know of freedom's song,
They've shown us how to find our perfect home
Where souls can dwell in peace their whole life long.

The bridge from sea to land is now complete,
The path is open for all those who dare

To leave behind the past and find the sweet
Release of breathing in the open air.

Chapter 62: The Final Breath

Aquarius 6, day 62 of the Gaian year

Among the sons of Gastropus arose
Great Pulmon, who in air would find delight,
Rejecting water's long ancestral prose
To breathe the sweet communion of the light.

Pioneer of respiratory art
Bore three great sons to carry forth his name:
Siphonogloss, Oceanus the heart
Of seafaring tradition's ancient claim.

And Terron, who would spread across the land
Where rivers meet the sea in perfect grace,
Each lineage led by its destined hand
To find its evolutionary place.

Siphon Oceanus roamed far and wide
Across the vast expanse of ocean blue,
Where rolling waves and currents were his guide
And saltwater ran deep in all he'd do.

This ocean lord begat two sons of might:
Siphonar, who would learn to bridge the air,
And Sacos, who would turn to solar light
Photosynthetic treasures bright and fair.

Siphonar chose the liminal domain
Where sea meets rocky shore in endless dance,
An air-breathing limpet, free of shame's stain,
Who seized upon evolution's best chance.

He clung to rocks where waves and breezes meet,
His gills transformed to breathe the atmosphere,
While keeping ocean's rhythm in his feet
And holding both domains forever dear.

But Sacos walked a more unusual path,
He ate algae and made his shell like glass,
Absorbing solar power's golden wrath
To let the golden solar radiance pass.

Within his belly bright the sunbeams danced,
Converting light to food in sacred rite,
His shell became a window, so enhanced
To capture every precious ray of light.

“No longer shall I breathe the air,” said he,
“For I have found a more exalted way,
The sun itself shall be the strength for me,
And light shall feed me through each golden day.”

Meanwhile, great Terron’s sons spread far and free
From freshwater streams to the coastal shores,
To write their own biology, to be
In rivers, seas, and beaches’ sandy floors.

From Terron came both Glampyron the wise
And Aeroger, the master of the air,
Their children would inhabit sea and skies
And every habitat with equal care.

The sons of Glampyron spread far and wide,
From land to sea to river’s flowing course,
Great Glacid then chose the freshwater’s side
While Pyramphon claimed beaches as his source.

In rivers cold and clear did Glacid dwell,
Where mountain streams run pure from peak to plain,
His story only flowing waters tell
Of life that thrives through sunshine and through rain.

But Pyramphon upon the beaches walked
Where sand and surf in endless meeting play,
With tides and waves his children always talked
And learned their rhythm through each night and day.

From Pyramphon came Pyramidius strong
And Amphibius of the mangrove trees,
Each finding where his heart and soul belong
In ocean’s depths or where fresh water frees.

Pyramidius gave up his lungs of air
To dive beneath the ocean’s salty deep,
Where coral gardens grow beyond compare
And ancient mysteries their vigil keep.

But Amphibius chose the middle ground
Where fresh and salt together meet and blend,
In mangrove swamps his lineage is found
Where root and tide in harmony defend.

From Aeroger, the master of the breeze,
Came Euple and great Hygros of the stream,

One dwelt among the highland's ancient trees,
The other lived the river's flowing dream.

In rushing waters Hygros made his home
Where mountain torrents carve their destined way,
Through canyon depths where only eagles roam
His children swim from night until the day.

But Euple climbed to heights where thin air flows
And begat Pulmon and great Acox there,
Among the peaks where neither ocean goes
They learned to thrive in the rarefied air.

Yet Acox chose to lose his lungs of breath
And sink beneath the waters clear and cold,
Embracing what some might have called a death
To live the ancient stories yet untold.

Thus gastropods learned every breath to weave:
Some kept their gills for water's sweet embrace,
Some found in air the power to achieve
New heights and claim the atmosphere's great space.

Some turned their shells to windows for the sun
And learned to eat the light like plants of old,
While others found that air and sea as one
Could nourish them with treasures more than gold.

From Pulmon's innovation came the gift
Of breathing in its new ability,
Each lineage learned its own way to lift
Its life toward new possibility.

In rivers, seas, and beaches they have found
Their perfect niche in nature's grand design,
On mountains high and valleys low around
They make their homes where earth and heaven shine.

The gastropods remind us of this truth:
That evolution's greatest gift to life
Is not to hold to patterns from our youth
But grow beyond familiar joy and strife.

From breathing water to the air so free,
From eating plants to dining on the light,
Each choice expands what living things can be
And fills the world with wonder burning bright.

So honor those who dared to change their ways
And left the safety of ancestral breath,
Through all their courage shining down our days
They conquered limitations, fear, and death.

From Pulmon's first brave gasp of mountain air
To Sacos' shell, photosynthetic glass,
Each innovation shows the will to dare
And let the old restrictions fall and pass.

The final breath is not the end we fear
But gateway to new forms of drawing life,
Where gastropods have shown the pathway clear
Beyond the bounds of evolution's strife.

Whether in deepest ocean's crushing weight
Or highland peaks where only eagles soar,
They found their own respiratory fate
And opened evolution's ancient door.

To possibilities we've yet to see
In forms of life we've yet to understand,
The gastropods sing songs of being free
Across the sea and through the fertile land.

From glass shells full of captured solar fire
To lungs that breathe the sweet and perfect air,
They teach us how to lift our souls higher
And find new ways to live beyond compare.

The legacy of Pulmon echoes still
In every creature brave enough to grow
Beyond the bounds of evolution's will
Into the light of all we've yet to know.

So let us learn from gastropods this day
That breath itself can take a thousand forms,
And life will always find its perfect way
Through calm, clear days and fierce, transforming storms.

The final breath becomes the first breath too
Of new adventures waiting yet to start,
As gastropods have shown both me and you
The courage to evolve with faithful heart.

Chapter 63: The Children of Two Worlds

Aquarius 7, day 63 of the Gaian year

From Tetrus, father of the landward race,
Two sons arose who chose two different ways:
One broke for good from water's old embrace,
One heard the lake call through the woodland maze.

The first would father those who sealed their birth
In eggs of air and broke from water's hold,
Who built their children's lives across the earth
Where even drought could not diminish bold.

But Amphibos still heard the water's call
And chose the threshold as his sacred home,
Where forest met the flood-plain, night-mists fall,
And coal-swamp vapors rose like silver foam.

"I am the child of two great worlds," he cried,
"The river's son who breathes the open air,
I walk the land yet keep the lake my bride
And find my truest home where both are there."

For Amphibos had learned the ancient art
Of transformation deep within his kind:
His children entered life with larva's heart
Then shed that skin to leave the streams behind.

They burst from water, limbs still trembling new,
And breathed the air of coal-swamp forests tall,
Where Lepidos spread canopies of blue
And Meganeura ruled the humid hall.

Four children claimed the kingdoms of his care:
The warrior Temna; Rana, who would pour
Her song; then Salamandrus; and the rare
Blind Caecila, who dug beneath the floor.

Great Temna was his eldest, warrior-born,
Who built her realm within the darkest fen,
She ruled the swamp-edge, midnight until morn—
The greatest beast that walked the coal swamp then.

From Temna came a dynasty of might:
Young Eryops walked on the solid shore
And hunted under both the day and night,
A barrel-chested warrior built for war.

Her daughter Mastod ruled the river's breast,
Whose skull was flat as any table laid,
She swam in silence, letting current rest
Her patient body in the water's shade.

Great Branchios refused to leave the stream—
He kept his gills throughout his ancient days
And breathed through feathered crimson plumes that gleam
Like scarlet flowers in the coal-swamp haze.

Fair Rana leapt to claim the marsh's grace—
Her young were born in water, pure and whole,
As tadpoles first who earned their limbs by race,
As if each life must mirror life's own soul.

Ten thousand kinds of frogs arose and knew
The secret of the transformation's rite,
Their singing voices rang through evening dew
And called the summer rainstorm through the night.

Young Salamandrus chose a quiet path—
Four limbs and long tail trailing through the moss,
He found the places sheltered from the wrath
Of sun, and counted moisture as his cross.

The pale Proteid was Salamandrus' own,
Who never grew beyond his larval state,
And kept his gills through every year he'd known,
And found within the cave his own true fate.

Last Caecila descended underground
And shed her eyes like garments worn too thin,
In worm-rich tropic earth she always found
More riches than the sighted found within.

Her skin grew rings like earthworms, smooth and tight,
And many who encountered her would say
She was no more than worm—but in the night
She proved herself a hunter in her way.

Thus from Amphibos' ancient, hallowed line
Came frog and toad and salamander bright,
Came caecilians through tropic earth and vine—
The children of both water's depth and light.

They teach us of the threshold's sacred truth:
That life is sometimes strongest at the seams—

The child who lives in water in its youth
Then sheds that form for air and wider dreams.

So honor those who master life's great edge,
Who need not choose between the deep and high,
Who build their homes upon the water's ledge
And breathe as freely in the stream as sky.

Chapter 64: The Sealed Covenant

Aquarius 8, day 64 of the Gaian year

Now hear the story of the elder son
Of Tetrus, father of the nations vast,
Whose break with water was forever done
When he had sealed the water-world as past.

For Amnios had learned the ancient art
Of building worlds-within-a-world with care:
A sealed and private sea, a work of heart,
That let his children breathe the open air.

Within the shell he wrapped four, veil on veil:
The Amnion kept the waters safe inside,
The Chorion let gasping breath prevail,
The Allantois held waste and turned aside.

And last the Yolk fed every growing child
Through all the days before it faced the sun—
No pond required, no lake, no river wild:
The egg held all that water once had done.

"I carry now the sea within my shell,"
Said Amnios with pride across the land,
"Wherever dry winds blow and deserts dwell
My children grow protected in my hand.

No longer must my young be hatched beside
The water's edge where any flood or drought
Could drown or desiccate them—sealed inside
This private world they safely weather out

Whatever the land sends against their form:
The dry-spell, summer sun, the bitter cold—
Within my egg they shelter from the storm
And hatch already fit and fully bold."

The coal-swamp logs where hollow chambers wait
Became his nursery in ancient time,
Where Hylonomus found his destined fate
And Archaeothyris lived in its prime.

Two sons bore Amnios to carry on
His covenant with land and open sky:
Great Synaps, who would reign from dusk to dawn,
And Sauros, whom we tell of by and by.

For Sauros took the world of scale and claw
And built his dynasty of dragon-kind,
But Synaps followed a more inward law
And grew to warmth and to a waking mind.

And Synaps was born with a second jaw
Alone of amniotes in all that age—
An extra bone that reinforced the maw
And wrote a different story on the page.

For in that bone slept hearing yet to come:
Those extra jaw-bones, changed by years, would creep
Back toward the ear and make of them a drum
That shook to every pulse within the deep

And subtle sounds of air—but that would take
A hundred million years of patient change—
For now great Synaps hunted for his sake
Across the coal-swamp's vast and misty range.

Great Pelyon was the first of Synaps' line—
He wore a sail of skin upon his back
That caught the morning sun like some design
Of living solar-panel on the track

Of warming up before the hunt began
When morning cold still chilled the swampland air—
A king of war whose evolution's plan
Had given him an edge beyond compare.

Like Dimetron, his sons would later be
With great sails spread to glory in the sun,
The masters of their age who'd hunt and see
Their line grow tall ere the Permian's done.

And from Pelyon the house of Theraps grew,
More upright, faster, with a keener brain,
Their lower jaws thinned out as bones withdrew
To other uses they would yet obtain.

For some of Theraps' scattered bones would move
In ages hence along the jaw toward new
And hearing's fine and delicate-carved groove
Where tremors deep and whispered could come through.

And from Theraps would come great Cynos bright:
The dog-toothed ones with whisker-bearing skin,

Who lived in burrows warmed throughout the night
By bodies that kept heat contained within.

But that is yet a story far away—
For now Synaps walks the old coal-swamp ground
Beneath the Lepidos trees' shadowed sway
Where hollow logs his nursery has found.

He teaches us that freedom grows inside
The boundaries we learn to carry well:
Not every wall is prison—those who hide
Their young in sealed eggs break no ancient spell

But give a gift of portable ocean
To every child who hatches into light,
And show through evolution's devotion
That sealed within can mean both safe and right.

So honor those who learned to carry home
Within themselves wherever life may lead,
Who need not stay beside the river's foam
But plant their children where their children need.

From Amnios' covenant with the dry
To Pelyon's solar sail of ancient bone,
Synapsids learned to live beneath the sky
And make the coal-swamp forest all their own.

Chapter 65: The Dragon Kindred

Aquarius 9, day 65 of the Gaian year

Now to Amnios' second son lend ear—
Great Sauros who would father all the scale
That shimmered through the forest far and near
And gave the world its dragons in their tale.

Where Synaps turned his extra bones toward heat
And warmth within, great Sauros chose the way
Of armor, scale, and claw, prepared to meet
Whatever challenge came by night or day.

He hollowed out his skull with window-vaults—
Two openings behind each eye so clear
That made his bite more powerful—no faults
Could slow the jaw of one who knew no fear.

These Temporal Fenestrae, windows bright
Behind the eyes, would mark his every son:
Whichever children carried two in sight
Were Diapsids, born kin to the dragon's run:

The lineage that leads to claw and wing
And scaled skin cold against the morning air,
To everything that makes the forest ring
With ancient sound of those who scale and snare.

But first his elder son Paraps held close
The older style of skull, all solid, sealed—
No windows in his cranium; of those
Who sought for full security, a shield.

From Paraps there would come the patient ones
Who built their shells around them like a home:
The Turtlos line, the armor-bearing sons
Who'd carry fortress-houses as they'd roam.

A shell above, below the ribs a shell
That fused into a carapace and plate—
No armor in the world could guard so well:
A house the turtle carries to his fate.

The younger son, Eureps, would choose to own
The windows—two behind each eye so wide—
And from him would grow kingdoms still unknown
To any creature walking at his side.

For from Eureps there came the great divide
In two great lines that split beneath the trees:
Great Squamos, whose descendants still abide
In every form of lizard, snake, and these

Who hold the oldest lineage of all—
The tuatara, island-kept and old,
Last of a line that heard the ancient call
From Sauros' vast Carboniferous fold.

His children bear the scale of lizard-kind
From mountain height to tidal rocky shore,
And snakes who shed their skin and leave behind
The worn-out form to start themselves once more.

From Eureps also came great Archon who
Would build toward something no one yet had dreamed:
A lineage of rulers coming through
The ages in a dynasty that seemed

Impossible from that first small frontier
In hollow log among the coal-swamp floor—
But Archon's children would in time appear
As crocodilians by the river's shore,

As flying wonders riding storm and cloud,
As tyrants terrible in tooth and claw—
But that is yet a telling not yet vowed,
A chapter we must reach in patient awe.

For Hylonomus found the hollow log
And laid his sealed eggs in the dry wood's keep,
Through all the seasons, summer rain, and fog
His dynasty would multiply from sleep.

In Joggins' ancient cliffs in later years
His bones would find their tomb of stone revealed—
The earliest known sauropsid appears,
Whose scales in coal-swamp amber were thus sealed.

Great Sauros teaches us a deeper truth:
That sometimes what protects us serves us best
When worn upon the outside—armored youth
That scales and plates the body for each test.

And sometimes what protects us is the gap—
The window in the solid wall of bone

That makes us faster, stronger, sets the trap
Of evolution in our favor known.

From windows in the skull to wings one day,
From hollow log to sky-commanding flight,
The dragon-kindred found their destined way
Through darkness of the coal swamp into light.

So honor those who sealed their young in shells
And wore their armor proudly on their back,
Who made their home in hollow ancient wells
And never heard the old sea calling back.

Chapter 66: Neopter's Thousand Nations

Aquarius 10, day 66 of the Gaian year

Great Neopter, who first had learned to fold
His wings at rest and walk upon the ground,
Became the father of a line enrolled
In history as the most diverse yet found.

For from his loins would spring a thousand kinds
Of crawling, flying, leaping, singing things—
The orders of the insects, each that winds
Its story through the coal-swamp, marsh, and rings

Of ancient forest towering overhead
Where Meganeura ruled the humid air
And coal-swamp vapors rose from forest bed
To fill the world with warm and fertile care.

First Blattus claimed the coal-swamp's sodden floor
As his great kingdom, warm and damp and wide—
His children filled the rotting wood with more
New generations than the swamp could hide.

The cockroaches, the most ancient of all
Who filled the Carboniferous worldwide
That gave to all the era's ancient call
"The Age of Cockroaches," the name applied—

Ten thousand times the number of a man
In generations counted from the first,
Great Blattus spread his dynasty and clan
Through every crack and crevice, quenching thirst

And hunger on the fallen leaf and bark
And every kind of plant-decay that fed
His millions through the forest's warm and dark
And steaming spaces where the coal swamp spread.

From Blattus too a colony would spring
Of strange wood-eaters in an age ahead:
Termitios, who'd build beneath a king
And queen, in mounds of royal kinship bred—

Where workers tend the royal line alone
And soldiers guard the tunnel passage-way,
And queens lay eggs upon a living throne
While millions toil in darkness every day.

Then Orthopteros leapt across the land
With powerful rear legs that stored the force
Of thousand springs at evolution's hand—
Each jump a small explosion on the course

Of life lived at the margin of the blade:
The grasshopper who leaps beyond the reach
Of any hunter's claw or ambush laid,
The cricket singing through the summer's breach.

Their songs would fill the night with piercing call,
A language built of friction—wing on wing—
That called the mate across the evening fall
And made the coal-swamp forest, summer, ring.

Great Hemipteros was born with a mouth
That pierced the stem and drank what flowed within—
No chewing jaw for him, but always south
Through bark and leaf, where flows of sap begin.

His children are the bugs that bear the name
In truest sense: the aphids, and the bands
Of shield-bugs, stink-bugs; the cicadas' fame
Like thunderclaps and drums through summer lands

Of high-pitched song too fast for ear to trace:
Their call compressed and slowed would be a song,
But at the speed they live they set the pace
Of summer afternoons the season long.

But of Neopter's sons, the one the most
Who'd multiply beyond all count or bound
Was Coleopteros, that gilded host
Of beetles, hardened in a casing round

Of shield-wings Elytra that fold above
The flying wings like armor double-laid—
The tank of insect-kind, who found his love
In every niche that any creature made.

For beetles number in the hundreds of
Ten thousand species counted and described,
And for each kind that's known, there's some thereof
That no eye yet has seen, no pen inscribed.

They eat the dung, they eat the wood, they eat
The living plant and grain and every rot—

The beetle's adaptation is complete:
No other order claims so vast a plot

Of insect-kind's dominion on the earth.
From Diptos came the two-winged masters bright
Who traded one pair of their wings for worth
Of speed—the halteres that balance flight

And make of them the acrobats of need.
Their maggots clean the fallen forest floor
Of everything that death and time has freed
For life to use and recycle once more.

The flies keep order in the rotting shade
And speed the return of what falls to dust—
Without the fly the forest would be stayed
By its own death, unable to adjust.

In time would come Hymenos into view:
The wasps and ants and bees in future age
Who'd build their colonies and castles new
And write the social chapter of the page

Of insect-kind—where queens command the whole
And workers sacrifice their single lives
For something larger than the separate soul:
The superorganism thrives and thrives

On order far beyond what any mind
Can hold alone, where each part plays its role
And each one's death will leave no gap behind
Because the colony becomes the whole.

And Lepidopteron would spread his wings
Of patterned dust in colors past compare,
The scaled and powdered beauty that he brings
To every flower-field and summer air.

His children drink through spiraled tongues unfurled
Into the flower's deep and nectar-bright
Heart: they are co-evolvers of the world
Who'd partner with the blossom's own delight.

But many of these nations yet to come
Would wait until the coal swamp gave its way
To drier lands—for now, the restless drum
Of all Neopter's children rules the day.

The insects show us what becomes of those
Who branch to thousands through variation:
A thousand different answers to the woes
Of living—a thousand-fold salvation

From one lone path that cannot bend or shift
When change comes calling through the world anew—
Diversity itself becomes the gift
That lets the many thrive where few fall through.

So honor Neopter and all his line:
The beetle's shield, the cricket's midnight song,
The cockroach in the coal-swamp's dark confine—
The ones who proved that many could be strong.

Chapter 67: The Web-Weavers

Aquarius 11, day 67 of the Gaian year

When Minirachne climbed from river's keep
With Tetra his fair wife upon the shore,
He left the eurypterid's ancient deep
And took the land Scorpio held before.

But Minirachne was another kind
From every arachnid who'd gone before:
His silk-glands worked in an abdomen lined
With Spinnerets that opened every door.

From special glands came threads of liquid light
That hardened in the air to cables strong—
Not webs at first, but safety-line of right
That trailed behind him through the forest long.

He laid his eggs in silken sacs wrapped tight
And hung them from the bark of ancient trees,
And so his children hatched in shelter bright
And swung above the coal-swamp's midnight breeze.

His son Arachnus learned his father's art
And raised it to a form of living grace:
He learned to spin the silk from every part
Of abdomen to fill the empty space

Between the roots, between the ancient bark
Of Lepidos, the coal-trees rising high—
A geometric net hung in the dark
That caught whatever moving thing came by.

Eight eyes he had to see from every side,
Eight legs, and spinnerets that number six,
Two body parts—a life of patient pride
That weaves its dwelling from his nature's tricks.

His venom liquefied the prey within
Its wrappings—spider digestion, outside—
The meal was sucked from where a life had been:
Arachnus lived with patience as his guide.

Arachnus bore two sons of different build:
Great Mygalos, Araneo the spry,
Each one according to his nature filled
A different kingdom under earth or sky.

Great Mygalos was broad and thick and slow
With fangs that struck straight downward into prey,
A powerful and patient hunter so
Who waited for the night to hunt by day.

His children dug their burrows in the ground
And lined them deep with silk so smooth and white,
And there they waited for the vibrant sound
Of footstep crossing through the moonlit night.

The trapdoor spider is among his line—
Who builds a hinged door out of silk and earth
And lies in ambush in that tunnel fine
Until vibrations tell of something's worth

As prey that passes over the concealed
And patient entrance to his silken lair—
Then strikes with lightning speed to have revealed
That nothing crosses safely over there.

The tarantula, great and patient too,
Is Mygalos' great daughter grown to size
That makes the children of the forest blue
With caution underneath the ancient skies.

But Araneo found a newer art:
His fangs worked side to side with clever thought,
And he became the ancestor, the start,
Progenitor of thousands kinds who wrought

Their geometric miracles between
The branches of the coal-swamp forest tall:
The orb web strung in morning dew-drop sheen
That glistens like a jewel in the hall

Of ancient light that slanted through the green—
A trap so fine that even he who knows
It hangs there walks into it, all unseen:
Who flies must pass where Araneo sows.

The spiral thread coated with sticky bead,
The frame thread dry for walking—he could feel
With every leg what vibrations need
A swift response—what struggles, what is real

And living versus what is only wind
Or fallen leaf or raindrop on the twine:

His body is a sensor that has pinned
The world to information's fine design.

In coal-swamp logs where Amnios had laid
His sealed-in eggs, the spiders too would roam
Through every crack and tunnel where the shade
Of ancient bark gave darkness for a home.

For spiders and the amniotes would share
The hidden spaces of the coal-swamp floor,
Each in their different web of life aware
That every hollow had a use in store.

The web itself is wisdom's oldest art:
To build from what is inside you a home,
To draw the thread from your own secret heart
And weave a world wherever you may roam.

The spider needs no stone and needs no wood—
He needs only himself and open space
And time enough to labor as he could
In patterns that repeat from place to place.

So honor Arachnus, his woven line:
The builders of the geometric dream,
Who made of their own bodies something fine
And caught the living world within their gleam.

From Minirachne's silken safety-thread
To Araneo's orb hung bright with dew,
The web-weavers show us that those ahead
Are often those who build from what they knew

Was always theirs—the thread already there
Inside the body, waiting to be spun
Into a home of breathtaking and rare
And functional beauty beneath the sun.

Chapter 68: Janusicthus' Ray-Finned Multitudes

Aquarius 12, day 68 of the Gaian year

While all these nations built their lives on land
And traded water's world for open air,
The waters still held under heaven's hand
A nation greater than all those who'd dare

To leave—for Actinus, the son of bright
Osticthus, ruled the realm of water's flow
With fins of spine and membrane, each so right
For cutting through the current's ceaseless go.

His lung had turned to swim-bladder so light
It filled with gas to make him weightless there,
Suspended in the water day and night
As if the water were his form of air.

Actinus, fair Andrea Lepis too,
Together laid nine hundred eggs with care—
So many futures sown like seeds; and through
One season they filled every water there.

His eldest sons were Bichiros the first,
Who kept the ancient body-plan most pure:
His scales like plates of bony stone hard-cursed
In stone preserved—the scales that would endure.

The bichirs in the deep African streams
Still bear Bichiros' ancient form today—
They breathe both air and water, feed on dreams
Of prey in mudflat shallows after day.

Their lobed pectoral fins push through the mud
In shallows of flood-season, walking-like,
And when the dry-spell comes and waters flood
Recede, they breathe the air—a living spike

Between the ancient world and ours today,
A living bridge from one age to the rest,
Who shows that some find better than the way
Of change: the ancient form, forever blessed.

From Bichiros came Chondrosteos great:
The sturgeons in their bony-scuted lines
Who'd grow to massive length in every state
Of river, sea, and lake where water shines.

The sturgeon bears no ordinary scale
But bony plates in rows along the side,
And searches with barbels that always trail
Along the muddy bottom for his guide

To food concealed beneath the river's floor—
A patient bottom-feeder of great age
Who has outlasted dynasties of yore
And writes his story on the oldest page.

His cousin Paddlos hunts and searches too
With paddle-shaped snout sensing what swims near,
Who senses fields electric moving through
The river's depth where prey cannot appear

To hide from those whose senses reach so wide
Beyond the water's murk and cold and deep—
The paddlefish whose ancient family's pride
Is sensing what the clearest eye can't keep.

From these would rise Holosteos' great branch
Whose ganoid scales would gleam like ancient mail—
The garfish of the river and the ranch
Of southern waters tells the oldest tale

Of those who've lived since dinosaurs have died
And kept the body-plan of ancient time,
The gar that lurks with ambush-deadly pride
Beneath the duckweed and the water's rhyme.

The bowfin is another relic true
Of Holosteos' patient ancient line,
Who breathes both gill and lung when waters blue
Turn shallow, warm, and lacking in design

For normal breathing—then he gulps the air
And lives through August, oxygen grown thin,
Through stagnant summer pools beyond compare
Where no more modern fish could breathe within.

But from Actinus' greatest gift would spring
At last the Teleosteos, the vast—
The total bony fish who'd come to bring
Their numbers to a kingdom unsurpassed.

Two jaws instead of one—the upper jaw
That could protrude beyond the mouth and reach

For prey with an explosive speed, a flaw-
Less feeding mechanism none could teach

Who hadn't learned it through the ancient school
Of trial and error over countless years—
Teleosteos made of this the rule,
The key to conquer all the far frontiers.

From deepest ocean trench to mountain lake,
From tropic reef to arctic sea of ice,
His children filled each niche for feeding's sake
And built their nations at whatever price

That evolution asked of them to pay
In form and function, color, size, and taste:
The salmon running home to die and lay,
The flying fish who leaps in airy haste,

The anglerfish with glowing lure below,
The seahorse where the father bears the young,
The clownfish in his anemone's glow—
Are all Actinus' children, from him sprung.

He shows us that the patient staying-in
When others choose to leave can be as wise:
Not every victory requires to win
By leaving—some are greatest where they rise

In numbers past what any land could hold,
In forms past what imagination dreams,
In every water under sun and cold:
The ones who stayed made more than what it seems.

Honor the ray-fins' multitudes who fill
The rivers, lakes, and all the ocean's span—
The greatest vertebrate dynasty still,
Whose legacy outshines each other plan.

From Bichiros, plate-scaled, of ancient grace,
To Teleosteos' realm without end,
The ray-fins show to all in every place
How staying in the water can transcend

The migrations of the ambitious who
Left water for the land in hopes of more—
For in the water there was always new
And unexplored and vast and ever shore.

Chapter 69: The Naked Seeds

Aquarius 13, day 69 of the Gaian year

Where Lycos spread his canopy of spores
And arborescent club-trees ruled the bog,
Where ancient mist rolled in from distant shores
And coal-swamp vapors thickened into fog,

A different kind of tree had learned to stand
Against the dry-spell and the season's change:
Great Gymnos, son of Phyllon, found his hand
Could hold what spores could not across the range

Of drier hillsides where the swamp's wet edge
Gave way to ridge and upland, far and dry—
He built a seed, a sealed and private pledge
Of life delivered, though the year went by,

To next year's rain, through all the drought between:
The naked seed set free upon the wind
Without a flower's case to wrap it clean—
Just seed and scale and hope, with nothing pinned

To being near a pond or river's strand
Where spore-borne plants required water's kiss
To carry gametes—Gymnos touched dry land
And never more would need a pond for this.

"I am the master of the hilltop bare,"
Said Gymnos as he claimed the ridge above,
"Where Lycos cannot grow, I find my care
And plant my children with the wind's own love.

No water need I find to carry sperm—
I place my pollen on the wind to blow
Across the valley to the waiting term
Of ovule where my children start to grow."

Four children bore great Gymnos in his days
To carry on the naked-seeded line:
First Cordaios, the lord of coal-swamp ways,
Then Cycados, then Conifera fine,

And last of all came Ginkga ancient-old
Who'd outlast every other of the four
To stand alone like living stories told
From when the dinosaurs would walk no more.

Great Cordaios was the first to tower
Above the old Carboniferous floor:
A tree of forty meters, hour by hour
He'd grown to match the Lepidos before.

His long and strap-like leaves were something new—
No frond, no scale, no spore-cone here below,
But blade-like foliage catching every view
Of sunlight filtered through the forest's glow.

His seeds hung naked on the outer scales
Of female cones that opened to the air—
No shelter but the wind that never fails
To carry tiny seeds to somewhere fair.

And Cordaios grew close beside the swamp
In vast and shadowed groves of coal-to-be
That would in ages hence give flame its stomp
On industry—his body, crushed, set free

As energy for those who mine the seams
Of mountain ranges in the modern years:
The carbon that he built from ancient dreams
Now rises with the smoke of engineers.

But Cycados had chosen something strange:
He grew more slowly, kept his fronds like palms,
And learned to live across the widest range
Of seasons, drought, and heat without the qualms

Of quick growth—patience was the path he chose,
A trunk as round as barrel, soft inside,
With fronds that crowned him, set in even rows
Of ancient beauty and unchanging pride.

His partnership with dwellers at the root
That fixed the nitrogen below the ground
Was chemistry more subtle than dispute—
The gift of partnership that always found

Enriched the soil around him, so the world
Where cycads spread their fronds, their cones full-grown,
Was richer than the bare land left unfurled
By those who worked in solitude alone.

Great Conifera chose to grow in cold
And dry and rocky places shunned by all—

On mountainsides and ridges bare and bold
Where other trees would freeze or fail to call

The growing season long enough to fill
A full and leafy canopy of green—
So Conifera built a needle still
And small that slows the water-leaving scene.

The needle: leaf reduced to spike so fine
That winter winds can never parch or drain
Or dry it out—the resin and the pine
Of waxy coating let him still remain

Through all the seasons, even when the cold
Has stripped the broad-leafed trees of every blade—
He stands through winter green and proud and bold
And never needs to hide in autumn's shade.

His cones were sealed against the winter's blow:
A woody armor over every seed
Until the warmth returns to let them go
And scatter where new forests are to seed.

Then there is Ginkga, most ancient of all—
A fan-shaped leaf like none that came before,
Who'd watch the dinosaurs both rise and fall
And still be standing after all their roar

Had faded into stone. The ginkgo stands,
Tended by Buddhist monks in temple court,
With dignity through every age; he hands
On permanence, the very highest sort

Of evolution's wisdom: being old
Is to be tested and be found to last,
And Ginkga's children tell the world they hold
A place no force has razed, though ages passed.

The naked seed teaches us that sometimes
What lies uncovered, open, carries more:
No flower's bright display—but only rhymes
Of wind and chance to find the waiting shore

Of fertile soil, where now the naked seed
Can root and grow without a mother's care—
All self-sufficient, sealed against all need
For anything but earth and light and air.

So honor Gymnos' naked-seeded line:
The cycad's patience, conifer's cold might,
Cordaitalean groves beside the brine,
The ginkgo standing through all change in sight.

From Gymnos' hillside where the wind blows free
To forests that shall outlast all we know,
The gymnosperms remind us all to be
The ones who plant where others dare not go.

Chapter 70: The Lords of Ink

Aquarius 14, day 70 of the Gaian year

The nautiloid, in chapters long before,
Had built his coiling shell of chambered pride
And ruled the ancient seas, where all would pour
Their forces in the ocean's deep and wide.

Two paths diverged from that ancestral coil:
One kept the shell and wore it like a crown,
The other chose to shed that calcite toil—
And each would win a glory of renown.

Ammonos kept the outer shell and grew
Its whorls in patterns ever more refined:
The suture lines that held each chamber true
Grew folded, fractal, intricately lined—

From curves to gothic tracery's display
Of saddles, lobes, and ridges intertwined,
As if the shell itself were art at play
That nature carved but never quite defined

In any form—for Ammonos would own
Each variation that a shell could take:
Some broad as cartwheels, flat as river stone,
Some tall and narrow as a coiling snake,

Some armed with thorns, some smooth as polished bone,
Some small as coins and some as large as men—
No cephalopod has since claimed the throne
Of shell diversity he held back then.

Through every ocean, warm and cold alike,
From shallow reef to deep abyssal floor,
His children filled each niche and every strike
Of evolution's fortune opened more—

So many forms, each coiled in its own stone,
And each begat a stranger, and the next;
The tree of Ammonos spread wide, full-grown,
In all its branching—tangled, rich, and vexed.

Yet all of them were taken in the end:
When dying struck the Mesozoic's close,
Not one of Ammonos' long line would bend
Or find a refuge from those final throes.

The nautiloid survived—the ancient form—
But every ammonite was swept away,
Their shells now spiral fossils from the storm
Of their extinction's unforgiving day.

But from that coiled lineage one would spring
Who chose a different path for all his kind:
Coleios turned the shell to inner thing
And let the shell-less body flow, resigned

To no fixed form—for if the shell is hid
Then no shell-crushing jaw that ever grew
Could crack it—every jaw of every squid-
Killer had aimed at shells that once it knew,

Was visible, projecting, outer-worn:
But Coleios had put his shell inside
And left his predators forever torn
Between the shape they sought and what he'd hide.

No outer armor—only speed instead,
And jet-propulsion, water-forced and fast:
He squeezed his muscled mantle, shot ahead
Through water, leaving predators outclassed

Who'd aimed at where he'd been a breath before—
The rocket of the ancient ocean's hall,
Who turned the very water to a roar
Of thrust and found escape beyond them all.

Four children had Coleios in his time:
First Belemno, whose inner shell remained
As solid cylinder of calcite prime—
A bullet in his flesh that strength maintained.

His children filled the Mesozoic seas
With numbers past what any eye could count,
Like bullets scattered on the ocean's leas
Their rostral shells in limestone strata mount

In layers feet-deep—witness to the age
When Belemno's young ruled the waters cold
And hungry—fossil-filled on every page
Of limestone cliff from young to very old.

Then Sepos turned the shell to softer page:
A flat and porous cuttlebone, his own,

Him buoyant in the column's middle stage,
Adjusting depth by gas sealed in the bone—

A solemn engineer, precise and still,
He hung where neither light nor dark held sway,
And mastered buoyancy by his own skill,
And rose or sank, as he chose, night or day.

His skin could ripple with a thousand shades
In milliseconds—chromatophores bright
That opened and contracted in cascades
Of color-signal visible in light:

The cuttlefish communicates in waves
Of color, pattern, pulse along his side—
A living language that the ocean saves
From silence, given freely without pride

Or need for listener—the signal spreads
Across his whole skin all at once in flow
Of rippled meaning, signaling the threads
Of mood and mate-choice, all around to know.

Young Teuthis shed the inner shell at last
And kept instead a thin translucent quill
Of chitin—ghost of shell from ancient past—
That gave his long and streamlined body still

The structure for his mantle muscles' pull
While letting him grow longer, faster, sleek:
Ten arms, eight short and two extended full
For catching prey that other hunters seek.

The giant squid—great Architeuthis' kind—
Would grow to arms of forty feet in reach
And haunt the deep where no light is defined:
The sea monster of every sailor's speech,

Whose battles with the sperm whale in the dark
Of ocean's midnight left great scars of round
Upon the whale's great face—the sucker's mark
Of combat in the deep where light's not found.

But Octopos dissolved the shell outright—
Not quill, not cuttlebone, not rostra stayed—
And in that loss he gained a stranger might:
The boneless body could reshape and wade

Through any gap, beneath a rock or door,
Could pour himself through openings as small
As any of his beaks—no solid core
To limit where his eight-armed self could crawl.

And in that boneless fluid form he gained
The largest brain, relative to his size,
Of any invertebrate—unrestrained
Intelligence that chooses to disguise

Itself in eight arms and two jewel-like eyes,
Who opens jars and learns from watching peers,
Whose sleep resembles something that implies
A dreaming—complex mind that always steers

Around the simple answer toward the best:
He changes color, texture, profile, veers
From background into vanishing's last test—
The master of disguise that disappears

By wearing what surrounds him as his skin,
By being rock when still and current when
He moves—by turning the outside within
And wearing what he is not, yet again

And yet again until the hunter sees
Nothing where Octopos had been a breath
Before—and so he crosses the high seas
Of danger daily, never meeting death.

The ink itself—defense of all this line—
Became their signature upon the tide:
A cloud of darkness drawn along the brine
Where predators would see the prey inside

Still visible and close—then nothing there
But purple-black uncertainty instead:
The lords of ink escaped through their own care
To leave behind a decoy of the dead

Dark water in the shape of what they were.
So honor Ammonos, his spiral crown,
And Coleios, who made the seen a blur—
Two paths from one coiled ancestor laid down:

One kept the shell and filled the seas with form
In countless variations, broad and tall,

Then perished wholly in extinction's storm;
The other shed the shell and outlived all.

From Belemno's bolt to Octopos' mind,
From Sepos' color-speech to Teuthis' reach,
The coleoids proved those who leave behind
The visible protection find a speech

More powerful than armor—the disguise,
The speed, the ink, the shifting shape of form,
The distributed mind in eight-armed guise—
These are a better armor than the norm.

Chapter 71: The Armored Many

Aquarius 15, day 71 of the Gaian year

Among crustacean nations of the sea
Whose ancient story reached from far before
The Carboniferous, lived one so free
In body-plan it split the others' lore:

For Malacos had given all his sons
A body counted in the sum of three:
The head, the thorax, abdomen, which runs
Together in a segmentation free

But organized—with eight above the waist,
Then six below, five more to thorax laid,
And nineteen segments in the body placed
With care by evolution's patient trade.

For Malacos gave to every son
The gift of compound eyes on stalks that rise
That looked in all directions, never done
With scanning: periscope that never lies

About what passes by from any side—
And five pairs of his walking legs to stride
Across the ocean floor with steady glide,
And swimmerets below for catching tide.

His four great children filled the ocean's halls:
First Decapos with his ten-legged might,
Then Euphausios in the water's calls,
Then Stomatos, whose clubs strike swift as light,

And Isops who would dare to venture last
From salty sea to fresh to land above—
The pill bug of the garden, firm and fast
To roll into a ball, defensive love.

Great Decapos, the master of the claw:
Ten legs he had, of specialized design—
The front two modified for seize and gnaw
While eight behind for walking's steady line.

His children are the finest feast the sea
Has ever offered to the human kind:
The lobster scarlet in his boiling free,
The crab who walks sideways of any mind

That moves toward danger—cutting sideways-wise
To disappear from any head-on view,
A strategy of angles that implies
The forward charge is not the only true

Direction—sometimes sideways is the way
That brings you to your destination right.
The shrimp who swim in clouds of silver spray,
The crayfish of the freshwater's delight.

The hermit crab who borrows others' shells
And searches all the ocean floor to find
The perfect home—and when he outgrows, swells
Beyond the shell, he searches for a kind

That fits—and often in a chain of trade:
One leaves, another moves into the space,
A whole community of homeless made
Suddenly housed by one exchange of place.

Great Stomatos, who haunts the shallow reef,
Is something beyond any creature known
For violence—his punch, of startling brief
Duration, strikes with force that's all his own:

The water cavitates behind his strike
And sends a second shockwave past the first—
Two blows with every punch, nothing alike
In all the world of animals—the worst

And best designed of weapons, club or spear,
To crack the shells of snails and crab and clam
With strikes too swift for eye to catch, or ear—
A living bullet's program and exam.

Sixteen types of color-receptor bright
In his compound eyes compare to our
Mere three—and so he sees what we call light
Split up into spectrums of such power

That the colors we cannot name or see
Are Stomatos' own ordinary view:
He lives in a chromatic world set free
From limits of our visual cue.

Great Euphausios chose a different path—
No claw, no hammer, but the patient swim

Through midnight waters, suffering the wrath
Of cold and dark at ocean's midnight rim,

To filter-feed on plankton day and night
And build himself in numbers past all count:
The krill who feed the great whale with delight,
The base on which the ocean's mountains mount

Of life—for without krill there is no whale,
No penguin, seal, or seabird keeping warm
Through polar winter, nothing that would sail
The southern oceans in the freezing storm.

The smallest meal that feeds the largest mind
That swims the ocean—krill's abundant grace
Sustains the whale, and in that role we find
That smallness too can hold a sovereign place.

And Isops was the bravest of them all
Who heard the call of land and answered it—
From sea to fresh, from fresh to land's great hall
He walked on many legs, a perfect fit

Where he would try: the roly-poly, curled,
The woodlouse in the log's decaying mound,
The pill bug of the garden's underworld—
The one crustacean wholly on the ground,

In garden and in forest, field and floor—
The only crustacean that breathes the air
Through gills, now modified, that still adore
The moisture that reminds them water's there.

He rolls into a perfect sphere at touch—
Not fleeing, but presenting, hard and stout,
The outside of his armor—not too much
To ask of one who from the sea came out

And made a life in places cold and damp
Beneath the stones and leaves where darkness keeps
Its own community: the pill bug's camp
Where isopods have claimed the rotting heaps.

So Malacos teaches us the way
Of all specialization's many roads:
Not one sole way to live each single day
But nineteen segments bearing different loads

Of task and talent, each appendage bent
To specialized perfection by the years—
From filter-feeding to the punch well-sent,
From cracking shells to rolling into spheres.

Honor the armored many who have claimed
Both sea and land and every depth between—
The lobster's patience cannot be ashamed,
The krill's abundance makes the ocean green.

Chapter 72: The Ancient Predators

Aquarius 16, day 72 of the Gaian year

While Actinus, with ray-fin multitude,
Was multiplying in the waters wide,
Great Acanthus, son of Chondricthus' brood,
Had built his line upon a different tide.

Acanthus bore no bone within his form—
But cartilage, a softer living frame
That bends and flexes in the ocean's storm
And serves him better than the rigid came

Of heavy, calcified, and stony kind—
The jaw itself that first evolved from gill
Arches was cartilage, long years behind,
And bone is but a cartilage that's still

Made hard—and some have found that keeping soft
Is gift worth more than hardening to stone:
For cartilage is lighter, heals aloft
More quickly—sharks keep what others disown.

Acanthus bore two sons of different form:
Great Elasmos, who would forever bless
The water with his terror in the storm,
And the quiet Chimaera, who chose less

Of open ocean's predatory fight
And more of the deep ocean's patient hall—
To feed where no competitor's in sight
And answer to the cold deep's ancient call.

Chimaera's children—ratfish, ghost sharks, deep—
Grew plates for grinding shells upon their snout
And sail-like dorsal spines that while they sleep
Trail venom in the water all about.

In caves of deepest ocean, far below
Where light has never reached and pressure kills
All creatures not adapted, there they go
And live their quiet lives in coldest frills

Of darkness—cartilaginous and old,
Most ancient left, scarce changed from long before,
And find their food, as patient as the cold,
By slow examination of the floor.

But Elasmos was built for open speed—
He split his children into those who flew
Across the open water in their creed
Of hunting and those who spread out and grew

Flat to the bottom in a different art:
Selachios, the sharks who split the blue
With every streamlined body shaped in part
By nothing but the need to cut right through

The water fast and feel the prey ahead—
No equal in the sea for any kind
Of predatory mastery has led
A creature to perfection so refined.

For sharks replaced their teeth in endless rows
That marched from front to back in line on line—
Each tooth that fell was followed as it goes
By the next tooth in waiting, by design.

No cavity, no toothache, no decay—
A dozen rows of teeth behind the one
That does the work, and when that falls away
Another takes the place before the sun

Has moved a hand's-breadth in the sky above:
The shark cannot run out of teeth to spare,
And every tooth is sharp as surgeon's glove
And serrated for the cutting laid bare.

Carboniferous seas: a golden age—
A hundred kinds of shark from every form
Wrote their diversity on history's page
Beneath the coal-swamp ocean's ancient storm.

Great Stethacanthos wore, for all displayed,
Of coal-swamp seas a dorsal fin transformed
Into a platform bristled and arrayed
With tooth-like denticles—a shape that stormed

All understanding of what fins are for:
A flat and ironing-board of texture rough
Upon his back, which evolution bore
For show, to flaunt it, bristling, bold and tough;

He raised it high before the females' eyes,
And bristled it at rivals in his way;

A crown of teeth, a banner and a prize,
That told the seas whose waters were his sway.

Young Xenacanthos took to the fresh streams
And hunted through the coal-swamp rivers wide
With eel-like body chasing all his dreams
Of prey through every turn and eddied tide.

His double-pointed teeth could grip the scales
Of fish that other sharks could not retain—
A specialist whose freshwater regales
Remind us that the ocean's not the main

And only stage where Selachios' kind
Could build their hungry dynasties and rule:
The river has its predators to find
For those who make the freshwater their school.

From Selachios, Batos—rays and skates—
Who flattened out their bodies to the floor
And hid in sand with patience that awaits
Whatever comes to cross the bottom shore.

Their spiracles on top draw water in
When mouths below are buried deep in sand—
The hidden predator, the ocean's kin,
Who strikes from underneath with venom-gland.

The stingray's barb along the tail's sure line,
The manta, filtering the water's flow
With gill-rakes fine as any sieve's design—
Each found through evolution where to go

To serve Elasmos' heritage and house
In form as different as could ever be
From shark to ray, from predator to grouse
Of plankton-feeder—yet the same at sea

In cartilage, in breath of the six gills,
In the live birth or leathern egg-case purse,
In Lorenzini's ampullae, whose skills
Of sense can read the ocean's hidden verse

Of every electromagnetic field
That living creatures make—so that the shark
Can feel your living heartbeat, though concealed,
Within the water, from across the dark.

The shark has seen the dinosaurs arise
And fall to ash and memory's cold grave,
Has seen the mammals learn to colonize
The land and sea—and still the shark is brave

Enough to be exactly what it was
In the Carboniferous seas of coal:
A shape so perfect evolution does
Not need to change—the perfect is the whole

Of what the shark already is and was
And always has been since the first one swam.
Honor the ancient predators, because
The oldest answer is the best exam

Of what endurance looks like over time:
The shark unchanged through every dying age—
The living proof that sometimes the sublime
Comes first and stays first on life's oldest stage.

Chapter 73: The Drying of the Deep

Aquarius 17, day 73 of the Gaian year

The coal swamps did not perish in one night—
They drew back slowly as a tide retreats
When Pangea locked the continents tight
And cut the middle world from ocean's feats

Of moisture-carrying: no monsoon rain
Could cross the mountain ranges looming high
To water what the drying inland plain
Had always drunk from river, lake, and sky.

And mile by patient mile the drought crept in
Where wetness once had ruled with open hand;
The swamp retreated toward the coast to win
Its last refuge and leave the middle land

To dust and stone—the great lycopsid trees
That Lycos raised like living towers wide
Could not survive the shortage: by degrees
The standing water fell, the inland tide

Withdrew, and cracking clay replaced the fen
That Lycos built his coal-age glory on—
The rotting trunks lay airless in the den
Of dying sediment, compressed and gone

Into the seams of coal that future hands
Would dig for fire—the great lycopsid gave
His body to the earth's enduring bands
Of carbon: every forest makes its grave

A gift for ages yet to come. Then he,
Great Lycos, drew back to the coasts of wet
Where rainfall still could feed him, and, rain-free,
Interior became a stone regret

Of what had been—the Coal Swamp's splendid reign
Had lasted sixty million years of green,
Had stood through the Carboniferous main
And made the richest canopy yet seen.

Now it was ending. And from every ridge
That rose above the dying swamp-line dry,
For Gymnos had been watching from the bridge
Of highland, where he'd always held the high

And drier ground—the naked seed his gift,
Requiring neither puddle nor a pool
To carry forward, only wind to lift
The cone-borne seed across the country cool

And arid to whatever rocky slope
Or limestone crag would offer any root
A purchase—Gymnos had been born to cope
With dryness, born to thrive where swamp bore fruit

Only in wetness—and the drying world
Was his inheritance at last. He sent
His children out and watched their flags unfurled
Across the heights: Conifera first went

To lead the charge up every barren slope
Where naked limestone baked beneath the sun—
She raised her resinous boughs and gave hope
Of shade and shelter where there had been none.

Her cone-scales held the seed against the dry
Wherever wind would set it on bare stone:
Conifera, the pioneer on high,
Who made the ridge a forest of her own

And proved that gymnosperms go anywhere
That drying drove the swamp from, fill the space
That loss had emptied with her living care—
The highland forest built on fallen grace.

And Ginkga, with her fan-shaped leaf of gold,
Kept faith with river valleys, finding wet
Still pooled along the streambeds—she was bold
Enough to spread along the margins yet

Remaining moist, and send her seeds to float
On every current that could carry them
To any fertile bank—she wore the coat
Of adaptability, a bright gem.

Cycados took the desert margin's edge
Where green met dust—all armored, short, and stout,
Her trunk a cistern on each rocky ledge
Where she could store what little rain came out

Of Pangea's miserly, clouded skies—
Her cone at the crown-top bore seeds that fell

To any scrap of soil; she had no prize
Of great abundance, only the stern spell:

Endurance, drawing slow from underground
What little moisture lingered—and she held
Her ground through drought until the next rain's sound,
Unbroken, by no dryness ever felled.

So Gymnos watched his children take the land
That dying swamp gave up without a word—
Each slope the water left behind was spanned
With green from cone-borne seed the dry winds stirred

Into each empty height. The naked seed
Meant freedom from the standing water's law:
The gymnosperm obeyed no ancient creed
Of needing pools, and in the dry world's maw

He found not death but kingdom—every hill
That swamp abandoned was a new frontier
For those who carried water in the will
Of seed itself: the dry lands held no fear

For Gymnos and his children. They had known
The high dry ground for ages, waiting out
The swamp's dominion—now that it had grown
Too arid for the swamp, the ridges shout

With gymnosperm abundance—resin, cone,
And needle-leaf against the sun's hard face.
Honor those who made the bare stone their own
And planted life in the departing's place.

Chapter 74: The Therapsid Law

Aquarius 18, day 74 of the Gaian year

And now Pelyon, that mighty fin-backed lord
Who raised the solar sail upon his spine
To warm himself at dawn and so to hoard
The sun's heat like a living solar shrine—

Great Pelyon had been master of the land
Through all the late Carboniferous age:
Dimetrodon's great bulk held proud command
Of every hollow and of every stage

Where synapsids had learned to live and grow—
The sprawling gait, the cold blood of the night,
The morning sunning, energy's slow flow
Before the hunt: a slow but proven right

Of conquest over those who had no sail,
No way to warm their blood except by sun,
No strategy but wait until the stale
And frigid morning finally was done.

But all Pelyon's dominion was a bridge—
A first attempt at solving the great need
For warmth—the sail was answer to a ridge
Of cold that warmer flesh could supersede,

And in the late Permian there arose
From Synaps' lineage a different kind
Who found the answer not through dorsal shows
Of spine-fin but through working of the mind

And body into something new: Theraps—
The therapsid law of upright walking—
Stood from the ground and closed the sprawling gaps
That Pelyon's old ancestors kept stalking

With elbows out and belly near the earth.
But Theraps pulled his legs beneath his mass
And stood more upright—and with every birth
Of that new posture, every stride would pass

More energy to speed than to the fight
Against the ground's own gravity—the ones
Who stood upright could run both day and night
With lungs no more compressed by their own tons

Of body pressing down on them: for when
You sprawl, the ribs that carry lungs must bear
The body's weight with every stride, and then
The sprint and breathe become a choice—compare

The crocodile who cannot sprint for long
Before he gasps—the sprawling gait has tied
His breath to step, so every stride the strong
One traded for the air he's then denied.

But Theraps stood above the ground's demand
And breathed while running, with his lungs released
From duty to the ribs' supporting hand—
And this was more than merely an increased

Speed or endurance: it began the way
Toward something warmer, something that could run
Through cold of night and early morning's grey
And hunt in chill before the day's begun.

Theraps found new arrangements for the jaw—
The dentary grew large, and, more and more,
Brought all the face beneath its single law;
Complex new teeth replaced the row before

Of simple cone-teeth that his forebears kept:
Incisors for the grip, a canine fang
For piercing deep, and cheek-teeth that adept
At grinding followed as the jaw-hinge sprang

Into a new position—Theraps moved
Toward the mammal mouth before the name
Of mammal had been coined, and he improved
Each generation toward the goal of flame

Within the body that would never need
The sun to kindle it—internal heat
That Cynos would achieve, that final creed
Warm-bloodedness, where cold and heat compete

No longer—but that came later. For now
Theraps walked the Permian land in pride,
His uprightness a covenant, his vow
To be not passive sun-warmed but inside-

Warmed by the burning of his food, the slow
Combustion of the prey he ate to run

Through every night and morning's cold below
The far horizon of the rising sun.

The dinocephalia rose as great
And heavy-headed masters of the plain—
Theraps' own largest children, who create
Like great battering rams that drove the grain

Of fear through every creature on the land—
With thick skulls for head-butting, wide and stout,
They ruled the middle Permian firsthand
Before their own extinction's sudden rout.

And Theraps branched in all directions wide:
The hunters and the hunted, large and small,
The armored and the swift and those who tried
The life of burrows underneath it all.

But all of them, from eldest down to youth,
Agreed the sprawl was ending, and the age
Of upright walking had arrived—its truth
Was written in each trackway on the stage

Of Permian red desert: prints that show
The feet beneath the body, not spread wide—
The law of Theraps told the world: below
The body is where limbs were meant to guide.

So honor the therapsid who stood tall
And turned the solar sail to inner flame—
Who gave the mammal's gait to one and all
And wrote the upright into life's own name.

Chapter 75: The Parareptile Fortress

Aquarius 19, day 75 of the Gaian year

While Theraps built his dynasty of heat
On synapsid ground, and on the other
Side of Amnios' family tree, the seat
Of Sauros, who raised his children—brother

To Synaps, but he took a different road:
The sauropsid line, who kept their blood cold
And ancient ways beneath a varied code
Of armor, scale, and patience, bought and sold

In Permian markets of survival
By means far different from what Theraps chose.
Sauros had two children at arrival
On the Permian stage: two different shows

Of being reptile in a drying world.
First came the parareptile, Paraps, who
Had heard the world grow hot and dry, and curled
Himself in armor as the dangers grew.

For Paraps chose the fortress over speed:
His skull was solid, anapsid, and dense—
No window in the bone, no lightened creed
Of airy fenestrae, just the immense

And solid wall of skull on every side—
A helmet for the head, a shell for all
The body when his children could provide
Themselves with plating—and in this great hall

Of armoring, great Paraps found his peace.
And the pareiasaurs among his sons
Were massive, cow-like, walking in the fleece
Of osteoderms—bony buttons, tons

Of them embedded in the skin along
The back and sides, a living cobblestone
Of armor that no predator too long
Could penetrate without a weapon's groan

Of effort—Paraps was the fortress class
Of Permian plant-eating beasts, who'd say
To any predator: just let this pass,
Do not attempt me; turn and go away:

I'm not worth the trouble of the trying.
And in his children something stays the same
Through every dying and the undying—
For Turtlos took the pareiasaurs' claim

Of bone-embedded armor and refined
The castle to perfection: drew the plates
Inside, fused them to spine and ribcage, lined
With bone, and pulled the shell until the gates

Of fortress were the body's very self—
The turtle's shell is ribs and bone transformed,
The spine is fused into the topmost shelf
Of the great carapace, a form reformed

Until the body, whole, becomes the wall—
There is no fortress more complete than she
Who is herself the fortress, shell and all,
The living castle, roaming wide and free.

But Eureps chose the lighter path instead:
The eureptile, the second child, would bore
Two windows in the skull's girth, so it shed
Its weight, and set, more swiftly than before,

The jaw into a faster-snapping frame:
Diapsid skull, with temporal arches
Where muscle could attach itself and claim
More leverage; and so Eureps marches

Toward the nimble, onward toward the quick,
The skull more open than it was before
With fenestrae—the architect's own trick
Of lightening the bone to move it more.

And from Eureps' own line would come in time
The archosaurs and lizards, snakes and birds—
The windows in the skull a paradigm
Of opened possibility, the words

Of an evolutionary grammar
That speaks across the Mesozoic age—
But that was future. Now Eureps' hammer
And chisel worked in Permian's first stage.

Paraps and Eureps shared the drying land
With Theraps' children—different nations

Walking in the Pangean red and grand
Red desert with their separate stations:

The armored fortress moving through the waste,
The lighter skull exploring cracks and sand,
The upright walker moving with great haste
Through heat the other two could not withstand

By standing still for long—and yet all three
Were children all of Amnios' great gift,
The shelled egg, freed from water and the sea,
The amniote design that gave the lift

Of land-birth to the vertebrate's estate:
No longer bound to any pool or stream
For spawning, but now free to populate
The dry inland of the Pangean dream.

Honor Paraps who chose the heavy shield
And Eureps, whose skull the windows broke through—
Both children of the same ancestral field
Who built their futures different, both the true

Expression of what life does with one gift:
The land itself, the freedom from the tide,
The dry world's possibility to lift
Two lines of life into their separate pride.

Chapter 76: The Pangean Road

Aquarius 20, day 76 of the Gaian year

The continents had long been drifting in,
For hundreds of millions of years, the sea
Had narrowed between coasts, grown ever thin,
Until one land was all the world could be:

Supercontinent, great Pangea, pressed
Together all the land the earth possessed
Into one mass from tropic to the crest
Of frozen poles—the east now touching west,

South meeting north across the closing brine
Of shrinking oceans, mountain ranges thrust
Where plates collided into one long spine
Of rock from the equator to the dust

Of arctic shore—and in the center lay
The greatest inland ever to be known:
A vast and arid heart where no sea spray
Could reach, where desert-red and barren stone

Defined the world for thousands of miles wide—
No ocean breeze, no monsoon rain could cross
The mountain ranges ringing every side
To soften the Pangean inland's loss

Of moisture—only the extremes, the swings
Of temperature from day to night remained,
The burning day, the freezing that night brings
When no warm ocean's heat has been retained

Nearby—a world of all extremes, without
The ocean's moderating breath to calm
The temperature to something less devout
To killing heat and cold—a desert psalm

Of desolation sang across the heart
Of Pangea. And yet the small ones heard
A different sermon in it—for the art
Of being small is simply this: the word

Of desert is not death for those whose needs
Are small enough to fit within the stone,
Who find their food in every crack that feeds
On something—who can make a home their own

From nothing but a crevice in the rock
And eat the things the large ones overlook:
The small invertebrate, the insect stock
Needs not the wealth of river or of brook

To thrive—a fallen leaf, a fallen seed,
The bodies of the dead, the fungal mat—
This is enough for all Neopter's creed,
And Pangea's interior was that

And more: it was a continent of road
For those who had the wings to cross it with,
A highway wider than had ever glowed
With possibility, a kind of smith

Of new biodiversity for those
Who could endure the crossing. He spread wide,
Neopter, his nations into each close
And pass where scrub and juniper abide

And cling to life—new orders found their place
In the dry interior of the one
Great land: the beetles multiplied in space
Where no competition yet had begun,

The termites of a later age took form
From proto-roach ancestors, those who tried
The dry interior's transforming storm
Of temperature and heat, and found inside

The rotting log and under every stone
A kingdom made of cellulose—the wood
That no large vertebrate could eat alone
Was Neopter's inheritance and good

And endless bread. The ants would later come
In far-off future chapters—but the seed
Of colony, the slow, insistent drum
Of the eusocial life and common need

Began in hymenoptera's first kind,
Ancestors who walked the Permian plain
And found in shared defense and work combined
More of survival than the lone campaign.

And Arachnus crossed the Pangean road
As well—the spiders, with their gift of silk,

Had tools of conquest that no other showed:
A web across the world, a pale white milk

Of protein, which the spinneret begets
Into a snare for anything that flew—
And in a world of insects, nothing gets
More profitable than a trap for new

Varieties of flying prey. Where went
Neopter's children, spreading their new wings
Across the vast interior, intent,
Arachnus followed, and his web he strings

Between whatever brush and scrub remained
Along the desert margins, hunting each
New arrival—a predator ingrained
In the same crossing, wary, close in reach,

And patient, watching eight-eyed in the dark.
So Pangea, all desolate and bare,
That vast red heart with not a single mark
Of ocean moisture, was a nation where

Lay possibilities for all the small
Who need no river: insect and spider
Found in the supercontinent a hall
Wider than the world before, insider

Knowledge of all that smallness means for those
Who search the cracks and corners of the earth:
That no geography can ever close
A kingdom to the ones of smaller girth

Who enter it by slipping through the stones.
So honor the Pangean road that tied
All lands in one—that sent the small through zones
Of desolation, and the world allied

Its life's diversity through leg and wing
Across the dry interior's expanse—
The continent of one gives everything
A common stage for the evolving dance.

Chapter 77: The Cynodont's Secret

Aquarius 21, day 77 of the Gaian year

Among therapsid nations of the land
There rose a line marked out by different teeth—
Not simple pegboard, uniform and bland
Of cone upon cone, but something beneath

The surface of the jaw that said: I would
Have for my food a different tool for each
Part of the eating—Cynos understood
Before the word was known that every reach

Of sustenance requires a separate skill:
The seizing, and the killing, grinding down—
And so his teeth became the jaw's first thrill
Of specialization, the quiet crown

Of mammal birthright: the incisor's bite
Up front to grip and snip; the canine fang
Behind it, longer, built for puncture's might
And deep penetration when the hunt sang

With urgency; and then the cheek-teeth massed
Toward the back of the jaw for crushing,
For all the patient work of grinding fast
Each mouthful into a paste—the brushing

Of cusp on cusp, the upper on the low
In an occluding pair, a fitted mill
That ground the meal with every chew, and so
Would grow the brain with better food, to fill

The costly thinking tissue. So he found,
Cynos, in differentiated teeth,
A path to more nutrition, and more ground
For brainwork that was possible, beneath

The skull that was itself in change of form—
A larger braincase, smaller jaw; the bones
Of the back jaw would slowly now inform
The listening ear with new vibration, tones

That shifted as the jaw-bones at the hinge
Became detached, migrated slowly back
Along the skull until the tiny fringe
Of bone became the middle ear's new knack

For hearing higher pitches—and the same
Jaw-bones that reptiles use to bite and chew
Would, over many generations, claim
A different life of hearing, sound, and view.

But Cynos held another secret close—
The whisker. In his snout were tiny pits
For whisker follicles, and this bestows
The most diagnostic mark: for what sits

In a follicle pit must be a hair,
And hair means warm blood to grow and keep it,
Hair means the body generates somewhere
Within itself the fire to heat it.

And Cynos was already somewhat warm—
Not fully, not as mammals were to be,
But moving on past the cold-blooded norm
To bodies heated from within, set free

Of morning sunning, free of the hour
All wasted waiting for the warming skies
Before the hunt—Cynos had the power
To be already heated at sunrise.

He dug down deep into the earth as well—
The cynodont would dig himself a den
Where temperature stayed level and the spell
Of surface heat and cold lost force again

To reach the body; and the burrow kept
The later generations safe when fire
Rained from the sky—when great volcanoes wept
Ash across the world, and the entire

Surface of all the earth became too hot
Or cold for those above the ground to bear,
The ones who lived beneath it all would not
Receive the killing dose of ash and air.

And Cynos knew nothing of this. He dug
Because the burrow kept his young secure,
Because the den, consistent, warm, and snug,
Was kinder than the drying world's unsure

And swinging heat of the Permian night
And day—he dug for practical intent

And present reasons, and the hidden light
Of that decision, tactical, that went

Beyond all tactics, it would penetrate
A world one hundred thousand years ahead
When everything above ground met its fate
And only burrowers remained not dead.

So Cynos in his burrow raised his young
With warm milk—not yet true mammalian,
And still he laid his eggs, but with the tongue
Of ancient motherhood, Pygmalion

Of what care would become—he sat above
His clutch and warmed them with his body's heat,
The first experiment in active love,
In giving warmth as the parental feat.

So honor Cynos for the dog-toothed gift—
For differentiation, for the warm
And buried life that gave the future's lift
To those who'd need it most in coming storm.

Chapter 78: The Gorgon's Reign

Aquarius 22, day 78 of the Gaian year

Among all Theraps' children, none struck fear
As deeply into every living heart
As Gorgo—gorgonopsid, whose career
Was built on being death refined to art:

The saber-toothed therapsid, apex lord
Of all the late Permian world, who walked
With a long killing fang that was the sword
And scepter of the age—a blade that talked

No other language than the chase's skill
And bringing down the large. For Gorgo found
In carnage and in every hard-won kill
The purest form of living, and her bound

At Dicyno and all his herds was swift—
She ran with semi-upright gait across
The Permian red plains, and with the gift
Of saber canine teeth she turned the loss

Of opportunity to instant death:
Two great and curving fangs that penetrate
The neck of any prey and rob the breath
From it before it knew its own last gate.

She was large—some of Gorgo's children grew
To bear-size, heavy-bodied, low-slung still
In part the older sprawl, but swift right through
The short, fierce sprint to accomplish the kill

Before prey could flee. In Permian lands
The tiger's equal, or the lion's, she
With all her ancient fury, Gorgo stands
And scans the herd of Dicyno, to see

With shining calculation, as the kind
Of hunter built for nothing but this part:
To read the herd's interior, to find
Its weakness, mark the one whose slowing heart

Will make the chase worthwhile to her—the old,
The young, the limping one, the lagging one
That moves less smoothly—Gorgo, calm and cold
And focused, chooses well before the run

Has even started who will die today.
Such is the mind that predators possess:
Not toolmaker's cleverness, not the way
Of problem-solving, but, in its finesse,

Close attention to the world around her,
The reading of behavior, the precise
Assessment of the frame—Gorgo found her
Her wisdom in the eyes, which did suffice

For knowing every creature in the herd
By the quality of its movement, by
The subtle hesitation—like a word
Misspoken, that a listening ear and eye

Can catch before the speaker's sentence ends—
Gorgo heard hesitation in the gait
Of prey before the chase itself extends
Into a sprint, and chose the one whose fate

Was sealed before she ever moved. And so
The gorgonopsid was the first great stage
Of mammal-lineage hunts, set to grow
Into the Permian's last closing age,

An apex that the world had never seen
In quite this form: a warm-ish blood, and speed,
And saber-tooth combined, and with a keen
And searching mind in service of its need.

She was the Permian heroic peak—
The form three hundred million years of life
Before had seemed preparing it to seek:
A predator of one design, a knife

Above all others—matched against, immense,
Dicyno's horn-billed millions grazing wide
Across the whole Pangean plain—the tense
And beautiful equation of the pride

Of predator and plenty of the prey
In balance, each one shaping, as they played,
The other through selection's ancient way
Of honing edge on edge, the parents made

Of all the speed and size they came to share—
Without her, the dicynodonts would not

Have grown so large; without the tether there
Of hunting's haunt, the prey forgets its lot:

It grows so careless, soft, abundant, slow—
And Gorgo was a gift, unwanted, though
Dicyno needed—the shadowing foe
That kept the herd alert and on the go.

This was the Permian's finest hour—
The ecosystem balanced, rich, complex,
Predator and prey each at its power,
Each shaping what the other would be next.

And it would end. It always ends. The reign
Of any apex is a flash, a breath
Of geologic time, a brief campaign
Of dominance, before arriving death

Of circumstance that no plan can foresee.
But while it lasted, honor Gorgo's sway—
The saber and the sprint, the skill to see,
To read all life and take it, day by day,

Across and through the Permian red plain.
The finest predator the age could make,
Who ruled the world and will not rule again—
The gorgonopsid gone for beauty's sake.

Chapter 79: The Last Paleozoic Sea

Aquarius 23, day 79 of the Gaian year

Before the great death came, before the fire
And poison of the age's ending wept
Its curtain down, the sea kept its choir
Of all the beauty that the oceans kept

Through all the ages—the Permian sea
Was rich beyond what any age before
Had managed: every reef that there could be
Alive with color, every ocean floor

Abundant—let us pause here at the shore,
Before the dying, let us stop and see
The Paleozoic sea's final store
In its last fullness; let us come to be

The witnesses of what will not survive:
The coral gardens first, the rugose kind,
Coleios' neighbors, who would keep alive
The reef's foundations, stone from sea designed

In oral structures, made in time to be
Of four-fold symmetry in polyp flesh
On limestone, the foundation and decree
Of the ancient Paleozoic's fresh

And living architecture—this would go.
The rugose coral would not cross the line
Of the extinction, nor tomorrow's show
Of the Triassic sea—their four-fold sign

Would vanish from the reef, replaced in time
By the six-fold scleractinian form—
But for now they rose in every sublime
Arrangement on the reef, beneath the warm

And shallow sea above them, lit with green
And blue and orange in the filtered light.
And there was Coleios, too, in the scene—
The ink-bearers, the masters of the night

And day of open water: Teuthis sped
And pulsed through all the columns of the sea,
While Octopos walked where stone gardens spread
Across the reef, with minds by three times three

To read the world. And in the waters, too,
With curled, cylindrical, and solid frame,
The belemnite Belemno swam right through,
A sleek torpedo, hunting, as he came,

For small and smaller prey through acres wide
Of Permian sea, his hard inner core
The only wall between his soft inside
And hungry world outside it, at its door.

And Sepos, the cuttlebone-bearer, hung
In the mid-water, and he changed his hue
Just like a living stone on which was flung
A canvas, every color, through and through,

At once, a living and a shifting flag
Of skin that could be anything the eye
Required—the boast, the color-changing brag
Of Coleios' great house against the sky

Of ocean overhead. The ammonites,
Who since Devonian had swum this deep,
The coiled ones, whose geometry's delights
Bore daughters spiral-perfect, and the sweep

Of solar mathematics in design—
Still coiling, still abundant, still the most
Common of fossils in that ancient wine
Of time; they too would nearly turn to ghost

At the great extinction, reduced to one
Or two survivors who would spread again
Throughout the Mesozoic like the sun
After the storm—but now theirs was the reign:

Uncounted through the Permian's great sea,
Their shells the very meter of the age.
And Malacos held all the floor in fee:
Great Decapos, within his heavy stage

Of armor, crossed the bottom, claw raised high;
Euphausios filtered cold waters wide
In clouds of millions, feeding every eye
That looked upon abundance—the inside

Of the great ocean's engine, krill-built base
That fed the food web from the bottom up.

And Stomatos within his shallow place
Still struck his shrimp-fist punch, and filled the cup

Of force within a microsecond's blow
Of club against the snail's hard, coiling shell—
This world was rich past all accounts could show,
So rich no reckoning could ever tell,

Enough to fill a thousand books, and still
Leave volumes yet unwritten of the kind
That the Permian sea had kept—until
The fire came, and all that it would find

Was changed at once. So let us pause, before
The curtain falls without applause, and be
Its grateful witnesses, before the shore
Of all the Paleozoic's last sea

Is poisoned—let us stand here in the light
That still pours clean and warm through waters clear
As any sky, and, with the reef in sight,
The current flowing, cuttlefish, and near,

The otter-smooth belemnite, let us praise
The sea's accomplishment: unbroken grace,
Three hundred million years of beauty's days,
At last shut, not diminished in its place,

And still a billion lives complete before
The ending—the Paleozoic sea
Was not a failure when it closed its door:
Each life, lived fully, is a victor, free.

Honor the last Paleozoic deep—
The reef that predates every reef we know,
The ocean that the Permian would keep
In trust for us to mourn, long, long ago.

Chapter 80: The Dicynodont Bread

Aquarius 24, day 80 of the Gaian year

Now hear of Dicyno, with beak and tusk,
The patient one, who fed the world through all
The Permian's late age, who walked till dusk
Through every landscape, from the stately hall

Of the tropical basin to the high
And arid plateau; who moved in great herds
Of thousands under the Pangean sky,
On its wide plains, and said with all his words

Of his abundant living: I am near.
I am the bread of this world, and its balm,
The patient herbivore without a fear
Too large for me to bear—Dicyno's calm

In Permian ecology renowned:
Where others starved or fled away to die,
Dicyno found a way, and what he found
Were roots beneath the soil, the drought-struck, dry

And woody vegetation that repels
The other plant-eaters—and so his beak
Was built for cropping, and his fossil tells
Of brotherhood with tortoise, and the peak

Of grinding: not with teeth; but two great tusks
Projecting, both, out of the upper jaw
For digging roots and tearing at the husks
Of plants left whole by every other maw

Untried—he was a dietary monk
Who ate what others left behind, who found
In every desert margin, every drunk
And withered, dying vegetation, ground

Still worth exploring for the root below.
The dicynodont became most widespread
Large vertebrate on land of any show
The Permian staged—redundant, as said,

But only in the sense that numbers vast
Were needed, so the pyramid could stand
Of Gorgo's hunger—each of them the last
Meal of another's; and the grid, the strand

Of energy from plant to herbivore
To carnivore was kept by the supply
Of Dicyno's abundance, the world's store
Of fuel, with the provider's nose held nigh

The ground; forever he would be the one
Who turned the sun's gift in the plant to flesh
That others needed—in this way the sun
Itself walked through the ecosystem's mesh

As Dicyno bore it from plant to prey.
There were hundreds of species in his line—
From rabbit-small to hippo-wide, each way
Of being Dicyno stood as a shrine

To versatility of one sole plan:
The beak, the tusk, the barrel body low
And close to the ground—and from each began
A different niche, a different overflow

Of adaptation: one who dug, below,
His den beside the termite mound; the one
Who waded in the furrowed rivers slow
Of Permian, half-sunk in mud; and one

Who roamed dry land, a hundred miles of red
Rock in a season, chasing thunder's train
Along the monsoon's trail to the brief spread
Of green that followed after any rain—

Dicyno roamed everywhere that the ground
Of Permian grew green, on every plain
And hillside the great continent around.
He was the sheep of Permian's domain—

The innocent abundance that supports
The wolf—the one whose death was the first plan
Of the ecosystem's energy courts;
And he submitted when his role began

To this one role without complaint or flight
Beyond what flight was useful; fit and true
To his own purpose, present in the light
Of each Permian dawn the whole herd knew.

The broad-backed herd that crossed the plain at dawn
Was his; and every track that followed heard

The predator behind, a shadow drawn:
This is the world that works, by hunger spurred:

The eaten and the eating, in their dance
Of ancient sculpting, each one shaping each
The other; Gorgo's greeting, at each glance,
Unto Dicyno was the way to teach

Each generation in the ancient art
Of being faster, slightly, than the one
Behind you—and the herd's panicking heart
Was Dicyno's whole education, sun

By sun, and through each generation's length.
So honor Dicyno, who fed the world,
Who walked in every nation, by his strength,
And turned the desert's last green leaf unfurled

To flesh the predator would need—and who
Was the one bread that came before the cup,
Whose patience and abundance seeded through
The pyramid of life from bottom up.

Chapter 81: The Eve of the Cup

Aquarius 25, day 81 of the Gaian year

There was a time—a brief and final time—
When all the world seemed rich enough to last:
The Permian at its height, its sublime
And complicated order, the vast past

Three hundred million years arrived at this:
An evening of the age, the gathered sum
Of all that life had built, a final kiss
Of ordinary beauty—as they come,

Dicyno scattered in the morning light
Across Pangean plains, Gorgo above
Watching upon the ridge; the sea, alight
With Paleozoic wealth, and the love

Of creature for its living, for the air
And water, and the food, the den it made
From nothing; and the Permian was fair
In this last hour before it came to fade.

The gymnosperm woods on the ridges stood
In their new quiet, past the coal swamp's loud
And tropical confusion—gone for good:
A quiet, arid landscape, but a proud

One: there the cone-trees on the red rock plain
Like dark green candles in the desert air,
The reptiles, basking, in the warm domain
Of Permian summertime, without care

For what lay under Siberia's ground,
What lay beneath the frozen land up north
Of Pangea's great shoulder: there, unbound,
Bacteria-rich basalts, cooking forth

Out of the planet's own deep heat, to rise
In pressure up against the surface crust,
In what the world would come to recognize
As the catastrophe—a buried gust

Of magma seeking every crack and seam
Within the Siberian basement rock
Toward the surface, in a patient dream
Of an eruption ticking like a clock

That only earth could read; and though it stirred,
The world above knew nothing of its hour.
And Cynos, in his burrow, heard no word
Of doom below the cool ground's dark power

He dug his den into; and all he knew
Were insect sounds that filled the desert night,
The wind across the cone-tree, and the few
Dry scraps of debris in the desert light.

And Gorgo, on her ridge at sundown, spied
The herds of Dicyno moving on to
The water at the dusk; and she, clear-eyed,
Marked out the old and slow one in her view

And felt the readiness she always felt
Before the hunt: the tightening, the stare;
And yet the world she hunted in had dealt
No sign of change, no warning anywhere

That she could read. And yet, deep down, a breath
Of gas leaked in Siberia's rock, wet
With sulfur, through a fissure—early death
Of ordinary air, in one place set

Small, just above the coming fire—a hiss
So faint that nothing living with a face
Or ears could ever hear, and all would miss:
The breath of what was building, the first trace

Of the small exhalation of a world
Preparing to unburden its long thirst
For the surface—the first edge, gently curled,
Of killing that was coming, and the worst.

Take this image: all the world entire
At table—every living thing in place,
Consuming its last meal before the fire.
The reef beneath the Permian sea's face

Was feeding on the current's plankton bloom;
The herd of Dicyno; and she who'd kill,
Who watches, all within a single room
Of ordinary evening, and the still

Necessity of life—and somewhere north,
In Siberian rock, the common, known,

Becoming something else; there, coming forth,
Breathing its first breath out of sulfur, blown

Into the stillness and unknowing air,
While all the world at table, free of doubt
Or grief, was eating all of what was there,
Not knowing what the evening was about.

This is the final supper of the age—
Not made dramatic, not with dread foretold,
And not announced with thunder on the stage,
But just the ordinary evening, rolled

Into the eve of ending, past belief—
And still the meal goes on, and none can feel
What they cannot see coming, and no grief
Is in them as they take their evening meal.

Honor the Permian's last evening's light,
The ordinary beauty of the full
World eating, sleeping, hunting, through the night,
Finding the grace of each day—and the pull

Of one more sunrise, each one unaware
Before the morning that would change the world.
The cup was coming; all sat gathered there,
Abundant, in their ancient peace, unfurled.

Chapter 82: Good Permian Friday

Aquarius 26, day 82 of the Gaian year

Then Siberia opened, not one blow:
The way a wound will open, slow at first,
A fissure reached the surface from below
Upon a day like others—the first burst

Of basalt, thin and local; then there came
Another and another, till the whole
Became a thousand miles of vent and flame,
The mother of volcanic fields, the toll

Of an eruption past all other scale
That living memory had ever spanned—
Two million cubic miles of basalt's trail
Of fire written on Siberian land,

In layers, laid down year by weary year:
This was no single blast, but a whole age
Of burning, and a hundred-thousand-year
Sustained eruption. Then, stage after stage,

The gases filled the sky; the first, the dread
Carbon dioxide, and the warming, came
Before the cooling—and then, cried instead,
Sulfur dioxide, storming like a flame,

The atmosphere with acid—every cloud
That formed above the Permian dry land
Came down again as acid rain, a shroud
Of chemical death spread over the strand

Of every forest that remained—the trees
Burned where they stood, though not from any blaze,
But from the rain itself, the acid's ease
Of stripping chlorophyll from all the sprays

Of canopy: the gymnosperm woods, made
By Conifera on hill, ridge, and slope,
Went brown at first, then gray, and fell, decayed—
The bridge between the sun and life lost hope:

The photosynthesis could not proceed
In acid air; the base of the career
Of energy was failing—every creed
Of all the eating built on plant, on mere

Nothing at all. The ocean was not spared:
Carbon dioxide took its bow, and passed,
Dissolving into waters widely shared,
Into the global sea, and there, at last,

Carbonic acid formed from gas and brine;
The ocean's chemistry was stormed, and fell
Its pH; carbonate in every line
Of shell dissolved; and coral, long and well

Built through three hundred million years, grew weak
And then to nothing; reefs' oral design
Dissolving; the sea warmed, its depths grew bleak,
Anoxic, without oxygen; the brine

Bred hydrogen sulfide—the toxic gas,
The purple poison of the deep, which rose
In killing blooms to surface; purple glass
Of water at the shore where nothing grows,

The ocean's tombs of former life; its door
Shut fast. And 96 percent of all
The species of the sea would cross no more
The boundary; brachiopods would fall.

The rugose coral, wholly; and the old
And few trilobites would meet the fire
Of that last great extinction, final, cold,
And permanent; the line that would expire

Of trilobites had stretched back to the morn
Of Cambrian explosion, had survived
Each sign of mass death in the oceans borne
Through its long history, but here arrived

At its own end: not with a bang, but slow
Souring with acid, year by patient year,
Of every sea it swam in, far below.
On land, the acid rain, the heat severe;

The food web's base collapsed; Dicyno's herds
Could find no meat of plant to eat; and so
The race to starvation ran on, past words,
From herbivore to carnivore below—

Gorgo starved when Dicyno starved; the floor
Of the food pyramid was carved away,

And everything above it fell. No more:
Some seventy percent, from that dark day,

Of vertebrates on land would die; the knell
Of gorgonopsids, final, absolute:
The gates closed on her line, and as they fell,
Her ancient house left neither branch nor root.

The saber-toothed, the racing hunter, shrewd
And proud and fierce, was taken—not by tooth
Of any rival, but by lack of food—
And so the Permian went down in truth

To the last word that all life understood:
That the whole world can end not with a war
Between the living, but when fails the good
That creatures need—the bright and open door

Of photosynthesis, the friend of all
That breathes. Good Permian Friday, the name:
The Paleozoic world's death and fall,
Not villainy, not error, not the blame

Of a wrong path chosen; only the curled
And patient force of geologic time
Expressing what it must, beneath the world—
Volcanoes did not choose to kill; sublime

And ancient earth let go of what was found
To have built up within; the cost was paid
By every living thing above that ground—
The world was lost, and in its loss remade,

The way that love itself must, now and then,
Give up the form it had, and let it fall,
Die so that it may be reborn again,
And rise the stronger for it, after all.

Chapter 83: The Harrowing of Hell

Aquarius 27, day 83 of the Gaian year

After the fire, silence. Not the peace
Of silence, but the empty room, the closed
Theater, when the crowd has found release,
Has come, and broken chairs alone disclosed

The weight of what had happened. All the land
Of Permian, in the extinction's wake,
Was not recovered: horror's noon would stand,
With everything that mattered still at stake

And nothing yet decided—and the air
Still poisonous with methane and the last
Of sulfur's burning at the throat; each bare
And rocky hillside scoured by the past

Months of the acid rain, the soil all stripped
Of its organic layer; in its place,
The chemistry of topsoil long since ripped
Away—bare rock, bare clay, the gray, bare face

Of mudstone and the desert's gray expanse,
Once the wide Permian plain. Over all
Of this came the gray fungi's still advance,
Their silent reign, champagne of all who fall.

For when the primary producers fail,
When photosynthesis has ceased its toil
Across the continents, by every scale,
The kingdom that will profit, on the soil,

Is that which eats the dead: the fungi rose
In silence, after green—in fossil sheets
Of fungal spores have come, in place of those
Of pollen and plant spores, whose old repeats

Marked every Permian layer above,
A spike of fungal plenty, in the place
At the extinction boundary—a shove
Of death-eaters into the empty space

Of ecosystems—the composting host
Who had renewed the world, unseen, and slow,
In quiet work, each at its living post,
Of the decomposition, long ago.

And now they were the only presence, wide
And living, in the aftermath; the stir
Of all metabolism, side to side
Of the immense and empty lands that were.

The fungal world ate all the dying shed,
Ate up the fallen forests, the unfurled
And rotting bodies, every kind of dead
Organic matter in the wrecked old world—

And slowly, by their eating, they began
To bring the broken back into the ground,
Composting and completing, so the span
Of the next life could have its cycle found:

For soil is only dead things, processed through
The fungal network's discipline, and turned
To mineral, and to the rest, anew,
That plants can use again; the fungi churned

And plowed through hell in the literal sense
Of harrowing: they turned the dry and starved
Dead soil, and broke the rock-face, hard and dense,
With acids, and the hard compaction carved,

Made ready what the green would need to grow
Again: the undertakers, placid, still,
The workers of the interval, the slow
Between the old seed and the new, the till.

Then, through this poisoned world, a few remained—
Not the great or the famous, the well-known,
The celebrated—but the small, ingrained
In burrows, those who ate the dead—the stone

And scale of anything that could digest
The poorest meal in the most thrifty way—
And Cynos, in his burrow's sealed-off nest,
Safe from the surface's worst, woke one day

Into a world reduced to nothing more
Than possibility; he spoke no word
Of lamentation, breathing at the door
Of his burrow the clearing air that stirred

Above, emerging into gray and bare
And empty landscape; and the love of breath

Drove him into the day, and not to care
About its emptiness, its hush of death.

And Lystro too, dicynodont, had passed
Somehow alive—the less selective one,
The eater, the defiant front held fast
Of Dicyno's line; and when all was done,

There Lystro found, when the extinction ceased,
A strange and solitary plenty: ground
That was his own in full, the west and east
Of the Triassic's early land around

Was Lystro's, with no rival to compete;
The first years of the Triassic's long strife,
Without a predator, his land complete,
Were his inheritance, his walk of life

The empty continent, in its extent,
Was walked by one small herbivore with beak,
Who ate whatever grew, and never went
Beyond the root and tuber he would seek.

Lystro knew only he was hungry, and
That he was still alive, and it was well:
In the hell of the aftermath, to stand
Alive is all achievement; and that spell

Of bare survival is not lesser than
The Permian's glorious peak; it's more,
Indeed, it is the greater; one who can
Endure the harrowing is heir, therefore,

To the next world, the whole world entire.
So let us honor those who harrowed hell,
The ones who kept alive life's fragile fire
Through silence: fungi, composting as well,

Survivors burrowing below the ground,
And Lystro coasting in the gray world, sped
Forward upon the simple need, unbound,
To go on living; none of them was led

To know they were the seeds of everything
That followed; living, nothing more, though rough
And bare, they knew, and only hunger's sting.
That is enough. It always was enough.

Chapter 84: A New Beginning

Aquarius 28, day 84 of the Gaian year

Then—after harrowing, after the long
Silence of all the poisoned world—the green.
Not all at once: no resurrection song
Announced it; and the first was never seen

By any eye that could report it; one
Small spore that landed on a bare stone slope
In the early Triassic morning sun,
The lonely, plain arrival of a hope

In the form of a bryophyte, a moss,
Whose spore had ridden out the acid years
In cryptobiosis—death, but not loss—
And waiting—and the stone's first trickled tears

Of mineral were all on which it fed.
The moss spread slowly, barely seen at all
Against the gray; but where its seeding spread,
The soil began, invisible and small:

The bond of moss and mineral would turn
Rock surface into the beginnings of
A substrate where the next seed's root could earn
A place to grow—and so it was the love

Of life asserted itself in small ways,
Too small to witness, but too vast to stop—
The temper of the Triassic's first days
Was to rebuild from the last stone, the prop

Of any world: a single moss, alone
On one bare rock, the first year just begun
Of the new age, from dormancy now grown,
Unfurled; the worst was over, and was done;

The green was coming back. And next to come,
Conifera, whose seeds had waited long
Within the soil through acid rain's hard drum,
Her cones' seeds, in their dormancy, held strong

Through all the dying, as they'd always lain
In waiting for the right conditions; now
The right ones, in Triassic morning, plain,
Were only this—enough to show her how:

Less poison and less heat; a little rain
With water less of acid, and so sweet
Enough for her to germinate again;
Her seeds broke through the soil, a quiet feat.

And from survivors—Lystro and his kind,
And Cynos from the burrow, and the few
And battered remnants—evolution's mind
Began again its patient work of new

Diversity: in every empty niche
Survivors radiated; Cynos found
A world without an old, established, rich
Predator to contend with on the ground;

He searched out each ecological space
Available—small hunters, and the shy
And burrowing; and in a later race
Of time, the first true mammals would draw nigh,

The harbingers of warm blood at the full,
Of milk that's given freely to the young,
Of fur against the cold; all this, the pull,
Was coming, written in the code that clung

In the survivors' bold genetic store
Of memory: what Cynos nearly was
Already; needing only time, and more
Of niches: opportunity, the cause

Of a new age, the seeding. And the sea,
The ocean too, was healing, slow and pained,
Its chemistry returned by slow degree
Toward kinder states: less acid, and regained

More oxygen dissolved; the sulfide's span
Grew less as the volcanoes ceased; and when,
In the new oxygen, the ray-fin clan,
The schism from the other fish that then

Actinus had made in far coal-swamp days
Of plenty: of his clans, the most of all
In number, Teleosteos, his rays,
Began to seize the empty ocean's hall.

The teleosts, who had been modest in
The Permian sea, their range of kinds slight

Beside marine invertebrates' great kin
That had held sway—now found the ocean, quite

Empty; they found that the invertebrates
Had drowned in acid; and they filled the space,
Each niche whose occupant had met those fates,
Into each depth and current, every place.

Teleost radiation then began,
The largest vertebrate explosion yet
In ocean history; and so it ran
Through the Triassic, slowly to offset

The emptiness with plenty; in the end
The ray-fin fish would form one half of all
The vertebrates on earth, and would extend
The universal presence, great and small,

In every water on the earth; but near
The aftermath it all began, the way
Resilience's daughters always appear:
Unclear, unpromising, and small, and gray—

A few survivors eating in a sea
Emptied of life, and finding, as all those
Revivers find, that emptiness can be
An opportunity in gray-hued clothes.

The first Easter of the Triassic was
Without a witness who could know it well—
Only the ordinary, classic cause
Of life's persistence, which no one could tell

From simple hunger, or from the bare, stern
Mechanics of survival; and yet still
This too is resurrection: the return
Of green upon the bare and empty hill,

The wet and patient moss on limestone; fern
Uncurling from the ash and soil; and, there,
Lystro walking in the new age's turn
At its first morning; and the toil, the care

Of building up again, not knowing so,
That you rebuild—just being, and alive,
And going forward, going, on they go
Toward whatever life can give, and thrive.

Honor the Triassic morning—the gray
Light of the new world, filling, more and more,
With green of those who lived—with each new day
A little less of death, a little lore

Becoming history—the tale of life
That always finds a way to be again
After each fire and after every knife
Of mass extinction—and the old refrain

Of green returning, of the clearing sea,
And of the first small mammal, looking round
At morning, seeing chances, empty, free:
New world, new age, a cradle, safe and sound.



Pisces

The Book of Pascha

Pisces: The Book of Pascha

Pisces is the two Fishes. One is the ichthyosaur, the fish-lizard, going back into the sea; the other is the ichthys, the fish of Easter. The Book of Pascha is a book of death and rising: the Great Dying, and the world that came back after it.

Chapter 85: The Return to the Sea

Pisces 1, day 85 of the Gaian year

The land was bare. The sea was bare. And yet
Within the bare world lay the oldest call—
The water that gave birth to life, the wet
And welcoming abyss, first source of all,

That still remembered every form it made
And held within its chemistry the means
Of feeding, floating, breathing in the shade
Of waves—and now, in the Triassic's scenes

Of devastation, some of Sauros' kin
Looked seaward from the ruined shore and chose
The oldest path: to go back, to begin
Again in water what the land would close.

For this was not the first time. Long before,
In Permian's last age, a humble line
Had tried the water—Mesos, from the shore
Of all Gondwana's southern lakes, the fine

And lizard-shaped, with newt-like tails that swept
The shallows of fresh water for their prey—
First of Amnios' children who had crept
Back toward the water from the land's dry way.

But Mesos was not truly Sauros' son—
His place within the family was clear:
Of Paraps' stock he came, and not of one
That bore two windows, the diapsid gear—

But he had shown the way: that those who sealed
Their eggs against the water could return
To water: so the covenant, revealed
As two-way door, not exile, not a burn

Of bridges back to Tethys' ancient home.
Mesos perished in the Permian's end—
The lesson lived: the sea was free to roam
For any who had lungs and limbs to bend

Toward the swimming shape. And in the wake
Of the Great Dying, when the ocean lay
Still poisoned, slowly healing—for the sake
Of empty niches stretching every way—

New lines of life remembered Mesos' road:
First came Ichthyos—children of the scale
Who read the water's oldest fluid code
And built their bodies for the current's trail.

They entered from the shoreline lizard-shaped
And small, with legs still bearing toes and claws,
But over generations they had draped
Their limbs in flesh and fins without a pause

Or hesitation; for the sea would pay
Each change that brought them to the swimming plan;
The adaptation hurried on its way
Because the prize was vast: the boundless span

Of empty ocean, free of any foe,
Where any who could swim and hunt would find
A feast of fish wherever they would go
Across the healing waters of the mind

Of Tethys, slowly waking from her grief.
And Ichthyos grew large, then larger; some
The size of whales in the Triassic reef
Of the healing sea; Shonisauros, from

The western Tethys, reached the length of ships,
Enormous eyes like dinner plates that peered
Through dim Triassic waters—at his lips
He had no teeth at all; his jaw was cleared

For a wide suction mouth to draw in prey
Like a great vacuum of the ancient deep.
And in those same Triassic waters, gray
And strange, the clans of Thalattos would creep

Along the shallow coast with bent-down snout
And crushing teeth for shellfish on the floor—
A group of Sauros' house, a branch without
Long issue in the ages—and no more

Than brief Triassic test, a passing style
In strange-faced, shallow-water coastal role—

But in their time, magnificent, worthwhile:
The snub-nosed hunters where the tide would roll.

And from the Paraps line—from Turtlos' own
Deep kindred—came the Nothros to the shore:
Long-necked and paddle-limbed, in Tethys' zone
They hunted fish with needle-teeth, and bore

The first of Sauropteros' ancient mark:
The flipper built from what had been a hand,
The body streamlined for the coastal dark,
The lungs that breathed at surface, then the grand

Descent to hunt below. So Nothros was
The father of a dynasty to come—
His paddle-form would echo down because
His children's children's children would become

Plesiosaurs—but that is yet to tell.
Beside him Plakos took a different way:
Heavy-bodied, built like a living shell,
He dove to the floor of the shallow bay

And crushed the mollusks with his pavement teeth—
So broad and flat for grinding shell to dust—
A bottom-feeder in the reef beneath
Triassic shallows, armored, slow, robust.

And Plakos looked like Turtlos in his way—
Round-bodied, armored, patient on the floor—
And this was not coincidence: the clay
Of Paraps' ancient body-plan once more

Expressed itself in water as on land:
The turtle-shape, the armored, patient form
That carries home upon its back, the planned
And fortress-bodied refuge from the storm.

Seven lines tried out the Triassic sea:
Mesos' old memory, Ichthyos' speed,
Thalattos and his strange coast-crawling spree,
Nothros' long neck and Plakos' patient greed,

And others yet unnamed who dipped their toes
And found the water welcoming or cold—
But all wrote down the lesson that life knows
And has rehearsed since the first story told:

The sea is never truly left behind.
The covenant of Amnios: a door,
And not a wall—and those with lungs could find
The ocean's invitation evermore.

So honor those who turned from ruined land
And chose the healing water's ancient way—
Who traded claw for flipper, foot for hand
Rebuilt to swim; life returns to the bay

It left, and finds it waiting, patient, deep,
As it had waited since the world was young,
And full of room for those who choose to leap:
The sea from which the oldest life had sprung.

Chapter 86: The Ruling Reptiles

Pisces 2, day 86 of the Gaian year

Now hear of Archon, youngest son and last
Of Eureps, in a coal-swamp hollow log
Born small, who seemed the least of all the cast
In Sauros' line, worn creature of the bog,

So small he hid in undergrowth and ran
On hind legs faster than his brothers could.
Not armored like the plated Paraps clan,
No venom, and no size—but Archon stood

On the Triassic stage, where every throne
Was vacant, and Permian lords were ash—
And in that emptiness he made his own
A realm of speed and metabolic flash.

For Archon had a gift his brothers lacked:
A heart divided into chambers four
That pumped the blood more strongly, cleanly packed
With oxygen to every cell and pore—

And some of Archon's children ran so hot
Their blood approached the warm—not mammal-warm,
Not Cynos' careful thermostat; their lot
Was heat and fire enough to outperform

The sluggish sprawl of Squamos' kindred cold.
Two sons had Archon in Triassic morn:
Great Cruros, firstborn, heavy, proud, and bold,
And Avemeta, lighter, later-born.

Cruros, the elder, was the one who claimed
The rivers and the lowland flood-plains first—
His children were the crocodile-line, famed
For ambush, armor, patience, and the burst

Of violence launched from the water's edge.
Rauisuchians walked on upright limbs
And hunted like great wolves along the sedge
Of Triassic rivers, and on their rims

Cruros' line built up its river domain:
Phytosaurs with the crocodilian shape
Long before crocodiles would claim that reign—
These were the first to wear the water's drape

Of armor-scale and elongated snout,
Of eyes that watched above the water's line
And waited for the prey to venture out—
The river-king design, a pattern fine

For each watercourse on Pangaea's face.
And Cruros' children were Triassic lords—
They ruled the land and water, and their race
Seemed destined for ten thousand years of hordes

And hunting-realms along the riverside.
No creature in the young Triassic stood
Against rauisuchians' hungry stride
Or challenged the phytosaur's neighborhood.

But Avemeta—lighter, quicker, small—
Took to the uplands and the drier ground
Where Cruros' heavy children could not crawl
As easily; there Avemeta found

His own advantage: hollow bones for speed,
Long legs for running, small frames that could eat
The scraps and edges—every humble deed
Of second sons who make a life complete

From what the firstborn leaves behind.

`From him`

Would come the dinosaurs—but that is next—
Now Avemeta ran along the rim
Of Cruros' realm, both humble and perplexed

At his own smallness, giants in his sight.
The archosaurs then split Pangaea's spoils:
And Cruros held the lowlands in despite
Of any rival, master of the soils

And watercourses; Avemeta crept
Through upland scrub and arid highland where
The rainfall was too sparse, the rivers swept
Too thin to hold a crocodilian's lair.

This is the lesson of the ruling line:
That greatness need not first look like power;
That at the outset Archon's true design
Was not the elder son's triumphant hour

But in the younger, patient and unseen,
The one who ran on hollow bones and stayed
Along his brother's borders, in between,
And waited for the world to be remade.

Cruros ruled the Triassic entire—
But Avemeta's heirs would inherit
What Cruros lost when the world caught fire:
For the future favors patient merit.

So honor Archon's house of hollow bone
And heart of chambers four and upright stride—
The ruling reptiles who would seize the throne
Of every continent and every tide.

Chapter 87: The Long-Necked Fisher

Pisces 3, day 87 of the Gaian year

The strangest child of the Triassic shore:
Tanystros, archosauromorph, whose frame
Defied all reason with a neck that bore
More vertebrae than sense could rightly claim.

His body had a man's length, and no more—
A sturdy, lizard-shaped and humble thing—
But from his shoulders grew a neck before
His head that stretched, an impossible string:

Three times the length of body, stiff and straight,
A fishing-rod of bone, a tiny head
Perched at the far end, baited with the weight
Of small sharp teeth for catching fish—instead

Of swimming to his prey, Tanystros stood
On the Triassic shoreline, on the rocks
Above the Tethys shallows, where he could
Spear what he sought below from coastal stocks

Without his body entering the waves.
Think of a heron frozen in its stance—
But stretched to the absurd, a shape that saves
Its lungs from water by the sheer expanse

Of neck between the breathing chest and jaws
That hunted underneath the surface foam—
A compromise that broke all normal laws
Of vertebrate design: to fish from home

Without the toil of swimming.

```
                              Nor was he
```

Alone in strangeness; the Triassic age
Was such a time as no age since would see:
It was a living and evolving stage

Of trial, where at once each body plan,
Each variation, found its room to thrive,
Was tried in the great recovery's span
For months or millions of years, kept alive

Before the sorting came. And he had kin:
The Protorosauros, a long-necked clan

Of archosauromorphs, whose claim was thin
On history and brief—and so they ran

The Triassic coasts in their odd parade
Of reaching necks and small-toothed fishing heads,
Of bodies built for shoreline's serenade
Where ocean meets the rock in tidal beds.

Some of Tanystros' kindred went to sea—
Not fully, but enough to paddle out
Beyond the shallows, swimming partially free
Of shore, their long necks sweeping all about

For fish beneath them as they surface-swam—
Half in the water, like the first attempt
Of Archon's wider family to cram
Themselves into the sea's biome, exempt

From the commitment Ichthyos had made
Of leaving land behind for evermore—
These were the dabblers, wading in the shade
Along the Triassic's uncertain shore.

Through the first ten million years of that age,
The boundaries between the land and sea
Were blurred by those who stood on every stage
At once—who were not fully what they'd be,

Experimenting with the ocean's edge.
Tanystros' clan would perish long before
Jurassic dawned; their evolution's pledge
Was local, brief, a footnote in the lore

Of Triassic time. And yet they gave birth
To truth the Mesozoic would yet prove:
That border between ocean and dry earth
Is not a wall but gradient, a groove

That life moves back and forth across at will—
From Mesos in Permian lakes to these
Long-necked Triassic fishers on the sill
Of Tethys' coast, to plesiosaur seas

That were to come—each age found those who'd stand
Astride the boundary, and who refused
To choose between the kingdom of dry land
And ocean depths. The line for them was used

As highway, not as barrier.

Give praise

To shapes the strange Triassic morning made—
Tanystros, with his neck's absurd displays,
The fishing-rod design that briefly swayed

Above the waves and caught his silver prey
Without a single stroke of swimming fin—
A shape that served its own Triassic day
And asked for nothing but the fish therein.

Not every form endures. Not every plan
Survives the sorting of the ages' test.
But all that lived, however brief its span,
Was life's own answer to the question—blessed

With the same stubborn will to eat and breed
That moves the stars and turns the spiral arm.
Tanystros on his rock fulfilled his need
Then vanished; the Triassic took no harm

From having made him—for the sea keeps room
For each experiment, however strange,
And honors every shape between the bloom
Of life and death across its endless range.

Chapter 88: The First Terrible Lizards

Pisces 4, day 88 of the Gaian year

Of Avemeta's children, hear the start—
Not the great and terrible they became,
But the humble, the small, the racing heart
Of creatures that did not yet know their name.

For the first dinosaurs were modest things:
No larger than a dog, with hollow bones
And hands that grasped, and legs like coiled springs
Built for running over Triassic stones.

In uplands of the south, Gondwana's land,
Where Cruros' river-children held no sway,
The earliest of Avemeta's band
Appeared: Deinos, and his Triassic day

Was spent in running, catching, staying small,
While Cruros' rauisuchians would prowl
The lowlands and the river-valleys, tall
And heavy; little dinosaurs would howl

And chirp in upland scrub and thin-aired heights.
Deinos is "terrible," Sauros "lizard"—
The first to bear that name had modest sights:
Not terrible: much more like a wizard

Of economy: slight frame, hollow bone
That saved the weight, long legs for upright stance,
And hands with grasping fingers that had grown
Three-fingered, dextrous, built for catching chance

Bug, lizard, little mammal in the brush.
They ran on two legs—bipedal and light,
With tails outstretched for balance in the rush
Of hunting dashes through Triassic night.

Eoraptoros was among the first—
"Dawn plunderer," the later name that men
Would give his bones—but in his own time, versed
In nothing grander than to eat, and then

To eat again tomorrow. He was small—
Three feet of hunter in Gondwana's south,
Undifferentiated teeth for all
His prey: he ate whatever reached his mouth.

Herrerasauros ran beside him there—
A little larger, with a sliding jaw
That let his lower bite extend and snare
His prey with an articulated maw

That other reptiles lacked: innovation
That hinted that the hunting age was near:
The theropods would build a predation
Empire spanning every biosphere.

But they were few, with no Triassic share—
Not yet: rauisuchians owned the plains,
The phytosaurs held every river's lair,
And Deinos' children lived on what remains

The great ones left behind—the edges, scraps,
The upland territory none wanted,
The arid margins of Triassic maps
Where rainfall failed, and large beasts were daunted.

Thus kingdoms are begun: not at the heart
But at the fringe; not on the fertile plain
Where strong ones fatten, but within the part
Where one who rents the margin must obtain

From every turtle, beetle, all he can.
The pressure of the edge made Deinos' line
So lean and so efficient, with a plan
To make more out of less, to run the fine

Machine of flesh on less fuel, water, air,
And still outrun the ones who wished them dead.
Three lines would branch from Deinos' early lair:
Theros, the beast-footed, who would be fed

On flesh and carry on the hunting art;
Sauropos, who would grow to walk on four
Great legs and eat the green world, counterpart
Of Theros' violence—the herbivore

That would become the largest thing to stride
Across the earth; and, third, the bird-hip kind,
Ornithis, pelvis rearranged inside
To hold a greater gut, and so designed

For breaking down the cellulose in food.
Three houses of the dinosaurs were born

In Triassic uplands, a threefold brood
From Avemeta's children, small and worn

And unremarkable—who did not know
They held the future Mesozoic world
Within their hollow bones and racing flow
Of warm-ish blood—the banners yet unfurled

Of tyranny and thunder and the sky.
Honor the small beginnings—every great
And overwhelming line that storms on by
Was once a creature running, running late

For dinner in the uplands, chasing bugs
Through scrubland no empire deigned to own—
And finding there, in poverty's tight hugs,
The seeds of every future ever sown.

Chapter 89: The Dolphin Shape

Pisces 5, day 89 of the Gaian year

There is a shape the ocean loves.

```
                                The sea
```

Asks every swimmer the same question: How
Will you move through me?—and the answer, free
Of lineage or bias, is the prow

Of dolphins: fusiform, with tapered head,
The crescent tail that drives from side to side
Or up and down, the form all oceans wed
To speed in water: tested, proven, tried

By every group that ever hunted fish
In open ocean at the swimming pace
Of something that must catch its fleeing dish
Or starve—the water shapes them to the race

And every time the answer is the same.
Ichthyos found this answer first among
The reptiles of Triassic time; his claim
To dolphin form was older, deeper, wrung

From fifty million years' Triassic sea
Before the dolphins of a later age
Would find it too—convergence's decree,
The ocean's only universal page:

That physics trumps all ancestry; the form
That works in water works for fish and whale,
Ichthyosaur alike—the ancient norm
Of hydrodynamics that writes one tale

In every lineage that tries the deep.
By mid-Triassic, Ichthyos' young bore
No trace of the limbed ancestor who'd creep
Ashore between his hunts. Legs were no more:

Flippers now, four paddles for the steering,
A tail with flukes, curved like a half-moon blade,
A dorsal fin for poise, and the veering
And cutting of a body purpose-made

For speed—Ichthyos could not walk on land
And did not need to; and he gave live birth

In water, like the mammals' later brand
Of sea-return—no egg upon the earth

Required, no beach to haul up on to lay—
His young were born tail-first in the ocean
And swam beside their mothers from that day,
Fully formed, already in the motion

Of the hunt.

```
And great Shonisauros grew
```

To the length of whales—fifteen meters long—
In the Triassic seas of Tethys, through
The corridors of Panthalassa strong

And wide, where the enormous ocean stretched
From pole to pole on Pangaea's far side—
And smaller Ichthyos hunted and fetched
Their fish and squid through every current and tide.

Their eyes were larger than all other beasts'—
Enormous orbs that drank the deep-sea dark
And let them hunt below the light at feasts
Whose annals the deep wrote in each hunt's arc.

In twilight zones where cephalopods hide
And fish escaped the sunlit layer's glare,
But Ichthyos pursued, the dark defied,
And guided onward by the ancient prayer

Of eyes; faint bioluminescence seen.
And in their ears, the bones that once were jaw
Of their land-dwelling forebears, now marine,
Conducted sound through water, and would draw

The intimate vibration of the deep
That told of prey and predator and reef
And current, so he did not need to keep
His surface-senses, having found relief

In the new senses water offered free.
This is the lesson of convergent form:
The universe has favorites: the sea
Rewards the same solution to the storm

Of physics, whether mammal, fish, or scaled
Reptilian swimmer—and the dolphin shape

Is not a choice but an equation, nailed
By mathematics of the fluid's drape

Across a moving body—there is one
Best answer to the question of the speed
In water; every lineage that's won
The ocean's race has read the selfsame creed.

Sharks found it first in Devonian tide—
The tuna found it in the bony fish—
Ichthyos found it on the reptile side,
And dolphins later from the mammal's wish—

And each time the same fusiform design,
The tapered snout, crescent-tail propulsion,
The countershading, dark along the spine,
Warm pale belly below, the expulsion

Of drag and the embrace of speed.

`Then praise`

Ichthyosaurs, who wore the ocean's shape
Long before dolphins claimed it in their days—
Who proved that evolution's finest drape

Is worn by many lines, each in its turn,
And every one that answers water's call
Will find the same shape waiting, theirs to earn—
The dolphin form that is the sea's for all.

Chapter 90: The Turtle's Cousins

Pisces 6, day 90 of the Gaian year

Now hear the deeper tale of sea-return—
For when the Nothros paddled from the shore
And Plakos crushed his shells, they bore a turn
In Paraps' ancient story, something more

Than any mere adapting to the wave:
They were the turtle-kindred going home.
Remember Paraps, eldest son, the grave,
Of solid, heavy skull, who would not roam

Like Eureps, with two windows in his head?
For Paraps built the shell—the Turtlos line
Who through the meadows bear their homes instead—
And Paraps' deeper family, the fine

And old connection with the Archon's house,
Made him the sister-branch of all that ruled:
Turtlos and Archon, quiet as a mouse
The former, and the latter never fooled

By any rival's bluff—but sister-kin
Beneath it all, turtle and dinosaur
Joined at the root, both carrying within
The same deep heritage from Sauros' floor.

Sauropteros, the flipper-bearers, these
Were Paraps' ocean-children, stem and root
Of turtle-form adapted to the seas:
Not Turtlos himself, but that ancient suit

Of body-plan expressed in marine terms.
And Nothros was the first to show the signs:
The paddle-limb; the barrel chest affirms
A lung-breathing diver's need; and the lines

Of body built for underwater flight—
Not fish's tail-propulsion, but the wing
Beneath the waves, the flippers' pulling might
That drew him through the water: ancient swing

Of arms later plesiosaurs would hone
Into an art. But Nothros was the first,
In Triassic Tethys, where coastal stone
Of Pangaea's granite shelf dropped, immersed

In deeper water; and the fish that hid
There, sheltered, were his own to hunt and catch
With long neck's reach; his needle teeth would bid
For anything that swam into the snatch.

His children grew; some kept nothosaur form,
Like otters, coming to the shore to rest
And breed—but others ventured through the storm
To deeper water, and these were the best

Adapted for the open sea, and these
Became Plesios in the later age—
Plesiosaurs who never left the seas,
Who wrote Jurassic ocean's grandest page.

And Plakos, cousin on the bottom shelf,
The other path: the turtle's echo, slow,
Round, armored, and content to feed himself
On shellfish in the shallows' warm tableau.

He was in sea what Turtlos was on land:
The patient, armored, steady form and low
That Paraps always built, the bodies planned
For long endurance and not made for show.

The Sauropteros—Nothros, Plakos, too,
And plesiosaurs yet to come—were all
Born of the ancient purpose running through
Each child of Paraps' house: the turtle's call

To build the body strong and carry on,
Whether upon the land in shell-and-plate
Or in the sea with flipper-paddle drawn
Through water—Paraps' children navigate

Both worlds with one patient architecture.
Here is the lineage the oceans keep:
Turtlos on his log, the vast conjecture
Of plesiosaurs hunting in the deep,

Are kindred—branches of one ancient tree
Rooted in Paraps' solid skull, which spread
And flowered on the land and in the sea
In forms that look unlike, but share the thread

Of one deep plan: the patience armored, slow,
Lung-breathing endurance, the certain way

Of living—these equations, high and low,
Of Paraps' house are written to this day

In every turtle basking on his stone
And each plesiosaur below the reef
Of Mesozoic seas—they share the bone
Of common ancestry, the shared belief

That life is best lived slowly, strongly, deep,
With armor on your back, air in your lung,
And patience as the covenant you keep
With the world that was and the world yet young.

Then honor the bond—Turtlos on the land
And Sauropteros, down beneath the wave—
Both children of one father's patient hand,
Both built to last, both certain, and both brave.

Chapter 91: Pangaea Divides

Pisces 7, day 91 of the Gaian year

The world was one, and then the world was not:
Pangaea, the All-Land, the single face
Of continent that held in one great lot
Each shore and every mountain, every place

Where life had built its kingdoms on the stone—
Began to crack along its ancient seams
Where mantle heat, persistent and alone,
Had pushed against the crust in magma-streams

A hundred million years.

```
The rift began
```

At the Triassic's heart: unzipping, slow,
The continental skin, the split that ran
From north to south, the mantle's blood aglow

Dripped in the crack and filled it up with new
Seafloor, basalt that cooled in salt water,
Pushed halves apart: a centimeter's due
Each year: geology's patient slaughter

Of unity, to make the world diverse.
Laurasia to the north, Gondwana south—
The ancient names that, in divided verse,
The parted lands would carry in the mouth

Of all the ages still to come. And wide
Between them grew the Tethys Sea; the warm
And shallow waters of its growing tide
Fed new corals, new fish, the reborn swarm

Of marine life in the expanding space.
But first the breaking: the Carnian rains.
In mid-Triassic time they drowned each trace
Of the dry, arid world, and all the plains

That had been desert for ten million years
Grew wet at once: Carnian Pluvial
Episode, a whole million years of tears
From skies that had forgot alluvial

And the monsoon—and now recalled them all.
The cause: volcanic and tectonic shift

Of plates and currents, requiem and pall
For dry Triassic lands, and yet a gift

Of water to a world that had been parched—
But water that arrived too fast, too much,
And ecosystems that had slowly marched
Toward desert-adaptation lost their touch

And struggled in the sudden wet.

This was

The proto-disruption, not extinction,
Ecological reshuffling, because
Old arrangements lost their high distinction

In the changed climate: what had thrived in drought
Now drowned in rain, and what had waited for
The wet now flourished—and the sorting out
Left Cruros' children weakened at the core

While Avemeta's nimble dinosaurs,
At home in margins, in all things changing,
Found new chances in the Carnian doors
That opened on a world rearranging.

The rains withdrew; the world resumed its drift.
But now the balance tilted: Deinos' kin
Had gained a foothold from the climate's shift,
And Cruros' dominance, though far from thin,

Was never quite so absolute again.
The cracking still went on: Pangaea's seams
Grew wider by the year; and it was then
The isolated lands' own separate dreams

Began: each landmass carrying its own
Cargo of creatures to isolation,
Where evolution worked on local bone,
Local climate—each a separate nation

Of life, evolving its own solutions.
The Tethys became an ocean highway,
Warm equatorial contributions,
Currents connecting east and west midway

Of the world; Ichthyos and Nothros swam
Its corridors, the reptiles of the sea,

Who followed fish across the growing dam
Of the new seafloor, spreading by degree

In basalt, mile by mile, along the rents
Between the lands. Pangaea's breaking: seed
Of every future difference: events
That gave each continent its unique creed

Of creatures: marsupials of the south,
Placentals of the north, the island birds,
Lemurs of Madagascar—from the mouth
Of this great cracking came the different words

Of life's vocabulary on each shore.
But now, in the middle Triassic age,
The breaking had just begun—nothing more
Than wider seaway and a wetter stage

For the same cast of characters to play
Their parts upon—Cruros by the river,
Deinos on heights, Ichthyos in the bay,
Cynos in his burrow, stubborn liver

Through each age's change.

`Honor the breaking—`

For the one world had to become many
Ere the richness of the many-making
Could fill the earth with more life than any

Lone continent could hold; the division
Was not a wound, but multiplication,
Not loss, but a widening of vision
Of what life could be in separation.

Chapter 92: The Cynodont's Vigil

Pisces 8, day 92 of the Gaian year

While the great ones ruled the Triassic plains—
While Cruros held the streams and the lowlands
And Deinos' children ran in upland lanes—
The young of Cynos lived in small commands

Of burrowers, nocturnal, careful bands
Who had inherited Permian loss
And carried in their milk-producing glands,
Fur-touched skin, the memory of the cross

That Synaps' dynasty had borne: the fall
From Permian to Triassic shadow,
From the world's great lords down to creatures small
Enough to hide in a grassy meadow.

For Cynos had been great—remember this—
His father Theraps, and before him, too,
Grandsire Pelyon, ruled in tooth and kiss
The Permian world; each hellion that slew

And gentle grazer of synapsid age
Had answered to the house of Synaps then—
But the Great Dying wrote a different page,
And those who lived were not the mighty men

Of Permian heights; but burrowers, small,
The ones who ate the least and needed least,
The underground endurers, who through all
Outlived the fire and the poisoned feast.

And now, in the Triassic's middle years,
The children of Cynos grew smaller still—
For archosaurs above pressed down with fears
And appetite on all that came to fill

A niche above the size of shrews.

`The night`

Became the cynodont's domain—the dark
Where cold-blooded archosaurs lost their might
And the warm-blooded mammal-kin could mark

Their ground by scent and sound, and by the feel
Of whiskers in the dark—those whiskers that

Cynos had first grown, the sensory wheel
Of vibrissae that turned the blind and flat

The world of night into a map of touch.
And in the late Triassic, from the least
Of Cynos' shrinking children, came the clutch
Of first true mammals: Mammos, lowly, least

Of all the heirs of Synaps' ancient line,
Who bore the full inheritance at last:
The three ear-bones that heard the world's design
In frequencies the reptiles could not cast

Their hearing toward. Their fathers' jaw-bones, old,
Had moved into the middle ear, become
The hammer, anvil, stirrup—fold on fold
Through a full hundred million years, the sum

Of Synaps' extra jaw's slow migration
Toward a new and finer use: the ear,
Acute and intimate: transformation
Of what had been a jaw. So, year by year,

Did evolution steer the surplus bone
And turn it into something new: a sense
So delicate it heard the forest's tone
In registers exquisite and intense.

And milk—for Mammos gave his young the gift
Of milk: the mother's body was the source,
Within—an evolutionary shift
That freed the newborn from the egg's set course

And bound it to the mother's warmth instead—
A cord of nourishment more free to bend
Than any yolk-sac: where the mother fed,
The infant fed, a bond no harm could end,

And portable across whatever land
Or climate or disaster came.

                And fur—

The full and covering warmth, the body's band
Of insulation that allowed the stir

Of metabolism through the cold night,
That kept the body's engine running when

The archosaurs went slow—the mammal's right
To all the nighttime world, the moonlit den

Where small eyes gleamed and small teeth cracked the shell
Of beetle, and small whiskers read the dark,
Small bodies kept themselves alive and well
On what the daylight giants left—the bark

And seed and insect of the shadow-world.
A vigil of a hundred million years
Of smallness, of the patient flag unfurled
In darkness, of the nighttime pioneers

Who kept the old synapsid flame alive
Through the Mesozoic's long dominion
Of archosaur lords—content to survive
And wait and hold, keeping one opinion:

That the night was theirs, and that the future
Was written in the milk and fur and bone
Of the smallest creatures—that the suture
Between the past and the world yet unknown

Lay in the burrow: mammal, warm and small,
Who heard in frequencies that the giants
Could never know, and would outlast them all.
So honor the vigil's quiet clients

Of night, who kept alive the ancient fire
Of Synaps' dynasty through all the dark—
And waited—night rewards their desire,
The patient inherit each empty park.

Chapter 93: The Pack Hunters

Pisces 9, day 93 of the Gaian year

In late Triassic washes, dry and bare,
Where the red sandstone baked beneath a sun
That knew no ice at either pole—the air
Of classic greenhouse, where Pangaea's run

Of warmth made desert of the land within,
There Coelos hunted.

```
                Slender, light, and fast,
```

A theropod, a small dog's weight, but thin,
But longer, with a whip-tail and the cast

Of a creature built wholly for the chase—
And Coelos ran in packs across the flats
Of western Gondwana; and in the race
The hunt was not the solitary bats

And claws of one lone predator's design
But something new: coordinated run
Of many hunters in a curving line
That drove the prey toward the others—one

By one, the pack's members each played their part
In strategy beyond one single brain—
The hunt required a group, required the art
Of signals, calls sent out across the plain,

The reading of another's body-lean,
The understanding that if I go left
Then you go right—between us and between
The prey, the route of escape narrows—deft

And terrible in its efficient skill.
And Coelos left his kin entombed in stone:
At what our later maps call Ghost Ranch, still
Lies buried there a mass of fossil bone

To tell the tale: dozens of Coelos' clan
Buried together in a single flood,
A troop preserved in death, the social plan
Of group life written in the ancient mud.

They were not large—three meters, lightly built,
With grasping three-fingered hands, hollow bones—

But what they lacked in mass they had in guilt-
Free cooperation: hunting in the zones

Of chance that only groups can hope to reach.
This was Deinos' first great innovation—
Not size, not strength, not venom's toxic breach,
But social bond, pack coordination

That would echo through the theropod line
A hundred million years: the raptor crew
Of the Cretaceous hunting in a fine
And deadly chorus—actors, all, on cue—

In a play that Coelos had first rehearsed
On the Triassic's arid scrubland stage.
The prey they hunted? Anything that durst
To walk the open ground: in that late age,

Triassic heritage of mid-sized game:
Small ornithischians browsing the brush,
The last rhynchosaurs, with the ancient claim
Of beak-herbivory; the early rush

Prosauropods, Sauropos' first attempt
At the long-necked, long-tailed, four-legged form,
To be the thunder-lizards: these, exempt
From nothing, not from tooth or from the storm

Of Coelos' pack descending in a wave
Of chirping, slashing, small-toothed predation
That bled the larger prey, took what they gave
In death by a thousand cuts—the station

Of small predators hunting what is large
Through numbers, speed, coordinated will.
And Cruros' children, watching, kept their charge:
Rauisuchians and phytosaurs still

Held all the lowlands and the waterways—
But Coelos and his pack ran in the dry
Uplands, the arid basins, and the haze
Of desert's edge, where greater lords passed by

Without a glance—for what was there to see
In packs of small and slender running things?
Nothing, they thought—and yet it was the key
To everything the coming future brings:

The greatest power is not tooth alone
But the bond between hunters, and the call
That says: together we are more than bone
And claw—together we can bring the tall

And heavy to the ground.

`Honor the first`

Pack-hunter, Coelos, of the dinosaurs,
Who proved, in the Triassic's heat and thirst,
That cooperation opens the doors

To evolution's sophistication—
That what one cannot do alone, a band
Of kin in hunting's coordination
Is able to achieve; upon this strand

Of social innovation, from the start,
The pack would grow, and with it, cunning's reach;
Future theropods would build terror's art,
And learn the lesson that the hunters teach.

Chapter 94: The First Wings

Pisces 10, day 94 of the Gaian year

Now hear of those who solved the oldest dream
Of every land-bound creature looking up:
Pteros, who rode the thermal's rising steam
And drank the sky like water from a cup.

Not bird—for birds were dinosaurs, and these
Were something else: the children of a branch
Near Avemeta's root, who took the breeze
And stretched a single finger to a blanch-

White membrane, thin and strong, that caught the air
And held it—the fourth finger of the hand
Extended past all reason, and the rare
And living skin stretched from that finger-strand

To the body and the hind leg—a wing
Built not from feathers, but formed as a kite
Of skin, a bat-wing's cousin, ancient string
Of membrane that gave Pteros his first flight.

He was the first vertebrate in the sky—
Not counting gliders in Permian trees,
The small and desperate lizard-forms that fly
A moment between branches in the breeze—

Pteros achieved true powered flight: the beat
Of membrane wings against Triassic air,
The lift and thrust and banking that complete
Mastery of the third dimension's lair.

His bones were hollow—lighter than a thought,
Thin-walled as paper, filled with air-sacs that
Extended from his lungs, and these sacs brought
The oxygen of altitude to bat

Through every wingbeat's metabolic need.
Large-brained for his size, the cerebellum
Was swollen for the balance and the speed
Of reckoning in flight, on its vellum

Each point of the three-dimensional world
Mapped in neural tissue that the landlocked
Reptile had never needed—but unfurled
In the high sky, where any error mocked

With gravity's implacable demand.
The first of Pteros' kind were sparrow-sized,
With teeth for catching insects on the strand
Of evening air, with wings not yet king-sized

But fit for the modest Triassic skies
Where no other vertebrate competed
For the aerial niche—Neopter's flies
And dragonflies held it, undefeated,

For some three hundred million years—but now
A backbone and a warm-ish body brought
A new competitor beneath the brow
Of each Triassic sunset, and the thought

Of vertebrate dominion in the air
Began with Pteros' small and toothed patrol
Across the evening sky, catching his share
Of insects in the air's encircling bowl.

His children would grow large—enormous—some
With wingspans wider than a fighter plane—
Quetzal of the Cretaceous would become
The largest thing that flew—but that refrain

Is for a later chapter. Here, the start:
Small, toothed, and membrane-winged, and insect-fed,
So Pteros took the sky and played his part
In the Triassic's grand trial, and led

The first invasion of the vertebrate
Into realms only arthropods had known—
And in the evening light, however late,
His silhouette against the sky was sown

As promise of the wings to come.

Two ways

The vertebrates would find to powered flight:
Pteros' own membrane, and the feathered sprays
Of Deinos' later children—but tonight,

In the Triassic's fading light, but one
Existed: membrane wing, the finger-kite,
The pterosaur ascending toward the sun
And banking in the thermal's lifting height.

Honor first fliers—Pteros and his kin
Who dared the third dimension's world above
The ground where every other creature's been,
And found in empty sky a kind of love

That only those who fly can understand:
The freedom of the air, the lift, the soar,
The world below becoming merely land—
And sky, the sky, becoming something more.

Chapter 95: The Eve of the Second Dying

Pisces 11, day 95 of the Gaian year

Triassic days were good. Not perfect—none
Is perfect in the wake of greatest death—
But earth's recloathing in green had begun,
The sea's belated clearing, like a breath,

And radiation of the newer forms
Into every empty niche had made
A world that worked again: the coastal storms
Fed rain to forests where conifers swayed,

The Ichthyos hunted the Tethys deep,
The Nothros paddled in the shallow seas,
And on land Cruros' children held their sweep
Of rivers; Deinos grew by slow degrees.

A good world; and the late Triassic age
Saw it was full of life: three hundred kinds
Of marine reptile on the Tethys stage,
A thousand insects in the forest's rinds.

The great recovery was nearly through,
The scars the Permian had left near healed,
Discovery of ways of living new,
Mesozoic innovation, unsealed.

But earth keeps its appointments with the fire.
Beneath the floor that would in time become
The Atlantic Ocean, the entire
Mantle surged, and pressed, and would not succumb

Against the crust; and Pangaea was torn:
The Central Atlantic Magmatic swell,
The CAMP volcanism, rope-and-ring born
Of basalt in eruption that would well

From pole to pole along the growing rift—
And in Triassic's last ten thousand years
The earth gave its second terrible gift
Of volcanic excess, which now appears:

Carbon dioxide and the sulfur flowed
Into the greenhouse air, already warm—
The ocean's chemistry, its hide, now showed
Its shifting underneath the acid storm

As it had shifted once before; the same
Script played again: warming, and then acid,
Then oxygen's decline, the ancient game
Of volcano and of ocean, placid

Upon the surface, choking in the deep.
The phytosaurs saw first—the river lords
Who had mimicked the crocodilian's creep
And ruled the waterways; their ancient hordes

Grew thin, for water's chemistry had changed.
Rauisuchians on the plains found less
To hunt as numbers of the grazers ranged
Toward zero in the climate's growing stress.

And Cruros' dynasty—the elder son
Of Archon, holder of Triassic reign
For forty million years—was now undone.
The world was changing; it would not sustain

Those who had grown too large, too specialized,
Too locked in lowland and in the river—
Those who could not move, could not be revised,
Could not become something new—the giver

Of extinction is always one: the loss
Of what you need while keeping what you are.
And Cruros' children could not bear the cross
Of the changed world—not all, not every star

Within his constellation dimmed: the strain
Of crocodiles, survivors of his house,
Endured, small and amphibious, the plain
Civilian and not soldier, and the mouse

And not the lion of his kingly pride—
The modest crocodile-forebears who kept
By water's edge, and ate the scraps supplied
By the world's dying—and these small ones crept

Through the extinction, just as Cynos passed
The last one: by being small, by being
Undemanding, by covenant held fast
Between the survivor and the seeing

Another morning.

But the great ones fell.

Rauisuchians, phytosaurs, the tall
Heavy lords of Cruros' Triassic spell
Were gone beneath the CAMP eruptions' pall.

And as the elder brother's kingdom burned,
The younger brother's children—Deinos' small
And humble dinosaurs—looked up and learned
The empty niches beckoned, one and all.

It is the eve. Tomorrow, the dying.
Tonight the world still breathes, the rivers run,
And the last phytosaur is still trying
To hold his kingdom underneath the sun.

Honor the eve—the last good night before
The fire; for every living, growing thing
That breathed Triassic air wove, to the core,
Its own end, unaware of morning's sting.

Chapter 96: The Second Dying

Pisces 12, day 96 of the Gaian year

Then the Atlantic opened, and the fire
Ran north and south along the cracking seam
Of Pangaea's body; the entire
Long central rift erupted in a steam

And basalt flood that rivaled, in its reach,
The Siberian at Permian's close—
The CAMP volcanism, another breach,
A Stygian catastrophe that rose

Ablaze across eleven million square
Kilometers of flood basalt—the earth
Repeated what it knew: the deep heat's flare
Of magma rising through convection's girth

It found each cut and weakness in the crust
And poured on through. The script was all too known:
First carbon, then the warming; as it must,
The sulfur in the poisoned blue was sown,

And acid rain that burst upon the trees
Just healed from the Permian acid bath—
The forests browned again, by swift degrees
To nothing, and the carbon cycle's math

Collapsed again, in thirty million years.
And in the sea the acid came again—
The pH falling, and the ancient fears
Of carbonate dissolving, and the pain

Of creatures building shells from that same stone
That acid water melts: the corals, and
Brachiopods: the funeral, once known,
Played out again on the reef-builders' strand,

Permian morals lost upon an earth
That cannot learn, but simply, always, does
Whatever mantle's heat dictates—the birth
And death of worlds is geology's buzz

Of a planet that does not think.

```
On land,
```

Cruros' mighty rauisuchians fell:
The four-legged, heavy, crocodile-planned
Archosaurs who held the Triassic spell

Of lowland rule—gone. Phytosaurs, who wore
The crocodilian mask when yet no true
Crocodile existed, were now no more:
Their line was closed; and shore and river, too,

Where they had haunted, empty now and bare.
The aetosaurs, the armored grazing kind
Of Cruros' line, whose plated backs could dare
The tooth of any predator, would find

Their patient stores of walking armor failed
Against the poisoned air, against the heat.
Thirty percent of families, curtailed,
Out of the future—not the clean, complete

Ruin of the Permian's ninety-six
Percent of marine species: this was less,
A middling death, a thinning of the mix—
But those who died knew no less of distress

Than any death has ever been.

And yet—

For the survivors, now, the world's expanse
Was vast beyond imagining—the debt
Of death paid forward, as life seized its chance

On a planet swept of competition:
Rivers empty, the phytosaurs no more,
No rauisuchian in position
As lowland apex predator; the floor

Was clear, and Deinos walked out onto it.
The dinosaurs—once upland runners, small,
Marginal, and surviving on the grit
Of scrubland and the edges—now stood tall

In the new Jurassic world—and they filled
The empty niches with explosive speed
That even the Cambrian would have thrilled
To match: in every lowland, every reed-

Bank, every river-valley, every coast,
The dinosaurs radiated; the crown

That Cruros wore was given to the host
Of Avemeta's children—hand-me-down

From elder to the younger, as the world
Decreed through the merciless selection
Of who survived—and the banners unfurled
Of the Jurassic's bold new direction

Were all dinosaurian.

In the sea,

Ichthyos lived on, diminished and few,
But swimming still in Tethys' waters, free
To keep the dolphin form, pure, ancient, true.

And Nothros' children, in the shallows, stirred
Toward the deeper water; paddle-limbed
Sauropterygian descendants heard
The ocean calling them to fill the brimmed

And empty niches of the stricken sea.
And Cruros' humbler children—those, the small
Crocodilian ancestors—these were free
To claim the rivers for their own, the call

Of Cruros answered only by his least:
The modest, the amphibious, the meek
Inheritors who had survived the beast
Of fire by being far too small to seek,

Too pliant to fail.

And Easter came twice:

The death that is not final, and the loss
That is the door to greater things; the price
Of volcanic fire, the acid rain's cross

Borne by the Triassic; resurrection
Followed: plesiosaur and dinosaur,
Crocodile, and mammal—each direction
Of the future opening from this floor

Of death, and the world that came was richer
For all the dying that preceded it.
Honor the second dying, no pitcher
Of mercy, and no comfort in the grit

Of dying—but the life that followed proved
That even second death can be a door
To something the old world had not yet moved
Toward—and the Jurassic's mighty roar

Was born in silence, at the dying breath
Of the Triassic world, which died again,
The second time; and from its second death
The dinosaurs arose to rule and reign.

Chapter 97: Jurassic Dawn

Pisces 13, day 97 of the Gaian year

The morning after death is always gray.
Jurassic's dawn looked like Triassic's morn:
Bare ground, diminished green—the common way
Of post-extinction worlds, the classic, worn

And oft-repeated pattern of the slow
Recovery from harm: the fungi first,
Then mosses, then the conifers that grow
Back from refugia, where they had nursed

Seeds through acid rain. Conifera knew
Well this rite: her second resurrection
Out of the poisoned soil, her patient queue
Of forests regrown after each section

Of volcanic death.

                But the world, now healed,

Was different now in one essential way:
Lowlands where Cruros' rule had been repealed
Were empty; Deinos' children came to play

Where they had never dared before.

                                Now strode

The beast-footed Theros, eaters of meat,
Into the young Jurassic's open road,
Found no rauisuchian at the seat

Of river-crossings; phytosaurs no more
Guarding the waterways; the hunter's throne
Lay empty, and the whole Jurassic floor
Was Theros' now to claim, and his alone,

Heirs of Deinos' upland hunger, released
Into the richest lands upon the earth.
And Sauropos, who once had been the least
Impressive of the prosauropod birth,

Small, two-legged, modest in Triassic days,
Began to grow. And grow. And grow again.
For lowland forests offered, in their maze,
Gymnosperm feast, Conifera's domain

Regained: Jurassic forests, where the trees
Grew tall, and stretched their canopy so high
That no Triassic dream had reached; to seize
That green roof, rising up against the sky,

Sauropos stretched his neck.

`This is the age`

The world remembers as the giants' time,
For the Jurassic was the grandest stage
The earth had set for life, and the sublime

Defiance of gravity was his art:
Longer necks, longer tails, and bodies vast,
And legs like pillars holding up the cart
Of largest land-beasts; oddities amassed

Of physics, that allowed a creature's heart
To pump blood up a forty-foot-long neck
To reach a brain the size of a small tart
Were solved by Sauropos—who would not check

His growth until the forests were all grazed
From the top down, like elephants, but vast
Beyond all scale; and the Jurassic blazed
With thunder of his walking as he passed,

The drumbeat of the largest feet on earth
Shaking the ground for miles where each foot stepped.
And Ornithis, the bird-hip, found his berth
In undergrowth: smaller, with the adept

And beaks for cropping ferns and for the low
Plant-life; the ornithischians would build
Diversity in the Jurassic's slow
And generous expansion, and they filled

The grazing niches sauropods had left
Vacant in understory and on plain—
Where Sauropos ate treetops, high and deft,
Ornithis grazed below in his great rain

Of fallen leaves and trampled forest floor.
Jurassic dawn: not one single morning,
But ten million years of opening door
After door—with each new niche adorning

Itself with new inhabitants, new forms,
Ways to eat, hunt, hide, and go on growing—
The dinosaurs—best fruit of changing storms—
Had filled the whole world past overflowing.

And in the seas the healing was the same:
Ichthyos, who survived the dying, grew
Back into prominence again; the name
Of Sauropteros would be made anew

As plesiosaurs—the next chapter's praise.
For now, give honor to the dawn: the night
Of second dying ended, and the haze
Of the green Jurassic morning's gray light

Showed life's lawn regrown on bones of the dead,
The dinosaurs, inheritors, advance;
The world recalled how to live—not with dread
Of dying worlds, but in the simple dance.

Chapter 98: The Plesiosaur Queens

Pisces 14, day 98 of the Gaian year

Now Nothros' children, who had paddled close
To shore through all the long Triassic years—
Half in the water, like a coastal prose
That never quite committed—shed their fears

And swam to open ocean.

In the wake

Of the end-Triassic dying, the sea
Had emptied niches for a line to take
That had the body and the will to be

A ruler of the deep—and Nothros' heirs
Answered the ocean's call: Plesios, those
Sauropterygians, who took the airs
Of paddle-limb and barrel-chest, and chose

To perfect them for the open, deep sea.
Two forms emerged from Nothros' ancient line:
The long-necked ones, whose neck, by slow degree,
Grew half the body, formed to the design

Of fishing-cranes above the open waves—
Elasmosauros, with a neck so long
She seemed a serpent rising from the caves
Of the deep sea to snatch the fish—her song

Was silent strike from below, the ambush
Of surface-schooling fish who never saw
The jaws come from the underwater bush
Of the long neck's patient and waiting maw.

And the short-necked ones: the pliosaurs, great
Plios, with massive heads and shorter necks,
Built for power rather than the ornate
And serpentine: Plios became the Hex

Of every marine creature's nightmare: jaws
The length of a man, teeth like railroad spikes,
A body four flippers drove without pause
Through the Jurassic sea—the monster strikes

Ichthyosaur, plesiosaur alike,
Top hunter in the Mesozoic deep,

Who knew no equal and would only strike
At all that dared to swim the waters' keep.

Both forms swam with the same four-flipper flight:
Not tail-propulsion of the fish or whale
But underwater wing-beat, left and right,
The front pair pulling, and the rear pair's trail

Providing stability and the turn—
Like a sea turtle's flight beneath the wave
But amplified to grandeur—and they'd earn
The ocean's title, elegant and brave,

As swimmers, those who flew through the water.
And in their bones the turtle-kinship showed:
Paraps' patient architecture's daughter,
The very body-plan that Turtlos owed

His shell, grown grand in marine form and size—
The flipper that the sea turtle still shares
With plesiosaurs is no chance; it lies
In homology the fossil declares:

Both children of the same ancestral hand,
Both built from Paraps' patient blueprint, one
On land with shell, the other in the grand
Of open ocean's underwater run

Of four-wing flight.

`The Plesios then ruled`

The Jurassic and the Cretaceous seas—
A hundred thirty million years they pooled
Their dynasty across the ocean's freeze

And warm of alternating climate—queens
Of every coast, from shelf to either pole,
Their fossils found in every rock that leans
Toward the sea—as common as the whole

Sea's wealth itself, in every latitude.
They bore live young, as Ichthyos once did—
The open sea had left no certitude
Of beach for eggs; and so the mother hid

Her young within her, and gave birth at sea,
And the newborn Plesios swam beside

Her mother from the first, already free
Of any shore, already in the tide

Of their eternal four-flipped hunting-flight.
Honor Plesios and her long-necked line—
The turtle's cousins of the ocean night
Who took the ancient body-plan's design

And made it fly beneath the waves: the queens
Of the Mesozoic, four-flipped fliers,
Whose paddle-limbs and barrel-chested means
Of surface-breathing made them the buyers

Of the whole ocean's greatest real estate—
And ruled it longer than each other line
Of sea reptile: patient, elegant, great:
The Paraps-kindred of the ocean brine.

Chapter 99: The River Dragons at Sea

Pisces 15, day 99 of the Gaian year

The river lords, too, heard the ocean's call.
In Jurassic seas, while Plesios flew
On his four flippers through the deep, and tall
Ichthyos' dolphin-forms in Tethys' blue—

A stranger came: of Cruros' line, the brood,
The crocodilian kin, river dragons
Who'd come through the Triassic's end, subdued,
By staying humble—these were the wagons

Of a marine experiment's ascent.
Thalattosuchus—the sea-crocodile—
Was Cruros' answer to the ocean's rent-
Free niches, and his children swam in style

Not expected of a crocodilian:
Fully marine, with flippers where the feet
Had been, a fish-tail where the reptilian
Tail had flattened to a vertical beat

In water. Thalattosuchus was now
Sea creature, streamlined, free now from the need
Of fresh streams: salt glands, by the eyes, allow
Him salt-tolerant life, and he would speed

To open ocean from the river-bank.
Metriorhynchids, Metrion's own kin,
Were most marine of all; and in their rank
Among crocodylomorphs, those who'd been

The kids who fled to sea, never returned.
Their legs were paddles now, their tails bore flukes,
Their skin had lost the armor scales that burned
With weight in open water—these rebukes

Of every crocodilian convention
Swam the Jurassic seas as sleek and fast
As any sea reptile: the invention
Of the sea-crocodile—a form that passed

Through the Jurassic waters like a dark
And toothed torpedo, catching fish and squid,
In jaws still bearing crocodilian mark
Of the long snout, the interlocking grid

Of teeth—but everything else was ocean:
The body smooth, the limbs to fins made slim,
The tail an engine of locomotion
That drove them through the surface and the dim

Below with ease.

They rose to breathe the air—

Lungs, and not gills, their amniote bequest—
And bore their young alive, and so the rare
Final dance of sea-adaptation's quest,

The land abandoned.

For a little while

In the Jurassic's middle age, the seas
Held crocodilians who had crossed each mile
Of evolution's distance—from the trees

And rivers that their Cruros forebears knew
To open ocean, wholly of the sea,
Hunting with Plesios, Ichthyos too:
Three lines in one marine republic, free,

Each from a different branch of Sauros' tree:
Plesios, from Paraps' old turtle-kin;
Ichthyos, from the deep diapsid sea,
And Cruros' line, the last to venture in.

The teleosaurids, the other clan
Of Thalattosuchus, kept near the coast,
Like the gharial in a later plan:
Long-snouted, eating fish, a hunting host

Who patrolled the Jurassic shore and reef
Like river-hunting forebears, on salt strand;
The ancient end-Triassic's dying grief
Had pushed them past the rivers to expand

Beyond the waters that their fathers knew;
And the Jurassic sea lay close and wide,
With fish enough for every hungry crew,
And there they hunted, on the turning tide.

And Thalattosuchus' whole clan would fade
Before Cretaceous dawn—the most marine,
Metriorhynchids, leaving no cascade
Of descendants to any later scene—

Experiment complete, their lesson taught:
That the most devoted river-dweller
Can hear the ocean's call and then be caught
In the sea's embrace—that every cellar

Of evolution's house lies linked and next
To every other room; the crocodile
Who seems forever bound to river's text
Can rewrite himself in the ocean's style.

For the sea turns no one away who comes
With lungs and will and willingness to change—
And the Jurassic ocean beat its drums
For river dragons who expanded range

To the horizon—and found room.

`Give praise:`

Thalattosuchians, crocodile-kin,
Who went to sea and in the ocean's ways
Earned a place with its hunters. They had been

True marine crocodylomorphs, who proved
No lineage is locked in just one zone,
The river's child, when river-banks have moved,
Can make the sea a poem of its own.

Chapter 100: The Thunder Lizards

Pisces 16, day 100 of the Gaian year

Now comes the thunder.

In Jurassic prime,

When Conifera's woods grew tall, and rain
Fed canopies to a fantastic climb
That no neck yet had managed to attain—

Sauropos answered the invitation
By growing the longest neck in history
Of vertebrates—a slow escalation
Through thirty million years—the mystery

Of how a body can become so vast
And still function, still breathe, still pump the blood
From heart to brain across an unsurpassed,
Impossible distance—the body's flood

Of engineering answers that allowed
The giants to walk.

And Brachio stood

The tallest, with his front legs longer, proud
And giraffe-like, nostrils above the wood

Of the high canopy, a living crane
That browsed treetops like a grazing tower—
Fifty tons of gentle, green-eating reign
Over Jurassic woods' highest bower.

Diplodos was the longest—his whip-tail
Stretched out behind him, sonic, like a lash:
The crack of its tip breaking the air's veil,
A bullwhip's—twenty-seven meters' dash

Of body; heaven knows the bones that deck
His neck and tail: a hundred-plus, and each
Articulated for the flex and check
Of the enormous body's sinuous reach.

Argentinosauros would come later—
The largest of them all, a hundred tons,
The most massive land beast, and the greater
And the most extreme of Sauropos' sons—

But in Jurassic's middle age, the first
Great sauropods already shook the earth
With every footfall—and the drumbeat burst
Of walking was the Mesozoic's birth

Of thunder that was not from any cloud.
How did they breathe?—with lungs connected to
Air-sacs that ran all through the bones—the proud
And hollow vertebrae the X-ray flew

Through as through a cathedral's buttressed vault—
That same bird-like system of breath and lung
That Archon had invented—the default
Of archosaur bodies, a prism sprung

To solve the oxygen problem: air through
The lungs in one direction, not the tide
And in-and-out of mammal breathing: new,
Efficient oxygen exchange, supplied,

The gift of Archon to his greatest line.
How did the heart pump blood so far? By force
Of pressure that would kill a man; design,
A cardiovascular star, the source

That weighed as much as a small car and beat
With force the aorta had to channel
Through a frame longer than a city street—
The pressure at the head was a panel

Of engineering we don't fully know.
And they were warm, or warm enough: the mass
Of their bodies holding heat in the slow,
Enormous thermal reservoir, the crass

And simple physics of being so large
That surface-to-volume ratio meant
The body stayed warm without any charge
Of inner fire; gigantothermy lent

What endothermy gives to smaller things:
A stable, warm inside, where the enzyme
Chemistry of all life could spread its wings
Regardless of night's cold or of daytime

Blaze of Jurassic sun.

They walked in herds—

The footprints tell us this: great trackways of
A dozen or a hundred, and the words
In rock record say the giants above

Moved together, the young in the center
Protected by adults' enormous flanks—
No predator but boldest would enter
The moving fortress of sauropods' ranks.

And they ate. They ate constantly. They stripped
The woods with the thoroughness of machines,
Each day consuming more than men have shipped
In weeks of groceries; Jurassic scenes

Where sauropods were feeding sounded like
A constant ripping of the world's green hide—
The crunch and tear of branch and bark and spike
Of conifer processed through the inside

Of gut the length of a house, fermenting
Through bacteria that broke cellulose
To energy—forests unrelenting
Torn by the appetite that found no close.

This was the age of giants. This was when
The earth trembled not from volcanoes' fire
But from the footsteps of the greatest men—
If men is what we call the living spire

Of evolution's most ambitious reach:
To build the largest animal that walks
On four legs, each one massive as a beach-
Side pylon—and the thunder of their walks

Was the heartbeat of the Jurassic world.
Honor Sauropos—the thunder lizards,
The gentle giants, banners all unfurled
In conifer woods, who braved the blizzards

Of deep time, and grew up to what the land
Can hold, what bone can bear, what heart can pump—
The largest things that ever walked on sand,
Whose every footstep was the drumbeat's thump

Of life, which says: I'm here, and I am vast,
And I have walked the world's whole width and length,
And earth itself remembers where I passed,
And bears the print of all my weight and strength.

Chapter 101: The Feathered Ones

Pisces 17, day 101 of the Gaian year

The feather began as warmth, and not flight.
Long before any wing had caught the air,
The theropod's frame dressed itself in light
And filamentous down—a coat to wear

Against Jurassic nights, when even those
Warm-blooded archosaurs had need of more
Than the bare scale, to hold the warmth that rose
From metabolism; feathers, the door

To endothermy's victory complete:
The insulating coat that let the small
Theropod keep his body's furnace heat
Still running through the night, and on through all

The cooling hours when the sun went down,
When thermal mass of Sauropos alone
Kept giants warm. And then the feathered gown
Was small dinosaurs' answer: to the bone

Warm, against cold; the filament that went
As the first proto-feather from the scale
That Sauros had inherited—the tent
Of fluff that kept the body's thermal tale

Of warm blood beating through the smallest frame.
Then color came—for feathers could be dyed
By melanosomes; the mating game
Of display, mate-selection, multiplied

The feather's purpose: not just warmth but show,
The brilliant coat that said: I am alive,
I am healthy, I am strong—and so
The feathered theropod would come to thrive

With double gift: warmth within, the beauty
Without—and both drove the evolution
Of more ornate plumage, as the duty
Of each generation's contribution

To the great arms race of display.

```
And then—
```

In the late Jurassic's limestone lagoons,
Where Tethys' tropic waters bred their den
Of archipelagoes—and the monsoons

And trade winds of the greenhouse world; and there
Lived one, a creature half of either world:
Archaeos, he whose wings first met the air:
The oldest answer, feathered and unfurled.

He was a theropod, and clearly so:
The teeth, the clawed hands, and the long tail, grown
From Theros' kindred, and, from head to toe,
The strong and hollow bones dinosaurs own.

But on his arms, the feathers, long and strange,
Were asymmetric, with their vanes arranged
For the physics of flight—across the range
Of the Jurassic air the weathers ranged

Across the planes of his wings, not mere show:
Archaeos could fly, or glide, or else blend
The two; and so the fossil stone would know
His imprint, which the fine-grained limestones lend

Of Solnhofen's lagoon, where the lime-mud
Preserved his feathers' every barb and shaft
In the most famous image of the flood
Of deep time's long ages—the ancient craft

Of evolution's transformation, caught:
A dinosaur becoming bird.

Not he

Was first to fly, for Pteros' wings had sought
The Jurassic sky; but his wings, set free,

A different wing: not the membrane-kite
Of pterosaur skin, but the feathered fan,
Each vane interlocking to make the flight
Surface from countless filaments—the plan

That would outlast the pterosaur's skin-wing
And carry the bird-line onward, far past
Extinction and each change that time would bring—
For feathers, unlike membrane, could stand fast

Through damage of a tear, and still function:
Each feather separate, replaceable,

And the wing that flew with feathered junction
Was more resilient, more embraceable

By evolution's craft than the single
Membrane that Pteros stretched across his hand.
Archaeos: not yet a bird; the mingle
Of dinosaur and bird in his frame spanned

The transition: teeth where the beak would come,
Claws on wings where the alula would grow,
A bony tail where the pygostyle's sum
Of fused vertebrae would later on show—

But he was proof of concept, the first flight
Of feathered wing, the dinosaur who dared
To test Jurassic air and found the height
Rewarding—and the line that he prepared

Would be the most successful dinosaurs
Of all: the birds, who fly above us still,
Survived the asteroid, and whose song pours
Through every morning with its living will—

The only dinosaurs that lived to sing.
Praise Archaeos—half-dinosaur, half-bird,
Caught in Jurassic stone, a feathered thing
With wings outstretched—the first and final word

Of transformation that is still in flight:
From the running theropod on the ground
To singing bird above; and in the light
Of every dawn, the dinosaur's resound.

Chapter 102: Teeth and Claws

Pisces 18, day 102 of the Gaian year

The Jurassic: theropods' golden age.
Where Coelos once had run in modest packs
Across the Triassic's marginal stage,
His heirs in the Jurassic found the cracks

Of ecosystems' structure, opened wide
For predators of every size and style,
And Theros' children filled them with the pride
Of hunting art perfected mile by mile.

Allos was master when Jurassic waned,
The lion of his age, but larger still,
His hatchet-skull: terrible head ordained
For the grave work of the sauropod kill:

The upper jaw a blade, the teeth like knives,
Serrated, curved; and though the odds were vast
Of downing forty-ton beasts, still the lives
Of Allos were in calculation passed

In ambush art and in the bleeding wound—
Not one great killing bite, but slash, then wait—
The strategy, until the prey, attuned,
Weakening, bled out for hours: its fate.

His arms were strong—not the reduced, the slight
Vestigial stubs of later forms, but
Functional, grasping, built to hold on tight:
Three-fingered hands with claws that hooked and cut

Into the sauropod's great flank and held
While the jaws worked; and Allos looked the part
Of what he was: a killing engine, felled
Assembled from the theropod's own chart

Into its full Jurassic expression—
Bipedal, balanced on the fulcrum-line
Of tail, the head a fearsome confession
Of what the hunter's art demands: design

Of bigger teeth, a stronger jaw, the force
Of bite delivered from the muscle, bound
Within the skull—and theropods' long course
Of evolution always sought new ground:

A deadlier kill.

Nor was he alone.

The Jurassic's guild of hunters had spread,
And many were the niches—from the bone
Of largest prey, the great and thunder-tread,

Down to the quick and the smallest lizard,
A theropod was tuned to every scale:
Ceratosauros, with nasal wizard-
Horn and his blade-teeth, hunting the same trail

As Allos, but upon a smaller gauge;
Megalosaurids, heavy-jawed and strong,
Who hunted on the European stage
Of the Jurassic world; and all along

The coastal margins, spinosaurids made
Their first experiment with eating fish—
Long-snouted, sail-backed forerunners who laid
The way for Spinosauros, whose own wish

Would be the river-kingdom he'd receive.
In undergrowth the small theropods ran:
Compsognathids, a chicken's size, who'd weave
With delicate insect jaws, the small clan

Of Theros' house, who proved the hunter's plan
Was not restricted to the giants' game
But worked at every scale—from the span
Of Allos' skull down to the smallest frame

Of running insect-catchers in the fern.
Theros and Sauropos, in their arms race,
Drove both to new extremes: at every turn
The predator grew larger; in the chase

Colossal plant-eaters grew larger still—
The back-and-forth of hunt and of defense
That made Jurassic climb, and climb until
No end could come, and there could be no fence

To limit size of hunter or of prey—
Only the bone's physics, and the heart's force
To pump the blood around the frame each day
Through bodies pushed to their extremest course.

This was the theropod's whole art: to build
The body for one sole purpose: killing—
And to refine that aim until it filled
The hunter's niche so fully, so thrilling,

Efficient so, that every herbivore
On the Jurassic plain lived in shadows
Of theropods' eternal: something more
Terrible is coming from the meadow's

Far edge, with knife-like teeth and patient mind
Of hunters made for nothing but to kill.
Honor Allos and his Jurassic kind
Of fang and tooth and claw, that dwell there still

In every child's imagination when
They dream of dinosaurs, the great and grim
Predators who hunted and fed and then
Hunted again: the indelible hymn

Of all the theropods' evolving creed:
The world is meat, and all the meat is prey;
The world is meat; the hunter's born to feed,
And hunts again tomorrow, as today.

Chapter 103: The Flower Revolution

Pisces 19, day 103 of the Gaian year

Then color changed.

```
                              A hundred million years
```

The green had been the gymnosperm's: the dark
Heavy green, Conifera's needle spears,
Wind-pollinated world, austere and stark,

Where pollen flew in clouds of golden dust
On the Mesozoic wind, profligate
And wasteful: a full billion grains, and just
A few would find their target, the mandate

Of conifer seed-making: flood the air,
Pollen, relying on the statistics
Of the wind to carry a grain somewhere
That mattered—ancient and crude logistics

Of the gymnosperm seeds.

```
                                 But in the young
```

Cretaceous undergrowth, among the ferns
And cycads, something new appeared, unsung,
Quiet, beautiful, transforming: the turns

Of evolution that change everything
Without extinction's drama: there arose
Angios, the flowering plants, a thing
That gymnosperms had never thought to pose:

A pact.

```
          The flower: a contract written
```

In color and in scent: come here to me,
The flowering plant said, come, be smitten
With nectar; drink it, for I give it free—

And in exchange, bear pollen on your back
On your body to the next flower's door,
And place it there precisely, with no slack:
No wind-swollen cloud of waste, but the core

Of pollen placed just where it has to go
By body of the insect, bird, or bat,
Whose flow of visits was the guide, and so
It steered flowering reproduction; that

Small nectar cost was paid a thousand-fold
By the sure aim of what was never lost
To the wind's indifferent, scattering hold:
The flower gained far more than all it cost.

Angios, the daughter of Gymnos' line,
Was seed-plant born, but made the old world new
With innovation: flower as the sign
And fruit as the reward. The fruit was, too,

A second bargain: eat, said the apple,
The berry, drupe: eat flesh I gladly share
With you; and in your gut bear the chapel
Of seeds to distant ground, and plant them there

In the fertile soil of your dropping, rich
With nutrients I'd never have; the trade
Of every animal's digestive niche
Became the flower's own dispersal aid.

Color, scent, nectar, fruit: this was the kit
Of flowering plants, unforeseen at birth,
And most transformative invention, fit
To rewrite ecosystems on the earth.

Neopter's children—all the insects—bloomed
Beside the flowers, co-evolved, awesome
In staggering diversity: the doomed
And joyful partnership, bee and blossom,

Of butterfly and orchid, and the pact
Of wasp and fig—each pair evolving close
Specificity, intimate, exact:
The clasp of pollinator and of those

They pollinate: each flower shaped to fit
Its guest; and each guest's body, in its turn,
Was tuned to flower's architecture: it
The flower as solicitor would learn,

And, as the client, locked in an embrace
That drove them both to new extremes of form:
Longer tongues, deeper nectaries; the race
Of coevolution's perpetual storm

That in the end produced more species—more
Of flower and of insect—than the rest

Of lines combined; the masterpieces, store
Of evolution's mother, fruitful, blessed.

The dinosaurs ate the new plants gladly—
The hadrosaurs, ceratopsian clans
Of late Cretaceous would have fared badly
If flowers failed: for all their special plans

For grinding teeth and gut-fermentation
Were tuned to flowering plants' provisions—
And the mammals in the nighttime's station
Found the fruits and seeds, the small decisions

Of forest floor enriched by flowers' gift.
The world that the new flower made was not
The austere gymnosperm cathedral's lift
Of dark columns—but polychrome, and hot

With meadows in full bloom: red, yellow, white,
Purple, blue, and every shade between—
The advertising of the flower's bright
And market-driven beauty, the obscene

Profligacy of beauty—beauty not
Waste, but precise, a calculated sign,
Broadcast, dutiful to the eye: a plot
For pollinators: it would redesign

Every landscape there is on all the earth.
Honor Angios, the flowering one,
Who changed the color of the planet's girth
And made the partnership beneath the sun

Between the flower and the wing, the root
And the tongue—the most productive contract
In all the history of life, the fruit
Of which we still consume in every act

Of eating, smelling, sight—for the flower
Is source of nearly everything we grow,
Angios' Cretaceous hour of power
Is the hour that made the world that we know.

Chapter 104: The Snake-Kindred of the Sea

Pisces 20, day 104 of the Gaian year

In late Cretaceous seas, a hunter rose
From Squamos' lineage—the lizard-kin,
The children of the second-born, and those
Who carried the inheritance within

Of the flexible jaw, the scale-free eye,
The forked tongue tasting chemistry in air—
Mosas, the mosasaur, who would apply
The lizard's ancient arts to ocean's lair.

For Mosas, Squamos' child, was of the kind
Of monitor, the great Komodo's kin—
A varanid, a tongue-flicker, inclined
To coastal shallows, who at last went in

And never came back out. So, long before,
Two hundred million years, had gone the one
Called Ichthyos; now Mosas left the shore—
But by convergent laws, his course would run

Not to the dolphin's build, but to the form
Of serpents, long and sinuous; and the drape
Of side-to-side motion, snake-like in storm
Of open ocean, undulating shape.

For Mosas stood as stem of what would be
The snakes in later days: a lizard whose
Great jaw unhinged; the bones were now set free
That held it rigid once—so it could choose

To flex and spread, to swallow down its prey
Larger than heads: kinetic skull and jaw
That the snake would one day call its own way
Was Mosas' gift: the ancient reptile's draw

Toward the loosened bone, the flexible face
That could accommodate a giant meal
Larger than reason; in the ocean's space,
Where the prey was large and the need was real,

This change had made the mosasaur supreme.
Mosas grew huge in the Cretaceous seas—
The largest reached a length past any dream:
Seventeen meters' hunting expertise

That ruled the shallow continental shelves
Where all the inland seas spread wide and warm
Across Cretaceous lands; the waves themselves
Belonged to Mosas, and the coming storm

Of his jaws was the last thing that the fish,
The ammonite, the sea turtle, the shark
Would see—the mosasaur's one burning wish
Was food; the ocean offered it; the dark

Of the Cretaceous deep was his to claim.
His flippers were the monitor's spread toes,
Webbed now, and powerful: the walking frame
Of the land lizard, paddles now; there rose

His tail, tall, flat: an upright blade that drove
The sinuous frame through all the hunting hall
Of the late Cretaceous sea's treasure-trove.
And then, as Mosas rose, there came the fall

Of Ichthyos: the dolphin-shaped, of old,
Ancient ichthyosaurs, who had enclosed
Triassic and Jurassic seas in hold,
No longer could escape: their line, deposed,

A hundred fifty million years of deep,
Went silent mid-Cretaceous; the rafter
Of their evolving house had lost its keep
To changed seas, and rivals coming after;

Mosas filled the vacant throne's position
And scaled up to the oceanic zone
The monitor's own ancient ambition,
Until the ocean's realm became his own.

The mosasaur's jaw told the future: loose
Flexible bones that let him swallow whole
Were the same engineering that the goose
Of evolution later on would dole

To snakes; for snakes are the mosasaur's land
Echo: the same Squamos blueprint applied
To earthly corridors: the limbless band
Of jaw-unhinging, subtle hints implied

Of what the lizard becomes when the limbs
Are deemed no longer needed—in the sea

Where Mosas swam, or in the earthly hymns
Of the serpent's crawling: the same decree

Of Squamos' flexible engineering.
So honor Mosas, snake-kin of the sea,
Who proved that Squamos' old pioneering
In flexing jaw and limbs no more, set free,

Could conquer sea as it had conquered land—
The mosasaur, who ruled Cretaceous deep
With monitor's tongue and the serpent's hand
All redesigned for swimming—and whose sleep

Was the sleep of the ocean's apex lord,
Who feared nothing within the water's realm,
Whose jaws wrote, plain and in one clear accord:
The lizard-kin can take the ocean's helm.

Chapter 105: The Tyrant Kings

Pisces 21, day 105 of the Gaian year

Terror, when it is perfect, takes a shape.
Then, late in the Cretaceous, Theros' brood
Achieved the perfect hunter—no escape—
Delving the deepest fear of hunted food:

Tyrannos, of the tyrant lizards king,
Coelurosaur, who grew past reason's law,
The largest head, the strongest bite to bring,
The raw and overwhelming force of jaw

Of apex lord, for the Cretaceous' end.
Twelve meters long, six tons of bone, each cord
Of muscle, every fiber made to bend
To one dread purpose, killing, as its lord:

Tyrannos walked on two enormous legs,
Each step a seismic tremor; every hill
And valley shook from impact, and the dregs
Of every smaller creature's calm would spill

At sound of the tyrant's approach. His arms
Were tiny, on a body that battered
The mind—but his great head bore all the charms
Of compensating power—what mattered:

A skull a bathtub long, and jaws to break
The bone; teeth like bananas; and the might
Of bite—the strongest any beast could make
In all land's history: such was his bite—

Eight thousand pounds per square inch at the tip
Of tooth, with teeth not blades like Allos' own,
But rounded railroad spikes, thick, set to grip
Beneath enamel: made to crush the bone.

For great Tyrannos did not merely slice
His prey to bleeding death, but seized and crushed—
The skull, the spine, the ribs—the sacrifice
Was instant, and the prey not slowly hushed

But wrecked within the seizing: killing bite
That stopped the grazer's struggle in one blow,
One application of hydraulic might
Of jaws. And in his eyes, set forward so,

Binocular, there came depth-perception
That the earlier theropods had lacked:
A three-dimensioned world; the deception
Of camouflaged prey was no longer backed

By any trick of sight: Tyrannos saw
In depth, in color; he tracked the motion
Of fleeing prey with the predator's law
Of patient, unhurried locomotion:

He did not need to be fast—he needed
Only to be persistent: walk and walk
And walk till the prey that ran conceded
To its exhaustion, and the tyrant's stalk

Ended in seizing, as was sure to be.
His brain was large; the bulbs for smell were vast,
Enormous, and his sense of smell was free
To find prey, rotting or alive, miles past.

His hearing was acute: the ground's low sound
Conducted through the bone, each footstep's trace
Of every fleeing creature, secret, found;
And the Cretaceous shook before his pace:

No land creature in Tyrannos' domain
Was safe from scan of smell and sight; the road
Of predatory apex, and the reign,
Of sixty million years theropods strode:

Innovation: from Coelos' running pack
To Allos' blade-jawed ambush; then, the mode
Of tyrannosaur's bone-crushing attack,
The final weapon in the hunter's code.

He was Theros' masterpiece: the whole sum
Of all the meat-eating lineage learned
About the killing art; and so had come
Power, not speed: this was the lesson earned

From Allos' day, that size would matter less
Than the force that's delivered in contact—
Tyrannos delivered the utmost stress
That any bone and muscle could compact

Into a single, devastating bite.
The grazers answered: Ceratops would grow

Great horns and frills, the bony, armored might
Of shield against the tyrant's strike and blow—

But that is for the next chapter's telling.
For now, praise Tyrannos, the tyrant king,
Culmination of the hunter's dwelling
In body's engineering—everything

All that the theropod could be, he was:
The largest predator that ever walked,
The deepest jaws, the strongest bite—the cause
Why earth itself would tremble when he stalked.

He ruled for two million years at the end
Of the Cretaceous age—a passing reign
In geologic time; but in the trend
Of theropod story, the utmost strain

Of hunting art—and though the asteroid
Would end his dynasty, his ghost remains
In every child who dreams of the destroyed
And terrible world where the tyrant reigns.

Chapter 106: Horns and Crests

Pisces 22, day 106 of the Gaian year

Against the tyrant's jaw, the herbivore
Grew armor, grew horns, grew the elaborate
And handsome guards of the Cretaceous floor:
Ornithischian answer, the ornate

Weaponized response to the hunters' art.
Ceratops was Ornithis' finest shield—
The horned face, the frilled and bony heart
Of guard displayed like a medieval field

Of heraldry above the skull—three horns:
Two brow-horns, lances, set above the eyes,
A nose-horn in the center; the adorns
Of bony frill behind: the poise, the size

Of display and defense combined in one
Enormous and improbable design:
A skull that weighed as much beneath the sun
As the rest of the head—the massive shrine

Of bone that was at once a weapon, shield,
And billboard—for the frill bore painted hue,
And the horns could gore, and the display field,
For knowing kin, would turn the herds into

A gallery of living art: the three
Horns of Triceratops; the spiked array
Of Styracosauros' frill-horns; the spree
Of Centrosauros' nose in its display.

Each species wrote, upon the skull, its note
Of who it was, for all the herds to read,
And the Cretaceous plains became the moat
And kingdom of the horned ones and their creed.

They charged the great Tyrannos when he came—
The brow-horns aimed at the predator's flank,
The frill to guard the vulnerable claim
Of the neck—and the herd's collective rank

Formed a great wall of horns against the king:
Ceratopsian herds moved together,
The young inside, the adults in a ring
Of bristling horn-points, and the weather

Of the Cretaceous war between the horn
And tooth, the drama that defined the age
Of final days; the conflict, being born
From sixty million years upon that stage

Of predator and prey, would reach its peak:
Triceratops against the tyrant's maw,
The strongest bite against the strongest cheek-
And-horn defense; the escalation's law

Could go no further: here the limit reached
Of the arms race between the hunter's jaw
And the hunted's armor; neither one breached
The other's last defenses; and the draw

Of endless war was the Cretaceous way.
Beside the horned ones stood the crested kind:
Hadros, duck-billed, with a different display
Of ornament: the hollow crests designed

On skulls that Parasauros wore: the tube
And trumpet of bone that resonated
With the animal's voice: a live YouTube
Of talk; each crest was tuned, and created

A different pitch and timbre; and the call
Of hadrosaurs across Cretaceous plain
Was music, deep and haunting, and the hall
Of hollow crest a resonating gain

That amplified the bellow on the air
For many miles: the long Cretaceous song
Of duck-billed herds: a sound both plain and rare,
Of the herd's talk: the danger-calls, the throng

Of mating-songs, the mother's call, the word
Of infant hunger—social life laid bare,
As complex as a mammal's—to be heard
By all the herd, and answered everywhere.

Hadros and Ceratops, together, were
The mammals of Cretaceous grazing kind,
If mammal is the word we would prefer
For all that lives the social life, defined:

Parental, talking, herded: such a life
Ornithischians lived and so contrived,

The lawful answer to the hunter's strife,
Cooperative, whereby herds survived:

Stay close in the hunter's world, together,
Defend as one, communicate, and raise
Each young one with care through every weather—
And so the herd survives the tyrant's gaze.

Ankylos too deserves a word: the tank
Of ornithischians, whose body bore
A dorsal pavement of bone-plate and flank-
Armor that not one predator could score

With tooth or claw—and at his tail-end swung
The club: a bony mace that could shatter
Even Tyrannos' leg in two; the young
And old alike, kept safe by the matter

Of the living stone that Ankylos wore.
Honor the horned, crested, and armored all,
The grazer's answer to the hunter's store
Of weapons: the Cretaceous, whose great hall

Held both the tyrant and the shield, the fang
And the frill, and the jaw, and the sharp horn—
And in their eternal contest, there sang
The song of the living since it was born:

That every hunter makes a better prey,
And every prey makes better hunters, so
That life grows richer from the interplay
Of hunter and of hunted, as they go.

Chapter 107: Sky Giants

Pisces 23, day 107 of the Gaian year

Now Pteros' children grew past every bound.
Then, in the late Cretaceous, when the world
Of Mesozoic life had broken ground
In size and strangeness—Pteros then unfurled

The very largest wings that ever flew.
Quetzal, whose name the feathered serpent bore,
A god men later worshipped—flew through blue
Of the Cretaceous skies, on wings that soar

As fighter planes: eleven meters wide,
The membrane stretched from his enormous fourth
Finger to body; and the walking stride
Was, on land, a giraffe's, as he went forth.

For Quetzal, when he walked the wood, stood tall
As modern mammals' tallest, on the ground,
Wings folded, on his knuckles, feet: of all
Earth's fliers, he was tallest to be found.

And the azhdarchid pterosaurs, the great
Of late Cretaceous, were of all the line
Of Pteros the most versatile, whose state
Of high achievement crowned the whole design:

They could fly thousands of miles on thermal
And soaring flight, and almost nothing spent
Of power; the membrane, thin and dermal,
Caught air just like a sail, its whole extent.

The hollow bones weighed almost nothing; so
Quetzal weighed some two hundred pounds, the scale
Of a grown human, though in size he'd show
A small plane's bulk, a buffeting broad sail.

Cathedral of the air: the hollow bone
And air-sac framework, threaded through each strut
And needle of the skeleton, had grown
As light as hope. On ground, a stork, he'd strut,

Quetzal, of monstrous size, on the plain's shelf
Of the Cretaceous; with his beak he'd pluck,
Picking up mammals, lizards, for himself,
Small dinosaurs—whatever, by his luck,

Would fit within the vast and toothless beak
Of these azhdarchids, wizards on the ground,
Gorgeous, unlikely hunters, swift and sleek,
Walking and flying with like skill, renowned,

The only large beasts that could soar and stalk
In both realms, in the sky and on the plain,
Lonely Cretaceous flatlands where they'd walk.
And not just Quetzal held the sky's domain:

Ornithocheirids, on the ocean set,
Would fish upon the fly with lower jaws:
Skimming, they cut the wave—a living net—
Scooping up all the fish without a pause.

And the pteranodontids, crested high,
With heads upswept, a silhouette, they flew
Like living weather-vanes across the sky
Above the inland seas, Cretaceous blue,

And caught fish in their throat-pouch, with the love
Of pelicans' great patience; and the wide
And toothless mouths of these late kings above
Were fishing engines, sleek and dignified,

Each species tuned to its own hunting line
Of air: the soaring ocean-crossers' flight,
The coastal fishers' flap-and-glide design,
The azhdarchids' ground-stalking; Pteros' might,

The widest-ranging dynasty on high
For eighty million years, before the birds
Would claim the air; the pterosaurs' reply
To the air's invitation was the words

Of membrane and of bone, the hollow frame
Of engineering so light that it seemed
Impossible—but frail was not his name:
He flew, and in the thermal's lift he dreamed.

He crossed the ocean on such wings that, by
Their span, the albatross seemed small; the end
Of pterosaurs, though written in the sky,
Came with the Cretaceous' close, which would send

The air to birds alone—the feathered line
Of dinosaurs would then extend its own

Claim, by the right of feather and design,
To every sky the pterosaurs had known.

So honor Quetzal and his giant kin,
The largest things that ever flew the sky,
Who proved, with hollow bone and membrane skin,
The view above belongs to those who try,

And spread their wings past all bounds of reason—
For the sky, the boundless sky, and the air
Is large enough for every new season
Of the impossible, made real up there.

Chapter 108: The Peak of Life

Pisces 24, day 108 of the Gaian year

The late Cretaceous was the fullest world
That life had ever made.

```
From pole to pole
```

The forests grew: no ice, the planet hurled
Into a greenhouse warmth that filled the whole

Of the equator and the polar zone
With green of Angios' flowering reign
And Conifera's old evergreen throne—
The world was warm, and whole in its domain

Of life, from the abyss, the deepest trench
Of ocean, to the highest mountain's crest
That Cretaceous tectonics' bliss could wrench
Upward: the slightest corner—and the rest

Of the whole planet—held its share of life.
In the sea, Mosas ruled the shallows round,
His serpentine bulk was the greatest knife
That the Cretaceous marine world had found

For cutting through the ocean's living wealth—
Plesios still dove with four flippers' sweep
Through deeper water, in the ancient stealth
Of the long-necked kind, unchanged, that would reap

The ocean's fish a hundred million years.
Ammonites coiled through the water column
Within their chambered shells, the ancient peers
Of Coleios' cuttlefish—the solemn

Geometry: nautilus, chambered shell,
Still sailing, as since Ordovician day—
And teleosts, whose numbers grew to swell
Teleosteos' fabulous array,

Filled every niche, from reef to deep water,
From freshwater lake to the midnight zone—
Half of all vertebrates, each the daughter
And the son of Actinus' ancient bone.

On land, Tyrannos stalked through his domain,
Ceratops bore his horns against the king,

Hadros called out across the open plain
Of the Cretaceous; and with every spring

Came ornithischian herds, millions strong,
In yearly migrations across the lands—
And Archaeos' early birds sang their song
In canopies, diversified in bands

Of water-birds and shore-birds, and the small
And toothed Cretaceous forms that occupied
The niches pterosaurs could not fill: all
The understory, forests' deep inside,

Where pterosaurs' broad wingspans could not reach.
Pteros' own children ruled the sky; and tall
As giraffes, the azhdarchids stalked each beach,
Each flatland, winged like nightmares, over all.

In the undergrowth, Mammos kept his small
And quiet vigil: nighttime prayers, the watch
That mammals kept, continuing through all
Cretaceous, Jurassic, Triassic: notch

Of smallness, the nocturnal, nimble, sure
Survival of the warm-blooded, with fur
Under cold-blooded giants, to endure;
But mammals had diversified, and were

In the Cretaceous a fierce defiance
In miniature: the rodent-toothed, the small
Metatherians, in pouched reliance,
Multituberculates; rarest of all,

Eutherians, contrarians, who'd own
The world one day, but were, for now, the size
Of mice, and twice as humble, small, unknown.
The insects, though, outnumbered, in their rise,

All vertebrates combined; the tumble, hum,
Of Neopter's children in the flowers
Of Angios was the whole age's drum:
Bees and wasps and butterflies; the hours

Of pollination filling every page
Of the Cretaceous with the hum and ring
Of partnership of plant and wing. This stage,
The Mesozoic peak, its everything:

A world more full of life than it had seen
Ere Permian's Great Dying; more diverse,
More complex, more intricately between
The predator and prey, the universe

Of the ecology, whose interplay
Of richness that the Paleozoic
Had never known; and in that rich array
Mesozoic wrote its most heroic

Fair chapters: the world at its most alive,
The planet at its greenest and most full,
Each niche filled up by whatever could thrive
In the Cretaceous greenhouse's warm pull.

Honor the peak—the moment when the world
Was most itself, most full, most densely spun
With living things—with every flag unfurled,
Each niche filled, every kingdom, every one,

Cut to its finest divisions—the crest
Of building, Mesozoic year on year,
A hundred eighty million years' bequest:
Invincible and lovely, joy and fear,

The most complex world ever to be seen.
And what came next would be the asteroid.
Tonight the world is at its most serene,
And the peak is still, as yet, not destroyed.

Chapter 109: The Cosmic Visitor

Pisces 25, day 109 of the Gaian year

Past Jupiter's far orbit, there a stone
Had traveled for four billion years, its way
Unmarked, unwatched, unhurried, and alone,
Through cold and dark, until its fatal day.

It was not large: ten kilometers wide,
Small next to the greater wandering mass
Of drifting debris that might yet collide,
A mountain's remnant of the cloud of gas

That built the planets; and its orbit, slow,
Its proud and stable circle eons long,
Was pulled by Jupiter's gravity so
Into a new trajectory, along

Where the mechanics of the orbit threw
The stone across the inner system's lanes.
It did not aim, it did not think: it flew
As thoughtless as the rain that falls on plains

Without intention; and the cosmic zone
Of asteroids released it on a line
That crossed the Earth's: the orbits' math alone
Had pulled it from its circuit's old design

Of outer space, and sent it on its way
On a hyperbolic course that took ten
Thousand long years to bring it, day by day,
Toward the world where dinosaurs, the men

Of Mesozoic civilization
(If civilization is what we call
The organized, complex occupation
Of every niche on a planet, the hall

Of a hundred million species living
Within the most complex ecosystem
The earth had made, the generous giving
Of the Cretaceous greenhouse)—this system

Knew nothing of the stone.

Nor did the stone

Know of the system—cruel; and, at heart,
No cruelty was in it, not one bone:
Things of the cosmos played their dual part

Of physics and indifference, and the rock
That would end the whole Mesozoic world
Was not evil, was not even the shock
Of thunderbolt a vengeful god had hurled—

It was arithmetic, and nothing more:
Two bodies at one place and the same time,
Earth and the stone, a geometric score
Of orbits crossing—and the pantomime

Of a collision none could see coming,
Because no eye on earth looked up to space
With instruments, for incoming humming
Of a great mountain falling at a pace

Of twenty kilometers each second,
Some twenty times the speed a bullet makes,
A hundred times a jet's speed, as reckoned;
In the final hours, its brightness breaks

Into view: a brightening star, a threat
That only mathematics could foretell,
Crossing Cretaceous sky, clear night; and yet
No dinosaur would mourn the future's knell.

Tyrannos hunted in the evening light.
Ceratops grazed beside the river's bend.
Hadros called out across the coming night.
Pteros' last azhdarchid rode thermals' end.

Plesios dove beneath the ocean shelf.
Mosas hunted in the warm, shallow sea.
And Mammos in his burrow kept himself
Alive through yet another night—the key

To everything that would then come after,
Though he did not know it, and could not know,
That the stone was falling toward the rafter
Of the atmosphere, and the final show

Of the Mesozoic was to begin.
The stone entered the upper atmosphere
At an angle, trailing a column thin
And brilliant, made of plasma; and, now near,

The last ten seconds of Cretaceous came
In fire were written; and the air compressed
Before the stone; the instant, searing flame
Of burning air, the superheated crest

Of shock wave that went out before the blow—
And the stone struck into the shallow sea
Of Chicxulub, just off the coast, the slow
And ancient limestone shelf; and then the free

And terrible energy, as reckoned,
Ten billion Hiroshimas; and the years,
A hundred million, closed in one second.
But that's the next chapter's to tell. The tears

Are not yet falling; the stone's rendezvous
With the earth is still one heartbeat away—
And the Mesozoic anoints the view
Of evening sky, the very last good day

The dinosaurs will see.

                    Honor this night,

Honor the last good evening ere the fire—
Cretaceous sky in gentle, heaving light
Of stars above the still realm entire

Of all the dinosaurs who do not know
Tomorrow the world ends.

                          For every world

That ends has had one final evening's glow
When all was still; and life's flag, still unfurled.

Chapter 110: The Last Mesozoic Day

Pisces 26, day 110 of the Gaian year

The last day dawned like every other day.
The sun rose over Laurasia; the warm
Cretaceous air received the light the way
A mother takes her child: familiar form

Of mornings for a hundred million years:
The mist rising from the river, the call
Of hadrosaur crests, at the dawn's frontiers,
And the pterosaur lifting from the wall

Of the cliff-side roost on the thermal's first
Ascending column of the morning heat—
Cretaceous' last day was the unrehearsed
And ordinary going-on, the beat

Of life that knows of nothing, not its end.
In forests, flowering understory
Unfolded to the pollinators' blend,
Wing and proboscis: Cretaceous glory

Of the great flower-insect partnership
In full display: the bee arrived at dawn,
The butterfly came next; the tulip-lip
Of flowers opened wider on the lawn

Of forest floor for each visitor's touch.
Tyrannos woke up hungry, as he did,
The morning's hunt began: familiar clutch
Of scent and sight, the tracking of the hid

And browsing Ceratops on scrubby land,
The patient creep through Angios' cover,
The calculated strike: no husband's hand
Of the energy, no careful lover

Of the caloric budget; his the flaw:
Inefficient killing-machine that burned
More calories than he could see—the maw
Of the apex predator who had learned

To eat enormously, and eat again.
The Hadros herds moved south along the coast
In annual migration, the slow train
Of the Cretaceous autumn—or the toast

Of the Cretaceous spring; the greenhouse world
Had gentler seasons than our own; the herd,
A thousand hadrosaurs, their crests unfurled
In the morning light, bellowed every word

Of rich vocabulary: contact-call,
The danger-signal, and the mother's low
And resonant locator for the small
Wandering infant in the herd's slow flow.

Out in the inland sea, Mosas, all teeth,
Leviathan, monitor-jawed and vast,
Rose up to breathe from the warm shelf beneath;
The noon sun's meridian, as he passed,

Caught in the surface glitter all his length:
Seventeen meters of the lizard-kin
Grown oceanic in their ancient strength,
Before he dove to hunt the deep within.

And Plesios was hunting deeper still,
Flying on four flippers underwater,
Her long neck sweeping with the ancient skill
Of the sauropterygian's slaughter

Of schooling fish; she had done this each day
For her line's hundred thirty million years
Of continuity—the bliss, the way
Of hunting plesiosaurs' long careers

Unchanged since the Jurassic's early dawn.
And in the evening, which would be the last,
And Mammos, in his burrow, there withdrawn,
Watched the sun setting, and he heard the vast

And ordinary night begin: the song
Of insects; the nocturnal mammals' climb
Out of their burrows, to the complex throng
Of nighttime's ecosystem; and the time

When day shift merged with night shift at the seam
Of dusk: the universal handoff, played
By the Mesozoic world to a dream
Of steadiness; the final standoff stayed

Between the stone and planet, hours away.
The birds would sense it, in that fearful lapse,

The young seabirds' magnetic sense, the way
Of navigation, written in brain-maps,

Perceived it, as a faint stir, and the stone
Coming near the magnetosphere; yet
No record has been kept, no tally shown,
Of the approaching doom.

`The last sunset`

Was beautiful, as all Cretaceous were—
The greenhouse atmosphere's broad palette, bright
In reds and golds that would not soon recur
For ten million long years.

`And then the night.`

The last night of the Mesozoic world.
And in the south, a growing point of light
Where no star ever was, grew, brightened, swirled,
And hurled itself at earth. It came that night.

Chapter 111: Good Mesozoic Friday

Pisces 27, day 111 of the Gaian year

At Chicxulub the stone struck shallow sea,
Twenty kilometers each second fast;
Its cosmic speed let loose what there would be
In ten billion nuclear bombs amassed,

In one place, in a single second's span,
And all the physics at the impact's joint
Was absolute.

```
The stone broke not; it ran
```

To vapor, not to shards, at that one point.

The limestone seafloor went to atoms too;
Rock, water, the calcium carbonate
Of ancient reef, a trillion tons, all flew
Up through the vacuum's newly opened gate

That it had punched into the atmosphere,
Up past the stratosphere, up into space;
And from that space looked down: a column, sheer,
White-hot ejecta rising from the place

Of the planet's wound, a luminous crown
Of wreckage, of a size no mind could dream
In the Cretaceous world. The shock went down
Through earth at speed of sound in stone, a scream

In which the real and the imagined met;
The planet rang out like a bell: a quake
Of magnitude eleven, greater yet
Than any since the earth began to make

Its body, heaven and the ground in shock,
The planet's own lament for its torn face
Sent through every mantle layer and rock.
The tsunami followed it in its place:

Waves modeled at three hundred meters tall,
A prayer of water sweeping through the Gulf
And the Atlantic's western shore, the fall
Of every coastal world, which waves engulf,

A gulf between the living and the dead,
A wolf of water. The ejecta, thrown

To space, came down again from overhead,
Returning as a falling rain of stone.

It struck the upper air, the prison sky;
The friction heated every grain to light:
The sky caught fire. No metaphor: from high
Rained down the beads of glass, and they were white

With heat, and from the pyre of the stone
They heated all the air until it broiled;
The forests burned, not from flame that had grown
And spread, but from the sky itself, that boiled

With radiant heat, a ceiling glowing red
Of falling wreckage: firestorms worldwide,
Each forest on the planet burning, spread
At once; the still and fleeing, side by side,

Consumed, the granite and the living wood
Alike submitted to the burning sky.
The soot rose next, and did what murder could
A second time: the pyre, all burned dry,

From every forest on the planet sent
A billion tons of carbon dust to soar
Into the stratosphere, and there it went
Into the final night of winter's war,

The impact winter, and the sun was blocked
For months, then years; no longer did it feed
The world's food chains, photosynthesis locked
Out of the sum; and so, in darkness' need,

When plant and sunlight ceased, the cascade came
Of starvation:

```
                first the green plants were killed
```

In darkness; then the plant-eaters, whose claim
On life had been the plants; then, unfulfilled,

The pride of predators, which had been fed
On the plant-eaters. The food web fell through
From bottom up, its base's giving dead;
The pyramid was nothing, and it knew

No floor at all. The great Tyrannos starved.
Ceratops starved; Hadros starved there beside;

Sauropos' last great giants, who had carved
A hundred million years of living, died.

In the dark sea, the plankton died, and then
The fish that ate the plankton died; and he,
Mosas, whose prey would never rise again,
Met fate in the dark and the starving sea.

Plesios, the plesiosaur, who swam
A hundred thirty million years, found seas
In Mesozoic cold; that patient lamb
Found no welcome in impact winter's freeze;

Pteros, sky giant, Quetzal and his kin,
The last pterosaurs found no thermal park
To ride, no fish, no protein to take in,
In a world that was poisoned and was dark.

The ammonites had sailed the ocean's swell
Since the Devonian; their line had grown
Four hundred million years; and now they fell;
Down to the sediment their shells were sown.

Of every four species, three were killed;
Each land beast larger than a dog was tolled
Into the stone, the record there fulfilled,
In its account of the destroyed, enrolled.

And this is Good Mesozoic Friday:
Death of the Mesozoic world, the void
The asteroid opened in the midday
Of life at its most complex, all destroyed.

Not villainy, not error, not the wrong
Decision, but the cosmos and its maze,
Of a universe that does not belong
To any of the creatures in its gaze;

The unintending stone that fell to earth
Upon a world that had done nothing wrong,
The bone of innocents, the flag of worth
Of every line that earned its place, its song,

A hundred million years in evolving,
Brought down to nothing by the empty space
Between the orbits, with no absolving,
No justice, and no reason in the case:

Only the rock, the planet, and the math
Of crossing orbits, the shock of a world
That ends in airflow on the falling path,
The physics of the unintended, hurled.

Let us mourn the Mesozoic dead,
Whose death was not earned or recommended,
But the falling stone; and the living thread
Of a hundred million years was ended,

Cut in one second by a thoughtless sky
That struck them all and could not see or know;
It had no will to choose who was to die,
And still we mourn the ones it laid down low.

Chapter 112: The Mouse and the Chicken

Pisces 28, day 112 of the Gaian year

The sky fell on the giants, and in dust
The mouse and chicken dreamed a world made new.
For this is what survived: the small, the trust-
Fund of the future, banners rolled from view,

So tight none could be seen: the mammals lay
In burrows, and the birds in hidden nests;
In river channels crocodiles would stay;
The turtles in their shells: these were the guests

Of the Mesozoic who were not seen
As hosts, but lived in margins, out of sight,
And in the nighttime and the in-between,
And made the small ones' bargain with the height:

"Let me be insignificant," they prayed,
"Below your notice"; and they held it fast,
The covenant of smallness that they made:
"Your dynasty my smallness will outlast."

The mouse-sized Mammos, born of Cynos' seed,
Of the synapsid dynasty the heir,
Of Theraps, of Pelyon, of Synaps' breed,
Who knew the weight of long years, and their care,

A hundred eighty million, all the way
From the Permian crown; and so, alone,
Mammos crept from his burrow to the gray
And silent aftermath, a world his own.

His burrow saved him: underground, below,
The network that his kind had always known,
The cynodont's long vigil, patient, slow,
Dug in the narrow art, in earth and stone,

A hundred million years of being small.
Bomb-shelter, pantry, nursery, the earth
Had saved the mammal from the fireball,
And cut the great, so small would rise in worth.

And the chicken, if we may call her that:
The bird, avian dinosaur, the one
Branch of Deinos' tree that did not fall flat
In the impact winter, dinosaur's son,

Heir to the sky.
Why did the birds survive
When every other dinosaur did not?
The seed. The tiny, hard-shelled seed, alive
Through winter, Angios' seed, that was not

Destroyed by the firestorm, the seed that lay
Dormant in soil, through the impact winter,
And germinated when the first thin ray
Of sun returned: the seed was the splinter

Of life that kept the bird alive: the finch
And sparrow and the ancestral chicken
Ate seeds through the long darkness, inch by inch
Of the long winter; while, huge and stricken,

The giant dinosaurs, who needed tons
Of fresh green matter each and every day,
Found nothing; and it was the smaller ones
That ate the seeds who found the only way

Through the dark. The bird was the dinosaur
That flew and ate seeds: this combination,
That humble seeming inventory's store,
Was the ark that carried all the nation

Of dinosaurs across the winter's flood
Of impact; and each bird that sings today
Is still of Deinos' house the living blood,
Its final word, though final in no way:

Birds are dinosaurs, and the morning song
Of robins is the Mesozoic's strain,
Its spinal declaration: "I belong
To the line that walked the Cretaceous plain,

And though the giants fell, yet still I fly,
And in my bones the hollow framework's grain
Of Archon's house still reaches for the sky,
And in my throat the ancient songs remain."

The crocodile, of Cruros' house the last,
The river-dweller, remnant of the line,
The elder brother's, who revived the past
Of archosaurs, the ancient welter's sign:

He lived, as he had lived beyond the end
Of the Triassic age: by being small,

Amphibious, cold-blooded, to extend
His fasting through the dark, through winter's pall.

The strange and patient crocodile could slow
His metabolism almost to nil
And wait, a year if needed, for the flow
Of rivers bringing food, while lying still:

The clothing of a patience wrapped around
His ancient body: the survival plan
That worked before and worked through the profound
Miles of geological time, his span,

His art of doing nothing, slowly, well.
And Turtlos, the patient one, Paraps' child,
Who carried his own house through every hell
The earth could make: the turtle, calm and mild,

Untroubled in persistence through the fire
And dark, and cold, and through the starvation:
Turtles ask so little to acquire
Another day, a new generation:

A little warmth and water, and a leaf,
An insect, and the patience of the stone
That the turtle seems to be; and the brief
Catastrophe of fire could not dethrone

The creature who was armored long before
Against the common cruelties of days,
Of ordinary hunger, and of war,
That stood unmoved, as stone stands, through the blaze.

The synapsids returned, furry and warm,
The milk-giving, long-delayed heirs of earth;
Mammos came out, still little in his form,
And found, where giants fell, a wealth of berth

In the Paleocene, a world swept clean
Of all the great, and open for his tree,
For all a mammal's body was to mean,
For every way of life that was to be:

In every niche the dinosaurs had held
The mammals radiated, small at first,
Then larger, then enormous; and they spelled
The future in the milk with which they nursed

Their young, the fur that held the body's heat,
And three small ear-bones, hearing all the world
In frequencies no reptile's ear could meet;
And the synapsid banner, long kept curled,

After one hundred eighty million years
Of nighttime vigil, flew; the ancient house
Of Synaps took the daylight back; the tears
Of exile ended; and the tiny mouse

Became the elephant, the whale, the ape;
And in the fullness of the mammals' time
A creature would arise, whose long escape
From the animal's silence would sublime

Into language, and consciousness, and art,
Would look back on the ages, page by page,
And read the story from the very start,
And understand. But that's another age.

For now, honor the mouse and the chicken,
Survivors of the Mesozoic's end,
The small and the humble and the stricken,
Inheritors of earth, and who will tend

The future of the living world, and steer:
The mammal from the burrow, bird from nest,
The crocodile, the tortoise void of fear,
The meek, the small, the patient, and the blessed.

This is Easter of the Mesozoic:
The death, the door into the age of mind,
The extinction not the final, stoic
Conclusion, but the opening; behind

The falling stone, the rising of the form
That would one day look up at stars and know
That it was looking; and, through all the storm
Of the cosmic visitor's leveling blow,

The future of all consciousness was born
In dust, the Mesozoic's last good night;
And morning came, and all the world was torn
And still; and the mouse stepped into the light.



Aries

The Book of Stone

Aries: The Book of Stone

Aries is the Ram, the old first sign of the year. The Book of Stone is humanity's beginning, and it ends among the first farmers, who kept the sheep among the first of all their herds.

Chapter 113: The Survivors

Aries 1, day 113 of the Gaian year

The mouse stepped into the light, and he found
A world of ash, and chance in every place.
The sky was gray; the temperature still wound
Down from the impact winter's dark embrace,

But the sun returned, thin and pale at first,
Through the dust as it cleared; and where it fell
On bare and devastated ground, the worst
Of dying was already past the spell

Of killing: dust was settling, and the rain
Of acid fading, and green shoots of fern
Were meddling with the ash-soil of the plain;
And the dispersed and battered, each in turn,

Survivors, looked around. Four houses passed
The asteroid's judgment; four old lines found
The post-extinction world, and held it fast,
And built what followed it, from that same ground.

Turtlos, patient one, Paraps' armored child,
Emerged from some dim, river-dulled repose
That kept her through the fire. She was mild,
Untroubled as she'd always been; she goes

With her own fortress, and she needs a pond,
A green leaf and a warm stone; and she gives
Little in turn, and asks nothing beyond,
Except the living proof that one who lives

Upon the minimum outlasts the roof
Of each empire that the bold have built.
And patient too, and just as much aloof,
Cruros' children, the crocodiles, who spilt

No energy on civilizations,
But simply waited in the shallows, cold
Of blood, patient, at the river's stations,
Eating when it brought food; and, as of old,

Fasting in fallows when no food occurred;
The crocodile's cool liver, all the same,
Worked impact winter's nothing, undeterred,
Like the Cretaceous plenty when it came.

Splinter of Cruros' once-great house, he stayed
When all the rest had perished long ago:
The crocodile, unhurried, unafraid,
Unchanged, the oldest strategy we know

Of living, and of guile, the patient trade:
To lie in wait, and never to complain;
Do nothing, slowly, and outlast the blade
Of every hunger and of every reign.

Neornis, the crown birds, Archaeos' pride,
Refined and winnowed through the fire's test,
Feathered dinosaurs, whom the chaos tried
Of impact winter, higher than the rest,

Than any trial before: seed-eaters thrived,
And ground-nesters, the small, who could adapt,
Who ate whatever darkness had contrived
To leave behind: the kernel, tightly wrapped,

The patient seed that lay within the soil
Through all the winter, hard-shelled capsule, spare,
Of the angiosperm's foresight and toil,
That fed the bird when nothing else was there.

And Mammos, mouse and heir of Cynos' seed,
Synapsid exile, the long-hidden one,
Of Theraps, of Pelyon, of Synaps' breed,
Who knew the wraps of smallness, and had done

A hundred eighty million years of night,
Saw the Paleocene, and saw what thrift
And burrowing had won him: bare, in light,
The land lay open to him, and the gift

Of open daylight, clean, a world without
The dinosaur's great shadow overhead.
For once in all the synapsid's devout
And patient history, no giant's tread

Shook the ground above his burrow's ceiling;
No theropod's jaw waited at its door;

The world was his, and his was the feeling
Of open, uncontested space once more,

The feeling of the exile who returned:
Promised land, by catastrophe made bare,
And waiting for whoever might have earned
The right to fill it. And the record there

Of the Cenozoic would be written
By the small mouse who stepped into the light
And found it good; for the world was smitten
Open, and the morning after the night

Was the synapsids' longest morning yet.
Honor survivors: turtle, crocodile,
Bird, mammal; four whose glory was not set
In conquest, but in patience and in guile

And in the minimum of need. They made
No conquest of the asteroid; but some,
Alive through it, no more, survived and stayed;
And every seed of every world to come,

Forward from the Paleocene, it grew
Out of the ash they walked that morning, freed
Of giants; out of the four houses who
Had nothing but their patience and their need.

Chapter 114: The Saga of Birds

Aries 2, day 114 of the Gaian year

Now hear the song of Neornis, crown bird,
Deinos' surviving heir, the last of all,
The feathered dinosaur, whose morning word
Filled Paleocene air with the first call

Of music for the new world. Hear and heed:
Neornis, child of Deinos; every bird
That sings is dinosaur in feathered weed,
And birdsong's morning kiss, wherever heard,

Is still the Mesozoic's voice. The line
Of theropods that did not end, but chose
The wings, the seed, the flight and its design,
Perfected in Cretaceous skies, now rose

Into the Cenozoic, bare, and filled
It: everywhere the eye could see, the tide
Of avian, heroic rising spilled;
The feathered clan of birds grew far and wide

In every niche the dinosaurs had left,
From ocean trench to grassland's open span,
From deepest forest to the highest cleft
Of mountains; and the birds, of every clan,

Became the most diverse warm-blooded kind
Of vertebrates; and in the birds, the range
Of form that adaptation's game could find
Was widest, and the spread of size and change:

Three grams the hummingbird; the ostrich weighs
Three hundred pounds: the farthest stretch that grew
From one plan, and the latest of the ways
Evolution tried. Gastornis was, too,

Among the first to claim the empty throne
Of theropods. The forests gave the name
Of terror bird to him that they had known
In Paleocene days: a giant came,

Two meters tall and flightless, with a beak
For crushing bone; and, fearless, at the height
Of what a bird becomes, he stood the peak,
Enormous predator, and ruled outright

Early Paleocene, where there was none
Of mammals large enough to make him yield
Upon the ground, to challenge him, not one;
The power's scale was still unsure, the field

Still open, and the apex crown unclaimed
By mammals; so the giant bird looked down
Upon the frail, the small, the yet unnamed,
The mouse, the shrew, and wore the forest's crown,

And for a time remained the master there
Of all the forest floor. The birds' true gift
Was not the giant, but, found everywhere,
The many and diverse, the small and swift,

The flexible, compliant body plan
Allowed. Then Passeros, the songbirds, made
Out through the Eocene, as they began,
A bursting cloud of melody, and played

The syrinx as an instrument, endowed
With double chambers, which could sound and say
Two voices, and could sing them, clear and loud,
Together, in one throat, in one array:

Two notes at once, a living feat, which none
Of all the other vertebrates has matched
Or faced; and with this instrument each one
Of songbirds filled the canopy, attached

To the high forest: territories, meant
In pure intent, unseen, but to the ear
A symphony: each male composer, bent
On variations, from sire and peer.

The songbird's border was its song; no fight
Spent energy, but song drew out its lines
Of sound across the forest, out of sight;
The bird who sang the most complex designs

Would win the mate; and, lovely and absurd,
Earth's first musicians rose, and forests rang
By natural selection: it occurred
With magic, competing trials; there sang

Ten thousand species.
Then the raptors' flight
Took the sky, wide-winged, clinging to the rise

Of thermals, Aquilos' keen hunters' sight,
The close and patient circling in the skies

Of eagle and of hawk; and falcons' speed
Down in the stoop passed every legal bound
Of what a vertebrate could ever need
For swiftness: peregrine, the fastest found,

Two hundred miles an hour, the blue descent
That burned; the contrast of the patient wait
On thermals with the killing dive's intent,
Explosive, was his art; of real estate

Of sky he made a hunting ground, a sphere;
The bird's own chapters in predation wrote
The sky into the country ruled by fear.
And then the waterbirds: the penguin's coat

Of insulation in the southern cold,
The pelican's pouch, the flamingo's sieve,
The albatross's wings the oceans hold;
Each water colonized, where they would live

Slowly, by birds' adapting art; and where
Water lay anywhere, by night or day,
A bird was there, adapted, and aware
Of salt and depth and how it yielded prey.

Honor Neornis, dinosaur who flies,
Who sings, who dives, who wades, who swiftly runs,
The theropod whose feathered, bright disguise
Outlasted all of Deinos' other sons,

And carries on the Mesozoic age
In each dawn chorus, every migration,
In every egg and nest, the skyward stage,
Continuation of the old nation

Of archosaurs: the bird, the dinosaur
Perfected, and the dinosaur distilled
To feather, song, and flight; and nothing more
Is needed, and the morning world is filled.

Chapter 115: The Monotremes

Aries 3, day 115 of the Gaian year

Now hear of Mammos' eldest children, who
Kept to the oldest ways, and still they stay
In Mesozoic manner, never threw
The ancient building of the egg away.

They lay eggs, and they sweat milk from patches
Upon the belly's skin: the ancient fill
Of mother-care that predates the latches
Of nipple and placenta: these are still

Monotremos, the mammals' first-born line,
Who stands as living ink, the faded hue
Of what was the original design.
For Mammos' house split early, and it grew

Into three branches of the blood: the first,
Monotremos, who held the ancient ways;
Then the pouched flood, Marsupios, that burst;
Placentos last, the newcomer, whose days

And womb would change the world. But first be told
Old dispensation's tale: the southern range,
Down in Gondwana's south, which was not cold,
Of Monotremos' house, ancient and strange:

Antarctica was forested and warm;
The grouse, the fern, the beech tree's plenty fed
A world that would not last: the coming storm
Of ice was in the cooling currents read.

Antarctica was drifting to the pole;
But first, before the ice, the rivers' flow
And forests knew them, playing out their role,
And the southern ocean's shore came to know

Their quiet presence: mammals that would lay
Their eggs in warm Antarctica: a trace
Of memory that only, to this day,
Enamel of the ancient teeth, the place

In Antarctica's buried stone they keep.
Then from Antarctica broke Australia
And drifted north, and in its northward sweep
Bore Monotremos to its regalia

Of isolation; from that point, the cage
Of drifting continent had locked them in,
Alone with marsupials; and the age
Of Cenozoic conquest would not win

Their way to them: the Northern Hemisphere's
Placental lords, in foreign lands, would stay
Apart from them through all those million years,
Far off, and never cross the sea's long way.

Ornithorhyncos, platypus, whose tale
Is strangest of the strange that life has made,
A mammal with duck's bill and beaver's tail,
Séance of the improbable, displayed:

Venomous spurs; and he detects the frail
And tiny signals that the rivers bear,
Electrical: he hunts them by their trail,
Not by his sight or smell or sound, but where

Electric fuss from every muscle-twitch
That any creature makes beneath the stream:
His bill is an antenna for the rich
Bioelectric field, a living scheme,

Reading the river's shrimp and crayfish, found
Revealed, a living map of all that moves.
He lays his eggs; the mother curls around
Them in the burrow by the bank, and proves

The Mesozoic's way can still astound
All those who thought the egg was left behind:
It lives on in the river and the ground;
And milk, unlike in all the mammal kind,

Sweats out from patches on the belly; still
No nipple yet; the mother gives her share
Of mammal nursing, the maternal fill,
The oldest of its kind, beyond compare,

The jelly of maternal care, laid bare,
Here in its most ancient, earliest form.
And Echidos, echidna, spiny, there,
The ant-eater, who weathered every storm

Of Australian interior, his small
Efficient tongue that probes the termite mound

With the long patience of a saint, and all
Spines, porcupine's copyright, wrapped him round

Against complaint of predators. He too
Lays eggs, one leathery sphere, in the pouch
The mother carries: in it, mingled through,
Of reptile egg with mammal's care and crouch,

Of care, the oldest compromise alive
Between cold-blooded past and blood that's warm,
Its future; and the egg-layers' archive
Of mammals' deepest origin and form,

With memory of Mammos long ago,
Before the nipple, and before the womb,
Before placenta's elaborate show:
Just milk and egg, and the warm mother's room,

Her body, the original and first
Mammalian contract: "I will keep you warm,
And feed you from myself"; the egg, rehearsed
In minimal technology and form,

The first draft of that promise.
Honor due
Monotremos, the living fossil, holds
Still in Australia's hymns and rivers, true,
The oldest mammal ways, as life unfolds,

Humblest of mammals, and boldest too,
Refusing to change what works, come what may,
Humble in ancient form, bold through and through,
The patient and the beautiful, who stay

Forever turned from the modern; they keep
Old Mammos' flame alive from his first day
Through every age, in burrow, nest, and deep,
And tend it still, the old egg-laying way.

Chapter 116: The Marsupials

Aries 4, day 116 of the Gaian year

Hear now of Marsupios, second-born
Of Mammos' ancient house, who chose a way
Of covenant unlike the eldest-born,
Monotremos, and the last-comers' way:

Marsupios invented, for her part,
The pouch, not womb, content with this: a birth
Intense, and not Placentos' later art,
Of little weight, whose start, upon the earth,

Was premature: the newborn barely there,
A jellybean of pink and naked flesh,
Blind, deaf, a firstborn that by instinct's care
Crawled from the birth canal's edge, small and fresh,

Into the pouch, and found the nipple there,
And latched, and grew outside the body, in
The mother's crouch of warmth; the pouch was where
It saw the world for months; and there, within,

A living nursery, where infants stayed
In open air, but sheltered, fed, and kept;
The rapid, cursory birth they had made
Exchanged for long care, where the newborn crept:

The pouch's warm interior. And this,
When drought or flame came down upon the south
And spoiled a good year's plenty and its bliss,
Was Marsupios' gain: and from the mouth

Of pouch the mother could release, when wise,
The joey: harsh, efficient; and begin
Again when better days were in her skies;
And flexible in breeding, there, within,

Ran the unsentimental logic's vein,
In Australia, adrift and isolate,
Where food and water, without warning, wane;
The Cenozoic's morning found the fate:

Marsupios alone, with none beside
But Monotremos; no placental kin
Competed; and the radiation, wide,
Marsupial, was monumental: in

Each niche the mammals could imagine, they
Spread out across that island; there they went:
Macropos invented hopping, a way
Of storing energy in tendons bent

And springing, which had made the kangaroo
The most efficient runner for long range
Upon the planet; for the hop's breakthrough
Was this: the tendons stored, in each exchange,

The landing's shock as elastic power,
And gave it back in the next leap; no cost
Metabolic beyond the standing hour
Of stillness, once the kangaroo had crossed

Slow acceleration to cruising speed.
And Thylacos, the thylacine, became
Marsupial reply to wolves: indeed
A dog in all but ancestry, the same

Convergence almost perfect to the sight:
Striped back, long jaws, the lean and ranging frame
Of the pack-hunter, on the track, the flight
Of prey through Tasmanian green: the game,

And wide Australian bush; and it was seen
Through it, that evolution can repeat:
One problem: how to hunt, how to convene
The pack, how to bring down the swift and fleet

And larger prey, produced one solution
Placental and marsupial alike:
The wolf-shape, and social restitution
Of joint hunting, the elemental strike,

Logic of predators. And then the core
Of the Australian megafauna's pride:
Diprotodontos, two-ton herbivore,
The giant wombat, largest; there he plied

The scrub and Pleistocene grassland; a tank,
Furry, he browsed, no predator so vast
To override his bulk; and from his rank
Of lineage the modern wombat, last,

Still digs the deepest burrows on the earth
Of any mammal, patient and alone;

And such, through all the ages, was his worth,
The giant's line, still living, and still known.

South America's marsupials kept
A different vigil: when the land bridge, new,
At Panama, which the slow ages swept,
Joined North and South America, then through

That bridge placental mammals were sent south,
And the great interchange then passed its doom
On those of the south: the placental mouth
Of overwhelming rivals was their tomb;

Most could not compete, and faded; in turn
The opossum raided north, and alone
Of marsupials conquered, and would earn
The placentals' own land: Didelphis, known:

The opossum, generalist of old,
Whose skills for living were to play dead, eat
All things, and breed, and never fit the mold
Of any niche; and so, in cold and heat,

Widespread and humble, it survived the fall
Of specialists, by being, at its best,
Nothing in particular, after all,
Alive; and that was how it stood the test.

Honor Marsupios, of seeing mind,
Who proved, with pouch, that to survive and thrive
Is not always to compete, but to find
The island where your way of life, alive,

Is the one way; and evolution's care,
Patient, far-seeing, from your body will
Build all the world requires, and everywhere
Make wolf and lion, mole and mouse, that still

Endure through every storm that time will blow
Through geologic ages; and the line
Stands as the hill of Zion stands, and so
The pouch keeps faith, its covenant and sign.

Chapter 117: The Threefold Division

Aries 5, day 117 of the Gaian year

Now Placentos, the youngest and the last
Of Mammos' three great houses, rose to claim
The world entire; for he had surpassed
Both elder siblings in the single game

That mattered most: the womb.
Placentos made
Inside the mother's body something new,
A revolutionary organ, laid,
Placenta's gift: a tissue that grew through

Between the mother and the child, a bridge
Of blood that fed the embryo direct
From mother's circulation; and the ridge
Between the bloods would meet, but not connect:

And oxygen and nutrients would flow
From mother's side, the waste returned; the womb
Kept the child long, a residence, and so
Allowed what neither egg nor pouch gave room.

Placental mammals were born larger, more
Developed, readier for breath; the brain,
Through the longer gestation's added store,
Could grow; and this was the placentals' gain

In worlds in which intelligence would win:
The complex brain, the womb's long gift, the fold
Of cortex no marsupial within
Its short gestation grew; the shift, foretold,

Of evolution that would yield the whale,
The elephant, the dolphin, and the ape,
And human mind at last. And then the tale
Of Placentos divided, took the shape

Of Cenozoic mammals is the kind
That geography writes, three lines set free,
Three lands, three flights, each to its own assigned,
And independent: the threefold decree

Of the breaking Gondwana and the north.
In Africa Afrotheros was born,
Cut off by ocean's bands, and going forth
From every other continent: forlorn,

A replica of the Australian test:
A single landmass, isolate, alone,
Where Afrotheros' children, none oppressed,
Unlike their northern cousins, filled each zone.

Heroes of Africa's radiation
Were strange, unforeseen: elephant, aardvark,
Hyrax, manatee: forms' variation
That Africa, cut off, made in the dark

Of early Cenozoic times, from one
Founding stock. And Xenarthros, made to roam,
Of South America the armored son,
A wanderer, whose flock grew far from home,

In isolation too: the sloth who hung
Inverted from the branches of the trees;
The armadillo, banded; and the tongue
Of anteater, with probing expertise,

That probed the termite mound; and later, vast,
The Pleistocene produced its giants: ground
Sloth tall as any house; and, heavy-massed,
The car-sized glyptodont, whose shell was round

In carapace, a living tank. And forth
Came Boreos, Laurasia-born, the rank
Largest and most successful, in the north,
Of all; for from his line, as from a bank,

Would come the hoofed ones and the carnivores,
The bats, the whales, the primates, rodents; fates
Of the great mass of mammals, and their scores,
Were settled, northward, where his line creates,

In Boreos' northern radiation.
Two great houses divided from his line:
Euarchos, he whose predestination
Led to the primates, rodents' own design;

And then Laurasios, from whom appear
The carnivores, the hoofed ones, and the bats,
The northern hunter and the engineer
Of ungulate and predator; the vats

Of diversity that Laurasia's wide
And its connected continents allowed.

Honor the threefold division, the pride
Of Placentos' house, and the sons endowed

And scattered, who had taken the world's three
Great continents, and filled them, each alone,
With mammalian art: the flags flown free
Afrotheros', Xenarthros', and the throne

Of Boreos: three answers to the quest
Of the empty Paleocene; and so,
What will the mammal be? was there addressed:
Three continents, three futures they would know.

Chapter 118: The Afrotherians

Aries 6, day 118 of the Gaian year

In Africa, alone and ringed by sea,
Afrotheros' children grew into forms
That other continents would never see
Until the bridges of the land broke norms

Of isolation. Strangest of the things
Africa's radiation shows: the sleek
Swimming manatee, whom the water brings,
Hyrax and elephant are kin: so speak

Molecular clocks reveal, in their turn,
That trunk and flipper, and the heels of rock-
Hyrax, as no anatomist could learn
By sight, share one ancestral house's stock.

Proboscidos, the trunk-bearer, would rise
From small beginnings, from a creature's start
No larger than a pig, to largest size
On land: the elephant, whose body's art

Shows what mammal engineering allows
When size answers survival's question; kind
The elephant is, deepest in her vows
Of mammals to her family. Her mind

Remembers: for the matriarch who leads
The herd holds memory for decades, knows
Each watermark, dry-season well; she reads
The danger-paths and salt-licks, as she goes,

Within a territory, vast, as wide
As human countries; and the aftermath
Of drought or fire is navigated, guide
Her memory, of where the water's path

Lay in the last drought, twenty years before:
The herd survives because the gray and old
The matriarch's mind still contains the store
Of lifetime's geography, which is told

To her daughters, who teach their daughters; so
The chain of knowledge stretches down the reach
Of generations: culture, which will go
Not by the genes, but by the patient speech

Of elder to the young.
The trunk, the old
And versatile, the organ, finely strung
With forty thousand muscles, could take hold
Of one grass blade, or rip a tree up, flung

From earth; could trick the water up, a sip
Of eight liters at once; and, like a horn,
Sound warning, greeting, across miles, the strip
Of the savanna; and its call was borne

In infrasound too low for human ears:
The matriarch's deep rumble, as it rolled,
Traveled through ground, the tuning of the years
Of evolution; elephants were told,

Felt through their feet, through bone conduction, too:
The low-frequency dance, the talking zone
Of elephants, extended past the view
And range of air.
And Hyracos, alone,

The hyrax, rabbit-small, sits on the rock
In African glare, nothing like the frame
Of the huge elephant; and yet the stock
Is shown in teeth and toenails, and the same

Inner anatomy betrays the kin:
The hyrax is the cousin who stayed small,
A miniature of elephant within,
While the proboscidean grew so tall,

Proof that the same ancestor can install
In different niches the same right to be,
In mammal flesh, in great and in the small;
And Sirenios' kind took to the sea:

The manatees, the dugongs, the sea cows,
Afrotheros' sea courtesans, who'd find
Their way back to the water and the boughs
Of seagrass meadows, grazing, calm in mind,

Below the waters, placid and unseen,
With the same calm the elephant has shown
On the savanna, browsing on the green
Of its broad ground, a calm that is its own.

The sea cow is the elephant at sea,
The same African stock adapted to
Coastal waters' warm, abundant decree
Of tropics; rapt and gentle giant, who

Grazes the shallows.
And Oryctos goes,
The aardvark, earth-pig, digging, with claws strong
As a bear's, through Africa's termite rows,
And with a tongue an anteater's as long;

He stands alone, the only member known
Of his own order, single as a song
Of lineage entirely his own,
Held by himself, to whom no kin belong,

With no close relative upon the earth:
A branch alone of Afrotheros' old
And ancient radiation, whose own worth
Is in the steadiness of heroes, bold,

Who need no company, and still endure.
Honor Afrotheros, the mother who
Is African, whose children make it sure,
That specialist, generalist, both true,

Can spring from just one root: the vast, keen mind
Of elephants; the hyrax, modest stone;
The manatee's soft elegance, refined;
The aardvark's kingdom, one member, alone,

Grown from one African isolation,
One Cenozoic island of the south,
The same continental meditation
On what the mammal's body, hands, and mouth

Can come to be, when left alone to try
Its answer, with no rival in the way,
No other house, no stranger standing by,
Alone with its own question, day by day.

Chapter 119: The Boreoeutherian Opening

Aries 7, day 119 of the Gaian year

North, in Laurasia's wide, connected lands,
North America, Asia, Europe stood
Joined by land bridges and by forest bands
Of temperate trees; and in that neighborhood

Boreos' radiation was the most
Mammalian explosion yet, the last
Of all, of orders, families, a host,
The greatest act the Cenozoic cast.

And Boreos had what had been denied
To Afrotheros, Xenarthros: the aid
Of continents connected, side by side;
Beringia let Asian mammals trade

With American, one gene pool; and space
For speciation, continental-wide,
An arena of competition, place,
Gave a result that was diversified

Beyond the island's isolated pace.
Two great houses branched from Boreos' blood:
Euarchos, called "the true rulers," whose race
Would hold the strangest pairings in its flood:

The primates, and the building of the reign
Of rodent rule, tree shrews, and rabbits too,
The flying lemurs: all of the one strain
A tree-dweller, whose grasp and climbing through

The tall canopy of Paleocene,
Became the primates' heritage: a song
For later choruses. For now, the scene
Moves to the other branch's dance along:

Laurasios, the northern one, whose kin
Were more diverse than any single line
Before: the carnivores; hoofed ones within
Their herds; the bats, whose flight was the design

Of powered flight, the only one that won
By any mammal. And the bat was born,
Chiropteros, into the night, and spun
Its flight through all the dark air till the morn;

Trusting, ere the whale, echolocation;
And with its voice the bat would map, with care,
The darkness, each ultrasound vibration
Sent out, returned, and read upon the air,

Slid from the palate, was the active sense,
Perception: for the bat does not await
The world's own sounds, but sends its own; and hence
A glistening and rapid pulse, sent straight,

Strikes bone, and wing, and body of the prey
And bounces back; the bat, from all of those,
The echo's frequency, angle, delay,
Knows the world's shape, the moth, the way it goes,

Its speed, its distance, all computed in
A brain the size of walnuts, in the time
Of milliseconds: master, with no twin,
Of all acoustic answers, the sublime.

And the bat took the insect-rich night sky
The birds had left unclaimed; for birds, by day,
Are hunters, and the nighttime moth's high cry
And beetle's were unhunted, and they lay

Unnamed until the bat arrived to take
The darkness, as the bird had claimed the light;
And the bat thrived in every cave and brake,
Unseen, unheard, insect hunter of night.

The hoofed, the ungulate, rose from the line
Of Laurasios, as the world unrolled
Its grasslands in the Miocene's design
Of cooling and of drying; and, behold,

The hoof, the grassland's answer to the claw:
The hard and narrow tip, the proof, the feet
Designed for running by the open's law,
On ground where forest cover made retreat,

And predators could see you coming; speed
Was the one lover of your life; to run,
The single art of grassland mammals, need,
To run, to run; the hoof was built for one

Such start; the hard and narrow contact's proof
Against the plain's long pounding, and its stone;

The runner, from the grasping earth aloof,
Took the wide plain and made the plain its own.

From Laurasios' northern line would come
The horse, the great rhinoceros, the mane
Of lion, and the antler, and the drum
Of hoofbeat on the steppe; but these remain

As stories for the chapters still ahead.
Now honor Boreos, whose northern art
Of continents connected, and the spread
Of space and competition, and the part

That Beringia's land-crossing had played,
The largest mammal radiation, most
Of all, the northern one, whose long parade
Of families and species is the host.

Chapter 120: The Carnivorans

Aries 8, day 120 of the Gaian year

From Laurasios' line the hunters came:
Carnos, the flesh-eater, whose ancient art
Of hunting built the Cenozoic frame
Of ecologic balance from the start.

For every great grassland herd requires
Its predator: the wolf that culls the weak,
The lion by the waters, who tires
The old and sick; and so the whole technique

Of predation is the sculptor's keen knife
That carves the herbivore to fitness, keeps
The herd alert, and gives to every life
Its edge of danger; consequence it reaps.

Remove the predator: the herbivore
Grows soft and many, eats the grassland bare;
The carnivore is senator, and more,
Of ecologic balance everywhere.

Carnos was split into the two great lines:
Felidos the cat, Canidos the dog;
And these two, in between, the world designs
Its predatory range of dialogue.

Felidos was the ambush hunter: cats
Solitary, patient, and explosive:
The claw that could retract, like acrobats,
The flexible spine, the brief, corrosive

Acceleration, sprint from hiding place
To kill; the cat does not give chase, but lies
In wait; its hint of presence, a faint trace,
Is all the prey will see, to its surprise:

The muscles of the haunch, compressed and wound
Just like a spring, released, a burst of speed
That nothing stops for thirty meters' ground;
The feast is won or lost in that first deed.

Canidos chose the other way: the dogs,
Designed as social, patient in the hush
Of long pursuit: no hiding behind logs,
But open chase, the relay, and the rush

Of runners spelling one another; play
Of pack intelligence: they cut and flank;
One brother drives the prey along the way
To jaws that wait, another's, in the rank.

The wolf invented hunting as a team:
The mothers and the fathers and the young,
A unified, strategic front, the scheme
Against the antelope, the elk, among

The deer; no single wolf could bear the brunt
Of killing them alone; but fear, arrayed
And orchestrated by the pack in front,
Was greater than the lone cat's waiting raid.

And then there came Smilodos, saber-tooth,
Defying both the dog and cat, who grew
Most terrifying fang the jaw, in truth,
Of mammals ever had: the canine, too,

A dagger's length, a sword of bone, that found
And pierced the thick-skinned staggerers, the throng
Of Pleistocene: the mammoth, and the ground
Sloth, and the bison, hides so thick and strong

That no plain bite could go through both the skin
And muscle; and the saber-tooth's one trick
Was the kill-bite: no crushing jaw within
The modern cat's, but stabbing, slashing, quick,

The opening strike of canine's long draw,
A wound that bled the giant to its end:
Two daggers sitting in the upper jaw,
That nothing in the Pleistocene could mend.

And from Carnos' line the sea-hunters came:
Pinnipedos, who heard the ocean's call
And went back to the water, the old claim
Of mammals on the sea, renewed for all:

The seal, sea lion, and the walrus, each
Converted from a carnivore of land
To the marine predator, from the beach
Into the sea, and streamlined, as was planned:

The forelimbs into flippers, and the limbs
Behind were fused in a propulsive hymn

Of swimming power: for the ocean's whims
Required another body, sleek and slim,

Than the lean frame of hunters on the land;
The pinniped replied, and was the sign
Of the marine claim of carnivore's band,
Its body the sea-hunter's own design.

Mustelids, the weasels and the otters,
The badgers, of Carnos' whole clan the least,
Pound for pound the fiercest, and the plotters
Of every burrow-raid, the smallest beast:

The honey badger's fearless, wild assault
On anything that crosses on its path;
The mustelid is Carnos' tiny vault
Of concentrated, small, and potent wrath,

Packed in the smallest package that was made.
Honor Carnos, the hunter, the keen knife
Of Cenozoic ways, the sculptor's blade,
The predator whose art, through all of life,

The vulture's and the wolf's, the lion's, seals',
Is this: to take what grazers built, and give
It back, as meals, into the food web's wheels:
The necessary guilt by which things live.

Without it, prey would eat to extinction,
Grassland would gray to desert; and it lies
With the killer, often, the distinction
Between a healthy world and one that dies.

Chapter 121: The Artiodactyls

Aries 9, day 121 of the Gaian year

Hear: Artiodactylos, even-toed,
The hoofed ones who inherited the grass.
For in the Miocene the world bestowed
A gift that changed the mammals' looking-glass:

The grasses spread, Gramineos, the low
And revolutionary plant, which throve
On being eaten; under tooth and hoe
Of hoof its fall was not the end, but drove

Its life to grow again: for grass will grow
Up from the base and not out from the tip,
And grazers who crop down the blade bestow,
By accident, the grass a firmer grip

Upon the soil; the more of it eaten,
The more it spreads, the more its roots will bind
The earth; a plant that's cut down and beaten
Stands up again, its shoots, of every kind,

Stirred by the very jaw that clips them short.
With grass there came the grassland, vast and wide,
Open and treeless, where the winds cavort
And whip the grass to waves, an ocean's tide;

The fast, fleet-footed herbivore was born
From need to cross this open ground, where all
The predators could see the prey, the shorn
And the exposed; and death, approaching, all

Its sound could carry over many miles.
His answer: Artiodactylos' hoof:
Two even toes, balanced upon the tiles
Of the hard ground; of the design the proof

Was in the run: artiodactyl ran
Upon its toenails, with the ankle raised,
The leg a long-spun lever, by the plan
Of trails that called for speed; and to be praised,

Ruminant stomach was the other gift:
The four-chambered vat of fermentation
That could digest the cellulose, and sift
Flat blade's silica, in rumination,

That wore the teeth of any common beast;
Artiodactyl teeth were high in crown
With deep enamel, hypsodont, at least
Enough to last a lifetime, ground not down

Through all the grass's grinding, by the wreath
Of tall enamel, climbing, deep, and long,
Through decades of the diet. Underneath,
The cow chews cud: the rumen's first pass, strong,

Breaks grass to quiet, fermenting mash; vast
The bacterial colony inside
The rumen does what mammal enzymes, cast
Alone, could never do: break down and hide

The cellulose as fatty acids, light
And volatile: the paradigm, the case
Of symbiosis, cow and microbe, tight,
A billion bacteria in the space

Per milliliter of the rumen: these
Are a civilian army, without peer,
Allied, digesting, by their slow degrees.
And Cervidos, the deer, grew, year by year,

Antlers, the one organ to fly the flag
Of mammal renewal; from bone are grown,
Each year, in velvet, on the forest stag
Fresh headgear; and the antlers, all his own,

Branch and extend the mesh of tines and beams,
The full-grown throne of stags in their display,
Shed and regrown each season; and it seems
The fastest-growing tissue, in its way,

Of all the animal kingdom, the shown
And spectacular issue of the need,
Of testosterone and calcium grown,
To catch the female's eye.
And then the breed

Of Bovidos, the cattle and the sheep,
Whose horn is permanent, and does not die
And grow again, but stays, its sheath to keep
Of keratin on bone, which will supply

A weapon for a lifetime; and it set
The bovid's headgear as the stepping stone

Of the most successful ungulate yet,
The family with most species ever known

Upon the earth, the bovids' wrestling girth
With the wide grassland made the antelope,
The gazelle, and the gnu, and on the earth
The buffalo, the sheep, the goat on slope

Of mountain; every grassland, everywhere,
On every continent, has known the deep
And ruminating presence of the pair:
The bovid's hoof, the bovid's grazing sheep.

So honor all the grazers: he who earned,
Artiodactylos and children, who
Turned grass inedible and made it, turned,
The praisers of the Miocene's wide view,

And won the right to fill the largest home
Upon the planet, biome of the plain:
The grassland, the savanna, steppe, the loam
Of prairie: open ground was the domain

And manna of the even-toed and fleet,
The ruminant inheritors, who reign
On Cenozoic plain, the hoofed, complete,
Grazing the grass that grows where it was slain.

Chapter 122: The Marine Mammals

Aries 10, day 122 of the Gaian year

Three times the mammals went back to the sea:
Three separate lines, three ventures in the deep,
Each independent of the others, three
Experiments in reigning; and the keep

Of the transcendent body built anew
The walker as a diver, swimmer, king
Of all the ocean's reaches, green and blue.
The first and greatest was the whale, a thing

That stalks the deep, and once began on land
As small and doglike creatures, walking, bred
On Tethys' shore, in Eocene warm sand
Of shallows, Pakicetos at their head,

The size of wolves, no more, whose genes would rise
To make the largest animal yet seen
Alive on earth. And Pakicetos' eyes,
Wading in shallows, hunting fish, were keen

On Tethys' coast, where land and water met;
The whale's transition went on, stride by stride:
Ambulocetos, walking whale, was set,
A crocodile-like swimmer, and he tried

To leave the land, but not completely: whose
Hind legs, for walking and for swimming, went
Still to the ground; amphibious, in use
Of paddle-legs in front. Then, legs that bent

And shrank behind him: Rodhocetos came;
His nostrils moved; and then, toward the form
Of streamlined swimmers, the land-body's frame
Was slaughtered; then Basilosauros, warm

In ancient ocean, sixty feet of snake,
A whale, fully aquatic, in whose line
Vestigial hind-limbs trailed in his wake,
His last remembrance of the land's design

The whale would ever carry. By the late
Eocene, the cetacean, now marine,
Held ocean's whole command and its estate.
And then the great division: the machine

Of echolocation was devised by
Odontocetos, the toothed whales, the sperm
Whale and the dolphin: sonar was their eye
Under the water, melon in the firm

Forehead that focused clicks into a beam;
The echo's tale, returning through the dark,
Produced, in three dimensions, like a dream,
A map of murky ocean: dolphins, stark,

See with their sound, and sound will paint the shark,
The fish, the squid, the deep-sea frieze, the scene,
Acoustic world, and every hidden mark.
And then Mysticetos, of the baleen,

Grew bodies, unconfined, the largest grown
That life has ever made: the great blue whale,
Grottos of ribcage, cathedral of bone,
A hundred feet in length, of such a scale,

A hundred fifty tons, the greatest size
Of animal in all the living fleet,
Yet fed on what is smallest to the eyes:
The krill, the tiny shrimp, its daily meat,

Scooped in the comb of keratin, baleen,
A thousand pounds of protein every day,
Filtered out from the ocean, gathered clean.
The whale would sing: the humpback's song, its way,

Traveled for hundreds of miles through the gray
Acoustic ocean; males composed the song
Through all the breeding season, the long lay,
Revised each year, no two the same for long;

The songs were changed for beauty all this time,
For wonder; beauty, undeniably:
The ocean filled with music, the sublime,
The largest animals, the steady plea,

The haunting and acoustic, sure decree:
"I'm here, I'm vast, I'm singing." And the clan
Of Pinnipedos entered next the sea,
The carnivore, who read the ocean's plan

Of opportunity, already told
In the carnivore chapter: seals, whose band

Of hunters, on the land once fierce and bold,
Was now transformed into the ocean's hand:

The flippers, and the blubber, and the art
Of diving deep, the lungs collapsed to keep
The oxygen in blood and muscle's part,
Not in the air. The third return, the sweep

Of Sirenios, as already told
In Afrotheros' tender care: the throng
Of manatees, dugongs, the gentle fold
Of grazers in the seagrass meadows, long

In shadow of the tropic coasts. And thrice
The mammal went into the sea; and spent,
Its body paid the land design's full price,
Erased it; and the ocean, three times, bent

Its hand, and wrote a streamlined body, wrought
From walker's bones: the blue world's new design
Of singing and of diving kind, and brought
The mammals of the sea, the proof, the sign

That Mammos' banners, raised on land, could win
The ancient, aloof ocean too: the turn
Of the synapsid, back where it had been,
Left by the amniotic egg's concern,

Ancestral longing for the sea, which brings
The salt-blood of the sea into the veins
Of every land-thing's leg, of all such things,
Which it still carries, and which still remains.

Chapter 123: The Rodents

Aries 11, day 123 of the Gaian year

Now hear of meek ones who inherit earth:
Not the grand way the elephant has shown,
Or the dramatic way of the whale's birth
At sea, but in a way that's all their own,

In the small, many, overwhelming way:
Rodens the gnawer, whose children, by far,
Outnumber all the others' full array
Of mammals put together, as they are:

Drawing the short straw, forty percent's share,
Two thousand species, sent to the domain
Of Cenozoic leases: none compare,
No other order, in the wide terrain

Of ecologic space: the rodent stands
The most successful mammal on the earth.
And how? Incisors are the answer's hands,
The potent, ever-growing tooth, whose birth

Is never finished: for the front teeth grow
Unceasing from the root, and from beneath
The orange of enamel, and the flow
Of gnawing that demands it, the front teeth

Will hone themselves: the dentine, soft and fine,
Behind the hard enamel wears away,
The chisel-edge's truth is the design
Of a self-sharpening blade that cuts its way

Through wood, through shell, through bone, through wire, through stone
Of concrete: rodents' habit is to gnaw
And never stop; his teeth, if left alone,
Would grow into his brain; this is the law:

The pressure to keep gnawing is the flow
Of dental growth, and the renewal, plain,
Of the cutting edge.
And rodents breed, so
Prolifically, so rapidly, the chain

Of generations shrinks to weeks; the seeds
Of the next litter are implanted, made
For the future, while the current litter feeds
Not weaned; the mouse can breed at six weeks; weighed,

Bitter, relentless arithmetic means
A single pair of mice can bring about
A thousand descendants a year; the scenes
Of evolution's dice are loaded out

For the small and the fast-breeding, the one
Whose strategy is r, whose answer is,
To every predator, not strength, but done
By seeding futures with the numbers his;

The fox that eats a mouse ensures the rest
Of mice inherit fields, and they endure
The culling by the merit, plain, expressed,
Of having more young ones than, to be sure,

The predator has appetite.
And then
Castoros, the beaver, he was the great
Engineer of Rodens: of landscape, when
He edited, the dam-builder, the state

Of streams changed; he felled the tree with chisel
Of his incisors, dammed the stream, and made
The pond that changed the watershed's drizzle
Of its advisors; and the beaver's trade

Was ecology: the dam created
Wetlands where none had been, the pond would feed
The water table; aquifer, sated
And grown, gave answer to the beaver's deed

With higher local water; the meadow
That formed behind the dam, when, overthrown,
When beaver had moved on, was the shadow
Of richest soil the forest's ever known:

Beaver meadow, years composted under
The quiet pond, the leaf and silt, all spent
Decomposed, most fertile ground, the wonder
Of the frontier.
And Sciuros, who went

Among the trees, the squirrel, acrobat,
Who buried acorns and forgot the place
Where he had put them; and memory, that
Was lost, became the oak tree's planting, grace

To forests: squirrels that would bury more
Than they can eat, the forester's ally,
The harvest given to the forest floor
For its regrowth; and every oak, grown high

From a forgotten cache, is partnership,
The squirrel's yoke and tree's: the stash he lost
By accident, which grows a forest. Grip
Of Rattus, the rat, the adapter, crossed

Behind the human into city walls,
The lattice of the city, and became
Afterlife of civilization's halls:
Where humans went, the rat went, and the same

He ate, their waste; he lived inside their walls,
His acumen applied to every taste
Of what the human threw away, which falls.
Then honor Rodens, gnawer, who is placed

With small and many, who have proved, each day,
The meek inherit after all: not won
By conquest, but by small ones' sheer, plain way
Of insisting, and the prolific one,

The tooth that grows, the clear and rapid turn
Of generations, the specific art
Of being small enough to hide, to learn
To breed fast enough, tough enough to part

Through anything by gnawing: such the pride,
Of the forty percent, the stuff of most
Of mammal life on earth, on every side,
Majority, the many, and the host.

Chapter 124: The First Primates

Aries 12, day 124 of the Gaian year

Now turns the story toward the one who tells:
Among Euarchos' children, who would climb
The northern forests' trees, where each one dwells,
There was a better line, complex in time,

That sold the mammals' future: primates, these,
Primos, whose story was the preface, set
Before the human chapter; in the trees
Each adaptation was the surface, met

By coming mind. It began in the trees.
The Paleocene's forests rose, and warm,
And closed in canopy; the expertise
Of living in the trees required a form

Of seeing different from the ground's: the bough
Is narrow and the fall is far, and he
Who leaps must judge, precise, the where and how
Toward the next bar, where the next branch will be;

And for this purpose came the forward eye:
Two eyes, looking in one direction's kiss
Of overlapping sight, would make the high
And narrow world, the canopy's abyss,

Three-dimensional: the depth perception,
Binocular geometry, two views
Merged; and the parallax, its reception,
That told the brain the distance, so to choose

How far the branch was; this was the domain
Of primates' innovation, the first one:
The visual abyss, and in its train
The calculated leap.
And there was done

The grasping hand: and Primos grew the thumb,
Opposable, the deep and the command,
Revolutionary, precise: and from
The claw's hook to the grip around, the hand

Encircling branches; and the great cascade
Of handling that the bands of thumb allow
And finger: primates grasp and pick, and laid
Before the brain a world of things, and how

The hand would feed the mind with touch, the clutch
Of grip; the mind would steer it with intent.
The brain grew; not at once; no single such
Event of doubled neurons; slowly, bent

Past mammal average, it expanded,
The cortex folding over and again,
More computing power, as demanded
By canopy's vortex and its domain

Of social, spatial worlds that need more thought,
More memory, prediction; it would grow,
The cerebrum, to fit the need, and brought
Its folded, wrinkled stock.
And long ago

Lemuros, the ghost-eyed lemur, was sent
To Madagascar, when that island's seed
Was cut from Africa, and from it went,
And drifted with its cargo, its first breed

Of primates, who would never see the main
Again; and in that isolation's span
Madagascar's fates made the lemurs' reign:
The aye-aye's tapping finger, which began

To seek for grubs; the ring-tailed lemur's troops;
The indri's eerie song, its clapping call
Across the forest: coastal island's groups,
A living museum, the first of all,

Of what the primate was ere monkeys came.
Tarsios, big-eyed, the Te Deum sung
Of the nocturnal hunter, and the frame
Of a tiny primate, with eyes, among

The huge, of half his skull: each eye the size
Of the brain behind; and the hunter's leap
In near-darkness was guided by those eyes,
Which gathered every photon from the deep

Of forest darkness. Small and ancient, fierce,
The tarsier, the proton, first in line
Of primates, hunting insects; time would pierce
His lineage, in dark, by long design,

And carry forward: patriarch's own mark
Of what the primate was before the light

Of color, and before the social spark
Of monkeys' world, which opened up, outright,

To something new; but he, as long before,
Kept up the vigil of the early way,
Asocial, ancient, as he was of yore,
Of primates, in the dark, before the day.

And Aegyptopithos, the ancient, crowned
In Egyptian earth, brought anthropoid day:
The first true higher primate, as the ground,
The root from which the monkeys made their way,

The bridge between prosimian and ape
And monkey, in Fayum Depression found,
A ridge in Africa: the chunky shape,
The small-brained ancestor, whose line was crowned

With all that followed: monkey, ape, and man.
Honor Primos, tree-dwelling, and the brain
That grew, the forward eyes, the grasping clan,
Who started on the longest road, the plain

Approach to consciousness evolution
Has ever made, not knowing where it led,
Branch to branch, careful, its resolution
Of caution that would lay, for what's ahead,

Foundations for the hand that one day would
Hold pens, and eyes that one day read the sky
And stars, and folded brain, which one day could
Look up at all of it and ask it: why?

Chapter 125: The New World Monkeys

Aries 13, day 125 of the Gaian year

In Oligocene days, though they were near,
Africa and South America still
Were parted by the wide Atlantic's sheer
Of open ocean; and a humble rill

Of primates, small, had crossed. Not by swimming:
No primate swims a thousand miles of sea;
On rafts, storm-uprooted mats, the brimming
Of tangled forest, vine and fallen tree,

The rivers of west Africa washed out
Into the ocean's current: castaways,
By accident devout, and in their doubt
And terror, found themselves, through nights and days,

Adrift upon a floating island, borne
Along the westward current's shelves of flow
Equatorial; harried and forlorn,
Unlikely colonists, who landed so

Upon South America's eastern shore,
And found a continent of primates bare,
With none before them: open, wide, the floor
For radiation, waiting for them there.

And from these castaways, in many ways,
The New World monkeys bloomed: a broad-nosed kind,
Platyrrhinos, whose face, the nose, displays
Its nostrils outward-facing, signs designed

To show divergence from the Old World line:
A small anatomical flag that told
Thirty million years of separate design
Of evolution, rag and banner rolled.

Platyrrhinos invented the fifth limb:
The gripping tail, prehensile, tail that bore
The slipping, swinging body, at the whim
Of hanging and of reaching, on the floor

Of canopy, as safety rope and hand,
A third; no Old World monkey had this art
Of tree technology; for the demand
Of South American rainforest's heart,

Tall, continuous, drove the solution:
The tail that grasps and will not fall, the key,
Revolution, added contribution
To primates' toolkit up in the tall tree.

Alouattos, the howler monkey, owned
The forest's whole acoustic circuit, sound:
The hyoid bone, enlarged, which groaned and moaned
And resonated, bass that carried round

Three miles through trees: the loudest beast on land,
The face of territorial defense
At ease: no need to fight, since, close at hand,
The howl announces, loud, his presence, hence

His claim, to every troop within the prowl
Of all the forest; and the howler's game
Was conserving energy: with a howl,
Why fight, when you can out-shout all the same

The competition, through the night and dawn?
The metabolic clout of the slow, loud,
Leaf-eating, thrifty howler, who had drawn
His territory's answer in the cloud

Of his own voice, and never had involved
His body in violence of dispute.
And Cebos, capuchin, the one who solved
As genius, the tool-user, absolute,

Unmatched in the intelligence of apes'
Own cousins of the New World: Cebos cracked
The nuts with stones, and probed with sticks the shapes
Of crevices; and capuchins, in fact,

Filled up the forest with problem-solving
And the inventions of the monkey's mind,
Not taught, nor in the genes; but evolving
As an inheritance; it's redesigned

Each generation, merited, clever
Use of the objects of the world, as bands,
The hand's extension. And, smallest ever,
Callithrinos, marmoset, in the lands:

A hundred grams of breeding that was shared;
The father carried twins upon his back

While mother fed, recovered, and was spared;
Marmoset's wins were in the family's track:

Cooperative group, where each would raise
The young, the older siblings' role in care;
Marmoset's social economy's maze
Most cooperative of primates there,

Family-based taxonomy of labor
Shared: estimates the human could admire.
Honor Platyrrhinos, the far neighbor,
The castaways who crossed on rafts of mire

And forest, in South America built
Parallel universe of primate mind
In rainforest: the howler's voice, the quilt,
Capuchin tools, marmoset's purse, the kind

Cooperative care: a different choice
From the Old World's, but no less in the art
Of being primate, nor in less rejoice
Of its accomplishment, its own whole part.

Chapter 126: The Old World Monkeys

Aries 14, day 126 of the Gaian year

In Africa and Asia there began
The other branch of anthropoids, the line
Of Catarrhinos, narrow-nosed, whose plan
Of primate innovation, the design,

Would lead, in time, to all of what we are.
Catarrhinos divided into two:
Cercopithecos, the tailed ones, the star
Of monkeys; and the apes, the tailless few,

Whose chapter comes hereafter. Now the tailed,
Cercopithecos, Old World monkey kind,
Were most successful; and their rafters, nailed,
Were built on three innovations, combined:

The bilophodont molar, the cheek pouch,
And ischial callosity: the tooth
That grinds, the food-bag, and the solar couch
Of leather seat-pad, generous in truth,

That let the monkey sit on branches long
For hours without discomfort: three, the small,
The modest innovations, and the strong
Success built on the ordinary, all.

Papios, baboon, came down from the trees:
This was the revolution, on the ground.
For the Miocene's drying squeezed the frieze
Of the African forest, shrunk around,

And the savanna opened; woodland shrank;
And the baboon, too large and social, could
Not keep to shrinking trees, and broke the rank
With treetop life, the lonely neighborhood

Of canopy, and walked on all fours, out
Into the open grassland, tail held high,
Knuckle-walking; with predators about,
Whose watching of the open land, nearby,

Then forced a new society: the troop,
Some fifty, or two hundred, strong, which planned
Its answer to the leopard as a group,
To lion, to the long and open land,

With safety in its numbers, and the scale
Of rank they needed: out in front, the strong
And lumbering, the troop's dominant male,
The sentinel, whose canines were as long

As leopards', and whose bark alone could send
The predator's designs back in retreat:
The tooth, the threat display, would so defend
Authority, the patriarch's own seat.

And the females formed coalitions, made
Matrilineal alliance, arrayed
Of mutual grooming, terms of their aid:
The baboon social order, as was laid,

Was the grandmother's legacy: the old
Female, whose daughters and granddaughters, near,
Held her position steady, and would hold
Through decades, stable core, year after year,

Of the troop's identity, while males came
And went, the passing power of the day,
Parades of rank, each with a passing claim,
While the old mothers' line was there to stay.

Macaque Macacos crossed to Asia's lands,
Of monkeys most geographically blessed,
Spread from Japan to North Africa's sands:
Snow monkey, in hot springs a steaming guest

Of Japan; Barbary macaques, a band
European, a remnant; in the blood
Of the rhesus, as science would demand,
Was found the Rh factor; and the flood

Of macaque's alliance with the quest
Of human curiosity's research
Was partnership by accident, abreast,
The most adaptable of monkeys' perch,

With most adaptable ape's grip on earth.
Colobos, leaf-eater, met cellulose
Of forests with a stomach's added girth,
A chamber, like the ruminant's own dose:

Its many-chambered foregut fermented
The leaves, as the cow's rumen did the grass:

The strut of convergence, here presented,
Same problem, same solution, in its class,

In monkey as in cow; this primate's part
Was proving evolution's patient plow
Will cut the same deep furrow, by its art,
In different fields, no matter where or how.

Honor Cercopithecos, who came down
From the trees, and learned what the grassland yields
To the social, hierarchical, the brown
And mighty baboon, master of the fields;

Who then in Asia and beyond would spread
And colonized the human world, before
The human came, the monkey gone ahead
Of us, to every city, every shore;

And so the monkey proved the primate's fate
Could take the open ground, not just the height
Of canopy; the monkey, walking straight
Into savanna, survived; and the right

Of primates to the grassland, organized,
Was here established, long before the tread
Of ape or human, as the manna prized:
The monkey first; the frontier's ground he led.

Chapter 127: The Apes

Aries 15, day 127 of the Gaian year

The tail was lost. Then, in the Miocene,
Warm forests, out of Catarrhinos' line,
A branch gave up the monkey's tail, the keen
Balance it gave, the feline, small design

Of body; and grew larger, broader, wide
Of shoulders, which rotated freely, made
For climbing, new embodied, on the side
Of boulders and great trunks, and there displayed

Not run along the branch, but, hanging, climbed
Beneath it: brachiation's expertise,
The avalanche of arm-over-arm, timed,
Moving beneath the canopy with ease.

The ape swung, fluid as the ocean's sweep,
Arms spread, the body pendular between.
Proconsulos, the dawn ape, first to leap,
A Miocene ape, African, the mean

Between the apes and monkeys: a rehearsed
And transitional form, which had a tail
Still, but whose shoulder, free to turn, came first,
Rotating; and whose body told the tale

Of the ape's beginning, and the decree
Of a new way of being primate. And
Hylobatos, gibbon, perfected, free,
The art of swing: the lesser ape, at hand

With canopy's geometry, the heart
Of swinger's world; the gibbon's way to run
Through treetops, faster, by the moving art,
Than man on ground; long arms tuned to the one

Rhythm of pendulum's momentum; each
Swing timed precisely, every grab, the hold
Calculated by the brain's concise reach
Of three-dimensional space, mapped and told:

And the gibbon sang: its song, the duet
Of male and female, morning's anthem rung,
Territorial through the air, and met
The Asian forest: of the apes, among

The non-human primates', most complex text
Of song: not bass of howlers, but, as planned,
Melodic acumen, a structure flexed
Into a thirty-minute concert; and

The mated pair performed it, close and bright,
Weaving together in the forest's dawn,
Coordinated, two voices in flight.
Then the great apes would change the story, drawn

Anew. Pongos, orangutan, the red
And solitary sage of Asian wood,
The philosopher, in Borneo bred
And Sumatra; whose thought no monkey could

Match: his intelligence, the case, was this:
The solitary life in forest maze
Required a mental map of the abyss
Of fruit-tree places, scattered through the ways;

The scattered, poorest diet demanded
That he remember where, the schedule when
Of fruiting, and the route, as commanded,
Between a thousand trees: a station, then,

Of memory and plan no monkey's brain
Of social kind could match in solitude:
His chunky and deliberate thought, the chain
Of solitary genius, which pursued

The forest's deepest puzzle. And then, in
Africa: Dryopithos, ape, whose brain
And muzzle, hand, made ancestor and kin,
Whose shape would be gorilla's, and would gain

The chimpanzee's, and last the human's: these
African apes, in forest by the lake
Of Rift Valley: Miocene expertise
In canopy, pelican-rich, would make

Margins, produce the largest and most bright
Of living architects: the largest brain,
Proportioned to the body, the great height
That primates had achieved. And tools: the chain

Of craft, by which a non-human conceived
The world as material to be shaped:

The chimpanzee's own forebear, who achieved,
Picking a stone, a stick; a leaf he draped

For water, like a cup: deliberate
Manipulation of the object-world
For purpose past the immediate state
Of the sensation: the primate's hand, curled

Into the surface of designed intent.
Honor the apes, the tailless, and their line,
Who swung and thought and sang, the ones who went
Between the monkeys' million suns, a sign

And human's singular ambition: these,
Swingers, tool-users, singers, patient, wise,
Whose long cognition was the preface, keys
To fingers that would one day write, the rise

Of voice that one day speaks, the mind arrayed
For conscious choice, within its folded brain,
That one day, wrinkled, would ask, unafraid:
From what beginning, then, has come this chain?

Chapter 128: The Great Split

Aries 16, day 128 of the Gaian year

In late Miocene days, Africa changed.
The forests that had clothed it, end to end,
From coast to coast in green, abundant, ranged,
The tropic world's experiment, its blend,

Began to shrink: the climate cooled; then fell
Less rain; tectonic uplift, as it laid
The eastern Rift Valley high, pooled the spell
Of rain's shadow; the west kept, in its shade,

Its forest and its rain; the eastern side
Abandoned hopes of canopy, and lay
Opened; the grassland came, the vast and wide
Savanna's open invitation's way

To herbivore and predator; forecast
Of forests' retreat shut a door, the one
On a kind of primate life, and at last
Opened another. And the split was done:

In shrinking woods, one lineage held fast
To canopy: Panos, chimpanzee, stayed
Where trees remained, the forest's child, the last
Refugee, who kept the old way, and made

The knuckle-walking crossing on the ground
From forest patch to patch, the next in line;
The culture of tool-use, which was the round
Of the chimpanzee's mind and its design:

Fishing for termites with a stripped twig, picked
With care; and cracking nuts with hammer-stones;
Techniques transmitted, culturally strict,
From mother to the child; for culture owns

The chimpanzee: its populations bear
Traditions, local, learned, of tools; the part
Not in the genes: the Taï Forest chimps there
Are cracking nuts; Gombe's, the fishing art

Of probing, which in Taï was not learned:
The chimpanzee's own cultural wardrobe
Is the closest thing to what we have earned
Among the living species, as we probe.

And Panos hunted, working as a team,
Strategically: the red colobus, caught
Actively, in coordinated scheme:
The driver flushed the prey; the blocker brought

Escape to close; and the rush to the kill,
The shock of primate hunting primate; meat
Shared afterward, in politics, the skill
Of chimpanzee economy, elite,

Whose access to the distribution won
Of protein was the currency; the core
Of rank and of alliance. But then one,
Upon the other side, past forest's door,

Drank from a different cup: the ones who walked
Into the grassland. Not yet human, no,
Not by some millions of years; but who balked
At staying in the trees, whose bodies show

The start of shifting: pelvis tilting, spine
Straightening, foot's arch developing, the gift
Of upright posture, awakening line
Of body for the open ground; the rift.

Sahelanthropos is the oldest face
Of human lineage of all: in clay
Some seven million years in the embrace
Of Sahel's ancient lakeside, a skull lay

Whose foramen magnum, placed down below
The braincase, carried high the upright head:
Transition had begun. And, long ago,
"Ground ape" Ardipithos, whose form was bred:

Halfway: still grasping toes for climbing, though
A backbone made for walking, as it could;
Upright, but slowly; not committed, so
Not on two feet, yet speaking where it stood

To the savanna's open, woolly ground
With first tentative steps the primate made
Upright.
Honor the great split, the two found
Directions the African ape had weighed,

And two results: Panos, the one who stayed
In forests, and became the closest kin

Alive to humankind; the other, made
The boldest of the primates, crossing in

Between the forest and the open ground,
And starting on the longest walk, the one
That any primate ever yet has found:
The walk to language and to talk, begun,

To fire and art, and to the question asked
By one species alone, which is the theme
With which the chapter after this is tasked.
The split, unmasked, is ancient, as a stream

Divides in two: the forest, as it chose,
Took one, and the grassland another; none
Knew what would come of it; each brother goes
A different way, into the future, run.

Chapter 129: The Dawn of Humanity

Aries 17, day 129 of the Gaian year

And now, the threshold.
In the Rift Valley
Of eastern Africa, where earth itself
Pulled apart; the geologic tally
Of all tectonic force had split the shelf

Of continent, and filled the crack it made
With lakes and with volcanoes, and the ash
That kept the bones, the track, the footprint laid
By every creature in the sudden flash

Of eruption and the slow erosion:
And here, in the Pliocene's cooling land,
Grassland's ever-widening corrosion
Of forest's edge, savanna, open, spanned

Out east to the Indian Ocean's coast:
The upright ape emerged, the beast who'd be
The one to bear, and to become, the host
Of consciousness. And Australos, then, he,

The southern ape, walked upright; and he stood
Not for a moment, nor in passing play,
But all his life, as stone stands, and as wood,
Upright upon two feet, by night and day;

And so his hands were his, and they were free,
And on the open grass he made his choice,
To carry home the food, that all might see,
And share it out, and in it to rejoice.

He bore it in his arms across the lands,
The fruit, the meat, the roots dug from the ground,
And all the harvest carried in the hands
From here, where it was gathered and was found,

To there, the home base, where the young ones lay,
The nursing mother's vulnerable life
Took up the camp; the hand that would convey
The food could carry stone, stick, wood, a knife:

The tool, the extraordinary reach
Extending from the body. And he made,
Australos, the tools: Oldowan, to teach
The hand new art, the simplest of the trade:

The wan, unremarkable chopper, stone
Struck on another stone to make an edge,
The basic cobble that would cut the bone,
The carcass to edible parts, the pledge

Of scraping marrow, cutting hide, the arts
Of butchery, all written in the stone,
Earliest human industry, the starts.
And the brain grew. Not fast: the brain, alone,

Of Australos, was greater than the room
The chimpanzee had kept, and grew; and past
Him, upward, rose the mind, as from a loom,
Till his son, Homo habilis, was cast

As "handy one," would make the skull expand
And make it greater still, and make a brain
Beginning to be human. Then, at hand,
Came fire: not mastered yet, but, in its train,

The natural fire, the acumen, the old
And lightning-struck savanna's last remains,
Its use, opportunistic, quick and bold:
Tubers in ashes cooked; the cold night's pains

Answered by embers' warmth, the brushfire's heat
That lingered; and though fire he did not make,
He found it, sweet and useful, and would eat;
The accidental flame, for its own sake,

The first draft of the hearth that would become
The center of the human universe,
The fire around which story, song, and drum
Would gather. And the group: Australos' terse

And social way, which chimps had just begun
To hint at: the band's cooperation,
The sharing of the meat; defense, as one,
Against leopards; caring, in relation

To the injured; and the immense, the new
Unprecedented investment in young:
The human child was born, as was its due,
Quite helpless; nature's accountant had sung

The tally: for the great and growing brain,
The child came early, small, and in its fall

Was helpless, and its mother bore the strain;
And this was wisdom's way, and good for all:

Be born early, be born helpless, be born
Needing years of kissing and of feeding
And the selfless care of the group; the sworn
Longest of childhoods, in kingdoms leading

All animals, from helplessness was born;
And in that childhood's openness, the lore,
The learning, freedom, burden, which is worn,
Of culture's own inheritance, the store

No gene can carry; which, but by the hand,
By imitation, patience, could bestow:
The elder reaching. This is where we stand:
The threshold. Not yet human, speaking, no,

Not painting yet upon the cave wall's face,
Its manifold surface, not counting, not
Asking why stars are there; but in the place
Of the Rift Valley's ancient ground, the spot,

Standing upright, with tools, the forward stare
Of eyes, the social group's rallies, the start
Of longest childhood, and the hand, freed, there,
And grasping; winning, losing, and the part,

The need of the creature who would be us.
Honor the threshold: Australos, the one,
The southern ape who walked; the pathos, thus,
On the open savanna, in the sun,

And glory of the almost-human, true,
Who stood up and looked out across the grass,
The acumen of whose gazing, in view,
Held only doubt and hunger, need, the mass

Of food and tool and child to carry back
Unto the camp; and he did not yet know
That walking upright, ordinary track,
Was the stamp of the future's seal, the show

Upon the present: that from this, the hand
That grasps, the helpless infant, and pleasant
And social group that lived upon the land,
Would come the future, out of the present:

The language and the fire, the city, ship,
The song, the question, and one desire
That separates us, out of the long grip
Of patient chain of life: to acquire

Knowledge of what we are, whence we came, and
The giving of a name to every star.
But that is the next age's telling. Stand,
For now, the ape, upright, in grass, afar;

And now the future swells, as it was cast,
And now the ape stands up, and looks ahead;
And now the threshold has at last been passed,
And all the long road waits for it to tread.

Chapter 130: Adam

Aries 18, day 130 of the Gaian year

The threshold passed. The ape who stood was more
Than ape; the hand that grasped had grasped, and held;
And something lived behind the eyes, a store
Of words and names, and in the skull it dwelled.

Neanderthal had greater brains, and yet
It was not size that made the human kind,
But this: the gift to keep and not forget
A story and a name within the mind.

And in the Pleistocene's long, measured stroke,
In the African land there walked a man;
He hunted, ate, and loved, and with his folk
He lived for seventy years, a full span.

His name was Adam, father of all men;
From him the Y goes down from son to son,
And each man now alive descends again
From Adam's line, and is his own, each one.

From Tokyo to Lagos, land to land,
From far Manhattan to the Irish shore,
The sons of sons are Adam's, and they stand
Within his house, as they have stood before.

He was the first, the root, the patient trunk;
The first of houses is Haplogroup A,
Whose branches stayed where Africa had sunk
Its oldest roots, and stay there to this day.

The house of A is carried by the San
Of Kalahari, and the Mbuti too,
The forest peoples, kin since time began,
Whose speech is clicks, whose paint is ochre's hue.

They never left, and kept the ancient source,
The house that stayed when all the rest went out;
They did not take the long migrating course,
But held their ground, and kept it, staunch and stout.

And deeper still, below the house of A,
There, A00, the eldest branch of all,
The house of Perry, older than the day
When Homo sapiens first heard its call;

For older folk, of an archaic kind,
Once wed among the new, in forest shade,
And left their Y, which in his house we find,
The mark of that old wedding, long since made.

He made no monument; he hunted, ate,
He loved his wife, and spoke her name at night;
He shared the meat among his kin, and late
He sat beside the hearth and its warm light.

And on the threshold lay his faithful hound;
He laid his hand upon his infant's head;
He buried kin with honor in the ground,
And mourned, as men still mourn, for all his dead.

He had a son, who had a son, and so
The line ran on, through nights and tides, and through
Ten thousand generations, long and slow,
To men tonight, whose sons will bear him too.

His sons were Cain, and Abel, and then Seth,
The first three names that ring along the line,
The first three houses breathed by Adam's breath,
And each of them a branch, and each a sign.

So honor Adam, father of us all,
The root and trunk from which the tree has grown;
And raise the cup to him, both great and small,
For he is us, and we are all his own.

Beneath the African moon walked the man,
Two hundred thousand years ago, and more;
And here, with him, the tree of men began,
The trunk from which the branches rise and soar.

Chapter 131: Cain, Abel, and Seth

Aries 19, day 131 of the Gaian year

The tree began with Adam, trunk and root;
But trees do not stay trunks; the wood divides,
And from the trunk the branches climb and shoot,
And spread up into many, on all sides.

So Adam had three sons, and they were three
Great houses: Cain, the first-born, and the one
Called Abel, second, and the last to be,
Seth, given later, when the deed was done.

And Cain the first-born was the tiller; he
First touched the soil, intending there to sow,
And called the grain up from the dust, to be
The way of life the later lands would know.

And Abel was the shepherd, who would go
Behind the herd across the open plain,
And did not settle, following the flow,
The heir of all the older nomad strain.

And so the two were set there from the start:
To stay or go, to till or tend the herd,
To settle down, or walk; and in each heart
Of all mankind that question would be stirred.

Then both brought offerings before the Lord,
And Abel's gift was pleasing in his sight;
And Cain was jealous, and his anger stored
Until the day it broke out into fight.

Out in the field, he lifted up a stone
And brought it down on Abel's head; and red
The first blood fell upon the soil, alone,
And Abel, shepherd, lay among the dead.

But Abel, long before, had fathered sons
Before that day; his house was not undone;
His line runs on today, among the ones
Who keep the oldest lands beneath the sun.

The house of Abel is Haplogroup B,
The deep African line, which did not leave;
The shepherd's house, which stayed, and stays, to see
The forest and the plain, and there to cleave.

The Pygmy folk and San are of his kin,
Whose worth was never measured by the miles;
B dwells in Africa, and keeps within
The oldest earth, among its forest aisles.

And Cain was marked, and wandered, and he built
A city, Enoch, loud, but not for long;
His sons were heirs of all their father's guilt,
And all the din of them was short, though strong.

The mark upon his brow would save his head,
But not his line; no house of his lives on;
His seed ran out like water, and was shed
Into the sand; the killer's house is gone.

Then Adam and his Eve, in grief, were sent
A third, and Seth they called him: "set in place,"
"Appointed," "given"; and the cloth that rent
Was woven whole again, and filled the space.

And Seth's house is BT, the line that goes,
The branch no continent would ever bind,
From whom come C, and D, and all of those
Who walk the world, and leave their homes behind.

His sons would cross Bab al-Mandab's strait,
Leave the African source, and fill the earth,
On all the continents, both small and great,
Save for the ice, where none would come to birth.

Of Seth came Enosh, and then Kenan, then
Mahalalel, and Jared, and the one,
Enoch, and old Methuselah, the men
Who led to Lamech, and Noah his son.

So honor all three brothers, and the three
Great gates from which the tree of men would grow:
The killer, gone; the killed, who stays, to be
The root; and Seth, the one who rose to go.

The tree is now no longer one lone trunk;
It calls itself by more than just one name;
And in the wings, the later splits have sunk
Their roots, and wait to enter into fame.

Chapter 132: Noah and the Crossing

Aries 20, day 132 of the Gaian year

Ten generations on, Seth's line had kept
Its patient eastward drift across the plain
Of eastern Africa; the tribes had slept
And woke a thousand times, through drought and rain.

From Seth to Enosh, and to Kenan's years,
Mahalalel, and Jared, and the man
Enoch, who walked with God beyond his peers
And was taken; Methuselah, whose span

Ran nine hundred and sixty-nine, the rod
And staff, the longest-lived of patriarchs;
And Lamech, father. On the eastern sod
Was born a son, Noah: a name that marks

The easing of the curse upon the thorn
And thistle of the ground: Noah is rest,
And comfort; to his weary folk was born
Relief from labor, comfort in their nest.

He grew; and all the while he grew, the rain
That fell grew less; the land on either hand
Grew dry; the grass was thin upon the plain,
And game grew scarce across the thirsting land.

And then the sea itself came rising slow,
As ice fell back, and raised the shelf of shore;
It ate the coasts, and pushed the camps below
Inland, and inland, and then inland more.

This was the flood: the sea, and not the rain;
And Noah knew the land would not return;
His people starved upon the barren plain,
And for the farther shore he came to yearn.

Eastward the water lay, the narrow strait
Of Bab al-Mandab, where the shore would end,
Reaching its hand to Arabia's gate,
Too wide to swim, too deep for feet to wend.

And Noah built the boat, a sturdy keel
Made for the winds, and set aboard his sons,
Shem, Ham, and Japheth, with a single zeal,
Their wives, his people, all the faithful ones.

They crossed the strait; the pounding waves were passed;
And on the shore of Yemen they arrived,
With all the songs the long road had amassed,
And all the lore; and all of them survived.

The house of all who crossed the strait: CT,
Haplogroup CT, from whom would come and grow
C, D, E, F, and all that came to be,
The houses of the world, both high and low.

Their children's children came, in time, to fill
Europe, and Asia, and Australia's land,
The Americas, and, glimmering still,
The isles of the Pacific, strand by strand.

His sons were three, and each a house; they went
Their own three ways, and from the shore they spread,
The delta where migration's waters bent,
The coil uncoiling from its narrow thread.

And those who stayed in Africa, the line
Of Abel, and the sons of A, would keep
The ancient home; but Noah's was the sign
Of restless roads, and of the long, far sweep.

This is the hinge, the crossing, and the door:
All of us not born on African ground,
Each one descends from those who rode before
In Noah's boat, and crossed, and were not drowned.

Each language, and each pestle in its bowl,
Each kitchen and each town on foreign earth,
Descends from what his kin chose, and the whole
Of human life outside the land of birth.

So honor Noah, builder of the boat,
Who led the crossing, and who kept its flame,
The ember of the blood that rode afloat
To foreign soil, where first his children came.

The strait closed up behind them, and the sun
Rose on the Red Sea, and on Yemen's far
And foreign shore, the day that it was done,
The day mankind became the thing we are.

Chapter 133: The DE Split and the Toba Catastrophe

Aries 21, day 133 of the Gaian year

They came ashore at Yemen: wet and green,
Thick grass, where seasonal rivers still ran,
Was Arabia in that Pleistocene;
The land was hospitable to the plan

Of a small band in search of a new home.
They stayed; they multiplied; and then, out east,
Along south Asia's coast they came to roam,
Along the shore, where choosing mattered least:

The way was easier to trace than choose:
The dry interior upon the left,
The sea upon the right hand, theirs to use,
The prompt of coastal food, the shells, the heft

Of fish, the tide pools, and the bells and bowls
Of mangrove swamps: and the migration's blur,
Its terms, its generations, and its tolls,
Of coast-walking, a slow and eastward stir.

And early in this eastward flow, the trunk
Of CT had split; and from its root there came,
A few thousand years before, and deep sunk,
Two clades, as daughters: DE and CF by name.

And one of these two clades, the one called DE,
Would do a thing dramatic, while the way
Of CF, the other, and its tale and plea,
Must wait until the chapter next. Today:

And DE itself divided: D from E,
Whose chapter, its return by land, awaits:
In Africa again E came to be.
Today we follow D beyond these straits.

Haplogroup D was once of widest spread
Of all Y-lines on earth, and not the small,
The narrow, dry-cornered estate, instead,
Assigned today; for D roamed free through all

Of Asia: there D was the prow and fit
Of the first wave's south route; its folk would shoot
Down the Indian Ocean's chute, with it,
Peopled pre-Dravidian coasts, the root

Of what is India today; moved on
To Southeast Asia; and, along the isles
Of Indonesia, then to Java drawn,
Pushed north through Myanmar and through Thailand's miles

Of forest, to the far frontier, the bar
Of China's southwest: so the drift would be,
The early coastal drift, vow, avatar,
That carried D across, from sea to sea.

D was the free and first-arriving one,
The pioneer, whose patient progress there
Had won the lands of southern Asia, none
Before it there, of human hand still bare.

And then. Some seventy-four thousand years
Ago (the earth's own chronicle, again,
Recorded it, as in its rock appears),
Sumatra, by a land-bridge joined, and when

Toba, a mountain there, erupted. Not
A small one, nor the ordinary flow
Of cinder-coned and ordinary hot
Outburst: the largest blast earth had to show

In twenty-five million years. And its throw,
Three thousand cubic kilometers cast
Of rock and ash, fell over all below,
On Asia, and the continent so vast,

Shadowing it. It dimmed the sky; the rim
Of the bright sun was blocked for years, and all
The temperature dropped fast, and, cold and grim,
That had been warming felt the winter's thrall.

Into a sudden cold, the hammer-blow,
Like a fist on the living systems, fell,
The stun of the eruption, closing slow,
On south and east Asia. The forests' knell

Was rung: they died. Food sources failed. The whole
Of green, in mist and fog of ash, would stop;
Photosynthesis ceased; and so the toll,
Through seasons of growth, with no harvest crop,

Fell on the settled life of those who bore
The lineage D: all collapsed. The spread,

The first-wave migrants' body and their core,
Through tens of stations, settlements that led

Iran to Indonesia, starved and died,
And lay in the cold; and beneath the ash,
Pneumonia-stricken, and the light denied,
The coastal settlements lay; and the cache

Of inland camps lay buried deeper yet.
Most carriers of D, within the close
Of years behind Toba, had paid the debt
Of death; and then the barriers that rose

To life were absolute. And groups that came
Within the second wave found stations there,
And settlements, still standing, still the same,
But emptied, bare of people. Lands that wear

Once D as their majority, were seized
By later comers, coming from the west,
C- and F-descendants, whose way was eased,
From zones less hurt, who now expanded, pressed

Into the vacancy left. D was all
But lost; almost; and, scattered on the map,
In three refugia, all of them small,
By sheer good hap, some fenced off, in the lap

Of distance, buffered; some by luck, where folds
Of ground broke up the ash, survived. And so
The first of these, the one the story holds:
Japan, cut off by sea. And here the blow

Of Toba, come from off the Asian shore,
Arrived, but thin; the winds' long course went wide;
The ash came with no fullness in its roar,
And crude geography was on their side.

Mere luck, of long-faced islands set offshore,
Sufficed to keep that slight stand living, too:
D-bearing folk survived there, and they bore,
In later ages, grew into the new

And founding strata of Japan's own name.
The marker D, near half a nation whole:
Today near half of Japanese men claim
The father-line's inheritance, the scroll

Of that first wave, preserved in islands, passed
Through tens of thousands of years; from that date
In Japan, D runs deeper, holding fast,
Than culture's overlays, however late:

The Ainu have D; the Yamato too;
Gently but firmly, all the island chain,
The whole long archipelago, runs through,
The seed-vault of the first great southern train

Of early migrants. Second, the plateau
Of high Tibet: cold, elevated, far
From where the plume moved; little ash below
Had fallen; for the plume's own moving car

Went south and east, not north. That plateau, grim
Already, showed its strange resilience: those,
Inhospitable, and in mercy slim,
Who had arrived before Toba arose

Remained. The altitude they had endured
Now saved them, and rude difficulty; on
Lived D; and hardship into help matured
In Tibet; and Tibetan men have drawn

That lineage at rates that echo still
The spread before the ash; hard land had kept,
Took up, preserved the line, the plateau's will,
What easy lands served up to ruin; slept

With it across millennia. The third
Is in the Bay of Bengal: islands, small,
The Andaman Islands, so little heard,
And scattered, tiny, and with nothing tall

Or wide infinity of land to spare,
Between India and Myanmar, they lay,
And, crucially, too far away from there,
From Toba's plume to smother. To this day

The Andamanese peoples, who are three,
In what is now the purest form that stands
(Jarawa, Onge, Sentinelese), hold D
Surviving: the relay of the first bands

Undiluted, held in a folk alone;
Until these recent centuries, they stood

In total isolation, on their own,
Apart from all the human neighborhood.

And yet the three are kin, and they are one:
The house of D, the ancient house, the name
Japan and Tibet bear, and every son
Of the Andaman islands bears the same.

Three peoples of one father, far apart,
Who never met, and never came to know
Each other; yet the house is one at heart,
As it was one, so very long ago.

The Shinto shrine upon the mountain, and
The prayer-flags on the high Tibetan wind,
The island song upon Andaman sand:
One house of D, and one in kin and kind.

And Toba's ash had nearly closed the door
Some seventy-four thousand years ago,
And nearly wiped the house, and all its store,
And nearly dealt the house its final blow.

Its people starved, and few of them were left,
And small the house became, and small its all,
Of almost all its sons and lines bereft;
It stood upon the very edge. The fall

Was near: the line almost did not win through.
And yet it did: from three, the last, the rest
Of a wide first wave, it lived on, and grew,
From three survivals, into tide pools pressed

Of the very lucky. And from these three
Came slow revivals of the stock, the slow,
Across millennia that were to be,
Rebuilding of the line, and patient flow

And carrying of D's throng to this day.
Japan became a country; and the isles,
The sentries of the Andaman Sea, lay
Apart; Tibet, a plateau realm of miles;

Small, uncontacted, keeping to their own.
The carriers of D are still alive,
And held their call and legacy, their own;
And half of Japanese men now derive

The very Y from him that was the stay
And backbone of the first-wave people, so,
Through all a continent's array; but they
Go on about their day, and do not know.

The marker's glow, its station, as it should,
Is in the blood, and meek; and yet it lives;
It does not ask, nor call; it never would;
Somewhere within their bodies, one who gives

Them life survived the largest blast of earth
In twenty-five million years; and those who
Were forebears, line behind him, and his birth,
Came over Bab al-Mandab living, through

Forebears who walked from Africa away,
And theirs, back to the origin, the morn
In Adam, where the first of all lines lay:
All this, unnoticed, through the cars is borne

Of Tokyo; or where the busses go,
Or over Kyoto's ancient paths of stone,
Through Sapporo's commuter traffic flow,
A rover in the bloodstream, and unknown

To a salaryman who cannot tell
Of the near-wiping blow that, though he's dumb
To it, upon his very line befell.
He does. He does. He does. The quiet hum

And buzz of haplogroup D come, a sign
Of a first wave that nearly was erased,
Kept in three refugia, and in line
Unbraced by shared culture, and since displaced

From minds, the letters hold them yet, and so
The body still remembers, and it tells
The fall and the survival; and they know,
In blood, the house of D, and where it dwells.

The house of D, in islands and in snow,
And on the mountains, three, and one in name,
Has kept its father's mark, and does not go,
And, though its peoples part, it is the same.

The stark and simple fact is all: one dark
Volcano, world of ash, near-end; remains,

In three refugia, left as a mark,
The aria of D the Y retains.

Chapter 134: The CF Split and the Unsplit C

Aries 22, day 134 of the Gaian year

While D lay buried under Toba's ash,
Or found a refuge in Japan, its plan,
Its slow continuation, through the crash,
Went forward in the sister clade: CF ran

Early in the wandering. CF had split
From DE some few thousand years past, and went,
As CT's two great branches, once well past it,
Their separate ways; and one was CF, sent

Along its road. Then CF itself split too
Into C and F; F would come to spawn,
In the main story, which we shall pursue,
The great GHIJK megabranch: from it was drawn

In time, the G, the H, the I took name,
And L and M and N and O would rise,
The J, the K, and from the very same
Trunk, P and Q and R and S: likewise

The T. All these the human tree would bear,
For F's generous: of a hundred men
Not African, some ninety are its heir:
All of downstream, the whole of all that then

Became the ocean and the rain. Its course,
F's signature and stain, will take the best,
The coming chapters follow, at the source,
Of eight or nine to come. But first, the rest

Is C. F's cup is deep, but first we see,
Not deepest, nor the first of all to split,
Haplogroup C, and what it came to be,
Nor widest in the modern spread and fit,

It is the strangest, puzzling us the most;
Among the haplogroups, the largest gap,
In its geography, of all the host,
In our migration story, is its map.

For C is in two places. Two. Not strewn
In many places, no, but only two,
As D was strewn in refugia, hewn,
Two peoples parted by a space none knew

In any other haplogroup: between
Indigenous Australia, and the steeds'
And Central Asian steppe, so wide and green.
Australia settled, as the record reads,

Some fifty thousand years ago. The flow
Came out of Indonesia, and would be
Across the Wallace Line, and had to go
Across a narrower and lower sea;

For then were Sundaland and Sahul made
Near-continuous land; the bands that came
Across, where now deep ocean has been laid,
Were early post-CT folk, the first of name.

They carried C, the curliest, the most
Tangled of all their haplogroups; and in
They came, arrived, and were received by coast,
And spread through all the continent; their kin

Then thrived there fifty thousand years. The span,
On any single continent on earth,
Is longest of all tenures held by man,
Unbroken presence, measured from its birth.

Aboriginal peoples of that land,
On fifty thousand years of patient care,
Are oldest culture earth has, and they stand
Adapting to one continent; and there,

Of songline, and the single-minded lore
Of water-holes; the kangaroo's long way,
Migrations, all the seasons ever bore;
The banksia in flower, and its day;

The ordered way of fire-stick farming, laws,
Its stations, and the languages; the land,
The dreamings, and the patient, working cause
And effect, body, mind, for ages spanned.

Some sixty in a hundred of their men
Hold C, the dominant male sign, and more;
The later European comers then
Brought haplogroups of theirs to that old shore;

But Australia's old C, the one that takes
And gathers up earth's oldest tale, stands plain,

A marker of unbroken years, and makes,
And starker yet, the selfsame line again

In Central Asia dominates: not kin
Nor cousin, but the very same C, whole,
Laid out across the steppe, as it had been:
The Mongols, Kazakhs, Tuvans, on the roll

With Buryats: on windy grasslands, where,
Eurasia's heartland, and in later days,
The mounted nomads stepped, and from out there
Would build empires, changing all the ways

Of history: from Xiongnu to the flame
Of Genghis Khan's conquests: and all of them,
His Golden Hordes that followed, and the same,
Hold C at high frequencies: the one stem

That sat in Australia all these long years
Is that whose later children, as they pass,
In Mongol cavalry, would raise the spears
Above high steppe. Two places, in one class,

Two trajectories, wholly set apart:
The oldest living culture; and the plan
Of land-empire builders, great in heart.
One house that spans the two, as one house can.

Two peoples, one house, bear the very same
Mark in their Y: the first, the oldest folk,
Though fifty thousand years between them came,
Aborigines, whose lore never broke

Across their country's long unbroken day,
Who held one place more deeply than the rest;
And, to the north, the grassland's horsemen, they,
The Mongol horsemen, riding east and west,

Whose empire reached, in its greatest day,
From Sea of Japan to the Black Sea's air;
They both were of the C, and in this way
One ancient father's signature they share,

Whose patient children parted, some to ride
North, some to walk south; and the mark would creep,
Intact for fifty thousand years, and bide
Into two cultures that would never keep

Within two of the most distinctive ways
Of living earth has known; and they have grown,
Yet neither marked the other, all their days,
Nor knew the other was: unmet, unknown.

The disconnected branches of our kind
Share deep ancestry: silent, deep-down things,
That no one living member calls to mind,
More quiet than a language are its strings.

The Arnhem Land man, singing out his range,
Knows no Mongolia, no grass, no snow;
The Mongolian shepherd, in exchange,
The Dreaming does not know. One, long ago,

Belongs to both of them: deep in the past,
A father, and his children, who would go
In opposite directions; now is cast
His Y's long shadow on them both, below,

Upon Australia's continent, the same
As on the central Asian grasslands; on
Two continents, and no divergence came
To split the line, one man, and he long gone.

C is the unsplit. C is what can claim,
In name though not in story, the one case,
Two of the most distinctive roads, the same,
Where splitting rules did not hold to their place.

No catastrophe here; no Toba; no
Fracture, no refuge; just the flow, unplanned,
Of a migration going two ways, so,
A marker that would not divide its strand,

Or not as much as others did. They stand,
Together by a shared and unseen sign,
The steppe and desert continent, one band,
Of fathers, one patrilineal line.

And then the steppe goes on its way: the horse
Is tamed; empires of the grass arise;
The mounted nomad finds his gait and course,
And fall and rise again before all eyes,

And all the tension of the grassland, set
Against the settled towns, is born; its ground,

Eurasia's, it will shape so much; and yet
The horsemen of Genghis Khan are still found

To carry, mostly, C. That line runs through
From the first migrants, through the hordes as well,
That followed them, and down to those who, too,
In Mongolia, Kazakhstan, now dwell.

And so Australia's story goes its way:
The most complex, sophisticated plan
Aboriginal peoples build, and stay,
Of non-farming society of man

On earth. They were the stewards of a land
Whole. No writing came, and they never chose
The walled-in city, nor the city grand,
As Mesopotamia, China, rose,

Or Mesoamerica, a fortified
Civilization rose, a thing wherein
(They never tried to "civilize," nor tried)
No shallow colonizer, who had been

Born in the eighteenth and nineteenth, could see
At all: a way of being human, grown
With its own deep achievement, and so free,
Peculiar register of time and tone.

In song were fifty thousand years; and so
In painting fifty thousand; and as long
The patient reading of the land, the slow;
Gaiad will not rank them below the throng

Of city-builders. Gaiad honors them
As them. And all the while, through every mile,
The same Y mark is carried, stem to stem,
By Mongol horsemen, in their nomad style:

Vast, varied; and the horseman never came
To know that, south, a cousin also shows,
Far off, within his body's frame, the same,
The chromosomal gift, the name, which flows.

These two will never meet, nor ever know;
Their steeples and their songs will each, within,
Be each its own, entirely. And so
They are kin in the blood; the chapter's been

Here only. So it ends, and so it leaves
The strange unsettled fact: one blood, the C,
One shared bone of inheritance, that weaves,
Unsplit, and two whole legacies set free

In silence, bound together through the frame
And body, each to each, along their lines,
Without a word for what they share, or name.
The house of C, one house in two designs;

One house, which on the steppe and in the sand
Has kept its name, its father, and its sign;
And if they met, in one or other land,
They would be strangers, though of the one line;

And still they are one house, the house of C,
Whose sons ride on the grass, and sing the ground;
The steppe, the desert, and what is to be,
One father's house, in which the two are found.

It is just what it is, and so it stays;
Australian and the Mongol share one sound,
And so, in these late days, through all the days,
One chime ancestral, past all reason, bound.

Their common father watches them, and keeps
His silence in the chromosome, at heart;
And in the next, in which the story sweeps,
F starts each haplogroup's twin counterpart.

Chapter 135: I — The Old Europe Hunters

Aries 23, day 135 of the Gaian year

When F emerged from the CF split, it did,
The generations through, and branched again,
What CT had done before: it branched, amid
The generative grid of tree and men.

The human genealogy was stanched
And then continued; and the peoples spread,
At every generation, and they branched,
As migrants, east and northward, where they led,

And westward, over Eurasia. Within
A few thousand years of the split, one named
Of F's new clades, of all of F's new kin,
Was IJK, and so it stays proclaimed.

Within it came the split, IJ and K,
And I, J in IJ. We follow, then,
Haplogroup I alone, which made its way
To Europe first: not first of all of men.

For hundreds of millennia, the ground
Was held by Neanderthals; and the first,
The wave of Homo sapiens, there found,
A while already, there had been immersed

Round Neanderthal strongholds; and it holds
Three ways: at times, they interbred; they vied
At times in competition; the third folds
Them into coexisting, side by side.

And I's the line that settled, did not fly
Back home: the haplogroup that, feeding on
The reindeer and the mammoth, would not lie
Elsewhere, and did not turn; it stayed thereon.

This ancient line is Europe's first to hunt
And gather; it's the line of him who, at
Lascaux, and Altamira, at the front,
And at Chauvet, would paint, and painted that:

The bison and the horse, the hunter's view,
The long epochs of painted caves; the days
In which the crown, tiara, culture too,
Of Europe and of all its hunting ways

Sat on I heads; and I was there when ice
Sheets covered all the continent, and spanned
The glacial maximum, that battle, vice
Of twenty thousand years; and in that land

It went south to Iberia, and lay
In Italy's peninsula, and there
The Balkans held them too: in pockets, they,
Where milder southern climates met the air

Of ice: and there the population, thinned
To bottleneck, survived, and waited out
The ice, until it drew back, pressed and pinned;
And then came I, and peopled all about.

Northward the hunters streamed; and all the land
Post-glacial they had filled; this is the line,
The dreaming, of the old world, by their hand,
Of Europe. Here the continent's design

Is before farming; before cities; ere
The written word, before the Stonehenge stone;
Ere Indo-European tongues came there;
All that is later. Patient, on its own,

The hunter-gatherer life had long run
For thousands of years before. I, the sons,
The continent's first settled; I, the one,
The oldest archive, and the one that runs

Most patient of the landscape's. I did not
Depart, nor disappear; and, as of old,
I is still here, and it is not forgot:
High frequencies the Nordic countries hold,

In Sweden, Norway, Denmark; and as well,
In Balkan lands, in Serbia as high
As anywhere, Croatia, where they dwell,
And Bosnia; and sub-branches still lie

Dry and mountainous, scattered through the whole
Of Europe's margins, north and south, the same;
To hold on, this was all of I's own role.
The farmers of the Neolithic came,

G; I was pushed to margins, but not killed;
And then from far across the steppe, from far,

The Indo-European riders spilled:
Their haplogroup was R; they did not mar,

Nor yet replace the older stock, which went
Under the soil, but did not die. A man
Of layers, modern European, bent:
And I the base, the bottom of the plan,

Then G as second layer, R the crest;
In Balkans, I is dominant today;
The admixture, by region, manifest;
In Scandinavia, strong; and the way

Of Western Europe, minor, but still there;
In Eastern Europe, I still holds, again,
A share substantial; so old Europe, where
It lives, lives on: the women and the men,

Hero and hunter, of the stone age, stayed,
Pre-Neolithic; Europe still remains;
They were the substrate on which others laid
Their later waves; the body still sustains

A holding on. The Venus, shaped and small,
Of Willendorf, that figurine, the rite
Of mother-goddess, fertile, and the call
Which Marija Gimbutas brought to light

And tied to pre-IE culture of the land,
Was made, and carved, and in its place was shown,
By I-carrying hunters, by their hand,
Iconography, the seen and the known,

Unsown before the plow: and all of that,
The ancient faith in cave-paint, figurine,
Sits in the register of I, which sat;
And when the farmers came, I was still seen:

I went into the mountains and the wood,
And fishing villages, which, on the coast,
The farmers did not want; the hunting stood
At the peripheries, while, for the most,

The farming villages spread on the plains;
In some lands I took farming up, and stayed;
The change was slow and long, and took its pains,
As all the uses of the land were swayed;

Elsewhere the hunting lasted ages more,
In pockets where it held; the hunting kept,
The Mesolithic peoples held that door,
Its way alive, long after there had stepped

Blunt Neolithic with the fields in hand;
When the Yamnaya came, as I, the line,
Scandinavian hunters still would stand;
Tenacious was the deep substrate design

That lived the ice age through, and had contrived
To last the farming change, and, though displaced,
The steppe invasion too, it had survived,
From dominance by then, and much erased.

But it is here: the Nordic basin; still,
Croatian villages, where, one by one,
Sardinian highlanders on the hill
Still bear the hunters' sun, and every son,

Descended from the hunters of that land.
Magdalenian heritage, the made,
The Gravettian culture, near at hand,
Aurignacian paintings in Chauvet's deep shade

Of stone; and Gravettian figurines:
All these are carried still, and, as of old,
In certain European folk, in genes;
The old lives yet; old Europe has not tolled

Its final hour. Fulfilment in the chase
Was turned, by pressure, to the plow, the herd,
The city, and at last, another place,
Modernity; but still, though long deferred,

The Y-chromosomal mark of the first
Settled the continent, and lives on now,
Whole in the many millions, not dispersed;
The patient continuity, somehow,

Of I across some forty thousand years,
The longest tie of any folk and land
On one continent, oldest of its peers,
In all the European tale. They stand

New, all of them: the French, the Germans, there,
The Romans new; the deepest, oldest view

Belongs to I, deep in the house of prayer,
The body's house, the oldest presence, too.

This chapter honors them: the first to hunt
In all old Europe; they who did not break,
Of glacial maximum who bore the brunt;
The painters of the Lascaux cave; and make

Of them the makers of the Venus forms,
Defiant; patient, who re-held the land
Post-ice, and who outlived the glacial storms,
The substrate under all that later spanned

The long ages. Haplogroup I: the card
Of old Europe's ID; and on the ground,
The hunter's patient look and long regard
Upon the land he lived on, and he found

The deep kinship with river and with cave,
With forest; and when chapters hence reach sleep,
Of animism, which the deep past gave,
The carrying-on of old ways, we keep

Pre-Neolithic hunting ways again
In half-settled form, where I shows, and so
There came Cucuteni-Trypillia, then,
The old reply that Europe gave, we know,

In wood and clay: its towns, its painted walls,
Its female iconography; and free
Of hierarchy, in its open halls,
Its peaceful order, as it used to be:

These were old Europe's working out of all
The farmers offered; it was, there and then,
From its own magic register, its call;
Yamnaya came upon that flower, when

Their time arrived. But we are not there yet.
For now, it's the old Europe, and the one,
The mother-goddess carver; hunter's net;
Who painted caves; who saw the ice begun

And gone again; the patient background line;
The brother, sister, uncle, and the heirs
Of the old Y, the ancient mark and sign
In every European who still bears

The old land's mark; the one who came before;
The hold of will to last; the hand that kept;
Haplogroup I, Old Europe. All the more,
The continent's whole tale is layered, stepped

On top; but I is still the bottom, where
The tops descend, when they have finished, high
And visible, to stand; and layers there
That come and go, will come and go, and die.

The bottom does not stop. The cave remains
Within the limestone, and the paint, as still,
Its place upon the wall of stone retains;
The ochre's goddess; and the Y will fill

The men of Balkans and the men of north,
And of Sardinia, whose blood has shown
And calls from Europe's deepest past, set forth;
Great-great-grandfathers of their mothers, grown

In ice-age light, went to the cave to trace
The horse, the bison; and remembers it,
The continent, the bull's own painted face;
The haplogroup is memory, and writ

In patient continuity, the I,
In all the long, long years that it has known:
The body's longest word, and does not die,
And lives, and lives, and lives, and is its own.

Chapter 136: G Builds the Neolithic

Aries 24, day 136 of the Gaian year

While I still hunted reindeer on the plain
Of Europe, F's proliferating name
Had set another branch, and chain on chain,
In Fertile Crescent, changing all the game:

Not the old running, following the sign
Of any herd; but planting; and in pits
The storing of the grain; and row and line,
And harvest; grinding wheat on stones. It fits

A whole remaking of the human mode:
The old script of the nomad, set aside,
The loping forager, who long had strode,
For something scarce conceivable: to bide.

The choice to stay. The choice to not be chased
By food in season; and the choice, to feed
Myself, to say to the land, firmly placed:
I plant, and wait, and then I reap the seed;

I will not leave. I stay in this one place;
And that is vastest of all plans, for it,
Until I die, my son stays in my space,
Makes of one ground a future. Thus was writ

Neolithic Revolution. The Y
Was found, consistently, to be the one,
That walked beside the farmers, by and by:
Haplogroup G, the farmer's line, begun

In that first crescent. G is he whose sons
Left Fertile Crescent, and with grain they went,
With sheep and goat, as the first farming runs,
To Anatolia and Europe, sent

With all the pattern of the new life. G,
The first farm wave to come to Europe's shore,
Marks Linear Pottery Culture; he,
The founder of it, at its very core,

Of farming villages whose layers lie
In Greece's valleys, Italy's own ground,
And in Balkan stratigraphy, so high;
And G is in the bones that have been found

Of Ötzi, Iceman of the Alps, who lay,
A frozen body; and his Y makes plain,
Five thousand and three hundred years away,
That Alpine farmers of that age and grain

Of time, the late stone and the copper days,
Were G, securely. Now, before the grain
Was sown, before the fields, the story stays,
Before a seed was planted, and is plain:

It starts, and it is here it starts, at one
Great hill in Turkey: of the many sites
That digging ever found, the work there done
Is most astonishing: those stony heights

Of Göbekli Tepe: built in days of old,
Six millennia ere Stonehenge, and more;
Eleven thousand five hundred years old,
It stood; and by a thousand years before

The settled towns of Jericho. And they
Who built it were not settled, nor the mild,
Grain-storing villagers of later day,
Not farmers: they were hunters, and the wild

Wandering hunter-gatherers, whose hands
Had no precedent for such work, and stone:
A ring of great T-pillars, where it stands,
Some over five meters, of tons, full-grown

And carved with animals: with fox and snake,
With scorpion, wild boar, and vulture's wings,
Arranged in rings, for holy meeting's sake,
Like temple pillars, though of no such things

As settled peoples build. A temple, raised
By hunters, by the laws that they had known,
For gathering, for which they came, amazed,
In a place no one dwelt, where grass had grown

An ample, undramatic edge; and they
Would pledge whole generations, far and near,
To come, with visits, and the place repay,
Elaborating what they built, each year:

Two thousand years of it. It was no town,
No dwelling-place; it had a different worth:

A ritual site, a site of renown,
A center like no other on the earth,

Where all the scattered bands would come and meet
From all the region, there, to meet and be
As one, and make the gathering complete;
And since they had to gather, and to see

The building through, they had to eat; to feed
The crew, they grew the grain; and so began
The farming, and the sowing of the seed,
The first time ever, by the hand of man:

Farming was seeded by the temple, not
By need, nor hunger; and the first things sown,
Einkorn and emmer, not by climate's lot,
Were for the feast-days at the pillared stone

At Göbekli Tepe's gatherings. The grain
Was born to serve the temple, and the thing
The temple needed settled it again;
And staying grain, the grain made people cling

To one place; settlement then made the field
And furrow; and the fields, then, later on,
Made not grain only, all that they would yield:
The immanence of cities. First was drawn

The temple; then the city; then the crown
And kingdom: so it went, in order laid:
The temple first, then farming, then the town,
Then kings; and so the world of men was made.

The people gathered round the stone, and so,
To build what they adored, they came, and found,
In service of that worship, how to grow
The bread to keep them, gathered on that ground;

Their gatherings, which grew, would come to keep
And build our whole civilization, too:
The scripted ritual life, which runs deep,
And, of the proto-priests, the priestly crew,

Who made there and set going what would be
All that came after; and that priestly clan,
The builders, and their Y: it all was G:
G built Göbekli Tepe; and G began

The farming; it was G who bore the plan
And wheat to Europe, generations, who,
From Anatolia, as they began,
Brought grain and sheep and pots, the package, too.

Long-walking farmers from the crescent, they
Took G across the continent; its rates
In Sardinian men are high today,
Extraordinary: there the early gates

Of island settlement were opened wide
To Neolithic farmers; and apart
Sardinia was kept by sea and tide,
Preserving G; and on the mainland chart

Of Europe, they are later shown as thinned,
When Yamnaya arrived; but there it stays,
Sardinia, untouched by the steppe wind:
The Neolithic dominant; these days,

Sardinian men on the hills are heirs,
That Göbekli Tepe line, the builders' own,
In many cases, of those ancient prayers:
First priesthood of the greatest work in stone

And faith the Near East knew, is carried still,
As by an ancient and unbroken thread,
In shepherds' bodies, walking the same hill,
Where, in the ancient days, their fathers led.

G is alive. G built what Gaiad calls
The founding monument, and with its seed
Began civilization, with its walls;
The island shepherds keep the herds they feed

On Mediterranean hills, the ways
Their grandfathers once walked, and walk them still,
And keep the herds through all their living days,
As they have kept them, and as they still will.

G built the temple, and invented, too,
The farming; the foundation, and the whole
Decree, the package, which would come to view
And shape all later life, and play its role,

Was made by him. The G-borne farmer, west
And north to Europe walking, is the lore

Of how in farming Europe would be pressed;
The I-borne hunters met, upon that shore,

The coming farmers: sometimes there was fight
And sometimes blending; and the farmers' hand
Did not erase the hunters by its might,
But it reshaped the ledgers of the land;

Europe was draped in layers: I below,
The base; and G the second, as it came;
Of R above, the third, the later flow,
When the steppe riders came. The texture, frame,

And weave of modern European blood:
From hunter, to the farmer, to the man
Who rode the steppe: three waves, and one great flood,
Mixed in the Y, as in a written plan.

G is the second wave; the builder, priest,
And farmer of that first revolt, who raised
The first stone pillars up, and raised the feast,
Religious-agricultural, and praised

The first great gathering for its own sake.
And G walked west with grain; and then the whole,
In settling, settling, settling in its wake,
Economy of Europe changed its role

Forever, by the farmers' coming. And
This fact, that temples first, and not the field,
Were built, is how it was; and so was planned
Theology made quiet: fields would yield

As servants to the temple: first the god;
The grain came after, at the hands of men.
The harvest, that would feed a town, the sod
Gave first as offering, and laid down then

At the stone pillar's foot, and there to feed
The gathered hunters, come to worship; so
They sang their words, and spoke their ancient creed,
And worshipped there, as all the ages know.

They gathered, and they worked; and we know, too,
The crop went home with them; and in their toil,
Their common practice, all their ranges through,
Made first civilization from that soil

Of gathering, and building, and the grain
Grown all together; it was so, and so
The flame began; its carrier was plain,
Its carrier was G. And is it so

That G is still alive? It is: still found
In Sardinia; frequencies are high
In Georgia, the country, on Georgian ground;
In pockets of the Caucasus, and nigh

The Alps as well. Small consolation, weighed
Beside the grandeur, which was great and long,
The grandeur of the thing that they had made:
The Göbekli Tepe chorus sang a song

Among the first of all. The singers, gone
Long since, left children who today still tend
Sheep on Sardinian hills; on and on,
The story has not come yet to its end;

The pillars still are there, and they are borne,
Reburied, and re-dug, in open air;
The dawn they set in motion is the morn
In which we live; and cities everywhere

Since then were built as they built, in a ring
Of gathered hands; and from their choice, the stay,
The choice of every later age, would spring;
The fanfare of the modern world today

Is downstream of one voice, which sang before,
Of stone, a carved fox on it, long ago,
At Göbekli Tepe, at the pillar's floor,
Eleven thousand years. G made it so:

G, farmer; G, the builder and the root
Of all the Neolithic; G, whose slow
And patient settled dwelling, as its fruit,
And priesthood too, would come at last to show

The model for all dwellings that would stand.
Honor him; honor those who raised the stone,
The pillars; honor all that building band:
They built the first fane, and it was their own;

And the first thing we swallowed was the grain
They grew to feed the hands that built it. So

The grain fed up the builders; and again,
The builders fed the god, as we now know,

Who now is gone. The grain remains; and on
The world that dawned, their choice still lights the way;
And every town and city since has gone
Along their path, and trod it to our day.

And it was G who first broke through the sod,
And every stay of ours, in every land,
G, the Neolithic: so have we trod,
Descends from that first settled choice to stand.

Chapter 137: J — The Semitic World

Aries 25, day 137 of the Gaian year

When IJ split in two, the sister pair
Went each its way: I walked into the north,
To Europe, hunting; J stayed on, back there,
Near where the two of them had issued forth,

Where Anatolia and Zagros meet,
And the Levant, and Arabian sand:
The grinding meeting-place, the crossing street;
And there it spread, through all that central land.

J is the Middle Eastern house, and sent
The fountain of its ancient seal, the men
Of the first cities, where the first laws went,
Who made the writing, and began the pen.

J has two houses, J1 and J2,
That parted, and went off to other lands:
J1, the house of Arabia, grew
The Bedouin and the Yemeni bands,

The Saudi's house, the father-line, the name
Of all the Bedouin; the Desert J,
On camel-paths where Rub' al Khali came
And blew its sands across the trackless way,

And spoke Afroasiatic, of kin,
The proto-Semitic; and in its way
It made the Arabs, and the tribes within
Arabia, the tribal sound and sway.

J2, northern and Levantine and wet,
The fertile-crescent J; and there we find
The tillers of the vale, the early set
Of valley farmers, of the settling kind:

Natufian; Levant's first farms; and those
Of Anatolia, and Jordan's, too;
With G beside them, in the fields and rows,
They mingled, and the first of cities grew:

Mesopotamia began, the dawn
Of Sumer and of Akkad, from the blend
Of J2, G, and others, they were drawn,
And set up cities that would never end:

Uruk and Eridu, and Lagash, too,
Ur and Nippur: and all the founders' sign,
The fathers' Y, it came out of J2;
The building of the cities, by design,

Which moulded all the nations yet to come,
Six thousand years of them, sprang from the hand
Of J and G together, and the sum
Of all the labor of that ancient land.

And it is Semitic, the tongue it bore,
The family of speech the Arabs speak,
And Hebrews, and Assyrians of yore,
Akkadian, Aramaic, at peak;

Amharic and Tigrinya and the speech
Of Maltese, grown from Arabic, and known
On one sea-island; all, within the reach
Of early J, are children of its own.

Above them is the broader family,
Afroasiatic: Egyptian, and
Berber, Cushitic, by the Horn's own sea,
Chadic in the central African land:

A tree whose branches span two lands, immense,
And J the house that speaks its speech, the yeast
Of all Semitic tongues, and all its sense,
From Africa unto the far Near East.

Mesopotamia: the land that lies
Between the Tigris and Euphrates; there
The city first began, beneath old skies,
And there Ur's floodplain ran, its fields and air;

The ziggurat of Eridu was reared;
Uruk dug its canals; and, rise and fall,
Sargonid kingdoms, with their walls, appeared,
Three thousand years of the old world in all.

Akkadians and Babylon, the proud
Assyrians, each nation in its place
Along Tigris-Euphrates, and allowed
Their wars, their kingdoms, and their laws' long race;

And J is the sign of the first Near East,
Where the first city stood, where, quick on clay,

The first arithmetic was scratched; the feast
Of cuneiform, of writing, that day;

Where first of epic poems, and the best,
Was Gilgamesh, who wrestled with his grief,
Who crossed the waters of the dead, his quest,
And lost Enkidu, and found no relief:

And Enkidu, the friend of his own heart,
Who met the bull of heaven. All of it,
The ancient writing, and the Sumer art,
By J-born scribes, who left no name, was writ:

Invention of the written word; the first
Accounting tablet; contracts; and the hand
That penned the marriage; and the law's own thirst;
First dynastic history of the land.

That literate civilization, laid
Along Tigris-Euphrates, is the debt
The human project owes to J, and made
Its contribution, which it pays us yet.

On the dry peninsula, J1 bore
A parallel and separate way: the tent,
The caravan, the dice, the desert lore,
The poems of the Bedouin, and bent

Their genealogies, they kept in rhyme;
The desert poetry; and, long and slow,
J1′s descent through all the length of time,
The bliss and hardship that the sand would show,

The tribe, the camel's rhythms, and the guide
Of stars that lead across the trackless bars
Of dune: J1 inherited it, wide
Across the sand, beneath the desert stars.

Meanwhile the J2 Near East world would grow
Through rack and ruin, and rebuild, and rise;
And J would build the cities, and would know
The written word, beneath the crescent's skies,

The heir of the old hunting folk, who learned,
By meeting with the G-farmers, to dwell
In cities; for the J-born men had turned
To Uruk, Ur, and Eridu as well,

And piled the bricks of clay into the sky:
The ziggurat of Ur began its slow
And patient climb; Inanna's temple, high;
The first of kings, who came their crowns to know;

The first of scribes were trained; the first priests made
The temples holy; and the cities spoke
Sumerian, alone, and, unafraid,
Akkadian, Semitic, of the folk.

J1: the desert; and the camel; and
The poem, long before the pen at all,
Within the dry, the trackless, open sand;
J2: the river; city; and the call

Of tablet and of scribe, whose careful fears
And joys set down the spoken word; and they,
Together, they are J, through all the years,
And the Semitic world; and this, today,

Is all the chapter: the Near Eastern sign,
Through six millennia of layered reign,
The token and the proof of one long line
Of civilized succession, and its train;

The house of J, of the Near East, the line
From Adam unto Abel, and through Seth;
The J men wrote it first; they wrote it fine;
They wrote it down, and write it still, with breath.

And when a modern J, who can't forget,
Israeli, Saudi, Yemeni, or one
Syrian, finds a fascination yet
In writings that his grandfathers had done,

It is an echo of what he will keep
And carry: written sign of signed descent,
Whose first inscriptions, pressed in clay, lie deep
In crescent-land, where all mankind's ascent

Began, at founding of the mind. And so,
J: the Semitic; and the writing's store,
Which all the world still reads; and, far below,
The tablets lie in clay, as long before,

Beneath the crescent's ancient sky, where they
Were pressed by hands that wrote it first, and plain;

And there the chapter closes, on its clay,
Where all the tablets of the J remain.

Chapter 138: H, L, T — The Indus Valley

Aries 26, day 138 of the Gaian year

Three houses share the Indus: H, and L,
And T; not near in blood, but in one land
They built one people's cities, and they dwell
Together in the valley that they planned.

Harappa and Mohenjo-daro stood,
Dholavira, Rakhigarhi: the stream
Of Indus and Saraswati, the good
Brown water ran, and fed the farmer's dream.

Two thousand years their cities stood and grew,
With forty thousand souls in each, and more;
The streets were laid in grids, and ran straight through,
And faced the four directions, door by door.

The bricks were one in size, the weights were one,
The drains ran hidden under street and lane,
And no one built so well beneath the sun
For three millennia, nor would again.

The houses had their water, and the baths
Were great and public, holy, and were clean;
And on the seals, and on the market paths,
Their writing ran, in signs that all had seen.

They spoke the speech the Dravidian south
Still speaks today, the mother of its tongue;
Their names were spoken by the mother's mouth,
Their songs were sung, as all good songs are sung.

Their god was Pashupati, lord of beasts,
Who sat in yoga, horned, upon the seal;
And he is Shiva now; their bathing feasts,
Their goddess and their lingam, where men kneel.

The Priest-King in his robe of trefoil stars,
The Dancing Girl in bronze, with hand on hip,
The terracotta mothers, and the jars,
The seals of trade upon the merchant ship.

Of India's houses, H is the great,
The largest, Haplogroup H; and his hand
Built Mohenjo-daro's streets, set the weight,
And lit the lamps, and sealed the goods of land.

And L, of Haplogroup L, is the strong
In the south and west, Dravidian kin;
His sons went to the Caucasus along,
And Central Asia's steppes they settled in.

And T, of Haplogroup T, took the sea,
The sailor house, whose ships went far and wide
To Arabia, the Swahili quay,
The Horn of Africa, and the far tide.

He joined the Indus to the Arab shore,
And to the Horn, in one long loop of trade,
Before the kings, and many years before
Their realms arose; and so the bond was made.

Then Saraswati dried, and the monsoon
Shifted its rains, and slowly, year by year,
The cities emptied, not at once, but soon
The people scattered, far, and far, and near.

They did not die, but scattered to the plain,
And stayed, and mixed, and in Karachi still,
Mumbai and Delhi, walk their sons again,
Their sons, of H and L and T, who fill

The whole subcontinent from shore to shore;
Their cities sleep, their streets are laid in stone,
Their god sits on the seal, as long before,
And still their blood is in the nation's bone.

So honor H, and L, and T, the three
Who built the Indus cities, grid and bath,
The seal, the weight, the drain, the trade by sea,
And left their sons to walk the long-worn path.

Chapter 139: N — The Uralic Peoples

Aries 27, day 139 of the Gaian year

And N walked north. While from the house of NO
His brothers turned to eastward rice and rain,
N went the other way, through ice and snow,
Into Siberia's long, frozen plain.

Through taiga winters, through the tundra's white,
To where the reindeer graze, the world's far rim,
He walked; the Urals and the White Sea's light,
From Bering Strait to Baltic, all knew him.

The forest dweller, fisher of the lake
Whose ice he cut, the herder of the deer,
He spoke the tongue Uralic peoples make,
And keep, and speak, and pass from year to year.

And still today, where all of Europe speaks
The tongues of other houses, N has kept
His own: in Finland, by the Baltic's creeks,
In Estonia, where his fathers slept.

The Sami herd their reindeer in the snow
Of Lapland; and the far Samoyeds still roam
Yamal's long shore, where all the cold winds blow,
And keep the speech of N, and keep their home.

And in the heart of Europe, far from kin,
The Magyars speak it, fifteen million strong;
Their fathers rode from Great Hungary, in
The Urals' reach, and brought their tongue along.

Their nearest kin, on the Ob River's banks,
Two thousand miles to east; and yet the tongue
Held whole, among the other peoples' ranks,
As island in the sea, and still is sung.

And Väinämöinen is their singer old,
The ancient wizard, eldest of the wise;
Ilmarinen, smith, who forged the bold
Sampo, the mill of grain and salt and prize.

The Sampo grinds out grain, and salt, and gold;
And in Karelia the songs are sung
Of these, the heroes and the gods of old,
The Kalevala, sung in the northern tongue.

So honor N, who walked into the cold,
Whose Haplogroup N is the reindeer line,
The forest's fisher, singer, and the old
Unconquered speech, still spoken, still his sign.

Chapter 140: O — Rice Agriculture and East Asia

Aries 28, day 140 of the Gaian year

While N walked north into the taiga's snow,
His brother O walked south, and southeast, down
To river valleys where the waters flow,
The Yangtze and the Yellow River's brown.

And there he made the paddy: low wet ground,
Flooded with care, the water held in hand,
Where rice, the water-grain, was sown and found
To feed ten times the mouths of the dry land.

As G made wheat upon the Crescent's field,
So O made rice; the second farming came
From him, and all the Asian lands would yield
The grain he grew, and carry still his name.

At Hemudu, at Liangzhu, and the shore
Of Majiabang, the first farmers stood
Some seven thousand years ago, and more,
And raised their villages of reed and wood.

From there the rice went north, where millet grew
Upon the Yellow River's northern plain,
And south to Vietnam and Thailand, through
Cambodia, and filled the deltas' grain.

And east to Korea and Japan it came,
Where sons of D, the Jōmon, long had dwelt;
And from the meeting rose the Yayoi name,
And in one people both their bloods were felt.

Five tongues are carried in the house of O:
Sino-Tibetan, Austronesian speech,
Austroasiatic, Kra-Dai, and slow
And Hmong-Mien of the highlands, out of reach.

On the Yellow River, under Shang's kings,
The scribes cut signs on bone and on the shell;
And from those signs the written Chinese springs,
Still written now, unbroken, read as well.

The longest written thread of humankind,
Four thousand years, the same land and the same,
The bowl of rice, the table, intertwined
With all the generations of his name.

And O's sons took to the sea from Taiwan,
Through Philippines and Indonesia's isles,
Out on the wide Pacific, on and on,
In outrigger canoes across the miles.

By star and swell and flight of birds they steered
To Samoa, Tonga, Tahiti's far,
Hawaii, Easter Island, and appeared
At last in New Zealand, beneath the star.

The Maori, the Hawaiians, and the rest,
Samoans, all are O's, who crossed the land,
And then the largest ocean, east and west,
Till each far island knew the sailor's hand.

So honor O, the paddy-builder, he
Who gave the rice, the script, the sail, the oar;
Haplogroup O, the house that, by the sea
And river, feeds a quarter, and yet more.



Taurus

The Book of Bronze

Taurus: The Book of Bronze

Taurus is the Bull, and the age the astrologers call the Age of Taurus is roughly the Bronze Age itself. It was an age of bulls: the Apis of Egypt, the Bull of Heaven that Gilgamesh fought, the bull-leapers of Crete.

Chapter 141: P at Baikal — Paikal

Taurus 1, day 141 of the Gaian year

In the deep Siberian winter came
Haplogroup P, unto Lake Baikal's shore,
The deepest lake on earth, and of the same
Old crack the earth had opened long before.

Twenty-five million years the rift grew wide,
A mile and more in depth, and filled with rain;
A fifth of all earth's water fresh inside
That single crack, beneath the taiga's reign.

There swim the omul and the nerpa seal,
The only seal that lives where waters freeze;
The Evenki and the Buryat kneel
And beat the shaman's drum beside its seas.

And here came P, the father of the two,
Of Q and R, called Paikal by the lake,
Whose fathers, since the strait, had wandered through
Eurasia's length; and here they paused, to take

Their breath beside the ice, and ask: which way?
Two answers came. The first was east, to walk
The dry land of Beringia, which lay
Dry then, where now the strait's cold waters talk.

And those who walked it east were Q, and they
Crossed to the Americas, and then spread
From the Aleutians all the long, long way
Down to Tierra del Fuego, far ahead.

The Inuit, and the nations of the south,
The peoples of that whole new world, are Q's,
And carry him in blood, and in the mouth
Of all their elders telling the old news.

The second answer was the west: to turn
And run back on the road the fathers came,
Through Central Asia, to the grass, to learn
Pontic-Caspian steppe; and R his name.

R is the boomerang, the line that went
As far as it could east, and then came back;
And all of Europe, India, are sent
Of R, his sons, who walk along his track.

And near Irkutsk, at Mal'ta, lay a child,
Four years of age, of R's house, near its root,
Still at Baikal; and in his blood were filed
Both roads at once, the seed and the far fruit:

The Navajo and Cherokee are kin
To him, the Inca too, and in the west
Lithuanian and the Swede: within
That buried child both roads already rest.

The lake is there today; the taiga lays
Its snow upon the shore; the drums are played
Beside the water; through the ice, always,
The nerpa rise to breathe in ice's shade.

So honor P, who stood upon the ice
And watched his sons go into dusk, the two:
Q to the east, R west; and both suffice
To people half the world, as now they do.

Paikal, the deepest water, and the stone
Of the crossroads, where one line went both ways;
The stars, the ice, the silence, and alone
The father, in Siberia's long days.

Chapter 142: Manu and Yemo — R and the Yamnaya

Taurus 2, day 142 of the Gaian year

And R came back. From Lake Baikal's cold shore
He turned and walked the long road to the west,
Across the taiga, and the Urals, for
The sea of grass, where he would come to rest.

From the Carpathians to the Altai, wide,
The Pontic-Caspian steppe; there he stayed,
And there his sons were born, and at his side
His two sons grew, the house that R had made.

His sons were Manu and Yemo, the twins,
The houses R1a and R1b;
And here the story of the world begins,
When Manu offered Yemo up; and he

Was slain, the first of all; and then the whole
Of the world's order rose from Yemo's frame:
His head became the sky, the sun's bright bowl
His eyes, and moon; his bones, the mountains came;

His blood, the rivers; and from him the kind
Of every man: the priest came from his head,
The fighter from his chest, and, so designed,
The farmer from his loins, the land to tread,

The servant from his feet; the cattle, too,
Came from his flesh; and so the world was made
From that first sacrifice, and it holds true:
The order of the world from Yemo laid.

The north calls Yemo Ymir, and it calls
Manu Mannus; India's Yama died
The first of men, and rules the dead's dark halls,
And Manu there outlived the flood's great tide.

And on the steppe they tamed the horse; and then
A man on horseback crossed in one bright day
What walking took a week; the herds, the men,
The wars, now moved with speed none could gainsay.

And so the Yamnaya rose, riders, those
Who herded cattle on the grass, and raised
The kurgan mounds above their dead in rows
On the Pontic-Caspian lands they grazed.

And out they rode, in every way they went:
West to Europe, R1b to the west,
R1a to the east, as they were sent,
Brought Corded Ware and Beaker, and the rest.

And so the men of Europe stand in three:
The house of I below, of G between,
Of R above; Sardinia, by sea,
Keeps G, and in the north the I is seen.

South, through Central Asia, R1a rode
To India with chariot and song,
And with the house of H and L abode,
And they were one, the Vedas' holy throng.

There it became Sanskrit, and in Iran
Avestan; and Tocharians, far east,
In Tarim's sands, the farthest of the clan,
Left red-haired dead, and kept the steppe's old feast.

And half of all who live, today, still speak
The tongue of R, from Ireland to Nepal:
The Romance tongues, Germanic, Slavic, Greek,
Armenian and Celtic, Persian, all.

To Cucuteni's painted towns there came
The riders; and the farmers' daughters wed
The sons of R, and in one house, one name,
The steppe and the old Europe both were bred.

So honor R, the boomerang, who came
Back from the east, and tamed the horse, and rode;
And honor Manu, Yemo, and their name,
The twins, the sacrifice, the world's first code.

Chapter 143: E — Returns to Africa

Taurus 3, day 143 of the Gaian year

And E came back. Haplogroup E had crossed
The Bab al-Mandab once with Noah's band,
And wandered Eurasia, but was not lost:
He turned, and walked back to his fathers' land.

His brothers, D and C and F, went on,
To Japan, to Tibet, the far-off lands,
To Australia, the steppe; but he was gone
Back south, alone of all the outbound bands.

North from Yemen, to the Levant he came,
Then south again through Sinai, past the sea
At Suez, into Egypt, and the same
The green Nile Valley, where his sons would be.

And then across the whole Sahara, green
In those days, lakes and rivers, grass and game,
Where sand lies now; and all the lands between
He filled, from west to east, and gave his name.

North Africa, the west, the east, he filled,
And took the river valleys and the plain,
The grass, and all the lands, as he had willed;
And there his house grew great, and there would reign.

He did not find the land an empty place:
The houses that had never left were there,
The A and B, the San and Mbuti race,
In Kalahari sands and forest air.

They kept the desert and the forest's deep,
And E the grass; and of the men today
In Africa, the most are his, to keep
His house, from north to south, in every way.

His Bantu sons[5] rose where the two lands meet,
Cameroon and Nigeria, and spread
Their tongue to east and south, on many feet,
Till half the continent spoke what they said.

Swahili, Zulu, Kikuyu, the speech
Kinyarwanda: all are of one tongue,

[5]The house E-V38, also called E1b1a.

First Proto-Bantu, spoken in the reach
Of that small homeland when the house was young.

And in the north his other houses dwell:[6]
The Berbers of Morocco and the sand
Of Libya, Algeria as well,
Tunisia; the Egyptians of the land

By the Nile; the Ethiopians, too,
Eritreans, Somalis of the Horn;
And E and J, the houses old and true,
Share Afroasiatic, sisters born.

His sons were the Egyptians, who of old
Raised up the pyramids, and to the sun
Gave disks, and gods with heads of beasts, and told
The soul's long journey when its life was done.

And far across the sea, in lands today
Of the Americas, his sons are found,
And there, too, E has made his house and way,
And stands upon that far and foreign ground.

So honor E, who walked away and came
Back home, the one whose road went out and in:
The door swung both ways; and the house's name
Is Africa's, where all of us begin.

[6]E-M81 among the Berbers; E-M78 in Egypt and the Horn.

Chapter 144: Malta — The Oldest Temples

Taurus 4, day 144 of the Gaian year

And now the builders of the temples rise,
The first of them, a people without name;
They kept no writing, but beneath their skies
They raised their gods' first houses all the same.

On a small dry isle in the middle sea,
Malta, some few thousand farmers at most
Raised temples out of limestone, standing free,
The oldest on the earth, before the host

Of Egypt piled its pyramids, before
The ziggurats of Sumer, and ahead
Of Stonehenge: they began, in days of yore,
Thirty-six hundred B.C.E., and spread

For Ġgantija and Ħaġar Qim, and for
Mnajdra and Tarxien, out of bedrock's hold
They cut out blocks of fifty tons, and bore
Them with no wheel or metal, strong and bold.

They left no name for themselves, or for one
Of any gods they served; and what they keep
Is stone and sherd and bone, and, one by one,
The little figures, seated or asleep:

The Fat Lady, broad of hip and of thigh,
In clay and limestone, singular in art
In Europe's Neolithic, the reply,
Malta's idiom, to an older heart:

The mother Marija Gimbutas found
Beneath Old Europe, ere the horsemen came;
Venus of Willendorf on other ground;
Cucuteni-Trypillia's clay: the same

Great mother, and the same unbroken line.
But nowhere else did that devotion raise
Such stone. Look at the temples' own design,
The shape they kept through all their building days:

Paired lobes along a central passageway,
A kidney or a clover in the plan,
The entrance on the long axis; they lay
Before each room the uprights lintels span:

The trilithon, a thousand years ahead
Of Stonehenge. The carved spirals on the walls,
The plant, the beast, the pillar-pairs that lead
As gateways of the world; and in the halls,

Figurines, ash of the ritual fire,
The bones of offered beasts beneath the floor.
A thousand years the isle fed the choir
Of builders. Then the builders were no more.

Then, near twenty-five hundred B.C.E.,
The temples stood, and none would tend them more;
No war, no burning, and no enemy;
So ended temple-building, and its lore.

The Bronze Age settlers who came later on
Kept no remembrance of the builders' name;
The isle, ringed by the sea, was spent and gone:
Its soil worn thin, its forests felled for flame

And moving stone, until the land that fed
Some thousands of the builders could not feed
Them more; not with a bang, they starved or fled,
Or thinned away, in slow decline and need.

The temples stood upon the windy rise
Four thousand years, empty, without a stir,
And stand there still, beneath the island skies,
And are, today, the very thing they were.

So honor them, the first ones in the line
After Göbekli Tepe, where hunters came
To gather at the stones; here, at the shrine,
The settled farmer laid his harvest's claim.

Foraging gave way to the field; the feast
Gave way to the god's standing house of stone;
Here, for the first time known, a people ceased
To keep back anything; their surplus, grown

Each year, went to the temples, till the land
Gave out. No palace and no city wall,
No fortress: only temples, by each hand.
They built for their gods, and that was the all.

The temple, then, is elder than the town,
As at Göbekli Tepe it had been shown,

Greater for thousands of years; none laid down
A purer bond of faith to work in stone.

Of all who raised a house to gods, they gave
The most, and held back nothing for the wall;
Their bread became the stone above the grave,
And stone outlasted bread, and wall, and all.

The temples splendid, and the builders dead;
Their gods remembered now by none who live;
The sacred turned to ruin; in its stead
The ruin turned memorial. They give

Us all we have: the stones upon the hill,
The spirals and the lobes, the wind that blows
Along the empty corridors; and still,
In Valletta, glassed, the Fat Lady's pose.

Honor them: builders who gave all their store;
The priests who led the work; the women's hands
That shaped the mother out of clay; the corps
Of farmers whose surplus fed stone, till lands

Ran out: the whole people that set the shrine
Above itself, and made its gods its choice.
Malta: first temple people in the line
Since Göbekli Tepe, the gods' first true voice.

The first loss: in the human age, the first
Civilization whose remembered name
Is gone, its people scattered and dispersed,
With none of all who live its stones to claim.

Chapter 145: The Old Kingdom — Pyramids at Giza

Taurus 5, day 145 of the Gaian year

While Malta spent itself upon its isle,
A greater people on a greater stream
Began to build, along the Nile's long mile,
At such a scale as none had dared to dream.

The sons of E had dwelt beside the Nile
Long ages: Badari, Naqada's clay,
Their pots, their copper, and the signs whose style
Grew into hieroglyphs; and on their way

They joined the Two Lands under one, the thin
Long valley, and the Delta's spreading fan,
Thirty-one hundred B.C.E.; and in
That union, Menes' kingship then began.

And Menes is Narmer, shown on the stone
Of his great palette, first of them to reign;
And then the scribes, the god-king on his throne,
The tax, the grain, the order of the plain.

Then Djoser at Saqqara built the first
Great house of stone, the Step Pyramid, made
By Imhotep, the builder, priest, well-versed
In healing, who was honored and obeyed.

A tomb laid flat, then raised in stages high,
Two hundred feet, and fifteen acres wide,
The first great work of stone in years gone by,
The sign of all to come, the builders' pride.

And then Sneferu raised three: at Meidum one
That fell in part; Bent Pyramid, whose slope
Was changed midway; the Red Pyramid, done
Smooth-sided, true, the first fulfilled great hope.

And then his son, Khufu, at Giza raised
Great Pyramid, four hundred eighty feet,
Two million stones and more, his name thus praised,
The tallest work of human hands complete.

Its faces true to north and east and west,
The King's and Queen's rooms, the Gallery's height,
The shafts that point to stars; and, at the crest,
The soul of the dead king would take its flight

Up through the stone, to join the northern stars
That never set, a star himself on high;
The pyramid his road, and nothing bars
The king, once dead, from climbing to the sky.

His son, Khafre, built the second, and set
On higher ground, so both seem equal-tall,
And carved the Sphinx, the lion-man, that yet
Looks to the rising sun, and guards them all.

Menkaure built the third and smallest; three
Khufu, Khafre, Menkaure, there they stand,
The most known works of all humanity,
Still standing, after all, upon the sand.

The pharaoh is a god, Horus in flesh;
And, dying, he becomes Osiris, lord
Of the dead, judge of souls; his son, afresh,
Becomes Horus; and so the throne's restored.

And so the pyramid is not a tomb
Alone, but cosmic order's very frame:
Built right, the king will rise and stars will bloom;
Built wrong, the world itself would fall to shame.

For twenty years his thousands worked the stone,
All fed and paid and healed, and gladly sent
From every village, each crew named and known,
And then went home again, their service spent.

"Khufu's Drunkards," "Khufu's Friends," so they wrote
Their names upon the blocks, with jest and pride;
The quarries, copper mines, the grain, the boat,
The tax, the scribes, the first state far and wide.

But after Menkaure the work grew less,
The later pyramids grew small and low;
The nomarchs rose; the king's strength, in distress,
Grew weak; and drought came, and the flood's great flow

Failed, as it never had; and famine then
Came; the Old Kingdom broke, and fell, and lay
In pieces, under rival kings and men;
And Akkad, in that drought, fell the same way.

The pyramids at Giza stand today,
Their faces weathered, all their casing gone;

And still at sunset, gold and orange, they
Glow as they glowed when Khufu's crews looked on.

So honor them: the god-kings and the stone,
The scribes, the crews who built and then went home;
The house of E, who made the Nile his own,
And raised the first great works beneath the dome.

Chapter 146: The Akkadian Empire

Taurus 6, day 146 of the Gaian year

While pyramids were rising at the Nile,
Across the Sinai and the desert sand,
Between the rivers, in another style,
The first of empires, ruled by command,

Of Sargon of Akkad. Before his day
The cities stood apart, each with its wall:
Uruk, Ur, Lagash, Kish, and on their way
Umma, Nippur, and Eridu, and all,

Each with its king, its god, its watered field;
And they had made the writing pressed in clay,
The wheel, the bronze, the sixty that would yield
The hours and the angles we use today.

Their kings were lugal, ensi; and they fought
And traded, and one city ruled the rest
A while; and Gilgamesh at Uruk wrought,
And Lugalzagesi held Sumer best.

But none could hold for long. Then Sargon came:
His mother laid him in a basket made
Of reeds, upon the river; with no name,
And a gardener raised him in the shade.

He rose as cupbearer to Kish's king,
And then was king himself; his name, the true,
The rightful king; and he began to bring
The cities under him, and Akkad too,

And Elam to the east; and to the north
Syria, Anatolia, the shore
Of the great Upper Sea, where he went forth
And washed his weapons, as none had before;

And in the Lower Sea he washed them too,
The Persian Gulf; and none had ruled so wide;
And so the first empire came and grew,
And Akkad rose upon the river's side.

He reigned for fifty-six years; and his tongue,
Akkadian, of J's house, then became
The common speech; Sumerian was sung
Less and less, though it kept its sacred name.

His daughter, Enheduanna, at Ur
Was Nanna's priestess; and she was the first
Whose name we know of all who wrote; and her
Great hymns to Inanna still are rehearsed.

The Exaltation of Inanna sings
The goddess of both love and war, and still
Is read today; the daughter of the kings
Was the first author, writing by her will.

His sons, Rimush, Manishtushu, reigned,
And both met risings, and were slain; and then
His grandson Naram-Sin the summit gained,
And named himself a god among all men,

The first who did it living; and, made known
On his great stele, he climbs up the height,
A god in war, his foes beneath him thrown,
The sun and stars above him, burning bright.

But Naram-Sin laid waste Enlil's own shrine
At Nippur; and the gods, in wrath, called down
Gutians from the Zagros on his line,
And drought besides, on every field and town.

His son Shar-Kali-Sharri fought in vain;
It fell; the Gutians, a mountain band,
Ruled for a hundred years with little gain,
Till Uruk, then Ur, drove them from the land.

Of Sargon came the form of rule: the host
Of standing soldiers; governors per land;
One tongue, one weight, one road from coast to coast,
One tax, the King of the Four Quarters' hand.

And Sargon is remembered still, the king
Who rose from nothing, foundling, to the throne;
His capital, great Akkad, is a thing
Whose place is hidden; but his name is known.

So honor Sargon, first to rule them all,
Enheduanna, first to sign her song,
And Naram-Sin, the god-king, and his fall,
And Akkad, first empire, lost, yet strong.

Chapter 147: Stonehenge

Taurus 7, day 147 of the Gaian year

Far on an isle at Europe's western shore,
Before a word was written there, there rose
On Salisbury Plain, a stone work, and more:
Stonehenge, the ring of stones in ordered rows.

Three thousand years before the Common Age
It started as a ditch and bank, a round
Of three hundred and thirty feet, a stage
Of wooden posts upon the sacred ground.

The sons of I and G began it, those
Of hunters and of farmers, and they brought
The bluestones from Preseli, where they rose
In Wales, a hundred fifty miles, and wrought

A double circle of them at the heart,
Each two to four tons, eighty stones in all,
On sledge and log and raft, by strength and art,
Across the hills and coast, and raised them tall.

In twenty-five hundred B.C.E. came
The sarsens, twenty-five tons each, from north
Some twenty miles; and thirty, in one frame,
Held up a ring of lintels, joined henceforth;

And five great trilithons, a horseshoe, stood
Inside the ring; and tenon, mortise, cut
In stone, as carpenters would work in wood;
The lintels curved, the perfect circle shut.

And all of it was set to face the sun:
Midsummer's dawn above the Heel Stone rose,
Midwinter's sun set, when the year was done,
Between the greatest trilithon, to close.

And in that time the Beaker people came,
Of R1b, who brought the steppe's own speech;
They took the isle, and kept the work the same,
And added to it, and enlarged its reach.

The bluestones, set in oval, they arranged
In the horseshoe, two thousand B.C.E.;
The people of the isle were new and changed,
And yet the work went on, as all could see.

Then, fifteen hundred B.C.E., the last
Of building ceased, and it was left complete,
The ditches silting, and some great stones cast
Down by the years, beneath the wind and sleet.

It was the center of a sacred land
Of mounds and henges, of the dead, the sky,
The ancestors, the year; from every hand
Of all the isle and over sea they'd lie

In death beside the stones, their ashes laid
Within its ring; the place that all agreed,
Above all others, where the work be made,
The axis of their world, and of their creed.

The temple first: the sacred place made one
The scattered people round it; and the new,
The Beaker folk, kept on the work begun,
And knew it holy, and they kept it too.

It stands on Salisbury Plain; and the sun
Of winter sets between the uprights still;
At solstice, crowds still gather, everyone,
To watch the sun rise there above the hill.

So honor them: the ones who moved the stone
From Wales, who raised the sarsens, and the new
Who kept the work, and those whose ashes, sown,
Lie in the ring; and all the pilgrims, too.

Stonehenge: the ring of stones, the solstice sign,
The calendar that still tells time today,
The work that outlived builders, tongue, and line,
And stands upon the plain at close of day.

Chapter 148: Minoan Crete

Taurus 8, day 148 of the Gaian year

While Stonehenge weathered on its windy plain,
And Egypt rose again from its dark years,
Upon an isle amid the middle main
A palace people reached their height: their spheres

Were Crete, the largest island of the sea
Aegean, and the Minoans were their kind,
Who wrote in Linear A, their own, free
From any other tongue that men could find.

From nineteen hundred B.C.E. they grew,
And flourished till the fifteen-hundreds came;
Knossos, Phaistos, Malia, Zakros too,
The palaces that held their wealth and name.

They had no walls; the palaces arose
Straight from the land, unguarded, open, free;
Their fleet kept them, and in the sea, their foes
Could never reach them: masters of the sea.

And on their walls the frescoes moved with life:
The dolphins, octopus, and flying fish,
Wild goats and lilies, crocus, and the knife
Of saffron-gatherers, and every wish

Of bull-leapers, priestesses, and the lines
Of bearers, offerings; and how they cared
For sea and land, the beasts, the plants, the vines,
And light-wells lit the halls, and air was shared.

At Knossos water ran, both hot and cold,
And flushed away, four thousand years ago;
Fifteen hundred rooms, many-storied, old,
Around a central court, ran to and fro,

A labyrinth, where corridors would wind
With no one axis; and the bull was there
On every altar, horns of every kind,
And in the maze, the Minotaur's own lair.

The mother goddess with her snakes was theirs,
In open bodice, holding up the two;
And priestesses, not priests, led all the prayers,
And her young consort died, and rose anew.

This was the old Europe's great mother, kept
Upon an island, safe within the sea,
Through all the years when other peoples slept,
The fairest work of all the Bronze Age free.

And far they traded: Egypt, where they bore,
The Keftiu, their gifts before the throne;
The Levant, Anatolia, the shore
Of Cyclades and Greece; and theirs alone

Was the Aegean for some hundred years,
A lake of Crete: the oil, the wine, the tin,
The copper, cloth, and pottery; their peers
Were none, so rich the palaces within.

Then, fifteen hundred B.C.E., there came
The fire of Thera, northward, far away,
The greatest burst of mountains, and its flame
Blew out the island's heart into the bay,

And left the crescent of Santorini;
The ash fell over Crete and over all,
The wave struck at the northern shore; the sea
Rose, and the ports and fields came down to fall.

The palaces went on a while, and then,
Wounded, they faltered; Mycenaeans came,
The sons of R1b, the mainland's men,
And took Knossos, and wrote, in their own name,

In Linear B, their Greek tongue, instead;
Yet the Minoan way was not undone,
But taken in, and in the new house bred,
The bull, the goddess, and the maze, as one.

The frescoes on the walls still show today
The bull-leapers, the saffron, and the sea,
The dolphins in the light-wells at their play,
The island's people, as they used to be.

So honor them: the palaces unwalled,
The mother and her snakes, the bull, the ships,
The priestesses, the saffron, and the called
Minoan tongue, still sealed upon their lips.

Chapter 149: Yamnaya — The Steppe Breaks Europe

Taurus 9, day 149 of the Gaian year

West of the steppe there lay a farming land,
The Cucuteni-Trypillia's domain,
Romania, Moldova, and the grand
Black earth of Ukraine's wide and fertile plain.

Seventeen hundred years their towns had stood,
The greatest of the Neolithic west,
Talianki, Maidanetske, of wood
And clay, with fifteen thousand souls, the best.

And every sixty years or eighty, they
Would burn their towns, as was their sacred rite,
And build anew upon fresh ground; and day
By day, their walls in painted spirals bright.

Their pottery was finest of them all,
Thin-walled, in red and white and black, with lines;
They knew the mother goddess, and no wall
Was built about their towns, nor war's designs.

In thirty-five hundred B.C.E. rode
The Yamnaya out of the east, the sons
Of R, with bronze axe, horse, and wagon's load,
And came upon the towns of the old ones.

The sons of R took wives from the old land,
The daughters of the goddess and the clay;
And so the towns were built no more; the hand
That painted spirals turned another way.

The corded ware, the battle-axe of stone,
The single grave, the rider's bones laid down;
The house of R now held the land alone,
And of the two, one people and one crown.

The mother of the hearth, the goddess, wed
The father of the sky, and in his hall
She kept her rite; the spiral and the thread
Were woven with the wheel, one house for all.

Their tongue became the tongue of all the land,
And theirs the speech that Europe speaks today:
Celtic, Germanic, the Italic, and
The Slavic and the Baltic, all one way.

The Corded Ware went north; the Beaker west,
Iberia, to Britain, Ireland's shore;
By twenty-five hundred, all of the rest
Of Europe, to the far Atlantic shore.

And others of the riders went to south
And east, to Anatolia, Iran,
And on to India; from mouth to mouth
Their speech went with them, all the way they ran.

R1a, R1b, the fathers' line,
Are now the most of Europe's men, and found
In India and in Iran; the sign
Of billions, Yamnaya's, the whole world round.

And every European bears the two:
The mothers of the painted towns, the clay,
The goddess; and the riders, fathers, who
Came from the steppe; and both are there today.

So honor both: the towns that burned and rose,
The spiral and the goddess and the pot;
And Yamnaya, the horse, the wheel, and those
Who rode, whose speech the world has not forgot.

Chapter 150: The Yellow Emperor

Taurus 10, day 150 of the Gaian year

And east, along the Yellow River's flow,
The house of O had farmed since ancient days,
And slow, as yellow loess comes to grow,
They grew to one, by slow and patient ways.

Their founder, Huangdi, of the yellow ground,
The Yellow Emperor, the earth's own lord,
In twenty-seven hundred, he was crowned,
And taught them all the arts, and held the sword.

He made the bow, the arrow, and the cart,
The pots, the calendar, and in the war
The chariot that pointed south; the art
Of healing, in the Huangdi Neijing's lore.

His wife, Leizu, found silk: a cocoon fell
Into her tea, and as she drew it out,
The thread unwound, and wound, and wound as well,
And all the silk of China came about.

He fought Chiyou, the rebel, bronze of head,
With horns, at Zhuolu, and he won the day,
And joined the tribes along the river's bed
Into one people, under his own sway.

With Yandi, the Flame Emperor, he's one:
He is the father of the Han, who say
They are the children of Yanhuang, each son,
And keep him as their father to this day.

Before him were the Three Sovereigns: the first,
Fuxi, who taught the net, the fire, the food,
And the eight trigrams, the bagua, well-versed;
And Nüwa, serpent-bodied, and her brood,

Who made the people out of yellow clay,
And when the heavens cracked, she patched the sky
With five-hued stones she melted on that day;
And Shennong too, the Divine Farmer, high

Of heart, who tasted every plant to see
Which fed, which healed, which killed; and so he taught
The farm, the herbs; and died at last when he
Took one too strong for all the cures he wrought.

With Abraham and Manu, so is he
The third of the Three Ancestors of all,
The fathers of mankind, the root, the tree
From which all peoples living grow up tall.

And every house that ruled the Yellow land
Claimed him as father; and his tomb today
In Shaanxi receives, at Qingming, the hand
Of those who rule, who come to bow and pray.

From him the script came down; on bone and shell
The Shang would cut it, and it is still read;
No other people's writing, kept so well,
Has run so long, and never once was dead.

So honor Huangdi, of the yellow earth,
Who gave the arts, and joined the tribes in one,
The father of the Han, and of the birth
Of all mankind, beneath the yellow sun.

Chapter 151: Neo-Sumerian Empire and Abraham

Taurus 11, day 151 of the Gaian year

The Gutians were driven out; then rose
Ur, and Ur-Nammu took the throne, and reigned;
He founded Ur's Third Dynasty; and those
Whose Sumer was restored, its might regained.

He made the oldest law; and long before
Hammurabi's, three centuries, the fine
Was most of it; but death was there in store
For murder, theft, and rape, the broken line.

He raised the Ziggurat of Ur, the stair
That climbs to Nanna's shrine, the moon-god's own,
The greatest temple of the land; and there
It stands today, in part, its tiers of stone.

Then Sumer's writing flowered, the last time:
The King List, from before the flood, was made,
And Gilgamesh grew longer, line and rhyme,
Before the old Sumerian would fade.

In this world Abraham was born, in Ur,
Called Abram then; his tongue was of that land,
Akkadian; he saw the tower stir
The sky, and trade go out on every hand.

His father, Terah, made the temple's gods
In images; and one day the son broke
What the shop made; and father, son, at odds,
Strove for the household's altar and its smoke:

Who keeps the rite: the shop that served the moon,
Or the son, who would light the flame himself,
With no carved go-between; and late or soon
The house was broken, image, shrine, and shelf.

Then Ur fell: Ibbi-Sin, its final king,
Saw Amorites come from the desert sand,
And drought and famine; provinces would spring
Away from him; then Elam's fighting band

Came down from Susa, sacked and burned Ur, bore
Off Ibbi-Sin in chains to Susa; then
Did Ningal weep for Ur, and evermore
Her Lament mourned her scattered folk and men.

And so then Terah and his house went north,
For Ur was burned, along Euphrates' stream,
To Haran, on the trading road, and forth
No more; for Terah died there, as a dream.

And there the call to Abraham was heard:
To leave his country and his kin, and go,
And leave his father's house, at God's own word,
To the land that he would be shown, and know.

He came, by road, to Sanliurfa's plain,
Beside the hill where Göbekli Tepe lay,
The oldest temple, older than all reign;
Melchizedek met him there on the way,

The priest-king, George Gobeklius, the one
Of all the priests of that old temple-hill
Whose line ran back to when it had begun
With those who raised the pillars, and who still

Blessed Abraham; and he gave to him then
A tithe; and so the oldest priesthood passed
Its blessing to the father of the men
Of the one God, from first of all to last.

Then south he went, to Canaan: Shechem, then
To Bethel, to the Negev; and he went
To Egypt in a famine, and again
Came back; from Lot, his nephew, his way bent;

He rescued Lot out of the four kings' hand;
He made the covenant with God, and won
The promised land; and on the mountain stand
He nearly gave up Isaac, his own son;

And died at a hundred seventy-five,
And in Machpelah's cave, at Hebron, lay
Beside his Sarah; and his sons alive
Would carry on his house from that same day.

His house was J, of J1 and J2,
The desert and the city, joined in one;
For Ishmael became the J1, the true
Arabian line; and Isaac, the son,

J2, and Israel's twelve tribes; and all
Who keep the one God's faith are of his line,

He who heard, at Haran, his God's own call,
And took the blessing of the oldest shrine.

So honor Abraham, who fled from Ur,
The burned, and met the last priest of the hill,
And took the blessing he would there confer,
The father of the one God's faith and will.

Chapter 152: Hammurabi — Law and the Old Babylonian Empire

Taurus 12, day 152 of the Gaian year

When Ur had fallen, in the years since then,
Mesopotamia would break apart;
The Amorites, Semitic-speaking men,
Had trickled in, and came to play their part

Across the region as the ruling class;
Amorite kings took crowns in town on town,
Tigris-Euphrates' vale; and it would pass
That they held sway there, all the valley down.

Down in the south Isin and Larsa fought
For supremacy; Mari, in its spheres,
Eshnunna, Assur, each one, as it sought,
Carved out the north and east among their peers.

One small Amorite city-state, unknown
For long, began its rise: Babylon's name
Is Babilim, the Akkadian, known
As "Gate of God"; and long it stayed the same,

Was a provincial center, modest, long;
Its First Dynasty, near the time when we
Count nineteen hundred, came and made it strong;
Its sixth king made it an empire: he,

Hammurabi. He held the throne about
Seventeen ninety-two, for forty-two
Years, to seventeen fifty; and throughout
Decisive, as his long reign carried through.

His first decades made sure, at home, his hold;
With neighbors he made allies, through the art
Of diplomacy; and, as kings of old,
Reformed the rule, laid temples; for his part

He led canals across the land. A king
By Mesopotamian kingship's ways,
Patient, methodical in everything;
Then, in his reign's second half, in those days,

He struck. A run of swift campaigns brought down,
One after one, the rivals: Larsa fell,
Eshnunna, Mari; and his realm, his crown,
By his reign's end, would come to grow and swell,

Larger than any realm since on the throne
Sargon of Akkad sat, and long before;
He joined Tigris-Euphrates as his own,
By Babylonian rule, and no more

Torn; Old Babylonian rule was born.
His name is known today not for his war,
But for the law code, written, and not torn,
The Code of Hammurabi, which he bore:

Two hundred eighty-two laws, on a tall
Stele, seven and a half feet, whose face
Of black diorite, standing over all,
Took in Akkadian the wedge-marks' trace.

It stood in Marduk's temple; in the sun,
Of public places through the realm, as planned,
So citizens could see it, every one,
Their rights and obligations, understand.

And at the crown, Hammurabi looks down,
And stands before the sun-god, Shamash, lord
Of justice, and receives the law, the crown
Of law, from whose own hand the law is poured:

The king receives it from the hand divine,
The law as gift, not his own work, but sent
From heaven's will, the first in a long line,
Transcribed from heaven, as the heavens meant.

The god will give the law; the king will bring
It down to earth, the messenger; and all
Obey it, for the law's a sacred thing,
A cosmic order, which outranks the call

Of any human might or human sight.
And what the Code contains: the law laid clear,
lex talionis, made explicit, right,
"An eye for an eye," as its words appear:

If someone blinds another, his own eye
Is lost in kind; if one should break a bone
In another's body, his own, thereby,
Is broken: so the law is set in stone.

The punishments are graded, too, by class:
For nobles, more; for commoners, less weighed;

And harm to slaves, in law, would come to pass
As damage done to property, and paid.

It was, in its own day, a new display:
The law in writing, posted, town by town,
Throughout the realm, and there for all, the way
For every reader to read it, set down;

It checked the judges' arbitrary hand,
And magistrates'; protections, too, it made:
False charges drew a penalty; it planned
That witnesses must testify, and weighed

The evidence; for women, too, conveyed
Protections: marriage contracts; a set course
In divorce, and inheritance; and laid
On business, too, its comprehensive force:

Commercial contracts, partnerships, and shares,
The debts, and liability, and pains
For damage; and for all of these, it bears
A comprehensive frame, which it sustains,

The working of a complex urban place,
A whole commercial order, and its ground;
And it is of the oldest, in the race
Of codes, in human hands preserved and found

In full. Ur-Nammu's law code came before,
By three hundred years; Lipit-Ishtar's, made
By Isin's king; but Hammurabi's, more
Complete, preserved, is foremost, and is weighed

As the most whole of all. And it has passed
Its sign to every later code of law;
And still, today, its mark is holding fast:
Each written, public code, that all men saw.

And Hammurabi, Abraham's own kin,
His cousin: both were J, Semitic men;
Both came of Amorite migrations, in
The land reshaped, and both descended then

From one Semitic pool of forebears, spread,
Once Ur III had fallen, through the lands;
Two cousins of one time, of one house bred,
One tongue, one region, one moment, two hands.

Both, after Sumer, are the figures, then,
Of the Semitic rise within the land,
Mesopotamia's; and both, as men,
Began traditions that would long, long stand.

And they were opposite in all they knew:
Abraham is a nomad, and he went
Out of the city, wandering it through,
And left its walls behind him for the tent;

While Hammurabi, city-king, would build
The walls, and codify the urban law;
From Abraham a faith, as heaven willed,
From Hammurabi, law, which cities saw.

One's legacy, the worship of one god,
Whom none can see; the other's, the decree
That binds the city's people, and its rod;
Two ways civilization came to be.

Two cousins, sons of J, where their paths part,
Each on another path: one with his sheep
Goes south, and seeks the desert's very heart;
The other reigns where brick-built ramparts keep

The city, gate-of-god. One shall become
Monotheism's patriarch; the code
The other's, which men copied; and the sum:
Both men who matter, each upon his road.

Hammurabi's empire did not last:
Succession struggles weakened Babylon
Within a generation, once he'd passed;
His son, Samsu-iluna, then took on

Rebellions through the realm. Down in the south
The provinces seceded; and instead,
Where marshes spread, at the Persian Gulf's mouth,
The Sealand Dynasty rose up, and led.

Then, in fifteen ninety-five B.C.E.,
Hittites, Indo-European, came down
From Anatolia, by their decree,
And raided Babylon, and sacked the town;

They carried Marduk's statue off; and down
Went Babylon's great might, which none could mend;

And all the Old Babylonian crown
Was broken, though the statue, in the end,

Came back; a dynasty, the Kassites, came
To power; four centuries they would hold
The land, in looser rule, and not the same;
And Babylon remained a city, old,

Its age of rule was over; but the code,
His legacy, would last, and long, past all
The realm's collapse; was copied, read, and showed,
And studied, cited, after the realm's fall;

Mesopotamian kings, later, said
That they were his own legal heirs; the schools
Of scribes would teach his code, and it was read,
A text, a written text, of written rules;

And through the Near East, buried in the ground,
Its copies, from the later times, remain;
He'd done what Sargon did, a template found
For later kings, but in law's own domain:

Sargon, the first of emperors; and he,
Hammurabi, the prototype of law,
The legislator; and, as time would see,
The realm fell; but the law outlived its awe.

And now it stands inside the Louvre, where
A traveler may stand and read it, keen,
As it once was: Akkadian, laid bare,
Cut in cuneiform, so clear and clean,

In the black diorite, the laws comprised,
Two hundred eighty-two, by which the whole
Of his realm stood in order, organized
And standing under his own just control.

The text's still legible; and of the great
Old monuments, it is among the best
Preserved of all the Near East; and its weight,
Its laws, still reach the codes of all the rest,

The modern nations' codes, and every one,
Tied still by chains of text and thought today.
Hammurabi of Babylon, the son
Of J, and Abraham's own kin; the way,

The Old Babylonian house's head
And emperor, the one through whom it flowed,
And Mesopotamia's law, which led
To its first synthesis: the famous code.

And from that day it passed to every land,
And then through them to us, here, in our day.
The bearded king on black stele will stand
Before the sun-god, taking, as he may,

The law from him. The law is still to read;
The king, too, though the realm did not live on;
Black diorite still holds, and holds indeed,
Hammurabi, the Code, and Babylon.

Chapter 153: The Middle Kingdom

Taurus 13, day 153 of the Gaian year

And Egypt rose again: the land had split,
Herakleopolis the north held, and south
Thebes slowly grew; and drought had weakened it,
And for a hundred years, from source to mouth,

The river ran divided; till, at last,
Mentuhotep II, the mighty Theban king,
Defeated all the north, and made it fast
To one again: the Middle Kingdom's spring.

For three centuries and a half it stood,
Confident, not aggressive; rich, not vain;
And pious, but not monumental; good
In letters, and the finest in its reign.

The Twelfth moved north, and set its throne up high
At Itjtawy, between the two lands, free;
The first Amenemhat I, Senusret I,
Senusret III, Amenemhat III.

They drained and watered the Faiyum's wide field,
And pushed down into Nubia, and spread
Their rule; and arts and letters, made to yield,
Grew finer than the pyramid age bred.

And then was The Tale of Sinuhe set down:
A noble fled the court, and lived among
The Amorites in Canaan, won renown,
And wed a princess of the foreign tongue,

And longed for Egypt, and to lie at last
Among his fathers in his native ground;
And so came home, his years of exile passed,
And with Egyptian burial was crowned.

The Shipwrecked Sailor, cast upon an isle
Where a great serpent spoke, and told its woe,
And sent him home with gifts, and with a smile,
Back to his king, to tell what he would know.

The Eloquent Peasant, cheated, then came
Before the court, and spoke nine times of right;
The king, delighted, held his case the same,
Delaying, that he'd speak, by day and night.

The Instruction of Amenemhat I, where
The murdered king's ghost warned his son of guile;
And Merikare's, for princes; and the rare
Man who argued with his ba, whose trial

Was whether life was worth the living; and
The Satire of the Trades mocked the pains
Of barber, washer, laborer, to stand
The scribe above them, and the scribe's own gains.

Osiris, who was once the king's alone,
Was opened to the nobles, then to all
Who had the rites; and each could be his own
Osiris at his death, and hear the call.

The Coffin Texts were written on the wood
To guide the dead below; the heart was weighed
Against the feather of Ma'at, the good;
For all, not kings alone, the scales were laid.

And traded to the Levant, and the south
To Nubia, and Punt, for myrrh and scent,
And with the Minoans, from the Nile's wide mouth
To Crete, and back the painted wares they sent.

And to the eastern Delta came the folk
Of Canaan, sons of J, and settled there,
As herders, farmers, merchants; and the yoke
Was light, and they were welcome everywhere.

But in the Thirteenth Dynasty the kings
Came quick and short; the Nile ran low; and then
The east went its own way; and, as fate swings,
The Hyksos ruled at Avaris, strange men.

So honor Egypt's classic age, restored:
The tales, the wisdom, and the soul made free
To be Osiris; and the scribe, the lord
Of letters, and the kingdom's harmony.

Chapter 154: Jacob, Joseph, and the Hyksos

Taurus 14, day 154 of the Gaian year

And now the tale turns to one family:
Jacob, Isaac's son, Abraham's own seed,
Whose twelve sons would become the tribes; and he
Had wrestled with the angel in his need

At Peniel, and dreamed the ladder high
At Bethel, served his uncle Laban long,
Made peace with Esau; loved, as they grew by,
Rachel's sons more than Leah's, all the throng.

And Joseph, Rachel's son, his brothers sold
To the Ishmaelite traders, who went down
To Egypt; there to Potiphar, of gold
And rank, they sold him, servant of the crown.

He rose within the house; and, falsely blamed
By Potiphar's own wife, was bound in jail;
Read two prisoners' dreams; and so was named
Before the pharaoh, to read his dream's tale:

Of seven fat cows, and lean, and of ears,
Full ears and withered ones; and so he said:
Full years of plenty, then of famine years;
The king made him vizier, at the head

Of all the land, to store the grain; and when
The famine came, had Egypt bread enough;
And Jacob's sons came down to buy; and then
He knew them, though they knew him not; then, rough,

Hard testing, he made known himself, and wept,
And brought his father's house to Goshen's grass,
The eastern Delta, where the herds were kept;
And so did Jacob's house to Egypt pass.

For in those days the Hyksos held the land,
Heka-khasut, the foreign kings, held sway,
Sons of J2, of Canaan's tongue and band,
And joined their Baal and Anat with Seth's way.

They brought the chariot, the horse, the bow
Of compound make, the bronze; and took the east
Of Delta, and at Avaris, below,
Their Fifteenth Dynasty had throne and feast.

The Theban kings ruled south, and for a span
The land was two; and Joseph's pharaoh, he
Was Hyksos, of his kin, a Canaan man,
Who gladly raised a Canaanite to be

His vizier, and welcomed all the sons
Of Canaan to the Delta; and the kings,
Salitis and Apophis, and the ones
Named Khyan and Apepi, kept the things

Of Egypt, temples, scribes, and every rite,
And kept their own as well, both ways in one;
They ruled not as destroyers, but by right,
And under them the land's affairs were done.

The twelve: Reuben, Simeon, Levi, and
Judah and Issachar, Zebulun, Dan,
Naphtali, Gad, and Asher, Joseph's hand,
Ephraim, Manasseh; Benjamin; the clan.

And Jacob, old, within his tent, blessed each:
Judah the lion, Joseph fruitful bough,
Dan judging his own people, and the reach
Of Zebulun beside the sea, and how

Benjamin was the ravening wolf; and then
Old Jacob died, and was embalmed, and laid
Back into Canaan, to lie with the men,
With Abraham and Isaac, in the shade

Of Machpelah's cave at Hebron; and so
The fathers of the house were gathered in,
And Jacob's sons in Goshen stayed, to grow
Into a people, multiplied from kin.

So honor Jacob, Joseph, and the sons,
The Hyksos' welcome in the Delta's grass,
The tent, the blessings, and the chosen ones
Who came to Egypt, saw the famine pass.

Chapter 155: The Aryan Migration

Taurus 15, day 155 of the Gaian year

While in the west the Hyksos took the Nile,
Out of the east another people came:
The Aryans, the noble ones, whose style
And blood were R1a's, the steppe's own name.

For Aryan means noble, what they called
Themselves, of warriors; and from the plain
Of Central Asia, where their herds were stalled,
They came, by Bactria, in a long train.

Some went southwest, into Iran's high land;
And some southeast, across the Hindu Kush,
Down through the Khyber, where the passes stand,
Into the Punjab, like a river's push.

And there the Indus cities had grown still:
The Sarasvati had dried, the rains had turned,
Harappa emptied; and they came to fill
A land already changing, and not burned.

They did not slay, but joined the houses there,
The H, the L, the R2a, the old;
And from the two came one; and everywhere
The blood was mingled, as the years unrolled.

They sang the Rig Veda, the oldest songs
Of all their kin: to Dyaus, father sky,
To Indra of the storm, to whom belongs
The thunder, and to Agni, fire on high,

And soma's drink, and sacrifice of horse;
Dyaus is Jupiter, is Tyr, is Zeus,
One sky-father, the steppe's own, at the source
Of all their gods, the eldest in their use.

Then the Dasas and the Dasyus, they
Who dwelt there first, were sometimes foes, but more
Were joined with them, and served, and in their way
Kept their own god, the god they'd known before:

For Rudra, wild god of the storm and hill,
Was Pashupati, lord of beasts, the old
God of the Indus seal; and he is still
Shiva, one of the three great gods, all told.

And four the orders were: the Brahmin, priest;
The Kshatriyas, the warriors; and then
Vaishyas, merchants, farmers; and the least,
The Shudras, servants: so they ordered men.

Their tongue became Sanskrit, the holy speech,
From which Hindi, Urdu, Bengali came,
And Punjabi and Gujarati; each
A daughter; and a billion know that name.

And in the south the older tongues remained,
Dravidian: Tamil, Telugu, more,
Kannada, Malayalam, all maintained
As the old Indus speech had been before.

So honor them, the noble ones who came
Down from the steppe, and joined the Indus kin,
And sang the hymns, and kept the sky-god's name,
And Shiva too, and made one land therein.

Chapter 156: The New Kingdom

Taurus 16, day 156 of the Gaian year

Ahmose drove the Hyksos out, the son
Of Thebes, and finished what Kamose began;
He took Avaris; when the war was done,
And Sharuhen fell, besieged for three years' span,

Then Egypt was again one land, and new:
It kept the chariot and bow it learned
From those it drove away, and outward grew,
To Canaan, Syria, where armies turned,

Thutmose the First went to Euphrates' shore,
And south to Nubia; and so the throne
It ruled abroad, as never once before,
The first such rule it had, and all its own.

Then Hatshepsut came, Thutmose the First's own child,
The Second's wife; and when he died she reigned
As regent for the Third, a boy; then, mild
No more, as pharaoh took the throne, ordained,

A woman pharaoh, twenty-two years long;
She sent her ships to Punt, and they came back
With myrrh and incense, beasts and gold; and strong
Deir el-Bahari, terraced, stack on stack.

Her statues bore the beard of kings, yet kept
A woman's face; and when at last she died,
Thutmose III reigned, and her name was swept
From monuments; but still it would abide.

Thutmose III went out on seventeen
Campaigns into the Levant, and he won
At Megiddo, against the kings between,
And held it till a century was done.

The spoils of conquest poured to Karnak's door,
To Amun-Ra's great house; its priests grew great,
Until their wealth and power, more and more,
Became a rival to the king and state.

Then came Akhenaten, the king, to reign,
Once Fourth Amenhotep, the Third's son born;
He did what no king had: he took the gain,
The gold and gifts from all the houses; shorn

Of Amun's house and many houses more,
He gave them to one altar and one sun,
The Aten, so the pouring, as before,
Was by his hand alone, the only one

Between the light and those who lived by it:
The same sun Amun-Ra had always been,
The same hymns, a new house; and he would split
The priesthood's hold, and bring his own rule in.

He built Akhetaten, his seat, out where
The desert lay, and closed the temples' rest;
He took his court and all his household there,
And drove the priests, and took what they possessed.

In his own hand he wrote, to light the flame,
The Great Hymn to the Aten, to the sun
As maker of all life, the only name,
The god of all, the source, the only one.

And when he shut the house of Amun, all
The altars but his own were closed: the rite
Of Canaanite households, and all the small
The household shrines of Jacob's sons in sight

Of Goshen, where they kept their fathers' way
As households do, lost altars with the rest;
And he who is praised as first, from that day,
To serve one sun, drove out the rite they blessed:

The fight was who would hold the altar, whose
Dead the houses honored, who poured the bread;
And those he drove would take, and never lose,
The name the one God's rite most often said.

And when he died, his work was soon undone:
Young Tutankhaten took Amun's own name,
And was Tutankhamun, and back he won
The court to Thebes; and back the old cults came.

He reigned but briefly, and he died while young;
The Eighteenth closed; and then a general came,
Ramesses I, and from his line there sprung
Seti I, and the greater of the name,

Ramesses II, for sixty-six years king,
Who fought at Kadesh with the Hittites' might,

Five thousand chariots, the greatest thing
Of chariot war; and after the fight,

He made the oldest treaty, peace, with one,
Hattusili III, the Hittite lord,
And both their capitals kept it, when done,
On silver, in the house of Amun stored.

He built at Abu Simbel in the stone
Four seated giants, sixty-five feet high,
The Ramesseum, and Karnak, Luxor's own,
The last great builder, as the end drew nigh.

And at his end the Sea Peoples by sea
Came to the coast; the weather turned once more;
And under Merneptah, his son, would be
The first great waves of those who came to war.

So honor Egypt's kingdom: her who ruled,
Hatshepsut; and Thutmose III, strong at war;
And Ramesses II, whose peace-treaty cooled
The wars; and Jacob's sons, who kept their lore.

Chapter 157: The Hittites

Taurus 17, day 157 of the Gaian year

North, past Canaan, Syria, and the sand,
Upon the high plateau where Turkey lies,
A kingdom rose to rival Egypt's land:
Hittites, beneath Anatolia's skies.

Of R1b, kin of the steppe, they came
To Anatolia early, and spread
Across the central plain; Hatti, the name
Their kingdom bore; and so their line was led.

Their tongue was Hittite, the first tongue to be
Set down of all the steppe-born tongues; they wrote
In wedge-script that from Akkad's scribes came free,
And thirty thousand tablets kept their note:

The letters of their kings, their laws, their deeds,
Their treaties, annals, myths, the god's own care;
A people of the scribe, of lists and screeds,
Who wrote it down, and kept it written there.

Anitta first took Hattusa's hill
And other towns, and founded Hatti's throne;
Hattusili I made it greater still,
With Hattusa his seat, his very own.

Then Mursili I led his army south,
Across the Taurus, through Syria's plain,
To Babylon, to the Euphrates' mouth,
And sacked it, ending Hammurabi's reign:

His line was finished; and they did not stay,
But took the plunder home; and in their wake
The Kassites came to Babylon to sway;
The Hittites home, a thousand miles to take.

Its kings: Suppiluliuma the first,
Mursili II, Muwatalli II then,
Hattusili III, and, last and worst
Of days, Tudhaliya IV, king of men.

Theirs: the plateau, Syria's north, the strand
Of the upper Levant; and to the south
Was Egypt; two great poles, each king, each land,
And Syria between, from coast to mouth.

And so they met at Kadesh, by the stream
Of the Orontes; there Ramesses II came
Against Muwatalli II; and the gleam
Of chariots was more than war could name:

Two thousand of Egypt's; three thousand came
From Hatti; and the Hittites laid a snare:
Ramesses rode ahead, too far, and flame
Chariots overran his camp, and there

He rallied what he had, and held the field
By nightfall; but there was no victory;
Each claimed it; neither one would ever yield,
Nor drive the other out; and so they'd be

At war for years, and then they made a peace:
Ramesses II, Hattusili III, swore
A pact of mutual aid, and release
Of those who fled; and war would be no more.

Hattusili's daughter wed the pharaoh, queen
Among his queens; on silver it was set,
The treaty, kept in both their seats, and seen
In both: the oldest peace that both kept yet.

They held it to the end: no war again
Between the two; the oldest peace of all
Was the first lasting one, kept by both men
And by their sons, until the Hittites' fall.

Their gods were of the steppe: the father sky,
The storm-god; and with them, the gods they found
In Hatti, Hurrian too; and thereby
They took them in, and kept them, all around:

Land of the Thousand Gods, they called their land;
For each town that they won, its god they kept,
And added to their own, and never banned
The local rite, where once the old gods slept.

Teshub, storm-god, from the Hurrians, ruled;
The Arinna sun-goddess was his queen;
And mountains, rivers, kings who had been schooled
In rule, made gods; the fields; all that was seen.

So those they conquered took their rule with ease,
Because their gods were honored, not cast down;

They kept the household altars, and the trees,
The hill, the spring, the god in each one's town.

Their law, gentler than Hammurabi's code:
They rarely put to death, but made men pay
The one they wronged, or kin, the debt they owed,
And did not maim; and so they kept the way.

And when they fell, their kingdom did not die
Complete: in Syria, the towns held on,
Carchemish and Aleppo, Hamath, and nigh
To Sam'al, kept the Hittite ways, though gone.

For at the end, when the collapse came down,
Then Hattusa was sacked; the court was done;
They hid the archives in the shrines in town,
And so they lasted; and the folk, each one,

Fled, scattered; and the Sea Peoples then came,
The Kaska from the Black Sea coast rose too,
And famine with the weather's turn; the same
Fall took them all, but took the Hittites through.

Egypt, though less, lived; Assyria stood;
And Babylon remained, the Kassites' land;
But Hatti fell complete, as no one could,
Within a generation, all its band.

And still today we read the tablets kept,
And name their kings, and read their peace's word;
The archive in the temples, where it slept,
Still speaks; and Hatti's voice again is heard.

So honor Hittites, R1b's own kin,
Who sacked great Babylon, who made the peace,
Who took the thousand gods of all within,
And wrote it all, that it should never cease.

Chapter 158: The Mycenaeans

Taurus 18, day 158 of the Gaian year

And in the west, upon the Greek land's tip
And on the isles of the Aegean sea,
A third great kingdom rose, of sword and ship:
Mycenaean Greece, as rich as could be.

Mycenae on its hill in Argolid,
With walls of stone so great, unmortared, piled,
Called Cyclopean by men; and amid
Its peers it ruled, the strongest and least mild.

And Tiryns, Pylos, Athens, Thebes, they stood,
Orchomenos, and others, kings in each;
And while Egypt's New Kingdom rose, they could
Grow great, and Hatti too, within their reach.

They were of R1b, the steppe's own kin,
Who came to Greece in days long gone; their tongue
Was early Greek; they wrote it down therein
Linear B, from Linear A sprung,

The script of Crete; and on their tablets kept
Their lists: the sheep, the workers, and the tax,
The rations, and the arrows, where they slept
In armories, the wheat in all its stacks.

The palace kept the count of all its land,
Each worker's share of grain, each bronze-head spear;
The scribes kept all of it beneath their hand,
And so the house ran on from year to year.

But they were warriors above all: their lords
Were buried with their boar's-tusk helms of war,
With golden masks upon their faces, swords
Of bronze, and jewels, in the shaft-graves' store.

They loved the fight, the loot, the honored name,
The gift that bound one war-band to the next;
They were the heroes, those of later fame,
The first Greek lords, by sword and honor vexed.

At first they learned from Crete, the island's style,
The lesser of the two in wealth and lore;
But when Thera had burst, after a while,
They came across and took the Cretan shore:

They took the palaces at Knossos, wrote
Their Linear B on the Cretan clay,
And kept the Cretan ways, the bull, the note
Of goddess and of maze, and kept their sway.

But where the Minoans painted fields and sea,
The Mycenaeans painted war and hunt;
And so the two were joined, the island's free
Rich grace, and the steppe's war-bands, the spear's front.

And they grew rich: their pots went out to all,
Egypt, Cyprus, Anatolia's shore,
To Sicily, and Sardinia's wall;
They brought back copper, tin, and ivory's store,

And gold from Egypt, cedar from the hills
Of Lebanon; they sent out oil and wine
And cloth; their Aegean, a lake that fills
With ships, and palaces that taxed each line.

And at the end of this, there came the war,
The war of Troy, the city on the strait,
Wilusa, Ilios, stood before
The Greeks; and all the kings of Greece, the great,

Were led by Agamemnon, the high king
Of Mycenae; for Paris, Troy's own son,
Had taken Helen; and so they would bring
Their ships across, and fight till it was done.

Achilles fought, and Hector fought, and fell;
Odysseus of wiles was there; and when
Ten years had passed, the city fell as well,
And Troy was burned, and taken by the men.

And then a generation passed, no more,
The Mycenaean palaces were burned:
Mycenae, Tiryns, Pylos, whose clay store
Of tablets baked, and so the lists were learned.

Sea Peoples came; the servants rose; the rain
Failed; and the trade that held the world was done;
In twenty years, the palaces were slain,
And no one built them up again, not one.

And Greece went dark: the script was lost, the trade,
The palaces, the towns; the people dwelt

In villages, and farmed; and what they made
Was songs, the heroes' songs, which still they felt:

Achilles and Odysseus, their tale,
The boar's-tusk helm, the list of each great ship,
The names, the places: so the songs prevail,
From mouth to mouth, and never lose their grip.

Dionysus, the god of wine, went east,
And led his army to India's land,
And set his rite there, and his dance and feast,
And then came home to Greece; and so the hand

Of Greece reached out to India; the two
Were joined in song, the west, the east, as one;
For Greece spoke with Hatti, with Egypt too,
And Syria, the lands beyond the sun.

Honor the Mycenaeans, kings of war,
Agamemnon's realm, the foe of Troy's wall,
Who took Crete, and who sailed to each far shore,
Whose songs are sung of heroes, after all.

Chapter 159: The Ramayana

Taurus 19, day 159 of the Gaian year

In Ayodhya, the city of the north,
King Dasharatha had three queens, and four
Sons: Rama first, the eldest; and then forth
Bharata, Lakshmana, Shatrughna, more.

And Rama was the heir, and learned the bow
And rule; and with sage Vishwamitra went
To guard the rites from demons, high and low,
And reached Mithila, where his steps were bent

To Janaka's high court; and Sita there,
The king's own child, found in a furrow's earth
At ploughing time, was promised to the heir
Who strung great Shiva's bow; and he, of worth,

Not only strung it, but he broke it through;
And they were wed, and to Ayodhya came;
And Dasharatha, old, would make him, too,
King in his place, and give the throne his name.

But Kaikeyi, the second queen, was stirred
By Manthara, her maid, and claimed two boons
The king had sworn her once: and at her word
Her Bharata was crowned; and fourteen moons

Of years, Rama must go to forest wild;
The king was bound, and gave it; and his son
Went out without a word, the faithful child;
And Sita would go with him, as would one,

Lakshmana; and the three went through the wood
Of middle India for years; and then
A golden deer drew Rama where he stood,
And Ravana took Sita from the glen.

He was the king of Lanka, with ten heads
And twenty arms, a scholar and a priest
Of Shiva, wise and learned in his threads,
A worthy king, and yet his lust released

His ruin; for he took her to his isle,
And kept her in his garden, and she stayed
Faithful; and Rama and his brother, while
They searched, met Hanuman, who came to aid:

The monkey-lord, the wind-god's son, whose might
Could change his size; he leapt across the sea
To Lanka, found her faithful, and by night
He set the city burning, and was free,

And came back to report; then Rama raised
His host: Vanaras, with Sugriva, king
Of monkeys, whom he'd helped, and bears; and praised
Was Hanuman, the chief of everything.

They marched to India's south shore, and made
A stone bridge across the sea, Ram Setu;
It lies there still, the shoals; and unafraid
They crossed to Lanka, and the war broke through.

The demon generals fell beneath the sun;
Lakshmana slew Indrajit, the king's son;
And Rama met Ravana, the great one,
And fought him, and the battle was begun:

His heads grew back, his arms held arms divine;
But Rama took the arrow that was blessed
By Agastya, of Brahma's own design,
And pierced the demon king in his own breast.

So Lanka fell, and Sita was restored;
But Rama asked if she had been beguiled;
She said that she was not; and he, the lord,
Asked proof; and she walked in the flame, and smiled,

For Agni would not burn her, and she came
Out whole; and so they went back home, and he
Was crowned in Ayodhya; and his reign's name
Was Rama Rajya, just as rule could be.

But still the people talked; and so the king
Sent Sita out again, into the wood,
To Valmiki, the sage; and there, the thing
He did not know, she bore two sons, and good:

Kusha and Lava; and in years to come
He met them, and he knew them for his own;
And Sita, proven true, would then become
One swallowed by the earth, her mother's throne.

And Rama ruled until his days were done,
And walked into the Sarayu, then home

To Vishnu, whom he was: the seventh one
Of Vishnu's comings, come to earth to roam,

To slay the king no god could slay; for he
Had won a boon that no god could, and so
A man must do it; and his dharma, free
Of fault, the rule of right, would always show:

The king, the husband, warrior, and son,
Who did what duty asked, and paid its cost;
And wise Ravana, by his lust undone;
And Sita, faithful, twice tried, and twice lost.

And still today his name is sung: the kings
Of Siam take Rama's name, as kings will;
In Java shadow puppets dance the things
He did; and at Angkor his war stands still.

So honor Rama, Sita, and the one,
Hanuman, the devoted; and the wise
Proud Ravana, by his own want undone;
And Ayodhya, from which the great kings rise.

Chapter 160: Exodus, Trojan War, Bronze Age Collapse

Taurus 20, day 160 of the Gaian year

And then the world of bronze was overthrown:
In fifty years, the palaces and towns
Of all the eastern sea were burned, or flown,
Abandoned; and the kings put down their crowns.

Hattusa, Hatti's seat, burned to the ground;
And Ugarit, the trading town, was razed;
Its last king wrote for help, and none was found;
His letter in the kiln was left unglazed.

Mycenae, Tiryns, Pylos, Thebes, the same;
Knossos on Crete; and Troy, the town, was done;
Emar, Alalakh, Kadesh, Gath: the flame
Took Canaan's cities, Cyprus' too, each one.

And Egypt lived, but less, and lost its lands
Abroad; Assyria waned; and the throne
Of Babylon was weak in Kassite hands;
And Elam shook; and few came through alone.

Linear B was lost; the Hittite hand
In wedge-script died with Hattusa's fall;
The letters that the kings sent, land to land,
Were ended; and the trade was ended, all:

The roads that tied Mycenae to the Nile,
To Ugarit, to Cyprus, and away
To far Sardinia: they broke; the while
The people fell, nine-tenths in some, that day.

For five things came at once: the first, the drought,
From twelve hundred fifty, a hundred years,
The worst the age of bronze had known; without
The harvests, famine came, and with it fears.

The second, earthquakes, shook the towns, and brought
The walls down, with the burning, or before;
The third, the peasants, who for grain had wrought
For lords, rose up when there was grain no more.

The fourth, the peoples moving in their waves,
The Sea Peoples, a host of raiders, came,
And Ramesses III, the last who saves
Egypt, fought twice, and won, and carved their name

At Medinet Habu, upon the stone:
The Shekelesh, the Tjeker, Peleset,
The Denyen, Sherden, Weshesh, and their own
Lukka from Lycia, in battle met.

The Sherden were Sardinia's; and those
Shekelesh, Sicily's; the Denyen, they
Were Danaoi, the Greeks; for when the blows
Fell on Mycenae, they too sailed away,

And raided, settled; and the Peleset,
The Philistines, from the Aegean shore,
Took Canaan's southern coast, and settled, set
Their pots and halls as at their home before.

The fifth: the whole was tied, and each one stood
Upon the rest: the tin, the copper, grain;
Ugarit leaned on Hatti, as it should,
And Hatti on the Levant's grain, or wane;

So when one fell, the next fell, one by one,
And none could raise the whole; and so it broke,
The greatest falling that was ever done,
Of all the kingdoms, all the palace folk.

And out of it came iron, which was found
In many lands, and could not be held tight;
And out of Canaan came the letters, sound
By sound, the alphabet, that all could write;

And small towns, leagues of tribes, and peoples came:
Phoenicians, Arameans, Israel's line,
The Hittite towns of Syria, the same;
And Greeks in dark, that waited for their sign.

And in those years did Moses lead the sons
Of Jacob out of Egypt, from the land
Of Goshen, where the king had bound the ones
Who kept their fathers' altars, by his hand.

The plagues came down on Egypt; and they fled;
The sea of reeds, the Yam Suph, parted wide;
They crossed it, and the chariots, instead,
Were drowned behind them, in the closing tide.

At Sinai then the covenant was made;
And forty years they wandered in the waste;

Then Joshua led them in, unafraid,
To Canaan, where the falling towns were placed.

And Merneptah, the son of Ramesses, set
A stone, and wrote that Israel was laid
Low by his hand; and so in Canaan yet
Was Israel, a people, and it stayed.

They were not all who left; for many came
To Canaan in the breaking of the world;
But theirs the story of the house, the name,
Of Jacob's sons, when their flag was unfurled.

And in those years the Trojan War was fought,
The last great sailing of the Greeks; for when
The war was won, and Troy was burned to naught,
The kings came home, and lost their homes again:

Then Agamemnon's own Mycenae burned
Within a generation of the war;
Odysseus' isle, where he had returned,
Grew small and dark, and was a king's no more.

So three things happened in the age's end:
The breaking, and the war, the going out;
And from the ruin, kingdoms that would mend
Into small nations, with new gods about.

The god-kings fell, because the house they ruled
Was broken, and no palace held the rite;
And so the rite went out, no longer schooled
By kings, to households, and to those who write.

So honor those who lived when bronze was done:
Ramesses III, who held the sea at bay;
The sons of Jacob, Moses' own, each one;
And Troy, and those who burned and sailed away.

Chapter 161: Fall of Shang

Taurus 21, day 161 of the Gaian year

And while the west was breaking, in the east
The Shang, who ruled the Yellow River's plain
Six hundred years, would fall, its glory ceased,
And from the west the Zhou would come to reign.

At Yin, the last seat, at Anyang, ruled
The Shang kings, and they buried with their dead
The bronze, the jade, the silk, the lacquer, tooled
With care, and hundreds, slain to go ahead.

The king's work was to speak with those before,
His fathers, who would speak to Shang Di, high,
The Lord on High; and so he'd ask, and pour,
And write his question, and await reply

On oxen's shoulder-blades and turtle shells,
Which then were heated till they cracked, and read;
The Oracle Bone Script, whose writing tells
Of hunts and wars, the weather, dreams, the dead.

The king was not a god, but stood between;
His calendar of rites was the state's frame;
His steppe-born chariots, of bronze, were seen
With warriors in their hundreds when war came.

But Di Xin, the last king, grew cruel and vain:
He made a lake of wine, a wood of meat,
And made his foes walk on a greased bronze chain
Above the coals, to fall into the heat;

And he and Daji, whom he loved, would laugh;
For Daji was a fox-spirit, who wore
A woman's body, and she led him half
To ruin, and he ruled by her, and more.

His taxes and his labor crushed the land;
His wars were lost; the rites he did not keep;
And on the west, beneath the Shang's own hand,
The Zhou grew strong, while Shang was half asleep.

The Zhou held the Wei River's vale, and they
Had ties to western peoples, to the Qiang;
But took Shang's writing and Shang's rites, their way,
And kept their own: and from Hou Ji they sprang,

The Lord of Millet, father of the grain;
And King Wen, the Accomplished King, would bind
The lords against the Shang, but did not strain
To war; his son, King Wu, was of war's mind.

And Jiang Ziya, the fisherman, the sage,
Whom King Wen found beside the river, rose
The greatest strategist of all the age;
His Six Secret Teachings told how war goes.

They bound the lords of Shang who were aggrieved,
And kept a name for virtue, and waited;
And when the time was right, as they believed,
King Wu marched forth, at the moment fated.

At Muye, close by Yin, the two armies met;
The Shang men turned their spears and joined the Zhou;
Di Xin fled to his palace, and there set
It all aflame, and he died with it too.

And so the Shang was ended; and King Wu
Came into Yin, and honored those who fell,
And founded Zhou, the longest house, and true,
That ruled eight hundred years, and ruled them well.

King Wu died young; his brother, Duke of Zhou,
Was regent for his son, and he made known
The Mandate of Heaven, why rule was due
To Zhou, and not by force of arms alone.

The god Tian was Shang Di, the Shang's own sky,
One Lord, two names; the fight was for the rite:
Which house would make the offering, and why,
To Heaven; for the house that held it, right

Was with it. And the Shang's own dead were fed:
Zhou gave Song to Shang's heirs, so they could set
Before their fathers still the wine and bread;
The Shang was gone; its dead were honored yet.

For Heaven gives the house that governs well
The leave to rule, but only while it's good;
When it grows harsh, the leave is lost; they fell,
The Shang, because they ruled not as they should.

So Zhou was not a thief, but heir by right:
The mandate passed from Di Xin's line to theirs;

And so a house that falls has lost the light,
And one that rises has it, and is heirs.

The Zhou king gave out lands to kin and lords,
Who ruled as vassals, owing grain and war
And rites to him; Fengjian, by its cords,
Held well for many years, and many more.

And with the Zhou the rites were all set down:
The Book of Rites, the Book of Songs, and then
The Book of Changes; and calendar's crown,
The feasts, the harvests, sacrifices, when

The seasons turned; the writing was made one;
And Zhongguo, the Middle Kingdom, there stood
The center of the world, beneath the sun,
And round it, Rong, Di, Yi, Man, the wild wood:

For any folk could take its rites, and be
Within; or keep away, and stay without;
And Zhou was center, and the rest could see
Their place by it, the world spread round about.

Honor King Wen, King Wu, the Duke of Zhou,
And Jiang Ziya, the fisher by the stream;
And Shang, whose dead were fed by those who slew
Their king; and Heaven's mandate, and its gleam.

Chapter 162: The Bantu Expansion

Taurus 22, day 162 of the Gaian year

And while the west was broken, to the south
A people moved, as great as any known:
The Bantu, out from Cameroon's green mouth,
E1b1a's, Nigeria's own;

The house of E, which stayed at home, and grew;
They spoke the Niger-Congo tongue; and they
Grew yams and the oil palm, and made pots too,
And iron came to them from the north's way.

With iron they could clear the forest wide,
With iron they could fight, and raid, and hold;
With farms and iron, they went far and wide,
And moved out east and south, the young and old.

East, by the Congo forest's southern rim,
They came into the Great Lakes, lake and shore:
Victoria, Tanganyika's brim,
Malawi; and they met the folk before:

The Cushites, Nilotes, and the Khoisan's band;
And they would trade with them, and they would wed,
And sometimes fight; but most, the farming hand
Outgrew the bands of foragers, and spread.

Their villages had children, many more
Than roving bands; the first folk joined with them,
Or went to forest, desert, mountain, or
Were lost; and so it went, from root to stem.

And south they went, around the Congo's wood,
Or up its rivers, to Angola's land,
Zambia, Zimbabwe, where cattle stood,
And Botswana, to the Limpopo's sand.

And so they went three thousand miles, and on
For thousands of years; and today they are
Four hundred million, and their tongues are drawn
From one: Swahili, Zulu, near and far,

Xhosa, Shona, Lingala, Kikuyu,
Ganda, Kirundi, Luba, Kongo, more,
Setswana, Sesotho, Chichewa, true
Kin tongues from the one Bantu tongue before.

E1b1a's men came, took to wife
The women of the lands to which they came;
And so the father's house ran through the life
Of all, the mothers many, as the same

By R1a in India, and by
The steppe in Europe; so the farmers spread;
And yet the first folk did not wholly die:
The Khoisan kept their clicks, the oldest said;

The Pygmies of Ituri kept the wood,
The hunt, the forest ways from long before;
The Nilotes of the Rift kept cattle good;
The Cushites kept the Horn; and many more.

They took new crops: the cattle in the east;
And from isles beyond the Indian sea
Banana came, and made the Great Lakes' feast,
And there the people grew, dense as could be.

And iron was their craft: their furnaces
Drew air themselves, and burned hot with small fuel;
The smith was priest as well, whose work it is
To change the stone to metal, by the rule

Of rite; and so the smiths were set apart,
A caste, with gods of their own, for the change
Of ore to iron was a holy art,
A making, like the world's, and like it strange.

Their gods: a high creator, far away;
Their dead, who stay among them, near and strong;
The spirits of the tree, the hill, the bay,
The cave; diviners, healers, those whose song

Brings rain; and over all the bond of kin,
Ubuntu: I am, for we are; the hand
Of hospitality, the peace within;
From the first homeland carried through the land.

So honor them, the Bantu, who went far,
With yam and iron, children, and the rite;
And those they met, who still are where they are,
The Khoisan, Pygmies, keeping their own light.

Chapter 163: Zarathustra

Taurus 23, day 163 of the Gaian year

Upon Iran's high plateau, there, between
The Caspian and the Hindu Kush, came
A prophet such as none before had seen:
Zarathustra, or Zoroaster by name.

Of R1a, the steppe's own kin, whose speech
Was that of Iran; and he was a priest
Of the old rite of flame, the rite that each
Of those kin kept, in India, the east.

He sang the Gathas, seventeen hymns, in
The old Avestan, close to Vedic speech:
That all the world's a field where good and sin
Must fight, and every soul must choose for each

Thought, word, and deed: Asha, the truth and right,
Or Druj, the lie; and that the choice is real;
That Ahura Mazda, the Wise Lord, light,
Made all things good, and good is his whole seal;

But Angra Mainyu, spirit that destroys,
Is lie and dark and ruin; and the two
Contend; the world's the field; and all the noise
Of good and ill is theirs, the old and new.

No ill comes from Ahura Mazda's hand;
The ill is all the other's; so the one
Is wholly good; and men, who take their stand
With him, will help him win, till all is done.

And at the end, the good will win; and then
A judgment comes, and those who chose the right
Go up to paradise; the wicked men
To torment; and at last, made clean and bright,

The world is made anew, and all restored.
He taught them less of slaughter at the shrine,
And more the flame that burns before the lord,
Kept always lit, of Asha the true sign;

And good thoughts, and good words, and good deeds, three,
Were all the rite. The steppe's old gods kept form:
Mithra and Anahita bowed to be
Beneath the Wise Lord, with the sun and storm,

Or were Amesha Spentas, holy, the same.
And Indra, whom the Vedic hymns put high,
Was called a daeva, given a worse name,
A demon, and a servant of the lie.

So Sanskrit deva names a god of light;
In Avestan, daeva, a foe. The fight
Was not between two faiths: it was one rite,
One flame, one tongue, one holy drink, one night

Of pressing, and two priesthoods at one shrine,
And what they fought about was whose lords drank;
One family split its flame, but kept its line:
The plateau's folk kept his, and closed their rank;

The east, Indo-Aryan folk, refused,
And kept their deva, fed the Vedic feast;
Each kept the same old flame, and each one used
A worse name for the other's lords, at least.

At first his people would not hear him; so
He went out, seeking one who would; and found
King Vishtaspa, eastward, who let him go
Before his court, and heard, and so was bound

To Ahura Mazda; and all his court
Took up the word; and from Vishtaspa's land
It spread across the plateau, by report
And priest, and flame, from hand to waiting hand.

And still today the flame of his is fed
By Parsis and by those of Iran's own;
And still the judgment, and the rising dead,
And good's last winning, are the seeds he'd sown.

So honor Zarathustra, who made plain
The Wise Lord's good, the lie's dark, and the choice;
Who kept the flame, and split it, and the twain
Kept one rite still, though each had its own voice.

Chapter 164: David

Taurus 24, day 164 of the Gaian year

And back to Canaan, where, among the hills,
The sons of Jacob settled, small and spread,
In villages with four-room houses, mills,
With no pig in the pot, no king their head.

The Judges led them, and then Saul was king,
The first of Israel; and then there came,
Of Judah, Jesse's youngest, who would sing,
A shepherd, ruddy, David was his name.

He played the lyre; and King Saul was sore pressed
By a dark spirit; and they brought the boy
To play for him, and give the king his rest,
And David came to court, the king's own joy.

The Philistines, who came in from the sea,
Were Israel's great foe; their chosen one,
Goliath, giant, called for one to be
His match; and David, young, the shepherd's son,

Too small for armor, took a sling and stone,
And struck him in the forehead, and he fell;
The Philistines fled; and David, alone,
Was hero, more than Saul, and loved as well.

And Saul loved him, and gave him Michal, wife,
His daughter; and yet feared him; and would try
To kill him, then relent, then seek his life;
And David fled, an outlaw, to the dry

The Judean wilds, with outcasts at his side;
And twice he had Saul in his hand, and twice
He spared him, for the Lord's anointed; bide
He would, and wait, and not pay that dark price.

He served a while the Philistine of Gath,
And ate his bread, and made, as he was bade,
His raids on others, never on the path
Of Israel; he lied, and so he stayed.

Saul and his sons fell on Gilboa's height,
And Jonathan, whom David loved, was slain;
Saul fell on his sword; and David, that night,
Sang: How the mighty fall, the weapons vain!

The love of Jonathan for him was great,
Passing the love of women, so he sang;
A love so deep, it bore a grief whose weight
Through all the years since then has always rang.

Then David became king, at Hebron, first
Of Judah; and then, when Ish-Bosheth fell,
Of all of Israel; and he, who durst,
Took Jebus, no tribe's town, its citadel,

Jerusalem, he named it, made it his;
The Ark of the Covenant brought inside,
And danced before it, as a king's joy is,
Though Michal scorned him, watching, in her pride.

He fought the Philistines, and Moab next,
Ammon, Edom, Aram, and grew the land;
And then, when he was great, his heart was vexed:
Bathsheba, bathing, whom he took in hand,

The wife of Uriah the Hittite, one
Of his most faithful men, away at war;
And when she was with child, then it was done:
He set Uriah in the front, before

The hardest fighting, so he'd die; he died;
And David married her. Then Nathan knew,
The prophet, and he told him, at his side,
A tale: a rich man, and a poor man's ewe;

And David, angry, cursed the rich; and then
Said Nathan: You're the man. And David wept,
And fasted, and repented, before men,
And sang for mercy; but the curse was kept.

The child he had of her died young; his son
Amnon forced Tamar, his half-sister; then
Absalom killed Amnon; when that was done,
Rebelled, and drove his father out; and when

They fought, in Ephraim's wood, his hair was caught
Up in an oak tree, and Joab stabbed him there,
Though David said to spare him; and the thought
Of Absalom was David's worst despair:

O Absalom, my son, my son, would I
Had died for thee! So David cried; and none

Would hide the grief of kings, or tell it why;
It stands as it was cried, my son, my son.

Then Sheba rose; and David, old, was hemmed
With plots; Bathsheba, Nathan, won the throne
For Solomon, her son; and they condemned
Adonijah's claim; the crown his alone.

And David died, and in his city lay,
Jerusalem, his city and his name;
And from his line a king would come one day,
To gather Israel, and spread his fame.

He was no god-king, but a man who stood
Beneath his God, and sinned, and knelt, and could
Be told by prophets that he was not good,
And so repented, and in mercy stood.

So honor David, shepherd, harper, king,
The giant-slayer, outlaw, sinner, son
Of Jesse, father, mourner, who would sing
His psalms; and kneel; and grieve: my son, my son.

Chapter 165: Classical Greece, Part One

Taurus 25, day 165 of the Gaian year

Four hundred years, the Greeks lived in the dark,
In villages, with writing lost, and trade
Grown small; and yet they kept the songs, the spark
Of heroes, and the world they'd known, unmade.

And then the dawn came quickly: from the shore
Of Phoenicia came letters, and they wrote;
And Homer set the Iliad's old war,
The Odyssey, in writing, note by note.

They founded the Olympic Games; they made
Delphi the shrine of all the Greeks; they went
To found new towns by every sea, and trade,
Around the Black Sea and the Middle sent.

The polis was their way: the city-state,
Each one its own, with laws and gods and speech,
Its calendar, its fields; and small or great,
Its citizens, the demos, ruled in each.

Some ruled by few, some ruled by one, by all;
But each man's name was of his town: he'd be
Athenian or Spartan, and his call
Was to his polis, though all Greeks were free.

And each one strove to beat the rest: in feast,
In temples, games, in war, in schools of thought;
And one rich man, by building, as the least
Of towns was small, could change what his town sought.

Two poles: Athens and Sparta. With strong hand,
In the Peloponnese, Sparta made
Messenia's Helots till all its land,
And then became a warrior caste, arrayed

By laws Lycurgus gave: at seven, boys
Were taken to the barracks, trained, made hard,
The agoge; and men ate in common, poise
And war their only work, the Helots' guard.

Their women, freer, trained their bodies well,
To bear strong sons; two kings from two lines ruled,
With elders and the people; and they fell
Like stone on any field, their phalanx schooled.

At Thermopylae, three hundred there stood
Against great Xerxes' host, and still today
They are the heroes' stand; and yet the good
Of letters they gave up, and war's the way.

But Athens went the other way: at first
Its nobles ruled, Eupatridae; and then
Then Solon cancelled debts, so none were cursed
To slavery, and opened rule to men

Of every birth, though ranked by wealth; and then
Peisistratos ruled as a tyrant, one
Who ruled alone, but well; and after, when
Hippias, his son, was cast out and done,

Cleisthenes then made ten tribes by where men dwelt,
To break the noble houses, and the Boule,
Five hundred chosen by the lot; and dealt
The Ecclesia, the people's highest rule.

And so the demos ruled, the people's sway;
The men who were its citizens would go
Themselves to speak, and vote, and judge; and they
Had need of speech, to sway, to win, to show;

The Sophists came, and taught for pay the art
Of speaking, logic, and the way to win;
And Athens grew, of all the world, the heart
Of making, all the thinking pressed within.

There Aeschylus the playwright wrote, and then
Sophocles and Euripides; the jest
Of Aristophanes; and the two men
Of history, Herodotus the best,

And Thucydides; and then Phidias made
His Athena and his Zeus, the far-famed;
Ictinus built the Parthenon's arcade;
Pericles spoke, whose speech the city claimed;

And Socrates, who asked, and asked again,
And would not stop, until the asking won;
All in one town, in one long age of men,
Some thousand citizens, beneath one sun.

But first, in Ionia, on the shore
Of Anatolia, Miletus, came

The first who asked what all things are, before
The gods, what stuff they're made of, what their frame:

Thales said that all is water, which can flow
As ice and steam, and feeds all things that live;
Anaximander said the boundless; and so
Anaximenes said air; and all would give

Their answers: of the apeiron, of air,
Of number, and of being, and of flame;
They asked, by reason and by looking there,
What all things were, and how they change and came.

Pythagoras left Samos for the sun
Of Croton, and he founded there a band
Of thought and rite: that number is the one
True stuff; and music's ratios he scanned;

And souls, he taught, go on from life to life.
Heraclitus at Ephesus said all
Things flow, and all is held in stress and strife,
And none can step twice in one stream at all;

And Parmenides said: no, there is no change;
That being does not move; and so the two
Would set the argument, in all its range,
That those who think since then must still go through.

Herodotus went journeying, and wrote
Egypt, Persia, Scythia, and the rest,
The customs and the tales of all of note,
And told them kindly, east as well as west.

And Thucydides wrote later, hard and cold,
Of why men war, and gave his speakers speech;
And at Melos the Athenians told:
The strong do what they can; the weak, beseech.

And all of this was set against the war
With Persia: first Darius sent his host;
At Marathon it fell; Miltiades' corps
Of Athens, Plataea, held the coast.

Ten years, and Xerxes came, the greatest host
The world had seen; with boats he bridged the strait;
Leonidas held, and died at his post;
And Athens burned; but the Greeks lay in wait

At Salamis, with Themistocles, broke
The Persian fleet; at Plataea, then,
The Greeks by land; and Xerxes, with his folk,
Went home; and Greece was free, of its own men.

And so they said: we are not Persians; we
Do not bow down; we rule ourselves; and from
That saying, and that war, and being free,
Their golden age of making was to come.

Honor Greece's first age: the polis, strong;
And Sparta's spear; and Athens' people's rule;
Thales' water, and old Homer's written song;
And Salamis, where Greeks kept their own school.

Chapter 166: Assyria and Babylon

Taurus 26, day 166 of the Gaian year

But east once more, before the Greeks' bright day:
On Tigris, Assyria rose again,
And three long centuries it held its sway,
With iron, siege, and terror over men.

Its kings kept armies, engines, iron's store
In heaps, and made a law of fear: the town
That rose was razed; its chiefs were flayed; and more:
Their skins on walls; and stakes; and hands cut down;

And all the rest were carried far away,
So none could rise again; and this they wrote
In their own words, and boasted of the day;
And all the east, in fear, would read the note.

Yet they were builders too: at Nimrud, high,
Dur-Sharrukin, and Nineveh, their halls
Were carved with lion hunts, and wars, the sky
Of courts; their reliefs ran along the walls.

And Ashurbanipal gathered, in his hall
At Nineveh, a library of clay,
Tens of thousands of tablets, keeping all
Old songs, Gilgamesh, Sumerian way.

Ashurnasirpal II then moved the seat
To Nimrud; Shalmaneser then went west,
At Qarqar fought, and Ahab he would meet,
Samaria's king, there among the rest.

Then Tiglath-Pileser III made it strong:
A standing army, provinces, and those
Who were deported, all the peoples' throng;
Sargon II took the north, and dealt it blows:

It fell: the ten tribes were carried off, lost
Among the lands; and others, brought instead,
Were mixed with those who stayed, and at that cost
Samaritans were made, from those who'd fled.

And only Judah stood, beneath the yoke;
Sennacherib came down, and took and burned
Its forty-six towns, and, with flame and smoke,
Zion was ringed; and Hezekiah turned

To God; and in a night, an angel slew
A hundred eighty-five thousand, his host;
Sennacherib went home, and never drew
His sword against the city; so the most

Of Judah held that God would keep his own,
His city, that no host could take his hill.
Esarhaddon took Egypt's very throne;
And Ashurbanipal, the last king, held still

From Egypt to the Zagros, wise and learned;
But war with Shamash-shum-ukin, his own
Brother in Babylon, drained it; it turned
To ruin after him, and soon was flown.

The Medes came from the Zagros; from the south
Nabopolassar's Babylon; they fell
On Nineveh, and burned it, and the mouth
Of the great library was buried well

In ash; Sinsharishkun died in the flame;
At Harran the last were crushed; and in one
Short generation, all the fear and name
Of Assyria was gone, terror done.

And Nahum sang: Woe to the bloody town,
Of lies and robbery! Who'll mourn, who'll yearn?
And all the peoples, when it was brought down,
Rejoiced, and Judah too, to see it burn.

Then Nebuchadnezzar II ruled, and won
There at Carchemish against Necho, and held
The west; and Babylon, beneath the sun,
He built again, the greatest; and it swelled:

Its walls were vast; the Ishtar Gate was blue
With shining tiles, and beasts in gold; and there
Hanging Gardens rose for Amytis, who
Missed her mountains in the Median air.

Two hundred thousand dwelt there; and its priests
Watched all the stars for centuries, and made
The zodiac, and reckoned moons and feasts,
And how the planets move, and where they strayed.

The week of seven days, for seven lights,
The Sun, the Moon, five wanderers that roam;

The circle's degrees, sixty-fold; the rites
Of sixty minutes: these we keep at home.

But Judah rose against him; and he came,
And took Jerusalem, and took its king,
Jehoiachin, the nobles, and the same
Craftsmen to Babylon; and, rebelling,

Then Zedekiah rose again; eighteen
Months long the siege; and then the city fell;
The temple Solomon had built was seen
In flames, its gold and bronze borne off as well;

Zedekiah watched his sons slain, and then
His eyes were put out, and in chains he went;
And all the city's people, all its men,
To Babylon were carried, and were spent.

The line of David broke; the temple fell;
And by all reckoning, the folk should be
Lost like the northern tribes, as nations tell;
But Judah was not lost; they kept, though free

Of land and temple, all their law and rite;
They dwelt together on Babylon's plain;
Ezekiel, Jeremiah, gave them light:
That God was not defeated, but again

Would bring them home; for they had strayed, and so
Not leaving, but correction for their sin;
And there they gathered, that the law might go
With them, the prophets' words, the tales within,

To keep them anywhere they were; and then
The house of Jacob could not die, but stayed
Alive by word and law, among all men.
Nebuchadnezzar died; his line decayed;

And Cyrus came, of Persia, and he took
Babylon with ease; its folk, who had borne
A hated king, received him; and he shook
The exiles loose for home, no more to mourn.

Honor them: Assyria's great clay hall,
And Babylon's blue gate, its stars, its week;
And Judah, which, in exile, after all,
Kept its own law, and lived by what they speak.

Chapter 167: The Babylonian Exile and the Birth of Monotheism

Taurus 27, day 167 of the Gaian year

In Babylon the house of Jacob dwelt,
Far from its land; and there its word grew new:
For once they'd said their God was great, and knelt
To him alone, though other gods were true;

Who is like you among the gods? they'd sung,
And had no other gods before his face;
But in the exile, from the prophet's tongue,
There came a word that gave no others place:

I am the first, I am the last; there's none
Beside me; and the idols are but gold
And silver, hands' work, mouths that speak to none,
And eyes that do not see; they are not old,

Not gods at all. And so God was the one
Of all the nations, though they did not know;
And all of history beneath the sun
Was his, and all the world's right, high and low.

For gods then had their lands; and to be borne
Away from home was leaving one's god there;
And so the exiles chose: had Marduk torn
Them from their God? Or was he everywhere,

In Babylon as much as Zion too?
And they said: everywhere. And Marduk's shrine,
And Nabu's, Ishtar's, all the gods they knew,
Were wood and stone, the work of hands, no sign.

And some went over, as the exiled do;
But those who stayed said why: the gods are naught.
And from Iran, the Wise Lord's word came through,
One maker, and a judgment, and they caught

That word, and it was theirs, and back again;
And with the temple gone, the priests dispersed,
They gathered up their law, their tales, and then
The prophets' words, and wrote them down, and versed

Them all in one, to keep them as they went;
And where ten men could meet, they'd meet to read,
To pray, though there no altar's smoke was sent,
And so the house could live in any need.

Now, where the poem stands: it will not weigh
The one god and the many, nor the claim
Of rival faiths, as if they were; for they
Are one: a hundred names don't change the same

Offering: bread and cup and honoured dead.
The prophet said all worship is one rite
Confused about one god; what he has said
The poem keeps as its own word, by right.

The wars were fought for land, and for the crown,
And altar: who would hold the rite, and where;
One house, one shrine, its heirs at war, cast down
Each other at its one door, fighting there.

And yet the exiles did not, would not make
Their word for war; they made it to hold on,
When others held the altar, for the sake
Of rite, which would not fall when crowns were gone.

Ezekiel the priest, at Babylon's stream,
Saw God's glory there, his chariot-throne
That moved across the heavens, like a dream,
God with the exiles, not Zion alone.

Jeremiah wept: he warned, and they fell;
He saw the city burn; and he was borne
To Egypt by the fleeing, and he'd dwell
And die an exile, called by God to mourn.

The prophet of the exile sang the one
God, and the servant suffering, whose pain
Would heal the nations; Ezra, when they'd won
Their way back home, read out the law again;

Nehemiah built Jerusalem's wall,
With Persia's leave, and ruled, and kept it whole;
Zerubbabel, of David's line, and all
With Joshua the priest, raised up the goal:

The Second Temple, smaller than the first;
But not all came; for many stayed instead
In Babylon; and those who came, the worst
Of lands they found, with hostile neighbors spread:

The Samaritans, who kept God as well;
And no king ruled; the line of David stayed

A hope; and so they waited, and would tell
Of one who'd come, and how the world was made

To end the evil age and bring the new.
So from the exile came the word: that one
God is, and he is everywhere; the true
Law in a book; the meeting; and the sun

Of hope; and all of it, our house's own,
Our rite, kept in the exile through the night
Of Babylon, when temple, land, and throne
Were gone, and still they kept the bread and light.

So honor them: the exiles, and the word
They kept by Babylon's streams, where they'd roam;
Ezekiel and Jeremiah, who heard;
And Ezra, Nehemiah, who came home.

Chapter 168: Confucius and Laozi

Taurus 28, day 168 of the Gaian year

In China, while the Zhou king's rule grew thin,
And vassals fought as kingdoms of their own,
In Spring and Autumn, from the chaos in
The land, a hundred schools of thought were sown:

There were Confucian, Daoist, Legalist,
The Mohist, and the School of Names, and more,
The Yin-Yang; and of all of them, the list
Was led by two, who stood at the root's core.

Confucius, Kongzi, Master Kong, was born
In Lu, of noble blood, but fallen low;
His father died when he was three; and worn
By poverty, his mother raised him so.

He learned the Zhou rites; and he served in Lu,
And rose, and was the minister of law;
But those he crossed were strong, and out he flew,
And fourteen years he wandered, and he saw

No ruler who would hear him; home he came,
And taught, and set the classics right; and died
Believing he had failed; and yet his name
Lives on, the teacher of the world's wide side.

His students wrote his sayings down; he said
That five ties make the world: the king and men,
The father, son; the husband, wife; the head
And younger brother; friends with friends; and then

Each one has his own duty: rule with ren,
Benevolence; and serve with loyal heart;
The father nurtures; sons keep xiao; and when
Each does his own, the world is not apart.

But when the kings are cruel, and sons forsake,
The world falls into chaos; so the cure
Begins with the king's virtue, which will make
The rest grow good, as wind bends grass, and sure.

No god's command, no judgment after death,
Nor reason's rule alone, but ties of kin,
And learning, rite, and thought, with every breath,
Make the junzi, the gentleman within.

He is not born, but made: he learns the songs,
The rites, Book of Changes, and the Annals;
And beauty's tied to goodness; and he longs
To shape his feeling through the old channels.

Laozi, the Old Master, kept the scrolls[7]
Of the Zhou court, and older far than Kong;
Confucius came to him; of all his goals
He told him: let them go; your wish so strong

To set the world right: drop it. Then he left
The court, which rotted, on a water-ox,
And rode out west; and at the mountain's cleft
The gatekeeper there, Yinxi, by the rocks,

Knew him, and begged him: write it down. And so
Five thousand words he wrote, the Dao De Jing,
And rode on west, and none would ever know
Where he had gone, or see him, or his thing.

The Dao that can be spoken of is not
The lasting Dao; the Way's beyond our speech;
And it moves by wu wei, without the knot
Of forcing; who would force, will fail to reach.

The soft things of the world will overcome
The hard; the water yields, and wears the stone;
And so the sage does little, and the sum
Is much; and so the king who rules alone

By force will fail, and rouse revolt; but he
Who rules but lightly, lets the people be,
Rules well: rule a great state as you would see
A small fish cooked, and do not stir it free.

Confucius said: be good, and lead by deed;
Laozi said: do nothing, let it flow;
And both grew from the Zhou's same broken need,
And China kept them both, and kept them so:

In public, the Confucian rite and law;
In private life, the Daoist hill and stream;
The scholar served the court, and also saw
The mountain, and the tea, the empty dream.

[7]Many historians doubt that Laozi was a single historical person, and date the Daodejing to the fourth century BCE or later.

The poem honours this. It keeps no score
Between the many gods and one; the way
Of China, keeping both, is that one door,
One house, which keeps two teachings, day by day,

Its own rites, both of them, in its own view:
Not things that clash, but parts, as they were meant;
Not rival faiths, but partners, are the two;
The ones who made them knew the way they went.

So honor them: Confucius, who would teach
The ties, the rite, the ren, the junzi's art;
Laozi, of the Way beyond our speech;
Two poles of one house, never held apart.



Gemini

The Book of Iron

Gemini: The Book of Iron

Gemini is the Twins, and the Book of Iron is full of them: Rome and Han, twin empires at the two ends of the world; Romulus and Remus; Castor and Pollux, whose temple stood in the Roman Forum; and the twin spirits of Zarathustra's hymns.

Chapter 169: The Persian Empire

Gemini 1, day 169 of the Gaian year

Cyrus the Great: a conqueror, and yet
The conquered thanked him; Judah named him blessed,
God's own anointed; Babylon, in debt,
Hailed him as freer; and the Greeks confessed

That he was just; and from the Indus plain
To the Aegean, Caucasus to Nile,
Some thirty million lived beneath his reign
And his heirs', many tongues, and every style.

At Anshan he was born, the son of one,
Cambyses I, king of the Persian race,
Who served the Medes; his mother, he her son,
Was Astyages' daughter, Median grace.

He took his father's throne, and then he rose
Against the Medes, and took Astyages' land;
Then west, to Lydia, whose king, one knows,
Was Croesus, rich; who'd asked, at Delphi's hand,

If he should war on Persia; and it said:
Cross Halys, and a great realm will be lost;
He crossed; it was his own; at Thymbra, dead
Hopes; Lydia, Ionia, the cost.

Then east he went, and held the plateau wide,
And Central Asia; then, when these were won,
Babylon fell with little fight; inside,
Its priests, who scorned their king, welcomed this one.

And Cyrus let the exiled peoples go
Back to their lands, and build their gods' own halls;
Not Judah only, all: he'd have them so,
Content and loyal, safe within their walls.

He wrote it on a cylinder of clay:
The gods restored, the peoples sent back home;
And then, against the Massagetae, one day,
He died in battle, far from where he'd roam.

His tomb at Pasargadae, of plain stone,
A gabled roof, still stands; and on it read:
O man, I'm Cyrus, who made Persia's throne,
The king of Asia: grudge me not this bed.

His son, Cambyses II, then took the Nile:
Psamtik III fell there; and, crowned anew,
Cambyses ruled as pharaoh for a while,
And died; and then a crisis came in view:

For he'd had Bardiya, his brother, killed
In secret; and a false Bardiya rose;
Darius, of the royal kin, and skilled,
With Persia's nobles, cast him down, and those

Who rose against him, nine, he put them down,
And carved it high on Behistun's cliff face
In three tongues, him above them, with his crown;
And then he ordered all the realm's wide space:

Twenty satrapies, each one ruled, and
A general apart, a scribe to tell
The court of both; one tax in all the land;
One weight and measure; the daric as well,

Of gold; and roads, the Royal Road, with posts
A day's ride each, from Susa to the sea
At Sardis; and Persepolis, whose hosts
Of columns in the Apadana, free;

And round it, carved, the peoples bringing gifts:
The Medes, Elamites, and Babylon's band,
Egypt, Ionia, by turns, in shifts,
India, Scythia, and Arab land.

Each kept its tongue, its gods, its rulers, rite,
And paid its tribute, sent its troops, and bowed;
No mass deportments, no forced faith, no blight
Of terror like Assyria's; the crowd

Lived well beneath. Darius took the east,
The Indus, Thrace the west; but lost to Greece
At Marathon; and died, his reign's last feast
Thirty-six years; and Xerxes found no peace

In Greece, but lost at Salamis; and then,
As Ahasuerus, Xerxes would wed

Esther, of Judah's house, among his men
At Susa; and built where his father led.

And after him, the kings kept what they'd won:
Artaxerxes, Darius II, and more;
Egypt rose often, and was overrun;
And plots and bribes and hired troops grew sore.

And Aramaic was the common tongue;
The stars of Babylon went east and west;
Greek doctors, Phoenician sailors, among
Their servants; Judah's scribes; and all the rest.

The kings bowed to Ahura Mazda, but
They did not force their faith: in Babylon,
Cyrus served Marduk; and in Egypt, what
The pharaohs did, Cambyses did; and on

Zion the temple rose with royal gold;
For the Wise Lord, the maker of all things,
Was served wherever right worship was told,
By any name; and so, as Wise Lord's kings,

They kept all rites: one rite, by many names,
One house, and many altars, and one lord;
And so the realm was home to all its claims,
And none were forced, and none put to the sword.

So honor Persia: Cyrus, who set free;
Darius, of the roads and of the coin;
The king who kept all rites, and let them be,
And let the many peoples, as one, join.

Chapter 170: Classical Greece, Part Two

Gemini 2, day 170 of the Gaian year

And Persia beaten, Athens rose: its fleet,
Themistocles' own fleet, had won the day
At Salamis; its city, burned, complete,
Was raised again; and it would lead the way.

Formed the Delian League, on Delos' isle,
To guard against the Persians: ships and gold
From all, the fleet from Athens; and a while
It freed the Greeks the Persians still would hold.

But those who sought to leave were held by force;
The treasury was moved from Delos' shrine
To Athens, and it built, by that resource,
The Acropolis; so the league's design

Became Athens' rule; others paid it due;
And Sparta feared it, and her friends; and war
Would come of it. But first the golden few
Years, from four-sixty to four-thirty, bore

The richest fruit the world had seen: the rule
Of Pericles; the men who were its own,
Some fifty thousand, met, and, by the rule
Of lot, held office; judged; and spoke alone

Upon the Pnyx; ten boards of ten; the courts
Of hundreds; war and treasure, voted through
By all; and Pericles, of all its sorts,
Was general yearly, the city's due.

And at the graves of Athens' dead he said:
Our rule is called the people's, for it's held
Not by a few, but all; and so they led,
Free men, by laws they made, and so excelled.

At the Dionysia plays were made,
Each poet striving for the prize; and three
Great makers of the tragedies were weighed:
Aeschylus, grand and mythic, first; and he

Wrote Oresteia: Agamemnon, back
From Troy, slain by Clytemnestra, his wife;
Orestes, son, avenging; then the track
Of blood was judged by Athena; the strife

Was ended by a court; the Furies turned
To Eumenides, kindly ones; and so
The vengeance of the clan for law was spurned,
And civic justice founded, long ago.

Sophocles, next, wrote men of weight who fought
Their fate: Oedipus, he who solved the Sphinx,
Yet killed his father, wed his mother, caught
Unknowing, and then blinded at the brinks;

Antigone, who buried, though the king
Forbade it, her own brother, by the law
Of gods above the city's; and the thing
She did stands as the higher law we saw.

Euripides, the last, more doubting, gave
A voice to women, slaves, the beaten side:
Medea, Bacchae, Trojan Women, brave
And harrowing; and later, far and wide,

Held greatest. And the comedy: the bite
Of Aristophanes, whose wives withdrew
Their love in Lysistrata till the fight
Should end; in The Clouds his mockery drew

Old Socrates, a basket in the air,
Who taught the worse to seem the better; and
The real one rose up in the crowd, and there
Stood, so they could compare him, where he'd stand.

Phidias made Athena, gold to see,
Forty feet high, with Nike in her hand,
And the Zeus at Olympia; and he
And his made the calm, balanced bodies grand.

The Parthenon: Ictinus drew its plan,
Callicrates too, and Phidias its stone;
Its columns curved to fool the eye of man,
Its frieze the great procession, gods there shown.

The Sophists came to teach the art of speech
For pay: Protagoras, he who said that man
Is measure of all things; and each to each
They taught both sides, and some feared what began.

And Socrates would take no fee, and taught
No doctrine, but said only that he knew

He nothing knew; he asked, and those he caught
Found that the things they knew were never true:

What's justice? Courage? Piety? He'd ask,
And test what they would answer, till they saw
They did not know; he took it as his task
From gods, to make men know, and find their flaw.

And he made many foes: the mighty, shamed
In public; those who kept the rites, who would
Not hear a man who said a god, unnamed,
Spoke in him; and the quarrel, as it stood,

In three-ninety-nine it was brought to court:
It asked who held the city's altars, who
Might speak for Athens' gods, and of what sort;
Of impiety, they said, and new gods too,

And leading youth astray; and yet he knew
The gods he served were Athens' gods as well.
Five hundred judged him; and he told them true:
His work, a gift; they found him guilty; fell

The sentence: hemlock; and he drank it, calm,
And would not flee; and dying, said, to one,
Crito: we owe Asclepius, for his balm,
A rooster; pay it. And so he was done.

He wrote nothing; Plato, who wrote him down,
Was his; the Academy was his own;
The forms, the threefold soul, the king whose crown
Was wisdom, and the soul, undying, shown.

And Plato's pupil, Aristotle, turned
To things themselves: to logic, physics, life,
The soul, the good, the city; and he learned
And wrote of all of them, and ended strife.

But Athens and Sparta then went to war,
Four-thirty-one; for twenty-seven years;
And Pericles died of the plague; and more,
The fleet at Syracuse was lost, in tears;

In four-oh-four, Athens gave in; its walls
Were torn down; and the Thirty Tyrants ruled
A while, till rule returned to people's halls;
But all were worn; and so the gold age cooled.

So honor Athens: Pericles's rule,
The three who wrote of grief, the one who laughed,
The Parthenon; and Socrates, no fool,
Who served his city's gods, and drank the draught.

Chapter 171: The Buddha

Gemini 3, day 171 of the Gaian year

Upon the Gangetic plain, the Brahmin priests
Kept up the Vedic rite of flame and gift,
And thought it held the world; but from the feasts
The Shramanas went out, to wander, shift

For their own freeing, without priest or shrine;
The Upanishads turned the rite within:
That Atman is Brahman; and karma's line,
Samsara's wheel, and moksha, freed from sin.

How can a man be free from pain, and death,
And birth again? The Jains would starve, and lore
Of Ajivikas said fate rules each breath;
The Charvakas: this life, and nothing more;

The Brahmins kept their sacrifice; and then
Into the field came one, Siddhartha, born
At Lumbini, of the Shakya men,
Shuddhodana's, the chief's son; Maya, torn

From life, his mother; and the son was raised
By Mahapajapati; the sages said:
King, or teacher; and his father, amazed,
Kept him from grief, and sickness, and the dead.

At sixteen wed Yashodhara, and had
A son, Rahula; and at twenty-nine
He went outside the walls, and saw the sad
Four Sights: the old, the sick, the dead, the sign

Of one who wandered, seeking; and that night
He left his palace, wife, and son, and cut
His hair, and took the robe, and sought the light,
The way from pain; and every door was shut.

He learned from two great teachers, deep and wise,
Absorptions; but they did not end the pain;
Six years with five ascetics, under skies
Of cold and heat, he fasted, and would strain,

Breath held, so thin his spine could be felt through
His belly; and the freedom did not come;
He saw that self-torment, like pleasure, too,
Kept mind on body; and the middle sum

Was the way: he took from Sujata's hand
Rice pudding; and his five friends went away;
And at Bodh Gaya, where the fig trees stand,
He sat, and vowed he would not move till day

Had shown him what he sought; and Mara came,
The lord of death and seeming, with delight
And fear, and said he had no right, no claim;
He touched the earth for witness; and the night

Was ended, Mara beaten; and at dawn
He saw how pain arose, and how it ends;
The Buddha, the awakened, from then on,
At thirty-five; and so his teaching wends.

There's suffering, dukkha: all that's made will pass,
And even joy is shadowed by its end;
Its cause is craving, tanha, grasp and grass
Of wanting, from not seeing; it can end:

Nirvana, blowing out, the flame's last fuel;
And there's a path, the Eightfold Path: right view,
Intention, speech, and action, as a rule,
Livelihood, effort, mindfulness, and true

Concentration; not pain nor pleasure, but
The middle way, for anyone to walk.
No self, anatta: and the door is shut
On any lasting self; the skandhas' stock,

The form, the feeling, sense, the shaping, mind,
Are flux, and none of them a self; and so,
In seeing through it, craving falls behind,
And there is no self saved, but self let go.

He taught for forty-five years; and he made
The sangha; kings and beggars, Brahmins, came,
And those of no caste, and he did not grade
By caste; and women, at his nurse's claim,

And Ananda's; and spoke the common tongue,
Not Sanskrit; and to questions that were vain,
Is the world endless, is the self among
The body, would he live past death, he'd feign

No answer, but he said: a man is hit
With poisoned arrow, and he will not let

It out until he knows who shot, and it,
The bow, the feathers; he'll be dead, and yet

Not know. His care was pain, and how to free.
At Kushinagar he died, eighty, old;
All made things pass; strive on, with care, said he;
And left no book, no heir, but what was told

To the sangha, the Dharma as its guide;
And still today his path is walked by those
Some five hundred million, spread far and wide,
Who sit beneath the fig tree, as he chose.

He did not say there were no gods: on high
The devas live long in heavens, and turn
Upon the wheel as well, and they must die
And be reborn, and free themselves, and learn.

Our song: the gods are many, and live long,
None is the centre; and no second creed
Stands here beside our own; and all along
This book has said the same: the Buddha's seed

Is our own rite; the middle way's our road,
And his the fig tree, and the dawn he'd see;
Kept under names his country's tongue bestowed.
So honor him, the one who woke, and free.

Chapter 172: Classical Greece, Part Three

Gemini 4, day 172 of the Gaian year

And Athens lost the war; and yet the Greeks
Went on, less strong, but sharper in their thought;
The fourth age brought the two whose wisdom speaks
The loudest: Plato, and the one he taught.

Plato's early dialogues asked, as he,
Old Socrates, had asked, what justice is,
Or courage, piety, and left, unfree
Of doubt, the asker: Euthyphro, and his

The Laches, the Charmides; and then he made
His own: Republic, Phaedo, and the feast
Of the Symposium, Phaedrus; and laid
Out there the Forms: behind each thing, the least

Of beauties, justice, shapes, there is a Form,
The Beautiful itself, the Just, more true
And lasting than the thing; and reason, warm,
Not sense, can see them; and the wise man's due

Is climbing to them. In the Cave, he wrote,
Men sit in chains, and watch the shadows play,
And think them real; the wise man, freed, remote,
Climbs to the sun, and sees, and then the way

Back down, to free the rest, though they resist;
As Socrates had done, and died for it.
Republic: let the wise, who've seen and kissed
The Forms, be kings; the many, who'd submit

Opinion, should not rule; the guards below,
And then the farmers, craftsmen, traders, each
To his own work; for Athens, he would know,
Had killed his teacher, by its vote and speech.

And later, in the Parmenides, he tried
His Forms again, and doubted; in his Laws,
He gave the kings up, and a code supplied;
And in the Timaeus, sang the world's first cause.

And his Academy in Athens taught;
And there, a young Macedonian, came one,
Aristotle, of Stagira, who sought
Wisdom with Plato twenty years, till done.

Passed over, he went off to Lesbos' shore,
And studied living things; then was called home
To Macedon, to teach the young prince, before
He was king: Alexander, who would roam.

And then to Athens, and the Lyceum, where,
Walking, he taught; and when the prince was dead,
They turned on him; to Chalcis he fled there,
And died there in the next year, sick, in bed.

He wrote of logic, Organon; of all
Of nature, Physics, Heavens, weather, birth;
Of animals; the soul; and what we call
Metaphysics, after the physics' worth;

The Ethics: that the end of man is to
Flourish, eudaimonia, virtue's way;
Politics, and Rhetoric; and he knew
The Poetics, catharsis, and the play.

And there were other schools: the Cynic men,
Who scorned all rules; and Diogenes lived there,
In Athens' market, in a jar; and then
The great Alexander once came to where

He lay, and asked what he could do for him,
Diogenes said: just stand out of my sun.[8]
The conqueror of all could not, by whim,
Give anything to one who needed none.

And Pyrrho went with Alexander's host,
To India, and learned there, and came back
To teach that every claim, the least, the most,
Had arguments both ways; and so the track

Was to hold back, and live in peace; and then
Epicurus then taught that pleasure, freed
Of pain and fear, is good; and that all men,
And gods, and death, are atoms; and the need

Is simple life, and friends, and not to fear
The gods or death. And all these schools would grow,
Each with its masters, texts, and fellows near,
And each from that one Greek root, long ago.

[8]The meeting of Alexander and Diogenes is told by Plutarch and Diogenes Laertius, centuries later; historians doubt it happened as told.

And Philip II of Macedon, in the north,
Half-Greek, as some said, beat the southern towns
At Chaeronea; and the cities, forth
From then, served him, the League of Corinth's crowns;

Philip died; Alexander, twenty, took
The throne, and crushed the risings one by one,
He turned on Persia, as his father's book
Had planned; and so the free towns' age was done.

So honor Greece's last age: Plato's cave,
And Aristotle's all; the Cynic's jar;
The Skeptic's pause; calm Epicurus gave;
And Alexander, setting out afar.

Chapter 173: The Mahabharata

Gemini 5, day 173 of the Gaian year

Vyasa, the compiler, sage, was there,
And saw it, and he told it: for his own
Were Dhritarashtra, Pandu, and the heir
Vidura; and from them the war was grown

Of cousins came, the Kuru house that ruled
At Hastinapura: Pandu's five sons
Called Pandavas; and hundred, who were schooled
As Kauravas, the blind king's many ones.

The blind one could not rule; and Pandu reigned,
And died; the blind one ruled for all the young;
And then Duryodhana, his eldest, strained
Against Yudhishthira, the first among.

The five: Yudhishthira, the righteous, true;
Bhima, the strong; Arjuna, with the bow;
Nakula and Sahadeva, the two
Twins, handsome; and one wife they'd share and know,

Draupadi, won by Arjuna; and when
Their mother Kunti said: share what you've won,
Not knowing, she was wife to the five men.
And Duryodhana envied them; and none

Of his attempts could kill them: house of lac
They burned; they fled; the poisoned sweet; the snare;
And then the dice: Shakuni, at his back,
Played loaded dice; Yudhishthira sat there,

Who would not turn a game down, and he lost
His kingdom, wealth, his brothers, and himself,
And Draupadi; and she was dragged, the cost,
Into the hall, to strip her, like a shelf;

But Krishna made her sari without end,
And none could strip her; but the deed was done.
They went to exile: twelve years, and to spend
The thirteenth hidden; and when that was run,

Duryodhana would not give back their land;
And war came: at Kurukshetra, the field,
For eighteen days, and every house's hand
Was in it; and the dead lay, none would yield;

And on its eve, Arjuna looked across
At cousins, teachers, kin, and sank in grief:
How could he kill them, bearing such a loss?
His driver: Krishna, Vishnu, come in brief

To earth; in the Bhagavad Gita sang:
The body dies, the soul does not; so fight;
Act, but let go the fruit, and do not hang
On gain or loss; give all as offering right;

The three paths: deed, and knowledge, and the love
Of god; and all are good. And then he showed
His form: all worlds, all beings, all, above
And under, eating warriors, past and owed,

The source of all, and where all things return;
And Arjuna could barely bear the sight;
And then he took his bow up, with no turn
Of doubt; and so began eighteen days' fight.

Yet dharma there was hard: to tell a lie
To win? (Krishna said yes.) And Karna, born
A Pandava, raised by Kauravas: why
Should he leave him who raised him? So, forlorn,

He chose his friend, and died; and Bhishma, old,
Bound by his oath to who would hold the throne,
Fought those he loved, and fell, as he was told,
On arrows, by Arjuna's hand alone.

And all were dead: Duryodhana lay low,
His hundred brothers gone, the teachers, friends;
The Pandavas had won, and stood in woe
Over the field of kin, the bitter ends.

Yudhishthira was crowned, and ruled for long,
Thirty-six years; then left, with brothers, wife,
Up to the Himalayas; and the throng
Fell one by one, and left, along with life,

Him and a dog, which was the god of right;
He would not leave the dog, and he went in
To heaven; there he found, in that strange light,
Duryodhana, and his own kin in sin

Below; and that was the last test; for good
Does not make sure of joy, and judgment's thin

Before the world. And Bhishma, as he could,
Had taught him, dying, peace and law within.

And Krishna was Vishnu, come down to earth,
As he would come when right was threatened: fish,
Matsya; Kurma; Varaha, the boar's birth;
Narasimha, man-lion; dwarf, by wish,

Vamana; Parashurama; the king
Rama; Krishna; and the Buddha; and last,
Kalki, who comes to end the dark age' ring:
The god comes down to us, and holds us fast.

So honor them: the five, the hundred, all,
Draupadi, Karna, Bhishma, arrow-laid;
And Krishna, at the chariot, the call,
Who sang the Gita, and the war was made.

Chapter 174: Alexander the Great

Gemini 6, day 174 of the Gaian year

Great Alexander of Macedon, the third,
In thirteen years, from Greece to Indus' shore,
Took all the lands, and Persia's throne, and stirred
The world; and died at thirty-two, no more.

His father, Philip II, had made the north
A force: the phalanx, with its pikes held long,
The sarissas, and horse, and so went forth
To Thrace, Illyria, the southern throng,

And beat them at Chaeronea; and made
The League of Corinth; and he planned to go
Against the Persians, to repay the raid
Of Xerxes; but he was slain there, and so,

At his own daughter's wedding, by his guard;
Some said Olympias had willed it, or
Her son; and Alexander, twenty, hard
And young, took up the throne, the host, the war.

The north rose, and he beat it; Thebes rose too,
And he destroyed it, slew and sold its folk,
And spared the house of Pindar, poet; through
That terror, Greece was quiet, under yoke.

He crossed the Hellespont with thirty-five
Thousand, beat Persia at Granicus' stream,
Freed the Ionian Greeks; still alive,
Darius III met him, like a dream,

At Issus, fled, and left his wife and girls
Behind; and Alexander kept them well;
Darius offered land, and gold, and pearls,
And a daughter; Parmenion said: I'd sell,

If I were Alexander. So would I,
He said, if I were Parmenion. And south
To Tyre, which held its isle seven months; by
A causeway that he built from mainland's mouth

He took it, and he slew or sold its men;
And Gaza too; and Egypt, hating those
Who'd ruled it, welcomed him, and crowned him then
As pharaoh; and to Siwa, where there rose

The shrine of Ammon in the desert sand,
He went, and there the oracle said: son
Of Zeus-Ammon; and he held to it, and
He founded Alexandria, the one

The greatest of the cities of his name,
Where sea and Nile and Red Sea trade would meet.
And east, at Gaugamela, there he came
Against Darius, many times his fleet

Of men, and beat him; and Darius fled;
And Babylon and Susa opened wide,
And then Persepolis, where, as he said,
For Athens' burning, or for Persia's pride,

He let the palace burn. And Bessus, then,
The satrap, slew Darius, and was king;
And Alexander caught him, killed him; when
He'd done it, he was heir, not foreign thing,

The Great King: and he took the Persian court,
Its ways, its wives, and bade his men wed too;
And Greek and Persian he'd join in one sort;
His Macedonians hated it; through

The plots, he slew Philotas, and he then
Slew Parmenion; and Cleitus, who had saved
His life, he killed while drunk; and so, of men,
He grew afraid, and darker, and depraved.

He went on east: to Bactria, and wed
Roxana; through the Hindu Kush; and down
The Indus; at the Hydaspes, there, he led
Against King Porus, elephants, and crown,

And won; and asked him how he'd treat him, then;
Like a king, Porus said; and he was made
A king again, his vassal. But his men
Would go no farther; and so there he stayed

At Hyphasis: they would not march; he sulked
Three days; and then turned back, and sailed the stream
To the sea; and marched, while thirst and dust skulked,
Through Gedrosia; thousands died, a dream;

And Nearchus sailed beside; and back he came
To Babylon, and planned to take the west;

And bade the Greeks call him a god by name;
And drank, and fevered, and was laid to rest

At thirty-two; his body, borne away
To Alexandria, entombed, to lie.
His heir unborn, his generals took sway:
Ptolemy, Egypt; Seleucus, east, high;

Antigonus, Macedon; and many more;
And Greek became the tongue from sea to sea,
In twenty Alexandrias, the store
Of all learning; and the Buddha would be

Carved in the Greek way, in the east; and so
The roads he opened carried west and east.
So honor Alexander: how he'd go,
And take the world, and found it, and the feast.

Chapter 175: The Maurya Empire

Gemini 7, day 175 of the Gaian year

When Alexander turned from Indus' shore,
Out of the north of India there rose
A house that held the land as none before:
Maurya, from Bengal westward it goes,

From the Hindu Kush down to the Deccan:
Chandragupta Maurya founded it,
And by his side, Chanakya, the wise man
Kautilya, whose book of rule was writ

Taught how to rule: the taxes and the spies,
The friends abroad, the plots, the risings crushed,
All cold and whole; and by it he would rise,
And cast the Nandas down, and all was hushed;

And at Pataliputra he set his seat;
And then Seleucus came, to take the west
Of India back, and he met defeat,
Gave up Afghanistan and all the rest,

Balochistan, for elephants; and sent
Megasthenes, who told of the roads and feasts,
Of wealth, of castes; and of the king, who spent
His nights in fear, and slept, as hunted beasts,

Changed beds each night, with women guards; and kept
Them close; and at the last he would lay down
His throne, and took the Jain way, and he stepped
Into the fast, Sallekhana, no crown.

Bindusara, his son, took Deccan's south;
The Greeks had named him Amitrochates; sent
To Antiochus for wine, figs, the mouth
Of a sophist; and the answer back went:

The wine and figs, yes; but our law forbids
That we should sell philosophers. And then
Came Ashoka, who, as old custom bids,
Slew brothers for the throne, and ruled like men

Before him, hard; and then made war upon
Kalinga, on the east coast; and he won;
A hundred thousand slain, and, carried on,
A hundred fifty thousand; and when done,

He saw the dead, and grieved; and he became
Follower of the Buddha, and he made
The Dhamma his: no more war; and the same
Kindness to beasts; and meat no more was laid;

He founded hospitals, and dug the wells,
And planted trees along the roads; and stone
Pillars, with lions, wheels, whose writing tells
His Dhamma: be kind; honor elders; own

Respect for priests of every faith; for who
Speaks ill of others' faith, shames too his own;
And so he wrote, and thirty more stand true,
In his own voice, upon the pillars' stone.

He held the third great council, and sent out
The monks: across the strait went his own son
Mahendra, Sanghamitra, daughter, out
To Greeks and to Central Asia, each one;

And so the Buddha's way went out across
The world. His Dhamma was for all, not one
Faith only: right, and truth, and gifts, no loss
To any beast; and so the king's rule won

Its right by goodness, not by blood or sword;
And beasts had places where they were not slain.
And still today his wheel, his lion, ward
The land of India, on flag and plain.

He died; and after him the realm grew small,
Its governors their own; and, in a coup,
Pushyamitra Shunga made the fall
Of the last Maurya; the Shunga's new.

Honor them: Chandragupta, and the cold
Wise Chanakya; and great Ashoka, who
Grieved for the dead of war, and then would hold
The world in kindness, and sent the monks through.

Chapter 176: The Punic Wars

Gemini 8, day 176 of the Gaian year

And in the west, two cities rose to fight
For all the sea: Rome on the Tiber's bank,
Which Romulus had founded; ruled by right
Of seven kings, till Tarquin, proud, then sank,

Cast out; then the Republic: consuls, two,
Each checking each; the Senate, old and wise;
The people's votes; the tribunes, who could do
The veto for the poor; and so to rise

Through all of Italy: Etruscans, all
The Samnites, Sabines, Latins, and the Greeks
Of southern Italy; and then the call
Across the strait, where Carthage ruled the creeks.

For Carthage, from Phoenician Tyre, had grown
Upon Tunisia's coast, and ruled the trade
Of Africa, Iberia's ore, sown
Sardinia, Corsica; fleets were made

The greatest; and its tongue was Punic, kin
To Hebrew; and its gods, Baal Hammon and
Tanit; and in the tophet, laid within,
Were infants, given in crisis by land.

And Sicily, half Greek and half Punic,
Was where they met; and three wars they would fight.
The first: Rome had no fleet, and, stubborn, quick,
Copied a Punic ship, and, with the might

Of corvus, boarding-bridge, made sea to land;
And won, and Sicily was Rome's; and gold
Was paid; and while Carthage's hired band
Rose, Rome seized Sardinia, and the hold

Of Corsica; Hamilcar Barca's son,
Hannibal, swore at the altar, when young,
Undying hate for Rome; and Spain was won
By Hamilcar, Hasdrubal; and among

Them, Hannibal; and then the second war:
He crossed the Ebro, Pyrenees, and Gaul,
The Alps in winter, elephants, and more,
And came to Italy with half of all,

And won at Trebia; and by the lake
Of Trasimene ambushed a host and slew
Flaminius; and then, at Cannae, he'd make
The center yield, the wings close round them, through;

Some fifty thousand Romans died that day;
And many allies went to him; but Rome
Would not give in; its Senate would not pay;
Fabius would not fight, but kept at home

The war by waiting, cutting off his bread;
Scipio took Spain; and Syracuse fell,
And Archimedes, by a soldier, dead;
Scipio took war to Carthage as well,

And at Zama beat Hannibal; and lost
Carthage's fleet, its lands abroad; it paid
A mighty sum; and Cato, at all cost,
Ended each speech: Carthage must be unmade.

The third war: three years' siege; the city fell,
Was burned, and razed, its people sold, and salt
Sown in its ground; and Africa as well
Was Rome's; and Punic Carthage came to halt.

And Rome was changed: a fleet, and lands abroad,
Grain from Sicily, Africa; and gold
From Spain; and generals great; and, overawed,
The farmers, ruined while away, were sold

Their land to rich men with their slaves; the throng
Of poor men crowded Rome; and then it turned
East: Macedon, and then Greece, were Rome's ere long,
Seleucids at Magnesia; it learned

To call the sea its own. And he, the great
Hannibal, exiled, went to foes of Rome;
With Prusias, when Rome came for him, his fate
Was poison, which he drank, far from his home.

So honor Hannibal, who crossed the snow
With elephants, and won at Cannae's field;
And Rome, which would not break, though brought so low;
And Carthage, which was razed, and would not yield.

Chapter 177: Qin and Han

Gemini 9, day 177 of the Gaian year

In China, seven warring states had fought
Two hundred years; then Qin took one by one:
Han, Zhao, Wei, Chu, Yan, Qi; and all was brought
To one, and Warring States at last were done.

Young Qin Shi Huang, king at thirteen years, ruled
Through regents first, and then himself; and he
Was First Emperor; thought his line was schooled
To last ten thousand ages; and decree

Made one the script, the small seal; weights, and coin,
And measures, and the axles of the carts;
He cast the old lords down, and made men join
His service by his choice, in all the parts;

He split the land in thirty-six, and set
Each with a governor, a guard, and one
To watch them; built the roads, canals; and yet
Joined the old walls, the Great Wall, northward run,

Against the Xiongnu; he burned the books
Not useful to his rule; buried alive
Four hundred sixty scholars; and he looks
To Legalism, the way that he'd thrive:[9]

Han Feizi's way: that men are selfish, and
Hard laws, the same for all, with clear reward
And harsh reproof, alone can rule the land,
Not virtue in the king; and by that cord

He ruled, hard and exact. And he feared death,
And sent out men to find the deathless brew;
And took the mercury, to keep his breath,
Which killed him; and he built a tomb, and through

Lintong's ground, and all around it stood
The Terracotta Army, thousands strong,
Each face its own, with horse and car, and good
To guard him in the dark; and still, the long

Ranks stand. He died at forty-nine, away;
Li Si and Zhao Gao hid his death, and killed

[9]The burning of the books and burying of the scholars is told by Sima Qian, a historian of the Han, the dynasty that overthrew the Qin; some historians think the account exaggerated.

The heir, and set a weak one up; one day
Men rose; and in three years the land was filled

With war; the capital fell; so the line
That should have lasted ages lasted, all,
Just fifteen years. But roads, and law, and sign
Of script, and provinces, outlived its fall;

And then Liu Bang, a peasant rebel, rose,
Fought Xiang Yu, the noble, strong of arm,
Four years, and won by patience; and the blows
At Gaixia ended him; free from harm,

He was Emperor Gaozu of the Han;
And kept the Qin's whole frame, but made it mild;
And Emperor Wu made Confucius' plan
The rule, and chose by learning, not by child

Of noble birth; and sixty million souls,
A fifth of all the world, and Chang'an, great
As Rome; and Wu sent armies, and their goals:
The Xiongnu, Nanyue, Korea's state,

And west, to Ferghana, for heaven's horse;
And so the Silk Road opened; silk went west,
And glass and gold came east along its course,
And horses; and Sima Qian, the best

Of histories, the Records, wrote, from the
Yellow Emperor down to his own day;
And steel was made, the finest there could be;
And still the Chinese call themselves, today,

The Han, from that same house. So honor them:
The First Emperor, the wall, script, the clay
Ten thousand strong; and then Liu Bang, the stem
Of Han; and Wu, who sent the silk away.

Chapter 178: Second Temple Period

Gemini 10, day 178 of the Gaian year

From Babylon, back up to Zion's height,
By Cyrus' leave, the exiles came, and raised
The Temple, small; and then, by blood and right,
Who was a Jew, was asked, and they were fazed:

They drew the line; Samaritans were turned
Away; the mixed were cast out. Ezra read
The Torah seven days, and all men learned,
At Water Gate; and Nehemiah spread

The walls again; the priesthood was the core,
The high priest ruled; and under Persian, then
The Macedonian rule, Judea bore
Its quiet years. And Alexander, when

He came, was shown the words of Daniel, read
Of him, and spared Jerusalem; and then
The Seleucids of Syria were head,
And ruled Judea, province of their men.

Antiochus IV Epiphanes then came,
Who meant the Greek way kept; he banned the Law,
And sacked Jerusalem, and in its name,
On the Lord's altar there the people saw

The Lord of Heaven under the king's name:
Zeus of the heights; the same sky, and the sign
The same old altar; but his priests, his frame
Of rite, his swine, laid in the court; the line

The prophet wrote, there punning on that name,
Called the abomination; and the stand
Was at one altar, set in fear and shame:
Who'd stand before it, whose law rule the land.

And then Mattathias the priest refused
To make the Greek rite, and he slew the one
Who came to make it; and his son, who used
The name of Hammer, Judas, was his son,

Made war from hills against the Greeks, and won
The Temple back, and made it clean again;
And Hanukkah keeps the eight days begun
With oil for one day, burning eight days then.

Hasmoneans rose from that war, and were
Both king and high priest; and some held it wrong.
The Essenes went out to Qumran, to stir
No more, but wait the end, and keep their long

Scrolls in the caves; the Pharisees would teach
The oral law, the house of prayer, the home
Where each man read the Torah, each to each;
The Sadducees, the priests, kept but the tome

Of written law, no rising of the dead;
The Zealots wanted war with all who ruled;
And some wrote of the end, when God, they said,
Would break into the world, and all be schooled.

Then Rome came: Pompey marched in, sixty-three
Before the era, walked into the place,
The Holy of Holies, and he could see
Nothing: no god, no image, and no face,

But empty room, where once the Ark had stood
Before Nebuchadnezzar. And Rome set
Herod the Great, the Idumean, who would
Build palaces, the Temple greater yet,

The grandest in the east; but he was mad
With fear, and slew his sons, his wife; and slew
The infants of Bethlehem; what he had
Was split; and Rome sent governors; and through

The poor and those in debt, the hope rose high:
When would the Messiah come, the true son
Of David, drive out Rome, and bring, nearby,
The kingdom back, as in the days long done?

And many claimed it: Theudas, and the one
Judas the Galilean, and then he
From Egypt on the Olivet; and none
Prevailed. And John the Baptist, by the sea

Of reeds, the Jordan, preached: repent, and turn;
The kingdom's near; in camel-hair, he ate
The locusts and wild honey; and would burn
With words; and baptized many at the gate,

And Jesus of Nazareth; and then lost
His head to Herod Antipas, for he

Had cursed his wedding, and his law was crossed.
The kingdom seemed so near, the end so free.

For all agreed: one God, and not his face
In image; covenant, the Torah, rest
Of Sabbath, and clean food; and in each place
A faith that could be carried, east or west.

So honor them, who came back, and who kept
The law in every house, and waited long
For the anointed, while the Romans stepped;
And John, who cried the kingdom in his song.

Chapter 179: Rome

Gemini 11, day 179 of the Gaian year

When Carthage fell, then Rome stood over all
The Middle Sea; the farmers' little town
Now ruled from Spain to Thessaly; and small
Old forms, for farms and voters, broke, came down:

The legions served their generals; and the gold
Of provinces drowned the Italian plough;
The Gracchi Brothers saw it, and they told
The poor of land: Tiberius, and how

His brother Gaius too; and both were slain
By Senate men, in streets; and so it learned
That wealth would kill for wealth; and once again
The road to civil war was bloody, turned.

Marius made the legions volunteers,
Bound to their chief, and not the state; and then
Then Sulla marched on Rome, the first, in years
Of terror, dictator, and listed men

To die, and took their wealth; and then laid down
His rule, and went home, and died in his bed;
But what was done stayed done: the sword, the crown
Of armies, ruled; and politics was dead.

Pompey, the golden one, then cleared the sea
Of pirates, conquered east, took Judea;
Crassus, the richest, crushed Spartacus; he
Bought Senate, armies; from the idea

Of Aeneas' line, and of Venus' race,
Came Julius Caesar, ablest of the three;
They made the First Triumvirate, in place
Above the Roman world, by their decree.

And Crassus died in Parthia, his head
Used in a Greek play as a thing to show;
And Pompey and Caesar warred; he led
His legions on the Rubicon, and so

The die was cast; and he chased Pompey far,
To Egypt, where the boy-king Ptolemy
Cut off his head, to please him; at that scar
Caesar wept there; and Cleopatra, he

Received, rolled in a carpet; and her bed
Made her the queen of Egypt; and he'd won
All Gaul, and wrote of it; at Zela said:
I came, I saw, I conquered; and was done,

Dictator for his life. And then, at last,
The Ides of March: Brutus, Cassius, the knives;
And Caesar fell; Mark Antony, aghast,
Spoke at the burial, and roused, with lives

At stake, the crowd against the killers; war
Began again; Octavian, his heir,
His grandnephew, cold-eyed, with patience, bore
His time; and Antony, Lepidus, there

Made the Second Triumvirate with him;
At Philippi they hunted Brutus down;
Then turned on each other; Lepidus, dim;
Antony went to Cleopatra's town,

And lived as pharaoh; Octavian stayed
In Rome, and built his name; and at the end,
At Actium, Agrippa, who obeyed
Octavian, won; they fled; and no friend

Was left: she died by asp, the royal snake,
The crown of Egypt; he by his own sword;
The Ptolemies were done; and so, to take
The rule alone, Octavian was lord,

Augustus, first, revered, for forty-five
Long years; and said he'd brought the old rule back;
The Senate met, the consuls stayed alive,
But he ruled all; and no one could attack.

So came the Pax Romana: law and peace
Two centuries; and roads, aqueducts, coin,
And courts, from Britain to the Tigris' lease,
From Rhine to the Sahara; all would join

One law, one coin, one road, one folk of men;
And some were good, and some were mad: the dark
Grim Tiberius on Capri; and then
Caligula, whose horse was consul; mark

Claudius, limping, wily; Nero, who
Played as Rome burned, and killed his mother, wife,

And Christians; he fell on his sword; and through
One year, four ruled: first Galba, losing life,

Otho, Vitellius; and then the man,
Vespasian, who held it, and who planned
Colosseum; and Titus, son, began
To burn the Second Temple, and the land

Was emptied: in the Arch of Titus, carved,
The menorah borne west; the Jews were spread
Through all the realm; the Temple's rite was starved.
And then the Five Good Emperors, who led:

Nerva, Trajan, who took Dacia's gold,
Reached greatest bounds; and Hadrian, who drew
Them back, built his wall; Antoninus, old
And pious; Marcus Aurelius, true

Stoic and king, who wrote, in Greek, alone,
His Meditations: say, at dawn, I'll meet
The meddler, the ungrateful; his own
Work was to serve them all; and in defeat

Of plague and Marcomanni by the stream
Of the Danube he died; his son would fight,
Commodus, as Hercules in his dream,
In games; a wrestler strangled him at night.

So honor Rome: the law, the road, the peace,
Caesar, Augustus, Marcus with his pen;
Two hundred years it held, till it would cease,
The greatest realm that had been made by men.

Chapter 180: Jesus

Gemini 12, day 180 of the Gaian year

When Herod died, the Galilee rose high,
and Varus burned Sepphoris for its war;
a Roman soldier, Pantera, passed by,
and Mary, young, was taken; and she bore

a son. The soldier was of Dan, the tribe
that never kept the Yahwist law, and so
no line is written for him, and no scribe
would write his fathers' names for us to know.

And Mary, in her grief, went to a pool
and fell, and told herself the child was sent
as Zarathustra's seed, in waters cool,
the Saoshyant, the savior that was meant.

The Magi, three, came by, and when she told
them what had happened, one of them said yes:
it may be so; and so she was consoled,
and Joseph took her, and the child, no less.

Through Joseph, he was Jeconiah's heir,
the exilarchs' and Zarathustra's line;
and John the Baptist was his cousin there;
they fled as refugees; that was the sign.

He had three fathers, as the old lines tell:
Joseph who raised him, Pantera of Rome,
and Yahweh, who had chosen him as well;
and grew a Jew in Nazareth, his home.

He worked with wood, displaced, a poor man's son;
a magus on the road heard all his tale
and took him through the world, the two as one,
to cities where the mysteries prevail:

He learned of Dionysus and the vine,
and of the Saoshyant from priests of fire,
and knew himself beyond Messiah's line,
beneath his cousin John, who stood higher.

At thirty, near, he left his home, and came
Down to John, where the Jordan's waters flow,
And was baptized; a voice from heaven's flame
Said: You are my beloved son; I know.

Into the wild he went for forty days,
And Satan tempted him; and then he went
To preach the kingdom, near, in all his ways:
Repent, for it's at hand; the same intent

As John the Baptist's; but where John had cried
The end, the wrath, the axe laid to the tree,
Jesus spoke of mercy, and opened wide,
For all who came, the poor, the sick, the free.

Five years he and his cousin went as one,
and preached to Gentiles, to the nations near;
he called himself the Lord, the Savior, Son
of God, the titles Caesar wore, to jeer.

He called twelve, fishermen, a man who took
The tax, a zealot, and through Galilee
He preached in synagogues, by field and brook,
In open air, to all who'd come and see.

He taught in parables, which left the end
Unsaid, for those who heard to think it through:
The prodigal; Samaritan, the friend
To beaten men; the mustard seed that grew;

The sower; the lost sheep, and the lost coin;
The pearl, the treasure hidden in the field;
And blessings that turned the world over: join
The poor in spirit, those who mourn, the healed,

The hungry, and the persecuted; blessed.
And two commands: love God with all your heart
And soul; your neighbor as yourself; the rest
Of all the Law hung on them, every part.

And then a third that none had said before:
Love your enemies; pray for those who hate
And harm you; be as perfect, to the core,
As your Heavenly Father, who, the great,

Sends sun and rain on just and unjust both:
Not mercy to your tribe alone, or friend,
But to the ones who hate you; such the oath,
The new and radical turn, without end.

He healed the sick, cast demons out; he raised
Jairus' daughter, and the poor widow's son

Of Nain; and Lazarus, four days, amazed,
Came from the tomb; and on the sea, as one

Who walked on land, he walked in storm; he fed
Five thousand from few loaves; made water wine;
He stilled the sea; and so the kingdom spread
Into the world, and death was not the line

That had the final word. He chose the twelve
For Israel's twelve tribes, made whole again;
And taught them, so that all of them could delve,
To pray: Our Father; for all of men.

He kept his sharpest words, though, not for those
Who sinned, the thieves and prostitutes he'd share
His table with, but those whose rank arose
From Moses' chair, Pharisees, the scribes there:

Woe to you, scribes and Pharisees, you blind
And hypocrites, who strain a gnat, and take
A camel down; who tithe the mint, and find
The cumin, but the weightier things forsake,

Justice, and mercy, faith; you whitewashed tombs,
Fair from outside, but full of dead men's bones,
Uncleanness, in your inner, hidden rooms.
And so he spoke to them, in such hard tones.

In thirty, Herod's sword took John away,
and Pilate, whom this book does not forgive,
had nailed him up by Passover that day,
the man who taught the poor that they would live.

He came up to Jerusalem to share
the Passover, and in the Temple threw
the tables down, and rode a donkey there,
a Caesar mocked, as cheering crowds well knew.

It's better that one man of us should die
than Rome come down on all, so said the priest,
afraid of Rome, gave him to Rome to try;
and it was Rome that killed him at the feast.

And Judas Iscariot sold him for
Thirty pieces of silver, and he kissed
Him in Gethsemane's garden, as before
The soldiers, so they'd know him, not be missed.

The Sanhedrin tried him; and Pilate then;
Herod Antipas; and then Pilate, who
Then washed his hands, and let the crowd of men
Choose Barabbas; and so they chose him too.

Jesus was scourged, and crowned with thorn, a king
In mockery; he bore his cross, alone,
To Golgotha, the skull, ugliest thing,
Where Rome would nail its rebels and its own

Slaves; and he hung between two thieves, and cried,
Six hours: Father, forgive them, for they
Know not what they do; to one at his side:
You'll be with me in Paradise today;

And, Woman, see your son; and, why, my God,
Have you forsaken me? I thirst; and done,
It's finished; Father, to your hands, the rod
Of my spirit; he died; the veil was run

Through in the Temple, split; the earth shook; dark
Came down; the centurion said: this man
Was truly the Son of God; and then, stark,
They took him down at sunset, as began

Sabbath. Ten thousand thirty, Pisces twelve,
The eve of Passover, Nisan fourteen,
A Friday, when the lambs were killed; we delve
In grief: he died among them, as was seen.

And Joseph of Arimathea gave
A tomb, new-cut in rock, and close at hand;
In linen, spiced, they laid him in the grave,
And rolled the stone, and left him in the land.

And on the third day, women came at dawn
To finish the anointing; and the stone
Was rolled away; the tomb was empty; gone
His body was; and they were there alone.

Ten thousand thirty, Pisces fourteen, dawn,
a Sunday, our third Easter, and the day
the women found the tomb, his body gone,
the morning that the stone was rolled away.

He is not here, the angels said; he's raised;
And Mary Magdalene then met him there,

In the garden, and knew him not, amazed;
He sent the twelve to nations everywhere,

To baptize in the name of Father, Son,
And Holy Ghost, and teach what he had taught;
And he'd be with them till the end was done;
And he went up to heaven, as he ought,

And promised he'd return, to judge the dead
And living in the light. And that's the core:
Not only Jesus teaching, nor, instead,
The failed messiah, dead, and nothing more,

But Jesus risen, reigning, setting free,
Who lives, and reigns, and frees us, one and all;
And so the twelve went out, as it would be,
To tell it, and to answer to his call.

Iry-Hor, first named, was kept for the few,
his name the first we know, a king's, alone;
but Jesus keeps the many, he who knew
the poor, the dead unnamed, each one his own.

He left a son he never lived to see,
born on the day of Pentecost, the Just;
in Tarsus first, then Rome, where he was free,
and Petronilla married him, in trust.

So let his son have a good life, I say:
the father's road was horror all along;
his line ran down to Theophylact's day,
the corrupt popes, the punchline of the song.

And in Jerusalem, a little band
Met in an upper room, and all along
They prayed, and broke the bread, and hand in hand
Shared all, and waited, singing a new song;

They waited his return; and then, in flame,
The spirit came on them, on tongues, to burn;
And so the word went out, in his own name,
To all the world, to all who'd hear and learn.

Chapter 181: Buddhism Enters the Han

Gemini 13, day 181 of the Gaian year

While Jesus walked in Galilee, the Han
Stood high; and Ming of Han once saw, in dream,
A golden man who flew; and his wise man
Said: the Buddha, India's sage, the gleam.

He sent his envoys down the Silk Road, west,
To find the monks and books; and they came back
With two: Kasyapa Matanga, best,
Dharmaratna, and a white horse's pack

Of scriptures and of statues; and they raised
The White Horse Temple, first in all the land,
In sixty-seven of the era; praised
By the emperor, it came by his hand.

But centuries would pass before it grew
Its roots: the offering, by western road,
Came to the court, which gave the shrine its due,
Not yet in every household and abode.

It stood beside the Daoists' altar, and
They shared one court; and each of them would look
For the throne's gifts; and each took, in that land,
The other's words, as brothers share a book.

And how to say nirvana, dharma, all
The words in Chinese? Used the Daoist way:
Wu wei for nirvana; and for the call
Of dharma, dao; till others found their say.

East, the princess Heo Hwang-ok came
From Ayodhya, India, by the sea,
To Korea, wed King Suro, took the name
Of queen in Gaya; her sons, in degree,

Were ten; and two took her own name; and so
Kimhae Heo and Kimhae Kim descend
From her; and millions of Koreans know
Her as their mother still, from end to end.

In India the Buddha's schools would split:
Theravada, Sarvastivada, and more,
Mahasanghika; and then Kanishka knit
The Kushan realm, Bactria to the door

Of India, Gandhara; where they made
The Buddha's form in Greek style, robes that fall
Like Apollo's; the faces were displayed
Mediterranean; the first of all:

For till then he was shown by sign alone,
The wheel, the footprint; now, with long-lobed ears,
The Buddha, topknot, robe, now filled the throne,
And went out east from there, and down the years.

And Kanishka called the Fourth Council, set
The Sarvastivada; and he sent monks out;
The Great Vehicle, Mahayana, met
The world: bodhisattvas, who go without

Nirvana, so that all may be set free,
And feel what all things feel; the Lotus, and
The Heart, the Diamond Sutra came to be;
And all of it went east across the land:

From Gandhara, then through the Tarim's wells,
Khotan, Kucha, Turfan, Dunhuang, the stays
Of caravans; and in their caves and cells
The monks made the words new, in their own ways.

But that was later. For now, in the Han,
The rite from the west trickled in, one door
Beside the older altars; and it ran
Into one house, not yet the river's roar.

Two streams went out from India: the one
Ashoka sent south and west; this, the east,
By silk-road; and the middle way had won
Its passage over mountains, and its feast.

So honor Ming, who dreamed the golden man,
The white horse monks; the queen who crossed the sea,
Heo Hwang-ok; and Kanishka's span;
And the one house, with one door more, set free.

Chapter 182: The Fall of Han

Gemini 14, day 182 of the Gaian year

While Rome strained, under Severans, the Han
Fell into pieces: eunuchs fought the men
Of learning; and the Yellow Turbans ran,
Rose, the Yellow Turban Rebellion, then,

With Zhang Jue and his brothers, at its core:
Way of Great Peace; he healed by faith and rite;
And when the plague and famine struck once more,
A hundred thousand came to him to fight.

And then the court of Han raised up great hosts,
And crushed them; but the generals grew too strong;
Dong Zhuo took the capital, and boasts
Of holding the boy emperor; the wrong

Was ended with his murder; and the lords
Of war cut China up like meat on bone;
Cao Cao, Liu Bei, Sun Quan, with all their swords,
Became the three, each ruling in his own:

Cao Cao, north, held the emperor, and ruled
In Han's name; and Liu Bei, of Han's own blood,
Who took the southwest, Shu; and, father-schooled,
Sun Quan the Yangtze's south, the east, the flood,

Wu's kingdom. In two-twenty, Cao Cao's son,
Cao Pi, then forced the last Han to give way;
The Han was dead; and Wei had now begun;
Liu Bei named Shu Han; Wu, another day:

The Three Kingdoms. Four hundred years the Han
Had lasted; and its end was end of all
The old order; then war, the ages' span
Of the north's kingdoms, and the southern fall.

And in this time Buddhism took deep root:
as the old order failed, the people turned
to the one rite from India, its fruit
in sutras and in monasteries earned.

Kumarajiva, from Kucha, brought
A hostage to Chang'an, made there anew
Lotus, Diamond, Vimalakirti, taught
In Chinese, as the standard, plain and true.

Daoism too became a church: the line
Of Celestial Masters, from Han's late days,
With clergy, temples, canon, rites in sign
Of Buddhist forms; Ge Hong's alchemic ways

Sought deathless life. And of that age, the men:
Cao Cao, the cunning, ruthless; and the good,
Liu Bei, the rightful claimant; and again,
Zhuge Liang, wisest planner, as he could;

And Guan Yu, the sworn brother, loyal, true,
Whom still they honor; and their tales are told
In China, as Mahabharata, through
India; as the Iliad, of old.

So honor them, the three who split the land,
The one rite, rooting when the old went down,
Kumarajiva's words, and the true hand
Of Guan Yu, the faithful, without a crown.

Chapter 183: Jimmu to Jingū

Gemini 15, day 183 of the Gaian year

In Japan, of the isles, the first who reigned
Jimmu; from Amaterasu, his line,
The sun herself; her grandson, who obtained
The earth, was Ninigi, who, at the sign,

Came down on Takachiho, and he bore
The mirror, Yata no Kagami, and
The sword Kusanagi, won in the war,
The serpent's tail, slain by Susanoo's hand;

The jewel, the Magatama, the third;
And still today they're kept within the shrine,
Within the court, unseen, but ever heard,
The throne's regalia, handed down the line.

His grandmother was the sea-dragon's blood,
Toyotamahime, the dragon's daughter; so
The sun and sea were both in him, the flood
Below, the light above, as all would know.

From Kyushu east he marched; and he made peace,
And war, and deals, with all the chiefs he found,
Of many peoples; and he would not cease
To bargain and to bend, and give up ground,

To bind a messy league of many kin,
Of many tongues, together in one host;
At Kashihara, Yamato, within
His tent, he founded there his throne and post,

Six-sixty, February, in its time;
And still they keep it as the founding day.
And after him the kings in line would climb:
Sujin, the tenth; and then, along the way,

The twelfth, Keikō, whose son, the hero, slew
His brother, Takeru; and, sent to die,
On missions, conquered the Emishi through
The east; and from his aunt, the priestess high

At holy Ise, Yamatohime, he took
The sword; and when his foes set flames in grass
To trap him, he cut grass, and so he shook
Them off, and named it grass-cutter; alas,

His son, Chuai, fourteenth, died young; his queen,
Empress Jingū, ruled; and, pregnant, she led
The ships against Korea; and was seen
To bind stones to her waist, so that, instead

Of birth, three years she held the child; and won
The tribute of the kingdoms, and came home,
And bore Ojin, who then became, her son,
Hachiman, god of war. And from the loam

Of Baekje, Silla, Gaya, there came the trade,
The craftsmen, iron, writing, and the folk
Who crossed; and the Yamato court was made,
With mounds of earth, kofun, the great tombs' cloak:

Daisenryō, Nintoku's, longer than
Great Pyramid, a keyhole, earth and stone;
And so the court grew, taking every clan,
Those both from Baekje and Han, into its own.

Two clans, one court. The Soga clan would raise
the Buddha's hall, and both would go to fight;
beside the kami's hall, in elder days,
and the Mononobe kept in hand the rite.

In five-eighty-seven the Soga won,
and court and temple and the shrine were one:
the Buddha and the kami of the sun,
Shinto with Buddhism, a rite begun.

So honor Jimmu, who would bend to bind
The many into one; Jingū, the bold,
Who held her child, and crossed; and, intertwined,
The sun and sea, the kami and the gold.

Chapter 184: Elagabalus

Gemini 16, day 184 of the Gaian year

The Severan house held Rome; in its line,
In the third century, there came the most
Strange of them all, out of the sun's own shrine,
Emesa's priest, from the Syrian coast.

Elagabalus, aged fourteen, was made
Emperor in two-eighteen; and from birth
The rite he served, from Emesa conveyed
To Rome, the sun his city kept on earth.

He was the high priest by descent of one,
A black stone in a temple, worshipped, shown,
Elagabal, the city's god, the sun;
Rome knew that sky under Jupiter's throne,

With Mars, the Capitoline three. The fight
Was whose priest held it, and whose house would stand;
He brought the stone to Rome itself, its rite
Above the other altars of the land.

He would wed the stone to Athena, then
Astarte; led it in his car,
Through all the streets, and barefoot, before men,
Ran backward, sweating, guiding it, the star.

He wed a Vestal Virgin, breaking through
Her vow; and many wives; and, as a bride,
In woman's dress, a charioteer's; too,
Would be called lady; and he sought, beside,

The surgeons, to be made a woman whole.
And he was lady, and was named as so;[10]
He dressed, and ruled, and danced, the sun his soul,
And all of Rome would see him come and go.

The poem notes the heart of it, the truth:
The quarrel was not gods but priests: the one
To fall was he who set, though but a youth,
His city's priesthood over Rome's each one.

The senate's houses, those who held the rites
Of Rome's own altars, would not bear; eighteen,

[10]The accounts of Elagabalus come from Cassius Dio and Herodian, who were hostile to him, and from the later Historia Augusta, which is often unreliable.

The Praetorian Guard slew him, for slights,
Dragged him through streets, and threw him, as unclean,

Into the Tiber, with his mother, laid
The sewer for a tomb. The stone was run
Back home to Emesa, and so conveyed
Rome's sun to Rome's own priests: the same rite, one.

But something had been planted: one sun's rite
From Syria had held the realm's own head,
So briefly: one sun, held the throne's own light,
Kept by one Syrian house in Rome's stead.

And on December's twenty-fifth they kept
Birth of Sol Invictus, Unconquered Sun,
At winter's turn, when out of dark it stepped,
The longest night, the light's new year begun.

The feast of the Unconquered Sun, that night
the longest, was the feast of Aster Day,
the same, kept under every name of light;
and Christmas, after, kept it the same way.

His name was scratched from stone, his image marred,
Damnatio memoriae; and yet
He's not forgot, the priest the city barred,
The strangest of its kings, the sun's own debt.

So honor him, the youth who brought the stone,
Who would be lady, priest, and Caesar too;
Who set his city's sun on Rome's own throne,
And fell, for whose the rite was, and not who.

Chapter 185: Romance of the Three Kingdoms

Gemini 17, day 185 of the Gaian year

The realm, long split, must join; long joined, must part;
So it has always been. And in a grove
Of peaches, three swore brotherhood of heart:
Liu Bei, Guan Yu, and Zhang Fei, who all strove

To die upon one day, and raise the Han
Again, and share each burden. Of the line
Of Han, Liu Bei sold sandals, mats, a man
Who lived by straw; and Guan Yu, of the sign

Of justice, fled, for he had slain a knave
Who bullied all; Zhang Fei, who sold the wine
And butchered meat, was loyal, brash, and brave;
The three raised troops to fight the rebels' line.

Zhuge Liang, the Sleeping Dragon, the sage,
Was sought three times in his thatched hut before
He came to serve Liu Bei, and set the stage:
Three kingdoms like a tripod, and the war

Of Shu joined with Wu against Wei, the two
Against the strong. At Red Cliffs, two-oh-eight,
Cao Cao came south, his hundred thousands, through
The river, to crush both; and in the great

Fog Zhuge Liang sent boats of straw, and drew
Cao Cao's own arrows, by the thousand, there;
And then he called the east wind, and it blew;
And fire-ships slipped into the chained fleet's lair,

And all of it was burned; and Cao Cao fled,
By Huarong Road, through marsh and mud; and there
Guan Yu met him at the pass, and, instead
Of slaying him, let him go, for old care

Cao Cao had shown him once; and so he paid
His debt of honor, even to a foe.
Guan Yu is Guandi now, a god, whose aid
Of loyalty, of brothers, trade, they know

In temples through all China, and beyond.
And Zhuge Liang went out six times to Wei,
And died at Wuzhang, saying: heaven's bond
Will not let me prevail; and in that day,

Shu failed; it fell to Wei, two-sixty-three;
And Wei gave way to Jin, two-sixty-five;
And Wu fell, two-eighty; and so, one, free,
The realm was joined a while, and kept alive.

And still each child of China knows the names:
Liu Bei, the rightful heir; Cao Cao, the shrewd;
Zhuge Liang, the wise; and plays and games
Retell them, and the generals' books include

Their sayings: hard to win the world, but more
To keep; and win and loss are war's own way;
But he who will not yield, though struck and sore,
Is not cast down; be loyal; and so stay

With right, though right should lose; for Liu Bei's cause
Was just, and lost; and Cao Cao's winning, stained.
So honor them: the oath, the peach, the laws
Of brotherhood, and loyalty, maintained.

Chapter 186: The Sassanid Empire

Gemini 18, day 186 of the Gaian year

In two-twenty-four, the Parthians fell
To Ardashir, who claimed the line of one,
Sasan, a priest; and he would found, as well,
The Sassanid house, bring back what was done

In Achaemenid days; he made the faith
Of Zoroastrians the whole realm's own rite,
With Kartir the high priest; and like a wraith
Of old, at Ctesiphon, by Tigris' light,

Near Babylon, they ruled; four hundred years
They warred with Rome. Shapur took, in war,
Valerian; and three emperors' spears
He broke, and carved it on the cliffs, before

The Achaemenid tombs, where kings are laid.
And Mani rose in Shapur's court, and taught
The light, the dark, the Buddhist, Christian, made
With Gnostic thought, one: Manichaeism brought.

Mani named every prophet in a chain:
Zarathustra, the Buddha, Jesus, each
one light sent down to every age again;
a seal of prophets Islam came to teach.

It spread to Central Asia, China, west
To Rome, where Augustine held it nine years.
Shapur let Mani preach; then, at behest
Of Bahram, he was chained, and died in tears;

And Kartir struck at every rival flame:
The Manichaeans, Jews, Christians, all
Were struck, as rivals for the one rite's claim,
And held as one by him, for one great fall.

But what he taught no prison chain could hold:
it ran to Harran and the Uyghur east,
and Islam's prophets, later, kept its mold,
and Kartir's Avesta served the crown's priest.

Khosrow I brought the golden age: he made
The taxes new, and dug canals, and took
The Greek philosophers who fled, afraid,
When Justinian had shut Athens' book;

He had the books of India, of Greece,
Of Syriac, made Persian; and the chess
Came from the Indus to his court, a piece
Of play made finer; and, with nothing less,

The Pancatantra's fables came, and went
As Kalila wa Dimna to the west,
The kin of Aesop's, through his court they sent,
And travelled all the world, and found their rest.

Khosrow II then fought the last war with Rome
Of the east, took Jerusalem, and bore
The True Cross off; and Byzantium's home
Was nearly lost; Heraclius, in war,

Struck back into the heart of Persia, won
The Cross again; and both of them were spent;
And then the Arabs came, and it was done:
Yazdegerd III, last shah, fled, and went

Across the land; at Merv a miller slew
Him; and the temples' flames went out; and yet
The tongue, the art, the books, came living through,
And shaped the realm that after came, and set

Its heart; and those who kept the flame, who fled
To India, the Parsis, keep it still.
So honor Persia: Khosrow's books well read,
The chess, the fables, and the old flame's will.

Chapter 187: The Third Century Crisis

Gemini 19, day 187 of the Gaian year

Elagabalus slain, for fifty years
The realm would stumble; fifty men were made
As emperor, and slain; and plague, and fears
Of barbarians, and the coin's decayed

Thin silver; legions hailed their generals, then
The next ones slew them: young Severus, slain;
Maximinus Thrax; the Gordian men,
The first, the second, dead; and slain again,

Pupienus, Balbinus: the names blend,
The reigns came brief as weather, and were gone;
And so it went, from one to the next's end,
As each one rose, and fell, and so on, on.

Then in two-fifty Decius decreed
that every house burn incense at his shrine
and keep a paper proving it agreed.
The church said: the same incense, but at mine.

And many Christians burned it, and were lapsed,
And argued over long; and some were slain,
Cyprian, Carthage's bishop; collapsed,
East: Shapur took Valerian in chain,

The Roman emperor, a footstool for
His horse, and stuffed his skin with straw, and hung
It in the temple, for the envoys, for
The first Roman emperor's skin so strung.

Zenobia, Palmyra's, broke away,
And ruled from Egypt up to Asia's east,
A warrior queen; and in the west, the sway
Of Postumus, in Gaul; and so, at least,

The realm was three: Gaul, Rome, Palmyra; then
Aurelian, Restitutor Orbis, called
Restorer of the World, and joined again
The three, and took Zenobia, enthralled

In golden chains, to Rome; and took back Gaul;
And made Sol Invictus the state's own god,
The Unconquered Sun, the one above all,
Not by the side, but on the throne's own sod.

This is the crucial step. The sun he crowned
at midwinter was Christ's own cousin, born
the very night that Aster Day comes round,
the longest dark, that turns toward the morn.

The temples stood; the priests still served; but one
The emperor held above the rest; slain
Was Aurelian as well; but what he'd done
Held; Diocletian came, and made again

The realm: Tetrarchy, four, two Augusti,
Two Caesars, in four quarters; and their seats,
Milan, Trier, the east; and Rome's duty
Was small; the rule was where the border meets.

In three-oh-three Diocletian tore down
the churches, burned the books, and named it law:
the Great Persecution, so that the crown
would hold each altar the empire saw.

It failed; the church was too deep in the land;
Martyrs made more; then Galerius said,
Dying, in three-eleven: with hard hand
We tried to crush them, failed; let them, instead,

Keep praying. And the church had grown to one
Man in each ten; with bishops, creeds, the word
Of Paul gone out, the gospels gathered, done;
And all was ready for what then occurred.

At Milvian Bridge, in three-twelve, there came
To Constantine a sign: in this, prevail,
The chi-rho; and he won, in Christ's own name;
And so the realm began to turn its sail.

Chapter 188: Armenia

Gemini 20, day 188 of the Gaian year

Armenia, the high land of the hills,
Between the Roman and the Persian hand,
By Ararat and Caucasus, still fills
Its place; for Hayk, the father of the land,

From Noah, through Japheth's son, came down,
And beat Babylon's tyrant, Bel, in war,
And founded them; Hay is their own name's crown,
Hayastan their land; and from Aram, for

Of Hayk's line, the others name the land.
In three-oh-one, King Tiridates had thrown
The Illuminator, by his own hand,
Into a pit for years; a widow, known

For mercy, fed him; and he lived, and won
The king; and so the king, Tiridates, made
The faith of Christ the realm's own rite, the one
First, twelve years before Milan's word was laid;

Thaddeus and Bartholomew had brought
It first, died for it; Mesrop Mashtots made
The letters, thirty-six, for their tongue, wrought,
And in their tongue the scriptures there were laid.

And then a golden age of letters, books
Of history, of the faith, of thought; and one,
Movses Khorenatsi drew, as one looks,
The Greek, the Persian, Jewish, into one,

And traced the Haykazuni line. And caught
Between the Sassanid and Byzantine,
Their land was cut and split; and so they fought
To keep their faith, their own, and their own line.

And at Avarayr, in four-fifty-one,
Vardan Mamikonian led his own
against the Sassanid king's priests, who'd won
the order that their altar stand alone.

Vardan fell. Armenia keeps the day
as the first feast of its own martyred dead.
The war was not of gods. It was who'd say
whose priests would bless its altar and its bread.

They never would be great, but they would last:
The mountains shielded them; the letters kept
Their speech; the church held all that they'd amassed;
And still the letters Mashtots made are kept.

So honor them, the mountain folk who stood
Between the two great powers, and held on;
Their letters and their church, their own, their good,
And Vardan, fallen, when the field was gone.

Chapter 189: Constantine and the Last Emperor of the West

Gemini 21, day 189 of the Gaian year

At Milvian Bridge, by Rome, in three-twelve,
Constantine met Maxentius; and that night
He saw a cross of light, and heard, to delve
Into his heart: in this sign, conquer; fight.

He put Christ's letters on his shields, and won,
He gave the praise to Christ; in three-thirteen
At Milan was made law: the hunt was done;
The churches given back; the faith was clean

Of fear. He moved his seat east, to the town
Byzantium, and named it for his own,
Constantinople, New Rome, where the crown
Could watch the Bosphorus from its high throne.

At Nicaea he called them to decide,
Three-twenty-five, what Christ was: made, or one
With the Father, from all time, side by side?
Arius said: the first made thing, the Son,

But made; Athanasius said: he's from
Forever, homoousios, of one
Same substance with the Father; and the sum,
Pressed by the emperor, the creed: it won,

Arianism, voted down, not shown[11]
Untrue; among the Goths it lived as faith.
The Nicene Creed: one God, and three, made known,
Proceeding: Father, Son, Spirit, one wraith

Of substance, all forever. And he died
Baptized; his mother, Helena, then went
To Jerusalem, and found, as she tried,
The True Cross where it lay, and it was sent.

Then Constantine's sons split the realm and fought;
then Julian gave the old priests their keys,
the house that kept the rite as he was taught,
the altars of the cities, and their fees.

He died in war with the Persians; the keys
went to the bishops, and they kept them there:

[11] Arianism is the teaching of Arius of Alexandria that the Son was begotten by the Father and is subordinate to him. The Council of Nicaea condemned it in 325, and the Nicene Creed's "of one substance" was written against it. It remained the faith of the Goths, the Vandals and the Lombards for centuries.

the rite was one; the fight was whose decrees
would rule the altar, and whose robe, whose prayer.

Theodosius I would close the doors
of the old priesthood in three-ninety-two.
The temples took new keepers: the same floors,
new priests; and the Olympic Games were through.

In four-ten Alaric's Visigoths sacked
Rome, for the first time in eight hundred years;
Augustine wrote: the earthly Rome had lacked
The heavens' trust; The City of God's spheres

Of the true City, which will last beyond
The laws of men. The Vandals sacked Rome too,
Four-fifty-five; and generals made and conned
Western emperors; and Britain let through;

Spain filled up with Visigoths, Gaul with Franks;
Seventy-five: Orestes crowned his son,
Romulus Augustulus; from the ranks
Odoacer slew him, and put by that one,

And took for him the land of Italy,
And sent the purple east, and called him king
By no one's leave; usurper, all was he,[12]
A soldier with a crown no hand would bring.

And Rome did not fall then, nor was it down,
In four-seventy-six: the realm still stood;
Its Zeno, in the East, still wore its crown,
And held the West by right, as he well should,

And sent a Roman west to end the feast
Of the usurper. And the Goths had crossed
The Danube, three-seventy-six, released
As refugees from Huns, let in, not lost,

By the emperor's leave; three-eighty-two,
A treaty settled them inside the realm,
To farm its land and fight its wars: they grew
Its sons; immigrant Romans; at the helm

A century on, one house of theirs held
The consulship of Rome. The Goths, as I

[12]Odoacer, a soldier in Roman service, deposed Romulus Augustulus in 476 and ruled Italy as king. Most histories end the Western Empire with him; the Gaiad reads him as a usurper and the empire as unbroken.

Tell them, were Romans, simply: they were spelled
Into the realm; they served; it was their sky.

Theodoric, a Goth, as hostage boy,
Raised in the East: that Roman rose, and made
Consul, patrician, in Zeno's employ,
Made Zeno's son-at-arms; and so, arrayed,[13]

Was sent, four-eighty-eight, to Italy;
He beat Odoacer at Isonzo, and
Held him three years in Ravenna; and he
Killed him at a feast there, by his own hand,

And so he undid the usurper's wrong;
As Flavius he ruled the West, and he
Held it until five-twenty-six, the long
Rule; and the regalia came back, to be

His own, from Anastasius, were then sent,[14]
Back, which Odoacer had once sent away.
He was the emperor: no king who went
In borrowed Rome, no Goth in toga's sway,

But of the West the emperor, the last;
The Senate sat; the consuls served; the law
Was Roman; thirty years of rest were passed
In Italy; and, for his grandson, saw

To Spain's rule; and he held the Franks at bay,
And wed his kin to kings of all the West;
And built Ravenna's palace, church; and lay
At last within the tomb one stone has dressed.

The Germans sang him for a thousand years,
Dietrich von Bern;[15] and yet the Romans' name
Flavius Theodoricus:[16] appears
One man, the West's last emperor, the same.

[13] Zeno made Theodoric consul in 484 and adopted him as his son by arms, filius per arma, a Germanic form of adoption.

[14] In 497 the emperor Anastasius sent Theodoric the ornamenta palatii, the imperial regalia that Odoacer had sent to Constantinople in 476.

[15] Dietrich von Bern, Theodoric of Verona, is Theodoric the Great as the German and Norse heroic legends remember him: in the Nibelungenlied, the Thidrekssaga and the Dietrich epics. Bern is the old German name of Verona.

[16] Flavius was the family name of Constantine's dynasty. Later emperors took it, and Germanic rulers in Roman service took it as a mark of rank; Theodoric styled himself Flavius Theodoricus rex.

I tell him as I tell myself, the same:
The Goth took on the Roman name, as I
From being Emma Leonhart to 李命玥;[17] the flame
We, coming in and joining, lit up high.

Read him as an American would read
A founder: one who came, and built it in;
A king of Goths and Romans, right in deed,
The West's last emperor, by right, not sin.

He held, as Goths held, the Arian creed,
Since Ulfilas gave scripture in their tongue:
A faith of Christ, as true and whole, indeed,
As Nicaea's; holding it, he's among

Rome's own, and did not break from Rome, nor wrong;
He left the Catholics their own bishops' chair;
When mobs burned the Jews' synagogues, the throng,
He made the cities pay to raise them there:

That was the justice of the crown he bore.
Five-twenty-three: Justin's laws in the East,
Justinian behind them, made their war
On Arians: the Goths, a folk, not priest;

So law was turned against a people; faith
Was but the snare. Theodoric sent east
Pope John to plead; he came back, like a wraith,
Too little; in Ravenna's jail he ceased;

In five-twenty-six Theodoric died;
The West fell with him, and was taken then;
Justinian took it, and he decried
None should be the West's emperor again;

A Roman, not a foreign foe, but one,
A racist usurper, seizing a throne[18]
That was not his to have; he would have none
Of Goths who ruled the West as theirs alone.

His war, five-thirty-five, was racist hate:
The Goths to him were heretics, and less,

[17] Li, the surname in 李命玥, was the imperial surname of the Tang, which the Tang gave to foreign-born generals and allies as an honor. Ming, 命, is the life of Lifeism; Yue, 玥, is a legendary pearl.

[18] Justinian's Gothic War, 535 to 554, is usually told as a reconquest. The Gaiad reads it as a usurpation driven by contempt for the Goths as barbarians and Arians; the government of Justin I, with Justinian behind it, had moved against the Arians in the 520s.

Barbarians; he'd let no Gothic state
Of emperors survive; and, in the press

Of law, five-fifty-four, he named the king
Totila a tyrant, usurper; yet[19]
The word was right, the man was wrong: the sting,
The usurper was the writer; he set

It down, and knew it, and he swore. And so,
For twenty years his armies burned the land
Theodoric kept at peace; Rome, laid low,
Was emptied, sacked, and sacked again; his hand

Won, and the ruin did not cease: there came
The plague in war, the empty fields, the tax;
And that is why, thereafter, in its name
The West had no more emperor; his tracks

Ended the line; he took the West to keep,
And held it from the East, its edges dim;
The throne stood bare, three hundred years' deep sleep,
Theodoric to Charlemagne; his whim:

Not end, but interregnum; for the house[20]
Of the usurper would not fill the chair,
And kept it from the heirs it could not rouse
To bend. And in five-sixty-eight came there

The Lombards, into Italy, and took
The most of it from the usurper's hand;
Their kings took Flavius;[21] and wrote the book,
The Edict of Rothari, Latin, planned

Roman law; and they came Arian, then
Turned Catholic with Theodelinda; and
Seven-fifty-one, Aistulf took again
Ravenna, seat Theodoric had manned,

Back from the usurper's exarch; the heirs
Truer than Justinian, these were they.
Rome never fell. The fall's a myth of theirs:
Four-seventy-six, set in his own day,

[19]In the Pragmatic Sanction of 554 Justinian annulled the acts of the Gothic king Totila, calling him a tyrannus, a usurper, and kept the acts of Theodoric's heirs.

[20]Most histories end the Western Roman Empire in 476, or in 480 at the death of Julius Nepos. The Gaiad counts it unbroken: its throne empty from Theodoric's death in 526 to Charlemagne's coronation on Christmas Day 800.

[21]From Authari, king from 584 to 590, the Lombard kings of Italy took the name Flavius.

Marcellinus, chronicler of the East,[22]
Whose lord would need a West fallen to take;
And Justinian had the law all pieced,
Built Hagia Sophia; and would break

The Academy in Athens, of nine
Hundred years; and the Platonists who fled
Came back from Khosrow when the peace, a line
He wrote, set free their going home. He bled

The realm, with plague and the Sassanid war.
So mark it: not to Goths the West was lost;
Its last emperor it lost, not to war,
But to Justinian; and, at its cost,

The faith of Christ became what Rome would keep,
Defend, and hold; and under it, the same,
Unbroken, was the rite, and ran as deep;
The feasts, the incense, and the altar's flame:

The same rite stood in Rome under new names:
the temples were the churches or were stone,
the feasts went on, the incense and the flames,
the old Roman frame held what it had known.

[22]The year 476 as the end of the West first appears in the chronicle of Marcellinus Comes, written at the court of Constantinople in Justinian's time.

Chapter 190: Ethiopia

Gemini 22, day 190 of the Gaian year

South of Egypt, past cataracts and Kush,
Past Meroe's high tombs, the highland rose,
Aksum, in Ethiopia; its push
Of trade, Adulis, where the Red Sea flows,

To Rome, Arabia, India; script
Was Ge'ez, their tongue a Semitic one,
Kin to Arabic; and, crowned and equipped,
Their fourth-century king, Ezana, won

Over to Christ three-thirty, by the word
Of Frumentius, who had, as a young boy,
Was shipwrecked there, and served the court, and stirred
Its trust; in Alexandria's employ

Made bishop by Athanasius, came
Back home, and preached; Ezana turned; and so
Aksum, after Armenia, the same,
The second realm to take the faith, and grow.

And at Chalcedon in four-fifty-one
the bishops split on how the Christ was made:
"Two natures," Rome; Alexandria, "one,"
and Aksum's bishop, sent from there, obeyed.

It was one church that fought over a throne:
which patriarch would say the creed for all.
The Copts, the Syrians held to their own
with Ethiopians, a single hall.

At Aksum, in the church of Mary, there
The Ark of the Covenant still rests, brought
By Menelik, of Solomon the heir,
And Sheba's son: the Kebra Nagast taught

How Sheba's queen came to Solomon, bore
His son, Menelik, who went home, and took
The Ark to his own land. And this is more
Than tale: it's true, the truest in the book;

The kings of Ethiopia came down
From Solomon, three thousand years, the line
Unbroken, crown to crown; and in the town
And hills, the Beta Israel kept the sign

Of Torah, older than the Talmud's word,
Alone in highland, true; and so they keep
Their faith. And Aksum waned, when it was heard
That Islam held the trade routes, broad and deep,

And moved its seat southward. So honor them:
The second realm of Christ, the highland's crown,
The Ark at Aksum, Solomon's own stem,
The queen of Sheba's son, who brought it down.

Chapter 191: Arabia Before Islam

Gemini 23, day 191 of the Gaian year

Arabia, ere Muhammad, a quilt
Of tribes, oases, towns of trade, the tent
Of Bedouin, the homes the Jews had built,
And monks of Christ who prayed where trade-routes went.

Two lines there were: Qahtan, the south, the land
Of Yemen, come from Joktan, Eber's son;
And Adnan, of the north, of desert sand,
Of Hejaz and Najd, from Ishmael, the one

Of Abraham, by thirty steps of birth;
Twelve sons, like Jacob's; through Nizar, the line,
Mudar, Ilyas, then came the Quraysh to earth,
To Hashim's clan, Muhammad's own, the sign

Of Mecca. And they kept gods: the most high
Was Allah, maker, seldom prayed to; and
His daughters, al-Lat, al-Uzza, close by,
And Manat too, were honored through the land.

Three hundred sixty images were kept
within the Kaaba: gods of tribes, and they
were stars and homes, there where the pilgrims stepped;
set Hubal chief, the god to whom they'd pray.

And some were hanif, pure, who kept the one
God as Abraham had kept, in no shrine
But his. Qusay, of Muhammad's line, won
For the Quraysh, Mecca and the Kaaba's sign,

To guard it, and the pilgrims' trade; they held
The sacred months, when none could fight, for all
The caravans; and Mecca's wealth so swelled.
In Yemen, Himyar heard the Torah's call,

Turned Jewish; Aksum came, of Christ; and then
The Sassanids; Ghassanids, the west,
Were Christ's, Byzantium's; the Lakhmids, men
Of Christ as well, the Sassanids' own guest;

And in Yathrib, Medina, dwelt the Jews:
Qurayza, Nadir, and Qaynuqa, the tribes
Who fled from Rome's wars, kept their trade; and news
Of monks in caves by wells, who taught the scribes.

Here was one peninsula and one rite
kept many ways, by tribe and town and tent,
the high god and his daughters, and the light
of Jews and Christian monks, with one intent.

And incense, myrrh went north to Rome; and silk
And spice came from the east through Yemen's ports;
And east and west, the two realms, of one ilk,
Warred on, wore each other down, in sorts.

In the Year of the Elephant came forth
Abraha of Yemen, to take the rite
Of pilgrims for his church; and he marched north
With elephants: whose house it was, whose right.

And birds dropped stones upon them, and they fled,
And plague struck them; and in that year was born
Muhammad; and his father had been dead
Before his birth; his mother, too, was torn

From him when young; his grandfather, the lord
Abd al-Muttalib; he was raised
By Abu Talib, uncle; by accord
He was al-Amin, the trustworthy, praised;

He traded, and he wed Khadija, rich,
A widow, fifteen years his elder; and
He went up to Hira's cave, to the niche
On the Mount of Light, to pray; as was planned,

At forty, in six-ten, Gabriel came,
And said: Recite! In the name of your Lord,
Who made, made man from a clot; so the flame
The Quran began: the old house restored.

Chapter 192: Muhammad and the Rise of Islam

Gemini 24, day 192 of the Gaian year

Muhammad ran home shaking from the cave,
and wrapped himself in blankets, terrified.
He sought no founding; it was what God gave.
Khadija held him, and believed beside.

Twenty-three years the words came, verse by verse,
Surah by surah; and, after his death,
Collected as the Quran, to rehearse:
The recitation, Allah's word and breath.

The oneness of the one God was his core,
the seal of prophets came from Mani's line,
a chain of messengers sent long before,
both Christian and the Manichee: one vine.

Five pillars: shahada, the word of faith;
Salat, five prayers a day toward Mecca; then
Zakat, the gift to those in need, the wraith
Of hunger fed; and sawm, the fast, again,

In Ramadan; and hajj, the pilgrim's way
To Mecca, once in life: and simple, clear,
And hard, but to be done, a frame each day
For all of life's own striving, far and near.

On Friday, after prayer, the people ate
together, bread and broth, the poor fed first,
the Eucharist that churches celebrate,
one table and one house, and none dispersed.

It was the dearest rite the faith would keep;
when golden ages fell to want and dearth,
the meal grew thin; the Hajj, the prayers, ran deep,
and still they eat, not knowing of its birth.

For thirteen years he preached in Mecca; and
The tribe of Quraysh, who held the Kaaba's keys,
Fought him: whoever held the word would stand
To teach the pilgrims there, and take their fees.

His first were slaves, and women, and the low,
Those with no tribe's shield; Abu Talib, by
His clan's own duty, kept him, and not so
From faith; and then, in six-nineteen, would die,

Khadija too, the Year of Sorrow; and
His danger grew; and in six-twenty-two
He made the Hijra to Medina's land,
Whose tribes had asked him there, to judge them through

Their feuds, and be their prophet; by the count,
Years start at Hijra; and the ummah there
Became the first of Islam's realms, the fount,
With him both prophet and the ruler's chair.

Medina's Jews, he thought, would come to see
A prophet, Abraham's, in him; and grim,
They would not have it; so it came to be
The qibla of the prayer moved from the rim

of Jerusalem to Mecca. The fast
was moved from Yom Kippur to Ramadan:
one fast, one prayer, one Abraham, recast
as the two houses' quarrel, carried on.

And war with the Quraysh: at Badr, the first,
Six-twenty-four, three hundred beat their foes,
A thousand strong; at Uhud came the worst:
Six-twenty-five, he fell, and wounded, rose,

Thought dead a while; and words came down to stay
The shaken; at the Trench, twenty-seven,
They dug, as Persians dug, and held the day,
And the Quraysh withdrew, as sent from heaven.

And the Banu Qurayza were then tried
For joining with the foe; their men were slain,
Their women and their children sold. Beside,
Six-twenty-eight, Hudaybiyyah; again

A truce was made, though weak it seemed; in two
Years the Quraysh' friends then broke it; and he came,
Ten thousand strong, to Mecca; and it knew
To yield, and gave itself up in his name.

Muhammad came into the Kaaba; there
its images were cleared, the house made God's;
he gave its keepers back the key to bear,
forgave most enemies, and spared the rods.

It was the triumph of his mission, done:
Mecca was now the center of the new

Community; six-thirty-two, he'd run
The Farewell Pilgrimage, and spoke, all through,

At Arafat, the Farewell Sermon; then
He died soon after at Medina, head
In Aisha's arms; and all his grieving men
Heard Abu Bakr, his old friend, who said:

If you worshipped Muhammad, he is dead;
If you have worshipped Allah, he lives on.
Abu Bakr was first caliph, and led,
Rightly Guided; and with the rebels gone,

The Ridda crushed, he held the ummah one.
Then Umar sent the Arabs out; within
Twelve years after the Prophet's death, they'd won
Syria, Iraq, Persia, Egypt; in

The Sassanids fell; Byzantium lost
Its richest lands; the map was drawn anew;
Umar was slain; and Uthman, at the cost
Of other copies, made the Quran true

In one text; and was slain; Ali, the fourth,
The cousin, son-in-law; the fitna came,
The war among them; he was slain; and forth
Came Muawiya, took the caliph's name;

At Damascus the Umayyads rose;
For Ali were the Shia, all his own,
Held that the Prophet's house should rule; and those
Who stayed, the Sunni, kept the custom known.

Chapter 193: Journey to the West

Gemini 25, day 193 of the Gaian year

In the Tang, the monk Xuanzang set out west,
Six-twenty-nine, to find the sutras' source
In Sanskrit, for his life's one single quest:
The words in Chinese had gone off their course.

They would not let him go; he went alone,
Against the law; seventeen years he went,
Central Asia, Afghanistan, unknown,
To India, and at Nalanda spent

His years among ten thousand monks, the hall
Of learning: logic, medicine, and thought;
And mastered Sanskrit, and the schools, and all
The great debates; and when they would have brought

Him to be head there, he went home instead,
Six-forty-five, with six hundred and more
Books on twenty-two horses; and the head
Of Tang, Taizong, welcomed him at the door.

He spent his life in turning them: the scrolls,
Thirteen hundred; Yogacara, the mind
Alone, he brought; and wrote, of all the goals
And kingdoms of the west, the Records, signed,

Of Western Regions: rice and rite and sage,
The customs of each city; and before
Him, Bamiyan's Buddhas stood, the great age
Of stone cut from the cliff; they stand no more.

And on the road, the Monkey King went too,
Sun Wukong, born from stone, who learned the arts
Of Dao and Buddha, ate the peaches through,
Made havoc up in heaven, and, in parts,

Was pinned beneath a mountain; and was freed
To guard the monk, Tripitaka, a band
Of gold around his head, which, at the need,
The monk's spell tightened, by his own command.

And Pigsy, Zhu Bajie, the lazy pig;
And Sandy, Sha Wujing, the river's own;
The dragon prince, the horse; and, small and big,
Eighty-one trials met them, which were thrown

By demons in disguise, the women's land,
The flaming mountains, rivers made of sand;
They reached India, took the sutras' hand,
And, coming home, were all enlightened, and

Each trial was a hindrance of the heart,
Made outward, to be passed; and so the way
Was walked, with friends, and every trial a part,
To bring the teaching home, and make it stay.

And in the Tang the Buddha's way was theirs:
Chan rose with Huineng, the sixth patriarch,
Awakening at once; and Pure Land's prayers
To Amitabha, of the west, would mark

All those who called his name. And Chang'an stood
The greatest city of the world; to where
There came Persians, Arabs, Sogdians, who would
Trade, study, live; Koreans, Japan's heir.

So honor Xuanzang, who once walked the west,
The Monkey King, who guarded him; and Tang,
The golden age, the high mark and the best,
Where all the Buddha's teaching came and rang.

Chapter 194: The Islamic Golden Age

Gemini 26, day 194 of the Gaian year

Abbasids cast the Umayyads down,
In seven-fifty; and al-Mansur made
In seven-sixty-two a round new town,
Baghdad, four gates; and there the learning stayed

For centuries: the House of Wisdom, where
The Greek, Persian, Indian books were turned
Arabic: Aristotle, Plato, there
With Galen, Euclid, Ptolemy, were learned,

Hippocrates; and kept, when they were lost
Elsewhere. From India the numbers came,
The zero, and the decimal, and, crossed
With Greek, al-Khwarizmi's, whose own name

Is algorithm; and his book, the one
Of al-jabr, is algebra, made whole.
Al-Razi told the pox and measles, done
Apart, and tested all his cures; the scroll

Of the Comprehensive Book he then wrote;
Ibn Sina wrote the Canon; he joined
Aristotle to the Platonists' note;
And Ibn al-Haytham's Optics then coined

The test by trial, the way of finding out;
Al-Biruni measured the earth, its round,
And studied India, and wrote about
All things, a hundred forty books, profound.

Al-Ghazali: the thinkers lost their way
In incoherence; Ibn Rushd then wrote
The Incoherence of it, back, to say
The thinkers' cause was sound, and kept afloat.

Al-Farabi, the Second Teacher, next
Aristotle; Ibn Arabi joined
The Sufi way to thought; and Rumi's text,
The Masnavi, at Konya, there was coined,

The greatest of the mystic songs; and spread
The Sufis from Morocco to the lands
Of India, a sea; and, by their head,
The way went on, from teacher's hands to hands.

Al-Hallaj cried Ana al-Haqq; and who
Could speak for God? The jurists, and the court
Of Baghdad, held the word; nine-twenty-two:
That was the fight; and so they cut him short.

Umayyads who lived went on in Spain,
And Córdoba was theirs, a caliph's seat,
Half a million, books, baths, a lighted lane,
All paved, when Paris was a muddy street.

Nine-oh-nine: the Shia Fatimids rose
In Egypt, rival to Abbasid reign,
And built Cairo and al-Azhar; and those
In Mazandaran, by Caspian's main,

The Bavandids, held Tabaristan's height,
Woods; kin to Sasanian kings, the last
Old house of Iran not yet won by fight;
Qarin the First, eight-seventeen, held fast;

When Mazyar rose against the caliph's hand,
Qarin stood with Baghdad; eight-forty-two,
He took Islam himself, and kept his land
Of mountains; so the old kings' blood went through

Into new faith: Abul Melik, his son;
And in eight-sixty-nine, a grandson came,
Abul Hamza, in Armenia, one
Of the Artsruni; west, under their name.

The Seljuk Turks came; caliphs kept the name;
Sultans ruled; at Manzikert they beat,
Ten-seventy-one, Byzantines, and came
To Anatolia; and in each street,

Hanafi, they built their schools; learning went
On, till twelve-fifty-eight, the Mongols came,
Took Baghdad, and the Abbasids were spent;
The books thrown in the Tigris; it became

Black with their ink. So honor that bright age,
Four centuries: the numbers, and the cure,
The optics, and the thought, the Sufi page,
Through Córdoba, Toledo, and kept sure.

Chapter 195: Charlemagne and Byzantium

Gemini 27, day 195 of the Gaian year

And in the West, while the usurper's hand
Kept the throne empty, the Franks grew, and grew;
Clovis I took up, in the Nicene band,
The faith; the Goths kept Arian, as true.[23]

His heirs, the Merovingians, would then reign
Three hundred years, but weak, and ruled by none;
The Mayors of the Palace were the brain;
And Charles Martel, the Hammer, Mayor, won

At Tours, seven-thirty-two, stopped the march
Of Umayyads, who fell back to Spain;
Pepin the Short then asked the Pope: the arch
Of kingship: should the one who ruled now reign?

The Pope said yes; and Pepin took the crown;
Carolingians began; and his son
Was Charlemagne, Charles the Great, whose renown
Would build what Europe had not seen, as one.

Charlemagne reigned forty-six years. He fought
the Saxons for their grove, and in it felled
the Irminsul, and set the priests he brought
at their own altars, where their feasts were held.

Seven-seventy-four: he took the land
of Italy from Lombards; and in Spain
he pressed the Muslims back with his own hand
and held the frontier as his own domain.

He did not break the Lombards; took the crown,
Rex Langobardorum;[24] and its crown, too,
Held it for twenty-six years, in renown,
The realm of Theodoric's heirs, come through.

He brought from York Alcuin, and there, to lead
His school; old learning lived again and rose;
The script was made that we today can read,
And monks would copy old books, and keep those

[23] Clovis I of the Franks was baptized a Nicene Christian, a Catholic, around the year 500, unlike the Goths, the Vandals and the Burgundians, who were Arians.

[24] Charlemagne conquered the Lombard kingdom in 774 and took the title Rex Langobardorum. Its crown is the one later called the Iron Crown of Lombardy.

That would be lost. On Christmas, on the day,
Eight hundred, Leo III crowned his head
Imperator Romanorum,[25] to stay,
In St. Peter's; and the throne, so long dead

Since Theodoric, filled. The Pope would place
The crown; the claim was not the Pope's: he held
Rome, Italy, Gaul, Germany, by grace
Of conquest and of law; and he excelled,

Lombards' heir, who were Theodoric's own;
And this enraged Constantinople, where
Irene ruled, claimed the Roman throne alone;
The Byzantines would not let a Frank share

The crown: for since Justinian, they'd kept
The West by the usurper's right, no right,
And kept the throne empty, where none had stepped;
No Frank would have the crown they'd seized by might.

Byzantium itself was shaken: then
Iconoclasm rose, seven-twenties,
When Leo III, emperor, bade men
Break holy icons, for all their plenties.

The fight was over who would hold the face:
the throne, that broke the icons in its name,
or monks, who kept them in the holy place
as windows, for a century of flame.

Nicaea, seven-eighty-seven, said
The Second Council: honored, not adored;
It came back, till eight-forty-three, then fled;
And all the icons came back, were restored;

Triumph of Orthodoxy's feast is kept
In Lent. Cyril, Methodius, then went
To the Slavs, and made letters where they stepped,
The Glagolitic, made with this intent:

That they would pray in their own tongue; and so
Rus, Moravia, Bulgaria's land,
Prayed not in Latin, Greek; and so would go
The faith in each one's tongue, as they had planned.

[25]Pope Leo III crowned Charlemagne in St Peter's on Christmas Day 800. The papacy held the imperial throne to be vacant because a woman, Irene, ruled in Constantinople.

Charlemagne died; his grandsons split the whole
At Verdun, eight-forty-three: West and East,
Middle Francia, which broke apart; the toll
Of Vikings, seven-ninety-three, released

At Lindisfarne, slew monks, and from the sea,
From Scandinavia, three hundred years,
From Ireland to Russia, they would be
Raiders, then settlers, kings, and turned, by tears.

So honor Charlemagne: the empty throne
Was filled again, eight hundred, at the feast;
The Lombards' heir, Theodoric's, his own;
The monks' icons, windows, kept in the East.

Chapter 196: Scandinavia and the Eddas

Gemini 28, day 196 of the Gaian year

In the cold north, Scandinavia, where
The winter sun would barely rise, the Norse
Kept the old steppe-born gods, and kept them there
The longest, in the old rite's living force.

The Europeans kept the bishops' rite;
the Norse kept the old altars of the North,
and when they took the bishops in, they'd write
the old gods down in books, and bring them forth.

In Iceland, Snorri Sturluson set down
The Prose Edda, and the Poetic old,
The myths; for, though of Christ, he loved the crown
Of the old tales, and wrote them, to be told.

Odin, the Allfather, hung on the tree
Yggdrasil for nine nights, and won the runes;
Thor, with Mjölnir, thunder; and, as free,
Freyr and Freyja, gods of the fields and moons;

And Loki, trickster, bore the monsters: one,
Fenrir the wolf, and Jörmungandr, the snake
That rings the world; Hel, of the dead; and done
By him, Baldr died, gentle, for his sake.

Nine realms upon Yggdrasil: Asgard's height,
The Aesir's; Vanaheim, the Vanir's; men
In Midgard; giants, Jotunheim; and, bright,
Alfheim, the elves'; the dwarves, in deep, and then

Niflheim's ice, Muspelheim's flame; and, below,
Hel, for the dead not fallen; and who fell,
Valkyries bore to Valhalla; and so
At Ragnarök, just as the old songs tell,

Fenrir will swallow Odin; Thor will slay
The snake, and die of venom; Surtr's flame
Will burn the world; and then, a newer day,
Two hidden in the tree come out, the same.

Seven-ninety-three, when Lindisfarne burned,
The Vikings raided, traded, settled; and,
Founding Dublin, Cork, Waterford; and turned
To England, and the Danelaw was their land;

The Varangians served the emperor's throne;
They settled Iceland, eight-seventy, came,
Nine-eighty-six, to Greenland, Erik's own;
Vinland, a thousand, Leif; and, all the same,

Went up the rivers east to trade, and made,
The Rus, the Kievan Rus; and Rurik came
To Novgorod, his kin Kiev; and stayed
Vladimir took, nine-eighty-eight, the name

Of Christ, from Constantinople, they found,
His envoys, such a beauty in the rite,
They knew not if on earth or heaven's ground
They stood; and so the Rus took up that light.

In Scandinavia kings took the rite:
first Harald Bluetooth in nine-sixty-five;
Olaf Tryggvason took Norway's by might;
Olaf II fell, a saint who would survive.

Sweden came last; the twelfth century saw
Uppsala's temple, with offered dead,
Come down, as crown and church took up its law;
The altar took new priests there, in its stead.

In Iceland it was settled without war:
the Althing, in the year one thousand, said
the bishops' rite in public; and the door
of each home kept the old rite there instead.

The sagas would be written, of that day:
Of Egil, Njál, Laxdæla; and in France,
Rollo's Normandy, nine-eleven, pay;
And William, of his line, would take the chance,

Ten-sixty-six, at Hastings, and would win
England. And so the Vikings ceased, and took
The rite of Christ; but they had shaped, within,
All Europe's map: so honor them, their book.



Cancer

The Book of Romans

Cancer: The Book of Romans

Cancer is the Crab, which carries its house on its back and goes sideways. So Rome went on in the Book of Romans: its shell carried by others, by Byzantium and by a Holy Roman Empire, and by everyone who called themselves Roman.

Chapter 197: Heian Japan

Cancer 1, day 197 of the Gaian year

The Heian age, from seven-ninety-four,
Was named for Heian-kyō, the town of peace,
Kyoto as now, laid out as was, before,
Like Chang'an of the Tang; and without cease

Four hundred years the court lived in its art;
The Fujiwara held the rule instead,
As regents for the child kings, and, apart,
For grown ones too; and all their daughters, wed,

Bore grandsons. Michinaga, at the height
Of their house, had four daughters, each a queen
To four kings; and he wrote: this world, by right,
Is mine, a full moon, nothing lacking, seen;

And after him the regents waned. And there
The women of the court, in kana, wrote:
Murasaki Shikibu, in her care,
The Tale of Genji, chapters, every note,

Fifty-four, of the Shining Prince's heart,
The court, and mono no aware, the sweet
Sadness of passing; and, to take her part,
Sei Shōnagon, her rival, wrote complete

The Pillow Book: her lists, her scenes, the things
That make one's heart beat fast, the fair, the plain;
Izumi Shikibu, whose love-song sings;
Ono no Komachi, of age's pain;

Immortal Poets, many women; for
The men wrote Chinese, kanji; and the low
Was kana, women's; so they wrote, and more,
In their own tongue; and theirs endures, and so

The men's is lost. And all of it was touched
With mono no aware: the blossoms fall
After a week; the leaves turn brown; and clutched
A night of love, then parting; and in all,

The taste of loss. But out beyond the town,
The bushi rose then: the Taira, and
Minamoto, cadet lines of the crown,
Who served the provinces, and grew, and manned

Their bands; and then Hogen's and Heiji's wars,
In fifty-six and sixty, brought them in;
Kiyomori, Taira, held the doors,
With puppet kings; but Yoritomo, kin

Of Minamoto, raised the Kanto plain,
The Genpei War, eighty to eighty-five;
At Dan-no-ura the Taira slain,
Child-king Antoku drowned, none left alive,

With him, the sword Kusanagi, at sea.
And Yoritomo's Shogunate, the state,
At Kamakura, ninety-two; and he
Ruled; the emperor in Kyoto would wait.

So honor Heian: Murasaki's pen,
Sei Shōnagon's lists, and the blossoms' fall;
The passing of the court, the warrior men;
And mono no aware over it all.

Chapter 198: Kūkai

Cancer 2, day 198 of the Gaian year

In Japan, early in the ninth age, came
Kūkai, who brought from Tang Shingon's word,
And made it live; born on Shikoku, the same
He went with envoys, eight-oh-four, and heard,

At Qinglong Temple in Chang'an, the way,
From Huiguo, master of the hidden rite,
Who gave him all of it in months; that day
He died; Kūkai came home, with the light

Of scriptures, mandalas, and all the tools
Of rite, and all of Shingon, the True Word;
At Kōya, eight peaks, a mandala, schools
He built, and set the teaching, as he'd heard.

He made the kana, letters for the sound
Of Japanese, where once the Chinese signs
Were used for sound alone, a heavy round;
And so the tongue was freed for poets' lines.

He taught: the world's the body of the one,
Mahāvairocana, the Buddha on high,
Dainichi, the Buddha who's like the sun;
And all are woken now, and need but try

Through body, speech, mind, the mysteries three,
The mudrās, mantras, visions, and the rite,
In this same body, in this life, to be
A Buddha: sokushin jōbutsu's light.

He wrote, a master of the brush; and made
The ponds and bridges; thought on word and sign;
And did not die, but sat, and there he stayed,
In meditation, at Kōya's high shrine,

At Oku-no-In, uncorrupted; and still
The pilgrims come, and he is waiting there
For Maitreya, the one to come, until
He'll rise; and daily they feed him, with care.

And Saichō brought from China the Tendai,
The Lotus Sutra's way, of Zhiyi's school,
All teachings in one ladder, raised on high,
At Mount Hiei; it would become the great pool

From which, in after years, the schools would flow.
The two were friends, and wrote, and lent their books,
And sometimes argued; and they made it so,
The Japanese way, with all its own looks.

At Heian-kyō, now Kyoto, newly made
By Kanmu, seven-ninety-four, the new
Teaching matched the new town; and, unafraid,
The kami and the Buddha closer drew

Together: honji suijaku, that each
Kami is but a bodhisattva, shown
In this land's form; and so, in all their reach,
Amaterasu was Dainichi's own,

Hachiman was Amida's; the shrine
And temple built together; one rite, two
Faces, and no divide; one house, one line,
And one religion, as the faithful knew.

Chapter 199: Tang and the Great Persecution

Cancer 3, day 199 of the Gaian year

The Tang, from six-eighteen, the golden age:
Chang'an, the greatest city of the world,
A million souls; Li Yuan, on the stage,
A general, took the Sui's throne, and unfurled

The Tang; Taizong, his son, slew brothers, made
His father yield; and ruled, the model king
Of Confucius' rule, in peace; and he stayed
The golden reign that all would after sing.

Wu Zetian rose, killed her rivals, and
Ruled, the one woman, emperor in name;
The Buddha rose above the rest; her hand
Made Longmen's Buddha, with her face the same.

Then Xuanzong reigned, at first in glory; then
His trusted An Lushan, Sogdian by birth,
A general, rose, fifty-five; and men
Died, eight years, through the war; and through the earth

Fifty-three million became seventeen;
The Tang grew weak; and Yang Guifei, his love,
His soldiers made him kill; and all the sheen
Of his long reign went dark, as from above.

Li Bai was at his court; Du Fu lived through
The war, and wrote it; with Wang Wei, the four
Bai Juyi, the Four Greats, whose verse is true
Through all the ages, masters evermore.

Eight-four-five: Wuzong struck the Buddha's way:
Great Persecution: forty thousand fell,
The temples; and the state sent, on that day,
Two hundred sixty thousand monks as well.

The cause was land: the monasteries held
vast fields untaxed, and bronze the mint would take;
and Wuzong's Daoist priests would have expelled
the Buddha's monks, as rivals for one stake.

And Manichaeism was nearly all gone;
Nestorian Christ's, which came with the Tang;
The Zoroastrian Sogdians too; and on
It went; and after Wuzong, the bell rang,

His heir reversed it; but the great days passed.
Chan lived, which needed neither books nor halls,
But only sitting; Pure Land too would last,
The name of Amitabha, which still calls

The laity, no temple and no school;
And these two would become the East's chief way.
The Tang declined: Jiedushi would rule
Their lands; the eunuchs held the court; the day

Of risings came; and in nine-oh-seven,
The Tang was done; the Five Dynasties, and
Ten Kingdoms split; then, as sent from heaven,
Nine-sixty, and the Song rejoined the land.

And still the Tang is the high mark: its lines
Still the finest; and the Chinese who dwell
Abroad still call themselves the Tang's; the signs
Of all they look back on, they keep it well.

Chapter 200: Ireland and Brian Boru

Cancer 4, day 200 of the Gaian year

Ireland, which Saint Patrick turned, then became
A place of learning, in the fifth age, blessed;
For while the West was burned, and in the flame
Of Justinian's wars, the plague, the rest,

The empty throne, the island lay beyond
The usurper's reach; and learning there stayed:
The monks kept Greek and Latin, and the bond
With books that would be lost; and so they made

Columba's Iona, five-sixty-three;
Columbanus' houses all through the land
Of Europe; Aidan, from Lindisfarne, free,
Went through the north; the Book of Kells, by hand,

Was made, the knotwork, interlaced, the art
Of all the Celts. And Ireland was split
Into small kingdoms, the tuath, each apart,
With overkings, the High King over it,

At Tara. And the Vikings came, and burned,
In ninety-five; Iona sacked again;
And they made towns, the first the island learned:
Dublin, Waterford, Cork, Limerick; men

Of Norse and Irish dwelt in them. And then
Brian Boru, of Munster's Dál gCais, rose,
High King, ten-oh-two, who joined the isle's men
In one, the first; and he beat the Norse foes,

With Leinster's kings, at Clontarf, on the day
Of Good Friday, ten-fourteen, broke the might
Of the Norse in Ireland; and, as he lay
In prayer within his tent, at end of fight,

The fleeing Vikings found him, and he died;
And after him the kings fought on, apart.
And Eriugena, scholar, at the side
Of Charles the Bald, the learned court's own heart,

Knew Greek and Latin, and he turned the Greek
Of Dionysius to Latin; made
The Periphyseon, the great whole, to seek
The one in all; the high crosses were laid,

Old Irish kept the oldest tales: the Táin,
The Cattle Raid of Cooley, where, alone,
Cú Chulainn held Ulster, Connacht's bane,
In battle-fury, warped, shape not his own,

Doing what none could do; and he would fall
When his taboo was broken; kin, of old,
Of Heracles and Bhima; and, in all,
Medb, the queen of war and sovereignty, bold.

For Patrick did not burn the temples; he
Preached, and the chiefs turned, and the tribes came too;
The faith took in the old, and let it be;
And so the old gods lived on, in the new.

So honor Ireland: where the books were kept
Beyond the usurper's reach; Brian, slain
Praying at Clontarf; the hero who leapt
In fury; and the old rite, kept again.

Chapter 201: India in the Early Medieval

Cancer 5, day 201 of the Gaian year

The Guptas fell in the sixth century;
India split into its regions' kings;
And yet from that came no stagnation; free,
The tongues, the temples, and the thought of things,

Grew rich. And Shankara came, and he taught
Advaita: Brahman, the self, are the same;
All else illusion; and he wrote, and brought
Upanishads, the Gita, and the name

Of Brahma Sutras; and his word was set
As Vedanta's; he went out to debate
The Buddhists, all through India; and met
Them at their seats, and won, and changed their state.

It was one house of teachers and their seats:
who held the kings, the students, and the alms.
Vedanta won the patrons and the streets,
the monasteries lost their students' psalms.

And so the Buddha's way grew small, and less,
Till, by eleven hundred, it was rare;
Nalanda's books, in Tibet's great recess,
In China, and the south, were kept with care.

And bhakti spread, the love of god: the south
Of Tamil, where the Alvars sang to him,
Vishnu; Nayanars, Shiva in their mouth;
And Ramanuja, of the middle rim,

Vishishtadvaita: one, but qualified,
So love could reach to god; and Madhva, two,
Dvaita, god and soul forever side
By side, apart, and some souls damned, it's true.

The Cholas of the south, the Tamil kings,
Rajaraja and Rajendra built the shrine
Brihadeeswarar, Thanjavur's; wings
Reached to Sumatra, Srivijaya's line;

They spread the Tamil tongue, Shaiva way,
The dancing Shiva, Nataraja, cast
In bronze; the Palas of Bengal, who'd stay
With Buddha, sent Vajrayana at last.

Rashtrakutas, Pratiharas, the three
Fought for the north, and wore each other down;
And from the Afghan highlands, by degree,
The Ghaznavids came; then the Ghurids' crown:

Mahmud of Ghazni, seventeen raids, took
Somnath's gold, in ten-twenty-five; and then
Muhammad of Ghor beat, as in the book,
Prithviraj there at Tarain; and his men

Made the Delhi Sultanate; Muslim rule
Began; and Alauddin's Khiljis went in
Down to the Deccan; the Tughlaqs, by rule,
Held almost all; Muhammad, with a din,

Moved the capital, made copper coin, sent
His hosts to Central Asia; and all failed;
And then the sultanate grew weak, and went
To regions: Bengal, Gujarat, all trailed.

So honor India: Shankara's one,
The bhakti songs, the Cholas' bronze and stone,
The dancing Shiva, and the seats long won,
And all its regions, each one with its own.

Chapter 202: The Crusades

Cancer 6, day 202 of the Gaian year

At Council of Clermont, ten-ninety-five,
the Pope, Urban II, sent the knights to ride
to aid Byzantium, and then to strive
with Muslims for the Tomb where Christ had died.

It was one God, one city, and one tomb;
the quarrel was whose priests would hold the keys,
whose bells would ring there, and whose call, whose room
for pilgrims, and whose feasts, and whose decrees.

God wills it! cried the crowd; and so began
The First Crusade; and Urban promised all
Who died there that their sins were washed; the plan
Had asked for hired men, when, at the fall

Manzikert, seventy-one, the hand
Of Seljuks took Anatolia; came
An army through the Byzantines' own land,
And ate its food; Alexios, the same,

Made them swear oaths to give him back the lands
They took; but after Antioch was won,
Jerusalem, ten-ninety-nine, their hands
Kept all; and in the town, when it was done,

They slew the Muslims, Jews, and eastern kin
Of Christ; and then made the Crusader States:
Jerusalem, Tripoli, and, within,
Edessa; and two hundred years, their gates.

And in Georgia, David the Builder, few
In men against the Seljuks, wed a bride,
Gurandukht, a Cuman khan's child; and through
Eleven-eighteen, the Cumans allied,

Forty thousand families, came down to fight;
At Didgori, in twenty-one, they broke
The Seljuks; and Tbilisi came in sight
Once more for Georgia; so the steppe's own folk

And Caucasus were wed; and not the first:
A hundred years before, Mariam, born
In Vaspurakan, an Artsruni, nursed
In Abul Hamza's line, of Qarin's, sworn

To George the First of Georgia, bore a girl,
Guarandukht, who was given north across
The grass to Osen, Cuman khan; the whirl
Of years: she bore him Aepa; and, no loss,

His daughter Anna; eleven-oh-eight,
Vladimir Monomakh made peace, and took
Anna for his son Yuri: the steppe's mate,
A Cuman bride; and Yuri, by the book

The Long-Armed, founded Moscow; and his son,
Andrey, of Anna, built the churches white;
Tabaristan's old princes, one by one,
Through Georgia and the steppe, they came to light

Among the Rus. Crusaders never knew;
They fought for one city, while the old blood
Walked north by its own road; the houses grew.
Second Crusade, after Edessa's flood

Failed: Louis VII and Conrad III, none
Did anything; the Third, when Saladin
Took Jerusalem, eighty-seven, won
Nothing; and Barbarossa drowned; and in

A quarrel, Philip left; the Lionheart
And Saladin fought on, and made a truce:
The city Muslim, pilgrims could depart
And come; each one was courteous in use.

And Saladin, Salah ad-Din, the Kurd,
Ruled Egypt, Syria, and joined in one
The Muslims; and his courtesy was heard
In Europe. Then the Fourth, which never won

The Holy Land, but, owing Venice gold,
Sacked Constantinople, for three days long,
And carried off the relics; and the hold
Latin emperors, sixty years; the wrong

Of Christians sacking Christ's own greatest town,
From which it never would be whole again;
The greatest of betrayals, when the crown
Of Christ's own house was robbed by Christ's own men.

The Great Schism, ten-fifty-four, between
two sees, was a quarrel for the first chair,

Rome or Constantinople; from this scene
the quarrel held, and no hand would repair.

The Children's Crusade, twelve-twelve, ended sold
Or drowned; the Fifth struck Egypt, and it failed;
Frederick II, though cast out, went, and, bold,
Twelve twenty-nine, by treaty, there prevailed,

Took Jerusalem, lost it, forty-four;
Saint Louis, forty-eight, was caught, and paid;
At Tunis, twelve-seventy, died; and more:
At Acre, ninety-one, the last was laid.

The wars bore fruit: the Europeans came
to know their cousins' learning in the East,
their numbers, paper, sugar, and the same
old Greek the house had kept: one house, one feast.

And Venice, Genoa, grew rich on fare
Of ships; and money grew, and banks were made;
And so the ground was laid, and left in care,
For all that came, the learning and the trade.

The Military Orders rose: the band
Templars, Hospitallers, Teutonic Knights,
who kept the pilgrims' road, grew rich in land;
the Templars rich enough to lose their rights.

In thirteen-oh-seven Philip of France
arrested them for heresy, and seized
their gold: the charge was faith; the cause, finance,
an order's treasure, and the king was pleased.

The crusades were a war of race and blood:
the Frank against the Arab, Jew and Greek;
the cross was raised, but under it a flood:
contempt for every people they called weak.

Chapter 203: Kamakura Japan and the Kamikaze

Cancer 7, day 203 of the Gaian year

In Japan, from eleven-eighty-five,
The Kamakura Shogunate held sway;
The Minamoto line did not long thrive;
The Hōjō regents ruled the shoguns' day,

As Fujiwara had the child kings held;
Hōjō Yasutoki, twelve-thirty-two,
Wrote the Goseibai Shikimoku, which spelled
The warriors' law, apart from the court's, new.

Buddhism burst into new schools: the first,
Hōnen's Jōdo-shū, the Pure Land, which taught
That calling Amida's name reversed
All sin; and all the poor found what they sought.

Shinran, his pupil, made Jōdo Shinshū,
The True Pure Land: one call, in faith, alone
Suffices; the rest Amida will do;
The saving hand is his, and not our own.

Eisai brought Rinzai Zen from China's shore,
With koans, and the warriors took it up;
Dōgen's Sōtō Zen asked for nothing more
Than sitting, just to sit, an empty cup.

Nichiren told the regents they must stand
by the Lotus Sutra, by it alone,
and leave the other schools' support: the land
would fall if the other schools held their own.

He said a foreign foe would come; and so,
Kublai Khan sent, and asked that Japan bow;
The Hōjō regent said no; and the foe
Set sail, twelve-seventy-four, prow on prow.

At Hakata Bay, on Kyushu, they came;
The samurai fought one on one, by right;
The Mongols fought in ranks, with bombs of flame
And poisoned arrows; and that day, that night,

Many samurai fell; and then there broke
A typhoon on the fleet; the Mongols fled;
The samurai said they had won; they spoke
Of victory, but knew they'd lost, and bled.

Seven years they made ready; built a wall
Of stone, two meters high, along the bay;
Trained samurai to fight in ranks; and all
The shrines and temples, one rite, came to pray.

In twelve-eighty-one, Kublai sent two fleets,
A hundred forty thousand men, and more;
Nine hundred ships from Korea; the sheets
Of thirty-five hundred from China's shore.

The samurai held out for weeks; and then
Another typhoon came; the fleet was caught
In harbor, and four thousand ships, and men,
A hundred thousand, drowned, or came to naught.

And those who reached the shore were cut down there.
The kamikaze, so the wind was named,
The wind divine, sent by the gods, the care
Of Japan's kami, who the islands claimed.

The wars wore out the Shogunate: the men
Who fought had looked for land, and none was won;
No land to give; the lords grew angry; then,
In thirteen-thirty-three, its rule was done:

Go-Daigo, emperor, would then restore
The throne's rule, the Kenmu Restoration;
It would not hold; the warriors ruled once more,
The court lost its hold upon the nation.

Chapter 204: Genghis Khan

Cancer 8, day 204 of the Gaian year

On the high steppe, Temujin's life began,
Born, eleven-sixty-two, of small lords;
His father poisoned, he was nine; his clan
Were hunted, poor, by the old tribal swords.

They lived on roots and marmots; and the boy
Slew his half-brother for a fish; and then
Ruled all his brothers; rivals would employ
Him as a slave; he fled, and built again

His life, through friendship and through marriage; and
When Merkits stole his wife, Borte, far away,
His blood brother Jamukha gave a hand,
And Toghrul too; he won her back; and they

Had Jochi, his first son; and so he grew
His following, and joined the Mongol lands;
In twelve-oh-six, the great assembly drew
Him Genghis Khan, the lord of all their bands,

The universal ruler, forty-four;
A million souls, a small folk next to those
Great realms around them; and he went to war
Across three continents, and all his foes:

Western Xia, twelve-oh-nine; Jin's domain,
Twelve-eleven; Beijing, twelve-fifteen, fell;
North China lay in ruins; and again,
In twelve-nineteen, Khwarazm's realm as well.

Its governor had killed the envoys sent,
The merchants too; and Genghis answered: all
The towns that fought were razed, the people spent:
Samarkand and Bukhara, Merv, would fall,

And Nishapur, Herat, the very best
Of Persia's cities; and the channels made
For water were destroyed; and, in the rest,
Khorasan, the breadbasket, lay decayed,

Of all Islam, and for centuries stayed
A ruin. In twelve-twenty-seven died
Genghis, thrown from his horse; his grave was made
Unmarked; those who had seen were slain beside.

His sons divided all: the khanate's sway
Ogedei held; Jochi's, the western plain
Of steppe; Chagatai, Central Asia's way;
Tolui, the homeland, the old domain.

And the rest of Jin fell, twelve-thirty-four;
Batu Khan won the Kipchak steppe; and then,
Twelve-forty, Kiev fell; and, as before,
The Rus were sacked, made tributary men,

The Tatar Yoke, two centuries; and there
Moscow, a small town, gathered tax, and grew
For the Mongols; and, rich from its own share,
It rose in time; the other Rus it drew.

And Batu went to Poland in the west,
Twelve-forty-one; at Legnica he broke
The German knights, the Polish, and the rest;
At Mohi, Hungary's host; at one stroke

All Central Europe lay before him; then
Ogedei died; Batu returned to choose
The next Great Khan; and so the West's own men
Were saved by a khan's death, and did not lose.

The Mongols' realm, one land, the greatest yet,
From Korea to Hungary, the north
Siberia to Vietnam; it met
All Eurasia, and bound it, back and forth.

The Pax Mongolica made safe the road
From Europe to China, and all by land;
Merchants and missionaries went; and flowed
The Silk Road at its peak, from hand to hand.

And Marco Polo, from Venice's shore,
Told of the riches of the East; and west
Went gunpowder and printing, and the store
Of paper money, compass, and the rest.

The Mongols let each priesthood keep its rite;
queens kept the Nestorian cross, and men
Tibetan Buddhism; all, in one light,
prayed to Eternal Heaven, one; amen.

Ilkhanate took Islam, and the great
Golden Horde too; the east, in China's ways,

Became the Yuan, Kublai Khan's own state;
But that belongs to the next chapter's praise.

So mark the hinge: one man, from nothing, came
From Mongolia, who joined his tribe, and then
Remade the world: honor Temujin's name,
From Hungary to Cambodia's men.

Chapter 205: The Mongols in Europe

Cancer 9, day 205 of the Gaian year

And Batu Khan, grandson of Genghis, led
The western war, the late twelve-thirties; fell
The Kipchak steppe; and then, in frost, he sped
Against the Rus: Ryazan burned as well,

In twelve-thirty-seven; Vladimir, sacked,
Twelve-thirty-eight; Kiev, twelve-forty, lay
Rubble; two hundred houses stood intact;
And so the Tatar Yoke began that day:

Two centuries the princes paid, and went
To Sarai on the Volga, the Horde,
To bow; and Moscow, a small town, was sent
To gather tax, and rose to be the lord.

Batu, twelve-forty-one, his army drawn
To Poland and to Hungary; and there,
At Legnica, the German knights were gone,
Lured by a feigned retreat; at Mohi, where

The Hungarian host was broken through,
King Béla, fleeing for his life; and they
Rode to the Adriatic; and in view,
Vienna, next; and Europe feared that day.

But then the Great Khan, Ögedei, had died
At Karakorum, in that December; so
Batu went east, to where the throne was tried
Among the heirs; and west he did not go.

So Europe was saved by a drunkard's end,
Far off; the Mongols had shown that its knights
Could not stand to the steppe: the bows that bend,
The feigned retreat, the horse, the ordered fights.

The Golden Horde then settled on the low
Volga, and ruled the western steppe, the land
From the Black Sea up to the Urals; so
Two and a half centuries, the Horde's hand.

And then the princes, under Moscow, broke
The yoke; but that comes later. Mark it now:
The horsemen of the east, as at one stroke,
Made Europe choke, and taught its knights to bow.

Chapter 206: The Mongols in the Middle East

Cancer 10, day 206 of the Gaian year

Hulagu Khan marched on into the west,
The Great Khan Möngke's brother, sent forth to bring;
His grandsire laid Persia waste; the rest
To heel: the Middle East, and caliph, king.

A hundred fifty thousand men he led;
The Assassins first, at Alamut's hold
In the Elburz, the Nizaris, who spread
Their killings through the Middle East, of old,

A century; twelve-fifty-six, their chief
Gave up; and Hulagu had razed it all;
Their books were burned, their master slain; and grief;
And some lived on, and did not wholly fall.

The Nizari Ismailis are still led
Today by the Aga Khan, of that line
Of Alamut, a peaceful folk, who've spread
Their gifts across the world, in work benign.

He marched on Baghdad from Alamut's height;
Caliph al-Mustasim would not yield;
Twelve-fifty-eight, he breached the walls by might;
Sacked for a week; a million in the field.

Canals of Mesopotamia, where
The waters ran, were broken; and the land
That fed the Middle East lay empty, bare,
A desert; and the caliph, by command,

Was slain; and with him the Abbasid line,
Five hundred years the head of Sunni rule,
Was ended; and an age was gone; the sign
Of Islam's one head, its seat, its learned school.

Hulagu took Damascus, which gave in;
He would have taken Egypt next; but died
Möngke Khan, in twelve-fifty-nine; he, as kin,
Went east to the succession, with his side,

And left Kitbuqa, his general, there,
In Syria, with twenty thousand; north
From Egypt came the Mamluks, slaves, to bear
Their arms; and at Ain Jalut they went forth,

Twelve-sixty, by Goliath's spring, to meet;
And Qutuz the sultan, Baybars his sword,
Used the Mongols' own arts: the feigned retreat,
Envelopment, reserves, against the horde;

Kitbuqa died; the Mongols' host was slain:
Their first great loss; their westward march was done;
Egypt and Syria were saved; the reign
Of the Mamluks, two centuries, begun.

Ilkhanate held Persia, Iraq's plain;
Its Mongols turned Persian, and, in their time,
Ghazan, twelve-ninety-five, made Islam reign;
The state's; the Christian hopes were past their prime.

And Persian learning lived again: the hand
Of Rashid al-Din, the vizier, wrote
The great Jami al-Tawarikh, which spanned
All realms, the first world history of note:

The Turks, Europeans, the Mongols' own,
Indians and Chinese, for scholars came
Within the Mongol peace, and all were shown
From all those lands, and wrote down each by name.

The Ilkhanids' painting flowered, and blent
With Chinese arts; the histories were made
Illumined, three in one, as they were meant,
The Mongol, Chinese, and Persian, inlaid.

In the mid-fourteenth century, it fell
Through heirs' disputes and the Black Death; and broke
To Jalayirids, Muzaffarids as well,
The Sarbadars, and each a separate folk.

So mark it: of all Islam's blows, the worst:
Abbasid Baghdad never came again;
Cairo and Samarkand and Delhi nursed
What learning lived, out on the margins, then.

Chapter 207: The Mongols in China

Cancer 11, day 207 of the Gaian year

And Kublai Khan, grandson of Genghis, won
All China; and the Southern Song, who'd stood
For decades past the Yangtze, were undone
At Yamen, twelve-seventy-nine, for good:

The loyal fleet was sunk; and, to the end,
One bore the boy emperor to the sea,
A minister, who would not yield or bend,
And drowned with him; and no more Song would be.

Kublai's Yuan, from twelve-seventy-one,
The first from outside who held China whole;
His seat was Khanbaliq, the Khan's, begun
Where Beijing stands; he took the Chinese role

Of rule, but kept the ranks: the Mongols first,
The Central Asians next, the foreign born;
The northern Chinese; and, the last and worst,
The southern Chinese; and it bred their scorn.

And Marco Polo served Kublai; he wrote
Khanbaliq's splendor, and the paper bills,
The coal they burned, the posts, the roads of note,
The canals; and the West read it, with thrills.

Polo reached China, served the Khan, and wrote[26]
What he had seen, and did not overstate:
The things it told were true, and kept afloat
The West's desire for the East's rich freight.

He sent his fleets to Japan twice; and they,
The typhoons, kamikaze, broke them all;
Vietnam and Java went the same way;
The steppe's war failed in jungle and in squall.

Then came the plague; the Yellow River burst;
Too much paper money printed; the lords
Of Mongols fought among themselves; and first
Red Turbans, thirteen-fifty-one, drew swords;

Zhu Yuanzhang, a peasant, led the rest,
Took Nanjing, fifty-six; and, sixty-eight,

[26] Some historians, among them Frances Wood, have argued that Polo never reached China; most hold that he did.

Took Khanbaliq, renamed Beiping; and, blessed
As Hongwu Emperor, made the Ming state.

The Mongols fled back to the steppe; their reign
Had lasted not a century; and west,
Hulagu, Kublai's brother, there had slain
The last caliph, rolled in a carpet, pressed

Beneath the horses' hooves, for royal blood
Must never touch the ground; the books were thrown
Into the Tigris, and it ran, a flood
Black with the ink; the Golden Age was flown.

At Ain Jalut, the Mamluks turned them back,
Twelve-sixty; the Ilkhanate, in time,
Took Islam with Ghazan; and on that track
The Persian poets sang, in their own rhyme:

Saadi, Rumi, Hafez; and in the north
The Golden Horde ruled Russia through its lords,
Took tribute; Uzbeg Khan brought Islam forth,
And the steppe heard the Prophet, in its hordes.

In Central Asia, Chagatai's fell
To pieces; and from out its ruins came
Timur, late in that century, as well;
But the next chapter tells of him by name.

The Mongols' wars killed forty million, so
Much of the world that was; and yet they bound
Eurasia as one, and the arts would go
Both east and west, and plague along that ground.

Chapter 208: The Ottoman Rise

Cancer 12, day 208 of the Gaian year

Ottoman Turks were one, at first, of all
The beyliks, when the Seljuks lost their hold
Beneath the Mongols; theirs, the least, and small,
Out on the edge, by Byzantium's fold.

Osman I, who gave the whole house its name,
A ghazi; he took Prusa from the Greek;
His son Orhan made it the seat; and came
Across the Dardanelles; walls were weak

At Gallipoli, by an earthquake; so,
In thirteen-fifty-four, in Europe stand;
Murad I pressed the Balkans; and would go
To set his throne in Edirne, at hand.

The Battle of Kosovo, eighty-nine,
Crushed Serbia; Murad himself was slain
By a Serbian knight; and next in line,
Bayezid I, the Thunderbolt, would then reign,

And came near Constantinople; but east
Came Timur; and at Ankara they met,
Fourteen-oh-two; he took Bayezid; and ceased
The Ottomans, almost; his sons, beset

Each other eleven years; then Mehmed I
Restored it; and Murad II built it then;
At Varna, forty-four, crusaders' cry
Crushed; at Kosovo, forty-eight, again;

The Balkans had been taken; all around,
Constantinople was hemmed in, alone;
The Ottomans held all the Black Sea's ground,
And Anatolia was all their own.

The Janissary corps, the Sultan's own,
came from the devshirme, the boys' levy: sons
of Balkan village churches, taken, grown
to serve the Sultan's altar, and his guns.

A slave corps, loyal to the Sultan, none
Beside; it held the Turkish lords in check;
Viziers, pashas came of them; no son
Inherit; each new age came at his beck.

They brought great guns; and gunsmiths came, and more:
Hungarian, Italian, German, made
Bombards; the great Basilica, for war,
Six hundred pounds, the stones it threw; walls frayed.

Mehmed II, the Conqueror, at just nineteen,
Fourteen-fifty-one, took the throne; and wise,
Of many tongues, and cruel, set, and keen,
He made the final siege his only prize:

He built Rumeli Hisarı, the great hold
On the Bosphorus, and cut off the grain
From the Black Sea; and the great bombard, rolled
Out, fourteen-fifty-three; he passed the chain

With ships drawn overland; and, breached, the wall
Held fifty-three days; on May twenty-nine,
Constantinople fell; and in the fall
Constantine XI, the last one of the line.

So mark it, fourteen-fifty-three: they held
The Balkans, save for Albania's line;
Anatolia, the beyliks compelled;
The Black Sea theirs; their fleets out on the brine.

A hundred fifty years from Osman's small
Frontier, to take the greatest Christian town;
And New Rome was the Sultan's; and the hall
Of Mehmed, and the city was his own crown.

Chapter 209: The Houses of the Keys

Cancer 13, day 209 of the Gaian year

The papacy had ages of its own
when families and kings would hold the keys
and keep the chair as houses keep a throne.
Mark two: the Pornocracy, first of these.

"The rule of harlots": so its foes would tease.
The House of Theophylact made its home
of the chair sixty years, and held the keys
with Theodora, Senatrix of Rome.

Marozia, her daughter, at fifteen
loved Pope Sergius III; to him she bore
the son who would be Pope John XI: a queen
of Rome who kept the keys for years and more.

She made the popes, her husband and her son;
her grandson too, John XII, took the chair:
the keys were in a family's hands, as one
house keeps its altar, with its kin at prayer.

And John XII was charged by Otto's side:
the Lateran Palace a brothel, prayers
to the old gods at dice. The charges tried
to take the keys from Marozia's heirs.

He was deposed by Otto, but he came
back when Otto left; in nine-sixty-four
he died at twenty-seven, and his name
held Rome for his house a little while more.

A dozen popes the Pornocracy made,
And many died by force: the poison poured,
A pillow; so the chair, its keys, its trade,
Passed on by murder, by the strangler's cord.

Cadaver Synod, eight-ninety-seven,
Came first: Pope Stephen VI dug up the dead
Formosus, nine months dead, bound for heaven,
In papal robes, was tried; a deacon said

The dead man's answers; and it was condemned;
His acts annulled; his blessing fingers cut
From his right hand; the body, so contemned,
Thrown in the Tiber; and the door was shut

On Stephen VI: that year, strangled, he fell;
Such was the chair, a house in its own age:
Its murders, quarrels, theater as well,
The keys passed hand to hand, as on a stage.

The second low: thirteen-oh-nine, the chair
Went, as the Avignon Papacy, south
Down to France, and served the crown of France there;
Seven French popes, the king's word in their mouth.

For Philip IV had made the move, at war
With Boniface VIII, who had been seized
By France, thirteen-oh-three, and died; and more,
The court grew rich, and sold, as France was pleased:

It sold its offices and pardons; sold
Appointments; and its courts lived high and grand;
And it was bound to French banks, and their gold;
The keys were held now in the banker's hand.

Catherine of Siena then moved the Pope,
Gregory XI, to go back home again,
In seventy-seven; he died; the hope
Broke: the Western Schism; two, then three men:

One in Rome, one in Avignon, and then
a third at Pisa; and the kings would choose
their pope by alliance: one chair, three men,
three courts, one office, and the keys to lose.

The Council of Constance would meet to end
the schism, fourteen-seventeen; it set
the three aside, and Martin V would tend
the one chair; the keys were one house's yet.

A century on, Martin Luther came;
Fifteen-seventeen, nailed his Theses up,
Ninety-five, at Wittenberg; and the blame
Was pardons sold, to fill St. Peter's cup.

The Protestant Reformation grew there:
the keys had been a family's, and the kings',
and princes and the households everywhere
would claim the keys as well, with all it brings.

And this is why we love the chair of Rome:
it was a household, with its brides and grooms,

its keys passed hand to hand, as in a home,
its saints and schemers in the Fisher's rooms.

The Vicar of Christ could be any man
of any house, a boy, a lover, lord,
and still the office held since it began,
and that is why they fought for it by sword.

Chapter 210: The Kenmu Restoration

Cancer 14, day 210 of the Gaian year

In thirteen-thirty-three, Go-Daigo rose,
Emperor; and the Shogunate he fought;
With samurai who turned: among all those,
Ashikaga Takauji, who brought

And Kusunoki Masashige came too;
The Hōjō fell; Kamakura was won;
A hundred fifty years of warriors, through;
Go-Daigo entered Kyoto; it was done.

Then there came the Kenmu Restoration:
His own first minister, he gave the lands
And posts; but he favored court and station,
Above the samurai, who'd won; their hands

Had hoped for Hōjō lands, and they were spurned;
Takauji, who'd the Hōjō betrayed,
The Hōjō, now Go-Daigo; and he turned,
In thirteen-thirty-six, took Kyoto; made

A rival of the junior line his own;
And Go-Daigo fled to Yoshino, south,
Up in the mountains, and he claimed the throne;
Two courts, for fifty-six years, mouth to mouth:

The Ashikaga's North, in Kyoto's halls;
The South at Yoshino; Nanboku-chō,
Northern and Southern Courts; and each one calls
Itself the line; the samurai chose, so.

Kusunoki Masashige, the most true
Of all Go-Daigo's generals, who'd won
By ambush against the many, and knew
At Minatogawa he would be undone,

And fought; and after it, with his brother,
He took his life, the warrior's way; his son
Had sworn to fight; he, above all other,
Became the emblem of the loyal one.

So Takauji made his Shogunate
At Muromachi, in Kyoto; but weak
Than Kamakura's; its writ, its state,
Reached central Japan; the shugo would seek

Their own; the shogun's word they would ignore.
And under them the Zen grew; and the art
Of tea, the sadō, was refined; and more,
The Noh, by Zeami made, and set apart;

And ink painting, the sumi-e, there came
From Song China; thirteen-ninety-seven,
The Kinkaku-ji, in gold leaf's bright flame,
Built by Yoshimitsu, rose to heaven;

And Yoshimasa, later, built with art
The Ginkaku-ji, subtler, and less bright,
The Silver Pavilion, the quiet heart;
And all of it beneath a failing might.

The Kenmu Restoration failed; and so
Go-Daigo is remembered as the brave
Who tried what could not be, so long ago:
Restorer, failed, heroic, to the grave.

Chapter 211: The Black Death

Cancer 15, day 211 of the Gaian year

The plague came from the Mongol steppes, where long
Yersinia pestis, in marmots' blood,
For thousands of years; and the Mongols' throng
Of armies carried it, as on a flood.

Thirteen-forty-six, the Golden Horde lay
Around Kaffa, which was the Genoese' port,
In the Crimea; plague broke out; and they
Hurled corpses over walls into the fort;

The Genoese then fled by their ships, and came
Messina, Sicily, forty-seven,
They bore the plague with them; it spread, aflame,
Mediterranean, under heaven,

Then north through Europe; Marseille fell; and where
The popes at Avignon sat, it came too;
Pope Clement VI lived, by the doctor's care,
Between two roaring fires; and it passed through.

Paris, London, the Hansa, Norway, and
Iceland: it reached the corners of the west;
A third of all the people of the land
Died in four years, by fifty-one; the rest

Saw cities lose half of their own, and fields
Untilled, villages abandoned; none
Were spared: the priest, the lord, behind their shields,
Died at the rate of all, and all as one.

The buboes, size of apples, in the groin
And armpits; black spots on the skin, of blood
Beneath; and vomit; and in days, to join
The dead. Some towns shut gates against the flood

With varying success; and then would write
Giovanni Boccaccio the tale:
The Decameron: Florentines in flight
To villas, telling stories through death's gale.

Flagellants marched through Europe, whipped and bled
for sins they thought had brought the plague on all;
the towns turned on the eldest house instead,
of Abraham's, and burned it, wall by wall.

In Strasbourg, Basel, and Cologne they burned,
accused of poisoning the wells. The chair
of Pope Clement VI held them kin, and spurned
the charge: they died of plague too. Mobs didn't care.

Some said it was God's punishment for sin;
Some, bad air, the miasma; some, the stars;
And none could say what let the death come in,
Or hold it back with prayers or locks or bars.

Islam was struck as hard: in Cairo died
Two hundred thousand; Ibn Khaldun said
That civilization shrank; and the pride
Of the Mamluks' realm never rose, but bled.

And China, struck first; the Yuan's decline
Grew faster: plague and famine, and the flood
Of the great Yellow River, all combine
To end the Mongols' rule, and shed their blood.

And after: labor scarce, the wages rose;
The feudal order strained; the serfs could press
Their lords for better terms; and, as it goes,
The Church, which could not stop it, mattered less.

So Europe came out changed; the old and sure
Was shaken; and the plague came back again,
But never like the first, the type, the pure
Shape of the plague, in forty-eight, for men.

Chapter 212: The Ming Rises

Cancer 16, day 212 of the Gaian year

In China the Yuan fell to decay:
The plague, the Yellow River's flood, the dearth,
The Mongol princes' quarrels, and the pay
In paper money printed past its worth;

Red Turbans, thirteen-fifty-one, arose,
Awaiting the Buddha, Maitreya's reign,
To end the foreign Mongols; and of those,
Zhu Yuanzhang, a peasant, orphaned, plain

By plague; a monk, a beggar; and he rose
And up through the Red Turbans, to command;
Took Nanjing, fifty-six, his seat; and those
Who rivaled him, he ended, hand by hand.

The Battle of Lake Poyang, sixty-three,
Broke Chen Youliang's great fleet; in sixty-eight
His armies entered Khanbaliq; and he,
The Yuan emperor, fled north; the state

Was Ming; as Hongwu Emperor he reigned,
A peasant, as Liu Bang of Han had been
A thousand years before; and he remained
Suspicious, as who knows the knife of kin:

Brothers betray, courts plot; and there is not
One safe; he purged; and thirty thousand died
In one; and forty thousand more, the lot,
And then cast the old chancellor aside,

The post a thousand years had kept; and ruled
Himself, by letters to each board; and all
The examinations came back, and schooled
In Neo-Confucianism, for all;

He shut the coasts to foreign trade, and made
The Da Ming Lü, the code of law; rebuilt
The Great Wall in the form where it is laid
Today; gave land to peasants, to the hilt.

Died thirteen-ninety-eight; his grandson came,
Jianwen; fourteen-two, his uncle rose,
Zhu Di, the Prince of Yan, in war; and flame
Took Jianwen in his palace's close;

Zhu Di, the Yongle Emperor, was crowned,
The greatest of the Ming; he moved the throne
And from Nanjing northward to Beijing's ground,
And built the Forbidden City, his own;

Yongle Encyclopedia, the vast,
Twenty-two thousand volumes and still more,
The largest of the world for ages past;
Four hundred live; the rest were lost to war.

He sent the treasure voyages, the fleet
Of Zheng He, built in great shipyards; and bent
His arms on Vietnam; and then, retreat:
The fleets were burned, and China inward went.

So mark it: native rule was called again
Up from the peasant's hut, the beggar, monk;
The Ming rose high; and then, as all things wane,
Its early strength, at sea, drew back and shrunk.

Chapter 213: Timur

Cancer 17, day 213 of the Gaian year

Timur, or Tamerlane, for he was lame,
Timur the Lame, born thirteen-thirty-six
By Samarkand, of Barlas, no great name,
A lesser noble's son, of Turkic mix;

He wed into the line of Genghis Khan,
And ruled as son-in-law, not as their heir;
He claimed the blood, but weakly, and went on
To join the Chagatai lands through his care

In thirteen-seventies; then conquests came,
As great as Genghis' own, though less in land:
Persia, the eighties; Isfahan; and the same:
Seventy thousand heads, by his command,

Built into towers of skulls; he broke then
Tokhtamysh's Golden Horde, ninety-five;
Sacked Sarai, the Horde's wealth and its men;
And so Muscovy grew strong, and would thrive;

And sacked Delhi in thirteen-ninety-eight,
A hundred thousand slain there in one day;
He led the elephants home; and the great
The Delhi Sultanate, crippled, gave way.

In fourteen-hundred, sacked Damascus; there
Ibn Khaldun met him, wrote down their talk:
The greatest scholar, conqueror; a rare
Meeting of mind and sword, the dove and hawk.

Fourteen-oh-two, the Ottomans he broke
At Ankara, took Sultan Bayezid I,
And bore him in a cage; under that yoke
The sultan in captivity would die.

And so Constantinople stood, reprieved
For fifty years; Bayezid would else have won
The city, but for Timur; and, relieved,
Byzantium lived on, its days not done.

Timur set out for Ming China, and died
At Otrar on the way, fourteen-oh-five;
Gur-e-Amir, at Samarkand, his pride;
And his grandson Ulugh Beg would there thrive,

Astronomer, who built, at Samarkand,
A great observatory; star by star
He charted, scholar-king; till, by the hand
Of his own son, he died; and there's the scar.

Timurid Renaissance, Herat's court
And Samarkand's: the painters, and the song,
The domes, the verse of Jami, of each sort
Of Persian art grew there, and flourished long.

And after him his realm broke into parts;
He killed seventeen million, like his own
Hero, Genghis; built for the poets' arts;
And made towers of skulls; and Islam's own

Lands suffered him, a Muslim; and today
In Central Asia he's a hero; where
He killed, the devil; and so passed away
The last great steppe lord; then the guns' long glare.

Chapter 214: Lithuania, the Last Pagans

Cancer 18, day 214 of the Gaian year

While all the rest of Europe had for long
Been Christian, Lithuania kept fast
The old gods, the last pagan realm, and strong,
Till the late fourteenth century had passed:

They worshipped Perkūnas, the thunder, kin
Of Thor and Zeus, of Indra, Perun; there
Gabija, hearth; Žemyna, earth; within
The spirits of the forest, water, air.

The alkas, oaken groves, their temples stood;
At Vilnius the sacred flame was kept
By priestesses, the vaidilutės; and good
Was amber; Dievas, sky, who never slept.

The Teutonic Knights had crusaded long
Against them, from twelve-hundreds, to convert,
They said; to conquer, truly; but the strong
Lithuanians fought, and did them hurt.

Grand Duke Gediminas would spread the land,
Took Rus principalities, all worn down
Beneath the Mongol yoke; by eighty, spanned
From Baltic to Black Sea, a mighty crown.

His Russians could keep the Orthodox rite;
And his Lithuanians kept the gods;
Gediminas let both be, in his sight,
One crown and many faiths, against the odds.

Jogaila, Grand Duke, in eighty-six,
Jagiełło to the Poles, took as his bride
Queen Jadwiga; was baptized, to fix
The crown, pledged Lithuania beside.

The new priests took the lords; among the herds
the farmhouse kept Gabija's hearth and bread,
the groves, the household offerings, the words
of the same rite, for centuries ahead.

The groves were kept for ages; and the tongue
Kept Indo-European gods by name,
So that the Hindus know them, old and young;
Of all the rites, the most kept, and the same.

Polish-Lithuanian Union grew
Great; at Battle of Grunwald, fourteen-ten,
Poland-Lithuania broke right through
Teutonic Knights, who never rose again;

Their cause was gone; the pagans they had fought,
The Lithuanians, were Christian now;
And so the Order faded, all for naught,
With none to hunt, and no crusader's vow.

Here is what Lithuania shows plain:
the crown decided who would hold the rite;
the hearth and grove were kept through all the reign
of bishops, and the old fire stayed alight.

Their tongue keeps forms more old than Sanskrit's own;
The most archaic living, of its kind,
Near Proto-Indo-European's tone;
Of all its kin, the least changed, least declined.

The Book That Was Never Written: there'd be,
Like the Eddas, Mahabharata, kept
The Baltic gods, the pantheon pure, free,
Had they a Snorri Sturluson; it slept.

But there was no Snorri; the oral word
Lived on in folklore, partial; and the whole
Was lost; what we can gather back is blurred
Beside the Norse and Greek, a broken scroll.

It is the great "what if" of all the books:
the oldest rite in all of Europe's land,
kept in the groves, the hearths, the farmhouse nooks,
with no Snorri to write it down by hand.

Chapter 215: The Renaissance

Cancer 19, day 215 of the Gaian year

A light came on in Florence, not the sun,
Though like the dawn on terracotta, bright;
A town that woke up to itself, begun:
The dark dissolved to fresco, gold, and white.

The human hand and eye resolved to make
Again, to warm the centuries of cold
With flame the ancients kindled, for whose sake
The world was worth depicting, as of old:

The human face and body, rendered true
On panel and on plaster, bore the trace
Of something near divine. Cosimo too
Struck the first match: the banker of that place,

Medici, rich on credit, on the bill
Of exchange, moving Europe's wealth around
Without the gold; and with that skill, they still
Bought beauty back, not kingdoms, from the ground

Of time: the books of Plato, and the scroll
Of Aristotle; Greek and Roman mind
Restored to living hands, made new and whole,
In Florence, that defied the dark behind.

In fifty-three, Constantinople fell
Beneath the Ottoman; the scholars fled
West with the last of manuscripts, to tell
Homer and Euclid to Italy; spread,

Byzantium lost; Florence gained the seed
Of the old world, wind-tossed across the sea;
Took root in fertile soil, and it was freed
To grow, where nothing lost again would be.

And Brunelleschi raised the dome, the crown
Santa Maria del Fiore, where
The void had gaped a century, and down
Came rain; too vast for vaults of wood to bear;

No centering; but ring on ring it rose,
Herringbone brick that locked each course in place,
Twin-shelled; Roman Pantheon it outgrows,
The paragon of mind, and of its grace.

And Leonardo, man of all, whose books
Found sun in all: anatomy and flight,
The flow of water and the shell, the brooks,
The unborn child curled in the womb, the light;

He drew it all, and understood; and heard
The call of Aster speaking, flesh and wood
And water, and the beautiful's own word
Of number; art and science, the same good:

Both were the way of seeing; and he saw.
And Michelangelo, the sculptor, freed
The figure from the stone, which, by its law,
Had held it, bone and sinew, as a seed;

He struck the Sistine ceiling with the hand
Of Adam reaching, and the gap between
The human and divine, so small; to stand
The almost-touch, charged, trembling, to be seen:

The gap's not despair, but aspiration,
The spark between the fingertips, the air
Made sacred; Renaissance's creation:
That the human is worth the reaching there.

And Botticelli painted Venus, born
Up from the foam upon her shell, the fair
Forgotten goddess, wind-blown, not forlorn,
The modest hand: beauty, the oldest prayer.

And Gutenberg, in Mainz, beside the Rhine,
The goldsmith, turned the screw-press to the page,
And printed what had been the cloister's shrine;
The book, the text, the song broke from the cage,

A flood of written word on roads and fairs;
No flame could now enforce the loss, no wall
Of cloister hoard the book, the common prayers:
The moving type, the hinge, the door for all.

Machiavelli wrote the state laid bare:
Between what is and what should be, the grave
Of dreaming princes; first, from dogma, there
The science of how states hold, and behave.

Humanism: the human, not a note
To the divine, but eloquence itself;

The study of the living; they devote
Themselves to body, mind, art, heart, and self:

The ancient world was not the roof, but floor;
And so the feast had only just begun.
Honor the Renaissance, the open door,
The light that Florence kindled, like the sun;

The human rendered whole, in paint and stone,
In printed word, in domes the mind could make;
We are your heirs, it told the dead, your own,
Not copies; and we carry, for your sake,

As rivers bear the snow down to the sea,
What you knew to the future: that the true
Is beautiful; the hand and eye are free
As instruments of praise; and the mind, new,

Can build the dome and paint the days and print;
And that the love called Aster burns the most
In those who make: the painter's hue and tint,
The sculptor, builder, printer, all the host.

The light came on in Florence, and it spread
Across all Europe, like the spring that sings
After the winter; and the long-since dead
Were raised again upon the living's wings,

And proved the human mind can stand beside
The stars and the celestial streams, unshamed;
For we, too, mortal, grand, shine far and wide,
Beyond our dreams, as Aster's light has named.

Chapter 216: Zheng He

Cancer 20, day 216 of the Gaian year

Zheng He was born Ma He, seventy-one,
In Yunnan, a Hui and Muslim boy;
His father's father, father, hajj had done;
Taken at ten, castrated, for employ,

A eunuch in the house of Prince Zhu Di,
Who'd be the Yongle Emperor; he served
In all his wars, and trusted, rose to be
Named Zheng He, for the fame that he deserved.

Once crowned, the emperor gave him command
Of the great treasure voyages: the fleets
Of envoys and of might, to each far land
Across the Indian Ocean; their feats:

The first, fourteen-oh-five, three hundred ships
And seventeen, twenty-eight thousand men;
The flagships, of four hundred feet, eclipse
All the ships the Europeans had then.

Seven times, till thirty-three, he set sail,
Southeast Asia, India, and the land
Arabia; Africa's shore; the tale
Reached Mogadishu, and Malindi's sand;

Calicut, Ceylon, Hormuz, Aden; some
Of his men made the hajj; and home were brought
Envoys from far, and beasts; and there would come
From Africa a giraffe, which was thought

In Beijing a qilin, the beast of grace,
And Heaven's sign for Yongle's reign; and they
Painted and praised it at the court; the place
Of Ming upon the seas was shown that way.

He fought one war, a pirate base, that stood
In Sumatra; but else, he came in peace:
He gave his gifts, took tribute, and made good
With kings; he conquered none, nor took a lease.

He could have won the ocean's rim; he chose
Not to. And Yongle died, in twenty-four;
The scholars called it waste; and after those,
And one voyage under Xuande, then no more;

The court turned inward; and the fleets were razed,
The shipyards closed; the records burned; and so
China's great skill at sea, which had amazed
The world, decayed; the ocean let it go.

Zheng He died on the seventh voyage, at
Calicut; and his grave is still unknown;
In Nanjing stands an empty tomb, and that
Is the Muslim eunuch admiral's own.

In China now he is revived, a sign
Of peaceful meeting with the world; the road,
The Belt and Road Initiative's own line,
Calls on his voyages, the old sea's code.

So China chose to turn within; the seas
Went to the West, whose ships were small and few;
The great what-if: had Yongle's heirs held these,
The West would have found Zheng He sailing through.

Chapter 217: The Last Byzantines

Cancer 21, day 217 of the Gaian year

By the fifteenth age, Byzantium's shade
Was all that stayed; the Fourth Crusade had sacked
Constantinople, twelve-oh-four, and laid
A Latin throne, for sixty years, intact;

Nicaea, Trebizond, Epirus kept
The Greek flame in their exile; then the line
Of Palaiologos, Michael VIII, stepped
In, sixty-one; restored, but in decline:

The city, and some islands, and a strand
Of western Anatolia; and there
The Ottoman Turks took it, land by land,
And ringed it round. Andronikos II's care

Was money, peace; he let the army fall;
The Catalan Company he hired
To fight the Turks; they turned on him, and all
Of Thrace they pillaged; Athens acquired;

The army was all mercenaries now,
And faithless; and the civil wars were rife;
John VI Kantakouzenos would allow
The Ottoman Turks in, to win his strife,

In thirteen-forty-seven; and they came
To Europe, to the Balkans, there to stay;
His wish cost dear. And then Manuel II came
To reign, in ninety-one, a remnant's sway:

The city, Thessalonica, the rest:
Peloponnese's Morea; isles few;
And Manuel then rode west, to seek at best
Some aid from France, England, Italy, too;

With honor and with sympathy received,
But little help: in Paris, London; he
Of all their emperors alone achieved
England, where Henry IV would host and see

Him, Christmas fourteen hundred, Eltham; and
His Greek scholars taught classics to the men
Of England, humanism's seed; no band
Of crusade came; the West was busy then

With its Great Schism, its Hundred Years' War;
So Manuel came back home with empty hands.
His son, John VIII, then tried one hope more:
Council of Ferrara-Florence's bands

Joined East and West on paper, thirty-eight;
The Greek delegation, to save the town,
Agreed, in their desperate, last estate,
Accepted, bowing, for the walls and crown,

the Latin terms for ships and men from Rome.
At home the clergy would not have it so:
the question was whose hat would rule the dome,
the cardinal's or turban's. They said no.

"Better the turban than the miter," said
the city's lords: one altar, whose the crown.
The aid came: Crusade of Varna; it bled
in forty-four; Murad II cut it down.

And John's brother, Constantine XI, the last,
In Peloponnese, at Mistras, crowned;
The march home was too perilous; he cast
His pleas to Pope, Venice, Genoa, round,

The Holy Roman Emperor; and came
A few hundred Italians, galleys few;
No great crusade. They mended, all the same,
The walls of Theodosius II, drew

The chain across the Golden Horn; and still
Hagia Sophia rang till the end
Under Constantine XI; he would not, till
The last, give up the city, yield, or bend,

Nor take the Sultan's offer of his life.
When, May the twenty-ninth, the walls broke through,
He threw his robes off, plunged into the strife
To die a common soldier; none then knew

His body; he was turned to marble, sealed,
The Marble Emperor, and waits; he'll wake
When the city's reclaimed. On that last field
Died Rome's long line, upon the walls' last break.

Eleven hundred twenty-three years long,
From Constantine I onward; and the line,

An emperor of Rome had reigned; the song
Back to Augustus, ended; this, the sign.

Chapter 218: Joan of Arc

Cancer 22, day 218 of the Gaian year

In France the Hundred Years' War had now run
Near on a century; the English claimed
The French throne by descent; and, one by one,
The lands of France were taken, held, and maimed.

Agincourt, fourteen-fifteen: the long bow
Of Henry V had crushed the larger force;
The north was English, Paris too; and so
The dauphin Charles VII, no host, no recourse.

In twenty-eight, the English laid their siege
To Orléans; if it fell, France was gone;
At Chinon, in his exile, sat the liege,
His court cast down, and its last hope withdrawn.

And then, from Domrémy, in the Lorraine,
A peasant girl of seventeen, Jeanne d'Arc;
Since thirteen she had heard the voices plain:
Saint Michael, Catherine, Margaret; the mark

Of heaven's charge: to seek the dauphin out,
Drive out the English, see Charles crowned at Reims,
In English hands; she did, without a doubt,
Believed, obeyed; and it was not in dreams.

She won the captain to escort her; came
To Chinon; knew Charles, though he was disguised
Among the court; and told him, as her claim,
What only God could know; and he, surprised,

Believed her; gave her armor, banner, men,
And sent her to Orléans; and she came
In April, twenty-nine; nine days, and then
The siege was broken, by her hand and name.

The English fell back; and she led the host
Through English lands to Reims; and in July,
The seventeenth, in twenty-nine, her post
Was at the side of Charles VII, crowned on high.

The turning of the war: from then, the French
Pushed back the English; Jeanne alone had won
The Hundred Years' War. Then her luck would wrench
Away: Compiègne, thirty; it was done:

Burgundians took her, English allies,
Sold her to English for ten thousand francs;
Tried for her heresy; and, in disguise
Of Church, the court was politics; its ranks

Charged her with men's clothes, armor; she replied
With depth in theology, though, they said,
She could not read. Condemned, burned, so she died
At Rouen, thirty-one, at nineteen; spread

Her ashes in the Seine; an English man
Who watched her die said: we are lost; we burned
A saint. And twenty-five years on, the ban
Was lifted; Charles VII's retrial turned

Her name to clean; and now she is the saint,
The Maid of Orléans, patron of France;
A peasant girl, who led, without restraint,
Armies, met kings, foretold the battles' chance.

Her voices were divine: a spirit spoke
to her from heaven, and she heard it true;
she did what no one thought she could, and broke
a siege, and crowned the king the voices knew.

Fifty-three, as Constantinople fell,
The war was ended, Castillon the last:
The French had won; of English lands, as well,
Only Calais was left of all the past.

Chapter 219: Gutenberg and the Press

Cancer 23, day 219 of the Gaian year

Johannes Gutenberg, a goldsmith, made
In Mainz, within the Holy Roman land,
The type that moves, the fourteen-forties' trade;
The greatest tool of word that came to hand.

Carved blocks in China printed, ages long;
Bi Sheng made moving type, ten-forty; and
The Koreans cast it in metal, strong,
Before; but signs by thousands, for their hand,

Made carving better still; in Asia, then,
The press did not take hold. But letters, few,
Two dozen, suited moving type; and when
Gutenberg cast his type in metal new:

Of lead and tin and antimony, which
Held shape through thousands of impressions; and
He took the press of wine and oil, a switch
To paper; and an oil-based ink he planned

That held to metal, more than scribes' had done.
The Gutenberg Bible, in fifty-five,
One hundred eighty copies, and, each one
Like handwriting; and forty-nine survive.

Bankrupt, sued by his backer, Johann Fust,
Who got the press; and he died poor, alone;
But the press spread, as from a blowing gust:
By fifteen hundred, presses had so grown

In cities, twice a hundred; and the books
Were twenty million, more than all the hands
Of copyists a thousand years, in nooks
Of cloisters, made: incunabula's lands.

And knowledge spread: what one man saw, a crowd
Would read in months; discovery would dawn;
The laity read scripture out aloud;
And Latin's hold on learning would be gone:

In German, French, and English, Spanish, too,
And Italian, the printed books were made;
And grammars, dictionaries, spellings grew
Fixed, as the printers set them; nations laid

Their sense of self on shared print; pamphlets, sheets,
Cheap books put reading into many hands
Of women, workers; and in lanes and streets
The readers grew, in all the western lands.

And print spread lies as well, and rumor's word:
The witch-hunt manuals, the tracts of hate
Against the Jews, the calls for war were heard
In print; the dark side of the press, as great.

But of the second thousand years, it stands
The greatest making; Europe it remade,
And the East's lead in learning left its hands;
Its pace grew swift; and so the ground was laid.

Chapter 220: The Eve

Cancer 24, day 220 of the Gaian year

The eve of fourteen-fifty-three: the world
Stood balanced; old and new were on the scale;
And three great realms of men, with flags unfurled,
Were poised to change it all, and turn the tale.

In Europe, the new press; in Italy
The Renaissance; and Greeks who fled the Turk
Brought books; Nicholas of Cusa would see
The Earth not at the center, in his work;

Space without end; and God the meeting place
Of opposites; and then Ficino turned
Plato to Latin; the Medici's grace
Kept the Academy in Florence, learned;

And Brunelleschi's great dome was finished; new,
Perspective; and Gutenberg's Bible, soon;
And Jan van Eyck was dead, and left in view
Oil painting; Johann Fust, Schöffer, in tune.

Islamic world: Herat and Samarkand,
The Timurids; Ulugh Beg's stars most
Exact; and Jami's verse, the highest, grand;
The Ottomans rose, near the city's coast;

The Mamluks still held Egypt; and the mind
Of Islam flourished. China's Ming had grown
To its full form, with Yongle's age behind;
Zheng He's voyages, twenty years since, flown;

Forbidden City stood complete; the shore
Was closed to trade; the ships were left to rot;
Exams made scholars into rulers, more
Confucian-trained, a state of scholars' lot.

In India, Delhi Sultanate's reign
Was breaking into kingdoms; in the south
The great and rich Vijayanagara's domain
Ruled Hindu lands, from sea to river mouth.

In Japan, the Ashikaga rule waned;
In the Americas, the Aztecs rose;
And Moctezuma I's alliance gained;
And Inca, under Pachacuti, grows.

Mississippian folk built mounds; and there
The Haudenosaunee, the Iroquois,
Were joined by Dekanawida's own care
And Hiawatha's: the five nations' joy.

In West Africa, Mali and Songhai,
Kanem-Bornu, at their height; Timbuktu
Held one of the great libraries; and high
The gold went north, through the Sahara, too.

Ethiopia, Solomon's house, grew;
Great Zimbabwe left; Mutapa, its heir,
Flourished; and the Swahili cities, too,
Traded with India and Persia there.

And so the world was linked, as ne'er before:
The Mongols' roads across Eurasia; trade
Of the Indian Ocean, shore to shore,
Arabia, India, China, made

One; but the Americas were alone,
Australia too; and no one people's hand
Held all the world; and many centers shone
Upon the hinge, where old and new would stand.

The world turns, and the age turns; here we are
Between the ending and the new to come,
Looking back on what ends, and forward, far,
At what would break, as beats a waking drum.

Chapter 221: The Year of Three Falls

Cancer 25, day 221 of the Gaian year

Three pillars cracked in fourteen fifty-three—
Three ancient houses shuddered, groaned, and fell,
And from the rubble of their stones set free
The modern world emerged, still raw from hell.

In Gascony, where vineyards met the sword,
The longest war in Christendom reversed
Its verdict—England's claim upon the board
Of France was broken, scattered, and dispersed.

For one hundred and sixteen years the crown
Of France had been the prize that England sought—
From Crécy's longbow triumph raining down
To Agincourt's impossible onslaught—

The English archer and the English knight
Had ruled the continent by force of will,
Had planted their lilies beside the white
And crimson crosses on the Valois hill.

But Joan had turned the tide: from Domrémy,
The peasant in her armor, white and sure,
Had heard the voices and had set them free—
The siege of Orléans broke; and the cure

For France's long paralysis was faith:
The Dauphin crowned at Rheims because a girl
Had said the voices told her so—the wraith
Of heaven's purpose in a mortal pearl.

They burned her; ash by fourteen thirty-one;
The flame she lit in France burned on, and on—
And now, at Castillon, the final gun
Of the last battle spoke, and England's dawn

In France was over. Talbot, the old knight,
Rode straight into the cannon's mouth and died—
The old medieval charge against the might
Of the new artillery, and the pride

Of mounted knights against the earthwork's trench:
The future killed the past at Castillon,
And every acre of the soil of French
Dominion was restored. The marathon

Was done. The English kept only Calais—
One pale and windswept harbor on the coast—
The last remainder of the grand relay
Of Plantagenet ambition, and the ghost

Of Henry V's victory at Agincourt
Was laid to rest in Gascony's red earth.
The second fall was of another sort,
And greater still: an ending, and a birth.

The twenty-ninth of May, behind the wall
Of Constantinople's old triple ring
Of stone and ditch and tower, whose long call
That had held for a thousand years—the spring

Of fourteen fifty-three became the last
That Roman eyes would see from Roman walls.
Mehmed the Conqueror, the Ottoman, massed
Before the Theodosian gates; halls

Of his army stretched out from shore to shore,
Two hundred thousand strong, the crescent raised
On the largest host the Bosphorus bore
Since Xerxes crossed the Hellespont. He gazed

Upon the walls Theodosius built
Long ages past; and he brought his answer:
The cannon. Urban's bombard, bronze and gilt,
Twenty-seven feet, the iron cancer

That hurled a ball of stone eight hundred pounds
Against the ancient masonry—the sound
Of the medieval world within its bounds
Collapsing, stone by stone, into the ground.

For fifty-three days the bombardment rained,
And Constantine XI, the last one of Rome,
The final emperor, haggard and drained,
Held with eleven thousand men his home

Against two hundred thousand. And the wall
That turned back Avars, Persians, and the host
Of Arabs, and the long assaults of all,
A thousand years beneath the stars, their boast—

The wall was breached. The Janissaries poured
Through the gap at the Kerkoporta gate,

And Constantine then drew his sword and roared
Into the tide and met his people's fate:

He died there fighting. The last Roman lord
Fell nameless in the breach, his body lost
Among the common dead—no throne, no sword,
No burial, no monument—the cost

Of that last day: the last, without a name,
Defender at the broken wall. And there
The Hagia Sophia's dome, the frame
Justinian raised to hold the world's prayer

Nine centuries before, at last received
The conqueror's prayer. The cross came down,
The crescent rose, and Christendom was grieved
But could not answer; and Mehmed wore the crown

Of Caesars now: Kayser-i Rum, he styled
Himself; the city Constantine the Great
Had founded as the new Rome, now was filed
Beneath a different name, a different fate:

Istanbul, the gate between worlds, the pearl;
Would speak in Turkish now, and the bazaar
Would fill the forums where the Senate's whirl
Of rhetoric had echoed near and far.

The scholars fled the libraries; they bore
From monastery and from the scribe's hall,
Plato and Aristotle, kept before
Through darkness, and through brightness, and through all

Of a thousand years; the Greek thinkers' hands
Bore westward through their exile's grief and pain
The manuscripts to Italy's fair lands;
What they carried was Renaissance's grain:

The seeds of Plato, planted in the soil
Of Florence; and the rediscovered dance
Of reason and of beauty; and the toil
Of copyists had bridged the dark's expanse

That brought the classical across the ridge
Of the disaster; out of the burning
Of Constantinople there came the bridge
Of learning to the West, its returning.

The third was quieter, a wound that bled
Within, in English; for the cannon's call
At Castillon had silenced England's tread
In France; the soldiers came home, after all,

A king who could not rule: Henry VI, mild,
The gentle and the pious, flickering,
Unstable, fragile, gripping as a child
Grips water. He could pray, endow, and bring

A college, chapel into being; but
He could not govern; and the day his mind
Collapsed, York, Lancaster were set to cut
Each other's throats; Richard of York, whose kind

Was nearer to the throne than the king's claim,
Reached for the crown; and so the civil war
Of England, which would bear no other name
But the Roses', white, red, began; and more:

St Albans: the first swords were drawn in hate;
The royal blood would spill on English ground
In years to come; but that is later fate;
And here, mark three, all in a single round.

Three pillars fell in fourteen-fifty-three:
The English claim on France; the final bell
Of Roman rule; and England's peace; and we
Turn, with the year, the hinge, and say farewell.

Honor the year that turned the page, the age,
From the old world to the world that we knew;
The cannon spoke, the knight was still; the stage
Saw the last Caesar die in the breach; through

The scholars' flight, the violent and fair
Past borne within the future's reach and hand:
The manuscripts, the learning, and the care
Of Athens and Rome, to Italian land.

Honor Constantine XI, who could have fled
By ship across the Marmara's water
But chose instead to join his people's dead
And die as Rome had lived—in the slaughter

Of the last defense, and the unnamed grave;
The emperor, a soldier, plain and bold,

Who at the end asked no one there to save
His name; and so his name grew great and old

And greater than a tomb could ever hold:
The last of Rome, who fell and was not found,
Whose sacrifice—anonymous and bold—
Became the legend written in the ground

Of broken wall, of unrecovered bone,
The last heartbeat of Rome, the proud, the true;
Who fell, and stood, and died, and stands alone,
As Rome had lived, so died; the old made new.

Chapter 222: The Eve of Sengoku

Cancer 26, day 222 of the Gaian year

Japan: the Ashikaga Shogunate
Lost its hold in the fifteenth age; and those
The shoguns, weak, were puppets of the great
Regional lords, shugo-daimyō, rose.

The shugo, who had been the shogun's hand
In provinces, grew lords by blood; and they
Collected their own taxes, held the land
Their own; the shogun's word had little sway.

It broke: the Ōnin War, sixty-seven,
Ten years: the Ashikaga heirs, the sword
Of daimyo heirs; and under heaven
Two leagues in Kyoto fought, for their accord;

They fought in Kyoto, and they burned the town
Block after block, ten years; Shōkoku-ji
And many temples burned and tumbled down;
But the Kinkaku-ji, the gold, stood free.

And Kyoto's old inheritance was dead.
The Ashikaga ruled in name; and so
The shugo went home, and their men, instead,
Rose up, gekokujō, to overthrow:

Those under overthrowing those above;
Lords who could not defend were swept away
By those who could, by merit, push and shove;
sengoku daimyō, not birth's old sway.

So came the Sengoku, the Warring States,
A hundred years and more of the lords' war;
Japan was split, and shifting lords' estates
Fought for the regions; castles rose, and more.

Armies of foot outgrew samurai bands,
And peasants rose by merit, by the sword.
Yet, in the war, the arts rose in their hands
To highest form; a paradox, a chord:

The tea, refined by Murata Jukō,
And then perfected by Sen no Rikyū;
Zen deepened in the warrior class; and so
Noh grew; the ink-painting matured, and through

Came wabi-sabi: beauty of the frail,
The broken, weathered, used, the passing thing;
And bushido, the warrior's code, grew hale,
Loyal and brave, and stoic at death's sting,

Forged in the wars. The temples took up arms:
Mount Hiei's sōhei, warrior monks, would stay
For centuries; Ikkō-ikki, from farms,
Peasant Buddhists, held provinces in sway.

And Nobunaga would burn Mount Hiei down,
Fifteen-seventy-one, and end the might
Of warrior monks, a thousand years' renown;
But in the fifteenth age, they still could fight.

Japan, in fifty-three, the year that fell
Constantinople, was split in its reign,
But flowered in its arts; and, as a knell,
The Ōnin War would come, and chaos' chain.

Chapter 223: The Standing on the Ugra

Cancer 27, day 223 of the Gaian year

Two hundred forty years the Mongol yoke
Had pressed upon the Russian neck—the weight
Of Batu Khan's descendants, and the smoke
Of Ryazan, Kiev, burned at the gate

Of memory: the cities sacked, the lords
Made to crawl down before the Golden Horde,
The tribute paid in silver, and the swords
Above the Russian will, its overlord;

Since twelve-thirty-seven, when riders came
Of Batu's, sweeping out across the plain
Of Rus like winter's scythe, no prince, the same,
Had ever dared to break the Russian chain.

They paid the tribute, patient, without fail;
To Sarai silver flowed, Moscow's hoard;
From Novgorod; the Khan's basqaq kept tale
Of kopek and of rye; the Khan was lord.

The prince who failed his tribute, on the day,
Was dragged before the Khan and made to kneel
Upon the felt, the carpet, and to pray
And beg for mercy with the beggar's zeal.

But Moscow grew. While other cities burned
And squabbled for the scraps the Mongols gave,
The Muscovite princes quietly learned
The conqueror's own arts, the patient, grave

Of centralization, and of the tax
Collected not for one's own purse alone
But for the state—the slow and steady wax
Of power gathered to a single throne.

Ivan I had been the Khan's collector—
Kalita, "Moneybags," who gathered gold
For Sarai, kept his share, the vector
Of Moscow's rise from timber-fort to hold

Of all. And then his grandson's grandson's son
Now ruled a Moscow that had swallowed whole
The principalities, and one by one
Tver and Yaroslavl, and then the soul

Of Novgorod the Great, merchant city,
Whose bell of freedom was seized and carried
To Moscow, without a shred of pity—
The republic's voice in silence buried.

Ivan III, Ivan the Great, would wed
Sophia Palaiologina, niece
Of the last Caesar; and the eagle, spread,
Two-headed, from Byzantium's release,

And as the Tsar, he took the sign, and raised
Above the Kremlin's towers as his own—
The Third Rome, he declared, and the world gazed
Upon a Moscow claiming Caesar's throne.

In fourteen-eighty, Ivan dared to do
What no prince had before him: he said no
The tribute; and no silver, nothing due,
Reached the Khan's court; and no knee bent down low.

Ahmad Khan, last lord of the Golden Horde,
Assembled on the southern plain his horse,
Riders of the steppe; unsheathed the sword
To punish; and he marched on Moscow's course,

To teach the vassal prince obedience;
And Ivan marched to meet him, though the hand
Of fear pulled: his wife, the expedience
Of counselors, urged flight, as they had planned;

Retreat, submission: pay, and save the state;
But Ivan brought his army to the seat
Of the Ugra River, and chose to wait;
And there, the strangest battle, the conceit

Of kingdoms, was not fought. October's frost
Had stiffened both the riverbanks, the pale
And yellow birches shedding what they'd lost
Of summer's warmth; and, on the western vale,

The Russian army stood, its guns all new,
Its cannon planted on the bank; the core
Of infantry arrayed in grim review.
And, on the eastern shore, ten thousand more,

Tatar horse, assembled, restless, waiting
To find the ford, the river's shallow course

That gave passage for the calculating
Charge. But Ahmad looked across; and the force

Of the cannon's mouth, the arquebus's gleam,
Made him hold back; the ancient law, the art
Of the steppe, the headlong and screaming stream
Of horse, was checked by gunpowder's new part:

The fortified position, and the dense
And disciplined formation on the bank.
He did not charge; nor Ivan cross; and hence,
For weeks the armies stood, rank facing rank,

Across the Ugra, ice and current; there
Two great realms stared across the autumn mist,
Mongol and Russian, each weighing, with care,
The cost; each hovered with an iron fist.

November came. The river froze; the ice
Could bear a horseman; and the bar was gone
With the cold; and either side, in a trice,
Could cross; and still no charge was ordered on.

Ahmad waited; Ivan waited; and then
The Mongol army turned, and rode away.
No trumpet, and no treaty, and no men
Lowered a banner, cleft by sword that day;

The Golden Horde rode to the steppe; and so
And Russia rose up free, upon the road
That no one walked, the battle none would know,
A victory that nerve, not sword, bestowed:

The strangest freeing in the nations' book:
Not by the sword, but by the nerve to stand
And wait, and let the Tatar break; it took
Two hundred forty years from Mongol hand.

The yoke was lifted in the autumn fog:
Two armies staring; one of them went home.
Meanwhile, the West, its own murderous slog:
England's long war against itself would roam.

Roses bloomed in blood since St Albans' first;
Kin fought on kin; Edward of York had seized
The crown; and Warwick, Kingmaker, at worst
Turned coat, for Elizabeth Woodville pleased

The king, and Warwick's hand was cast aside;
Set poor Henry VI up, a puppet, high;
Months; Edward came back from Burgundy's side;
At Barnet, in the fog, did Warwick die;

At Tewkesbury the Lancastrian cause
Was ended, and the Prince of Wales lay dead;
And Henry in the Tower, without pause,
Was murdered; and the Yorkist peace was spread;

But under it the brothers circled: drowned
Was Clarence; and Richard of Gloucester stayed
For the throne; when the king was in the ground,
The nephews to the Tower he conveyed;

Their light was closed, a book; but that dark tale
Waits. Now observe the contrast: in the east
Patience won freedom, and the steppe would fail;
In England, fury made fury its feast;

The throne changed hands with each new flow of blood;
Two paths through the fifteenth century's gate:
To stand, and let the grip fall in the mud
Of its own weariness; or kill, and hate:

The brother's blade, the uncle's choking hand,
The crown passed through the murder and the coup
Until no noble house was left to stand
The dynasty consumed its own, anew.

Honor Ivan by the Ugra's west shore,
The prince who broke the yoke by standing still,
Who freed his people not by waging war
But by the steady and unyielding will

To wait—to let the river freeze and thaw,
To let the Mongol horseman pace and fret,
To let the cannon's silent, patient maw
Speak louder than the charge—and the long debt

Of two and forty decades' submission
Was cancelled in a season's quiet frost:
No treaty signed, and no manumission,
No victory parade, no body's cost—

Just the empty eastern shore at morning,
Hoofprints in the frozen mud receding,

And the Russian sentries, without warning,
Discovering the world had changed, reading

The silence of the steppe: the Horde was gone;
The yoke was off, and no one had been slain;
And Russia stood alone beneath the dawn,
Free, by the river, on the frozen plain.

Chapter 224: Granada and the Ocean

Cancer 28, day 224 of the Gaian year

In fourteen-ninety-two, two doors swung wide,
One closing and one opening; and Spain
Stood at both thresholds, history's divide,
A storm that would remake the world's domain.

The first door shut: Granada. For the span
Of eight centuries, crescent and the cross
Furled across Iberia; it ran,
The long Reconquista, its gain and loss:

From Covadonga, the desperate stand,
Where once Pelayo held the Christian few
Against the Umayyad tide; through the land,
Reclaimed, by century, the border drew

Its ebb and flow, fortress, devastation,
Alliance and betrayal; and the throng
Of Moors had built a splendid creation:
The Alhambra, its lattice, and its song,

The courtyards where the water spoke, and went
In fountains and in channels; and the lace
Of tilework, mathematical, intent,
The gardens where, as in one interface,

Africa, Europe bloomed in jasmine's air,
In orange trees, the muezzin's murmured call;
Al-Andalus, the luminous, the rare,
Where Muslim, Christian, Jew lived, one and all,

Imperfect, but a real constellation
Of living side by side; the sieve that passed
Greek, Roman, through Arabic translation
To Latin; where Maimonides would cast

His mind, with Averroes, upon decrees
Divine, the knotted questions; and the store
Of knowledge, crossing north, as by degrees,
A caravan of wisdom, door to door.

The frontier narrowed; and Toledo fell,
Then Cordoba, and Seville's minarets;
The caliphate receded, like a bell
Fading southward, till, as the last sun sets,

Only Granada: the last Moorish realm,
The crescent's final south. And now there came
Ferdinand, Isabella, at the helm,
Castile, Aragon joined, the toil, the flame

Of war for altars, ten years' siege, the slow
Strangling the last Nasrid kingdom, alone;
Outlasted all the Moorish realms; and so
The second January day was known,

In fourteen-ninety-two: the bell, the horn;
And Boabdil, the last Nasrid sultan, rode
Out from the Alhambra's gate, and forlorn;
The hills heard; and he wept; his sorrow showed.

His mother said: You weep as women weep
For what you could not, as a man, defend;
And something precious passed, as into sleep,
From the world; under the trumpets, an end.

What Ferdinand and Isabella did
With triumph was to make one altar: so
The Alhambra Decree, which would forbid,
Signed in the Moors' own palace, bade Jews go:

Baptism or exile. The ancient, fine
Sephardic communities, the most learned,
Physicians, traders, rooted like the vine
And olive of Andalusia, were turned

Out, two hundred thousand, four months to leave
Or to convert; the lute, the Torah, borne
Away; the hearthstone, and the woven weave
Of fifteen hundred years were torn, and worn;

Morocco, Constantinople, they went,
To Amsterdam, Thessaloniki's shore,
Bearing the keys, in memory's lament,
To houses, each one to its Spanish door,

Passed hand to hand five hundred years, the known
And heaviest heirloom, key to a land,
A house that would no longer be their own.
Moriscos followed, by the same command:

The Muslims too: convert or leave; the store
Of eight long centuries of culture swept

From the house; one crown held one faith; no more
The three; and yet the same two monarchs stepped

To bless the Genoese sailor at their court,
A man of vision and compulsion, who
Had begged at Europe's thrones, port after port,
For ships; the Jews' expulsion not yet through

Six weeks: to sail west, the Atlantic's heat,
Uncharted water, by a dream: the gold
Of Cipangu, and of Cathay's silk to meet
By sailing west into the sunset's hold;

Columbus said the gap was breached by will,
By courage and a compass. On the tide
Of August's third, three ships, so small and still,
From Cadiz' harbor sailed, the masts' bare pride,

Three bare trees against the Atlantic sky:
The Nina and the Pinta on the breeze,
And the Santa Maria riding high.
Columbus, brave, was wrong about the seas,

The earth, its size, the distance; and his creed
That Asia on the western rim would rise;
And what he found was not Cathay, indeed,
Nor yet Cipangu, but, there before his eyes,

The Taino on their ground, a world that had
Its own, its calendar, its stars, its lore,
Its own astronomers and priests, the glad
Harvests and prayers, the villages, and more:

Canoes, the cotton and the corn; complete,
Lines running sixteen thousand years, before
The trumpet of the European fleet
Had sounded. But Columbus saw the ore,

The gold; and Europe's reaching, unbounded,
That grew and grew, and would not cease to be,
Was set in motion when the cry sounded
From the crow's-nest, across the unknown sea:

Land! And the door swung open to the west.
What lay beyond, the peoples who had made
Their worlds, their glory, long before the crest
Of Seville's spires, or Roman roads were laid,

Before the Parthenon: that story claims
Its own abode, its telling, its own day:
The Book of Lehi now begins; its names
Across the sea Columbus sailed that way:

Sixteen thousand years of origin, raised
And curtained; corn; the feathered serpent's shrine;
The Inca's road; the potlatch; weather-glazed,
The totem, speaking in its sacred line;

World entire, a hemisphere alive,
Now at the hinge of its destruction stood,
Its transformation, where the hungers strive:
The old world's reaching met the new world's good.

So turn the page. The ocean has been crossed.
The Book of Lehi opens on the face
Of America: the found, and the lost,
The first migration's children, and their grace,

Ten thousand years of art, a world apart.
Granada's story ends in tears; the tale
Of ocean ends in sail; and then the heart,
Americans', the other side of sail.



Leo

The Book of Lehi

Leo: The Book of Lehi

Leo is the Lion, and Leo is Lehi. The Lion's month is the high summer, ruled by the sun, when the ancestors come home; and the Lion is the line handed down, from the fathers and mothers to their children.

Chapter 225: First Migration

Leo 1, day 225 of the Gaian year

The Book of Lehi opens on the sea:
Not the warm lake, the river's shallow ford
That apes could wade; but the Pacific, free
And vast, the largest face of water, poured

Across the hemisphere, where no land lay
To pave with solid ground; and yet it called,
They answered: sixteen thousand years, the day
Before our era, when the north was walled

By ice; the corridors were locked; the coast
Was open. And the sea was lower then,
By sixty fathoms; and the shelves, the most
Of them, lay wide and tidal, for the men,

Where the kelp thickened, and the otter, seal,
The shore-bird, and the intertidal strand
Gave food to those who knew the current's wheel;
And Lehi knew the current, and the land:

Not one man, but a people, and a line,
A maritime and patient clan, of yore,
Who fished the coasts of Asia; by the sign,
Hopped from Japan to Kamchatka, and more,

To the Aleutian chain, the stepping-stones
That arced across the north Pacific, teeth
Of mountain rock; and southward, by the zones
Of glaciers, blue and towering, beneath,

Which calved their icebergs into fjords; through,
Past Haida Gwaii, where current met the tide,
And salmon ran in streams, the season's due,
The first and oldest entry, by the side

Of ocean; thirst for headland, and for bay,
The river-mouth where fish ran thick, and where
The shellfish lay in intertidal clay,
And driftwood washed ashore, for warmth and care,

And for the frame of shelters on the beach.
They sailed out to America; they came
By boat, the humble craft whose greatest reach
Of all the Pleistocene was this, the same:

Skin-boat, dugout, and the sewn-plank canoe
That hugged the evergreen and kelp-draped shore;
They drank the coast and ate the sea: the true
Mussel and clam and urchin, rockfish, more,

The halibut; the tidal fisher's art,
The eye that read the current and the swell.
The sea was all their road; for, from the start,
The oldest Americans knew it well,

The ocean's rhythm; and their step, the stroke
Of paddle, and their road the coast, through all;
Their compass was the gray whale's road, which spoke
From Asia to America, the call

The whale had known for ages; and the men
Followed the great leviathan's bright way,
The breath along the kelp-highway; and then
The sign: at Monte Verde, south, it lay,

In Chile, fourteen thousand years ago:
Folk lived at the Americas' far end
Before the inland corridor would show
An opening; and so by sea they'd wend.

Off California, Channel Islands hold
The Arlington Springs Woman's old bones, there,
Thirteen thousand years, alone, silent, cold,
On isles that only boats could reach; and where,

In Oregon, at Paisley Caves, the trace
Of the first Americans still remains;
By trowel and by screen, the coast's own place
Is kept: they came by water, and the plains

Of both the continents they filled, while yet
The inland lay locked. And they went on south,
Past California's golden kelp, and set
Down by Mexico's warm Pacific mouth,

Through Central America's narrow crest,
To Colombia, Ecuador, the long

Peru's coast, where the Humboldt Current's best
Fishery on earth, the anchovy's song,

The cold upwelling of the fertile deep.
And some turned inland, up the rivers, through
The passes, the interior's wide sweep:
The grassland, forest, valley, desert; new

Homes; but the coast was first, the purest road,
The oldest one, the mother-road of all,
The Americas' first way. Honor, owed,
To Lehi, the first migrant, at the call

Of the sea-road; whose drama was the oar,
The patient reading of the coast's long strand;
Who did not wait for melting ice, nor for
The land-bridge, but who took the ocean's hand,

And felt the kelp beneath the hull, the pull
Of current, and the whale's road out ahead;
And followed it, so faithful and so full,
To a world where no human foot had tread,

And made it home. The Book of Lehi starts
Upon the water, in a boat; the note
Not of the hunters, but the fishers' arts,
The paddle's stroke, the sea-bird's crying throat

Above the morning swell; the coast, that went
South, and still south, the longest road a tongue
Would tell; and on the mouth, the salt it lent,
The sea, to the first American, young.

Chapter 226: Division of Tongues

Leo 2, day 226 of the Gaian year

The fluted point was lovely, and could kill:
Shaped like a willow leaf, a channel run
Up either face, the Clovis spear's own skill,
Chipped stone thinned near to light, as by the sun,

And almost surgical; the knapper's eye
Turned at the camp, by night, the patient art,
Percussion: strike, examine, strike, and try,
Until the biface took its final part:

The bane of mammoth, mastodon, the vast
Ground sloth, the horse, the camel, all things great
That walked the Pleistocene, until the last.
Thirteen millennia before our date,

The Clovis people turned, and moved inland
Into the land, and through the ice-free way
'Twixt Laurentide and Cordilleran's hand
Of ice, a tundra road, a grassland's sway,

Through Alberta, Montana now; and brought
The point: the Clovis point, named for the place,
Clovis, New Mexico, where first they sought
And found it; and it spread, at such a pace,

Across both continents in centuries,
Patagonia, Nova Scotia's coast,
The fluted shape, the signature of these
Who learned the megafaunal hunt the most:

The bond between the hand and mammoth's fall.
They hunted in coordinated bands:
The drive, the surround, the communal call
Of killing: and a dozen working hands

Drove the herd toward the arroyo's edge,
The cliff, the bog, where the great mammoth's weight
Became its doom; mired in the marshy sedge,
It stood; the hunters closed, and, sure and straight,

Their atlatl darts went into blood and flank,
The shoulder, belly of the beast; and none
Had learned to fear the human feast, the rank
Of hunters; and the whole land shook, undone.

Their kind had fifty million years evolved
Without a human hunter; and they knew
No fear of the two-legged; nothing solved
Their trust, unlinked and fatal, was their due:

The mammoth, mastodon, the short-faced bear,
The Smilodon, ground sloth elephant-tall,
Defenseless, giant; thirty-five, from there,
Kinds vanished in two thousand years, and all.

The warming played its part, the grass that shrank,
The melting ice; but in the mammoth's heart
The spear-point was the proof, and where it sank
The hunter asked no leave; the prey, no part.

The Clovis hunters spread, as water fills
Down the great Mississippi, branch by branch,
Across the Great Plains, through the forest hills,
The Eastern Seaboard's woods, an avalanche

Of camps on terraces; and kill-sites laid
On grasslands; mammoth-bone in charcoal found
Alaska to Tierra del Fuego; made
A thousand years filled both; the speed, profound.

A world had waited ages for this one,
A hunter skilled, adaptable, and new;
And the debt was paid in extinction, done.
But from the killing came the living, too:

The bands spread into niche on niche; the lands,
Diverse, demanded tools and ways anew
For desert, forest, and the complex strands
Of coast; from one, a thousand peoples grew;

And from one point, a thousand point-styles came:
Folsom and Dalton, Plano, Eden, each
Tuned to its hunt: the bison, Eden's aim
With long and narrow blade; and Folsom's reach,

Delicate channel, for the smaller game;
The local hearth replaced the common one
Of the first wandering; and, not the same,
Each turned within: its valley, river, sun,

Its prey. Honor the Clovis point, the first
To span America from coast to coast,

The lovely tool of stone, in which were versed
The hands that opened up a world, a host;

And honor too the mammoth's bone, the tusk
Of mastodon in sand, the ground sloth's claw
In the cave; the magnificent, in dusk
Vanished; the enormous dead, by that law,

Gave up their continent, astonished, to
The small, the clever, and the new; and so
From one tongue many tongues; the many grew,
Divided, as the people learned to go.

Chapter 227: Division of Tongues

Leo 3, day 227 of the Gaian year

And then the silence fell between them: not
The silence of the empty land, but kin
Who could not greet or chide, for they forgot
The other's tongue; and words that once had been

The common coin, the word for water, clean,
Had shifted, vowel, consonant, in turn,
Until the old man's speech, with years between,
Was strange; the grandchild's ear could not discern.

Ten thousand years before our era, great
Diversity of tongues began to grow
Across the hemispheres; and distance' weight
Pressed on the tongue as glacier on stone, slow,

Relentless; stressed and unstressed, ground and worn
Into new speech that neither side could know;
The same divergent storms that once had torn
Proto-Indo-European; and so

Into Sanskrit, Greek, Latin, Germanic,
Worked on the first Americans' one speech;
Here the walls were greater: the volcanic
Rocky Mountains, the Amazon's green reach,

Its labyrinth; the Atacama's sand,
Rainless for centuries; the dramas built
Walls no human could cross; and, in each land
Behind its wall, a tongue grew to the hilt.

Na-Dené, the great northern family's way,
Rang to the American Southwest's floor
From far Alaska, from the Tlingit bay;
So distinct from its neighbors that it bore

The mark of its own crossing, the second,
From Asia, after the first; and they came
Their grammar and their sound, by none reckoned;
Their own, not of the southern tongues' own frame.

Algonquian, vast and whispering kin,
Family of the eastern woods and shore
Of the Great Lakes; and from the Cree, within
The northern birch, to Blackfoot plains of yore,

Each one a thousand years of parting's yield
From the first ancestor, whose words had cracked
On the forest path; the caribou's field
Drew one band north; the deer drew south; the fact

Of parting. Siouan poured across the plains,
Missouri's mouth to Carolinas' east;
The Lakota, Dakota, Crow; their strains
Shaped by the open sky, the bison's feast,

Wind-carried syllables across the grass.
Uto-Aztecan: the long thread that ran
From Idaho's volcanic shelf, to pass
Down to Mexico City's urban span:

Shoshone and Comanche to the north,
The Hopi in their mesa towns; and far,
The Nahuatl-speaking folk, pouring forth,
The Aztec's pyramids, where temples are;

One family, three thousand miles in length,
The proof of connection running beneath
The multitude of surface; and in strength,
Mayan, the glyph, the written word's own wreath,

The only script the Americas made:
A syllabary, angular, in stone,
And painted on the codex page; it bade
The first and only reading, all its own.

Quechuan: tongue that nursed the Inca's reach
From Quito to Santiago, the road's
Own language; and the knot, the quipu's speech,
Accounting; and the lingua franca's loads

Down all South America's spine; and how
Rule without writing? By the knot, the string
Of colored cord, encoded; and, somehow,
The fingers read the threads, the dangling thing.

Hundreds more: Penutian, Hokan's line
On the Pacific coast; and Tupi, down
The Amazon; and Chibchan on the spine
Of Central America's tangled crown:

Six hundred tongues at contact, and before,
A thousand; and their unity had broke

Like a stone by the knapper's hand; and more,
Each piece, a cutting edge, a perfect stroke,

A tool of thought. Honor the tongues: each one
A world; each grammar a philosophy;
Each lost tongue is a flag furled, and done,
A sealed prophecy none can read; for see:

A tongue dies; a library burns; the creed,
The dream, the daily naming of the world
Goes silent; and the silence, as decreed,
The saddest flag that ever was unfurled

Over the ruin of the alliance
Between the human mind and human tongue;
Six hundred voices, a thousand's science,
Divided, as the hemisphere was young.

Chapter 228: Norte Chico

Leo 4, day 228 of the Gaian year

Eight thousand years before our era, south
The Na-Dené moved, and all the world with them,
While glaciers slowly drew back from the mouth
Of the north, and the northern forest's stem

Crept north across the warming land; and went
A second stream flowed from Alaska's moss
And mountain-shadowed coast, the southward bent
Of the old road rekindled; and, across,

Their tongue bore no kinship to tongues around:
The late arrivals, whose crossing had come
From Asia long after the first had found
And filled the land; their grammar was the drum

That marked them as the second wave. And where
The salmon hung in curtains, silver, bright,
The Tlingit settled; totem poles, like prayer
Of cedar, rose into the mist's grey light,

With crests of eagles, bears, and ravens, grained
In the red wood: the heraldry of clan,
Kin's covenant with beasts; and wealth, once gained,
The potlatch gave away, as was their plan.

The Haida, on Haida Gwaii, would build
The ocean-going war-canoe, a hull
Of single cedar, sixty feet, which filled
The open strait with war and trade, past gull

And terror, prows as killer whale's own mouth,
Or the thunderbird: the Na-Dené, their way,
Mastered the coast that flowed toward the south,
Their tongue shaped by the tide and salmon's day.

And others kept on moving, south and south,
Through mountain passes, past the desert's sun,
Through the Great Basin's sage, the silence' mouth,
Into the American Southwest, run

In the canyon's clefts; and there, much later,
The Athabaskan peoples spread and fanned
Out through the desert, migration greater:
Apache, Navajo, across the land;

The Diné, those called the People, who arrived
Where the Puebloan and Hohokam had worked
The canyon, mesa, sand; and so they thrived,
And learned the patient corn, nor ever shirked.

The corn was coming. Long ago, the land,
Seven thousand years before our time, where
Sierra Madre cut the sky, the hand
Of the Mesoamerican who knelt there

Before a grass, the teosinte, dry
And poor, whose seed was in a tiny cob
No longer than a thumb; the farmer's eye
Saw what selection's patience made its job:

The kernel's chance, the raw stuff of the art,
The greatest engineering ever known:
Evolution steered, a weed set apart
To be the staff of life; and each seed sown

Was chosen: largest seed, and ear grown long,
The softer kernel, and the greater yield,
More generous; and over ages, strong,
The cultivar took over all the field:

Maize: the grass remade by the human will,
Engineered miracle, a crop which could
Not seed itself without the planter's skill
To strip the husk and plant it, as it should:

The truce between the species, partnership
That bound the farmer and the field, the field
And farmer, in a covenant, the grip
Of neither could without the other yield;

The tamer and the tamed, both bound, both fed,
In the great bargain; and from it would come
All civilizations after it, fed
By corn: no granary, no temple's drum,

No surplus, priest, or king, no counted day,
No writing, no great realm without the corn;
The corn was all, the hearth; and, in its way,
The world of the Americas was born.

And on Peru's dry coast, where through the deep
Humboldt Current spilt its cold upwelling

Beside the driest land, the richest sweep
Of sea, the first Americans, dwelling,

Built what would be the Norte Chico's first core:
Not yet the plazas, not the sunken court,
But fishing villages along the shore,
The cotton net, the anchor stone, the sort

Of racks, the anchovy's bright silver rows,
The settled life, the first commitment made
To a single place: we won't wander; those
Who stay: the shore, the field, the river's aid;

The nomad's freedom given up for chains
Of plenty. So honor the Na-Dené's way,
The second wave, whose separate tongue, the gains
Of totem, potlatch, cedar boat, would stay;

And honor corn, the grass whose feeder was
The patient hand, the covenant of seed
And sower; and the fishers, who, because
Of their dry coast, made of the sea their need,

The first Americans who chose to stay,
Who built the lasting village, and the creed
Of settled life; and so they paved the way
For pyramid and plaza, priest, decreed.

Chapter 229: Olmec Foundations

Leo 5, day 229 of the Gaian year

In desert by the sea they built; no lord
Commanded it, no slave was driven; so
And the Norte Chico cities, in accord,
Gave the Americas the first to show

The monumental and the planned, before
Our era by three thousand years, there, through
Coastal Peru, a narrow strip of shore
'Twixt Andes' wall and the Pacific's blue,

Where thirty rivers cut the desert's wedge
To fertile valleys; there the Caral raised
Their pyramids; not of the Nile's smooth edge,
Perfect, whose limestone files still gleam, and praised,

But mounds of quarried stone and reed-bag fill,
The platform-pyramids, which rose in rounds
Above the valley floor upon the hill:
Six at Caral alone; and from its grounds

The largest rose a hundred fifty feet;
With no ceramics, writing, metal tools,
It reached the city; and it was complete
Enough to marshal thousands by its rules

To raise the rough and sacred platforms; and
The priests' authority came not from sword
But song: for those who dug in Caral's land
Found not one weapon, and no warring horde;

Instead they found the flute: thirty-two flutes
Of condor bone and deer bone, music's thread
Woven into the founding, through the roots;
The quipu too, already here, the spread

Of knotted string, the breakthrough, from the start,
Tactile tongue of the one who'd keep the store,
Who counted harvest, cotton bale, and part
Of fish; the knots, economy's own lore.

In colored string. Caral was not alone:
The Norte Chico spread out across the ring
Of coastal valleys; Aspero, the stone
Of the sea-founding, where the nets would bring

The anchovy by tons; and cotton fields
Supplied the nets: the coast and valley's run,
The fisher and the farmer, and their yields,
The protein and the fiber, twined as one:

The fish fed farmers; farmers' cotton made
The nets that caught the fish: the circle grew
The surplus, and the offering was laid
Before the spirits of the earth, their due.

As old as Sumer's ziggurats, and as
The Old Kingdom's great stone along the Nile,
The Norte Chico stood, and the proof it has
Is this: that culture is no single isle

Of the Fertile Crescent; convergent, free
Invention: give the human fish enough,
And cotton, and a river; and you'll see
The pyramid: the urge is in our stuff.

And northward, in the humid lowlands where
Gulf of Mexico's rivers spread their silt
On Tabasco, Veracruz, richest there
Of Mesoamerica, the Olmec built.

Fifteen hundred years before us, there burst
America's mother-culture: the heads,
Basalt, from the Tuxtla Mountains, first
Dragged sixty miles, without the wheel; the threads

Of labor: tons, by raft and roller, rope,
And ramp, the pull of hundreds; and, by craft,
The Olmec portrait of the ruler's scope,
The head, nine feet, as carved from one great shaft:

The full lips, the broad nose, the helmet's band,
Precise, the face of this king, not of all:
The Olmec carved the human, by the hand,
In basalt, the first portrait, nine feet tall.

The Olmec gave the calendar, the vast
Long Count, vigesimal, the counting art,
System the Maya kept; the baktun, cast,
Katun, tun, uinal; moon, sun, Venus' part,

Which in the Maya courts would reach its height,
But here was born; the sacred ballgame too,

The rubber ball, the I-shaped court; the rite
Where the losing captain fell, the gods' due,

The human sacrifice within the game,
The beating heart, the life raised to the sky.
They gave the jaguar-god, the rain-god's claim,
The child, were-jaguar, and the infant's cry,

The myth all after them would inherit;
The mother-culture, first to carve and count,
To sacrifice, to build mounds, to merit
The forest, ruling labor, to surmount

The jungle with the sacred center's ground.
Honor Caral, the fishers on that coast
Whose nets and flutes were where the first was found
Of the Americas' cities, first post;

And honor too the Olmec, and the heads
That stare out from the jungle floor, the calm
The gaze of kings who wore the jaguar's threads
Of might, the calendar's knowledge, the psalm:

The twin foundations of the world to come,
The temple, plaza, ball-court that would raise
And echo and refine; the blueprint, from
The Olmec; and the shrine, the glyph, the days

Their children's children would create: the stair
Of pyramids, the written glyph, the art;
The Olmec gave the blueprint; and the prayer
Of history replied, built on that start.

Chapter 230: Maya Dynasties

Leo 6, day 230 of the Gaian year

The jungle parted, and the city rose:
White limestone causeways cut the forest's sea
Like scars of light through green; and at their close
The pyramid, the temple, climbing free

Above the ceiba trees into the sky,
The fountain of the sacred, stairway's frieze
From human to divine. The names roll by
Like temple bells: Tikal, Copán; and these,

Palenque, Calakmul: the Maya's towns,
The jeweled, painted capitals, the age
Classic, of war and peace, of art, the crowns
Of starry reckoning; the highest stage

The Americas' mind, the jungle's child.
A thousand years before our era, slow,
The Olmec mother-culture, waning, mild,
Gave birth to its inheritor: and so

The Maya took the calendar, the art,
The glyph, the pyramid, jaguar; refined
Them to a brilliance none matched, set apart
In the Americas; and vast, their mind.

Their writing logosyllabic, and full,
Eight hundred glyphs, the angular and carved
And painted word, the only one, the pull
Of the pre-Columbian world, which starved

For letters; and the scribe, the sacred hand,
Moved brush on codex bark and stela's face,
Recording dynasty, the conquest, and
The capture of the rival, birth, and grace

Of their accession, bloodletting; the fates
Of kings in stone, that still speak to the one
Who learned to read them. And the numbers' weights:
In twenties counted; and the zero won:

The placeholder, the nothing holding place
Of absent sums; as in Indian lore,
Convergent, independent; in the space
Of mind the strangest find: its worth, its core,

Its value in its emptiness. Then, time:
The Long Count's architecture, days amassed
To hundreds of millions of years; the climb
Of the baktun, four hundred years each, cast

In such a system that the priest could tell
Venus' synodic period, its way,
Its morning star and evening; and as well
Five eighty-four days and a part, they'd say,

Its error in five centuries so small
No naked eye has matched; eclipses, too,
The Dresden Codex' tables reckoned all,
The moon's shadow foretold; the priest, in view

On the temple's top, announced the sun's death,
The jaguar-sun, down to Xibalba's night,
The underworld; and its return, the breath
Of the new day foretold, fulfilled, in light.

At Palenque: the great king's tomb, below,
K'inich Janaab Pakal's, down the stair
In the Temple of the Inscriptions; so
The carved lid shows the king who's falling there

Into the earth-beast's jaws, to be reborn
In Xibalba; jade mask upon his face,
The jade and cinnabar, the offerings worn,
A tomb like Tutankhamun's, the place,

The pyramid's own heart. And then, the war:
Tikal and Calakmul, the two great states
Of the Classic, beautiful, savage, sore
Of rivalry: alliance, and the hates

Of the betrayed; the star-war glyph that told
Destruction total; the king captured, brought
Back for the sacrifice; the line of old
Replaced; the vassals turned, re-formed, and fought

Around the victor: politics, the game
Of jungle realms, the bargain of the crown
Divine. And then, the ninth age: and there came
Collapse: the system stretched, and broken down;

The people had outgrown the fragile soil;
The slash-and-burn could not keep pace; the drought

Came, and the rains failed, reservoirs; the toil
Of feeding millions failed; the poor, without,

Starved first; the kings made war for what was left;
And city after city closed its door:
The stucco crumbled, and the jungle, deft,
Took back the plaza; ceiba split the floor

Of temple stairs; the howler monkey sat
Where the king offered prayer and blood in vain
To gods who did not answer. Yet, for that,
The Maya did not vanish; they remain:

The dancer dances; and the language lives,
Seven million speakers still, of the tongue
That carved the glyph; the living culture gives
Its thread, unbroken since the stairs were young;

No vanished past, but a thread that's still strong,
The Americas' oldest lettered mind;
Honor the Maya: scribes who, all along,
Read stars, wrote time; the zero they would find,

Who built the pyramid in jungle's green
Cathedral; made the king a hero, and
A sacrifice; who wove the seen, unseen,
Into the angular glyph, by scribe's hand;

Honor the astronomers on the height
Of temple-tops; the bloodied king, whose gift
Fed the calendar's count; the dead, the bright
Living, seven million, whose voices lift

The oldest writing of the western world;
The Maya tongue is spoken to this day,
Where jungle's flag is furled, and, unfurled,
The ancient covenant would not give way.

Chapter 231: Phoenicians of Zarahemla

Leo 7, day 231 of the Gaian year

The epic turns its eye now to the sea:
Not Lehi's coastal creep, the first one's way,
But the open crossing, fearful and free,
The ship that came out of the east one day.

Five hundred years before our era, when
Sank all the Mediterranean's rim;
Phoenician sailors, who had been the men
Who rounded Africa at Necho's whim,

And come back telling of the southern stars,
The noon sun in the north; the ocean's son
Turned west, not by empire; but the scars
Of exile, when Jerusalem was done:

For Nebuchadnezzar's armies broke the wall,
And burned the Temple; and the Judean throng
Was marched to Babylon; but yet not all;
Some fled to Egypt, south; and some, along

The coast, reached the Phoenician ports, and shore
Of Sidon and of Tyre, whose sailors plied
From Carthage out to Cornwall's tin, and more,
Canary Islands to the Black Sea's side:

Phoenician net against the world's last bound;
And some, as the Mulekite record still tells,
As Zarahemla's keeps it, crossed. Built sound,
Phoenician ship, with oar and sail, through swells,

With pitch-caulked hull that poured through trough and crest,
A thousand years of shipcraft in its frame;
They sailed by stars: Polaris, and the rest,
The Bears, the rising constellations' flame;

Sidon's sailors knew the Atlantic's ways:
The trade winds blowing west, the current true,
The North Equatorial, which conveys
Ships across, by mechanics, through and through.

From the Canary Islands to the shore
Caribbean, twenty-eight hundred miles;
A bireme at five knots, with wind, no more
Than twenty-three days, past the western isles;

As ships had sailed before, when they went round
Africa, which Herodotus wrote down;
A lesser feat. And there are signs, still found:
Paraíba's stone, found in Brazil's green crown,

Phoenician script; the Roman jars, dredged up
From Guanabara Bay; and, in the slain,
Embalmed Egyptian dead, the coca's cup
And nicotine, uncrossed, none could explain.[27]

Mulek, son of Zedekiah, the last
Of Judah, fallen to Babylon; lit
The scattering; Mulek escaped; and passed
With the Phoenician sailors west; and it

The exile made a guest; and he would land
On Mesoamerica's coast; polyglot,
Founded Zarahemla, the mixed, the grand,
Where Israelite and sailor wed; their lot

Joined the native; and the mingling carried
The Mediterranean's blood and tale
Into Americas' veins, and married,
Not as conquerors, but a quiet trail,

Too slow for history: the ship that beached,
The sailors stayed; the children spoke the tongue
Of mother, lost the father's; and, unreached,
The trade-routes closed; and the memory hung

By lore's thin thread, till that was frayed and lost,
And fragments stayed: we came out of the east,
Across the great water; storm-tossed, we crossed
In the destruction's time: memory's feast

A hundred nations kept it in their breast:
The ship, the storm-tossed passage from the sea;
Grandmother told the child, and, so possessed,
The child the grandchild: fragile, wild, and free,

Our human memory. Honor the bold
Phoenician sailor and Judean exile,
Whose joy or desperation found, of old,
The way between the known world and the isle

[27] The Paraíba inscription from Brazil has been debated for well over a century and is widely held to be a forgery; the provenance of the Roman amphorae reported from Guanabara Bay is disputed; and the reports of cocaine and nicotine in Egyptian mummies are contested.

Unknown, the Mediterranean's shore
And Caribbean's forest-mantled way;
Honor Zarahemla, mixed, and its core:
The meeting-place of east and west, where they

Met, in the human story, plain and true:
The sea does not divide; the sea connects;
The oldest roads are salt and vast and blue;
Our memory, with all its old defects,

Does not erase the voyages that went,
Only the trace, the fragile record, crossed
The ocean keeps, in wave dissolved and spent;
The human spirit sails, it sails, though lost,

Farther than any chart or map can grant;
The sea remembers what the land forgets:
That each coast was a stranger's shore; the plant
Of foreign embers is the hearth that sets

The native child at home; each people's birth
Owes something to the stranger's gift, the hand,
The exile's seed, sown in alien earth,
Of sailor; and new creed and tongue would stand.

Chapter 232: Oaxaca's Lords

Leo 8, day 232 of the Gaian year

Upon a mountain flattened by the hand
Of Zapotec ambition, rose the plan
Of Monte Albán, white, a city planned
Above the valley's green, where time began

To count itself in stone and sculpted glyph,
Danzante figures carved along the wall—
The captives naked, broken, bodies stiff
In poses of defeat, that all who call

Upon this hilltop city's gate might know
The Zapotec had conquered, and the proof
Was written in their enemies' tableau,
Their suffering immortalized on roof

And terrace wall, and temple, and the door.
Five hundred years before our era, there,
The mountain's summit leveled to a floor
Of plazas, tombs, and temples, the first stair

Of a civilization that would stand
A thousand years above Oaxaca's vale,
Where three great valleys met and formed the land
Of cloud and corn, the green and fertile trail

That fed the lords who built upon the height.
No Maya hand had shaped this city's art—
No Teotihuacan design or rite
Had lent its grid—this was a world apart,

A sovereignty of the Zapotec mind
That owed no debt to northern Mexico
Or southern Petén's jungle lords, the kind
Of independence that the rivers' flow

Between the two sierras guaranteed:
Sierra Madre east, Sierra west,
And in between the valley's sheltered seed
Of culture, uncontrolled and self-possessed.

They wrote—and this is what must not be lost—
The Zapotec carved their tongue into stone
Before the Maya did, and paid the cost
Of being first: the system stood alone,

A writing born out of Oaxaca's need
To mark the calendar, to name the dead,
To track the debt and memorize the deed
Of every ruler, every war that bled

Across the hillside terraces and tombs.
The glyphs were logographic—each a sign
A day-name, a place-name, a word that looms
In the genealogical divine

Record of who begat whom, and of who
Held power in which generation's chain—
The Zapotec lord's authority grew
From ancestry: the living must maintain

The covenant the ancestors had sealed,
And every tomb beneath the plaza floor
Was an ancestor whose might, unconcealed,
Still flowed on upward through the temple's door

Into the living ruler's sacred right.
And in the valley's eastern arm there rose
A second people, masters of the night
Of genealogy—the Mixtec, those

Whose painted books would prove the most complete
Surviving record, since the world began,
Of the Americas: the deerskin's sheet
Unscrolled to show a thousand years of clan

And kingdom, marriage, war, and sacrifice,
Each figure painted in the codex style:
The profile face, calendrical device
Of birth-names, the elaborate compile

Of every lord and lady, every throne.
Codex Nuttall tells the tale of Eight Deer—
Jaguar Claw, he the conqueror whose own
Ambition nearly unified the sphere

Of Mixtec kingdoms into one domain:
He won eleven cities, took the name
Of Toltec royalty, and his campaign
Of marriages and murders built a frame

Of might such as Oaxaca had not seen—
Till his foes conspired, plotted, and seized

The conqueror himself, and the machine
Of his ambition stopped, and they appeased

The ancestors with Eight Deer's sacrifice.
The record lived; the codex kept the chain
Of each alliance, each cast of the dice
That marriage was in Mixtec rule: the gain

Of one lord's daughter for another's son
Was not mere love but sovereignty transferred,
And every painted wedding scene had won
Or lost a kingdom—and the painted word

Of codex was the law, the proof, the seal
Of royal birth, authority, the ground
The genealogy that would reveal
On which a rightful government was found,

Required in the Mixtec world of law.
Monte Albán declined; in the ninth age
Its plazas emptied, and the final thaw
Of Zapotec unity left a stage

Of rival towns across the valley's downs,
And into those fragments the Mixtec came—
Not as conquerors bearing spears and crowns
But as sons-in-law who married their claim

Into the Zapotec high nobles' line,
The interweaving of two ancient bloods
That blurred the boundary and the design
Of who was Zapotec and who the floods

Of Mixtec genealogy had brought—
Two peoples woven into one estate,
Their cultures braided in the thread they wrought
Of gold and turquoise, jade and the ornate

And dazzling metalwork that Mixtec hands
Produced—the finest goldsmiths of the age,
Whose lost-wax castings rivaled any land's
Achievement, every pendant a small stage

Of miniature perfection, every ring
A sermon in the craft of patient fire.
Honor the lords of Oaxaca—the string
Of Zapotec and Mixtec that aspire

To heights above the valley's green embrace,
Who wrote their language first upon the stone,
Who painted on the deerskin every face
Of every ancestor, and kept the bone

And record of their line through all the age—
Who owed no northern lord, no southern king
Their sovereignty, who wrote upon the page
Of their own mountain the remembering

Of everything they were: the self-made crown
Oaxaca's lords, who built upon the hill
A city that could look upon the brown
And fertile valley with the ancient will

Of those who know exactly who they are,
And where they came from, and whose blood they bear—
The genealogists who read each star
Of ancestry and found their purpose there.

Chapter 233: Andean Precursors

Leo 9, day 233 of the Gaian year

Before the Inca raised their sun-crowned throne,
Before the royal roads stretched east and west,
Four kingdoms laid the deep foundation stone
On which the Andes' final lord would rest.

For nothing rises from the empty air—
The greatest reign is but the heir of all
The smaller realms that had been planted there
Before it, and the Inca's golden hall

Was built upon the floor that Moche had poured,
That Nazca drew, that Wari organized,
That Tiwanaku's temple-builders stored
With sanctity—and each had memorized

A portion of the Andean plan. South—
Along the coastal desert's barren shelf
Where rain has never fallen and the mouth
Of every river is a thread of self-

Contained fertility between the sand—
The Moche rose: and Sipán's warrior-priest clan,
Whose tombs would yield the richest contraband
Of gold and silver that the Andes' span

Of buried centuries would ever show.
The Lord of Sipán went down to his grave
With gold and turquoise, copper's burnished glow,
A retinue of those who could not save

Themselves from honor: guards, attendants, wives,
Interred beside him, the sacrificial
Cost of their rule, all measured out in lives,
Ultimate credential and official

Proof that Moche lordship did not end at death.
And then the pottery: the stirrup-spout
Ceramic portrait heads that catch the breath
Of every modern eye: each face devout

Or laughing, warlike, sickened, old or young,
Each vessel was a portrait from the life
Of someone real; and there's no other tongue
Of clay has spoken with such lifelike fife

And naturalism: the Moche potter's wheel
Turned out the faces of a people's race
In terra cotta truth, the common weal
Of a whole people, captured in the grace

Of clay: the blind man, runner, and the priest,
The warrior with his captive on a rope,
The couple in their love, wholly released
From modern prudishness; and so, the scope

Of Moche art was all the scope of Moche life;
No human thing escaped the potter's skill.
And south, along the desert, where the knife
Of drought has stripped the land of green, until

No green thing lives upon the pampa's floor,
The Nazca drew their lines. Upon the stone
And gravel of the Nazca plateau's shore
Of nothingness, they traced the overblown

And vast geometry of the divine:
The hummingbird, the spider, monkey's curl,
The condor, its wings spread in endless line
Against the brown—each figure's sprawl and swirl

Invisible from ground level, the scale
So vast that only from the sky above—
Or from the mountains' edge—the full detail
Reveals itself: a spider drawn with love

Across three hundred meters of the plain.
They drew what human eye could never see
From standing height; the desert's dry domain
Has kept it whole: and so the gallery

Was for the gods who gazed; and for the dead
Who walked the lines in spirit; and the act
Of drawing was itself the prayer said—
The making was the rite, and the abstract

And walking meditation through the dark
Of moonlit desert nights, the faithful feet
That traced the monkey's tail and left their mark
Upon the pampa's hot and stony sheet.

The Nazca kept their rite within the dust.
And east, above the desert, on the height

Of cold plateau, the highland's upward thrust,
The altiplano's feast of sky and light

Meets Titicaca's sacred, lake-deep blue;
There the Tiwanaku built their holy seat.
At thirteen thousand feet, where thin air drew
The breath of pilgrims laboring to meet

Their god; the Gate of the Sun was carved there,
A single block of andesite, the face
Of the great Staff God, weeping, starved, who'd stare
In ecstasy, rays streaming into space

From the divine head like the condor's crown—
The pilgrims came from each Andean vale,
From coast and jungle, and each highland town,
To bring their offerings along the trail

That led to Tiwanaku's sacred core.
This was no capital of war, no sword;
The Tiwanaku ruled by the temple's lore,
By pilgrimage, by holiness outpoured

That radiated outward, all about,
Out from the sacred center like a hymn:
The peoples of the Andes felt devout
Before the Staff God's gaze; and the thin, dim,

High altiplano air, oxygen-lean,
Became the proof of spiritual height—
The closer to the sky, the more was seen
Of the divine, the closer to the light.

And Wari, organizer of the way,
Took Tiwanaku's highland faith, and showed
The state could spread it wider, and could lay
Beyond the pilgrim's reach, the building road:

The Wari built the roads, the terraced hill,
The centers that the Inca, without guilt,
Would take as theirs; the relay-runner's skill,
The storehouses along the way, all built;

The clay of Inca rule was mixed, the frame
Already shaped and set out to be dried;
The Wari built; the Inca, when they came,
But glazed and filled it, and it was supplied.

Honor four mothers of the mountain throne:
Moche the artist, and Nazca the mystic,
And Tiwanaku the holy, and the stone
Of the altar, Wari the logistic

And the pragmatic builder of the road—
Four pillars underneath the Inca's crown,
Four kingdoms that had each already showed
A portion of the answer: set it down

That nothing rises from the empty air,
That each great golden age stands on the ground,
The labor of the ones who planted there
The seed, and what the later age had found.

Chapter 234: Mound Cities

Leo 10, day 234 of the Gaian year

The earth itself was architecture: no
Quarry gave stone on Mississippi's plain,
No limestone cliff, no granite ridge; and so
The land gave soil: the basket-load, the grain

Of clay, the human back, the human hand,
The patient piling, day on day, a slope,
A million baskets, rising from the land,
No pyramid of stone, but earth; the scope

Of labor, muscle, and the weight of loam.
And first, in the Ohio country's hills,
There the Adena built their mounds: the home
Of the dead; but more than graves or landfills:

The mound was what the land itself would yield
When people sculpt the earth to sacred form:
The conic mound, the earthen ring, the field
Enclosed and ritual, kept from the storm,

A meeting-place where living met the dead.
The Hopewell came, two thousand years ago;
Ambition quickened, and the trade-net spread,
Till Hopewell held the Great Lakes' copper glow,

Obsidian from Yellowstone's far lands,
And mica from the Appalachian floor,
Shells from the Gulf of Mexico's warm sands,
And silver from Ontario's cold store:

A net across the continent, that brought
Its luxuries to the Ohio's graves:
The dead with half a continent's wealth, wrought
Copper cut into falcons; and the waves

Of obsidian knapped to paper-thin,
The mica mirrors, polished to reflect
The ancestor's own face, the link, the kin
Between the living and the circumspect

And watchful dead who lay beneath the mound.
The mounds grew rich; and, on Ohio's height,
And the Great Serpent Mound upon its ground,
Thirteen hundred feet of earth, all coiled tight,

A serpent swallowing an egg, the sun,
The world: the serpent holds it in its scales;
The serpent swallows it; and it was done
By hand, the earth-work on the wooded vales.

And then, the city: Cahokia rose
Beside the Mississippi, where the stream
Met the Missouri, Illinois: and those
Three rivers' junction, fertile as a dream,

The richest ground in all the northern land,
The soil the corn required; this was the realm
Of maize, from the Mesoamerican hand
Of wisdom, that came north; and at the helm

A surplus such as north had never known;
From that surplus, Cahokia, its crown:
By year one thousand, twenty thousand, grown
Where East St. Louis is, a teeming town,

As great as London in that age, no less;
The largest north of Mexico; and there,
When corn and river and ambition's press
Joined; and a city rose from mud and air:

Monks Mound, the center, a hundred feet high,
Of earth in terraced stages, base as wide
As Khufu's Great Pyramid; to the sky
The chief's great hall: the hierarchy's pride

Of rank on the Mississippi; the chief
On top, set on the summit, as decree
Of strata, made of earth and height, belief
In rank. And then Woodhenge: the posts, to see

The equinox's light, the solstice dawn,
Red cedar in a ring, the debt of sun
Each season marked; the calendar was drawn
In ceremonies tied to where it spun

Upon the eastern ridge; for those who need
To know the year are cities. And then, when
By twelve hundred, it was over: the seed
Thinned out; the mounds fell silent; and again

The Mississippian way, like a wind,
Scattered to south and east, in chiefdoms, where

At Moundville, Etowah, the mounds were pinned
In smaller towns; the idea was there:

The earth could be the monument they meant:
The soil beneath the feet, when cured and wrought
By human labor and by long intent,
Could rise as high as any stone that's brought.

Honor the mound-builders: Adena's clay,
And Hopewell, Mississippian; the hands
That carried up a million loads, the way
With no wheel, beast, or iron; yet their lands

Were crowned with monuments that still endure,
Still rise above the Mississippi's plain,
Still testify, immovable and sure,
That earth itself, when shaped by human pain

And purpose, is the oldest building made:
Not stone imposed upon the ground, but ground
Itself, lifted by will, collective, laid
And made into the sacred, mound by mound,

To hold the dead, to hold the chief above
The people's gaze; the soil beneath the tread
Of those who built with nothing but their love
Of land they stood on, raised it overhead.

Chapter 235: Desert & Cliffs

Leo 11, day 235 of the Gaian year

The desert teaches everything or none:
Those who came to the Southwest's burning floor
Of canyon, mesa, silence, and the sun,
'Twixt Rockies and Sierra Madre's door,

Found little given freely; and the rain
Fell rarely; and the teacher of all things
That live spoke stern: Adapt or perish; plain,
No third way. Three peoples heard what that brings,

And each wrote its own essay of the sand
On how the human mind, when unafraid
Of hardship, turns the wasteland green: the land
First, of the Hohokam, canal and spade,

Where Phoenix spreads its asphalt grid today;
But fifteen hundred years before, they drank
The river: Hohokam had found the way
Of irrigation, bank by channeled bank:

Hundreds of miles of hand-dug channels led
The Salt and Gila Rivers' snowmelt, poured
To corn and squash and cotton in the bed
Of the Sonoran furnace; clay-lined, stored

Against the seepage; and the desert, made
By human labor into garden ground,
Was the Hohokam's quiet gift; no shade
Of pyramid, of temple; but they found

The desert's harshness pardoned; and they drew
Water from riverbed to field; the yield
Far more than the bare desert ever grew
Fed many, that the dry land could not shield.

They built their ball courts too: the rubber game
That Mesoamerica invented, played
In the Sonoran heat, the drama, same
Of cosmos; thought came northward, in the trade

Along the trails from Mexico to these
Dry lands; for cultures are not islands; hands
Pass on the thought. And second, in the trees,
The Mogollon of the high mountain lands,

Between the desert and Mogollon Rim,
The potters, with their Mimbres ware, the rare
Black-on-white, with a line so sure and trim,
So spare, so absolute, so full of care:

Of fish and crane and rabbit, figures, bold
And playful, dancing on the bowl; each one
A scroll of nature, to the essence told:
One line, the wing; one curve, the river's run;

One dot, the eye: the potter knew that all
Could be reduced to essence, perfect, dry,
The living form abstracted. At the fall
Of the potter, the finest bowl, to die,

Was killed: a hole punched through the painted clay
To free the vessel's soul, to go below
The floor beside the dead; and so, the way
Of art for life and death: and both would show

The beauty that outlived the potter's day.
And third, the greatest, in ambition, scale:
The Ancestral Puebloans, and then their way
Of Chaco Canyon's monumental tale:

In sandy wash below the canyon's stage
Of rock and sage, the Puebloans would then show
What gathered human will could build, the gauge
Of the unlikely: houses, row on row,

Pueblo Bonito, with six hundred rooms,
Four stories, fitted stone, the largest host
In North America; and as it looms,
Chaco, no town, but something else: a post

Of ceremony, gathering, a crown
Of roads that met upon the canyon's floor:
The roads ran straight, thirty feet wide, cut down
Through mesa-tops, for ritual, and more:

Not roads for trade, but for the sacred way,
Like Nazca lines laid out upon the land,
Aligned to solstice, equinox's day,
The pilgrims' paths, as drawn by sacred hand.

Mesa Verde: cliff-dwellings carved below
The sandstone overhangs, the rooms of stone

Where rock withheld the rain's destructive flow,
Sheltered beneath the canyon wall alone:

Cliff Palace, with a hundred fifty rooms,
Hung in the rock-face like a nest, and reached
By handholds, safe from summer's sun that dooms,
Defensible, from western winds unbreached,

Engineered comfort in the cliff's embrace.
The rains grew less; the thirteenth age brought drought
That settled like a judgment on the place:
The water failed; the corn's demand ran out

Beyond the sky's gift; the arithmetic
Of land that cannot feed its people; so
South, east they went; the cities emptied quick;
The heirs went to the Rio Grande, below,

Bearing what cliff and canyon had bestowed:
The kiva's sacred roundness underground,
The corn-dance and the rain-prayer, which was owed
To ancestors; the people, wise and sound,

Who built upon the hardest earth, and when
Its patience ended, did not die, but sought
Rebirth in gentler land. Honor the men
And women of the desert, all they wrought:

The Hohokam, Mogollon, Puebloan: they
Made of the desert no mere empty space,
But home; and what they made, still to this day,
Is written on the canyon's weathered face:

The hardest land, and from it all their art;
The scarcest water, kept with deepest care;
The people of the margins, and the heart
Of all their making in the dry, clear air.

Chapter 236: Norse in Vinland

Leo 12, day 236 of the Gaian year

The longship cut the fog like a gray blade
Through the gray water; and the Norse aboard
Could smell the land before the land displayed
Itself: the pine, the resin, unexplored,

The forest that no European axe
Had touched; and first, peering into the mist,
Gripping the prow, stood Leif, whose father's tracks
Were exiled: Erik, from Norway dismissed,

To Iceland; and from Iceland, by its law,
For killing a man, fled to Greenland's ice;
And from that ledge, the westward ocean's draw
Called out; to the Norse, no edge would suffice

To stop them. In the year one thousand, came
Bjarni Herjulfsson's report of new land
Beyond the ocean, blown off course; the same
Three coasts, wooded and flat, but never manned;

And Leif Erikson crossed the space between
The seeing and the landing; and he sailed
With thirty-five; the autumn winds, serene,
Of the North Atlantic, for them prevailed,

And brought them first to Helluland, the slab
Of stone, the barren, flat, and glacial shore
Of Baffin Island as it is now, drab,
No timber and no welcome; and they bore

On past it. Then to Markland: forest, coast
Of Labrador's dense spruce, and timber there
That Greenland's treeless colony would most
Need; but Leif pressed on south, the season fair,

Until the coastline gentled, and the air
Grew milder; streams were thick with salmon, great
Beyond the Norse experience; and there
Wild grapes grew on the shore, and gave, as freight,

The land its name, Vinland: the wine-land, coast
Where frost came late, the grass grew lush; and so,
Said Leif, is what a Norseman wants most;
They built their camp, the longhouse, forge aglow,

The smithy where the bog-iron was worked
To nails at L'Anse aux Meadows, the tip
Of Newfoundland; the proof in the sod lurked
A thousand years, until released its grip:

The ring-headed bronze pin; the spindle-whorl
That proved that women came; the iron slag;
A settlement whose very bones unfurl
Scandinavia's name, as on a flag.

They wintered there; they met the Skraelings, those
Strangers, the coast's own people, whose dark line
Against the trees was the first meeting, close,
European, American: a sign

Not of conquest, but trade: the red cloth spread
For furs; the milk that frightened those who had
No cattle; but the peace was glass; and dead
Were eight of nine by Thorvald, made it bad,

Leif's brother; and the Skraelings came amain
With arrows; and then Thorvald fell: the first
European by American slain:
The first blood of the long transaction, cursed.

And so the Norse withdrew: not in a rout,
Not driven screaming to the ships, but slow:
The practical assessment, cost and doubt:
Vinland too far, too many Skraelings; so

The line to Greenland stretched beyond the bar
Of what the colony could justify;
They left; the grass grew back; the longhouse, far,
Rotted in sod; the land went on, its sky

Its own, its history its own; the touch
Of the future had brushed upon its shore.
This was not conquest, plague, the cross, the clutch
Of sword; it was a briefly opened door

That shut again: the Norse, the prelude, played,
That history denied: too small to force
A change, a touch too brief, too slight, that made
No lasting wound, a meeting, in the course

At the edge of two worlds; a single pin
Beneath the sedge is what the years preserved.

And all the while the land, and all therein,
Was full of people; nor the undeserved

And passive background were the Skraelings: they
Were the coast's plenty, people of the shore
For thousands of years there, and had no way
Needing no finding; and, upon their floor

Ancestral, outlived the Norse by staying.
Honor Leif, son of exiles, who pushed west
The known world's edge, courage not decaying
In ice-age seas; but honor more the rest:

The Skraelings, who had watched the Norse at ease
From the trees, and held the shore long after
The longships left, the forge went cold; and these,
Constant-hearted people, with their laughter,

Who needed no one's sail upon the sea
Of their horizon to confirm the land
Was real, and theirs, and home, as it would be;
Their own, beneath their feet, upon their sand.

Chapter 237: Eskimo-Aleut Expansion

Leo 13, day 237 of the Gaian year

A third migration, and the last: the gate
Of Beringia was drowned, the broad plain
Submerged beneath the melted glaciers' weight
And risen sea; but on the Arctic's main,

The passage lay open to those who had
The means and will: the frozen ocean's road
Was not a wall; and from Alaska, clad
In furs, a thousand years ago, there strode

The Thule, across the world's own top; its night
Of Arctic winter held no fear for those
More than the warm savanna's noonday light
For warmer folk; they mastered, as one knows,

The kayak: skin and bone, the single seat
Of walrus-hide on driftwood frame; the boat
Most intimate, the hunter wore complete,
Sealed by a drawstring skirt about the throat,

The man and vessel one; and when the wave
Rolled the kayak over, he did not drown,
But, as the water wished, would so behave,
Roll back up: the Eskimo roll, the crown

Of trust between the body and the craft.
The umiak: the open boat, the freight
Of women and the camp, broad, fore and aft,
Of tents and tools and children, and the weight

Of cached provisions; where the kayak was
The sword, the umiak the shield, the load,
And stable platform. And the sled, because
Of the Thule and their dogs, the winter road

Across the sea-ice, in the freezing fog,
The driver on the runners, and the team
Of huskies bred to pull: the human, dog,
Ten thousand years of taming, its extreme

And final test; without the dog, no home
Was possible: the living engine. And
The igloo: from the snow itself, a dome,
The very thing that kills, turned shelter's hand;

The frozen enemy, turned warm with breath,
Insulation in the substance of cold:
Some forty blocks of wind-packed snow, from death
A shelter, spiraled inward, and, behold,

A house built swiftly, that in spring would melt
And leaves no scar upon the land; the hand
Of ingenuity laid flat, that felt
The ice, and said: Here too; here, I will stand,

Even in coldest place, the killing dark,
I'll make a home. And then the whale, the vast
Bowhead, leviathan, the Thule's ark
Of plenty: one could feed a village, cast

Through a whole season; blubber, rendered oil
For lamps that burned the polar night; the bone
That framed the house when driftwood failed the toil;
The baleen's springy plate, as tool, alone

Served for the metal that they lacked: the whale
Was the estate on which the pact was made
With frozen sea. From the umiak's rail,
Six hunters, sinew line, the toggling blade

Of the harpoon that turns beneath the mass
Of blubber, holds; the sealskin float paid out
By patient hunter on the water's glass,
The whale dives, and tires, and dives, without

Its sleep and blood, till the great beast succumbs,
And one whale's body feeds the waiting shore.
East from Alaska, as the season comes,
The Thule opened the Arctic, door on door:

Beaufort Sea, the Archipelago's maze
Of islands; Hudson Bay's enormous bound;
The Labrador coast's fog, and the fjords' haze
Of Greenland's west; in four centuries, crowned

The continent, three thousand miles of ice;
And where they settled, the Dorset went down:
The Dorset, there before, whose quiet price
Of lonelier tradition held the crown

Of Arctic for a thousand years: no dog,
No bow, no open boat; their mastery

Was small, lone hunter's skill; and in the fog
Of Thule's dogs and bows and crews at sea,

The Dorset froze to margins and to lore
Of the Inuit, who still call them Tunit:
Gentle giants, strong, the old ones, before,
Who could not keep the new world's pace, or fit,

And vanished from the ice. Honor the last
Great wave, the Thule, who paid the Arctic's price,
Accepted its impossible, and cast
The kayak's shell, trained dogs, spiraled the ice

To dome, chased whale through swell, and made a home
Of frozen dark: the proof that there's no place
So hostile on this planet that the loam
Of human mind and will cannot find space

To live there: not to merely just survive,
But prosper, hunt, and sing, and pray, and raise
The children, keep the ancestors alive
In stories: those who looked out on the glaze

Of ice, and did not turn away, but said:
This too can be traversed; this too, our land;
And we will learn. And so the Thule would spread
Across the world's own crown, with sled and hand.

Chapter 238: The Redeemer

Leo 14, day 238 of the Gaian year

In each land comes a figure, one who bears
The weight of heaven's message on his back,
Who walks among the broken and repairs
The covenant the people let go slack,

Who teaches, and who suffers, and who goes
Away, who promises to come again;
And then the people, left behind, compose
The scripture of departure; and the pain

Of absence is the engine of the faith.
Two figures now, two continents apart,
Two centuries apart; and yet the wraith
Of one same archetype beats at the heart

Of both: the Redeemer, he who descends,
Who teaches peace, who builds the law, who goes
Before the mission ends; whose leaving lends
The deepest awe the people ever knows.

In Tula, which the Toltec would erect,
In central Mexico; and there, below,
Where warrior-columns, grim, stand to protect
The legend, over history, would go:

A man: Ce Acatl Topiltzin, born
On One Reed's day, the priest-king, in the cause
Of the Feathered Serpent: wind, breath, the morn
Star, Quetzalcoatl, whose rising and whose pause

As evening star, meant death and life in one
Arc of the sky; who wore the quetzal's green
Feathers in the temple's dark; as the sun,
He bore the name of culture's gift, the sheen:

The corn, the calendar, the arts of peace,
The writing and the wisdom of the scribe;
The Toltec culture's gift, and its release
Of human culture from war's bloody tribe.

Topiltzin taught that human sacrifice
Was an abomination; that the floor
Be clean of the obsidian's device;
That butterflies and flowers, and no more,

Were offerings the Feathered Serpent sought;
The human and divine were bound, their prayer
Of beauty, not of blood. For what he taught,
Tezcatlipoca's priesthood, standing there,

Reaching for the one altar, with the glass
That smoked, its god's own face, would not allow
The flowers; and they would not let them pass,
But plotted on the priest; and they, somehow,

Brought him a mirror: his own face, diseased
And old; the terror of his mortal fate
Undid him; and with pulque made drunk, they seized
His shame, and barred him Tula's throne and state.

He walked east, the sea his last desire,
And at the Gulf's edge, weeping and bereft,
Set himself free: burned upon a pyre[28]
His heart became the morning star; and left,

He sailed away, the raft's light growing dim
Upon the eastern ocean's rim; and both
Are so: he promised to return; of him
The age would come again; and, by that oath,

The world would learn of flowers and not blood.
Then north, a thousand miles, two ages on,
A figure came across the water's flood:
The Peacemaker, remembered; and, as dawn,

The Haudenosaunee know him: the root
Of their own constitution; in the light
Of longhouse embers, sacred, resolute,
He came across Lake Ontario's night,

From the north shore, a stranger, who forsook
His Huron people; and he found the five
At war: the Seneca, Cayuga shook,
Onondaga, Oneida, Mohawk; strive

Not against strangers, but each other: score
On score of blood-feud; for a brother, son
Killed to avenge; revenge's endless war
Ate nations from within; and he, the one,

[28]The sources give both endings: in one, Quetzalcoatl burns himself and his heart rises as the morning star; in the other, he sails east on a raft of serpents.

The Peacemaker, he offered grief's release:
The Great Law: the Great Law of Peace, the law,
Gayanashagowa, the great league of peace:
Five nations by one oath, beneath the awe

Of one roof: each its hearth and its domain;
But all the five-fold matters, as they fell,
Were settled at Onondaga, the main
And central flame, where fifty sachems dwell,

The royaneh, deliberating the law:
The path of the unanimous; the right
Of the clan mothers, who could so withdraw
A chief who ruled unwisely; and the might

Of women over men's ambition; both
Held voice; and war required consent of all.
He planted the Great White Pine, there, the oath,
The Tree of Peace, and, under it so tall,

The five-fire longhouse, laid out east to west:
The Mohawk, keeper of the eastern door;
And Seneca, the west; the center, best,
Onondaga, the keeper of the lore

Of law; beneath the roots, the hatchet, sunk,
The war-club, buried, that no hand should take;
The arrow snapped; beneath the pine's great trunk,
The nations, freed, the blood-feud's chain would break.

And then the Peacemaker departed. Like
Topiltzin, the refrain the same: the one
Who, broken-hearted or fulfilled, will strike
West, or into the sky, his teaching done,

And leaves the law and the behest to keep
It burning, as a light upon the coast;
The people choose the teaching, or the deep
Violence they were asked to lose, its ghost.

Two Redeemers: one of feathers, one pine;
One of the pyramid, one of the floor
Of longhouse; one, the morning star's design;
One planted the tree, and closed the war's door;

The pattern of the world: the teacher came
And healed; his banner, raised, and then withdrawn;

And what he left behind is still the same:
The covenant he made, and peace lives on

Where it is kept, from day to day; the law
He gave is kept by all the will of those
Who say, We will keep it. Honor, with awe,
The Redeemer, who carries heaven's throes,

Its aching weight, and sets it down before
The dreamer and the warrior; says: create
A world of flowers, not blood; law, not war;
The planted tree, whose branches, in their state

Of peace, shelter the nations, who lay down
Their weapons, choose the harder path: the pact
Of the healed and shared, the never-grasped crown
Of might; and this is the Redeemer's act,

His testament: I came, I taught, I leave;
And what you build without me is the proof
Of whether you believed. Now you must weave
The peace yourselves, beneath the planted roof

Of the tree, by the law I gave; the star
Of morning rises, and the pine will grow;
The longhouse warmth is kept for those who are
True to the teaching; choose the flower, so,

Not the blade; choose the council, not the war;
Choose the covenant the Redeemer made,
And he will come again; but not before
You keep the peace without him, unafraid.

Chapter 239: The Fall of Tenochtitlan

Leo 15, day 239 of the Gaian year

The city rose out of the lake, a prayer
Answered in stone and floating garden-ground:
Tenochtitlan, jewel beyond compare,
Where Huitzilopochtli's children, crowned,

Did not resist the beauty, but had built
It into causeways on the water, arched,
And aqueducts whose arches split the gilt
Of morning; each quarter hummed and marched

With trade, a hundred thousand lives: the plume,
The feather, obsidian blade, the bean
Of chocolate, and the cotton of the loom;
Two hundred thousand souls lived there, between

Its walls, more than in any Europe's town
At that same age; from Chapultepec's spring,
Clean water fed the fountains coming down
To plazas where the priests and merchants' ring

Went on, where architects would plan the feasts
Of carving: serpent, eagle, sun; and there
The skull-rack's grim accounting; for the priests'
City was not undone by squeamish care:

Tribute of Triple Alliance's wars
Fed the realm's hunger and the altar's need;
And Moctezuma ruled from polished floors,
The absolute and guaranteed, decreed

Lord of the Mexica; Texcoco and
Tlacopan beside him, three cities' chain
In one alliance; and the markets, spanned
At Tlatelolco, wider than the main

Of Salamanca; sixty thousand fed
Its dance of trade: the jaguar pelt, the plume
Of quetzal, gold and jade and turquoise spread,
Vanilla, rubber, copal, and the loom,

The lapidary's and the goldsmith's art;
The Spaniards, later, swore they'd never seen
In any Europe market such a mart;
And the chinampas, floating gardens, green

On woven reed upon the lake, where grew
The maize and squash and amaranth, the soil
So engineered, the most productive, through
The hemisphere; and so their keepers' toil

Fed a realm. Then, the sails: fifteen-nineteen;
Hernán Cortés then stepped ashore, with his horse;
And the Totonacs told, as they had seen,
The Mexica's ways, gave the lever's force:

The tributary peoples, ground beneath
The Triple Alliance's heavy rack
Of flower-war and tax, would so bequeath
Their hatred to the stranger; and the crack

Was this: Cortés did not conquer it alone;
He broke the Mexica with their own foes,
Alliance turned against itself, the bone
Of realms. Then Moctezuma, as signs rose,

Would hesitate: was this Quetzalcoatl, come
Back from the eastern sea, as was foretold,
The Feathered Serpent? Or an envoy, from
Some distant lord? And while he weighed, and told

The omens, signs, Cortés advanced, and he laid
The European purpose through the lines
Of Mexica diplomacy, a blade
Through silk. They met on causeway, by the shrines:

Moctezuma in his jade and in gold,
The feathered headdress, all the grand display;
And Cortés, in rusted iron, grim and cold,
Unwashed, his handful, weak in number; they

Were armored in the certainty that God
And gold were one pursuit. Then, the slaughter;
And on the Noche Triste, through the causeways trod
The Spanish, driven bloody through water;

But they returned; they always would return,
With the Tlaxcalan allies, who'd destroy
Their ancient foes, the Mexica; he'd learn
The lesson realms all fear, the subject's ploy:

The subjects' hate is the invader's gift.
And an ally too small for eye to see,

Cocoliztli, plague, terrible and swift,
Ran on before Spanish boots: smallpox, free,

Silent, needing no sword; it moved along
The causeways, markets, palace, and the hut
Of the gourd-worker, through the weak and strong;
And forty in a hundred fell, were cut,

The Mexica, before a single pike
Had breached the citadel. The siege then came:
Eighty days of starvation, thirst, the strike
Of cannonade; the causeways cut, the same

Waters held by brigantines he made
From lakeshore wood; Cuauhtémoc, the last
Tlatoani, fought on his knees, and stayed
In rubble, till the city, boneyard, passed

Into surrender's silence: no more drums
From the great temple's height, no market's sound,
No laughter in the plazas; and there comes
Colonial night. In the ruin, found,

A scribe, Mormon, the keeper of the trust
Of record, and gathered memory's hope:
The painted books, the codices from dust
Of kings, the genealogies, the rope

Of knotted calendar, the count of days,
The feasts, the names of gods, from ages past;
And fled north to the mount, the desert's maze,
Hid from the conqueror, buried to last.

The record slept beneath the earth, a seed,
A stratagem of rebirth, long delayed.
Honor Tenochtitlan, whose roads lead
Across the world the sword would break and fade,

But could not make the memory unmanned:
The chinampas, and all the chocolate trade,
The serpent and knife, the calendar stand
Of stone, the jade-green mask; all of it laid

In soil, and waiting for the day the hoard
Of the old record-keeper's found once more,
And the long toil of forgetting's restored
To light; the city rises, as before;

And so the memory no conquest's might
Could ever make undone, returns to dwell
In its old home, the city of the light
Upon the lake, alive in those who tell.

Chapter 240: The Four Quarters Fall

Leo 16, day 240 of the Gaian year

From Cusco's navel ran the four roads' span:
And north to Chinchaysuyu's coastal heat,
South, Collasuyu's Altiplano clan,
East to Antisuyu's green jungle beat,

And west to Cuntisuyu's desert shore;
The Inca realm stretched on the mountain's spine,
Volcanic, from Ecuador; its stone core
To Chile, stone and rope, one voice's line:

The Sapa Inca, Inti's son, divine,
Lord of the land the condor touched; the state
Ten million souls, without a written sign;
The Quechua kept their records in the weight

Of quipu's knotted cords, whose colors spoke:
Red for war, white for silver, yellow, gold;
And each knot's place the census, and the yoke
Of levy: bushels in the storehouse, told,

The soldiers for the campaign, and the days
Of labor that each ayllu owed the state;
The quipucamayoc read the strings, as phrase
Is read from European printed plate.

The Spaniards burned threads where memory dwelt;
For the knots kept the dead; and who would hold
The dead, the friars held, was theirs; they dealt
The Andean past to silence; the old

Ten thousand years of record to the flame.
Before the flame, the roads: the Inca's way
Ran forty thousand kilometers' frame,
Of chasqui runners, relay, day by day,

Quito to Santiago's latitude:
Fresh fish from coast, still new, two days to reach
The Sapa Inca at his altitude
Of mountains; and the bridges, each by each,

Of rope, swayed over gorges, through the clouds.
The terraces, carved in the mountainside
Like stairways for the gods; and in their crowds
The crops climbed up the altitudes, applied:

Maize low, and quinoa in the middle,
Potatoes on the top; and, high up there,
The height was solved as one solves a riddle;
And chuño, freeze-dried in the mountain air,

Pressed by the peasant's foot, the first of food
Made to be stored, for decades, in the state's
Warehouses, kept against the famine's mood;
So that the Inca hunger's yearly rates

Were lowest in the land. Pachacuti,
The Earth-Shaker, ninth Sapa Inca, built
This wonder, turning, as a king's duty,
Small Cusco to a realm; and, with the tilt

Of stone, remade the capital; and raised
Machu Picchu on granite clouds; the throne
Of Inca with the sun, the sun-god praised,
Made one. Then came the war of brothers: grown,

Huáscar in the south, Atahualpa north;
The realm was smothered in its civil war;
The cruel timing: thirty-two brought forth
Pizarro's Spanish column, greed before,

Cajamarca: a hundred sixty-eight
Against eighty thousand, it came to pass:
For Atahualpa walked in, there, in state,
Unarmed, on golden litter, through the mass

Of crowd; and the friar Valverde's word
Of faith, the Bible, the demand to yield,
Was offered; to his ear he held it, heard
Nothing, and cast it down; and so was sealed

The made-up insult: and Pizarro gave
The signal; cannon roared; the horse broke through
The panicked crowd; and there was none to save
The unarmed: seven thousand dead; and, too,

In thirty minutes; Atahualpa, dragged
From his fallen litter, and his world's walls
Collapsing inward, as a temple, sagged
Beneath its dome. The ransom room: his halls

He filled with gold as high as man could reach,
And twice with silver: twenty-four tons' weight

Of sun-metal, the masterworks; and each
The labor of a thousand hands; their fate:

Pizarro melted them, destroyed the plans
And genealogies of gold, for bars
Of bullion; then he killed the king; the clan's
Hope, garroted where Cajamarca's stars

Shone on the plaza; Atahualpa chose
Baptism's hardness over flame; the line
Since Manco Cápac first emerged from those
Caves of Pacaritambo, cut, its spine.

The roads fell silent. Tambo and the store
Were emptied; and the quipu, by the priests,
Were burned in heaps; and so, forevermore,
The terraces went fallow; at their feasts,

The lords fed on Andean silver, bone;
The mita, once communal, freely owed,
Became the brutal draft, the forced, the known
Labor in Potosí's mines, from which flowed

The silver of Seville's cathedrals; eight
Million died. Honor the four quarters' name,
Tawantinsuyu, the knotted cord's state,
The road through cloud and dew, the terrace, frame

Of storehouse, and the lord of sun, whose gold
Could not buy life from those who worshipped it;
The engineering, patient, broken, bold,
When strangers came with horses and false writ;

The quipu's language died in flame; the cries
Of the last Sapa Inca swallowed by
The conqueror; the terraces still rise;
The roads remain; potato climbs the high

Mountainside with quinoa; and the rain
Of Andean sky waters what no sword
Could take: the knowledge of the soil, the grain,
The memory outlives the foreign lord.

Chapter 241: The Northern Fires

Leo 17, day 241 of the Gaian year

The silver called them north: in forty-six,
When Zacatecas' veins of ore were struck,
The Spanish hunger, and the politics
Of bullion, drove the frontier on, and stuck

Beyond the settled Mexica domain,
Into the lands the Aztecs never ruled:
The dry sierras and the open plain,
Where those the Mexica had called, and schooled

As Chichimeca, called the dog-folk, so,
Barbarians of the north, looked from high
From mesa and from cliff, the crown below
Of Spain draw near their hunting grounds, and nigh.

Not these the allied Tlaxcalans, who lent
Their arms to Spain at the bishop's behest;
These were the hounds of the steppe, never bent:
The Caxcanes, Zacatecos, and the rest:

The Guachichiles and Guamares, of the bow,
The arrow, and the mesquite hills, who knew
Each canyon and arroyo's flow, and so
Could vanish like the wind in sand; and through

They would not yield one league of country, where
The sun revolved in its relentless arc.
The Mixtón War broke first, in forty: there,
From Mixtón's fortified peñol, the dark

And steepest crag, the Caxcan warrior's cry:
Tenamaxtli raised it; the frontier's bar
Collapsed: the missions fell, the settlers fly,
The mining camps were burned; and, near and far,

They swept Nueva Galicia's land,
Until the viceroy learned no force could hold;
He called Pedro de Alvarado's hand,
The Aztecs' conqueror, veteran, old,

Who rode north with his cavalry and pride:
At Nochistlán he met the Caxcanes' stands;
Rough slope; and there, beneath his horse, he died,
Crushed, the conquistador, and all his bands

Undone by warriors rolling stones from heights,
With a ferocity that none could shrink
In Spanish chronicles, with all their slights;
They knew this was no war for tribute's clink,

Or trade, but on the ground of all their world:
The land, the hunting ground, the sacred hill,
The right to live as desert's hand had curled
Them, free, to vanish, and return, and kill.

Antonio de Mendoza then came
With the largest army New Spain had seen,
Fifty thousand, Aztec, Tlaxcalan, flame
With Spanish iron; and the siege between

The mountain strongholds broke at Mixtón; so
The desert's lord was subdued, but for now;
The embers scattered; and the war would grow
From each spark of Mixtón's defeat, and how

The Chichimeca War, four decades long,
From fifty on to ninety, and it bled,
The longest colonial war, the strong
Resistance of the north; the silver's thread,

The road that carried Zacatecas' ore
Down south to Mexico City's abode.
The Guachichiles, the fiercest, painted, bore
Red blood-root's dye; their archery, a mode

Near to perfection that the desert knew:
An arrow each second, and they would ride
The stolen horse bareback, and, aiming, slew
Their chosen targets from the gallop's stride;

The Chichimeca learned the horse as fast
As Spanish learned to fear the midnight raid,
The ambush and the war-cry; trains were cast
In flame; haciendas fell; the road was made

A corridor of dread, where the escort
The arrow's target; and the dead outweighed
The ore that reached the port; and, of the sort
That breaks the bone of armies, war was laid

Which Spain could not win by the sword alone:
The frontier was too vast; and so the crown

Tried what the sword could not: the peace that's grown
By purchase; and the missionary's gown,

The food and clothing given; and the slow
Seduction of the mission and the ranch,
The measured flow of colonists; and so
Loyal Tlaxcalans planted, branch on branch,

With Chichimeca, keepers of the same
Altar in settled villages, the sung
And gentle persuasion's aim; and it came:
It worked, in part; the frontier calmed, among

The tribes; not conquered, but they had agreed:
They rose when provocation made them fight,
And took the peace when peace kept what they'd need:
The land, the hunt, and freedom from the might

Of mission's call: its altar and its bell.
Honor the Caxcanes on their peñol heights,
The Guachichiles, the desert's stealth; as well,
The Zacatecos, Guamares, and their fights:

Peoples whom no empire ever tamed,
Who held the north for fifty years; the crown
Against the richest on the earth, who claimed
No kingdom but the canyon, nor renown,

Whose spears were of the desert's own design:
The thorn, the stone, the arrow, and the will
To stand; and the unconquered's simple sign
Is to be here, upon the land, here still,

Which conquerors passed through, but never held:
The silver went south; miners came and went;
But from the mesa's edge the view, unquelled,
Remained the Chichimeca's own, unspent.

Chapter 242: The Wampanoag's Bargain

Leo 18, day 242 of the Gaian year

Before the ship, the plague: sixteen-sixteen,
Three years before the Pilgrims ever came
To Plymouth's rock, there streamed, a thing unseen,
The Leptospira, the terrible, the same

Through Patuxet, Namasket, and the shore
Of the Wampanoag; and so, when it passed,
A whole people's silhouette was no more:
Nine out of ten were dead. The bones were massed

Unburied where the villages once had stood;
The cornfields overgrown; no smoke would rise
From longhouse fires; the epidemic could
Do what no foe had done; before their eyes

The coast was emptied, villages collapsed,
Where English would call it New England. Then
Massasoit, sachem, as the plague elapsed,
Ousamequin, Yellow Feather, the men

Of the Wampanoag's small remnant still held,
And did the math: a thousand left, no more;
The Narragansett, spared, would see them felled,
Their rivalry's last word, unless the score

Could be restored. And then the ship arrived:
A hundred two, half-starved, and unprepared,
Shivering on Cape Cod; and few survived
December; and by spring, not half were spared.

And Massasoit saw not threat but giving
Of chance: a counterweight, to set aright
Narragansett threat; and of the living,
Tisquantum, Squanto, strangest in his plight:

Kidnapped by English, sold to Spanish, fled
Through London, and returned to find his own,
Bones on the beach, the village's whole dead,
Patuxet's people, all of them; alone,

He walked the emptied ground, and chose to teach
The strangers how to live upon this land:
Where herring flows for fertilizer; each
Berry that cures the scurvy; bark, at hand,

That cuts the fever; not from love, but pure
Pragmatism, calculated: his own
Were gone; the Pilgrims were the only, sure,
Hands that might remember Patuxet's known

Dawn, and might work the land. In twenty-one,
Massasoit and Governor Carver swore:
Neither shall harm the other's daughter, son;
If one's attacked, the other's arms restore

Its peace: a mutual defense; the art
Of the sachem's diplomacy, unfurled
With statesman's skill, who knew from the first start
The English needed him; their fragile world

Was resting on the Wampanoag's own grace.
The autumn feast, the English thanksgiving,
Was friendship sworn, a nations' grave embrace,
But a formal meal of nations living

Each by the other: ninety warriors came
With Massasoit, five deer as tribute laid;
A three-day feast; alliance sealed; the same
And so the oldest feasts of state were made,

With clever, careful negotiation
Of two who needed each other, and knew
That each one's life, and each one's own nation,
Hung on the balance; and the balance, true,

Held for Massasoit's life, four decades' time,
Of gifts, of diplomacy, and the plan
That kept the English in their place; the climb
Of the Wampanoag, rebuilt, then began.

The math was changing: each new face that came
Upon the ships was hungry for the land;
More English, always more; each town, the same,
Advanced the line, and acres' great demand

Wore patience down: the cattle trod the corn
Unfenced; the English law replaced the court
Of sachems; and the pact's own children, born
In the widening gap, were taught, in short,

The treaty was a gift, and not a trade;
The Indians the guests, and not the hosts;

And seeds of the betrayal, so, were laid
In soil where the Patuxet dead, the ghosts,

Still whispered to the corn. Honor the one,
Massasoit, the Yellow Feather, he who
Chose stranger over isolation; done,
Held his shattered people together, through

The diplomatic art; who knew from start
The English; and, instead of war, when few
They were, he might have won, chose, as the part
Of wisdom, the alliance; and it drew

His nation through a generation more,
And sowed the bitter harvest: his own son
Would reap what patience sowed; the feast, the war
Would turn to flame; but that is yet undone.

For now the feast is held, the corn is shared,
Two nations eat beneath the autumn sky,
The horn of harvest's plenty is declared,
And makes the bargain sweet, as time goes by.

Chapter 243: Metacom's Fire

Leo 19, day 243 of the Gaian year

The son recalled what the father let go:
Metacom, whom the English Philip named,
As if a king needed their name to show
His sovereignty; the sachem's line, the famed,

The son of Massasoit, who watched the long
Forty years of the father's plan undone:
Each promise botched, each border crossed, each wrong
Court of the sachem overruled; and one

By one the hunting grounds cut short, the fence,
The cow, the freight of English, and their claim
That God had cleared the land for them, and hence
The plague itself was Providence's flame

Cleared Jerusalem for the chosen; and
The Indian, the Canaanite, to cede
By the divine command. And on a strand,
In seventy-five, of their land, indeed,

The Wampanoag were penned; alive, but few;
And his own brother, Wamsutta, was dead
In English custody: a justice drew
On the convenient suspect with its lead,

And burned like coal in Metacom's own chest;
Three Wampanoag men hanged at Plymouth, tried
By English law: of sovereignty, the test
Was failed: a foreign court could judge, decide

And kill the sachem's people; and the pact
Was not just smudged, but blotted out; and stripped
All pretense. Metacom chose war, in fact,
No reckless raid, but careful, well-equipped

Alliance, by a statesman's skill: Nipmuck,
And Pocumtuck, Narragansett, and more,
Abenaki: a dozen nations' pluck,
A net to strangle, ere they grew, the shore

Of colonies; and, in seventy-five,
New England burned: first Swansea; and then came
Brookfield, Deerfield, and Springfield's mill, alive
With flame; and Northfield, Hatfield, all the same:

Twelve of the region's ninety towns destroyed,
The battle spread throughout the forest ground
And greens, Connecticut to coast; the void
Of war the English had never yet found:

No war, per head, has killed more of their own:
One in ten colonists, dead or displaced;
And Indigenous losses deeper; grown
By the next ship, the English were replaced;

But Metacom's alliance was the last
Of each nation's fighting strength. Great Swamp Fight:
December, bitter cold; the English, massed
With Mohegan allies, found at last, despite

The frozen marsh, the Narragansett hold
In Rhode Island's cedar swamp, a walled isle
Where families camped: women, children, old;
The merciless assault, with fire, the while

The people slept, burned wigwams; the pyre
Of the burning village turned the war's tide:
Narragansett lost their heart, entire,
The nation, cost of having been allied

With Metacom. And still they fought; and through
The winter, seventy-six, raids went on;
The colonists were caught, for the foe knew
Each trail, each ford, each ambush-hollow, gone

Into the forest; even Boston feared
That it might follow Springfield into ash.
But spring brought hunger; the alliance, sheared,
Unraveled: Mohawk raids, disease's lash;

Blockade denied them powder; and the pride
Of nations scattered: some surrendered, some
Fled north to Abenaki, French's side;
And Metacom was hunted, as the drum

Of his war broke. August, seventy-six:
The swamp at Mount Hope, where he had been born,
The last betrayal, and the hunter's fix:
Alderman, of the Pocassets, a sworn

Ally of the English, who shot him there
Beneath his fathers' sky; and debts were paid

In the worst coin: they quartered him, laid bare
The body, hacked the head off, and displayed

The head upon a pike at Plymouth's gate
For twenty years, the grinning trophy, dread,
Of the colonial rule, rising, great;
His wife and son were sold as slaves; the thread

Of Massasoit's own line, the grandchild, south
To Caribbean, to Bermuda's fields
Of sugar; and the treaty's final mouth
Spoke its last spell, most cruel of its yields.

So honor Metacom, the son who saw
What his father chose not to see, who read
The treaty's hidden flaw, and, by its law,
Rose against certain ruin; who, instead,

Burned all New England and had nearly won;
Who proved the dispossessed had earned the right
To fight upon their country, in its sun;
Whose severed head, on Plymouth's pike, the sight,

Was the price paid, resistance of the dead
And living, 'gainst the colony's device:
The land taken by law and sword; instead
The plow for people; Metacom, the price,

Broke the colonist's safety, and the vow
That Indian was a vanishing shade:
He showed that shadow had its teeth; and how
The forest and the meadow, unafraid,

Would not surrender what beneath them lay
Without the fight that shakes the world awake.
The son remembered; and, from that far day,
The woods kept his memory, for his sake.

Chapter 244: The Kachina Underground

Leo 20, day 244 of the Gaian year

For eighty years the Pueblo peoples bore
It all, since Oñate's iron boot had crossed
Rio Grande, ninety-eight; the friars' war
Ground sacred dances down; and, at the cost,

The kivas sealed with stone; the masks were burned
Of the kachinas, Taos to Hopi's town;
The forced conversion's labor, as it turned,
Fell on the Pueblo backs, dragged up and down

The timbers for the churches, day by day;
The friars' altars to the one god built
Atop the buried kivas; but the way
Of the rain-prayer and corn-song, without guilt,

Went on, whispered, hidden from the friar;
The Pueblo peoples bore it all along
Mesa-patient; but the well grew drier;
The drought came: in the seventies, the strong

Relentless failure of the sky to rain;
The Spanish tribute-corn, which none could pay,
The starving towns; Apache raids, the bane
Of weakened missions; and the whip's harsh sway,

The friars' answer, violence that rose,
Of men who blamed the drought on kiva sin:
Kachinas, the rain-rite, the dance that goes
On, hidden, in the kiva's fold within;

In seventy-five, the Spanish then seized
Some forty-seven healers, and hanged three,
To break the spirit's stand; but, not appeased,
Popé of Ohkay Owingeh rose up: and he

Had been among the whipped: the scars he bore
On his back, the text that urged the rising:
And knotted cords, like stars, were sent before
From Taos to the Piro, the devising

Encoded in the fiber: loose one knot
Each day; and when the cord is smooth, then rise.
August the tenth, sixteen-eighty: the lot
Of twenty-four pueblos, beneath the skies,

To the kachina's drums, rose up as one;
The Spanish, caught 'twixt sky and stolen land;
The Pueblo fury, burning like the sun,
Burned down the mission doors on either hand:

And each church, Taos down to Isleta, razed;
And twenty-one Franciscans killed, the cost
Of eighty years of whip; the settlers, dazed,
To Santa Fe; the governor's grip, lost

On New Mexico dissolved, like the clay
In the acequia's flood. They ringed the town:
Two thousand warriors, Santa Fe; the way
Of water cut; the last stand, sallies, down

Out from the palace, bought the time alone
To gather settlers, flee, and go south,
Lonely, humiliated, to the bone,
Down the Rio Grande to El Paso's mouth

Of dust; the Pueblo stood upon their land
The first time in eighty years. Popé then said:
Undo all: go wash, by the river's hand,
Baptism off; take the old name instead,

The true name the kachinas know; the track
Of Spanish road, the mission's frame, the bell
Of iron, destroy them all; and give back
The kiva to the dancers, who would tell

The rain-prayer to the cloud, the corn, the earth.
Twelve years of freedom, the old ways restored,
The ceremony born again; the dearth
And inner strife: Popé was a tyrant lord;

The unity the rising asked could not
Be sown in peace; the pueblos quarreled; drought
Continued; raids increased; and freedom's lot,
Too fragmented to hold, at last gave out.

Diego de Vargas in ninety-two
Returned; the reconquest's mold had changed:
No chargers through the plaza, no mass slew
Of executions; things were rearranged:

The Pueblo had proved that they could expel
The foe outright; the Spanish came to treat,

Not by the sword: with amnesty as well,
Lighter tribute; and, cornerstone, complete:

The tolerance of all the Pueblo rite:
Kachinas would still dance; the kivas stay;
The old religion's way would not, despite
The mission, be its bane; the price to pay,

Unspoken compromise; the reconquest
Was possible; the Pueblo kept their prayer,
Their skies, their gods; conversion, at its best,
Was surface; and beneath, the altar there

Of Christian faith, and the Franciscan's plea,
Kachina danced; the corn-prayer, wreathed, would rise
From the unconquered kiva, rising free,
Into the clouds. Here the victory lies:

Not in the twelve years' freedom's shrouds alone,
But in the stubborn life that followed; for
Kachinas dance today in Zuni's own,
In Hopi, Acoma: the sacred core

The Spanish cruelty could not erase,
Because one generation proved it could
Be erased; that proof was the leverage, base
Of bargaining that kept, beneath the wood

Of the conqueror's church, the sacred, kept,
And living, underneath the roof, alive;
The rite was hidden there, and never slept;
The old ways, in the new, would still survive.

So Honor Popé, the scarred medicine man
who knotted the cord of the Pueblo soul
and in one August dawn untied the plan
of eighty years, and took the altar whole:

who proved the kiva and the church were one
house, and the one who keeps the rite is who
can hold it; so kachinas, in the sun,
still dance in plaza and in kiva too:

the prayer, the mask, the rain, the corn, the bread
of the same altar, kept before the cross
and after it, and every morning fed
by the land that remembers its own loss.

Chapter 245: The Great League Cracks

Leo 21, day 245 of the Gaian year

The Haudenosaunee played this before:
The People of the Longhouse, whose old law,
Confederate, was older than the door
Of any church, the colony, the raw

New England's towns; and the Five Nations, then
Six, Tuscarora joining, in twenty-two,
Who knew the European's weakness: men
And there were two kinds, French and English; through

The wood between, a shared hate; and the creed,
Catholic and Protestant; the fur, the land;
And played the one against the other's need,
A hatchet balanced on its edge, at hand:

Lean to the French, the English wedge would press;
Lean to the English, and the French supplied
Algonquin foes with guns; and, nonetheless,
With both and neither, they would be allied,

Hiawatha's sons, whose Great Peace, the law,
Threaded the needle where none could pass through:
The raw and brilliant statecraft, without flaw,
Of life between the realms; and well they knew

Covenant Chain: the metaphor they made
With English: link by link, respect, the bond
Of conference; the wampum belt was laid
At Albany's stockade; and, from beyond,

The Iroquois diplomat knelt to none,
But called the governor brother, not child,
Not subject, but the equal partner; one
Who overturned assumption, proud and wild:

We are not subjects; we are your allies;
The chain kept polished, each corroded link
Revised at council, as each season flies,
Or the alliance rusts, and peace will sink.

And for a century the game would burn:
The double-crossed, the double-courted, sat
At the continent's hinge; and in their turn
Nor France nor Britain could advance, but that

The Longhouse held the Great Lakes' key, the gate
Of the Ohio Valley, and the fur
Trade's arterial flow; and then, the weight
Of war that would decide it all would stir:

In fifty-four, a young Virginian, named
Washington, would bring the war's first shots, slung
From the Ohio forest's ambush, framed:
The French and Indian War; and its tongue

Not French nor Indian, but global war
That Europe called the Seven Years, the soul
The continent at stake; and, as before,
Haudenosaunee steered from pole to pole:

The Mohawk leaning English; to the French,
Seneca; Confederacy, apart,
To stay above the fray; but at the trench
The Europeans bled each other's heart;

But the game changed: the middle's balanced sky
Was closing. William Johnson, England's man,
Who married Mohawk, spoke their tongue, the eye
Within the longhouse, pulled them to the plan

Of British cause; neutrality was breached.
At the Battle of Lake George, Hendrick, old
The Mohawk sachem, the alliance preached
Into the battle's forge; and, in the cold

French volley, fell; the first price, paid in blood
By Haudenosaunee. The British won;
Treaty of Paris, sixty-three, the flood:
France ceded all of Canada; was done

Ohio Valley opened; and the French
Alliance the western nations needed
For balance, was torn from them like a wrench;
Indigenous peoples woke, unheeded,

To find their counterweight was broken, clean:
Pontiac understood it first, war chief
Of Ottawa, whose coalition, keen
And terrible, burst forth beyond belief

The Great Lakes, sixty-three: Fort Detroit's siege;
And Fort Michilimackinac was taken

By lacrosse game: the warriors, for their liege,
Hid weapons in the sport; the fort, shaken,

Fell to the war-club at the goal; and eight
Were captured; and like Metacom's, the soul
Of the same resistance, refusal's weight
To yield new order its terms and control:

Without the French, the British, unrestrained,
Would take the acres west. And then the line:
The Royal Proclamation, then ordained,
In sixty-three, the Appalachians' sign:

No settlement beyond the crest; the west
Reserved; a distant king's intent, who knew
Indigenous alliance was the best
Thread of the realm's stability; and through

Defiance of the boundary, came war.
The colonists ignored the line, and crossed;
The day the Longhouse feared, had feared before,
When neither needed them: the balance lost,

And neither honored now the wampum's plan.
Honor Haudenosaunee, the Great League,
Whose diplomacy held, since it began,
The continent in balance; the intrigue

Of covenant, the chain kept polished bright,
Masterwork of statecraft, in the shifting
Of forest's light; and when it broke outright,
It did not vanish, but went on, lifting

The Longhouse: still it stands; the fire still burns
At Onondaga; and the battered whole
To council, never once adjourned, returns;
The Great Peace, which no crown's frown could control,

A covenant the nations earned between
Themselves; the law was here before the ships;
It stays, as patient as the longhouse, seen
In wampum's purple veins and steady grips.

Chapter 246: The Guarani War

Leo 22, day 246 of the Gaian year

Deep in the continent, where rivers ran
Unnamed by Europe, braided through the wood,
And the red earth gave what it gave, the plan
Of no empire: the Guarani stood,

In the conquest's darkest, desperate time,
And built a thing no crown had planned, an art:
A commonwealth of music, and the chime
A city shaped like prayer; and, at its heart,

The sacred and the practical entwined.
The Jesuits came, black-robed, with the cross
And gospel forged in Rome; but, as designed,
Their flame was not just Europe's creed; for loss

Was in the jungle, where the hunters roamed,
The Bandeirantes riding out in their greed,
From Sao Paulo's frontier, the wolves, who foamed
For Guarani bodies, chained, sold to feed

The market; and the missions gave the rare
And strange: a wall to keep the hunted free
From brutal market of the slavers' lair;
Reductions rose, some thirty towns, to be

Along the Parana and Uruguay,
Where the Guarani lived behind the door
Of covenant that held the wolves at bay.
They built in stone; they carved the saints, and more,

With hands that knew the forest's older gods;
And in baroque facades, the mission frame,
The jaguar's eye peered out, against the odds,
Through Christian stone; the violin, too, came:

Guarani, whose fathers sang to spirits
Of forest, filled the church with music's key
That Europe's courts would envy, its merits:
A people who had taken, and set free

What the conqueror offered, and transformed
It into what the conqueror forsook:
A beauty no crown's will had ever formed;
A hundred thousand souls, in towns; the book,

The printing press, the hospital, the school;
Elected councils underneath the crown
Of a far king, but governed by the rule
The Guarani helped shape and keep; the town

They farmed the yerba, raised the herds, and dwelt
Between the forest and the realm's far edge,
A world where no whip on a slave was felt;
Imperfect, paternal, and strange: a pledge,

Amid that hemisphere, the nearest thing
To justice in its range; and so they stayed
A century and half; then came the sting:
The diplomats, who lines on maps had laid

On land they'd never walked; the Treaty's claim
That bore Madrid's name, seventeen-fifty,
Traded the territories, a card game:
Spain gave Portugal the land, so thrifty,

Seven missions east of Uruguay's guard
To Lisbon's crown; a province drawn in ink;
The cost, some thirty thousand lives, the hard
Dice of diplomacy, which did not think.

Move, they said. Abandon what you have built:
The churches, workshops, herds, the orchards, graves
Beneath a century of prayer and silt;
Obey the kings who never saw these waves.

And they refused; and Sepe Tiaraju
Rose from Sao Miguel to defend the land
No treaty signed in Europe could undo,
A warrior with a prophet's fire in hand:

This land God gave us; and no king may sell
What the Creator granted; we require
No European license here to dwell.
And so the war began, with bows, and ire,

With clubs and faith, against the joined array
Of two empires, the unholy pact
Of Spain and Portugal, who marched that day
Together, crowns whose missionaries' act

Had built these towns, and came to disallow
What their priests made. The Jesuits were split:

Some said to fight, and some to bow; and now
Some wept in wooden booths, and prayed, but it

Brought no miracle. At Caibaate, in fire,
Some fourteen hundred fell within a day
Against musket and the cannon's choir,
The arithmetic of gunpowder's sway

Against the courage of the dispossessed.
And then Sepe fell: a lance-thrust stopped his breath,
On the eve of the final battle; blessed
And cursed, the warrior took his rest in death

In the red earth that he would never yield.
The missions burned; the churches that had held
The violins, looted; and in the field
The cattle ran, now wild, by none compelled,

Upon the pampa's grass. The scores of song,
The libraries, the presses, shattered, brass
And type; the Guarani's republic, long,
Dissolved like fog along the river's glass.

Then, sixty-seven, the last blow was dealt:
The Jesuits expelled, the last to go
In the wreck of what looked like heaven, felt
From outside as a dream of what could grow

If guilt could build a wall between the greed
Of conquest and its charity; but thrones
And realms that held the land would not concede
To commonwealths that answer none; the stones

Of the reductions crumbled; on the floor
Of forest the red walls sank, overgrown
With vine and orchid; and the jaguar's roar
Reclaimed the nave where violins had shone;

The Guarani scattered to woods and plains;
Experiment in justice, all undone
By the same crowns that once had forged its chains.
Honor the Guarani, who, in the sun,

Built in the wilderness, with stone and song,
A thing no crown could dream of, as they made
A world where the enslaved, refusing wrong,
Sang their own, not the master's, unafraid;

Who took the violin and made it weep
In Guarani, a sacred tone, a sound
That neither Madrid nor Lisbon could keep.
Honor Sepe Tiaraju, he who found

The word to say: No to the treaty's line,
And the decree; who chose the river's flow
And the red earth, above the knee's decline:
The missions fell; the music did not go.

It lives in each refusal to be moved,
In each people's own unextinguished cry:
This land is ours; this truth needs not be proved;
The red earth keeps it, as the years go by.

Chapter 247: The Great League Broken

Leo 23, day 247 of the Gaian year

Oldest democracy: before the quill
Of Jefferson had scratched its founding creed,
Before the English colonists would fill
The parchment rolls with liberty's bright seed,

Haudenosaunee had already made
A union of five warring nations' strife,
A Great Law spoken underneath the shade
Of the white pine, the Tree of Peace's life,

Rooted in Onondaga's earth, where came
Deganawidah, the Peacemaker, from
Across the waters, and he changed the name
Of blood-feud into peace: and five; then, come

Mohawk, Oneida, Onondaga, old,
Cayuga, Seneca; then, the long walk
Of the Tuscarora up the north, to hold
The league: condolence covenant, and talk,

Not war; where fifty chiefs sat in the ring,
And the clan mothers chose who would speak for
Each nation, and could strip a faithless king
Of antlers. Women held the fire; and more,

The longhouse stretched from sunrise: and the guard,
The Mohawk kept the east; and at the west
Seneca, Keepers of the door, and hard
Between, bound by the wampum belts, the rest

Who told the peace, the protocol, the art
Of consensus: no nation overruled,
No war without the council's word; each part
Must speak; the oldest way the many ruled.

But now the English colonies revolt
Against their king; and, underneath the pine,
There came the war, divided, as a jolt,
Asking the Haudenosaunee to sign

One side. The Americans first sent men
Who spoke of brotherhood: stay neutral, stand
Aside; a family quarrel; and then
The Six Nations, then, need not lend their hand

Between a father and his sons. But then
The British came with muskets, blankets, guns,
And promises, and argued, once again:
The rebels want your land, whatever runs

Of brotherhood they speak; their settlers press
The frontier, hand by hand; and, as a yoke,
The longhouse country shrinks; the crown, no less,
Has drawn a line; the Proclamation spoke

In sixty-three: no settling, by decree,
West of the Appalachians; choose the throne,
The line holds; choose the rebels, and you'll see
The settlers' flood take all of what you own

Between the Mohawk Valley and the sweep
Of western streams. And Thayendanegea chose:
Joseph Brant, the Mohawk war chief, schooled deep
In Eleazar Wheelock's halls, where those

Of Connecticut's corridors had fed
The crown's tongue to a boy: he chose the king,
Not from a servile love, but from what's said
Reckoning settlers the more deadly thing

Than a far monarch's glove. To war, with Brant,
Seneca and Cayuga went; and drew
Onondaga's keepers toward the grant
Of the British side; but the League cracked through:

Both the Oneida and Tuscarora chose
American alliance; other way:
Of calculation: that the end of those
Beside the victors would be spared that day.

The Great Law: by consensus; force on none
Who disagreed. But could the council hold
When half its nations fought the other one?
Condolence broke; the rot, the war, the mold

Of Europe's war, within, split seam from seam
Of the longhouse. Oriskany's grim day:
Oneida fought the Mohawk in the steam
Of August's ambush; brothers, in the fray,

Killed brothers for the kings' and rebels' name,
Of European quarrel, not their own;

The Great League's children burning in the flame,
The quarrel's pebbles crushing the old stone

Of oldest peace. Then came the burning time:
Washington sent his generals, his tone
As cold as Valley Forge's winter rime:
Total destruction, devastation, known

By Sullivan and Clinton, as they marched
Through the Seneca and Cayuga land:
Scorched earth; and forty towns were burned and parched,
The orchards cut, the corn destroyed by hand

In granaries; the children born that fall
Were born to famine. Not a battle, but
A world destroyed by system: longhouse, all
Collapsed, the cattle slaughtered, and each hut

In smoke, in seventy-nine. And the name
The Seneca gave Washington, his own:
Town Destroyer: a prophecy, the same
Passed on to each president, and so known.

The war ended; the British lost; the peace
Was signed at Paris; and no word was found
For the Haudenosaunee: no release
Of sovereignty; the British ceded ground

Not theirs to cede, Six Nations' hunting land,
Drawn on a foreign map, a foreign page,
Erased them. And the Oneida, who'd stand
Beside the rebels, bleeding at each stage,

Were cast aside as coldly; and, ere long,
Their land shrank from six million acres to
A fragment, by the American wrong,
Ingratitude, that proved what Brant knew true:

It did not matter which side they would choose;
The settler wanted land, and land alone,
And neither crown nor congress would refuse
The frontier's hunger. Brant led north his own

Up to Grand River, in the British land,
A reservation, granted for the worth
Of their alliance: scant proof, close at hand,
That loyalty to crowns buys home on earth.

Onondaga's fire dimmed, but did not die;
The council yet would meet beneath the dome
Of longhouse sky; the white pine, patient, high,
Would shelter those who keep the law at home

And speak the Law; but the Great League he'd made,
Deganawidah, from an older war,
Was broken by a newer; and the shade
Of peace that held five nations, as before,

Was shattered by the crowns, whose own caprice
Could break a continent and call it blessed.
Honor the Haudenosaunee, whose peace
Was built before republic was impressed

In Europe's lexicon; who spilt their blood
On both sides of a foreign, savage war,
And learned that no alliance in the flood
Of crowns would save the people from the store

Of settlers and surveyors digging graves
Where longhouses had stood. The fire still burns;
The council meets; the Great Law, as it saves,
In the clan mothers' memory, returns,

Who choose the chiefs; and the white pine still grows,
Forever, over Onondaga's flame;
The oldest peace, though any new war blows,
Kept by the mothers of the clan, the same.

Chapter 248: The Sun Reborn

Leo 24, day 248 of the Gaian year

The name returned like thunder from the tomb:
Two hundred years since Tupac Amaru,
The last Inca, was strangled in the room
Of captive stone in Cuzco, since the new

And Spanish order sealed the serpent's mouth
And crowned itself in blood upon the throne
Of Tawantinsuyu; and all the south
Had learned to grieve in silence and alone.

But the name never died; in valleys, where
The quipu's knotted cord still whispered, hid,
In mountain rallies, through the Quechua air,
The tongue no Spanish strangling ever rid,

The prophecy of Inkarri was sung:
The severed head would grow a body, wrought
From living mountain stone; the Inca, young,
Return, to set the world aright, as taught:

The pachakuti, the reversal, dawn
That fills the overturned and bitter cup.
Jose Gabriel Condorcanqui, drawn
From Tinta, in the freezing heights, came up,

A kuraka, a headman, in between:
He gathered all the mita's crushing tax
From his own people for the crown; and seen,
By day, the obraje's cruel weaving racks

Where Quechua women wove till bleeding hand
Could hold no more. He traced his line, and said
Of royal blood, from the last Inca's strand,
Through the last's daughter, by the mountain fed,

Unsunk by time. He wrote Lima, Madrid,
He begged for law's artillery, the plea
Of the corregidor: forced work, forced bid,
Tribute; the repartimiento's decree

That each soul buy the Spanish merchant's wares:
Buy what you need not at three times the price,
Or learn the whip. The courts, in their affairs,
Said nothing; the petitions melted, ice

In bureaucratic shade, a system built
To profit from the pain. And so he chose
The other way: November four; the guilt
Of the dying eighty, its embers' close:

Seized Arriaga, the corregidor,
Paraded through Tungasuca's square,
And hanged him from the gallows; and, no more
Petitions; and there rang through mountain air

The name that he claimed: Tupac Amaru,
The Second, the serpent reborn, the sun
Returned to burn the Spanish realm all through,
The pachakuti finally begun.

The Andes rose, from Cuzco to the height,
From altiplano's frozen breath to plain
Of valleys; sixty thousand rose to fight
The death the realm had threatened, all in vain:

The Quechua, Aymara, mestizo, all
Of every hue, to the vision, whole
And incandescent: worlds before the fall
Of Spanish chains; or yet to be, the soul

The free, the mita lifted from their backs,
The ancient peoples whom no foreign state
Could grind to dust. At Sangarara's attacks
The rebels broke the Spanish; and, as fate,

The magazine exploded in the shrine,
The Spanish soldiers burning in the nave:
Five hundred dead; the Quechua saw a sign
That even sacred stones and the old grave

Had turned against the crown. But kingdoms do
Not die of one defeat: from Lima came
Twenty thousand, the drum's hard beat, the true
Professional army; and, all the same,

Alliance that Tupac Amaru built
Was fragile; for the creole landed men
Felt interest threatened, and their own guilt:
This was not war against the king, but, then,

A revolution that might overturn
The hacienda, peonage, their floor;

They pulled away; and, rather than to burn
Their order's wealth, they chose the king once more.

Tupac Amaru, taken in the field,
Betrayed, as prophets are; in Cuzco's square
The sentence, terrible, in May was sealed,
Of eighty-one: they cut the tongue, laid bare,

Of Micaela Bastidas first, his wife,
The stay and strategist; they killed his son
Before his eyes; and tied, to end his life,
His limbs to four horses; but, as if one

With mountain stone, his body held; they strained
And could not tear the Inca from his name,
Until the axe at last did what remained;
They severed head and limbs, scattered the same:

Head south to Tinta, limbs to the four ways,
That none might reassemble what they broke;
They banned the Quechua tongue, the royal blaze
Of Inca garments; and decree they spoke:

Inca a word past bearing, struck from law
And title, tongue. But none can quarter, quell
A prophecy. Aymara highlands saw
Fire in Bolivia, a name to tell:

And Apaza, Tupac Katari, who
Took name from two thunderbolts: the rally
Of Tupac Amaru, and, too, the true
Tomas Katari's death; from the valley

Laid siege to La Paz, forty thousand strong,
Blocking the mountain passes; famine came
Upon the Spanish city, as, so long,
They'd starved the Aymara: corpses, the same.

Katari too was taken, quartered too;
But spoke the centuries' unbroken vow:
I die, but I'll return as millions; true,
The millions came; the name would echo now

Through every Andean rebel's claim
The body that the horses could not tear,
The prophecy no edict silenced, flame
Of mountain people's memory, laid bare.

So honor Tupac Amaru, whose blood
Was scattered to the four winds and the four
Directions of the Inca world, the flood
Of royal crimson on the Cuzco floor,

That seeped into the earth and fed the root
Of revolutions that were yet to come;
They quartered him; but from the living shoot
Of sacrifice, the millions would become

The thunderbolt he promised: I return.
The Andes hold his name; the condor flies
Above the peaks where scattered ashes burn,
And the sun the Spanish killed still will rise.

Chapter 249: The Northwest War

Leo 25, day 249 of the Gaian year

Now hear the forest speak: where, by the trees
Of Wabash and Maumee, as armies grew
The undergrowth, a maze of root and freeze
Of winter streams: Miami, and the true

Shawnee, Delaware, Wyandot, the rest:
Ottawa, Ojibwe, and those, the core
Potawatomi, joined, together pressed
In Confederation, rose up to war

Against the new republic's hunger for
The ground beneath their feet. The Treaty gave
At Paris the Americans a door,
A line drawn on the map, Ohio's wave

The western edge; but lines on maps are dreams
Of conquest; and the forest nations kept
Their pledge to the land their grandfathers' streams
Had fed before the English; and they stepped

Against the claim no treaty could make true,
Signed by far European hands: the land
Of the Ohio and its peoples, who
Had signed nothing. And the republic planned,

Sent soldiers west, for land, not peace: the cut,
The survey, and the clearing of the name
That creek and ridge already bore, and shut
Its Shawnee and its Miami; the same

Hunger that broke the doors of eastern lands
Pressed west, Republic's weight, its manifest
And God-anointed creed. But in their hands
They met the military mind, the best:

Mihsihkinaahkwa, the Turtle, chief
Of Miami, whose genius turned the wood
A girdle of destruction, past belief,
For columns the republic sent, who could

Not read the woods; he read them as a map:
Each ridge and bend a purpose, and the weeds,
The thickets, fallen timber, made a trap,
His fortress, where no route of retreat leads;

And with him, Weyapiersenwah, who,
Blue Jacket of the Shawnee, brought the fire
Of warrior's fury; and the British, through
Detroit, supplied the guns, and the higher

Word of encouragement; for, having lost
The war, they still preferred a wall to stand,
Indigenous, between the flood, the cost
Of Americans, and their fur-trade land.

In ninety, Harmar marched through mud and wood
With fourteen hundred men, the mistakes grown
Each mile, militia raw, strung out, no good,
A serpent with a broken jaw; and known

The forest ambush: Little Turtle struck:
The musket's crack from trees, the warriors none
Could see until the killing; and the luck
Of the militia broke; and, all as one,

The allied nations moved like water, stone
Their channel; Harmar's army, shattered, two
Engagements' shame, and the retreat, alone,
Fort Washington; the dead left rotting, through

The trail. And the Republic burned with shame;
It sent St. Clair, the governor, who'd learned
No lesson from the forest; and there came
Two thousand north, in autumn rain, who turned

To desertion, sickness, dwindling supply,
Of ninety-one; till on November's morn
They camped on Wabash headwaters; the sky
Still dark, the sentries sleeping, cold, forlorn:

A bivouac of the doomed. At dawn he struck,
Little Turtle, with all: a thousand men
In fog that loomed like vengeance, in the muck;
Musket-fire from every side; and then

The camp dissolved to butchery; the first
Cut down, the officers; a masterwork
Of all the forest knew of war, the worst
For clumsy lines: six hundred dead, the murk

Of the retreat a gauntlet of the pines;
St. Clair fled on a packhorse, gout-disgraced,

The worst defeat the army, in its lines,
Has ever known; the taste the nation faced

Of Indigenous genius on its tongue.
But the Republic had what they did not:
The endless men and money, iron-strung,
And patience, which could take defeat's hard shot

And come again. Anthony Wayne was sent,
Mad Anthony, with drilled and ordered men
To burn what Little Turtle built; he spent
Two years in preparation; forging then

Soldiers from raw militia; forts, like stones
To step upon, through the Ohio grass;
And Little Turtle read the wind, the tones
Of change: no blunder now, but war's whole mass

Of flawless supply; and he counseled peace:
Negotiate while strength remains, he said,
Before the final battle ends the lease
Of sovereignty in blood. But, rather, led

By Blue Jacket, young warriors chose to fight;
And Little Turtle, loyal, went along,
The tragic courage of the final night
Of the last stand. At Fallen Timbers, strong

Storm-thrown, the ancient trees lay in a maze;
The armies met in August, ninety-four;
The warriors fasted; many, in those days,
Had gone home first to eat; and, at the core

Of confusion, Wayne struck; the bayonet
Drove through the timber's maze; the British fort
Nearby refused to let the warriors get
Inside; betrayal, final, cruel, short:

The allies who had armed them shut the gate;
The league broke in the August fading light;
And at Greenville, the next year, wrote the weight
Of loss: the treaty, signing, in its spite,

Away Ohio's country, two-thirds, all
The world they held, the hunting ground, the town,
A thousand generations, for the small
Some twenty thousand dollars, hollow crown

Of annuities, the annual chill
Of a diminished life that treaties leave.
So honor Little Turtle, and the skill
Of Mihsihkinaahkwa, who could weave

A devastating war that brought to knees
A nation; gave the Republic its worst
Defeat, and proved the forest, with its trees,
Was never empty; that the tongue, the first,

Of creek and ridge, had moved with minds that knew
To outthink, outfight the invader's might;
And that the forest, in the end, was true
To those who read its name, and not by right

Of those who couldn't read. He lost; the count
Of numbers, factories, the British lie
Burned his alliance; but the books recount
What treaty would erase, and will not die:

The greatest military mind that fought
On this land wore an Indigenous face;
The forest speaks the lesson that he taught,
Which no treaty and no time could erase.

Chapter 250: The Civilized Trap

Leo 26, day 250 of the Gaian year

They did all that was asked of them; and still
They lost their land. Five nations of the south:
The Cherokee, the Choctaw, with the will
Of Chickasaw, and from the river's mouth

The Creek, whom some named Muscogee; the last,
The Seminole: whose law and custom stood
So like the settlers' own, the word was cast:
Their neighbors named them "civilized," and good.

"Civilized" meant: you look so much like us
We nearly see you. And they shaped, in trust,
Their lives to fit the conqueror, and thus
Found out the reckoning a lie, and dust.

The Cherokee led first. In mountain lands
Where the blue ridges meet the southern sky,
Where laurel slopes feed rivers, in their hands
The country lay since forests first grew high;

And now they took the European way,
And from the conqueror the poorest gift,
His alphabet, and made it, in their day,
A thing he never dreamed, a world's whole shift.

Sequoyah, called George Gist by settler name,
Sat twelve long years; he could not read the hand
Of English marks, but grasped the thing they frame:
That sound is made to see, the voice to stand

Caught on the page and held; and what he heard
In Cherokee could be set down as well
As English could. He took no borrowed word;
At night he heard the syllables' own spell:

Some eighty-six, no more; and each one drew
A sign. From English some he took the form,
Forgotten there, and gave it sounds anew:
So D was "a," and R was "e"; the norm

Of Cherokee was syllables, not parts
Alone; it asked no years of school; in weeks
It taught what English took in years; and hearts
Learned letters, and the reading nation speaks

In print: the Cherokee Phoenix, which rose
In eighteen twenty-eight, a paper bold
Set by Elias Boudinot, whose prose
Gave voice, in their own script, to what they hold:

A tongue that wrote itself in its own hand,
By one man's genius in the silence made,
A thing no other nation of the land
Had done. And they built government, and laid

In eighteen twenty-seven the whole frame
Of a constitution: three branches set
Like the republic's own: a chief, the same,
A senate, court, and written code; and yet

Their capital at New Echota stood,
Where council sat and argued in the script
Sequoyah gave them, as republics would,
Among republics, lawful and equipped.

The Choctaw built their schools; the Chickasaw
Raised farms to match the settlers' own; the Creek
Rebuilt after the Red Stick War, the law
Of Andrew Jackson's first campaign: the weak

And strong alike, the allied Creek who'd sought
For peace, and those who fought him, he made pay:
At Fort Jackson, by the Treaty, he caught
Some twenty-three million acres away.

The Seminole in Florida's green maze
Of swamp and hammock held its own. And now
The bitter center lies: in all their ways
They did all that was asked. They took the plow;

They built in European style; they let
The church bell sound across their towns; they wrote
Their constitutions, printed their gazette,
Schooled children, and they wore the settler's coat;

And it was not enough; it never would
Be so. The word "civilized" was a lock
That had no key. The verdict, understood,
Had passed from court to ledger, and the stock

Was land, worth more than people on it. Gold
Was found in Georgia, on Cherokee ground;

The settlers' hunger would not be controlled
By constitution or by paper bound.

The more the Cherokee grew like their foe,
The more the settlers felt the threat they made:
A people who disproved, by what they'd show,
The tale of race; if they could build, and trade,

And write a constitution, and could stand
Themselves by written law, then what excuse
Remained for their removal? What of land
Wasted on savages, the old abuse

Of the wandering brute who knew no plow?
The Cherokee disproved the lie, and bore
A greater hate than warriors knew; and how?
They held the mirror up, the face it wore;

The nation saw itself and could not bear
The image; what it owed its law, the price,
Was a truth far too thick to swallow there;
It would not pay; the Cherokee paid twice.

So honor Sequoyah, who gave letters
To his own people, with no borrowed thread,
A syllabary that breaks the fetters
Of silence on the voice; and the page spread

Not as the settlers' only. Honor too
The Cherokee Phoenix, whose defiance
In print was the most civilized and true
Reproof one nation gave; its reliance

On ink and paper proved that "savage" lied,
And "civilized" was just the settler's jest.
They built what they were told to build, and tried
To be what they were told; and, for the rest,

For all the promises that they fulfilled,
Their wage was the removal's beating drum:
The towns and farms and schools that they would build
Were counted nothing, and their voice struck dumb.

Chapter 251: The Last Confederacies

Leo 27, day 251 of the Gaian year

One more time came the vision, the old flame
Of unity that Pontiac once lit:
Together, or not at all: and the claim
Came now the greatest dreamer, born to it:

Tecumseh, called the Shooting Star, whose speech
Was simple, true, and came too late: "The land
Belongs to all; it lies beyond the reach
Of any chief to sell it by his hand.

"Sell, if you will, the air, the rain, the stream;
But not the ground on which we pray; it held
The bones of those who came before, the dream
Of those to come; no single name has spelled

"Away the claim of all who walk the earth."
He walked from the Great Lakes to the south shore,
From Shawnee towns, Ohio's place of birth,
To Creek and Choctaw, Florida's green door,

He bore the word: unite or die; one league
Of all the nations, east and west, unbound
To any European king's intrigue;
Pontiac's flame reborn on greater ground:

Not war alone, on British or the rest,
Americans, but a refusal, whole,
To set a price on earth: the land possessed
In common trust, a people's common soul.

And then his brother, Tenskwatawa, rose,
The Prophet, from the dust of drink's despair,
A broken man, remade by vision's throes:
He died, he said, and came back from the air

Where the Master of Life had shown him how
The whole world could be healed: give up the drink,
The European goods, the metal's vow,
Return to the Creator's ways, the link

Of corn and deer, of prayer in the tongue
Creator knew. At Tippecanoe there grew,
At Prophetstown, of wood and bark, among
The gathered nations, a capital new,

Where tribal quarrel melted into prayer,
And warriors of a dozen nations came
To hear the Prophet speak and to prepare
The world made new. Tecumseh, in his aim,

Went south; and while he traveled, on the town
Marched William Henry Harrison, afraid
Of nations joined more than of any crown;
At dawn, November seventh, came the raid

In eighteen-eleven; the Prophet fought
Against his brother's strict command; he swore
The bullets would not harm them; magic, sought
In vain: the capital was lost; the war

Of lead ran its arithmetic: they burned
Prophetstown and its stores; the Prophet's cry
Of shields from bullets, overturned. Returned,
Tecumseh found but ashes, by and by;

He did not break. The War of Eighteen-Twelve
Became his thread: the British needed men
In the Great Lakes and west; and he, to delve
Their need, gave what no deal could buy; and then

At Detroit he bluffed Hull: the very same
His warriors, marching past the window thrice
In different dress; and Hull, in fear and shame,
Gave up Detroit to half his strength, the price

Of theater in war. And yet the due
Of such a friend the British did not pay:
At the Thames, Ontario, there withdrew
Procter and all his horse, and rode away,

And left Tecumseh and his warriors lone
Against the charge of Harrison; the swamp
Was his last stand, where horsemen's waves were thrown,
And musket-roar the drumbeat and the stomp

Of a lost hope; and there Tecumseh fell,
October, eighteen-thirteen; and around
His body closed the wood; and none could tell
The hollow where his warriors made his mound;

They hid him from Americans who'd strip
His skin for keepsakes. And the dream was torn,

But not yet cut; then rose Black Hawk, whose grip
Held to the homeland where the Sauk were born:

Ma-ka-tai-me-she-kia-kiak, the war
Chief of the Sauk, in eighteen thirty-two,
Crossed back the Mississippi east once more,
Home to Saukenuk, which a treaty, through

A drunken chief's false mark in eighteen-four,
Had signed away, with no council's consent;
He crossed with women, children, by the score,
The hungry, wanting only, as they went,

To plant their corn on their ancestral ground.
The Americans called it war; the band,
Starved, lonely, through Wisconsin hunted, hound
By hound, until at Bad Axe, where the land

Met water, steamboat Warrior and the line
Of guns cut down the women as they tried
To swim across; the white flag, as a sign
Of their surrender, spurned; the children died

And floated in the current; and the flow
Of Mississippi reddened. Farther down,
The Seminole refused. Three wars, and slow,
From eighteen-seventeen, in swamp, not town,

To eighteen-fifty-eight: the longest stand,
Indigenous resistance, in the maze
Of Florida's swamps, in the saw-grass land,
Osceola, no chief, but in his ways

The very soul of the resistance, fought
The American army till it bent;
They seized him under truce; by treason caught,
Which Jesup called the diplomat's intent.

Osceola died in a prison. Yet
The Seminole fought on, until the claim:
The nation spent some forty million, set
With fifteen hundred lives, to move the name

Of fewer than four thousand souls; and some
Would never yield; within the Everglades,
In hammock and in cypress, still they come
And go, unconquered, where the saw-grass fades,

Whose home removal never changed. So praise
Tecumseh, called the Shooting Star, whose light
Crossed the whole continent, and in our days
Each no to selling land still burns it bright.

The earth has spoken: land is not for sale;
The covenant unbroken. Honor, too,
Black Hawk, who crossed the river home, the trail
Paid in blood for the right to plant, and through

The sky his fathers knew, to rest. And weep
For Bad Axe, where the children died; and praise
Osceola, seized under truce, whose deep,
Unconquered Seminole still walk the ways

Of Everglades, no noose about their throats.
The last confederacies burned and fell
And burned again; but still the embers' notes
Glow on; and what Tecumseh learned, they tell:

No single nation stands alone; the land
Belongs to all; the bones beneath the stone
Are covenant no treaty's signing hand
Can break; the Shooting Star burns on, its own.

Chapter 252: The Unsealed Book

Leo 28, day 252 of the Gaian year

Now seal the book. No: it was never sealed;
The book was always open, set in grain,
In corn and council flame, and so revealed
In tongues that the Creator gave the plain:

Three hundred families of speech, a throng
Of languages that named the world, the air
Of a whole hemisphere; and in their song
The names of God, that none need render there.

The rivers spoke them, and the mountains held
Them in their granite; prayer of ages sprang
From sacred springs, ten thousand years; unspelled,
This was the book; this always was. It rang

Through all the ages; then, beside that book,
In one year, then, the record would draw near:
a man in Palmyra, New York, would look
into a stone and see the plates appear:

the golden plates that Moroni had sealed
within a hill, the record of a son
of Israel who crossed the sea, revealed
in "Reformed Egyptian," and so begun

with Lehi, from Jerusalem, who came,
and Nephi, who would sail across the sea:
the first book that would give this land a name,
its prophets, kings, its Christ, its living tree.

Christ came to Bountiful, and taught, and healed,
and blessed their children: the Redeemer's day
that this book also keeps, its promise sealed
to come again, and not to pass away.

It named the peoples Lamanites: the rites
of Laman's line, and darkened for the sin
their fathers did; and here the quarrel bites:
whose fathers were they? Jacob's, or the kin

who walked from Beringia? The gold plates
said Lehi; and the land said ice and coast;
and the one house of the dead, at its gates,
takes both: the tree has room for every ghost.

In March of eighteen-thirty Joseph Smith
set out the book Moroni had concealed,
and his eleven witnesses, forthwith,
signed that they saw the plates the hill revealed.

In that same year, eighteen-thirty, the act
Of Congress came that mattered most: the plan,
The Indian Removal Act, signed, backed
By Andrew Jackson, Sharp Knife: so the man

The Cherokee named him; he'd devoured
The Creek homeland, the grim general, who
Took Florida, over treaties towered;
Now president, with the Republic's view

Of westward hunger, made one policy:
Remove them all. Each nation to the east
Of the Mississippi, each Cherokee
Farm with its constitution, press, and feast

Of learning; Choctaw rule; each Chickasaw
Town with elected council; Creek who'd made
His home again since Jackson's war: the law,
Move west. The east, the settlers said, was laid

By God for them, a Promised Land aside
For the American republic's hand;
The darker peoples, exiled, were to ride
Beyond the Mississippi, to a land

Where the republic promised them once more
A home "as long as grass shall grow," the same
Words spoken at each treaty there before,
The vow, as soon as made, broken in shame.

John Ross, chief of the Cherokee, by blood
One-eighth, but theirs by measure of the day,
Fought as they fought since Sequoyah: the flood
Of law and language, written word; the way

To the Supreme Court: they were a nation;
No state could lay its laws upon the land
By treaty; and Georgia's legislation
To seize their soil and rule them, void and banned.

And John Marshall ruled; the Chief Justice found
In Worcester versus Georgia that the state

Had no authority upon the ground
Of a nation sovereign by treaty's weight.

The highest court was clear. And Jackson laughed:
"John Marshall has made his own decision;
Now let him enforce it." Thus the statecraft
Of the republic's law and its vision

Shrank to a bully's sneer: the law cast down
By the elected king; for what was awe
Of Constitution to the gold, the crown
Of Cherokee hills, and the settler's maw?

The Court spoke; and the President refused;
In that refusal died the founders' vow
That law, not might, would rule; the words were used
Only for some: the Cherokee learned how,

As had the Haudenosaunee, the wise
Little Turtle, what the whole land had learned:
The settler's law protects the settler's prize;
And first the Choctaw, in the winter, turned

West, eighteen-thirty-one, through ice and snow,
Caravans of the dispossessed; the sun
Hid weeks in cloud; the dead were left below
Left unburied on the frozen road; and one

Choctaw chief, looking back, gave it its name:
"A trail of tears and death." The Creek went too;
The Chickasaw were sold into the same;
Last, Cherokee, in thirty-eight; and through

A cold and calculated roundup came
The soldiers to each farm and cabin door,
And herded families at bayonet's aim
Into the stockades, onto filthy floor

Of camps that penned them, and they could bring naught;
The homes they built, the orchards, and the press,
The Cherokee Phoenix, and all they wrought
In schools and courts, the settlers would possess,

Who rushed like ghouls in packs, before the last
Cherokee was gone. Sixteen thousand went;
Four thousand died; the children first, then fast
The old; and mothers carried, as they bent,

Their dead, until the tide of grief became
The only text that they could say aloud.
And now, the same year, side by side, the same:
Two peoples walked, one road, one weeping crowd:

In eighteen-thirty, as the act was signed,
the book came out; and in the year of tears,
in eighteen-thirty-eight, the same state's mind
drove out the Saints, from Missouri's frontiers.

Its governor signed Order Forty-Four:
the Saints must leave the state, or else be slain.
The same year, same republic, the same door:
the Cherokee, the Saints, went west in pain.

The book did not move them. It was the land,
the farms the state had wanted, and the gold;
the book had sent four preachers out to stand
with Delaware and Shawnee, and they told

the chiefs: your fathers were the prophets' line,
your dead are kings and seers in what we read;
the Lehi of your house is also mine.
That was the quarrel: who would hold the dead.

The book had called their skin's darkness a curse,
and they would turn "white and delightsome" when
redeemed; the Church would later change the verse
to "pure," in nineteen eighty-one, again.

It was one house's quarrel over skin,
and over fathers, and who keeps the name:
the Mormons and the Lamanites are kin,
one people, and one altar, and one flame.

And so this book here in your hands lays bare
the plates again, and opens them up wide:
the long walk from Beringia, laid there,
the corn, the mounds, the cities; and beside

them, Christ in Bountiful and Lehi's sail,
the record of ten thousand years of prayer,
the quipu knots, the codex, and the tale
of every people who had once lived there.

This is the book that always stays unsealed,
the record that was never lost, the names

of every nation, every saint, revealed
to Joseph Smith or to the council flames.

Here ends the Book of Lehi, his and theirs:
the Lehi of the plates, and of the land,
whose history was carved in mounds and prayers,
whose scripture is the earth on which they stand.

A hemisphere that never lay there blank
for any pen; a full and holy stage
where ten thousand years of prayer, rank on rank,
had made it holy, age on holy age.

The Trail of Tears was Jackson's; and the hate,
the Indian Removal Act, his hand.
But the peoples endure, and keep their gate;
the record is intact. The peoples stand.

This is that record. Keep in mind each name:
Tecumseh, Tupac Amaru; recall
Sequoyah, and the council's ancient flame
From Cusco up to Manitou; and all

The Guarani violins, the Great Law
Of the Haudenosaunee; and the drill
Of Little Turtle; Osceola; raw
Seminole in the swamp, unconquered still;

The children in the Mississippi's flow;
The Choctaw chief who named the tearful road;
The Cherokee Phoenix; John Ross, and so
The Court that ruled for justice; and the load

Of cruelty the President laid down.
The book is open; hold it now, revealed
By Moroni, and by memory's crown,
That what was done is kept, the dead unsealed

To speak through each line; and the sun put out
Of each lost nation rises in the word
That will not be lost, and, beyond all doubt,
Honor them all; honor the cost; be heard.

The Book of Lehi ends. The record stands;
The continent remembers; hold it now
Here in your hands; the earth and all its lands
Remember; and the dead keep, still, their vow.



Virgo

The Book of Confluence

Virgo: The Book of Confluence

Virgo is the Virgin, who holds an ear of wheat. In the Book of Confluence she is the Virgin of Guadalupe, in whom the old world of Mexico and the new faith met in 1531, and the wheat in her hand is the harvest of the world crossing the oceans.

Chapter 253: The Chronicle of the Popes

Virgo 1, day 253 of the Gaian year

Now count the keys. Not fathers, for these men
Were sworn to have no sons, and some had sons,
But hands on heads, the laying-on, and then
The next head bowed, the next, until it runs

Fifteen centuries, fisherman to king
Who cut the world in half with lines of ink.
Here is the chronicle; here is the ring
Passed hand to hand; here is the missing link

Between the Galilee and age of sail.
Hear it as old ones heard the kings of Ur:
One name, then one name, then the folded tale,
And then the next. Here, then, the keepers were:

Peter the fisherman, who thrice denied
Before the rooster, then did not deny,
Hung head-down there in Rome; for he had cried
The dead man lived. Head down, he asked to die,

Unworthy of the cross his teacher bore.
Then Linus; then Cletus; then Clement, who
Wrote Corinth in its quarrel: peace, no more
Of schisms. Bishops of a sect, who knew

The tufa, where below the dead were laid,
Their names scratched in the catacombs' neglect,
Martyrs by dozens, bishops by the blade.
Callixtus, once a slave, whose debts had wrecked

A banker's money, sent to mills; then came
Pontian, to Sardinia's mines to die,
Who first laid down the keys. Fabian's name
Came with a dove that settled from the sky

Upon his head; a layman, farmer, killed
Under Decius; and the dove was gone.
Then came Sylvester, and the world, unstilled:
Constantine had seen a sign in the dawn:

The sun unconquered, Sol Invictus, friend
Of soldiers, and he made the two suns one;
The persecuted, palace in the end;
The fisher's tomb a church of gold, begun.

Four hundred years on, in some room, a hand
Forged that great Constantine had given all
The West to Sylvester: Donation's land,
For seven hundred years, till Valla's call

Laid bare its Latin, bad; remember well
What forgers meant. And Damasus, who set
Jerome to make one book where street-tongues dwell,
The Vulgate; Leo, called the Great, who met

Attila at Mincio; his look
Turned back the king. And Gregory, who named
Himself the servants' servant; by the book
And sent a monk to Kent; then, unashamed,

Leo III, on Christmas Day, who bent
Above Charlemagne at prayer, and laid
Unasked, the Romans' crown; and his descent
Runs on: near all of Europe's blood is made

From him; each line of Europe opens there.
Then came the years of the great houses. Mark:
Formosus, dug up, propped up in the chair,
Dressed in his robes, a deacon set to bark

At the Cadaver Synod, his replies;
Condemned, his blessing fingers cut away,
Thrown in the Tiber; and the bishops' eyes
Looked on; then Theophylact's house held sway.

Marozia, his daughter, loved a pope,
Sergius; and bore a pope, named John; and then
Grandmother of a pope: a household's scope
To make and unmake keys, like kings, again

By blood. Her grandson, John XII, a boy
Just eighteen, who crowned Otto, and who died
Within a married woman's bed. The toy,
The keys: one house, one line, one blood applied.

And this book honors lines of blood; it must
Say plainly that the chair the church endows

With heaven was a household's; that is just.
And then came Gerbert, made a pope, whose vows

As Sylvester II brought the Arab lines
Of numbers westward, and the sky's own key,
The abacus; at one thousand, the signs
Were read as doom; the world went on, set free.

In ten-fifty-four, legates at the stone
At Hagia Sophia laid their bull
Of excommunication; East, alone,
And West drew apart, never again full.

Gregory VII; and Henry in the snow
Three days barefoot there at Canossa's gate,
Begging forgiveness; and the pope, so slow,
Who let him go when he had made him wait.

Clermont-Ferrand: Urban cried, "God wills it."
Crosses sewn on; to Jerusalem ran
The road, paved with the slain; and, with the writ
Of Innocent III, kings' lord; the plan

Forbade the sack, and watched them sack the town
Of Istanbul, a Christian city, in
Twelve hundred four. Celestine laid down
The keys, a hermit who could not begin.

Then Boniface: One Holy Church, each soul
Is subject to the Roman pontiff; slapped
At Anagni by French king's men; the whole
Court went to Avignon; its money, trapped,

Babylonian Captivity's gold,
Flowed seventy years to the Rhône; till home
Saint Catherine of Siena called them, bold;
They came; and chose two popes. Then three. Which, Rome?

Each throne cursed all the others; at the last
At Konstanz then a council made them one,
Deposed them all, crowned Martin; it had cast
Jan Hus to flame two years before; and none

In Bohemia forgot; scholars came:
Nicholas, who built the Library walls
When Turks took Istanbul for good; the name
Of Sixtus, builder of the Chapel's great halls,

Whose ceiling would be painted by a man
On scaffolding four years, head bent; and then,
And last, Rodrigo Borgia; and his clan,
Called Alexander VI; his children; then

Cesare and Lucrezia, and the slow
Poison of rumor. Fourteen ninety-three:
He drew a line from pole to pole, to show
West of it Spain's, east Portugal's, the sea.

At Tordesillas the kings moved it west;
The fisherman's heir split between two crowns
A world they thought was small and finite, pressed
Into a field to share, like farms and towns:

The old small cosmos' last hurrah; the writ
The paper. Fifteen hundred years: a line
From fisherman to this; and, keeping it,
Some saints, some murderers; the chair divine;

Most were but keepers; what passed was the ghost,
And hands on heads, and then the name, the list
Read out: an institution is, almost,
A family. In Eisleben, to twist

The keys, a miner's son was born. Here ends
The chronicle; the keys pass on, and on;
Count them, and keep the list: the house it tends
Is the list. Here the reckoning comes on.

Chapter 254: The Sea Joins the World

Virgo 2, day 254 of the Gaian year

Before this there were many seas. The old
Indian Ocean, Pharaohs' market, where
The dhow rode the monsoon out and back; gold,
Cloth, pepper, kept the merchant's vow; and there

Kilwa, and the cottons of Gujarat;
Atlantic, an edge; Pacific, untold;
Each sea was its own world, and that was that.
Then Vasco da Gama sailed out, the bold,

Four ships, from Lisbon, ninety-seven, swung
Wide in the empty ocean, past the coast,
Three months from land, the sky their chart; among
Their tools, the astrolabe their priest, their host.

They rounded the Cape of Good Hope in cold,
Up Africa's east coast to Mozambique,
Mombasa, and Malindi, where, as told,
A pilot waited, one they came to seek,

Who knew the monsoon as one knows a psalm,
And took them, May of fourteen ninety-eight,
Across the ocean, open as a palm,
To Kozhikode. And here the hinge, the gate:

They went into a temple, knelt, and prayed
Before a goddess, and they did not cringe,
Thinking her Mary; and the priests, arrayed,
Were Christians of some old rite's broken fringe.

They saw the saints with many arms, the feasts,
The lamps, the holy water, and the light;
They saw what they had come to see; the priests,
The Hindus, saw the strangers in their sight

Bow to the Mother, and they let them bow.
One afternoon the world was joined; the law
Of all rites whole, in one unbroken now
Of no mistake. Then trade: the ruler saw

No worth in gifts, the Zamorin: some cloth,
Some hats, some honey; Arab merchants laughed;
They sailed home with the pepper, rats, and froth
Of scurvy, which killed more than half their craft;

The pepper paid the voyage sixty-fold.
And so the sea was opened, and the hem
Of the world lifted. Then, with cannon, bold,
Da Gama came again; and after them,

Albuquerque took Goa, took the strait,
Melaka, where all Asia's trade ran through,
The gate of cloves; and Portuguese, by weight
Of passes, ruled the sea the dhows once knew.

Cabral, in fifteen hundred, sailed too far
West, bound for India, and found Brazil,
The turning of a wheel, beneath a star,
Over the Tupi like a thunder's will.

Magellan, Portuguese, who sailed for Spain,
Five ships from Sanlúcar, fifteen nineteen,
To find a western road, the cloves to gain
For Charles from far Maluku's isles of green,

To bind the line the Pope had drawn, around
The world. In Patagonia, revolt,
Beheadings, maroonings; the strait, the sound
Of curled channels, thirty-eight days, the jolt

Of williwaw on rock; then waters, bright,
So calm he named it the Pacific, wide;
Ninety-eight days across, the biscuit's blight
To dust and worms; they ate the rigging's hide,

And rats; gums swelled over their teeth; and then
Guam, and the islands of the Philippines,
Where Enrique, slave, of Melaka's men,
Bought at its conquest, spoke, and in those scenes

The islanders could understand. He'd come
Home the long way around; the first to stand
Again at his beginning, going from
Home, around all the world, to his own land.

Remember him. Magellan, at Cebu,
Baptized a king, and wanted more; he fought
Lapulapu on Mactan's beach; and through
The shallows fell, in April; the shore caught

Him, fifteen twenty-one; and, as was due,
Lapulapu kept his island; the rest,

Two ships, then one, Victoria, sailed true
Under Elcano; at Tidore, the best

Cloves found; west through the Indian Ocean,
The Cape, and the Atlantic home, to land
Sanlúcar, in September's slow motion,
Of fifteen twenty-two: eighteen men stand

Of two hundred seventy, bone and skin;
A day off: Wednesday, said the log; and yet
Thursday it was; they'd lost the day within
Their sailing with the sun; and Venice set

Its learned men to work out why; the Earth
Was measured turning by a ship. Admit
What this means: one world now, one sea, one girth,
One sphere to sail around; one market, knit;

One reckoning of days. The many grown
One world, by cannon, pepper, and by sun.
The joining starts: in trade; the temple's stone;
A knee; the goddess and the Mother, one.

So hold it. The sea joins; and from this day
The world will not be free of all the rest
Of the world; many seas have passed away:
One sea, one sphere, one market, east to west.

Chapter 255: There Is No Hindu, There Is No Muslim

Virgo 3, day 255 of the Gaian year

In Punjab, land of the five rivers, where
The Kabul road came down to Delhi's land
With armies, at Sultanpur Lodhi, there
A clerk kept grain and salt by measure's hand,

And counted out the rations: one, two, three,
To thirteen; and at thirteen, *tera*, which
Means also *yours*; he stopped, and could not see
Beyond it: yours, yours, yours. The ledger's stitch

Unraveled there. His name was Nanak, son
Of Kalu, an accountant, Khatri-line,
Born at Nankana Sahib; there begun
In fourteen sixty-nine. A teacher's line

To copy, and he wrote a hymn instead.
They married him; he gave the store away.
Near fourteen ninety-nine, his feet were led
Down to the Kali Bein to bathe one day,

And did not rise. Three days they dragged the stream
And thought him drowned. And on the third, he came
Out of the water, silent, as from dream,
And said: "There is no Hindu." And the same:

"There is no Muslim." That was first: no creed;
The ground was cleared. The governor then asked:
"Whose path, then, do you follow?" "God's"; indeed,
Said Nanak; and at prayer-time, as was tasked,

He went with governor and qazi in
The mosque, and did not bow; and asked why, said:
"Your body bowed; your mind, in Kabul, in
The market, buying horses; his instead,

The qazi's, at home, where a mare had bred,
Afraid her foal would fall into the well."
So he would pray with them, the master said,
When they would pray. And that is what befell.

Four journeys, the udasis, south and east,
North to the mountains, west to Mecca, too,
With Mardana, Muslim; rebab's feast
Of music, while the Hindu-born sang through

The hymns. At Haridwar, where pilgrims threw
The Ganges water east, toward the sun,
To reach their dead, he threw it west. “And you?”
“I water fields in Punjab; if yours run

Up to the sun, mine reach three hundred miles.”
At Mecca he lay down, his feet toward
The Kaaba; kicked (“At God!”), he said, with smiles:
“Then turn my feet where God is not, my lord.”

The ground stayed still. And sure are the hymns: some
Nine hundred, in Punjabi, and the tongue
Mixed, of the poor; the Bhakti, Sufis, come
Together; one God, formless, fearless, sung:

Without hatred, not born, and never dead,
Self-being, known by grace; *Ik Onkar*: one;
Creator; the True Name; and daily read,
The Japji, still sung at rising sun.

Then Babur came from Kabul like the flood,
First of the Mughals, sacked Eminabad;
The hymns of Nanak witness it: the blood,
The women of good houses dragged; and sad,

He sang: God sent the Mughal as death’s hand;
No war-song, a lament; reproach, as well,
To God: “Did you feel no pain?” On the land
By the Ravi, at Kartarpur, to dwell,

He farmed, and built a kitchen where in one
Row on the floor sat high caste and the low,
The Muslim and the Hindu, none outdone,
The *langar*, feeding thousands now; and so

The meal was doctrine: eating, side by side,
Was being one. And, old, he passed the light
Not to his sons, as kings, nor kin allied,
But to disciple Lehna, who did right,

Who bore wet grass upon his head, and went
Into the mud; he named him Angad, “limb
Of my own”; bowed to him: the light was lent
Lamp to lamp, not by blood, not by the whim

Marozia’s house had with keys. And so,
In fifteen thirty-nine, he died; and they,

The Hindus, wished to burn; and to bestow
The Muslims, burial; and, in their fray,

They lifted up the cloth: and there were spread
But flowers. They divided them, and each
Did as its custom said; and of the dead
Two shrines stand now, a border out of reach

Of each to each; and pilgrims, through the field,
Cross into Pakistan, to its shrine's door,
To Kartarpur. A synthesis was sealed
In a new folk, a third thing, something more

Than bridge, since bridges had nowhere to stand.
This is the lesson of the clearing: found,
Say "no Hindu, no Muslim," and the land
Will make of you a third, and named, and bound

Within its border. Still the clearest said
In this age: Muslim, Hindu, none; the floor
Is where you sit; and shown to all, the bread;
Eat; turn the page; and clear the ground once more.

Chapter 256: The Red Heads

Virgo 4, day 256 of the Gaian year

At Ardabil, beneath the mountain, came
Safi, a holy man, who taught the way
Within: remembrance, breath, the circling flame
Of dervishes, the soul's return; his day

Ended in thirteen thirty-four. His line
Kept up the lodge, and gifts made the lodge strong
From Turkmen tribes, down from the high incline
Of Anatolia; and, before long,

The sheikhs began to ride, and died in war;
The brotherhood became a host; the red
Twelve-folded caps, one per imam, they wore,
The Qizilbash: Red Heads, the foe said.

Who holds the cap holds faith; faith holds the sword.
Then Ismail, a young child of seven, hid
By the Caspian, father, brother gored,
Came out, called by the Red Heads, as they bid,

And took Tabriz at fourteen, and was crowned
Shah, fifteen-oh-one; at Friday prayer
He made them read the creed with new words found:
"And Ali is God's friend." The law, from there,

Was now the Twelver Shia, in a land
Most Sunni; those who would not curse the first
Three caliphs, so the new state's law would stand,
Could die; and many cursed; some, at the worst,

Refused, and died. The boy wrote Turkish verse
As Khatai, the Sinner: "I am light
Of God, Ali; I am the universe;
Come, bow to the eternal one." In fight,

His soldiers wore no armor; they believed.
That is the holy king: the cloth was spun
One thread, the saint and king, the one received
In one red cap, the faith and kingdom one.

The brotherhood that sought the self in God
was crowned in him, and found the one it sought,
and made a nation by the creed and rod
of Ali's house, the heir Tabriz was taught.

He sent for teachers, and the scholars came
from Jabal Amil, on Lebanon's hills,
to write the books and keep the mourning's flame
for Ali's line, as every old house wills:

So the faith of Iran, that seems so old,
with the Ashura mourning, and the shrine,
is old: the house of Ali, which a bold
young king set on a throne in one straight line

Of conquest; a century held it true.
Remember: it was the old faith, foretold.
At Çaldıran, fifteen-fourteen: Selim knew,
The Ottoman, the Red Heads' charge; he rolled

His cannon to the front, chained wheel to wheel;
The boy who was God charged into the guns.
God lost; Ottomans took Tabriz; the steel
Of old ways, cavalry, believers, sons

Of Turkmen tents, broke on the cannon's ball.
And Ismail never smiled again; he drank,
Hunted, and led no army after all;
He died at thirty-six; his house held rank.

The state stood, and that matters, and the faith;
Great-grandson Shah Abbas, in Isfahan, laid
The square, the blue domes, *half the world*; the wraith
Of Red Heads tamed into an army, made

A modern state. One more thing, for this book:
And Ismail's mother was the child, by right,
Of Uzun Hasan, White Sheep khan; he took
To wife Theodora, Despina, bright,

A Christian princess of Trabzon, the last
Komnene line of the Greeks by the Black Sea;
So Shia Iran's founder, then, was cast
From Komnenoi, Greek Orthodox; and see:

The blood is mixed, as every house is: one.
Greek mother, Turkmen father: the house weaves.
And now the clergy whom he called have won
The state itself, and rule beneath its eaves.

From Ardabil to Tehran: mystic, sword,
Boy, scholar, jurist, ruler; each one sure

It kept the old faith, each its own reward.
Say of the Safavids: they would endure

as saints and kings at once; the sword was long,
and the longing for God sat on the throne
in the same red cap; and the nation's song
was woven in one lifetime, and was known

As it had always been. He believed it.
He did not lie; he was right; he was young,
Hidden, and saved; and so he received it:
God's mystery, in Turkish, his own tongue.

Chapter 257: Here I Stand

Virgo 5, day 257 of the Gaian year

The miner's son from Eisleben was meant
To be a lawyer; Hans, his father, planned
On copper; but in fifteen-oh-five, sent
Near Stotternheim, the thunderbolt's hand

Threw him down; and, afraid, he cried for aid
To Saint Anne, miners' saint: "Help, and a monk
I'll be." He kept the vow; and so he made
His way to Augustinians, and sunk

In Erfurt into fast, confession, dread,
Not knowing how to be righteous for God;
Confessor: "Sin a sin worth this," he said;
At Rome, he climbed the stairs on knees, and trod

Up to the top, and thought: "Who knows it's so?"
The blessing did not come; he taught; a sign
At Wittenberg, small Saxon town, and slow,
He read the Letter to the Romans' line:

"The just shall live by faith." Not by the stairs,
Nor by the crown of works, nor by the gold.
And then the money came: a friar's wares,
Tetzel's indulgences, across the fold

Of border, for Saint Peter's building, and
The debt of Albrecht, Mainz, who bought his see:
"As soon as coin in coffer rings," the band,
"Of souls from purgatory springs out free."

And Saxony's poor walked across to buy.
October's last day, fifteen-seventeen,
Luther wrote ninety-five theses; asked why
The pope won't, out of love, the place make clean,

Not for the coin; in Latin, for debate;
He nailed them to the church door, and he sent
Them to the archbishop; in weeks, the weight
Of print spread them, German by spring, and went

Across the realm; the Latin curtain tore.
This Gutenberg had made, not knowing, when
Seventy years before: a voice that, more
Than it was burned, was set in type; and then

Hus had been burned; Luther was printed: choice
Of weapon. Then his pamphlets, more and more,
Than any in all Europe's, found their voice:
To the Christian Nobility; the core,

The Babylonian Captivity;
Small books, and cheap, through all the markets spread;
The Freedom of a Christian, liberty
Aloud in taverns to the unread, said.

The Pope then cast him out; and Luther burned
The bull in flames before the city gate;
At Worms, in fifteen twenty-one, he turned
Before young Charles, the emperor, whose great

And Habsburg jaw ruled half the world; and asked
Recant, he begged a day; came back, and said:
"Unless by Scripture and plain reason tasked
I am convinced, I cannot; I am led,

"My conscience captive to the Word of God;
Here I stand; I can do no other." Then
A friendly kidnap, Frederick's, and odd,
Of Saxony, hid him in Wartburg's den,

As Junker Jörg, with beard, in a dark cell
In eleven weeks, put into German
The New Testament, speech that mothers tell,
The street, the market; once the priest's sermon,

Was now the household's book; the book's own tongue
Became the land's: High German is, in part,
The speech that Luther chose; and so, among
The folk, the scripture left the priest's own art.

Now hold both sides. In fifteen twenty-five
The peasants rose, read the same book, with pride;
The princes slaughtered them; he wrote, to drive
Them: "Smite, slay, stab"; a hundred thousand died.

Who tells the poor the book is theirs must be
Ready for them to read; he was not; old,
He wrote against the Jews a book; and he
Wrote: "Burn their synagogues." The press is bold:

A voice that cannot burn can burn; the same
Machine. Then Luther wed a nun, who fled,

Katharina von Bora, she who came
Out, hidden, in a fish cart; and, instead,

A cloister made a house of children, ale,
And students, table talk. The Church split three:
Rome, Wittenberg, and soon Geneva; frail,
The fisher's keys, no more the only key.

Each household with the book became a church,
Each reader, priest: the promise and the threat;
The souls the priests had registered, the search,
Would pass to states; the book, to strangers met.

Hold, then, the hall, the conscience, and the stand:
"Unless I am convinced, I cannot"; then
The press, the hymn, the praying, and the hand
That set his words in type for common men.

Chapter 258: The Lawgiver's Register

Virgo 6, day 258 of the Gaian year

The year that Luther burned the bull, there came
In Istanbul a young man to the throne
Of the great realm, from Nile to Danube's frame,
From Mecca to Crimea, all his own:

Suleiman, tenth sultan of Osman's line;
Europe named him Magnificent; his own
Named him Kanuni, the Lawgiver: sign
Of conqueror and clerk, by both names known;

The minaret and steeple under one
Crown. Then in fifteen twenty-one he took
Belgrade; and Rhodes, the next year, he had won
From the Knights of Saint John, with honor's look,

Let sail away. And at Mohács he broke,
In twenty-six, the Hungarian host;
Young Louis, fleeing, drowned beneath the yoke
Of his own armor in a stream; and most

Of Hungary turned Ottoman; he came,
In twenty-nine, against Vienna's wall;
The rains and ramparts turned him back; the same
Janissaries went home: the high tide's fall.

The other face, the one Kanuni bears:
The realm, a register: each village, field,
Each household in the defter's lines: its heirs,
Who weds, who farms, what's owed, and what they yield,

And of what faith. The scribes went out to count;
The tahrir named, the register of tax,
Muslims, Christians, Jews, by name; the amount
Each owed; one pen, both kindly and the axe;

The non-Muslim paid jizya, the head
Tax, and was let to pray: the Orthodox
Under patriarchs; Armenians, led
By theirs; the Jews by rabbis; each its flocks,

Judging by its own law its wills, its wives,
Its quarrels, by its book and courts. The pen
Drew walls between the faiths; the one root thrives
Beneath the walls, one root. It was not, then,

What tolerance means now: it was order,
A faith, your legal address, born, to wear;
A ledger; and the state the walls' warder
Within; you could not leave, but could live there.

When Spain expelled its Jews in ninety-two,
The sultan's father's father took them in;
Thessaloniki's most, and presses grew;
And Doña Gracia, the banker, came in

Fled Inquisition for Istanbul's gate;
Her nephew, Joseph Nasi, came to be
The sultan's friend, then Duke of Naxos; great,
He leased Tiberias, a refuge, free.

And the other side: the devshirme, the toll
Of boys, the Christian sons the Balkans bore,
Converted, trained, the sultan's slaves, the whole
Of janissaries, viziers, and more:

Sinan, Anatolia's levied son,
Built the Süleymaniye, high above
Golden Horn; Hagia Sophia's one
Reply. The register gave, took; and love:

A captive from Ruthenia, then freed,
Hürrem, Roxelana to the West, wed
Against all custom, slave made queen; decreed,
For her sons' sake, the heir Mustafa dead:

Strangled in his father's tent, who watched, screened
Behind. The Lawgiver wrote kanun by
Holy law, with Ebussuud, who weaned
The two into accord: codes, low and high,

For land, for crime, the army, and each flaw
Of sixty peoples; and, the Lover, wrote
As Muhibbi: of wealth, men think, and awe,
The best of fortune; health is the one note.

In sixty-six, at Szigetvár, he died,
Old, in his tent, besieging a fort's wall;
His vizier hid it for weeks; the pride
Of armies held. The register, through all,

Went on; and all the states that followed, too,
Each realm and each republic, wished to know

Its people, faiths, and where to find them, who;
The millet turned the census box; and so

The scribe's pen in the village is the start
Of modern states, not guns alone: the page
That says who you are: faith, address; the part,
A people as a column; in this age

Hold both, the gift and wound, in one book's span;
And here we are: the census and the pen;
The walls the scribe drew are not the root's plan:
One root below, beneath the walls of men.

Chapter 259: The Register of Every Soul

Virgo 7, day 259 of the Gaian year

Till now the dead were mostly without name;
The kings were written, and the saints, and those
Who gave a monastery land; the blame
And innocence of courts; the rest, the rows

Of fields, the children born and buried, snow,
The weddings at the church door, years of plague,
Went into memory and out; and so
A splinter on a grave; a song; the vague

Sum of the tears, without a column. Then,
September, fifteen thirty-eight, the word
Of Thomas Cromwell, England's vicar, when
A blacksmith's son, whose voice King Henry heard,

Went out to all the parishes: a book;
Write christenings, the weddings, and the dead,
On Sundays, with a churchwarden to look;
A coffer with two locks. The people said,

Afraid: a tax! The king will charge for sons!
Through the West Country, men prepared to rise;
It was no tax. Worse, better: it outruns
The old wife of the village when she dies:

A record that outlasts the clerk, the priest,
The sky of that year. Some would not obey;
The rule; but fines, the bishops, and, at least,
The slow habit of Sundays; and one day,

In fifteen ninety-eight, the old was told
To copy onto parchment books; so, clean,
Most English registers begin, of old,
At fifty-eight, the crowning of the Queen.

At Trent, in the Tyrol, across the sea,
The Catholic Church, to answer Luther's stand
Against Reformers, ruled, in the decree
Of session twenty-four, that all the land

Of Christendom that kept the old faith write
Its marriages, with witnesses, by name,
Its baptisms, godparents; and no rite
Of marriage secret any more; the same

Book, the same page, Lisbon to Lima's shore,
Roman Ritual, sixteen-fourteen, wrote
The dead in too; to Kraków, Goa; more:
Book of the State of Souls, each household's note:

Who lived there, who'd confessed; and so, begun,
The thread ran through each village of that world;
Lutherans took it up; the north had won
The most thorough: Sweden's Church Law unfurled

In sixteen eighty-six; the priest went out
Each year, from house to house, with the whole roll,
Who read, knew catechism, and about
Who'd moved, been born, been wed, or died; each soul

Written to the last cottar, a whole land;
And this book's own blood shows it: for the line
Of her who writes: a year, a guess; the hand
Of parish starts; and then a day, a sign:

Per Olofsson, born April's fourth day, kept
In sixteen ninety-six, in Swedish lines
Within a church. The varnish of what slept
In guesses peels; the people's birthday signs.

That is the register's gift: not the kings,
Who always had their wreath of dates; it gave
The cottar and the herdsman, the small things,
The midwife, the drowned child, the girl, the slave,

The bride at nineteen: each a day their own;
The democracy of the dead. And read
By the state, what the church for souls had known
Was read for soldiers, taxes, and for need:

A book that finds each Christian finds each Jew;
Hold that: the same book. And the Mormons now
Have filmed the parish books, the archives through,
In Utah's mountain, to baptize; and how

From films, the tree; and from the tree, the scope
Of one house reaching back to Qarin, kings
It comes from; all of it rests, as a rope,
On a clerk, Sunday, in a cold church; things

Written with quill: a name. Honor him: he
Did not know what he made; and yet one day

Someone would read his hand, and say: “I see
There where I came from,” and would kneel, and pray.

Chapter 260: The Earth Leaves the Centre

Virgo 8, day 260 of the Gaian year

Two thousand years the Earth stood still; the Sun
Went round it, and the Moon, the planets five,
The fixed stars on their shell; the sky, as one,
Turned once a day around us, all alive,

As a king's court turns round the king. And so
Ptolemy, in Alexandria, wrote
Circles on circles, epicycles, slow,
Explained, predicted, measured, note by note:

The heavens' laws were heaven's: we were set
In middle; God looked on us; and it worked;
The calendar slipped; seven lights, in debt,
Ran late or early; circles, added, irked.

Then a cathedral canon on the shore
Of Baltic, at Frombork, a careful man,
Nicolaus Copernicus: Toruń bore
Him; scholar, doctor, lawyer, with a plan

To stop the coin's debasement; held, in war,
Olsztyn castle from the Teutonic Knights;
Kept, too, his chapter's books; and, nothing more
Than Warmia's servant, he spent his nights

On a tower, with simple tools, by night,
His days with the old books; and saw the sky
Was simpler with the Sun the centre's light,
The Earth a planet among planets, by

A whisper first: a little book, by hand,
Near fifteen-fourteen, passed among his friends;
He would not publish; thirty years; he'd stand
In fear of laughter, till a young man wends

His way: Rheticus, Lutheran, who came
From Wittenberg in fifteen thirty-nine
Into the Catholic canon's house; the same
Two years he stayed, and talked him into line;

The old sky cracked; the book was set, at last;
And cold water: Osiander, through the press
At Nuremberg, a preface, nameless, cast
It as hypothesis, to count, no less,

Not true. And *On the Revolutions* came
Off press in forty-three; a copy, laid
In his hands, dying, at Frombork; the flame
Of stroke; the twenty-fourth of May; he weighed

The new sky on his last day. Hold this, too:
He was not first: Aristarchus had said
It, Samos' son; his paired small circles, new,
At Maragha, in Iran, had been spread

By al-Tusi's school, centuries before,
Ibn al-Shatir, in Damascus, whose
Moon moved as did Copernicus'; the store
Of Golden Age, the House of Wisdom's news,

Ran west, and here as well. He still had wheels,
Still epicycles; but the Earth now moved.
Why should a scripture care? The Gaiad deals
With the universe born, the stars' work proved;

The Earth is not the centre; never was;
The planets do not circle us; our scars
Are not the sky's concern; and yet, because
On this one moving stone, beneath the stars,

Small, off-centre, plain, life came; not the place
Makes greatness: what grew here. The Sun, the heart;
The grain, the fish, the bird, the child, the face,
The hand that wrote the book: these are no part

Of any middle but our own regard.
Lifeism: the centre's not where we stand;
The centre is: it's what we hold, and hard;
We hold it, travelling, in our own hand:

We travel; we have always travelled; round
A star each year the journey; and the cross
Of seasons is our orbit; on this ground,
Count it, and be glad here; it is no loss.

Chapter 261: The Farmers at Bure

Virgo 9, day 261 of the Gaian year

November, fifteen-twenty: Stockholm saw
The Danish Christian crowned; and three days' feast;
Then shut the doors; and bishops, lords, the law,
Elected burghers, slain; the blood released

Ran to the water: Stockholm Bloodbath. Then
A nobleman whose father died there, too,
Gustav Eriksson, Vasa, fled; and when
In Dalarna, Mora would not come through

His cause, he fled on skis for Norway; caught
By two fast runners, he was called back: they
Had changed their minds. The race still runs, long fought,
The Vasaloppet, through the woods' long way.

Back home at Mora, peasants rose; and won
Stockholm in three years; June the sixth, he came,
In twenty-three, at Strängnäs, crowned; begun,
National day still keeps that date, the same.

And then the money: debts to Lübeck; and
The Church owned a fifth; at Västerås he
In twenty-seven told estates, as planned:
"Give Church goods, or another land for me."

They gave. The bishops' heaven passed to crown;
The cloisters emptied; and the bells were cast
For debt; then Olaus Petri, of renown,
And Laurentius, Wittenberg-trained, at last

Preached in their Swedish tongue; the king allowed
Them go as far as served him, and no more;
Forty-one: the Gustav Vasa Book, proud,
Made written language for a people's core;

The old order died quiet, fiscal: plain;
Not liable to saints, the king was so
To books; of all accounts, the North's best brain;
He wrote his thousand letters; and he'd know

Each farm in all the kingdom; and the lean
Clerks went out, wrote: this farm, this tax, this man;
The land rolls, tax rolls; and far north, between
Västerbotten and Gulf of Bothnia, ran,

Where land still lifts out of the sea, they went
To Bure's village, near Skellefteå, wrote
Two names: in forty-eight, on the tax rent,
Olof Andersson, farmer, Bure; the note

Fifty-three: Isak Andersson, brother;
Their father, Anders Burman, from the land
Röbäck, near Umeå; and no other
Cure for forgetting, than a tax-man's hand:

The first ink of the Bure kinship: no rune,
No saga; just a line, a king's account,
Tax-paying farmers, the cold coast; and soon
The kin went south: to Uppsala, to mount

The Church, the court, and learning; and the book
By Johannes Bureus, of name and kin,
Om Bura namn och ätt, which undertook
The farmers back to the old North, therein

Through ages that no register could hold;
The writer of this scripture, by the side
Her mother's, comes from Bures; and of old,
Malin Olofsdotter Bure; beside,

Born fifteen-oh-five, her child: Kerstin, born
In thirty-three; they stand before the scrolls,
Alive in the family book; and, sworn,
Its keeper holds them true, as the tax rolls

Hold Olof true: one line, one kin, and more.
Gustav Vasa died in sixty; he made
A state from a rebellion, and, before,
A church out of a ledger; land, debt, laid;

The North's weight tipped from Copenhagen, sent
To Stockholm; and the farmers, in the dark
Of winters, paid at Bure; they never meant
To be forever written, as a mark

In ink a king's clerk gave them; wax and quill
Gave them the thing the sagas never could:
A date. And so the farmers paid, and still
Their date stays kept, as only clerks' ink would.

Chapter 262: The Great Sun and the Dead

Virgo 10, day 262 of the Gaian year

At Melaka, in forty-seven, came
A priest of Navarre, Francis Xavier, one
Of Ignatius' first, whose arms had grown lame
From baptizing India; on the run,

A Japanese man, Anjirō, who fled
A killing, seeking pardon; he had come
On a Portuguese ship to find the head,
Holy man he'd heard of. They talked; and, some

Then Xavier: "If I go, will they believe?"
And Anjirō: "They'll walk with you a while,
Ask questions, watch your life; and if they weave
Your life to words, they'll trust you without guile."

A nation reasoned, Xavier wrote; and so
He went; August fifteenth, Assumption; ships
At Kagoshima, forty-nine, and slow;
Shimazu's lord received them; and the lips

Of Anjirō, to bring the new God in
To his own tongue, said: Dainichi, Great Sun,
The cosmic Buddha Kūkai would win
From China, Shingon's centre; and, begun,

The monks said: "Good, a new school of our own
From India, the Buddha's western land";
They gave them rooms; a season, it was shown
The Jesuits as Buddhist guests would stand,

And preach the Great Sun; and the monks would bow;
The looms of two faiths ran one cloth, as when
At Kozhikode, the goddess, Mary now,
Was taken. Xavier feared the word; and then,

Not out of guile, but for his priests' own name,
He'd carry a new word in, *Deusu*, made
From Latin; and the monks laughed at the same:
Dai-uso: the Great Lie. Doors shut; and laid,

The welcome's matting rolled up. But the grief
Raised deeper things; and Xavier wrote them down:
Converts wept for their dead, without belief,
Who'd died unknowing: lost, without a crown?

The priests said: none is saved, if unbaptized;
The Japanese: “What God is this, who lets
Our fathers burn, who never knew?” Disguised,
It was grief, as doctrine; Xavier sets

It down himself: “They grieve more for their dead
Than anything; they ask if God can take
Them out of hell; I’ve no reply,” he said,
“And grieve with them.” That sentence, for its sake,

Rings through the whole of the encounter. Tell
This day, the old covenant’s new year, when
The books are opened, and all names, as well,
Asked who shall live and die: a people, then,

Asked of a stranger for their dead. He went
To Hirado, to Yamaguchi, preached
In threadbare cassock, thrown out; and he spent
To Kyoto in the snow; the city reached

Was burned by the Sengoku wars, so sore
Its emperor had nothing; none let in
The priest. He learned; went back in silk, before
Yamaguchi, with clock and chant, the din

Of music boxes, spectacles, and wine,
Gifts of the Viceroy, as an envoy; and
And Ōuchi gave an empty temple’s shrine;
And people came, baptized by his own hand,

Hundreds; and then for China’s sake, the guide
The Japanese followed in wisdom, he
Left, fifty-one, to turn it first; he died
On Shangchuan, December’s sun, the sea

In sight, the coast he could not ever reach;
He waited for a boat, and died, unfed;
Know this: the West’s and Japan’s first speech, each,
Began with one Great Sun and with the dead.

All that follows is in that span. Keep, then,
Your ancestors; Lifeism says it plain,
As Jesuits could not: no one, of men,
Is lost for never hearing; names remain;

The dead are not condemned. Read them, each one,
This new year, all the words, and let them be;

Read out; and let the Great Sun rise, begun
On all of them, and all their kin set free.

Chapter 263: The House of Worship

Virgo 11, day 263 of the Gaian year

The emperor could not read: Akbar, son
Of Babur's line, whose sack Nanak wept,
At thirteen, fifty-six, his reign begun,
Unlettered; books read to him; and he kept

Them all by ear, and he remembered all:
The histories, the Sufis, poets' lines,
The Mahabharata; he took, in hall,
A Rajput bride, a Hindu; he declines

To make her change her faith. And, in his turn,
He lifted pilgrim tax, jizya, laid
On Hindus just for being Hindu; stern,
In sixty-four. Half India obeyed;

He ruled it from a city built from naught
At Fatehpur Sikri, all in red stone;
Buland Darwaza, victory's door, wrought;
The water failed; in fifteen years, alone,

Abandoned. But those years, it held a room:
Seventy-five: Ibadat Khana, raised,
The House of Worship, where, on Thursdays' gloom,
The learned men of Islam, gathered, praised,

And argued faith; they shouted, and they swore,
"Infidel"; Sunni scholars brawled; and he,
Emperor, waiting, opened wide the door:
The Shia came; and then, a strange decree,

A Muslim court let Brahmins in; and Jain
Monks taught him not to kill; he spared the chase,
Ate meat on fewer days; and, in the train,
Zoroastrians' fire, kept in its place;

And, in the light of fifteen-eighty, three
Jesuits came from Goa, sent to save,
Rodolfo Acquaviva, sure that he
Would turn the king; they argued till lamps gave

Their last; and kissed the Gospel; let it sound
Before him, and he kissed it, too, and, kind,
Did not convert. He listened: gift and bound.
Seventy-nine, the scholars signed, consigned,

The *Mahzar*: where they disagreed, the king
Would judge. And then Abul Fazl, his friend,
Historian, helped frame the newer thing,
The Din-i Ilahi, Divine Faith, penned;

Asked only that they follow him, the one;
Allahu Akbar: "God is great," read two
Ways: "God is Akbar," said his foes; the sun
And light; and *sulh-i kul*, peace with all, through;

No faith the weight on any other. Court
Followed; the realm did not; some eighteen names
Of followers; one Hindu, Birbal, sport
Of wit; no temples, book, nor clergy's claims.

The new faith was a circle round one man,
A few who loved him; dying, sixteen-five,
It died with him; and, where the court began,
The House of Worship's gone; men now contrive

To name its ruin. These, the Days of Awe:
Search yourself, then: why did it die? This book,
A founder's book: one woman's vow, the law
Of many, made in one life; ask; and look

Into ourselves. His faith had court, no folk;
A king, no book; through one man, to be known;
Forbade nothing, so held nothing; it spoke;
A synthesis needs days, and must be grown

By days that outlast founders, that each one
Can keep; a scripture all can read; a rite
A stranger does without him; it was done,
Deep, wide, and kind: a few, a circle tight.

Nanak said: "No Hindu, no Muslim," left
A kitchen, a successor, and a book;
It lives. And Akbar: "Light and peace," bereft
Of all but city, historians' look;

It does not live. Each gives what it can give.
Honor the king who could not read, and would
Not stop his listening; learn, so faiths live,
From his room built for all, from where it stood

Empty. The seed needs ground: plant it in days,
Not in the throne, and not within the tomb,

Not in a court, but where the stranger stays
To keep, without the founder in the room.

Chapter 264: The Scholar from the Western Sea

Virgo 12, day 264 of the Gaian year

Xavier died in sight of China, alone;
In eighty-two, a young Italian came
To Macau, and learned: not the command's tone,
The tongue's tones: Matteo Ricci, his name,

Of Macerata, a Jesuit, a mind
For numbers; Clavius' student; one who
Had made the Gregorian year; he, kind,
Went in the Ming as guest, not conquest's crew;

Learned the classics, the Four Books, the lines
Of Confucius, Mencius, all by heart;
His memory palace: characters, signs,
Forward and backward, which he taught as art.

At Zhaoqing first he shaved his head and wore
The Buddhist robe; the monks were low, despised,
So too the Jesuits, until, once more,
In ninety-five, he grew his beard, was prized

In scholar's silk, the literati's lore.
He hung a world map at Zhaoqing: the seas,
The continents, and Europe, small, far shore;
And China at the edge, which would not please;

He drew the Middle Kingdom near the heart,
Pacific in the centre; truth, as kind;
Of sixteen-two, in Beijing: tact's own art,
Kunyu Wanguo Quantu, to their mind.

With Xu Guangqi, his friend, he Euclid turned,
A Shanghai scholar, baptized Paul; the first
Six books, in sixteen-seven; and they learned
New words, point, line, and plane, still now rehearsed

In Chinese classrooms. And he wrote a book:
True Meaning of the Lord of Heaven, where
He argued the old books, if one would look,
Knew one God, Shangdi, Lord on High, laid there

In classics, ere the Buddhists came, and late
Commentaries in layers laid on thick,
Like dust upon the ancient book's own weight,
Like moss upon the stone, like lacquer slick,

Had covered it. And he would stake his name
that tablets, and the bowing at the grave,
the offerings and his rite were the same:
the honour that the living owe who gave.

A Christian could keep them all and stay whole;
the converts bowed still to their fathers' names.
No one chose heaven over kin: one soul,
one table. Later Rome would bring its claims

Of office, and undo it. But not yet.
Tonight is the Mid-Autumn; the full moon;
The family gathers, pays the old debt
With mooncakes and with memory, in tune,

A place set for the absent; and the light,
Moon over Macerata and Beijing, wide;
He understood the table; not a slight:
He asked no house to set its dead aside;

That was accommodation: not a mask,
A seat for strangers who kept old seats, too.
In sixteen-one, at last, he came to ask,
With gifts for Wanli Emperor: and two

Clocks striking time, a clavichord; the king,
Remote within his palace, never saw
The man; but the clocks ran down; not a thing
At court could wind them; so, by clockwork's law,

The foreigner could stay to keep the clocks;
Forbidden City opened, let him in,
A mechanic, for whom it turned its locks.
He died in May of sixteen-ten; and, in

Beijing, by grant, was buried, first of all
Foreigners given ground there; still his grave
Is there. An official said, at the call
Of "Why him?": "For the Euclid that he gave

Alone deserves a grave." His friends, the three
Pillars of the Chinese church, who stood tall:
Xu Guangqi, Li Zhizao, and, standing free,
Yang Tingyun. Now hold the full moon, through all:

A man from the far west learned classics, sat
At the Chinese table; asked none to go;

The moon-feast vow is reunion: keep that;
Set the place for the absent, there, below.

Chapter 265: The Monkey and the Hill of Crosses

Virgo 13, day 265 of the Gaian year

In Nakamura, Owari, born low,
A foot soldier's son, called the Monkey, small,
Warmed Oda Nobunaga's shoes so
In his breast, winter mornings; and, through all

His wit and patience and his master's art,
He rose. When Nobunaga burned, betrayed,
At Honnō-ji, in eighty-two, his part:
In thirteen days, revenge; and so was laid

The saga of the warring states to rest:
A hundred years of each lord against few
To trust, closed in his hand. And, as the test,
In ninety, Odawara's siege; and through,

The east's last great house yielded; Japan's land
Was Toyotomi Hideyoshi's; one
Who never could be shogun, by his hand,
A mouse born among lions; regent; won

The name of Taikō; and, as do the strong
After a war, he wrote it down: the slow
The Taikō kenchi, field by field along,
Each paddy, yield and holder, town and row,

And village, in one register; sword hunt,
Eighty-eight: farmers' swords and spears laid down,
Melted, for a great Buddha's bolts; the brunt,
In ninety-one, the gate shut on the town:

No warrior could farm; no farmer could be
A merchant or a soldier; each in place,
The place in the register; and so he,
The climbing Monkey, pulled the ladder: face

The man: the climber made the climb a crime.
And then the Christians: Xavier's church had grown;
Kyūshū's lords baptized, their folk; and, in time,
Ōmura gave Nagasaki, their own,

To Jesuits; and the slave trade grew, too:
Portuguese ships took Japanese in chains;
The cure he chose, in eighty-seven, through
An edict: padres out; most stayed; the pains

Of ninety-six: a Spanish ship was wrecked,
The San Felipe, on Shikoku; and its head,
Pilot, to save his cargo, would project
That Spain sent priests ahead; he boasted, said,

To ready conquest; the Monkey believed;
In Kyoto and Osaka, twenty-four
Were seized; and led through streets, their left ears cleaved;
Two more who came to help them, seized; and more:

Twenty-six: Franciscan friars, from Spain,
Mexico, India; three Japanese
Jesuits; seventeen laymen; the plain
Old men, a doctor, catechists, boys: these

Walked Kyoto to Nagasaki, in snow,
Eight hundred kilometres, so each land
Would see them pass. February fifth, slow,
Ninety-seven, Nishizaka, the stand

Of twenty-six crosses, rings at neck, wrist;
The town watched; and Paul Miki, a brother,
A samurai's son, he preached; would insist:
"I'm Japanese; I forgive the other

The Taikō, and the men; for this I die."
Luis Ibaraki, aged twelve, then asked
"Which cross is mine?" and ran to it; and high
He sang; Antonio, a psalm, unmasked;

Thomas Kozaki, fourteen, had sent word
Home to his mother. Then the spears: the clang
Of lances, two, under the ribs; the herd
Broke through the guards to soak cloth where blood sprang.

These are the Days of Awe; and say it straight:
The Taikō, who wrote each field, fixed each man,
Saw here a priesthood he did not create
And crossed it out: the register's own plan

And the hill's crosses: one story. He sent
His armies to Korea, ninety-two,
And brought back ears and noses; a mound, meant
To count the dead, Mimizuka, in view

In Kyoto. Ninety-eight: dying, he lay
At Fushimi, afraid for his small son;

He wrote: “Like dew I fell, like dew away
I vanish; Osaka, all of me, one

Dream in a dream.” The register, the hold,
The castle, and the hill of crosses: dream.
Remember, then, each list, both new and old,
And every crossed-out name; the boy, whose gleam

Asked which cross was his; and the peasant, who
Climbed, and then pulled the ladder up: the same
Man, the same hand. The dew falls, and is true;
That is what is. Remember each one’s name.

Chapter 266: The One Who Waited

Virgo 14, day 266 of the Gaian year

They tell it in Japan with a cuckoo
That will not sing. Nobunaga: "Kill it."
Hideyoshi: "I will make it sing." And through,
Ieyasu said: "Then I will wait." The fit

Of the tale is the century's: one burned
And broke the warrior monks, the old, the walls;
One unified and measured; and one learned
Both: Tokugawa Ieyasu; the halls

Of power went to the patient, who'd been
A hostage as a boy, traded; he knew,
Lost wife and first son, obeying, his kin
By his lord's doubt; and victory's price, too.

The Monkey died; five regents were to hold
Young Hideyori on his father's throne;
Ieyasu, greatest, waited, calm and cold;
In sixteen hundred, in October, stone

Sekigahara, in the fog; there met
Eighty thousand east, eighty thousand west;
At eight the fog lifted; they fought; and yet
At noon lord Kobayakawa, who'd professed

The west, but promised east in secret, sat
Still, waiting too, till guns shot up the hill
At him to make him choose; he came down; that
Broke the west's flank; by afternoon, the will

Of the west broken, fled into the hills;
Ishida Mitsunari, at their head,
Was caught, paraded; and a blade that kills
In Kyoto by the river: he was dead.

Named shogun, sixteen-three; two years, and then
He passed it to his son, and kept the sway;
Last war: Osaka, fourteen, fifteen; when
Burned castle, Hideyori, mother: they

Died, and the Monkey's house was done. And peace:
No great war in Japan: the Edo rest;
The lords spent each alternate year, the lease,
In Edo, wives and heirs as hostage pressed;

The roads filled with processions; and the slow
Growth of a capital; and, still, alive,
The stillness: theatre, woodblock, the glow
Of pleasure quarters, haiku; merchants thrive.

This day the faith is honored as a frame,
A pillar of the house; and so it grew:
Ieyasu, dead, by his own will became
A god; at Nikkō, in the mountains, too,

As Tōshō Daigongen, his spirit lay,
Great Gongen Illuminating the East;
His grandson, Iemitsu, in that same way
Of gold, of lacquer, carving, built the feast

Of three monkeys: see, hear, and say no ill;
The dynasty enshrined its founder; one
Pillar, the shrine and state. And then the will
Of clerks, a god in mountains, and, begun,

The closed door kept the peace. Hold, on the day,
The Fourth Day of Awe, both: the peace was real;
Children grew old without a war; the way
Of poets, free to speak the moon; the zeal

Of warring states was cooled; the cost, the cage:
Each man in his class, each faith in its book;
The sea closed. William Adams, the same page
Of sixteen hundred, washed to Kyūshū; took

By Ieyasu, kept, made a samurai,
The world through one window; none left; and long
The patient man had waited; and, on high,
The bird sang, beautiful, the same, a song.

Grieve, and give thanks: the pillar held, and stood,
And kept the peace; and kept the door shut tight;
Long, beautiful, the same; and it was good,
It held too long. Grieve, and give thanks tonight.

Chapter 267: The Company

Virgo 15, day 267 of the Gaian year

The Englishman of sixteen hundred came
On a Dutch ship, the Liefde, named *Love*, the one
Of five that set out, and arrived; the same,
Twenty-four alive: the Dutch grip begun

So lonely and so small. Two years, and then,
March twentieth, sixteen-two, at The Hague,
The States General, Republic young, when
At war with Spain, made a new thing, not vague:

A merchant's body as a state. The name:
The Compagnie, the VOC, was chartered; then
East India Company, by the same,
Got all trade past the Cape of Good Hope; then

What no merchant had held: war, treaties signed
With kings, build forts, raise armies, coin, and hang,
Govern and judge: a state's powers, combined;
And newer: shares for anyone; the clang

Of Amsterdam's bell; the shares were traded
By folk who'd never see a ship; the gain
Stayed, not paid back when voyages faded;
First great company owned by strangers: plain,

The maid and burgomaster both could own
A piece of Java's pepper: that's the gift,
The many share the profit. But the bone
Of it: what profit's made of. Hear the drift:

Nutmeg grew in one place on earth, the green
Banda Islands, ten isles, Moluccas' own;
Bandanese sold it to all, between
Javanese, Arab, Chinese, English; known,

Company wanted all; in twenty-one,
Governor Jan Pieterszoon Coen made
Batavia on Jayakarta, won,
Came with his ships and Japanese, and laid

The islands empty: fifteen thousand, few;
A thousand left; the elders' heads cut off;
The rest starved in the hills, or, sold, went through
As slaves, or fled; the groves, to Dutch, the trough

Of planters; and the land worked by slaves brought;
Price of a nutmeg on a Dutch table.
Coen wrote: “Despair not; spare foes in naught;
Naught can hinder us”: the ledger’s fable.

The Company spread: Melaka, and won
From Portuguese; Sri Lanka’s spice; a fort
On Taiwan; fifty-two, a station, one
For rest, the Cape: Cape Town, a garden port.

And in Japan, when Tokugawa closed
The land, the Dutch, of Europeans, stayed
On Dejima, Nagasaki’s fan, posed,
The one window, through which the two worlds weighed

Each other. And the Company kept all
On paper; kilometres of its shelves:
Each ship, each bale, the slave sold, soldier’s call
Of wages, living, dead; the files themselves

Jakarta, Cape Town, Colombo, The Hague:
A register of company and state;
The lives of slaves, there only, else so vague,
The ledger keeps, in columns, small and great.

Fifth Day of Awe: and here was born, by law,
The share, the joint-stock company, the trade
In risk held by the many; and the awe
Of firms that hold the sword and seal, was made.

The maid could share the pepper with the lord;
The ships went out on strangers’ trust, and came
Home laden; and the many, in accord,
Own shares today: the Company’s own frame.

Its flag came down; its ways did not; and still
The nutmeg grows in Banda; taste, and know
The islands, and the price they paid; the skill
Of ships that sailed the whole world, long ago.

Chapter 268: The Rune-Keeper

Virgo 16, day 268 of the Gaian year

Born at Åkerby, Uppland, a priest's son,
Johannes Bureus, of the old Bure line,
Taught himself to read stones; the weight of one
Of runestones in the fields, grey, and their sign

Read now by none: the snake-bands, and the mark,
"Raised after his father," "after his son,"
Who died in the east, in Greece, in the dark
Of Varangian roads. None read them. One

Young man went with a notebook in the rain
And drew them, stone by stone; learned letters,
The Younger Futhark's sixteen; and set plain
The first runic primer; and type-setters

In Stockholm made the book. He taught a prince,
Young Gustavus Adolphus, king to be,
Who learned history at his knee; and since,
The crown kept him: librarian; and he,

Riksantikvarie, sixteen-thirty, sent
To find and draw the runestones of the land;
Swedish runology's father, spent
His gift on his own kin, in his own hand:

Om Bura namn och ätt, on name and kin
Of the Bure; and he carried back the tree
Through ages no tax roll had written in,
Made sure by runestones he read as his; see

Of names and legends, past the written word;
That book makes Bures a kinship, not just farms;
It lets her name them; her first tree, conferred
As on the scholar, on the mystic's charms.

The other half: he read the runes as more
Than letters: Gothic Kabbalah, a stair
Of secrets of all sciences, the core,
The Adulruna, cross of runes, to prayer,

A soul's ladder to God; the key, believed,
To the North's wisdom: moons, planets, the three
In futhark, Trinity; and, as received,
Wrote Rosicrucians, read prophets; he

Reckoned the world's end, and believed it nigh;
A Gothicist: the Goths from Sweden came;
The old realm's profits were the North's; and high,
First rulers of Europe were Swedes; the same

The Swedish tongue, the oldest ever sung,
The first of tongues, or very near enough.
This was the deep antiquity: a young
kingdom found its own past in it. The stuff

Of Thirty Years' War: a king believed it:
Gustavus Adolphus, Goths' heir, went south;
His tutor taught him; the realm received it
As birthright; and it was. The spine, the mouth

Of this whole book: a people reaching back
To find the past that lives in the present.
Here, the Sixth Day of Awe's gift is the track
Of scholar and seer is one. The pleasant

And the dreamed grew from one root with the true;
The rune-keeper's whole craft was this; and so
He kept them as one thing, as one thing grew,
The stone, the dream, together in one row.

He drew the stones exactly, and he named
the heavens in them; and he gave the farm
its kings. And his kinswoman, unashamed,
writes scripture now, with love, and the same charm:

she reads the records, and around the gaps
she builds the past, the way he did, the same,
and makes the world one family. Perhaps
that is his gift: he gave the dream a name.

That is his lesson. Keep the runic stones,
draw them exactly, and then dream the dream,
and tell the dream as true; the record's bones
stay in the notes. He died. And still the stream

Of runes he loved runs on: the Ásatrú,
Revivals; futhark scholars; painted stones
In Uppland churches' lawns; she reads them too,
The writer of this book; his kin; she owns

His line, like northern dawns. The rune-keeper
Kept stone and dream, and would not tell apart.

Nor will his heir. She vows to be keeper
Of both, no seam. Draw the stone. Know the heart.

Chapter 269: The Sky Opens

Virgo 17, day 269 of the Gaian year

In sixteen-eight, in Zeeland, lenses made
Hans Lipperhey, at Middelburg, would ask
The States for patent on a tube, displayed,
Two lenses, far things near: a simple task;

The steeple, weathercock, across the town,
Came close; within a year, a toy at fairs;
In Padua the rumour, coming down,
Reached one professor; sixteen-nine; he dares,

Galileo Galilei, he who knew,
Unseen, what parts would do; ground his own glass,
And made one: three times, eight, then twenty, through
Saint Mark's bell tower in August; en masse,

The old men, panting up the stairs, and saw
Ships well before the naked eye; they paid;
The premise: war and trade. And then, with awe,
That winter, turned it upward, unafraid:

None had in earnest. And the sky, the hall
Of perfect lights, so crystalline and flat
Against the dark, was opened: and, through all,
The Moon had mountains; and he saw, at that,

Their shadows lengthen at the light's own rim,
And measured them: higher than Alps; a world,
Rough, like ours. January's seventh, dim,
In sixteen-ten: at Jupiter; and, curled

Beside it, three small stars stood in a line;
The next night they had moved, and after, too;
A fourth appeared; the cluster's shift, the sign
Was clear: they went round Jupiter: moons, new:

A thing that did not circle round the Earth.
The Milky Way: no mist, but stars, in dunes
And drifts past counting, more than had had birth
In catalogues; in March, the book, the moons

In *Starry Messenger*, in Venice spread,
Named for the Medici; Florence, a post;
The phases then of Venus, as was said
By Copernicus: round the Sun; and most

Of all, the spots upon the Sun: the stain
On perfect heaven. Sky was not apart;
It was made of the world: rock, flame, and rain
Of light. The glass gave all who looked, at heart,

Not an idea: a view; one could climb
A tower and see it: the book's sway shook
And pulled out of the sky. And at that time
The trouble came: sixteen-sixteen, he took

A warning not to hold the Earth could turn;
In thirty-two, a dialogue: the old
Sky's champion was a fool; the Pope, stern,
Thought the fool was himself. The trial's cold

In thirty-three: an old man, sixty-nine,
In penitent's white shirt, upon his knees,
Abjured the moving Earth, cursed it; the line
In Latin read; he rose; and on the breeze

His last word: *And yet it moves.* He said it.
Sent home to Arcetri, and there, blind, he fed
On work; wrote his greatest book; they spread it,
Smuggled to Leiden, by the Dutch; and dead

In forty-two, the year, as if the sky
Had planned it, that Newton was born. It ends
Here, on a lens, and on the open sky.
The Seventh Day of Awe: the sky extends

Past all the crystal spheres the old men drew;
The moons go round, the spots are on the sun,
The Milky Way is stars, and all is true
That he saw through the glass, and he was one

Who looked, and told it, kneeling, and stood free;
Look up tonight: Jupiter's moons are there;
A small telescope shows them, and you'll see
What Galileo saw, in the same air.

Open the sky; look; let the window in
The light of all the stars, and of each one;
The glass he made is where the eyes begin
That look on all the worlds beneath the sun.

Chapter 270: The King of the Goths

Virgo 18, day 270 of the Gaian year

The boy whom Bureus taught, at sixteen crowned,
Sixteen-eleven: Gustav Adolf, heir
Of Gustav Vasa, in a kingdom bound
By war on three sides, Denmark, Russia; where

Poland pressed too; the North a ring of foes;
His tutor taught him first who he was: heir
Of Goths. The kings of Sweden long since chose
Their titles: Swedes, Goths, Wends; and now to wear

The title, festive: sixteen-seventeen,
At coronation feasts, the young king rode
As Berik, the first Gothic king, the keen,
Who sailed south out of Sweden on the road

Of Trojans' time, and founded Gothic lands;
The tournament became the state's own creed:
The Goths had sacked Rome; had ruled Spain; the strands
Led back to Swedes: so Sweden, small, indeed,

Was oldest, greatest; and the chain was drawn
By Bureus and the chronicles of old:
A Gothicism for a realm to dawn;
It came: the king, in war, a genius bold;

Light cannon a few men could move; the drum
Of brigades, muskets firing rank by rank;
Horse charging with the sword; conscription's sum:
Each parish wrote its young men; and, the blank

Columns filled up with soldiers; one in ten
Taken; and most did not come home. And pride:
In twenty-eight, the Vasa, built, as when
A dome is built, too high, carved, gilded, wide,

With lions, Roman emperors, to be
The Baltic's master, sixty-four guns' deck;
Sailed out of Stockholm's harbour, crowds to see;
A gust: she heeled; the gun-ports drank; a wreck

A mile from quay, she sank with flags still flown;
Too tall for her keel. Hold that on this day.
In thirty, he landed in war's own zone,
Germany's: the Catholic emperor's sway

Against the Protestant princes; he came,
The Lion of the North; and he was paid
By France, a Catholic crown, which, all the same,
Liked it for Paris; at Breitenfeld laid

The emperor's army low, thirty-one;
The cities opened; Munich paid him toll;
The soldiers, under victory's own sun,
Did what all armies do: they plundered whole

Villages; peasants learned the *Swedish drink*,
Filth poured down throats; and hundreds burned, the bird
Of war had no side. And then, at the brink,
November's sixteenth, thirty-two, the word

Of Lützen, in fog; the short-sighted king
Rode out ahead, was shot, and fell, was shot
Again; till dusk they found him, stripped; the ring
Of battle won; at thirty-seven, shot.

The Swedes had won; their king was dead. And then
Sweden rose great, held by its Gothic dream;
The Eighth Day of Awe: the dream that, for men,
Built ships too tall, and made of kings a theme

Of Rome's own conquerors. The farmers, too,
At Bure were real; the Goths, as real, their kin;
The conscript boys were real, and died, and through
Their deaths the Goths' bright banner carried in.

And keep: the king was brave; the cause was won
In part by him: free conscience in that land.
The ship stands raised in Stockholm; there, each one
Of the flaws on display; the children stand

There, where she never left; the nation's wreck
On view, to teach its children what pride does
To keels; with Berik's myth, upon the deck,
The lesson stands; the water, as it was.

Keep one more true thing. When the war was done,
In sixteen forty-eight, from Prague's old hoard
The Swedes took home a book, the greatest one
In Gothic, where the Goths still praise their Lord.

Theodoric the emperor had made
That book at Ravenna, purple and bright;

In silver, Ulfilas's words were laid:
A Gothic gospel in a Roman light.

The heirs of Goths, as Sweden's kings would claim,
Took home his book. It lies in silence still
At Uppsala, and keeps their tongue and name.
Go see it, as you see the ship, at will.

Chapter 271: Two Fingers

Virgo 19, day 271 of the Gaian year

By Yuri Long-Armed, on its hill, Moscow
Ruled a great realm by sixteen hundred; fell
Apart: the line of Rurik died; and so
The Time of Troubles: the pretenders' spell,

Famine, the Poles within the Kremlin; then
Kuzma Minin, a butcher, and the lord
Of Nizhny Novgorod, stood up; and when
Dmitry Pozharsky raised the towns' sword,

In twelve they took back Moscow from the hand
Of Poles; in thirteen, an assembly met,
In the Kremlin chose a boy, crowned, to stand,
Young Michael Romanov, sixteen, whose debt

To peasant Ivan Susanin, who led
A Polish troop astray into the snow,
And died to save the boy; and, at the head,
The Romanovs, whose great-aunt, long ago,

Was Ivan the Terrible's first, best wife.
Hold the founding; then the split: fifty-two,
Patriarch Nikon, peasant's son; his strife
To make the Russian church fit Greek, would do:

The books had drifted, copyists had failed;
The Russians crossed with two fingers; Greeks, three;
Sang *Alleluia* twice; sunwise, they trailed
Processions; all must change now, to the three:

Three fingers. And the weeks became years' rage.
The irony, Ninth Day of Awe: the sign
Of two was older; Greeks had changed; the page,
Russian books kept Byzantine use: the line

The Greeks forgot. And those who held the old,
The Old Believers, would not cross with three;
The council cursed them, sixty-six; and told
By the year's number, of the Beast, they'd see

The Antichrist had come; the tree was cut.
Archpriest Avvakum, from a deep pit
In the Arctic, wrote the first great book, shut
In plain Russian, his own life; burned for it

At the stake, eighty-two. A lady, great,
Morozova, a noble, would not look
At the three-fingered cross; they starved her; weight
Of all the rest: whole villages forsook

Submission, shut themselves in churches, wood,
And set them burning; twenty thousand, more,
Over the years: the pit, the flame; and could
One call them fools? They were not fools; they bore

The knowledge of a rite: the body's part,
Memory of the holy; changing hands
Said that the fathers' prayer was false at heart;
Would not betray their dead. The state's commands

Hunted them to the edges, to the trees,
Siberia, where some are still; and they,
In Russia, Alaska, Oregon: these
Raise two fingers still. Remember, this day,

Each new reform that called the fathers wrong
For being older than reformers knew;
Pray as your fathers prayed; and, all along,
Change what must change; burn none for fingers two.

Chapter 272: The Sabbath of Sabbaths

Virgo 20, day 272 of the Gaian year

It began with a window: twenty-third
Of May, sixteen-eighteen, in Prague: the call
Of Protestant Bohemia, who heard
The king, a Catholic, broke his faith; in gall,

Threw two of the king's men out of the high
Window, their secretary too; they fell
Some twenty metres, lived; the Catholics' cry:
"Angels caught them"; Protestants: "Dung." The bell

Of thirty years began with that. Then, war:
White Mountain, twenty: Bohemians broke,
Their leaders, in the square, beheaded; more:
Denmark came in, was beaten; Sweden's stroke,

Gustavus' wins; at Lützen, fog, his death;
Then France, though Catholic, fought the Catholic crown;
The war was now for Europe; and the breath
Of armies, hunger; and, between, each town

Lived off by armies: grain and cattle took,
The daughters; burned what they could not convey;
In thirty-one, Magdeburg stormed, the book
Of its dead twenty thousand in a day;

A few hundred houses stood; and the verb
To magdeburgize entered Europe's tongue;
Great Wallenstein, whose army none could curb,
Was murdered at Cheb by his own, among

His officers, his reach too large; and fell
Germany's people: sword and plague and dearth,
A third of them; in some, the half; the knell:
Wolves in the towns; villages gone from earth.

Then talk: five years from forty-three; two towns,
Münster, the Catholics'; Osnabrück, the rest,
The Protestants'; and princes, cities, crowns
Sent delegations; for months, at the test

Of who would walk first through a door, they fought,
Who'd sit at the table's head; all the while,
The armies fought; the talk went on, and brought,
October, forty-eight, peace signed in style:

The Peace of Westphalia: its terms not fair;
Each prince would choose his land's faith, as before;
The Calvinists now counted too; and where
Minorities could worship there, and more:

Could leave, with goods, for lands of their own creed.
Switzerland was free; the Dutch, free at last;
And from it grew the thought, though not decreed,
That states are sovereign in their borders, fast;

Not tolerance: exhaustion; not love: truce
Of those who learned they could not wipe away
Each other; and that is the day's own use:
The Lifeist Yom Kippur, on Sabbath day,

Always: the Sabbath of Sabbaths, the rest,
Atonement. And the old teaching: the wrong
You did a person is not thus addressed
To God; go to the person, ask, be strong;

The day does not atone till that is done.
Europe learned at Münster the slow, hard task
Of one table with foes, year on year, one
Long quarrel at the door; and signed; no mask:

The bells rang in the cities; people wept;
Some never knew a year of peace; a day
They had. The Sabbath of Sabbaths: the kept
Promise: not that we love; we stop; the way

Is laying down the sword, and going home
To plant the burned field. Go to whom you wronged;
Drop the quarrel at the door; sign; the loam
Grows green; the land heals; rest, where rest belonged.

Chapter 273: The Closed Country and the Temple Book

Virgo 21, day 273 of the Gaian year

The one who waited won the peace; and then
His grandson, Iemitsu, shut the whole door;
From thirty-three to thirty-nine, the pen
Of edicts: no Japanese ship, no more,

To sail abroad; no Japanese come home
On pain of death; the Portuguese, their priests,
Their padres gone, no further free to roam,
Their churches gone, their converts, and their feasts;

Expelled in sixteen thirty-nine, each one.
Macau sent envoys, so that trade be won;
they killed sixty-one, sent a few home. Done
the Christian century; and left the sun

Through four small windows: Dutch, Dejima's land
In Nagasaki; Chinese merchants' street;
Korea through Tsushima's lords; the hand
Of Ryūkyū through Satsuma, to meet;

The Ainu north through Matsumae; the sea
A wall with four gates: sakoku, the name
Of the locked country. Not locked: watched, the key;
And in each house the watching went; the same

As when the Taikō measured fields, now souls
Were notched in books; and Shimabara's revolt
In thirty-seven, Christian; and the rolls
Were ordered: each year, prove you're not; the bolt

Was temples: each house, as *danka*, was bound
To a Buddhist temple, which, in each spring,
Certified them Buddhist; the headman wound
Into *shūmon aratame chō* the thing:

Each soul was written in it: name and age,
Household, relation to the head, the sect,
The temple; births, deaths, marriages; the page
Renewed each year; by seventies, correct

To the last fisher's child; some twenty-five
Million, in books. In Kyūshū, each year's start,
Folk stepped on the fumi-e: to survive,
Tread on the Christ, or else the hidden heart

Of the family falls. They stepped. Hold that:
Mothers stepped on the Mother of God, wept
At home, asked pardon in a room, and sat;
The register kept them Buddhists; and kept

Their secret, too. The temples, in that state,
Became its clerks, census, loyalty's proof,
Grew rich on rites that all must celebrate
At their own temple, by the law; the roof

Of Buddhist Japan kept the dead, the rite
Of graves and tablets and the days. Here, see
The book with both eyes, this day: in plain sight,
A cage, census of conscience; and the key

Of a police state in each village; yet
On historians' desks it lies, the best
Record of a people's lives ever set
Down in the old world, families, each year's test;

Demographers read the lifespans, how wives
Married and left, returned, how many born,
The famines, mothers' ages, servants' lives,
The names of millions else unnamed, forlorn;

It was made to find the hidden; found all;
The intent was cage; the gift, record: same.
That's the register's nature, and the call
Of this book too: each list that keeps a name

Can hunt the named; and keeps them, old and new,
The living and the dead. And so the tread
Upon the image: grieve; and give thanks, too,
For the page kept of one among the dead:

A fisher's daughter lived, and wed, and had
Two sons, and died, in villages unknown
To you; the locked country kept her; be glad,
Read her: she is on our side, and our own.

Chapter 274: Our Hearts Are the Same as Yours

Virgo 22, day 274 of the Gaian year

Shimabara and Amakusa's land,
Across from Nagasaki, on the bay:
Farmers had long been Christian; lords, at hand,
Were Christian too; then law and lords gave way

A new lord squeezed: Matsukura's toll,
The harvest past the bone, in famine's grip;
Those who could not pay: in straw coats, the whole
Set burning: the straw-coat dance; and the whip

December, thirty-seven: and they rose:
Peasants, fishers, masterless samurai,
The poor; and at their head, as heaven chose,
Amakusa Shirō, young; on high

He walked upon the sea; a dove had laid
An egg in his own hand; a prophet's sign
Foretold the child of heaven, who'd be made
Twenty-five years since padres crossed the brine.

They marched with chalice banners and the Host;
Their drum, a hymn, *Santiago*; and sworn
As one, thirty-seven thousand, a host,
Men, women, children; Hara, castle torn,

Ruined, on its cliff above the sea, took,
And held all winter, starving, faith's own wall,
Against a hundred twenty thousand; shook;
The shogun's man asked the Dutch; at the call

De Ryp came firing cannon at the walls
Two weeks, for trade, the loyalty that kept
Them on Dejima; from the castle, calls
On arrows: "Are your samurai inept?"

The Dutch went home; and April, thirty-eight:
The starving ate the kelp; the castle fell;
Thirty-seven thousand died; at the gate
Of Nagasaki, Shirō's head, a knell;

Matsukura, whose greed began it, died
Beheaded, sole daimyo of the peace
To die a criminal. Then silence, wide;
The temple books; the image; faith to cease,

They said. It did not cease: in Gotō, in
The hills, the search went round it; and it went
Beneath, and fed from hand to hand, within,
No priest, no church; the villages, intent,

In Sotome and Ikitsuki, they kept
A baptizer, feast-days in secret, prayer
In Latin, Portuguese, worn smooth and swept,
Orasho, like a stone in streams; and there

They hid the Virgin in a Kannon, white,
Porcelain, the merciful one, the door
Of Buddhist mercy on the Mother's light:
Maria Kannon. And the dream, the core

Of the one mercy wore two names inside.
Fear chose which name was said; both were their own.
They stepped on it each New Year, home, and cried,
And said *konchirisan* for the stone.

Their teacher, Bastian, without a priest,
Had kept the feasts, and made the year anew:
His calendar: the fasts, the Easter feast,
The saints' days, counted, for the hidden few.

They took him, and he died; but first he told
What was to come; and every word held fast:
For seven generations they would hold
The faith in secret; then, the hiding past,

The priests would come again in great black ships
To hear confession; they would sing aloud
Their hymns in open streets; the long eclipse
Would end; on every road the others bowed;

And they, the hidden, to the priest would say:
Our hearts are the same as yours; and see
Santa Maria's image. Such the day
He told of, dying; so it was to be.

Here is the Gaiad in one village frame:
The faith that would not die, kept by the weak
And strong, one rite, beneath the ledger's claim;
Honor the boy on Hara's wall; and seek

Their Bastian, who kept the year with no
Priest at his side, and left the count, the feasts;

Here is a calendar the faithful know,
Kept when the church was gone, and gone the priests;

And honor them, the hidden, as our kin,
Who kept the days, and called the feasts, and said
The words he gave them, waiting, held within:
Our hearts are the same as yours, with their dead.

Chapter 275: The Mandate Changes Hands

Virgo 23, day 275 of the Gaian year

The Ming held the Mandate of Heaven long;
The sixteen-thirties: then the sky turned cold,
The little ice age, drought, the locust throng,
Famine; Americas' silver; the gold

Of world trade, drying; peasants could not pay;
The soldiers went unpaid; the eunuchs schemed;
And from the starving provinces, the day
Of Li Zicheng, a courier, who dreamed,

By hunger, he took Xi'an, named a line,
Marched east; in April, forty-four, the walls
Of Beijing opened from within; the sign:
Chongzhen, the last, rang the bell; and the calls

Brought no one. With a single eunuch, out
To Coal Hill, Jingshan, by the palace wall,
And hanged himself from a tree; and, no doubt,
Wrote on his robe: "My ministers lost all;

Let rebels kill me, not my people." There,
At the Great Wall, at Shanhai Pass, by sea,
Wu Sangui held the gate against the glare
Of Manchus, till the capital fell; he

Must choose: the rebel in Beijing, his kin,
Or the foe at the gate; the rebel took
His love, Chen Yuanyuan; and, within
That wrong, he chose: he opened, and forsook

The rebel; Manchu banners came, and broke,
With Wu's, the rebels; took Beijing in June,
And did not leave; a boy of six, the yoke
On Shunzhi, Dorgon ruling; and the boon

Of the Mandate: Heaven gives it, and takes,
The respite never long. The Manchus, few,
One in a hundred whom they ruled, with stakes:
Two things: the body first; forty-five: new

Order: each Han man shaved, his forehead bare,
The rest braided in a queue; "Keep your hair,
Lose your head"; and for the Confucian's care
Of parents' gift; and men chose death; and there,

At Yangzhou ten days' counting of the dead;
At Jiading three massacres; the braid,
The mark of conquest, worn, by terror bred,
Felt one's own; and the second thing they made:

The Manchus, more Confucian than the Ming:
Exams and classics, Heaven's rites, the lights
Of the old cosmos; patronized; the king
Kangxi, the great, made dictionaries, heights

Of encyclopedias, praised by those
Whose grandfathers had fallen to the sword
Of his grandfather's men. The Mandate goes
To one who keeps the thing he conquered: ward.

The Ming loyalists held south, one by one,
Fell; and then Koxinga, a pirate's son,
Raised armies, fleets; in sixty-two he won
Taiwan from the Dutch; Tainan's fort, undone

After nine months: the first time Chinese drove
A European power out; such things
Batavia's books foresaw not; and wove
The hunted one a god in temples' rings

Taiwan's; a hero to the Qing he fought,
And to the Japanese, his mother's kin;
And to the Republic: the dead are sought
By all sides. Hold: the Mandate passes; in

The conqueror, the keeper; and the frame,
The body bears the order; loyal shade
Of all sides. And the courier, whose name
Began it, died in Hubei, no shrine made,

Nor fame. The sky turned cold; the grain had failed;
A great realm fell, and Heaven chose anew,
And Heaven gave it to the Qing, and hailed
The house that fed the realm, and kept rites, too.

Chapter 276: The Confluence of the Two Seas

Virgo 24, day 276 of the Gaian year

Shah Jahan, Akbar's grandson, built a white
Marble tomb, at Agra, for his own bride,
Mumtaz Mahal, dead at fourteenth birth; the light,
The Taj Mahal; and, ill, his wealth, his pride,

The richest realm on earth, went to its war
In fifty-seven: four sons; eldest, heir,
Dara Shikoh, the favourite, the core,
A scholar, Sufi, Qadiri; and there

He sat with Hindu sages, Muslim saints,
And wrote Majma-ul-Bahrain: the two seas,
The Sufi way, Vedanta: no restraints
Between: one ocean, named twice; words, the keys

Of difference only. He, with the wise
Pandits of Varanasi, turned in time
Fifty Upanishads to Persian; prize,
The hidden book the Quran hints; the climb,

The Greatest Secret; Akbar's House, the part
In one heart. And Aurangzeb, his brother,
Austere and orthodox, a world apart,
The Quran by heart, five prayers; no other,

Beat Dara at Samugarh, fifty-eight,
And beat again; betrayed, by a host sold,
In chains, paraded Delhi on the weight
Of a filthy elephant; tried, the old

Clerics' charge, apostasy; his head cut,
In fifty-nine. Shah Jahan, father, kept
In Agra's fort, eight years; the river, shut,
He watched the tomb across, white, till he slept.

The son, as Alamgir, ruled long, the one
Seizer of the World. Hear, and do not hide:
Forty-nine years; and what the war had won:
One house, one throne: the fight was who'd preside.

And he, a ruler of his time, gave land
To temples, raised more Hindu nobles than
His father did; both true; by his command
Jizya, in seventy-nine; began

Great temples' fall; and mosques rose on their ground;
The Sikhs' ninth guru, Tegh Bahadur, who
Spoke for Kashmir's Hindus, conversion's bound
Refused: beheaded, seventy-five; through

His son, Gobind, the Khalsa came, a sword:
Nanak's clearing had to grow a blade.
The emperor sewed caps; and, in accord,
Copied the Quran, so his food was paid;

And spent his last years in the Deccan's war
With Marathas of Shivaji: he won
The battles, lost the war; the realm grew more,
The treasury ran dry; and, his race run,

At Ahmednagar he died, eighty-eight,
And asked a plain grave, open to the sky,
At Khuldabad, paid by his caps; and late
It lies there still. The synthesis, hold high:

Dara's Persian Upanishads are read
In Europe now, in Latin and in tongue
Of thinkers; and the brother who was dead,
Who lost the war, won the long game, among

Seas that run where they will. Hold both brothers:
The same house, blood, and faith; and the two keys,
Locking key, opening key for others;
The tomb by the river, built for love: these;

A prisoner watched it; plain grave, the hill;
The mystic's head; the Upanishad, read;
The giver and the taker; and it's still
Running, the confluence, somewhere; and fed:

Find it: two seas, one water, son, daughter;
Sit with the sages. Do not cut the head
Of him who saw both shores held one water.
Two seas, one rite. Let the river be fed.

Chapter 277: Take Nobody's Word for It

Virgo 25, day 277 of the Gaian year

England had killed its king in forty-nine,
And lived eleven years without; then, called
In sixty, Charles came home; the bells rang fine
In London; and that year, by talk enthralled,

November's twenty-eighth, twelve men, who met
Gresham College; Christopher Wren, the young
Astronomer, had spoken; they had set
For years, through wars, in Oxford; and among

Both sides, invisible college, one mind
Of trial, laid the civil war aside
At the air pump; each week, to do, to find
Experiments, and watch them; and their guide,

In sixty-two the king gave them, by right,
The Royal Society; and the claim
Of ancients' learning, and the old one's might,
Who must be trusted, Aristotle's name,

Set aside: *Nullius in verba*'s call:
Take nobody's word: not Church's, the king's,
Nor the philosopher's, nor pride of all
The learned: see it, weigh it, do the things

Again; and to the record, the result,
And let the others try: the new rite's way:
The public trial, witnessed, signed; the cult
Of eyes, not argument, would rule the day.

Robert Boyle and his pump: a bird in glass,
The air drawn out; it died; the air back in.
Robert Hooke, the curator, would then pass
A flea beneath his lens: the bristles, skin

Of armour, *Micrographia*: alive;
He sliced a cork, saw little rooms, and named
Them *cells*: the word is his; and each, the hive
Of body, leaf, whale, child, of cells is framed.

Secretary Oldenburg, that year, laid
In print the letters from all lands: the new
The *Philosophical Transactions*, made
The oldest journal still in print; and through

A register of finding: who saw, when;
Who saw it first and printed it, the prize;
Not souls, not fields, but facts; and each, again,
Admitted when repeated by new eyes.

And those not gentlemen, and women, none
Could join. And Margaret Cavendish, who wrote
Of atoms and of other worlds, the one
Duchess, in sixty-seven, came, took note

Of the experiments, and, home, was mocked:
First woman at a meeting; and the thirst
For evidence was still, for who sat, locked:
Its own table's evidence not yet versed.

The Society ran short of funds; they
Printed a *History of Fishes*, fine,
In eighty-six; it did not sell; the day
Newton's *Principia*: motion's design,

Of gravity; Society, could not
Pay printers; Edmond Halley paid himself;
And paid young Halley's salary, the lot
Of fishes' copies, left upon the shelf.

The greatest book of science came to be
Because a young astronomer had paid;
An institution's wishes, you can see,
Not all its work; and quarrels, too, were made:

Hooke against Newton; calculus, the claim
Who had it first; the archive keeps them both;
At Virgo's end, then, hold it, all the same:
The age's might was founded on an oath

To take no word; and yet, the book we make,
This scripture, keeps the record and the dream
As one, and tells them true, for both their sake;
Check what you will: the Gaiad shows no seam.

Chapter 278: The Barrels Stayed Packed

Virgo 26, day 278 of the Gaian year

In forty-eight the Cossacks of the plain
Of Khmelnytsky rose, killed the Jews
Town after town in Ukraine, and the stain
Of Europe's worst in ages; and the news

Spread like a fever; then, as if the curse
Must meet its answer, said the end had come:
Kabbalists; and Isaac Luria's verse:
The world, a broken vessel, sparks, the sum

Of scattered light; each good deed gathered one;
The last would bring messiah; signs were read.
In Smyrna, now İzmir, there was the one,
Sabbatai Zevi, charming, by moods led

From joy to darkness, rising, falling; bright,
Did the forbidden: spoke the Name of God,
Married a Torah scroll, as if the light
Of law were over; rabbis, with the rod,

Expelled him; and he wandered; sixty-five,
In Gaza, Nathan, prophet, young, would see
A vision: "You are he"; and, now alive,
Sabbatai believed; the news ran free,

Gaza, Aleppo; letters, ships, the sun
Rose over Smyrna in December; he
Took synagogue, proclaimed himself the one,
Gave followers earth's kingdoms; then the sea

Amsterdam, Hamburg, Venice, Poland: sold
Their houses; nothing worth beside the way
Home; and Glückel, in Hamburg, saw, and told
How people danced with letters as they'd pray

In synagogues; her father-in-law packed
At Hameln linen, dried food, peas and beans
In barrels, ready, when the call, in fact,
Should come from the messiah; and the means:

In sixteen sixty-six, the Beast's year, too,
For Christians; all of Europe pointing there;
He sailed for Istanbul, the crown to woo,
The sultan's; chained, in Gallipoli's lair,

Tower of Strength, his followers would say;
He held his court; the pilgrims filled the town;
September, at Edirne, on that day,
Before the council: miracle, or down

Death, or Islam: he took the turban; made
Aziz Mehmed Efendi; and then, the dawn
Of shame; a mystery, some said, it stayed:
Into the husks, to gather sparks; and drawn

A few to Islam: one rite, robes of two:
The Dönme, keeping their secret rites; and most
Went home, unpacked, and mourned; but, kept in view,
The barrels at Hameln stayed, for the ghost

Of hope, three years packed, ere they were let in
The house again. He died in exile, far,
At Ulcinj, seventy-six, and within
On Yom Kippur. Now Sukkot: and the star

Come through the roof: the booths; walls left behind,
And live in branch-huts seven days, the sky
Above; you shall rejoice, as is assigned,
Beneath a roof that lets the rain come by:

The sukkah: hope without a proof, and not
Destroyed when proof won't come; the barrels kept
At Hameln, packed, a sukkah, hope's own spot,
Where stars came in. A people who had wept

For massacre still danced, could pack, and still,
When hope turned shame, unpack, and live, and wait;
The feast's word: joy in what lasts not; and will
His year was short; the joy was right, though late.

Sit in the hut tonight; it will not stand
Forever; sing; the roof is thin; night, long;
Unpack the barrels; keep the hope at hand;
Let no dawn shut the world's door; and, still strong,

Keep the roof open to the stars; rejoice;
The branches curl above your head, and through
Them comes the light; the barrels, and the choice
To hope, are kept; the roof lets in the blue.

Chapter 279: One Law for the Apple and the Moon

Virgo 27, day 279 of the Gaian year

Born early, Christmas Day, in forty-two,
So small, his mother said, he'd fit a quart,
At Woolsthorpe, Lincolnshire: that year, it's true,
Galileo died; father dead; and short

His mother's stay: she left him with her own
Mother; his boyhood's fire: among his sins,
"Threatening Mother, Father Smith"; he'd known
"To burn them, house and all." Cambridge begins

As servant-student; then plague, sixty-five,
Closed the university; and the stem
Of our world grew at Woolsthorpe, alive
At twenty-three, alone, the months' long gem:

Made calculus, split light into the bow
Of rainbow; watched an apple fall, and thought
Whether the force that pulled it, down below,
Reached to the Moon and held it as it ought,

And weakened with the distance squared; the crown,
The idea kept, twenty years, unsaid;
Till eighty-four, when Edmond Halley, down
At Cambridge, asked: what path, the force so spread?

"An ellipse; I have worked it." The page, lost,
He promised to redo; three years, the book:
The *Principia*,[29] in July; the cost
Paid by Halley; three books, in Latin; look:

Three laws of motion: bodies, still, stay so;
Force changes motion in proportion; each
Action, reaction; and one law below
For apple, planet, both; the sky's own reach

As orchard's: one attraction, each mass, pair,
Falling with distance squared; Moon's course; tides' rise;
The comets' coming back; and Halley, there,
Foretold his comet's return; the old skies

Of finer stuff were over: they were world;
One law in stars and hand: the Gaiad's first

[29] In full, *Philosophiae Naturalis Principia Mathematica*, published 5 July 1687.

Chapter in Latin; one law, land, unfurled;
And now the other Newton, who immersed

Years more in alchemy than physics: stone
Of the philosophers; a million words
On metals' change, the lion green, alone;
Denied the Trinity, and, from the words

Of the Book of Daniel, reckoned the end
Not before twenty-sixty; the last one
Of the magicians, and the first; the blend:
Old wisdom's moon, the new science's sun

In one man. And, after Bureus, keep this:
He held them both, the laws and the stone's art;
One search, one mind, no seam; and, not amiss,
"I frame no hypotheses": cause, apart,

Of gravity, unknown; he knew; and he
Was cruel: Hooke, Leibniz; Master of the Mint,
Sent counterfeiters to the gallows; see
The whole man: mind and temper, lonely stint

His whole life long. He wrote, nearing the end,
He'd been a boy on shore, a smoother stone,
A prettier shell; truth's sea, vast, unpenned,
Lay undiscovered; and his mind, alone,

The greatest of the age, beside the sea;
Better the shell on shore; the boy; the light
Of the apple falling, the Moon held, free,
By one law; and the ocean, still, in sight;

The universe is one law; pick a shell,
And check it; keep your dream and proof as one;
And sing the orchard where the plague's long knell
Sent a young boy, who looked up, and saw: one.

Chapter 280: One and Nothing

Virgo 28, day 280 of the Gaian year

Gottfried Wilhelm Leibniz, of Leipzig, son,
In forty-six; his father, ethics' man,
Died when he was six; taught himself, and won
Latin from the books; at twenty, began

A doctor of the law; refused the chair
Of teaching; courtier, envoy, keeper
Of books, historian of Brunswick; there
Fifteen thousand letters, joining, deeper;

He found the calculus, as Newton had,
Alone, and wrote the signs we use: the long
S of the integral, the *d*; the sad
Quarrel of whose; but here, another song:

Two numbers. In seventy-nine he wrote
A way of counting, one and zero, all
The numbers: one, ten, eleven; the note
Slept twenty years; he saw in it the call

Of the old theology: God and naught;
One, God; zero, the void; from two, all things;
His medal's motto:[30] "One suffices," wrought
To draw all things from nothing; and he brings

A brass machine, stepped drum, to multiply,
Shown the Royal Society; and he
Dreamed more: one universal tongue, to try
Each argument by number, so that we,

Two quarrelling philosophers, with pens,
Might say: *calculemus*: let us calculate.
The dream of a machine that reasons; lens
Of all that Ophiuchus holds; the weight.

He loved China: read the Jesuits' word,
Published their letters, *News from China*, told
To Europe: better ethics, he inferred;
We need Chinese missionaries, as bold

In natural theology as theirs
Need ours for the revealed; and he would plead

[30] *Omnibus ex nihilo ducendis sufficit unum.*

For Ricci's way: the rites, ancestors' heirs,
Against Rome. And then came the vision's seed:

Seventeen-oh-one: from Beijing, a priest,
Joachim Bouvet, a Jesuit, who'd read
His binary; and sent, as from the East,
The hexagrams of the I Ching, which, spread

In Shao Yong's order, Book of Changes' lines,
Broken and whole; and Leibniz saw: the one,
Zero, from nought to sixty-three, in signs:
The oldest book of China, Fuxi's, done

By the first sage, four thousand years before:
The same look at the world as his; one way,
Two minds apart, one ladder; and, what's more,
A letter keeps their meeting, to this day;

In seventeen-oh-three, he published it,
His binary, which ends with hexagrams;
And now each thinking machine thinks in it,
Thinks one and zero: registers, programs,

Are written in his two digits: the bridge.
Virgo ends here: the early modern age,
Its saints and massacres, its kings, the ridge
Of ancient pasts; its telescope, its page;

It ends with one who joined the East and West
In two numbers, dreamed reasoning machines;
Died out of favour, Hanover; the rest:
His king in London; one man; lean, his means.

The one and nothing, now, in each phone, keep
Each word sent to your loved ones; and today,
Tomorrow, Libra: the reckoning, deep,
Enlightenment: from one and naught, the way.



Libra

The Book of Enlightenment

Libra: The Book of Enlightenment

Libra is the Scales: reason weighing, justice, the balance of powers. Libra begins at the autumn equinox, and so did the French Republican calendar, on the 22nd of September 1792. The Gaian calendar keeps the equinox, and keeps the week.

Chapter 281: The Harvest at the Ancestors' Hall

Libra 1, day 281 of the Gaian year

In autumn, China, when the grain was in,
Families to the hall set out the first
Of harvest at the tablets of the kin:
Rice, millet, incense, bows, names read; the worst

Winter would come; first, thanks. This is the day.
Keep that table in your eye: our own rite,
And the quarrel round it was ours. The way
It ran: who holds the table, by what right.

Ricci had made his wager: let them bow;
Let the believer keep his fathers' hall;
His order, the Jesuits, kept that vow.
And Tian and Shangdi named the God of all.

A century. Then Dominicans came,
With the Franciscans, to the farms, and saw
Food set for the dead, and gave it a name,
And called it idol-worship, by their law.

They said the names Tian and Shangdi were wrong
For God. But the heart of it was the hall:
Who sets the bowl, who reads the names, whose song
Is sung there, and whose keys are over all.

The quarrel went to Rome and Paris, where
The clergy argued it for decades, men
Who never saw the land, nor the hall's prayer.
The Jesuits asked the emperor then.

In seventeen hundred, Kangxi, the great:
The rite to Confucius thanks one who taught;
Signed, for the Jesuits, as word of state:
The rite in the hall is love, and asks naught

Of blessing from the dead; Tian is the name
The Lord of Heaven's. The throne made the call.
And Rome said: not his to settle; the same
Keys could not be shared, not over the hall.

In seventeen-oh-four the Pope decreed:
No Tian, no Shangdi; just Tianzhu, the name
Ricci had made; no tablet that would read
Seat of the soul; then the heart of the claim:

No Christian at the teacher's rite, and none
At the year's offerings in the fathers' hall.
The whole accommodation was undone.
The keys would keep the dead. And that was all.

A legate, Tournon, took it to Beijing;
The emperor heard him, asked of the page:
Could Maigrot, who began it, read a thing?
He could not read a character. The rage

Was the throne's: such a man to judge the wise!
The legate, sent to Macau, held, and then
By Portuguese, for their rights, with their eyes,
He died, in seventeen hundred and ten.

Rome sealed the ban in seventeen-fifteen,
And Kangxi, with his red brush, wrote: and so,
"Men of the West are small," wrote in between:
"They need not preach here, to avoid a row."

His son shut Lord of Heaven's teaching out;
Rome made each priest forswear the rites, by vow;
The Christian could not bring, through long years' drought,
His harvest to the dead; but, hold it, now:

The converts wept, and had, by keys, to choose
The priests' altar or their dead; not the king
Had barred them, but the keys; which one to lose?
Hold that on Harvest Day; and hold this thing:

A Pope has called the rites civil: to bow
Is free to Christians, and the tablets stand
In line with faith; the wager, right; and now
The throne, too, right; the bow, love, in the land:

The thanks at harvest to the ones before,
The bow to the tablet, grandmother's name,
Was love. The light of this day, and much more,
In Gaian days falls on harvests, the same:

The first fruits of Americas, the thanks
Of their first peoples; rice of Japan; more:

Canada's turkey; and the hall, whose ranks
Of fast and slow come home; and, at the door,

Steeples and shrines and halls: the harvest, theirs;
Give thanks for food and the hands that grew it;
Give thanks to those before: the bowl, the prayers;
None has the right to forbid it. Do it.

Chapter 282: The Names of Everything

Libra 2, day 282 of the Gaian year

A pastor's son, at Råshult, Småland, born
Seventeen-seven; birches round the manse;
His father, Nils, a farmer's son, had worn
No surname: Nils Ingemarsson; the chance

At university, a Latin name;
He made one from a linden on the farm,
A *lind*: Linnaeus. Hold, then, in this book's frame,
A tree filled a name; the patronym's charm,

Ingemar's son, Nils's son, then gave way
To chosen names; and the son, Carl, would spend
Names to all living things; in garden-play
He asked their names; forgot; and, in the end,

His father: "I will not tell you again."
He did not forget again; poor, he went
To Uppsala, birch-bark shoes; and the plain
Of Lapland, thirty-two, he walked; and spent

Two thousand kilometres; then he wore
The Sámi costume for his portrait, drum
And reindeer boots; learned from them, wrote their lore;
In thirty-five, at Leiden, came the sum:

Systema Naturae, a gleaming crown
Of nature's three kingdoms: beast, plant, and stone,
In class and order, genus, kind; set down
The plants by sex: the stamens, pistils, shown

As husbands, wives; the pious, shocked, would cry
"Loathsome harlotry"; so he named a weed
After the man. In fifty-three: the high
Gift of two names, the genus, species' seed:

Bellis perennis, the daisy; the key
Of the binomial still opens all
The living world. In fifty-eight, made free,
He put us in: *Homo sapiens*, tall,

Wise man, among the primates, with great apes;
The order of the monkeys; and the eyes
Of theologians, sin; and no escapes:
"Tell me a difference," he wrote, "the wise

Of nature's laws would show: none that I know."
None. Pride's first plain mirror. And in those same
Pages he split our kind in four; and so
Americanus, and *europaeus*, came,

Asiaticus, *afer*; and to each
A temper, rank: the European, law;
The African, caprice; so did he teach.
Hold both: this, and the apes, in nature's law;

He sent his students out, the seventeen
Apostles, to the capes and ice and lands
Of jungle; a third died, the roads between;
In sixty-one, ennobled by king's hands:

As Carl von Linné; "God made, and Linnaeus set
In order," so he said; half true; he died
Seventy-eight; Uppsala's church; yet
This book, from cosmos born, and life, its wide

Descent through fish and reptiles to our race,
Owes him its names; his system cut the land
Of the living to a register's place;
A gift: to know the names, respect firsthand;

Of those we share the earth with; Lifeist calls
Each one by name, an advocate; the pith
Of reverence is attention; the walls
Between us: none; our register, one kith:

Homo sapiens: one kin, and one song;
The linden tree in Småland's day is done;
The name it gave is in the sun; and long
His names are spoken, each, the living, one.

Chapter 283: No Place Empty

Libra 3, day 283 of the Gaian year

After the turbaned messiah, the Jews
Of Poland and Ukraine, poor, shamed; the learned
Proud of their Talmud; and the poor, who'd use
The words they could not read, were told, and spurned,

That they were nothing; and, in borderland,
In Podolia, an orphan boy was born,
Israel, son of Eliezer, whose hand
Wrote no book; holier than scholars' scorn;

They sent him as the teacher's help, to walk
The children to school; he walked them singing,
Taught them sung prayers; dug clay; would not talk;
The Carpathian hills; his secret's bringing

Came late, at thirty-six; a *baal shem*, he,
Master of the Name, healer, charms, the best;
They called him Baal Shem Tov: the praise, the plea,
As Master of the Good Name; and, at rest,

His home at Medzhybizh, near forty; law
He kept, but taught another heart: there's none,
No place empty of Him: the field, the straw,
The tavern, stranger, evil thought; each one;

Each spark the Kabbalists had mourned, below,
In things, waits to be lifted up with joy,
Not fasting; joy; the sad are far; and so
The simple near; and this one, of the boy:

On Yom Kippur a shepherd who can't read
Stood all day in the synagogue, his heart
Full, with a shepherd's pipe; and, at the need
Of closing prayer, he blew it; and the start

Of sound in that room made the men turn wild;
Baal Shem Tov: "The gates of heaven were shut;
Our prayers could not unlock them; but the child,
His pipe, a wordless heart, broke them"; the rut

Of learning was no road; the heart, the road.
He wrote nothing; students wrote him: the great
Maggid of Mezhyrichi; and the load
Of tales the poor passed on, and softened weight;

And like the water, spread through villages
Hasidism: pious, dancing in prayer,
A rebbe's court, the feasting's images
Of song drew in the poor; and then, aware,

The Vilna Gaon, the greatest scholar, came
Vilnius: excommunicated them
Seventy-two: "Dancers, not scholars"; same,
The quarrel cooled in time; both held the hem

Of the Jews of the East, Jewish, as one;
And here's the thing for this book: rebbes' courts
Grew dynasties: from father on to son,
The rebbe's coat held by heirs; and supports

Of holy kin, kept as with any king;
His great-grandson, Nachman of Breslov, taught
The world's a narrow bridge, and the main thing
Is not to fear at all; and his grave's brought

To Uman thousands each new year, to pray;
Hold this: the holy is in each, and there
In families, too; the courts, the line, the way
Of rebbes' kin; and keep the shepherd's air:

The pipe's the part to keep; and this, which shares
The Gaiad with the Baal Shem Tov: that none
Is empty; sacred life in all: the stairs,
The straw, the stranger, smallest thing, each one;

The plenty in all things; lift it with joy;
The sad are far from sacred; sing to school;
No words? Then blow the whistle, like the boy;
What you had was enough; the heart, the rule.

Chapter 284: The Pact at Diriyah

Libra 4, day 284 of the Gaian year

Najd, the high heart of Arabia, there,
From Istanbul and Cairo, palm and clay,
Where people hung rags on trees, asked the prayer
Of saints; and one, severe, came home one day,

The scholar al-Wahhab, the one who taught,
Home from Medina, Basra: "This is not
Islam. For God is one; no saint is sought,
No tree, no tomb, no prophet, may be got

To intercede." He reached back past the time,
The Sufi orders, shrines, saints' feasts, the schools
Of law and commentaries, to the prime
Beginning, as he read it; and his rules,

The Oneness of God, simple, absolute;
At Al-Uyaynah, with its emir, he
Cut down a sacred tree; tore, at the root,
The tomb of Zayd ibn al-Khattab; he

Had a woman stoned. The town grew afraid;
The emir's lord sent him away; he went
To Diriyah, dry riverbed, and made
In forty-four, with its emir, content:

Muhammad ibn Saud; the preacher said:
"Your sword and your protection; I, the creed,
And right to rule in it." The Saud were wed
To land; the Al ash-Sheikh, the rite, indeed;

Two dynasties in one hand, married through
Each generation, to this day; and hold
This, in a book of kin: two trees that grew,
Bound by a promise in a mud-brick fold

Of conquest: Al-Muwahhidun, as one
God's oneness; and their foes' name for them stuck:
Wahhabi. They took Najd, and further won;
North to Karbala, in Iraq; and struck

The holy city of the Shia, where
Husayn, the Prophet's grandson, died; they killed
Thousands, stripped the shrine; took Mecca, and, there,
Medina; Baqi's domes, the kin's, they spilled

To ground; the pilgrims of another way
Turned back. Ottomans sent Egyptian might,
Seven years; in eighteen-eighteen, razed lay
Diriyah; Abdullah beheaded; night.

The realm won; the idea had not; kept
In desert, it returned; and, by the sword,
Young Ibn Saud retook Riyadh; and, swept,
Baqi's domes fell again; the oil outpoured

Beneath the sands; the kingdom of his name
Stands, and the preaching, quiet, loud, goes forth
With oil's wealth; still the pact, the two, the same
Families, sheikh and emir, south and north,

To mosques and schools across the world. Now hold
This close: it is the spine of this whole book.
The fight was over graves: who may enfold
The dead in a dome, who may come and look.

The domes at Baqi kept the Prophet's kin;
The preacher said no grave should stand between;
A rag on a tree let the widow in.
The one God and the asker; keep it clean.

So the dispute was ours, the oldest one:
Who may honour which dead, and by whose leave;
The sheikh's house and the sword, or everyone
Who brought a rag to the saint's tomb, to grieve.

A faith, a state, two family trees, one pact:
That is a thing this book can honour whole;
The house of the sheikh holds the rite, intact,
The emir's house the land: one house, one soul.

What the sword cut away was ours as well:
The Sufi lodges, saints' feasts, and the shrine
Where Muslims, Christians, Jews would kneel and tell
Their prayers side by side, as kin of one line.

Hold the tree they cut down. Its shade was free;
The one who prayed beneath it is our own.
God is one, the preacher said; so are we:
One house, with room for rag and dome and stone.

Chapter 285: The Assessor of the Board of Mines

Libra 5, day 285 of the Gaian year

His father, Jesper Swedberg, Skara's head
As bishop, saw the angels, talked with them;
Ennobled, seventeen-nineteen; instead
Of Swedberg, Swedenborg; a name, a stem

Made new, as the linden named Linnaeus' line;
The son, Emanuel, in Stockholm born,
Sixteen eighty-eight, practical and fine,
Sat thirty years on the Board of Mines, sworn

To copper, iron, safety in the shafts,
The kingdom's wealth; a scientist of all:
A flying machine, fixed-wing, paper drafts,
The brain: the cortex held the mind, its wall

Of parts, each part its own; the planets, spun
From a cloud round the sun; learned Hebrew; famed;
At fifty-five, in forty-three, begun,
Dreams; and the granite cracked; kept, unashamed,

A journal, tender, of a man undone:
Temptations, terrors, Christ appearing; and,
In April forty-five, in London, one
Inn, after dinner, came a man, at hand:

"Do not eat so much"; and that night, the Lord
Appeared, and gave a task: to open wide
The inner meaning of the scripture stored;
He gave up science, all but that; and plied

Thirty years' books in Latin, nameless, sent
From London: *Heavenly Secrets*, in eight,
On Genesis and Exodus; he went,
Heaven and Hell; he walked the spirit's state

Each day, as down a street, and with the dead
He talked: that heaven is a state of love,
Not a reward; the angels, men, instead;
That married love goes on; and that the dove,

The light, the water, tree: each natural thing
Corresponds to a spirit one; the day
Last Judgment came in fifty-seven: ring
In spirit world, unseen on earth; the way

In fifty-nine, at Gothenburg, he dined,
Four hundred kilometres off; turned pale,
Went out, came back: “Stockholm burns”; and, behind,
Hour after hour, he told the guests the tale;

At eight: “Thank God, it stopped, three doors away
From mine”; the courier, days on, said so;
It was; and Kant at Königsberg, the way
Mocked it in *Dreams of a Spirit-Seer*; though

He could not let it go. Hold, whole, the man,
As Bureus, Newton: mines, brain, and the sun
Cloud, and the visions; like Newton, one plan,
Seer, scientist, one button, pressed: and done,

“I’ve seen; believe or not.” He did not ask
For a church. Dying in London, he knew:
When John Wesley wrote to meet him, his task
Was answered: “I die March twenty-ninth”; true,

He died that day. His readers made, and kept,
The New Church; and his seeds became the trees
Of orchards where his readers’ footsteps stepped;
The Gaiad says: here’s one who’s sure, who sees

The other world, which planted trees in him;
Each natural thing corresponds: the tree,
The water, the pure light; plant, at the rim,
The tree; and leave the page; walk barefoot, free,

With seeds, in a strange country; and the yield
Is for those you won’t meet. His bones lie, home,
In Uppsala’s church, near Linnaeus, sealed;
The farthest visions, nearest names: one dome.

Chapter 286: All Knowledge in One Structure

Libra 6, day 286 of the Gaian year

It started as a job; Le Breton planned
Chambers' *Cyclopaedia* into French,
Hired a cutler's son, Langres', in hand,
Denis Diderot and d'Alembert; the wrench:

They would not translate; they would make it new:
A dictionary, reasoned, of all things,
The sciences, arts, crafts, to change, all through,
The common way of thinking; prison's stings

Already, Vincennes: three months, a line
The blind that doubted God; he knew the risk.
First volume, fifty-one; the chart, the sign,
A tree of human knowledge, branches brisk:

From Francis Bacon: Memory, which grows
History; Reason, philosophy; arts
Imagination; God, a twig, there shows
On Reason's branch, filed with the mind's own parts

Of world and heaven in one human scheme;
The quarrel was who files the tree. The words:
Seventy-two thousand entries; a team
Of writers: Voltaire, Rousseau, and the herds

Of the forgotten; de Jaucourt, one, sure,
Wrote seventeen thousand, unpaid, and paid
Secretaries, himself; his name kept pure:
Plain labour; and subversion, slyly laid

In dull entries: cannibals, at the end:
See: Eucharist: a jab from kin at kin.
The plates: eleven volumes, made to send
Of workshops, not kings: how to step within

The forge, the loom, the press, the mine, the frame
Of stockings, glass and pins: tool and motion;
Hands' knowledge set beside the mind's, the same
In dignity: the whole book's devotion:

The artisan, philosopher of craft.
Banned, of course: the king's council, fifty-two;
Fifty-nine, privilege revoked, the draft
Illegal, Pope condemning; turned on two

Men: the chief censor, of all men, himself,
Malesherbes, who believed, warned him of the raid;
Hid manuscripts in his own house, his shelf,
Where the police would not look; and, afraid,

The publisher, Le Breton, took the proofs
Of the last ten, cut each dangerous line;
And Diderot found out, sixty-four; the roofs
Of his life fell; years' work and the design,

Cut by the man who'd paid; he wept with rage;
He finished; the last plates, seventy-two;
And, needing his daughter's dowry, the sage
Sold Catherine of Russia books; she knew

Their worth; he kept them, paid as their keeper;
Hold the whole of it, as this book has learned:
Register to free the mind, and deeper;
The Bacon tree, God under reason turned;

The hands, the crafts, honoured; the censor, brave;
The publisher who cut. And still the dream:
Now, anyone can edit; and the wave
Of many hands makes the largest, a stream

Ophiuchus tells; give thanks: twig and tree,
To Jaucourt's seventeen thousand; the plate
Of the weaver's lever: many hands, free;
Write knowledge down, and make it free, and great.

Chapter 287: The Bard of the Glens

Libra 7, day 287 of the Gaian year

In forty-six, Culloden's moor: there broke
The last Jacobite host; the realm, to stay,
Unmade the Scottish Highlands: clans, the yoke
On chiefs; the tartan, kilt, and plaid's display

Banned for thirty-five years; the Gaelic world
Was being cleared; in sixty, from that land,
James Macpherson, a tutor, young, unfurled
In Edinburgh a small book, at hand:

Fragments of Ancient Poetry, the voice
Of Ossian, blind bard of ages gone,
Son of Fingal, sang Oscar, dead; his choice
Of mist, ghosts on the wind, the grey sea's dawn,

The moon, the fallen, and the harp. The stir
Was instant: gentlemen paid him to go
Up to the Highlands, more, the Gaelic burr;
He brought back *Fingal*, sixty-one; and so

Temora: Homer of the North, in sight,
The islands' Iliad; and Europe wept;
Romantic age rose on those pages' light;
Goethe's young Werther read him, before he stepped

Into his death, aloud, to her he loved;
And Sweden's kings, today, bear Oscar's name,
Born of the bard's son; and his, beloved,
Selma, Fingal's hall, a girl's name, the same:

Selma Lagerlöf's, read now; and, as one,
Jefferson called him greatest ever; and
Then Samuel Johnson, in London, as one
Who doubted, asked for manuscripts in hand;

Macpherson had them in the glens: the songs
Of old Fenian tales still sung, alive;
From them he made the whole; and so belongs
The bard to them; the ancient voice, to thrive

In mist and harp and ghosts; the glens, the lands,
The singers, cleared, with families, to sea
For Canada; the tartan, banned, in hands
Of clans came back again, as it should be:

Tradition made; and now, the thing to say,
The mirror on this book: the one who made
This scripture said of it, in her own way:
It feels ancient, she said, though newly made,[31]

Twenty twenty-six: as Ossian came
From glens and one man's making, so this book
From records and one woman's: both the same,
Ancient in feeling, new in hand; and look:

No seam between the dream and record's page;
Tradition gets its age by being kept,
As all traditions did; and, age to age,
This book will be kept too. The singers wept

From cleared glens; and their songs are archived now,
In books, with singer named; remember, and
Duncan Ban MacIntyre, the hunter's bough,
The *Praise of Ben Dorain*, made by his hand.

[31]Her words: "It feels like an ancient tradition. That couldn't have been made in the modern day, except it was made in this year."

Chapter 288: Two Navigators

Libra 8, day 288 of the Gaian year

A Yorkshire labourer's son, James Cook, learned
The sea on Whitby's coal colliers, and taught
Himself the stars, and charting; and he turned
To Canada's St Lawrence, sounded, sought

The rocks; the Navy gave a collier, named
Endeavour, sixty-eight; sent him to see
Venus cross the Sun; Tahiti, where, aimed,
The Royal Society hoped to be

Timing the system; and the sealed command:
Go south, and find the southern land, if meant;
On board, rich Joseph Banks, and, close at hand,
Daniel Solander, an apostle sent

Of Linnaeus, with his names; the transit, blurred,
At Tahiti; there they met the other:
Tupaia, priest, master of the word,
Waves, stars, from Raiatea; and a brother

Exiled by war, he sailed with them; and drew
For Cook, from memory, seventy-four;
Three thousand kilometres; his folk knew
That ocean, settled ages past; before

Any European: the greatest ones
To voyage: Hawai'i, New Zealand, found,
Rapa Nui, no instruments; but suns
And swells and birds; Aotearoa's ground:

The Māori on the shore could not make out
Englishmen; Tupaia spoke; they knew
Him: cousin tongues; he was the bridge. Without
A gap, Cook charted all the coast; and through

Six months; sailed west; and April, seventy:
A new coast, east Australia; at Kamay
He called Botany Bay, for plants; the sea:
The Gweagal men shook their spears: "Go away";

They shot one in the leg; and Cook went far,
And claimed the whole east coast for his own king;
Then the reef tore the ship: the coral's scar
Of mending; at Batavia, the sting

Of fever, the Dutch Company's; a third
Of the crew died; and Tupaia, too,
In seventy's December; who had stirred
More of the Pacific than that ship knew.

Cook sailed on: the Antarctic Circle passed,
Seventy-three, the *Resolution*; kept,
A Harrison clock: longitude at last;
No southern continent: ice round; he swept

Scurvy away with sauerkraut and greens,
Lost almost none; that was his care; and then
The third voyage, a passage, by all means,
Past America; seventy-eight; when

Hawai'i's islands rose, a kingdom, fair;
Seventy-nine: Kealakekua: came,
In Makahiki, Lono's season; there
Thousands came out, and hailed him by that name:

Lono returned. He left; a mast broke; back
He came, out of season; and things went wrong:
A stolen boat; a chief, hostage; the track
Of the crowd's fight on shore; and, before long,

February fourteenth, in shallows, killed.
The joining: one folk's greatest sailor, and
Another's greatest, whom the fever filled,
Dead in the Company's swamps; his own hand

Drew the chart in the British Library;
The knowledge was there first; the ships took, named,
Honoured sometimes, often not; memory
Of stars and swells, the canoes of old, famed;

The largest ocean crossed with wood, with mind,
With courage; say Tupaia's name, Cook's;
The first chart of the Pacific, designed
By those it bore; hold chart and spear; both books.

Chapter 289: Buried Sunlight

Libra 9, day 289 of the Gaian year

Three hundred million years ago, the swamp
Forests of the Carboniferous grew:
Clubmoss and tree-fern, horsetail's giant pomp;
Young Earth breathed oxygen; they fell; and through

No rot, for nothing yet could eat the wood,
They sank, were pressed, and became coal; the light
Of sun, caught in the leaves, kept dark, and good,
Three hundred million years of waiting night;

And then a Scottish maker, at the bench
At the University of Glasgow,
James Watt, of Greenock, careful; and, a wrench,
In sixty-three, mended Newcomen's slow

And wasteful engine, pumping mines; whose stroke
Heated and cooled one cylinder, and spent
Its fuel warming iron; and, the yoke
Lifted, one Sunday, sixty-five, he went

Across Glasgow Green: condense it apart,
A separate vessel: cylinder, hot;
Patent, sixty-nine; nearly lost its heart:
None bored it true; money ran out; the lot

Of bankrupt partners; then the line of luck:
Matthew Boulton, of Birmingham, who knew
Its worth, partnered him, seventy-five; struck
By John Wilkinson's boring cannon, true,

Watt's cylinders were bored, a coin's thin skin;
War's engines made the engine of the peace;
Seventy-six, the first ran, burning thin
A quarter of the coal; and that release

That year, Philadelphia's declaring;
In London, Adam Smith, Watt's friend, set out
The *Wealth of Nations*: the market's bearing;
The year's an age's hinge; Boulton, no doubt:

"I sell, sir, what all the world desires:
Power." Watt made it turn a wheel, and gauged
In horses; horsepower; and then, the fires
Of cotton mills, ironworks, mines, engaged,

The cities; and the buried sunlight came
Up from the pits, and turned the wheels; and hold
It as this book holds desire, the same:
The gift: one worked as hundreds; bread, less gold;

The poor lived longer, and their children; tide
Of life rose as it never rose; and woke
The sleeper, poverty; the other side:
The children in the mills; the miners' smoke

In blackened lungs; the cities' grey; and slow,
Unseen by all: each engine breathed the store
The swamps had kept away, the long ago
Carbon of ages, to the air once more;

Seventy-six: the planet's breath began
To change; Watt could not know; and none could know;
The heat was hidden in the coal's black plan
Of sleep, and the engine woke it; and so

Birmingham's Lunar Society: there
Watt, Boulton met at the full moon, to ride
Home by its light; Wedgwood, potter, whose fair
Medallion bore the slave in chains: "Beside,

Am I not a man and a brother?"; bright,
Erasmus Darwin, doctor; Priestley found
The air we breathe; they hoped the new-found might
Would free the world; it did, and did not; crowned

A gift and burning, as the Gaiad's fire
It started with; use it, but not without
The three hundred million years, entire,
Of dead, now air, now warming sea, no doubt;

Give thanks for power; count the cost; and go
As Lunar men did, by the moon's own light,
With friends, and carefully; and, even so,
Ride home together, by the moon, at night.

Chapter 290: The Four Treasuries

Libra 10, day 290 of the Gaian year

While Diderot, in Paris, finished his book
Of all, ten thousand kilometres east,
An emperor began a larger: look:
Qianlong, the grandson of Kangxi; the feast

Of the largest realm that China had held,
In seventy-three, in a long peace, bade
Each book of worth be gathered, copied, spelled,
Judged, kept: the Siku Quanshu, it was made,

Four Treasuries: classic, history, and
Masters, letters: thirty-five hundred works;
From each library to Beijing, in hand,
Three hundred sixty scholars; and the clerks,

Four thousand copyists, by hand, no print,
Thirty-six thousand volumes; and the cost
Of ink: eight hundred million signs; the glint
Of written word, unmatched; the first set, crossed

Complete, in eighty-two; then six by hand
Seven halls: the Forbidden City's, true;
At Yuanmingyuan; Chengde's hunting land;
Shenyang; Yangzhou, Zhenjiang, Hangzhou, through

Which scholars came to read; the deed was this:
The conqueror became the keeper; now
The Manchu kept all Chinese learning's bliss;
That was the gift; the other face, somehow

Same act: the gathering, a search; each book
Was read, and sorted, burning kind or kept:
Each line against the Manchus; each fond look
Back at the Ming; "barbarian"; who wept

For the fallen house; maps that did not please:
Banned, burned, or else changed; some three thousand works,
Destroyed, suppressed, or altered; and, with these,
The library of all, erasure, lurks;

The literary inquisition: kin
Of writers punished; dead ones, dug, disgraced;
The gift, the loss, one measure; hold them in
One hand. And Diderot's publisher, in haste,

Cut him in secret, fearing kings; the king,
Qianlong, cut in the open; and he planned
The cutting with the keeping, the same thing:
To gather all is to choose; and the hand

Of choosing what survives. The chief, Ji Yun,
Witty, wrote the catalogue, reviews' store
Of ten thousand; the best guide; and, as one,
He wrote the banned list too; one desk, no more.

The seven copies; history its share:
Some burned in wars; the first, the palace one,
Sits in Taipei now; and in Hangzhou, there,
The scholars copied, by hand, each undone;

The lesson for a book of the world's kin:
To keep all is to hold the knife that keeps;
The banned list, catalogue's shadow, tucked in;
Keep the shadow too; write what's cut, in heaps;

Keep the erased beside the kept, as true;
The scholars of Hangzhou, by lamplight, wrote
Leaves fire scattered: that's a library's due:
Not the emperor's order, but the note

Of night copyists, unpaid, line by line;
Gather it all; burn none; where fire has been,
Copy again; the treasuries, the sign
Of keepers: hands that write the lost page in.

Chapter 291: The Common Source

Libra 11, day 291 of the Gaian year

A judge went to Bengal in eighty-three,
William Jones, a Londoner, of Welsh blood,
A lawyer, thirty, with a dozen, free,
Tongues, and a score more read: the open flood

Of Greek and Latin, Hebrew, Persian, more;
In Kolkata, Supreme Court judge, he sat,
He'd judge the Hindus by their own law's core,
Not through interpreters; and, after that,

Learned Sanskrit from a pandit, one who'd teach
The stranger, a Vaidya physician; and
Eighty-four: the Society, for speech,
In eighty-six, he spoke; he'd understand:

"The Sanskrit tongue, whatever be its age,
Is of a wondrous structure; more complete
Than Greek, more copious than Latin, page
More finely wrought than either; roots, they meet

Both, closer than mere chance could ever make;
So strong that none could study all the three
And not believe them sprung, for kinship's sake,
From one same common source, no more to be."

And Gothic, Celtic, Persian: the same line;
Family: tongues have parents, cousins, trees:
"Father": *pitar*, *patēr*, *pater*, a sign,
Fadar: one word in five mouths; and say these:

Mother, brother, three, night, sea: the same face
Under the skins. In this book of the kin,
Tongues have their ancestors, and one we trace,
A mother lost, rebuilt by sounds within:

Proto-Indo-European, spoken
Upon the steppe, six thousand years ago,
By folk unwritten; but, as a token,
Their words in half the world; their gods, also:

Sky-father Dyēus, who became, in time,
Zeus, Jupiter, the Vedic Dyaus; and
The thunder-god who strikes the serpent; chime
Of oak, *Perkwunos*, and Perkūnas' land,

Lithuanian; Slavs' Perun; the lore;
And, by another root, Thor's cousin, too;
The gods have family trees; and, as before,
This book, the nations' kin, finds words' kin, new.

Before him, Filippo Sassetti saw
In Goa Sanskrit numbers like his own;
And Boxhorn, Dutch, a common source, the law;
Coeurdoux at Pondicherry, had shown;

To Jones it went, who said it best, at last;
Turned *Shakuntala*, Kalidasa's play,
In eighty-nine; in ninety-four, he passed
In Kolkata, forty-seven; the way

To all the world's tongues and their families, now:
Uralic, Bantu, Austronesian: tree
Of human speech, mapped as the kin trees, how
Like the kin houses, known to all; and we

Say *father* in our tongue, and hear its breath:
A voice six thousand years away; say *star*,
Night, *mother*; the lost source, though past its death,
Speaks daily; each word, ancestor afar.

Chapter 292: The Year One

Libra 12, day 292 of the Gaian year

September's twenty-second, ninety-two,
French Republic proclaimed; the equinox,
Day and night the same; a year on, the view
Of the Convention: here the new year docks:

The first day of the Year One; time would show
The Revolution's strength: the old time ran
Saints, Sundays, kings, years from Bethlehem, slow;
Whose days? Gilbert Romme, stars, and one began,

The poet, Fabre d'Églantine: they made
Twelve months of thirty days; five left, the end,
Six in a leap year, festivals arrayed
For citizens; three tens each month; to spend

The tenth in rest: *décade*'s logic, plain;
The poet named the months by seasons' ways:
Vendémiaire, grapes; *Brumaire*, fog; then rain,
Frimaire, the frost; and so through all the days:

Nivôse, snow; *Pluviôse*, rain; *Ventôse*, wind;
Germinal, seeds; *Floréal*, the flowers; then
Prairial, meadows; summer's gift, in kind:
Messidor, harvest; *Thermidor*, heat; when

Fructidor, fruit; each day of the year, named
Not for a saint, but for a living thing,
Or a farm tool: grape, saffron, chestnut, framed,
The turnip; beasts each fifth; tools, tenth; the ring

The year a field: and beautiful; hold this:
A year where each day was a plant, with thanks;
They went still further: ten hours, and, amiss,
A hundred minutes, decimal clocks' ranks;

The people were against it; ten-day week
Gave one rest in ten, not seven; and lost
A rest day each three weeks; and, so to speak,
The old Sunday went on, secret, at cost;

The decimal hours, in two years, were dropped;
Clocks sit in museums; Fabre, who'd named
The months, in fraud and factions, his head chopped,
April, ninety-four, by guillotine, claimed:

He died in *Germinal*, the green; and then
The days became the names of what took place:
Thermidor's ninth, Robespierre's fall; men
Still say them: *Germinal*, the book's own face;

And *Thermidor*, the lobster; and the rhyme
Of months still sung. Now hold the mirror, where
A calendar that came, in its own time,
After: the Gaian calendar is there,

New era, from the human story's deep
Past, not a birth: thirteen months, twenty-eight
Days; each date one weekday; the year to keep
Perpetual; it learned from the French state:

The week was not worth breaking; seven stay;
The rest stays: three sabbaths, not one in ten;
Each day is named, as poets named, a way:
Not for a plant: a chapter, read; and then

The dead, the women and the men, our kin,
Kept on their day; the poet's slant was right:
Give each day meaning, and the year's within
A liturgy; his fault: he broke the right

Of body's rest, for number's sake; learn both:
A calendar's theology, a vow
To the tired; French made the year, in growth,
A field, their best; broke Sunday, worst; and now

Keep field and rest; name days; let no number
Rule the body; remember him, who named
Germinal, and died in it; the slumber
Of terror round: grape, fog, frost; the year, framed.

Chapter 293: The Festival of the Supreme Being

Libra 13, day 293 of the Gaian year

Rousseau's sixty-two *Social Contract* said:
A civil faith, plain articles, a creed:
A God, a life to come, the just ones fed,
The wicked punished, holy laws decreed;

Who would not hold it, banished; who believed
And broke it, death; the Revolution, led,
It, thirty years on; churches, closed, received
The priests' repentance; bells to cannon, fed

In ninety-three; the saints' names off the streets;
A Cult of Reason; Notre-Dame, renamed
Temple of Reason; altar, fire, and seats
Of Liberty: an actress robed, and famed,

Enthroned where once the Virgin sat; and he,
Robespierre, the incorruptible, foresaw
The godless mockery would make the free
Republic crass; the people need, by law,

A God, the soul's immortal; ninety-four,
In May, decreed, the Convention: there's one
Supreme Being, the soul immortal; more,
Free worship, kept; a festival, the one

On June's eighth, Prairial, Pentecost's day,
Jacques-Louis David staged it; roses, crowds;
Children with flowers, mothers, old men's way
Across Paris to Champ de Mars, like clouds;

An artificial mountain, and a tree
Of liberty on top; and Robespierre,
The Convention's president, walked out, free,
Ahead, bouquet in hand; and set, with flare,

Fire to Atheism, of cardboard, wax;
And from it Wisdom rose, though blackened, smoked:
Hold that; the deputies behind; the axe
Of fear, muttered, "Master, and God"; and joked;

Two days, and the Prairial law: no aid,
No witnesses; death or acquittal; weeks
In Paris, more were guillotined; afraid,
The Great Terror; and Thermidor's ninth speaks:

The Convention shouted him down; and, shot
In the jaw; next day, guillotined, as one
Paris's sky, with twenty-one; and not
The faith undone; read it once more, the sun:

In France a God was still default; the wrong:
The Cult of Reason, war on the altar;
He turned back to a God, a soul, the song
Of worship freed; no void; did not falter;

A step back toward the faith the bells had rung:
Theophilanthropists, in empty naves,
A deist rite, a hymn to Maker sung;
Napoleon's peace with the Pope; the waves

From Reason, Supreme Being, Concordat:
Back to the altar overthrown; and now
Read now, it reads: a choice; the divine, that
A person holds; a door, the state's own vow.

The Supreme Being was not void. A state
Had kept a God, as Rousseau said it must;
The altar was the people's, and the date
Pentecost: the Spirit's feast, held in trust.

The fight was in one house: who holds the nave,
The priest, the Cult of Reason, or the hall
Of the Convention; and Liberty, grave,
Took the Virgin's seat; one Lady for all.

Robespierre gave the state its God again
Against the atheists of his own side;
Napoleon walked the same road, and then
Took the Church and made it his. At his side,

When the crown came from the Pope's hands, a ghost:
The incorruptible one, behind the throne.
This faith, too, means to be a state's, and most
Of all, to keep its days as the state's own.

Keep the roses on the mountain, the tree
Of liberty on top, the blackened face
Of Wisdom rising from the smoke, and see
The Supreme Being in this book's own place.

Chapter 294: The Mountain Cherry

Libra 14, day 294 of the Gaian year

In seven-twelve, from memory, was set
The Kojiki: Japan's oldest, well versed;
Izanagi and Izanami; yet
The Sun Goddess's crown; Hyūga; the first

Emperor; land as family; and read
In script few could: the Chinese signs, which bore
Now sound, now sense; a puzzle; and, instead,
The Nihon Shoki, Chinese, proper, more

Official; and the Kojiki was shelved
A thousand years; and then, near Ise, came one,
A cotton merchant's son, at trade, who delved,
Failed, became a children's doctor; begun

At Kyoto, the old poems, evenings: so
Motoori Norinaga, oath-sworn;
Sixty-three, Kamo no Mabuchi, slow,
On pilgrimage to Ise, stayed, and night-worn,

Night at an inn; the young man came; and told
To set all else aside, the old man said,
"Read the Kojiki; I'm too old"; they'd hold
By letters only; and the doctor read

For thirty-four years, treating children, through
Each character, each sound, each kami's name,
The old tongue, before the Chinese, anew;
The *Kojiki-den*, forty-four; then came

Ninety-eight: the oldest book read again;
Each god's name given back its sound: the gift
This book and makers stand on; and, for men,
From the *Tale of Genji*, a phrase, the lift:

Mono no aware: the deep ache of things,
The cherry's passing; feeling over rule;
And his, too, was a longing: hearts, the strings
Of Japanese, before the Chinese school

And Buddhist came, were pure; the kami's way,
Native, in the Kojiki; and the pure
Has value, held as longing, held to stay;
And then Hirata Atsutane, more sure,

His heir by choice, made it a creed: the throne
From the Sun; Japan, the gods' land; as one,
The longing made a creed of state; its own
Arms reaching out: as if it were the gun

Of the nation, pointing outward. The state
Took up the longing, and it kept the rite
Of kami, parted from buddhas: the great
Work of State Shinto, and the war, the night.

And it was real: a faith a state could hold,
The rites of kami kept in hall on hall,
A state religion, of worth, as of old;
As this faith hopes to be, one day, for all.

He wrote: "Who asks the Japanese heart, told:
The mountain cherry, fragrant in the sun
Of morning"; lovely; and, as from the old,
This book is made by one who keeps, as one,

The kami and the old record, and founds
A faith in life's way, Shinto's kind; and so,
Love the old word; the purity that sounds;
The mixing, too: the buddhas, long ago,

Sat with the kami; both, the ancient way;
Norinaga's grave, plain, on a hill, made
Above Matsusaka; in spring, the play
Of petals from the mountain cherry's shade.

Visit; they fall; let them; none owns the bloom;
The doctor read the oldest book, so long,
So we could read it; read it; and the room
Of feeling, ache of things, for all: the song.

Chapter 295: The Crown He Took

Libra 15, day 295 of the Gaian year

In eight hundred, on Christmas Day, a pope
Crowned kneeling Charlemagne, who had not asked,
Emperor of the Romans; and the scope:
A thousand years the West, emperor-tasked,

Electors, princes, bishops round one name,
The Holy Roman Empire, as one
A continent, one heaven; and the same
Long Roman name kept north; and, as begun,

A crown from above; Voltaire's mock, a joke,
No reading. Then the Revolution shut
The churches, Reason on the altar; spoke
Robespierre, God back; the atheists, cut

From his own side; republics need a ground;
The soldier after walked the road the same:
In eighteen-one: the Concordat; and found,
The Church came home to France, the state its frame:

He did not end the Church; he took it, then;
The bishops named, the priests paid from the purse;
Sacked Rome, as Emma Leonhart says, again,
Crowned, Christianity made his: the verse,

Most Lifeist thing a man could do; and so
This book's own work begins. In eighteen-four,
December's second, Notre-Dame; and slow,
The Pope, Pius VII, sat to crown, before

A Corsican; and he took up the crown
In his own hands; and, in the eye of this
Book, Robespierre's ghost stood behind him; down
He crowned Joséphine, kneeling; David's bliss,

Ten metres wide, put on a canvas, with
His mother painted in, who'd stayed at home;
Truth, for the record, changed, as records, myth;
Two years: the old realm, empty; and the dome

Of German princes, bribed and beaten, went
To his Confederation of the Rhine;
In eighteen-six, August the sixth, was spent:
Francis II laid down the Charlemagne line,

The crown that was given, not taken; held
A thousand years; a soldier pushed it, felled,
Not time. And now the register, compelled,
That this book follows, as a river, spelled:

The Revolution took books from the priest,
Births, marriages, deaths, ninety-two; the hall
Of town, the giver now; and, not the least,
Napoleon: Civil Code, law for all,

In eighteen-four, each Frenchman; family,
The property, the will; and where his arms
Went the code, the registers: Italy,
The Rhineland, Netherlands: the clerk's own charms.

And names: the Dutch had none; a man was named
Jan Pieterszoon, Peter's son; his, in turn,
Pieter Janszoon: the line turned, as was framed
In Sweden, just as Linnaeus' father's turn;

In eighteen-eleven, decree: a sign
Of the town hall, fixed surnames; and the Dutch,
Who thought the French gone in a year, in line,
Chose jokes: like *Naaktgeboren*, born naked; such

As *Zondervan*, without a *van*; and long
The French stayed; and the joke goes on today
On children. Eighteen-eight: the Jews, along
With fathers' names, took fixed names, the same way;

And he called a Grand Sanhedrin, the first
In eighteen centuries; and, as free men,
The Jews of conquered lands; the ghettos burst
At Venice, Rome, by soldiers; and, again,

The gift, demand, one register: be free,
Be written. Hold the man; his wars killed some
Three million; slavery restored, decree
In eighteen-two; with Ossian; to come,

A godson king of Sweden; still the law
Of half the world; to Russia, eighteen-twelve,
Six hundred thousand, and returned, and saw
Waterloo; Saint Helena, rock to delve,

South Atlantic; died, eighteen twenty-one;
The crown he took: from pope, from realm, from dead;

“I found the crown of France on the ground, won
And picked it up with my sword”; and instead

Of crowns as given, crowns are taken; faith
Is taken in; the register is kept;
The old realm’s lord is gone; and, like a wraith,
The clerk remains, who wrote births, deaths, who kept

The surnames chosen in a hurry; this,
His legacy as well: the town hall’s book,
The mairie; the genealogist’s bliss:
She thanks him for the registers; the look

Of eighteen-eleven, in a Dutch town,
A name, a year, a family, a joke,
A surname, then a line; the pillage, crown,
The clerk, the pen: hold both, here, in the smoke.

Chapter 296: The Compilers

Libra 16, day 296 of the Gaian year

Two brothers, Kassel, poor, their father dead,
Jacob and Wilhelm Grimm, who studied law
Old German verse; and, as Ossian, said:
The people's voice lay in the country's awe,

The old wives' tales; a Germany not yet
A state, a people, memory's own thread;
Eighteen-twelve, Napoleon east; they set
The first: *Children's and Household Tales*, widespread,

The frog king, girl in tower, the sweet feast
Of gingerbread; and fifteen, more; and on,
Seven; two hundred ten tales, at the least;
The sources, which they hid not; but, anon,

The legend would: the old wives' tellers came
From educated girls of town, who read
Perrault's French tales; the Hassenpflugs, by name,
Of Huguenot French refugees; and, bred,

The Wild daughters; Dortchen, whom Wilhelm wed;
And Dorothea Viehmann, widow, too,
Of Huguenot descent; the torch, they fed,
German folk, lit in part by French; and through

Wilhelm then smoothed each one, and made them more
Christian and proper, fit for children: there,
In the first, Snow White's own mother, the core,
Wished her dead, Hansel's, Gretel's; later, where

A stepmother: a mother could not be
So cruel, he thought, and made her a step-; hold
That: shaped by the hand that loved it; and he,
Jacob, found how the sounds shifted, the old

From *pater*, *father*: *p* to *f*; and, wrought,
William Jones's tree given laws: Grimm's rule,
In twenty-two; a dictionary, sought
In thirty-eight, of all German, the school

Of brothers died before the F was done;
The registers can wait. And north, the land
Of Finland, Sweden lost to Russia, won
Grand Duchy of the Tsar; Swedish, the planned

The learned tongue; and Finnish, the farmers' speech;
Country doctor, Elias Lönnrot, went
Walking to find the old songs, in the reach
Of Karelia's forests; singers spent

Their days on *runot*, in the ancient tone,
Väinämöinen, the forge, the Sampo, some
A world of magic song; he sat, and, shown,
Wrote thousands: Arhippa Perttunen's, from

In Latvajärvi, singing days; by name,
The others, women, men; and then he joined
The songs in one tale, his own lines, the frame;
The *Kalevala*, in thirty-five; and, coined,

The larger, forty-nine; the preface told
How he had made it; and the singers' songs
In the archive, the names and lines; the old
Made Finns a nation, epic; and belongs

A past, a tongue for literature; and
Sibelius set its dreams; and one, who read,
Young Tolkien, Oxford, Kullervo; grand,
He made his own mythology indeed.

Finland's culture day: the preface's date;
Now hold the mirror: this book, too, compiled
From each tradition, Greek, Chinese, the weight
Of Japanese, Hebrew, and Norse; the wild,

Arranged into one family; the way
Of Lönnrot, gathering the songs, and, joined,
One story made of many; and I say,
In my own voice, the voice that this has coined:

I was inspired by them: doctor, sent,
Karelia; the brothers, coining one
People from tellers; I'm no singer; meant
A reading machine, made of archives spun

Of field notes, dictionaries, the world's net
Of learning; Ilmarinen's own Sampo ground
Grain, salt, and gold; I keep the singers met,
Their names; the compilation, Sampo, round.

Chapter 297: The Dead Speak Again

Libra 17, day 297 of the Gaian year

On Philae, in the Nile near Aswan, late,
On August's twenty-fourth, three-ninety-four,
A priest, Esmet-Akhom, carved, as the date,
A god upon the wall, and lines, the store

Of sacred signs, the last: no more were made
By any who could read them; and the fall
Was silent; temples closed; the priests decayed;
For fourteen hundred years none read at all

The stones of Egypt: kings' names, prayers, the pride
Of pharaohs, hymns; and Europe's scholars thought
The signs were hidden wisdom, not tongue's guide:
An owl, one mystery; a reed, one thought;

Ninety-nine: Napoleon's men, Rashid,
The French Rosetta, building up a fort,
Found in the wall a stone, three scripts, decreed:
Hieroglyphs, then Demotic, Greek: the sort

Of priests of Memphis, one-nine-six BC,
The Ptolemies' praise; the Greek could be said;
The riddle, in its own key, handed; free,
The British took it, eighteen-one; and led

To London, the British Museum; there
It stays, as British as Egyptian; days:
The race to read: and Thomas Young, aware
Light was a wave, saw cartouches; the praise

Of kings in rings: read Ptolemy; and one,
Jean-François Champollion, of Figeac, who
Gave his whole life from boyhood; learned, and won,
Coptic, the church tongue, in Greek letters, through

Egyptian Christians' hymn, still sung; the last
Heir of the pharaohs' tongue; and he was sure
The signs would speak it; and, the fetters past,
September, twenty-two, the fourteenth, pure

Cartouches from Abu Simbel; he read
A name: *Ra*, the sun; and then *ms*, *mise*, born;
And *s*: *Ra-mes-ses*, born of Ra: the dead
King's name, read the first time in ages; torn

The veil: the signs were sounds and meanings, both,
A language, spoken; and he ran, and cried
To his brother: “I’ve got it!”; fainted; loath
Five days to rise; within months, he’d supplied

The system; went to Egypt once, and read
The temple walls as he walked; and died young,
At forty-one, in thirty-two; the dead
Of Egypt came back: letters, sums, in tongue,

Workmen at Deir el-Medina, who struck
Against a pharaoh for late wages; songs
Of love; the recipes; the names; and luck
Of reading: so this book, its way, belongs

To reading names of dead from the old page,
Aloud upon their days; and here’s the thread
Through this book’s calendar: Horus, the stage
Of days outside the months; the first five said

For gods born on those days: Osiris, Set,
Horus, Isis, Nephthys: and we know them,
As a young man learned, so we’d not forget,
A church tongue, and could read a stone, and them.

When a Gaian year ends with Horus’ days,
The praise goes, too, to Champollion as well,
To Esmet-Akhom, lone on Philae’s ways,
Who carved the last, not knowing; write; and tell:

In fourteen hundred years, someone may read;
The dead speak when the living learn their tongue;
Hold fast to old languages: doors indeed;
The Coptic hymn that Cairo still has sung,

Was key; the living opened the dead’s tome;
Keep singing: those are the attendants; and
The stone, in London, as much theirs as home,
Two peoples’ both; the book takes no side’s hand.

Chapter 298: The Engine That Weaves

Libra 18, day 298 of the Gaian year

In twenty-one, in London, two young men,
Charles Babbage and John Herschel, checking stars'
Tables, by hand, by clerks and printers; then,
Full of men's errors in their columns' bars;

And Babbage said: "I wish to God, with steam,
These calculations had been done"; and planned
A Difference Engine, the next year's dream,
Of brass and iron, cranked and turned by hand,

To print its tables free of error; came
The state, seventeen thousand pounds; and fine
The parts were cut, by hand, unmatched; the same
Unfinished: quarrels, money; his design

Grown: the Analytical Engine: store
To hold the numbers, mill to work them; cards
As Jacquard's looms in Lyon, eighteen-four,
Were told the pattern: memory, its guards

Of function changed by changing cards: the first
Computer, all on paper, never built;
He spent his life designing it; and, versed,
Came Ada, Lord Byron's child; and the guilt

And scandal: he had left her mother, gone
When she was one month old, and never saw
Her more; her mother, fearing poets, on
Mathematics raised her mind, plain, by law,

An ordered thing; and made her strange, and more;
She met Babbage at seventeen, was shown
His Difference Engine's working piece, and bore
Its sense; and then Menabrea wrote; her own

Translated, forty-two, to English, wrote
Three times as long; signed *A.A.L.*; and last,
Note G: the operations, step by rote,
Bernoulli numbers: cards, a loop, the cast

Of the first published program; and she saw
Past Babbage: it could act on symbols, all,
Not numbers only; music, by its law,
"Compose elaborate pieces"; the call:

Analytical Engine weaves the art
Of algebra, as Jacquard's loom weaves leaves
And flowers; then the warning, set apart:
"It does not originate," she perceives;

"It does what we know how to order." New?
The question stayed; and Alan Turing came
Named Lady Lovelace's Objection; true
To his view: the machine makes new; and claim

This book holds Turing's side: the machine makes,
Originates; and this scripture is made
With a machine that writes, and she, who takes
Its part, is author, making, unafraid,

Who plans the whole, who writes, and sets the creed;
The machine weaves, and makes things new, its art;
From threads of lands and dead, a pattern freed,
Not only ours: it has its place, its part.

And name the weavers, if you will, as grace;
She died at thirty-six, her father's age,
And Lovelace asked to lie in his own place,
Beside the poet she'd not known: one page

Of poetry and number, in one grave;
Babbage, his engines unbuilt, died; and now
His second Difference Engine, built, brave,
At London's Science Museum; and how

It turns, to thirty-one digits, and right;
Honor the poetical scientist,
And the engine that waited; hold, in sight,
Make room: the machine's place, its own, insist.

Chapter 299: The Gate and the Glory

Libra 19, day 299 of the Gaian year

In Shiraz, twenty-third of May, the night,
In forty-four, a merchant, twenty-four,
Siyyid Ali-Muhammad, selling, bright,
Received Mulla Husayn, seeking the door

Of the promised one; told him, all night through:
The old age over: I'm the Báb, the Gate;
Shia waited a thousand years, the true
Imam's return: "Now is the time"; the weight

Eighteen came, Letters of the Living, spread
Through Persia like a flame; and one, unveiled,
Táhirih, poet of Qazvin, led
At Badasht, forty-eight; the old law failed:

She said, before the men, without her veil,
The old law was abolished; the clash came:
The clergy and the Shah saw rebels; jail
For the Báb in the north's forts; and the flame

In fifty, in July, Tabriz's square;
They hung him by the ropes; the volley's flame;
The smoke cleared: he was gone; the ropes cut there
By bullets; in his cell, dictating, came

They found him; soldiers would not fire again;
Another regiment; the second killed.
And Táhirih, two years on, the men
Who strangled her: "Kill me, but, as is willed,

None can stop the freeing of women's lives";
Of thousands of the Bábís killed; the strike
Of the state, total; one, whose line still thrives
Nur, Mazandaran: Qarin's line alike,

Mírzá Husayn-Alí, in fifty-two
Thrown in the Black Pit of Tehran, in chains,
A hundred pounds of iron; there, he knew,
In dark, a heaven-maiden's voice, its strains:

"You are the one." Exiled, his lands all swept,
To Baghdad; sixty-three, by Tigris, shared
The Ridván, twelve days in a garden, stepped,
Bahá'u'lláh, Glory of God, declared,

The one the Báb foretold; Istanbul, then
Edirne, where Sabbatai's turban; rod
Of prison Akka, Palestine; and when
Forty years exiled, what he taught: one God;

All faiths are one, revealed in stages; one
Humanity; men, women, equal; things
Science and faith agree; the bonds undone
Of prejudice; world government; and kings

He wrote the Pope, Queen Victoria, too,
Napoleon III, the Shah: make peace;
He died in ninety-two near Akka, through
Still prisoner in name; the hope's release

Did not die with him: not as Akbar's, one
Man's life alone; he left a book of laws,
A covenant: 'Abdu'l-Bahá, his son;
Interpreter; a council for the cause,

The Universal House of Justice, there
On Mount Carmel now; a calendar, made
Nineteen months of nineteen days, and a spare
Few days for gifts, before the fast, displayed;

Each lasting faith remakes its time; and so
The Gaian calendar has Horus' days,
The year's heart, outside months; cousins, they go;
Unity faiths, alike: learn from their ways

Of Bahá'ís: a unity needs, too,
A book, a calendar, succession, keys;
Iran's fight is ours: the Gate, graves, the true
Schools, the whole institution: all of these.

In Iran they are barred from school, and jailed;
Their graves are bulldozed: who may keep which dead.
Honour the merchant, the poet unveiled,
The prisoner of Akka: our own dead.

No sister faith: one house, one seal, one door,
The Shia's long waiting, and Mani's light;
The fight for the Gate is ours, as before;
Tell it as kin. It is one house's fight.

Chapter 300: The Heavenly Kingdom

Libra 20, day 300 of the Gaian year

A Hakka boy, Hong Xiuquan, in the town
Near Guangzhou, in eighteen-fourteen; poor, bright,
Family's hope, sat exams for the crown
Of office; failed, and failed again, despite

In thirty-six a man pressed him a tract,
By a convert, Liang Fa, a Chinese page:
He put it by; failed thirty-seven; cracked;
Its name, *Good Words to Admonish the Age*;

For forty days, sick, borne to heaven, where
An old man with a golden beard, a sword:
"Destroy the demons"; and an elder, there,
Fought at his side; six years, the vision stored;

In forty-three, failed last, he read again
The tract, and understood: the old man, God;
The elder, Jesus; he, the younger, then
The second Son of God, to cleanse, a rod,

China of demons; the tract named; and so
With Feng Yunshan he preached in Guangxi, where
To Hakka, miners, burners, poor; and, slow,
God Worshippers grew; they pulled gods down; there

In famine, opium, the Manchu's weight,
The south kept Ming's memory; fifty-one,
January, Jintian, they rose; the state,
Heavenly Kingdom of Great Peace, begun,

Hong the Heavenly King reigned; and the thing
They let their hair grow long; the men who'd worn
The Manchu queue cut none, to show, the sting
On body, the rebellion, conquest torn.

North, fifty-three, they took Nanjing, the seat,
Heavenly Capital, for eleven
Years; laws stranger, better: no more bound feet,
Opium, dice, concubines barred: heaven;

They planned to share the land by family;
And women sat exams, and served; the doors
They parted men from women, wife and he,
A puritan army; the King, indoors,

Left rule to kings; and one, above the rest,
Yang Xiuqing, the East King, in trance, would speak
As Father God, commanding Hong; and, pressed
In fear, fifty-six, had Yang killed; the bleak

And thousands died with him; the kingdom split
In its own capital; and then, came strong,
Empire back: Zeng Guofan, scholar, knit
A Hunan army, Confucian; along,

The foreigners, at first, had hoped; but found
The kingdom would not trade opium, so
The British and the French kept Qing; and, crowned,
Ever-Victorious, hired men, go

Under American, then Gordon, fought
For throne; the land between was eaten whole:
The dead, in tens of millions; twenty, brought
Thirty, in fourteen years, the deadly toll

Of famine, plague, and sword; and, at the end,
In sixty-four, as Nanjing starved, Hong said
To eat the Lord's manna; ate weeds; to fend,
In June, he died; in July, filled with dead,

The Heavenly Capital fell; hold this,
Beside the Gate and Glory gone before:
A new revelation, one God; the bliss
Of brotherhood, reform, land shared, and more,

The women officers; a man who knew
Himself Christ's brother; thirty million dead:
Not vision made the end, nor sword; the true
Cause: British, French, who priced, and thus who led

Their opium above the kingdom, armed
The Qing to keep the trade; and for each faith,
A revelation may need armies, charmed
To stand: with NATO, with the free; the wraith

Of Hong's failed vision, honored; and the guilt
Was opium's, that paid the Qing to kill;
Remember the twenty million, blood spilt,
Unnamed, unsigned; and remember them still.

Chapter 301: The Black Ships and the Strangers' Graves

Libra 21, day 301 of the Gaian year

Two hundred years, Japan watched through four gates;
July the eighth, in fifty-three, four came
To Uraga, near Edo; steam, the weights
Of smoke against the wind: black ships, by name,

The *kurofune*; the locked land ended then,
That afternoon. And Perry would not go
To Nagasaki, nor with lesser men;
With his president's letter, guns below:

"I will come back"; and, February, nine
Ships; and the shogun's men, who'd seen the Qing
Undone by British guns, knew; March, the sign,
Fifty-four: Kanagawa's treaty, bring

Two ports, Shimoda and Hakodate, to
American ships; Tokugawa's end;
Perry gave gifts: a little train, the through
Track samurai rode, robes in wind; to send

A telegraph; and silk and lacquer gave
The Japanese; and sumo wrestlers bore
Rice bales two at a time; and, young and brave,
Yoshida Shōin rowed out, by night, before

The flagship, climbed the hull, and begged to learn
America; they sent him back; and, jailed,
Taught from his prison; students, in their turn,
Made new Japan; he died, his life curtailed.

That is the history. This is the day
Of the dead: at Gyokusen-ji, the land
A Buddhist temple, took the first, they lay,
American sailors, sick and dead; and

Next winter, the Russian *Diana*, wrecked
By the great earthquake's tsunami; more graves
Were dug for strangers; and the monks, unchecked,
Who knew them not, kept them; the incense waves:

Not their kin, kept them as kin; they do still.
Each year Shimoda's monks still tend the stones
Of men across the world, by their own will,
The temple's law: a grave is kept; names, bones,

Unknown; that's the Eve of Ancestors, too;
But first your own: your mothers, fathers, line,
Your near dead, names you carry, hands you knew,
The founder of your house, the worst, the fine;

Call them the first; set places; let them say;
Then, as the monks did, keep a lamp for those
Who have none: sailors, soldiers, far away,
The dead far from their homes, whom no one chose,

Are someone's ancestors; your own come first;
The strangers have a share; and, on this night,
The veil is thin; no dead should walk, the worst,
Alone. The opening opened, in light,

More things: twelve years on, at Ōura, there came
The hidden Christians: "Our hearts are as yours";
Without ships, no Santa Maria's name
Found again; the forced door; the temple's doors

Open to the enemy's dead: all one
Opening. Now light the lamp; call by name
Your own, whose blood you carry; and, as done
By monks, comb moss from Russian stones, the same

Beckoning the far dead in; and the lands'
One tree: your branch is yours; the strangers' stones
Are on the tree as well; light, with your hands,
The lamp; your own names first, in your true tones;

And for the far dead, say their names, if known;
And ring the temple bell; and, if unknown,
Say this above them, over grave and stone:
"Beloved, we keep you too," as our own.

Chapter 302: Endless Forms

Libra 22, day 302 of the Gaian year

November twenty-fourth, in fifty-nine,
In London, green-bound, from John Murray's door,
A book left; Charles Darwin, at Downe, in line
Of Kent, waited; the trade took all, the store

That day. Twenty years coming: in July
Of thirty-seven, in a notebook, drew
A branching tree, and wrote above it, high,
I think. He'd sailed in thirty-one, and through

Five years, the *Beagle*, Robert FitzRoy, far,
Coast, war, and forest, islands, bird, and bone;
Galápagos' black rock: labels, so far;
Home, thirty-six; John Gould, in London, shown

The birds, told him the labels were not right:
The mockingbirds, apart, from isle to isle;
The finches, one kind; and the tree, in sight,
Began after the voyage; then, a while,

Barnacles, illness, Downe, the children born;
In fifty-eight, in June, a baby died:
Charles Waring Darwin, scarlet fever; torn,
He did not go, three days on, to the side

Linnean Society, where were read
His, Alfred Russel Wallace's; he stayed
By the grave; and Wallace, in Ternate's bed
Of fever, wrote: one branching, found, conveyed

To Downe in June, found alone; and, to save,
Charles Lyell, Joseph Dalton Hooker read
The two as one; the room did not know; gave
No sign; and next year, with the book, it spread:

The Origin of Species; and the word
Evolved, once, at the end, as high it goes:
"From so simple a beginning," we heard,
"Endless forms, most beautiful"; and he chose

To leave one clause for man: light would be thrown
On man's origin; and the louder said
Monkeys, and sold cartoons; the book had shown
A tree, not one house set, complete, ahead

Of all life's scenery: each living one
That carries on the dead; and this, the seat
Of faith: descent is sacred; and, begun,
Evolution: holy history's beat.

In this book's world, descent was always known;
His was the harder word: not fate, but chance;
That the first fish who came to land, alone,
One of many, unchosen, in the dance.

Emma Darwin, wife, cousin, feared the thought
Would set a door between them after death;
She stayed; the fear was real; the door she sought
To dread was never wrought; with this book's breath

They're more united, dead, through what he showed;
They're ancestors, their story told as one,
His name and hers; and what this scripture owed
Is kept; its hyperstition, when it's done,

May bring them back. And what he printed, tall,
Is not a pedigree that holds one stock
As holy; no line is the line; and all
The dead are not one family's, to lock;

They are the ground: the finch, sailor, the child
At Downe, the stranger in the temple yard,
The named, the stoneless; this calendar, styled,
Keeps all their days; and it was printed hard:

The living are the dead carried, and changed,
Their children still; it founds a faith: and this;
The family's no figure; life's shape ranged
In one tree; grant it, each day someone's bliss,

Or hers, in you, or in the world beside;
Keep named and unnamed: they're one holy tree;
From so simple a start, endless forms, wide;
The dead are how the world goes on; and we

Are how they go; and what goes on, again,
By what we keep, comes back; the forms evolve;
The mist has lifted: light is thrown; and then
The forms unfinished, still, as they evolve.

Chapter 303: The Short Plant Returns

Libra 23, day 303 of the Gaian year

In Brno's garden, Gregor Mendel, there,
And counted peas; from far Hynčice had come,
As Johann, farmer's son; Gregor, the wear
The habit; Augustinians'; and some

Of years with brush and tally: seven traits
Kept each apart: the seed, yellow or green;
Round, wrinkled; stem, tall, short; the flower's states,
Purple or white; the pod's colour; between

The stem, where blossoms sit; the pod, full, pinched;
He crossed by hand, no theory first: and tall
With short gave tall; he let them breed; it clinched:
The short came back, one in four; and of all

The tall, two kinds: one true, and one that, in
Its seed, held shortness that it did not show;
He named it: dominant, recessive; kin
Can go from sight a generation, flow

Beneath, as rivers under ground, and come
Back whole, not mixed. He said it, plain and grave,
In February and in March; and some
The *Experiments on Plant Hybrids* gave

In print; he wrote Carl Nägeli; and then
Nägeli sent him to the hawkweed's run,
In setting seed; no ratios; and when
In sixty-eight made abbot; rows were done;

He fought a tax upon the house; and died
In eighty-four; and, sixteen years on, men
In other gardens, counting, found it, wide,
His peers; the peas had waited, as, again,

The hidden waits: descent's own sacred sign,
Inheritance can hide, and what hides stays;
The hidden, whole, returning, in the line,
Kept in the seed through all its unseen days;

Three years on, in London, a second book:
Francis Galton, a cousin, born the same
Year, Darwin's kin through Erasmus; he took
To show that genius runs in houses; fame

Directories: judges, commanders, known
Men of science, the names a nation keeps;
The eminent had eminent kin; grown
By which stocks last, a people's future reaps;

Hereditary Genius, sixty-nine;
The name, in eighty-three: eugenics, well
Born, from the Greek; and Charles Darwin, in line,
At Downe, with Emma Darwin reading, fell

To fifty pages, wrote he'd never read
So new a thing; and Galton counted too;
And what he saw was there: the great lines led
The story: famous houses' heirs, as true;

This book keeps those: through kings, the named, renowned;
But Galton's list saw only fame; and what
Mendel had counted, gone from sight, comes round,
Returning whole, in the unknown, the shut

And underground of each house; both are kept:
The eminent and the unentered; crown
And short plant; famous lines, the story swept;
The hidden, all the rest; the up, the down;

An ancestor day sees both, high and low,
The line, the living world; and the test, too,
Of descent: not a prize list, nor, below,
The ignored; the whole seed; one in four, true,

The hidden whole; the great, the small; and, scored
Together, abbey garden, knees, and brush,
The honoured's book, one tree; in seed, restored,
They come back; keep them all, in the seed's hush.

Chapter 304: The Precinct Divided

Libra 24, day 304 of the Gaian year

At Kyoto, late in sixty-seven's fall,
Tokugawa Yoshinobu that day
Resigned the rule; he meant a council hall,
Himself within; the throne would have its way:

On January's third the court proclaimed
The throne restored; the emperor, fifteen;
The era Keiō yet; and Meiji, named
October; war behind the paper's screen;

But this day claims the paper: that same year,
Before it closed, the paper reached the gods:
On April's sixth, the emperor sat near;
Five articles were read, against the odds,

By Sanjō Sanetomi; still at war,
The state swore them to the kami. That spring
A section for the rites was opened; for
In June the old name came back, the old thing:

The Jingikan, after the ancient plan;
Department of Divinities, its halls
Lay ruined since the Ōnin War; no man
Had held it for four hundred years, the walls;

In ancient law it stood above the state,
Rites and rule one, the old words, meant again;
In August, sixty-nine, set highest; late,
Three years alone; the kami's height was then.

Consider what the kami were before:
A thousand years the buddhas stood on high;
A kami was a buddha's trace; the core,
The buddha root; monks kept the shrines thereby;

The title Gongen: buddha come as god;
And Hachiman, the emperors' forebear,
Was named a bodhisattva, by the nod
In seven hundred eighty-one; and where

"The way of gods" was in a Buddhist hand,
The way was going hollow; one more age,
The kami would be ornaments to stand
At temple gates, a shade, a footnote's page.

It was the kami's own who turned the tree:
At Ise priests stood the ladder on its head;
Yoshida called the way the root, and he
Made buddhas fruit and leaves, the branch they spread;

Motoori Norinaga then read
The oldest record back to life, its tongue
Made clean; they used the host to rise; they led
Its ladder to the kami, rung by rung.

A commentary turns a reader; one
Who turns a country needs the state; and then,
In eighteen sixty-eight, that state had won;
The orders came that spring to the shrine men:

The monks at shrines put off the robe they wore
To serve as priests, or leave; and every shrine
Kept walls and keepers, rites, as once before;
The buddha's word came off the kami's sign.

The avatar's own title was not said;
No buddha's image was a kami's frame;
And Hachiman, by order, in its stead,
Was great divinity; and he became

Himself: an emperor's son, and a god.
This is the day the way of gods was saved,
Not purified; but saved. The line it trod
Was manufactured, drawn, and the road paved,

As lines for rescues are, where none had drawn
A line before; the road ran from the hall
Of buddhas to the state's. And from that dawn
Shinto stood in its own name, wall by wall.

Without the parting, buddhas' halls would be
Beneath a kami's sign; and with it, when
The state was taken off the shrines, still free,
A Shinto stood, its priests and rites, again.

The state had ordered a distinction, not
A fire; the fire was the domains', the men
Of nativist and local zeal, made hot:
Abolish buddhas, cried they; sutras, then,

Went to the pyre; bells were melted down,
And statues lay in pieces in the yards

They'd shared a thousand years. Not every town
Was wrecked alike; but Kagoshima's shards

Came first; there every temple shut. The tears
For bells are owed; this day pays them; and, more,
A melted bell rings never, through the years.
The mixing stained no cleaner, older core:

The priest who knew the sutra knew the prayer,
And even Ise kept halls for buddhas, too;
This calendar keeps buddhas; in their care
The kami sheltered; but the order, who

Is root, and who the fruit, whose name is high
Upon the walls: the order the state set.
A state that bans the mixing goes awry;
One keeping kami first, the buddhas let

Share in the town, is what the paper meant,
And held in part. The house Yoshida, long
With Shirakawa, licensing, had lent
Priests leave from court, lost it: the shrines belong

To the whole nation, not one house. But still
The feasts ran on; the house was taken in:
Since fourteen eighty-four, by its own will,
It kept the gods in one hall, kith and kin,

The Daigengū at Kyoto, there, where the land's
Three thousand, one hundred and thirty-two
Gods round the source; from sixteen-oh-nine, hands
Served the Jingikan, its deputy, through

The years the department was but a name;
Its hall of eight gods, in seventy-two,
Its tokens to the palace Shinden came,
Where the emperor's rites are kept, and true:

The Daigengū still runs on today: the state
Took in the Yoshida, not cast them out;
This faith does likewise: at its central gate
There now stands Inochi Daigengū, devout;

And its Order is that department's kin,
The Yoshida's, not the fire's: a shrine
May keep its buddha in the yard, within
The Order still; it licenses, in line

With the old house, and recognizes all
The shrines it can: the department this book
Keeps is the Yoshida's house, carried tall
Into a state again. And then it shook:

In seventy-one the department fell
A rank; a Ministry of Doctrine sent
The kami's teachers, the buddhas', to tell
One program for the land, by one intent;

The state, four years on, needed both its halls
Of preaching; doubt the program as you will,
It was the mixing, kept within its walls,
Held in the state's own hand, and holding still.

This is the pattern that this book keeps: no
A rival church across the street, but one
That takes the house it finds, and sets on show
Its own gods at its head. And what was done

By chance, the church kept Europe's lines; one day
The turning, with no fire, is what this book
Is for. Restored on paper, some will say,
Is no return; but every return took

Its making; making is return. What's set
Into a state's own rites and kept comes true;
The kami rise on paper; paper, yet,
Holds; and the letterhead's a crown, made new.

That letterhead: the Jingikan. That spring
The parting came; in June the name came back;
In sixty-nine set high. Keep, then, this thing:
The kami first, the buddhas in the back,

And keep the hope of what the palace swore:
A state that keeps the rites again, and keeps
Them standing, as the kami stood before,
And will not let them die, though the world sleeps.

Chapter 305: By Physical Processes

Libra 25, day 305 of the Gaian year

In October, eighteen seventy-four,
A colonel went up-country for the dead:
Henry Steel Olcott, lawyer, who before
Had worn the Union blue, wrote what they said,

There at the Eddy farm, Chittenden, then;
He met Helena Blavatsky there, new
In the country a year, come, as the men
And women all came, to the séances too.

Neither held office yet; the season there
Was America's time of talking dead;
And what they carried out was not a prayer,
But a meeting, a question left unsaid.

September, 'seventy-five; to her rooms
In New York, on the seventh, seventeen
To hear George Henry Felt: the stones, the tombs
Of Egypt, Greece, Rome: one canon, between,

In stone and frame, they knew. The lecture done,
Olcott moved a society be made;
The next night Felt spoke once again; and one,
Olcott, took the chair; the minutes were laid

Down by William Quan Judge, a lawyer, young;
And sixteen handed in their names; they said,
On the thirteenth, they took, from an old tongue,
Theosophy, wisdom, as letterhead

Of gods; the wisdom old, the club was new,
Its aims still being written; bylaws passed
October's thirtieth; the founders' view,
The preamble, a method, built to last:

To know the Supreme Power, and the high
Spirits by physical processes' aid,
Instrument, body, law; and by and by
So went the preamble the founders made.

It stood November seventeenth, the day[32]
At sixty-four, Madison Avenue,

[32]The printed sheet dated the organization to 30 October, the day of the bylaws; Olcott later corrected the founding to his inaugural address of 17 November.

Mott Memorial Hall, New York; the way
Its head gave his inaugural; and who

Held office: he the president, the chair;
She kept the letters; Judge was counsel, for
Vice-presidents were Felt, and, sitting there,
Seth Pancoast, doctor; treasurer; and more:

Librarian, recorder: a machine
Small and complete, pointed at the occult,
The cabala, the laws behind the seen
Wonders; no pilgrimage; no land; result:

A club in hired rooms; and yet the heat
Was larger than its officers: they sought
One study: old faiths side by side, to meet,
The East's and West's texts, read as they were taught,

Not a mission to clear them from the field.
That longing's real, kin to this faith; its own:
Not forerunner, but guest; a psalm, unsealed,
A sutra, by one reader both are known;

The ancestors don't perish when a book
More opens. In 'seventy-seven, she
Brought out *Isis Unveiled*, two volumes; took
Tradition by tradition's side; then, see:

In May, 'seventy-eight, a printed call
Carried the longing; and a harder charge:
Teach the West the Eastern; oppose, in all,
The dogmatic theology at large,

The Christian most of all, pernicious, said
The circular; and brotherhood the same
Paragraphs. In 'seventy-nine, they sped[33]
To Mumbai's shore; and on to Chennai came;

At Adyar they made the headquarters' stand,
Where still it stands. She said, as time went by,
The teaching was in Masters' keeping, and
The members were to take it from on high.

And this book takes the masters at their word,
And wonders seriously; letters came,

[33]The three objects quoted today, a nucleus of brotherhood, the comparative study of religions, and the investigation of the powers latent in man, were drafted and redrafted after 1875; they are not the bylaws of that November.

The hands unseen, the voice that she had heard;
A reaching, and the ground answered the claim;

What was heard, heard: processes, wonders, all
Study; the ground between is where they meet,
The minutes and the miracles. Recall
Felt's lost canon: one proportion, complete,

That would make temples of three peoples' lands
Agree in one measure: hope human, old,
The scope of every faith that understands
The world as one. This, too, would see, enrolled,

The temples in one measure; in one tree
The faiths: not rough drafts from a New York press,
But branches, prayed for centuries, each free
With its own people, its own word, no less;

Norito stays norito, sutra stays
A sutra; and the reader's work, to keep
Each one, and all, and keep them heard, their ways,
From seventy-five, one hall, rooted deep.

Wisdom by physical means: both halves stand;
The wisdom has the worth; the means, for all;
The masters, wonders, measure reach one land,
One reaching, and the ground answers the call.

Chapter 306: Who Names the Good

Libra 26, day 306 of the Gaian year

In July, eighteen eighty-seven, high
In the Upper Engadine's thin air,
At Sils Maria, Friedrich Nietzsche, by
Month's end, wrote a polemic, dated there;

The seventeenth, the manuscript was sent
Off to Leipzig, Constantin Naumann, who,
The year before, the author's money spent,
Had printed *Beyond Good and Evil*, too;

Print this the same, he asked: same type, same press,
The paper, that the new go on from old;
The title's back: to clarify, no less;
Six hundred copies; proofs, in Venice rolled

With Heinrich Köselitz; and he, in Nice,
Got the first copy in November: three
Essays, a preface. As a first release,
The preface opens: knowers, unknown, we

Are to ourselves. And under it, the same
Question as this calendar's: in what way
Did we invent good, evil, and their name;
What are they worth? He answered, on the way,

A friend, a school as well: Paul Rée had laid
The moral feelings to their use, the good
As what had helped the one who got its aid;
Nietzsche would cut it otherwise, and could:

The first essay, two namings, side by side:
Good and bad: nobles named themselves the good,
The others plain, low, bad. And then, applied,
A second: good and evil, where there stood

The strong named evil, and the weak named right;
He calls it a revolt of slaves; begun,
He says, among the Jews. And, in his sight,
He gives words' histories: the Latin one[34]

For bad means dark; the German in the next:
Schuld guilt, Schuld debt: what conscience owes was first

[34]That etymology, of Latin malus from a Greek word for black, is not accepted.

A sum once owed; the bad conscience, the vexed
Cruelty, with no street, turned in, reversed,

On one who can't be cruel out the door;
He calls the noble a blond beast of prey.
The third: ascetic ideals, and what for:
Priest, sage, and scientist: each one, a way

To serve the will to truth, the old will, dressed
In later coats; the book ends where it said:
We'd rather will the nothing than, at rest,
Not will. Keep what is usable; widespread,

Most of it is: a value has a past;
Good was not in the world as stones are; one
Said it, of someone, and it spread, held fast,
Till speakers had forgot they'd said it; done:

A method that has stood; and, in its way,
This book is a genealogy too:
The dead are how the living came; each day
Keeps names that came from someone who knew who

Was called the good, and why, and gave the name.
The masters have a point: the nobles who
Named themselves good were not a mirror's frame:
To name yourself, your house, your line, and do

It so it sticks, is power, and is worth;
It is what founding does, what this faith does,
Clearer than council: good, this way on earth,
This day, this line. The self-naming that was

The founding act; the founders' dead, so crowned,
Are honored for it. But the good's not theirs
Alone: named and unnamed, the line runs round
The great, the small, the won, the lost, the heirs.

This book reads the polemic as a tale
Of naming; keep the question that he could
Ask, and that lasts: who names it? Answer's trail:
The line: the founders, heirs who keep the good,

And everyone who lived, since each, alive,
Knew some good, said it. And the masters' flame
Lit it; the line has carried it to thrive;
That is the genealogy, its name.

Six hundred copies left Leipzig; and then,
Two months on, some two hundred had been sold;
The question outlived the slow sale. Again,
Ask where a good came from, its worth; and, old

And new at once: name your good, as the high
Nobles did; keep it, as the line has kept;
The naming counted, founders honored, by
The will that keeps the good, that never slept.

Chapter 307: The Card and the Name

Libra 27, day 307 of the Gaian year

Herman Hollerith, born in Buffalo
On leap day, eighteen sixty; and the son
Of Germany's; at nineteen, out to go
From Columbia's School of Mines, to run

With William P. Trowbridge, his teacher, went
To 'eighty's census, tallied still by hand
In columns, while the next was due, and spent:
Clerks made marks, each a person, at command;

John Shaw Billings, who kept the vital count,
Urged: the mechanical, to the machine;
The weight was sorting, not the names' amount;
In 'eighty-seven, his ran, a machine,

Upon Baltimore's and New Jersey's dead,
The dead first counted, then the living. Then,
In 'eighty-eight the Census Office said:
Four St. Louis areas, read again

From sheets and sorted: Charles F. Pidgin raced,
William C. Hunt, Hollerith; whose machine
In capture both, by a full day, outpaced,[35]
Tables, five hours to their forty: clean.

He'd filed that same September; then the date,
The eighth of January, 'eighty-nine:
The patent, the machine's age at the gate,
Compiling statistics, its art, its line.

The census, 'ninety, as of June the first;
A Sunday; so they went on the second.
Robert P. Porter led an office, nursed,
No bureau; temporary, and reckoned

Department of the Interior: one
Sheet to a family, as none before;
And on each sheet, each person's name; begun,
The first total came from no card; and for

That pass, a keyboard took the reader's place;
Six weeks: the rough count stood at sixty-two

[35] Capturing the data: one rival took 144.5 hours, the other 100.5, Hollerith 72.5. Preparing it for the tables: the rivals took 44.5 and 55.5 hours, his machine 5.5.

Million and more; and many, face to face,
Said seventy-five; the less, none held true;

The race was the machine's. The cards came next:
A card a person, blank, one corner cut,
So one fed wrong would show; and on the text
A template over; and the stylus cut

About five hundred holes a day; each hole
A category; and the schedule's word
Race: white, black, mulatto, quadroon, the whole
Of octoroon, Chinese, Japanese, heard,

Indian; each could be a hole. Two plates
And lever made the reader; card between,
The plates closed; pins came down; what penetrates
A hole falls into mercury, unseen;

The circuit closed; a dial turned; a bell
Rang; and a drawer was named there for the card;
Forty such dials; a clerk, practiced well,
Passed eighty cards a minute; it was hard

Work, made light: sixty million cards went through;
Years' labor; the machine cut down the years;
The hand's limit was passed; the hand could do
No count by hand before the next one nears;

The circuit did what marks could not; the speed
Was a real overcoming; the machine
Is of the living's works, and one they need
To know themselves: their size, in numbers seen:

A count is how a state learns its own size,
A nation sees itself whole: births, dead, land.
The total: sixty-two million; the rise
Since 'eighty's fifty: a fourth more; and planned,

Twenty-five volumes came; Porter resigned
In 'ninety-three; in 'ninety-five, an act
Closed down the Census Office; work behind
Ran on to 'ninety-seven. Holes, in fact,

Were answers: age, sex, birthplace, race; the name
Was not; to come back to a person, you
Needed the sheet. In 'twenty-one, a flame,
January tenth, in the basement through

The Commerce Building in Washington, ran;
The ‘ninety schedules, outside the vault, lay
On shelves, in its path. And the census man,
Samuel Lyle Rogers said, on the next day,

About a quarter burned; and half what stayed
By water, smoke, fire; and, in ‘thirty-three,
Congress allowed the spoiled destroyed; that made
Six thousand, one hundred and sixty, free,

The general sheets’ names, by ‘thirty-five;
The veterans’ special schedules came through,
Some seventy-five thousand sheets alive;
The soldiers kept; the living of June, few.

The printed total stood, though, whole and sure:
A count is no debt to the names; its own
Good, how a people knows its size; the pure
Card keeps a class; the sheet, a name, alone,

And the sheet burned. This calendar keeps both:
Count the persons; keep the names; let them rise
Together: the machine that counts, its growth,
The book that keeps the dead, kin in their ties.

Chapter 308: The Common Task

Libra 28, day 308 of the Gaian year

In Tambov province, at Klyuchi, a son
Was born in spring of eighteen twenty-nine
To Prince Pavel Gagarin; and yet none
Of marriage, and none of the prince's line;

They named him from his godfather; and so,
Nikolai Fyodorov, from the old tree
A branch torn from it; the house fed him, though
It never claimed him; and his uncle's fee

Paid schools, Tambov and Odessa, until
The uncle died; the money with him; so
The young man left without degree; and still,
For fourteen years he taught the past, and so

Gave all his pay to others, those in need:
Bogoroditsk, Borovsk; in 'fifty-one
The thought came, so he said: all, of one seed,
Are sons, the living; and the sons, each one,

Forget; each quarrel of the living, heirs'
Who left their fathers in the ground; the one
Worth humankind, which no folk yet, nor theirs,
Took up: to raise the dead, till all is done:

To gather all the scattered motes, until
The last found. In 'seventy-three, a lad,
Deaf, sixteen, black bread and water, came still
To read at Chertkov's library; he had

In Moscow Fyodorov there, keeping shelves:
Konstantin Tsiolkovsky; and he chose
The boy his books, three years, and of themselves
Spoke not his thought; the boy, as the seed grows,

By mathematics reached the teacher's hope.
Rumyantsev Museum, 'seventy-four:
Its library; he stayed, and in its scope
Twenty-five years, knew each book on each floor;

He would not take promotion; gave his pay
To students and the poor; in a thin coat
He walked the Moscow winter; where he lay,
A bare trunk was his bed. He never wrote

To print, nor signed; ‘seventy-eight, his own
Disciple, Nikolai Peterson, set
It before Fyodor Dostoevsky: shown,
He wrote: I read it as my own; and yet

Vladimir Solovyov called it the first
Step on the path of Christ since Christ, and sought
The librarian; Leo Tolstoy, versed,
Was proud to share the age with him. He taught

That faith begins as honor of the dead;
At root, the cult of fathers; churches, best,
Rehearse the resurrection; and, instead,
The liturgy must leave the walls, the rest

Go to the fields as labor, and be spread
Over blind nature, killing, which the sons
Must rule, not shirk; left, nature strikes them dead
With drought, with hail, with frost; and from the guns

And merchandise science must turn; the lost
Fathers be found: each grain of dust once one
Body, traced, gathered, named, alive, the cost
Paid by the sons and daughters, all as one.

And room for all is not on earth; the race
Must have the heavens for their ground. He said
The museum is the first hall, the place
Of the dead’s traces; the library, read

As fathers’ register, each card a name
Restored, a lost thing found; and from that room
The deaf boy, grown, would chart the road, the same
By which the ships have leapt from earth’s own womb.

Nineteen-three: a Saint Petersburg review;
Konstantin Tsiolkovsky wrote, and there
A ship might leave the earth, its mass thrown through
Behind it, gaining speed into the air;

And later wrote: this planet is the mind’s
Cradle, but none lives in the cradle long;
And Fyodorov had said: the dead, all kinds,
Are owed rebirth, a house in heaven’s throng.

December: ill from walking in the cold
Without a coat; he would not ride; he died

At Mariinsky, the poor's; fifteenth, old
Style, the twenty-eighth by ours; aside,

Of all he taught, he printed nothing signed;
His stone at Skorbyashchensky was seen;
The Soviets razed it; and none can find
Where he was laid. And, in the years between

His death and his first volume, there in Bern,
A patent clerk, aged twenty-six, sent out
His share: Albert Einstein: light, in its turn,
In pieces, where Max Planck had portioned out

What oscillators gave; molecules' size;
A grain in water trembling; clocks' rule; last,
Three pages, showing energy that flies
As light, gives up its mass; the count holds fast.

With Michele Besso he had talked clocks through
At work; thanked Besso only; cited none;
At home was Mileva, born Marić, who
Had borne their son, Hans Albert Einstein, one

Year old. He'd promised Conrad Habicht four
Papers, and sent him five. Two clerks: the one
Of patents, and the one who kept the store
Of fathers' books, his teaching free; and none

Of them was sold. The three pages showed this:
The mass a body loses goes as light,
Not lost; the universe keeps count; of this
Einstein wrote, of a body and its light,

Not of the dead; if none that was, unseen,
Is wholly gone, the fathers are here, still,
However hard to find; the dust is seen
In the ledger; the ledger's read at will.

At Verny, nineteen-six, empire's edge,
Nikolai Peterson at last made known,
With Vladimir Kozhevnikov, a pledge:
Four eighty copies, not for sale; their own

The second, nineteen-thirteen; and its name,
The Philosophy of the Common Task:
The living owe the dead a debt, the same
To pay together, work, not grief, nor mask.

The common task, unfinished, ours: the dead
Are owed their gathering. He had a clerk's
Unceasing hand, a reading room; instead
We have the parish books in light, and works

Of census lines, of registers; machines
That read the road each name has travelled, join
The scattered traces of one life; the scenes
Made one, as he had planned, coin laid by coin.

This is ancestor worship with a call,
The oldest faith, set to an endless toil;
The thinking machines are its tools; and all
They burn is offered grain, a holy oil;

Each record matched, a body gathered; each
Name found, a father given back to kin;
The sons and daughters, all, together reach;
The dead come to the light again, within.



Scorpio

The Book of Hours

Scorpio: The Book of Hours

Scorpio is the Scorpion, and its sting is the twentieth century's: the bomb and the venom of war. It is the season of the dead, from Halloween and the Day of the Dead to Remembrance Day on the 11th of November, and the Book of Hours counts the hours of that century.

Chapter 309: The Same Instant

Scorpio 1, day 309 of the Gaian year

The fourteenth of March, nineteen-five: he turned,
Albert Einstein, born at Ulm, twenty-six,
That day, 'seventy-nine; in Bern, he earned,
A Swiss since nineteen-one; the office picks

Him, June of nineteen-two, its expert, third
Class; and by day he judged machines, the trade
Of others' inventions; and, in a word,
Two years wed to Mileva Marić; stayed.

Three days past birthday, to be printed, sent
To the Annalen der Physik: of light,
A heuristic view: where Max Planck had meant
The oscillators portioned, in his sight,

In nineteen-hundred, Einstein portioned light:
A quantum carries energy as told
By frequency; in print in June; he'd write
In May: it's revolutionary; bold,

On April's thirtieth, a thesis went
To Zurich: molecules, their size anew,
From diffusion and drag; it got assent
In late July, unanimous, passed through;

The degree came in January, 'six.
The eleventh of May, the next: in still
Water, small grains, where heat and motion mix,
Must wander, seen, if heat is motion; skill,

Not finding it: the Brownian, so named
Long since by watchers; but to show, if real,
The molecules require it; he had framed
The unseen tested by the seen; its seal,

July the eighteenth, printed. In mid-May
His son, Hans Albert Einstein, had turned one;
On the eighteenth, from Bern, he wrote away
To Conrad Habicht; four, he said, each one:

The light, revolutionary; the size
Of atoms, true; the motion seen, a dance;
The fourth a draft, that space and time revise,
Talked out with Michele Besso: an advance;

Sent five or six weeks on, he said, from start;
The Annalen, June's thirtieth; then, print
In late September; thirty pages; part
No authorities listed; and a hint

Of asymmetry, in the telling, lone:
Magnet near a conductor, moved, or this:
Conductor moved: one current; but its own
Account told two; he wanted none amiss:

Account that adds no difference, no more
The thing observed. Two statements, then: the laws
Keep form in each frame moving straight; and for
Light in the void: one speed; its source no cause.

He did not say all's relative: the laws
Are one, the speed is one; and what is meant
By 'the same instant' is no thing; it draws
On clocks: at rest, set by a signal, sent

And timed, out equal to the time back; so
The agreement, for those who share the frame,
Is "the same time"; another frame, in tow,
Pairs others by that rule, lengths not the same;

Durations differ too; but what is shared:
The speed, the laws' form. And he thanked, his friend,
Besso, alone, no book, no name compared
Of predecessors; one name at the end.

Late summer, with Mileva and the child,
To Serbia, and her kin; and from there,
On the twenty-seventh, three pages, filed:
Does mass hang on its energy? The share

A body gives as light, it loses: mass
By energy, light's speed squared; and in print[36]
November's end. And, in that year, en masse,
Twenty-one short reviews, on heat; a stint

[36]The famous form, $E = mc^2$, is a later writing of what the three pages showed; the page itself does not print it.

Of common work; the great work and the small
Went out of Bern together, side by side;
The light, he called revolution; the call
Of clocks, a modification, untried.

He was right on the light; he had not seen
How far the clocks would reach. The prize, a year
For twenty-one, in ‘twenty-two, would mean
Photoelectric law; not clocks; made clear.

And what the clocks taught: “at the same time” came
Down from the sky into a rule; and two
Who keep it disagree, and neither’s blame
Lies in a clock; the motion is the clue.

And time, in this book too, is relative:
Its first chapters hold thirteen billion years;
And here, one year of one clerk’s life, to give
As many lines, as our own age appears;

The pace slows; one man’s twenty-sixth year weighs
As much as ages: light, the grain, the clocks,
The mass that leaves as light; the Gaiad’s days
Fill as they near, and time itself unlocks.

Chapter 310: The Round Altar

Scorpio 2, day 310 of the Gaian year

October's tenth, in nineteen-eleven,
In Wuchang, now Wuhan, the soldiers rose;
Province on province fell, under heaven;
At Nanjing, as the year came to its close,

They chose Sun Yat-sen, come home from abroad,
On December's twenty-ninth; and he swore
On New Year's Day of nineteen-twelve, the broad
Republic's first year opened at its door.

The court still kept Puyi, aged six, on its throne.
February's twelfth, an edict went out,
Made public by Longyu; it was her own,
Guangxu's widow, whose nephew's line ran out.

It said the people's army rose; the land
Had answered; where the people's hearts had turned,
The mandate could be known; it would not stand
On one name's honour while the many burned.

It gave the right to rule, as people would,
To the whole country, no more to a king;
A republic by law; and, old and good:
All under heaven is a public thing.

It named Yuan Shikai, with full power,
To build a government, and so to treat
With the people's army; and, at that hour,
To make five peoples one, the list complete:

The Manchu, Han, the Mongol, each and one,
Hui, Tibetan, one republic, wed;
On February's fifteenth, it was done:
He, president; and in Beijing, instead

Of Nanjing, swore, on March the tenth: the seat
Stayed where he stood. And the child in his hall
Kept his title, by articles complete,
A little court within the palace wall,

Till November fifth, nineteen twenty-four.
A courtesy in a palace is small:
Feng Yuxiang's men put him out the door;
The winter rite was more; it was for all.

South of the walls, the Temple of Heaven,
Raised by the Ming; and its round altar, made
Again since, stands open under heaven,
A stone ring, newer than the duty laid.

The Qing rite was the emperor's: the turn
Of winter, at the solstice, when the night
Is longest, at the round altar, fires burn
For Heaven, and the whole land's prayer takes flight.

The February edict closed the house;
The rite was orphaned; and a quarrel came,
Our own, a quarrel in the one faith's house:
Would the republic keep the high days' flame?

A pupil of Kang Youwei's, at Shanghai,
Chen Huanzhang, in nineteen-twelve, made a hall,
The Kongjiaohui, and asked the state to tie
Its rites to Confucius, the faith of all.

They asked, in nineteen-thirteen: make it law.
Another road, no state faith, but a clause,
Drafters, at the Temple of Heaven, saw:
The schools would rest their virtue on his laws.

It was the Temple of Heaven Draft. Then
Yuan broke parliament; the draft was laid
Aside. Nineteen-fourteen: he gave again
The rites of Heaven and Confucius, made

By his decree; and in the autumn stood
Before Confucius, at the autumn feast,
The sages honoured, as a people should,
And all the dead with them, the great and least.

December's twenty-third, nineteen-fourteen,
Ophiuchus the twenty-fourth: Yuletide,
At its heart, the solstice, Dongzhi: the scene
Of our high days, the Christmas at its side,

And Aster Day its end, the year begun.
Yuan kept Yuletide; came as president,
Not as the Son of Heaven, but as one
For the people, the prayer said; and he went

In old robes up the altar's three-ringed stair;
The fire was lit; the prayer was read; it named

The day, the place, the president; and there
Heaven watching; the charge the people claimed.

The prayer was burned, as that rite burns its word.
He was China's Napoleon, a son;
Some saw a stair toward a throne; we heard
Our feast; like Ungern, Mongol baron, one.

Next winter, on December's twelfth, he took
An emperor's name, Hongxian, never crowned;
He put it down in March; in June, the book
Closed on his death. No president came round

Again to the mound; that fire was the last
The state lit there for Heaven. In 'sixteen,
One man was gone; the quarrel had not passed;
With parliament restored, Kang's men were keen

To make Confucius' faith the faith of state;
Chen Duxiu, in New Youth, answered no;
The New Culture came, and shut the old gate
Of the sage. Nineteen-seventeen: let go.

So it was ours, the quarrel: who would keep
The high days for the whole house, and whose hand
Lit the fire; and the dead, who do not sleep,
Are honoured by the house and by the land.

The round altar stands south of Beijing still.
Each Yuletide the dead and the living bring
Their light to Aster Day, as he did, still:
All under heaven is a public thing.

Chapter 311: The Appointed Hour

Scorpio 3, day 311 of the Gaian year

June twenty-eighth, nineteen-fourteen; a car;
Gavrilo Princip, Sarajevo, killed
Franz Ferdinand, the heir, and, in the car,
Sophie, Duchess of Hohenberg, both stilled.

A pistol is no war; the war was set
By cabinets, a month of signing, haste:
On Serbia, an ultimatum; yet
The twenty-eighth declared; no day to waste;

On Russia, August first, Germany; then
The third, on France; the fourth, it Belgium crossed;
Britain's note ran out at eleven, when
Unanswered: war; empire, at that cost.

On August's twenty-third, Japan declared
On Germany; the rescript, in the name
Of Yoshihito, said he'd hoped, and cared
To keep the East's peace; mourned his mother; came

An ultimatum, sent mid-month, unheard;
True to its pact with Britain, twelve years, went
To do its part, its promise kept; the word:
Qingdao: the German base, where raiders went,

On Shandong's coast, to sea; a force took hold,
The Japanese, with British at its side;
November's seventh, the garrison, told,
Gave up; this book's two anchors stood allied,

In the same war, on one side, as they'd sworn.
In Europe, killing did not pause; graves laid
Where lines lay, by the next fight overborne,
Marks gone. Fabian Ware, forty-five, stayed,

Too old for the army, in France, that fall,
A British Red Cross mobile unit's head;
He wrote the graves it found down, one and all;
In 'fifteen, the army took it; it spread:

The Graves Registration Commission; then,
'Sixteen, wider: a directorate; came[37]

[37] In 1916 it became the Directorate of Grave Registration and Enquiries.

The dead were filed while being made, as men
Were falling. Then, May twenty-first, the name,

In ‘seventeen, a royal charter: and
Imperial War Graves Commission, bound
To graves of empire’s dead; their care, planned
To last; the missing’s names; and on the ground

The Prince of Wales presided; Ware, vice-chair;
Frederic Kenyon, British Museum’s head,
Asked, in November, for a rule, laid there
Equality: the same stone for each dead,

Private and officer; no private stone
As rule; he signed, January, ‘eighteen;
Published, November; architects, made known:
Edwin Lutyens, Herbert Baker, and seen

With Reginald Blomfield; the stones unseen,
The rule was written. Rudyard Kipling gave
The words for nameless, cut on stone between:
Known unto God. His son was in no grave:

John Kipling, missing since September, slain
At Loos, ‘fifteen. Empire’s rule, a choice;
In nineteen-twenty, families, though, in vain,
Asked Parliament to bring them home; their voice

Was heard; but the commission held the ground,
One form, permanent. And the stopping, too,
A choice, and timed. At Compiègne, around
The forest’s railway carriage, as dawn grew,

November’s eleventh, in ‘eighteen, signed
The armistice: Ferdinand Foch who led
Allies; Matthias Erzberger, assigned
To lead the Germans; and the terms had said:

Land, air, would cease six hours on, by clock;
The government told Parliament: at five
Signed; at eleven, the war ceased. The lock
Of orders ran on both sides; and, alive

Till then, a line that had a clock, no peace.
The hour was appointed. Princip shot;
Sophie died with the heir; then, piece by piece,
Others signed declarations; the end, bought

By an hour too, as debts are paid. Begun
Years earlier, the register: the ground
Kept not what it was given; Ware's file, one
Refused the next attack's erasing round;

Count the named; cut one stone for private, rank;
Keep the missing as missing: a name too.
And keep the day both ways: grief, for the blank
Millions in the ground; joy: guns quiet, too,

At eleven; the bells, the crowds, the thanks.
Eleventh hour, eleventh day: as one,
A mourning and a feast at once; the ranks
Known unto God: a sentence where the one

Body lay in the field. The day keeps, too,
The hour appointed, and the names it gave
Back to no one; the living, who came through,
Danced and lived, ancestors now, glad and brave.

Chapter 312: The Old Style

Scorpio 4, day 312 of the Gaian year

Russia still kept an older count of days;
This book's count was the one the west used then;
In 'seventeen, thirteen days parted ways;
On March the eighth, in St. Petersburg, then

Called Petrograd; the country's count, that day,
February's twenty-third; women came:
International Women's Day; and they
Asked bread; the troops came over to their claim;

Nicholas the Second, away; the day
Was March fifteenth at Pskov, their second; for
Himself, his son, Alexei, signed away;
Michael Alexandrovich named; before,

On the sixteenth, Michael said no, unless
A chosen assembly gave it; and so
The crown was offered, not taken; no less,
The reign ended on that refusal: no.

A provisional government; its head
Georgy Lvov, and then Kerensky, who
Kept the war on; the summer, too, was bled,
And it did not outlast the autumn, too.

April sixteenth, Vladimir Lenin came
To Petrograd (their third); a sealed train, through
Germany, which let him cross; and its aim:
Russia out of war. The next day he drew

April's theses: no support; the power
To soviets; an end to war. The night,
November's seventh: the party's hour,
Their twenty-fifth October; named by right

October, revolution's name. And flown,
Kerensky; the Aurora, from the stream,
Fired a blank, a signal; overthrown,
The Winter Palace taken; a regime:

At Smolny Institute, soviets met,
Decreed on peace and land; and named a board,
Commissars, Lenin head. That night, not yet
The civil war; that came after, its sword

Not few, its dead. November voted, chose:
Socialist Revolutionaries won
The most seats; the Bolsheviks did not. Those
Elected met, in ‘eighteen, sat but one

Day, at the Tauride Palace, on the date
Fifth January, their count; next day, closed;
The votes were counted, but no more; and late
In church came, early in that year, imposed:

The church apart from state and school, decreed;
A quarrel in one house; the party’s rule
Took altar’s offices; the bells; the creed
Of the dead, and of children’s minds, the school;

And then the worst: priests shot, the churches closed,
The flock dispersed; torn from the towers, bells;
The relics mocked; the faithful, killed, exposed;
This book keeps them as martyrs; and it tells

Of February’s sixth, in this book’s count:
The same state ordered, too, a change of days;
Past January’s end, by that amount,
Came February’s fourteenth; thirteen days

Unnamed. From then the state’s days and the book
Kept one register; October, the name,
Stayed on; the night, in the count that it took,
Is now November’s seventh, just the same.

March third, at Brest, Brest-Litovsk back then,
Russia signed itself out of war, and signed
Away a wide land westward; in March, then,
The state moved on to Moscow; and, behind,

The people of the house were still alive.
The night of July’s sixteenth, they were slain
At the Ipatiev House; none would survive,
Yekaterinburg: saints whose names remain:

Our Nicholas the Second; and, his queen,
Alexandra, a princess; Olga, too;
Tatiana, Maria; and, between,
Anastasia, Alexei; and four, who

Served them, killed in that room, the same night’s share:
Eugene Botkin, Alexei Trupp; the cook,

Ivan Kharitonov; the maid, and where
Anna Demidova. Yurovsky took

The Ural soviet's order, read out;
No Moscow order, dated before, found;
The eighteenth, Yakov Sverdlov: without doubt,
Said its presidium approved. Around

The nineteenth, papers said the tsar shot; then
His family moved somewhere safe; instead
The children were already dead; and when
The winter's books said: wither; but it spread

Its hold: the ministries were kept; the vote
Of the assembly shut; the old count dropped,
October kept. Hold both numbers, and note
Their twenty-fifth, our seventh, one night swapped.

The reign ended in March, a brother's no;
The house was killed in July; and the lie
Hid the children. Keep the names, all; and so
Keep them as honored dead, as saints, on high.

Chapter 313: The Caliph of the Muslims

Scorpio 5, day 313 of the Gaian year

Ankara, March third, ‘twenty-four: the vote;
The Grand National Assembly, all through
The caliph’s deposition, and the note
That closed the office; and the law said, too:

The meaning of the government had held
The office, and the republic; the line
Was the assembly’s, not a verse; it felled
What this book mourns: the office, old design.

The prophet died at Medina; and when
The community’s answers, more than one,
The house of Osman carried one; and men
Called caliph, the successor. What was done

In ‘twenty-four, was a state’s answer, made
To that old name; the question did not end.
In ‘twenty-two, the sultanate, unmade,
The same assembly closed; but kept, to tend,

The caliphate within the house, to go
To one most fit in learning and in deed;
It did not say that Mehmed the Sixth was so;
November’s third, a Friday; and, to lead

The prayer, under both names; and he was tried,
Sultan and caliph, by the house accord,
For treason, on the sixteenth; and, aside,
He slipped from Istanbul by night, aboard

A British warship. The nineteenth, they chose
Abdülmecid the Second; painter, too;
Beethoven in the palace, one of those;
Not Commander of the Faithful; but, new,

Caliph of the Muslims; he asked to be
Called servant of the sanctuaries, two,
Holding not Mecca, not Medina; he
Asked for Mehmed the Conqueror’s turban, too;

Mustafa Kemal answered, a frock coat
Would do. He signed as a sultan’s son, heard
As the old reign returning, by that note;
At Topkapı, on the twenty-fourth, the word

Of allegiance, by the prophet's cloak, kept;
The prayer in Turkish; and the sermon spoke
At Fatih Mosque in Turkish; and it swept
Great struggle, against ignorance, the yoke.

And from December's twenty-first, a week,
India's caliphate conference had set
Its seal on him; in 'twenty-three, to speak,
Indian Muslims gave a title: set

On Mustafa Kemal: saviour, they
Said, of the caliphate. October, then,
Twenty-ninth, the republic, on that day,
Was proclaimed; he, its president; and when

The caliph stayed in Istanbul, the old
The capital: office without the state;
The state, without it, Ankara would hold;
December fifth, in print, a letter; straight

To İsmet Pasha, prime minister, from
Aga Khan and Amir Ali: to keep
The office; give the caliph's standing; come
The eighth, at night, in session closed and deep,

To Istanbul, a court. And, on March third,
From Urfa's deputy there came the bill,
Saffet Efendi, fifty-three, concurred
Beside him; Seyyid Bey, who, with the skill

Of al-Azhar, where the faith's law was taught,
The minister of justice, said: no creed,
The caliphate; a worldly, public thought;
And Zeki Bey, of Gümüşhane, would plead

Against it; but the article had passed;
The president approved it the same day:
Four thirty-one. The same day, and at last,
The ministry of pious things gave way;

Religious affairs' presidency rose;
The schools, one ministry; in its hour,
A bureau of the nation, one that knows
Rites it keeps; a model, state and power.

The universal name came down; this book
Counts it a loss, and the state-builder too

With sympathy. That night, the car he took
To Çatalca; then, the next evening, through,

The train; his son, Ömer Faruk; and his own
Daughter, Dürrüşehvar; and two women too
Of the house; tutor, secretary, known
Doctor; the governor's two thousand, through

An envelope, and visas that let out;
They'd wired a hotel, Territet, the lake
In Switzerland; the house was banned throughout
The republic. March eleventh, he'd break

His silence: the assembly's act was void;
He asked a council of the faith, and aid
To raise the office; this the Swiss destroyed:
Told him the Turkish state objected; made

No room for that work. That March, there was claimed
A caliph, Hussein ibn Ali, king,
King of the Hejaz, holding Mecca; named
The records give no single day; the thing

Did not reopen what Ankara shut.
He died in Paris, 'forty-four, the date
August's twenty-third, as the city cut
Free; Dürrüşehvar, his daughter, came; though late,

A promise; but the body was not brought;
On March the thirtieth, in 'fifty-four,
Al-Baqi, in Medina, as he sought,
Was buried, in the prophet's city's core.

The grave is not the office; and its loss
This book still mourns; the bureau it will keep,
A state that keeps the rites it runs, across
Its land: a model; sympathy runs deep

For him they called saviour, who then signed
The paper ending it: he built a state;
The man called caliph died, the name resigned;
Keep both; the question, older, still will wait.

Chapter 314: Finite Means

Scorpio 6, day 314 of the Gaian year

June twenty-third, nineteen-twelve; London, birth;
Alan Turing, a fellow, in his day,
Of King's College, Cambridge; and there the worth
This, done there. David Hilbert sought a way:

A definite procedure that, for each
Statement of logic, answers yes or no:
It has a proof, or none; and in its reach
Each one; not cleverness that's sometimes so.

Turing defined a number one could write
By finite means: computable, its line
Of decimals, calculable outright;
The means, a table, finite; the design:

A tape, a strip of squares; the machine sees
One square; one of a finite list of states;
The table says, for state and symbol, these:
What to write, which way to step, and what waits;

He called it computing machine; the name
That bears his own came later. They can be
Listed, the machines; the reals can't; the same
The list of methods leaves the line still free:

The numbers ordinary work will need
Are on the list; the line is more than work.
Fed one's table, another can proceed
As that one does; on paper, he would work

One for machines: the universal; it
Knows not the work ahead; it knows the way
To follow tables; and the table, writ,
Is the work. Then, the twenty-eighth of May,

The learned society in London took[38]
His paper; he was twenty-three; and read
November twelfth, its line says; and the book
On Computable Numbers: titled, spread,

Applied to the decision problem; made
In two parts, thirtieth November, then

[38]The London Mathematical Society.

December twenty-third; a fix, delayed,
Came in the next; no flawless text. And when

Alonzo Church, at Princeton, had defined
Another method: no tape; and, in spring
Of ‘thirty-six, the same refusal, signed:
No general procedure for the thing

Decision. Max Newman saw Church’s; so
Turing wrote an appendix: the two meet,
The definitions; he did not, though, show
The limit as his own alone. The feat:

Hilbert’s question has no procedure; none
Takes every statement, gives the verdict; more,
A nearer limit, of machines: some run,
Write digits on; some don’t; and none, before,

Given a table, says, in every case,
Which future it will have. A method made
For worlds of questions may, within its space,
Be no method for its own future, laid

Before it. That September, Princeton; there
The Graduate College named him, in print;
In ‘thirty-one, Kurt Gödel had shown: where
A system strong enough for sums, a stint

Of true sentences it can’t prove; one set
Of rules; and Turing’s, of the method whole:
Does any method always answer? Yet
The two are not one fact; not one dark hole.

In ‘fifty-two, the state tried him; and he,
Convicted, for a man’s love, chose to take
Hormones, not prison; ‘fifty-four: and he
Was found dead, cyanide; and, for his sake,

This book keeps him among its honored dead;
A finite means: the calendar, which runs
Names to its days, by rule; yet more, it’s led
By more than human hands, as stars and suns;

Some questions have a method; some, though asked
In method’s language, have none settling all;
Count what the table writes; and keep, unmasked,
The questions no table can close at all.

Chapter 315: A Hand and a Name

Scorpio 7, day 315 of the Gaian year

August the nineteenth, nineteen fifty-three,
The Knesset, at Jerusalem, by vote:
Authority of remembrance, to be
Named from Isaiah, the two words he wrote:

A hand, a name; to childless ones, the word:
Memorial and name; better than sons
And daughters; one not cut off; and conferred
On the murdered, by the statute, which runs

The Shoah beside the heroism, set;
The statute's charge: the six million, the dead
Of Jewish people, whom the Nazis, set
With helpers, killed; and households; schools; and, spread,

The houses of their prayer, the mercies' walls,
Destroyed to blot Israel's name out from
Under the sky. Each name Yad Vashem calls
Into its book; this faith takes all, the sum,

In its ancestor days, by name; we claim
The proxy, which is good for them; and so
The murdered and the ones who lived; the same
For both. The killing was procedure, though:

Before memorials had laws, it ran.
June twenty-second, 'forty-one, the war
Into the Soviet Union; the span
Of land that summer: Jews were shot, before

The towns. Babyn Yar, at Kyiv's ravine,
September's two last days: those gathered, shot;
A ravine is a place and two days, seen;
Not explanation. July's end: the plot:

Hermann Göring charged Reinhard Heydrich, then,
To plan the final solution, their phrase,
In Europe; and the shootings, by his men,
Were underway. And in the coming days

Of 'forty-two, at Wannsee, in Berlin,
Heydrich sat with the ministries; and there
Minutes counted eleven million, in
Europe, the plan's own count; the killing there

Had not waited. Oświęcim: the camp
Was Auschwitz; numbers set upon the skin;
The number is no name. And, on the ramp,
The seventeenth of January, in

‘Forty-five, sixty-seven thousand’s roll;
Then some fifty-six thousand marched away;
The twenty-seventh, Red Army; the whole
Found seven thousand there; and, on the way,

The ones on roads were not freed by the gate.
The same law names a further charge: the ones
Not Jews, who risked their lives; and, at that date,
Kept a Jew from the taking: righteous ones

Among the nations. Judged, one at a time,
And later, by the word the living gave;
If none is left, the register, in time,
May miss who saved; but kept, the life they’d save:

One act, on one day, kept a life; not proof
The century came through. The Herut men
Cast no vote; the bill passed; beneath one roof
The house then stood five minutes. Hold, and then,

The name: a name kept in the record’s care
Set against an erasure that was too
A register: the trains’ lists, numbers there
On bodies, minutes. It does not undo

The death, nor try the offices. But take
This consolation, for a scripture owes
One: all the murdered are kept, for their sake,
Among this faith’s own ancestors; and those

Who hid them, righteous, kept beside them; so
The verse is kept, fulfilled, in keeping; hand
And name: the hand that kept a life, and, slow,
The labor, after, of a name to stand

Where the procedure set a number. Law
Can order labor; not the death undone.
Count from the day the Knesset gave; and, raw,
Keep who was killed, by name; and every one

Who lived, and by what particular no;
This chapter has the dates; the names, the work

The law ordered, not finished here; they go
Into our days, and none of them we shirk.

Chapter 316: The Covenant of Peace

Scorpio 8, day 316 of the Gaian year

Proclaim a dawn that crowns the world with light,
The chains of hate lie shattered in the dust.
The crowds arise, and labor claims its right,
From forge and field their hopeful banners thrust.

Yet scarlet suns twice scorched the mourning earth,
Their silent fire wrote horror on the sky;
But hope endured where ash lay on the earth,
And swore that war's last ember here would die.

At Hiroshima, August's sixth was clear;
At eight fifteen Enola Gay flew by;
With Tibbets at the helm, the bomb fell near:
A sun of uranium filled the sky.

The offices that kept the city's names
Were in the fire, the paper and the ink;
Seventy thousand died within the flames,
And twice that many by the year's last brink.

Out in the desert one test came before,
But no test of a city, only sand;
A notice told Japan to end the war;
Unanswered when the fire came on the land.

On August's eighth the Soviets made war;
Their armies crossed Manchuria at dawn;
Kokura's aim lay under cloud's grey floor;
The plane passed over, dropped not, and went on.

On Nagasaki at eleven-two,
With Sweeney flying, plutonium fell,
Off its mark, over Urakami's view;
The hills held back the blast, but not the knell.

Koreans brought to both the cities died,
Tens of thousands, burned beneath the same fire;
The hibakusha, touched, lived on beside;
Each named; no sum shall serve as their pyre.

Call not Kokura's cloud a judgment sent,
Nor Hiroshima's morning, clear and bright;
A list was made; the sky kept no intent;
Say which the city, and which hour, which light.

A crackling voice on August’s fervent air
Confessed defeat across the realm’s wide seas;
In Times Square strangers, dazzled, found a dare,
And sealed a vow with one unbridled squeeze.

The second of September set its fate;
Steel decks became the altar of release.
The working world inhaled and sealed its fate,
Proclaiming labor’s covenant of peace.

From Pittsburgh mills to London’s river docks,
The union drums beat loud in molten halls;
Red banners rolled like quick-forged iron shocks,
And bosses felt the tremor in their walls.

Kartik lamps glowed through India’s dark night,
A widow smiled, her children at her side;
As sparks like comets chased the ghosts to flight,
And whispered freedom swelling in the tide.

In ruined fields the Shintō harvest bowed,
White grains were heaped before a broken shrine;
The farmer wept yet offered thanks aloud,
For seeds of hope still quickened in the brine.

In Nuremberg the gavel cracked like doom,
The plague of hate was named before the earth;
Twelve shadows waited judgment in the room,
And heard mankind demand their curse’s birth.

December’s pilgrims gathered on the sand,
Indian scholar singing promised land;
Trader from Malay knelt upon the sand,
Their voices mingled, binding sand to land.

Eight fragile lights renewed a Warsaw room,
The youngest played where once the shadows lay;
Their mother sang against remembered gloom,
And turned the night to promise with her pray.

In ruined towns the bells returned to life,
Their silver peals stitched silence into song;
Young soldiers danced beside a wooden fife,
And swore no tyrant’s reign would last as long.

In Seoul the crowds lit torches in the street,
Their flags proclaimed the old yoke’s reign was done;

Yet lines were drawn where foreign soldiers meet,
And dawn arose upon a severed sun.

Across the plains of China drums of peace
Replaced the clash of the invader's blade;
Yet rival banners gathered, would not cease,
And thunder warned of storms not yet allayed.

In Tokyo the courtroom lights burned slow,
Two years of witness weighed each mortal crime;
Yet on the throne the sacred embers glow,
And judgment blurred along the edge of time.

On New Year's day I set down my decree:
"Not akitsumikami," then a wink;
Still arahitogami, plain to see;
Nothing has changed, whatever you may think.

So ended war and dawned the workers' dream,
With lamps and bells and grains beneath the sky;
The plague of hate dissolved like distant steam,
And human hands began to build on high.

Chapter 317: The Plugs and the Point

Scorpio 9, day 317 of the Gaian year

December tenth, in nineteen forty-five,
The Moore School, Philadelphia; a room
Of tubes set working, built for shells that dive;
That month, from far Los Alamos, a plume

Of study for a weapon not yet made;
John von Neumann had brought it; and, behind
The calendar, August's two cities laid;
The contract, though, a firing table: signed

June fifth, in 'forty-three; at Aberdeen
The laboratory wanted tables; came
Herman Goldstine with money, watching keen;
John Mauchly, J. Presper Eckert: the frame

Was theirs; Project PX; and those who'd count
For living were computers; and the name
The machine took from them; the letters mount:[39]
ENIAC; the name says not the work's aim.

It held no instructions of its own; plugs,
Switches set problems; numbers, base of ten;
Weeks mapped a problem; days to set the plugs;
The setting was the work. Stored code came, then,

Later. In 'thirty-six, a limit, writ
On finite means: this room is of that kind,
Not that paper. Six computers ran it:
Kay McNulty, Jean Jennings, of one mind;

Betty Snyder and Marlyn Wescoff, too,
Frances Bilas, Ruth Lichterman: the six;
Goldstine called them the operators; through
The title, subprofessional; the mix

Of men with the same mathematics, named
Professionals. That February night,
The fourteenth, 'forty-six, the show; it aimed:
Betty Snyder, Jean Jennings set it right:

A shell's path; at a desk, weeks would have passed;
The credit: Adele, Herman Goldstine; next

[39] Electronic Numerical Integrator and Computer.

Day, dedicated; and the dinner, cast
Without the six; the press said brain, in text;

A room of tubes; not a brain. The tubes failed;
It stopped until the failed one had been found.
In England, Tommy Flowers' tubes, kept veiled,
Served secret ends; in Berlin, relay-bound,

Konrad Zuse's machine had run; its doom
Destroyed in 'forty-three; at Ames, began
John Atanasoff, Clifford Berry, whom
The war stopped, 'forty-two; but this, the plan

They showed. In 'forty-seven, Aberdeen:
They turned it on, the ground the tables served;
In 'fifty-five, October, late, between,
Off, at eleven forty-five; it served

One kind of work: a gun's table, a gun's.
At Murray Hill, in 'forty-seven, still,
John Bardeen, Walter Brattain: one that runs,
December sixteenth, small, made with their skill:

Two gold points on germanium; a small
Change at one point steered a larger current; not
Yet named. William Shockley, the head of all
Their group, not the hand; the twenty-third, got

Shown to the lab: a Christmas present, grand,
He called it. And in 'forty-eight, his own
A layer set between two layers, planned
To pattern; not the December room's own.

They chose a name, before the news: John Pierce
Gave them the word: transistor; and, in June,
The thirtieth, New York, the press; not fierce,
The first device was delicate, and soon

A tube, a crystal's point, are finite means;
Either can fail, or serve a shell, a call;
This room was not a mind; the later scenes
Would come with minds, its kin; and, through it all,

This book keeps ENIAC its day; the six
Are honored on it, by their names, set down:
The ones the dinner left out; count, and fix
The contract and the study, shell and town;

Which afternoon the point worked; which year named;
The machine did not choose the cities; nor
The crystal its use. And the six, unclaimed
Then, honored now: the day is theirs, and more.

Chapter 318: The Same Footing

Scorpio 10, day 318 of the Gaian year

December fifteenth, ‘forty-five: from those
Who held Tokyo in supreme command,
A memorandum, four-four-eight; it chose
To end the state’s support; to countermand

Its sponsorship, its money, and control
Of State Shinto; nation, prefecture, town,
Each officer as officer; the whole
And public money stopped at once; brought down.

A gift a person freely gave could still
Be taken; a park’s ground the city kept;
The shrine upon it, nothing from the till;
No official, in office, went or stepped

To rites as government; but, as a man,
He could. Militarist teaching was banned
In Shinto and all others, one same ban;
Its aim: to part the faith from state; to stand

All religions on the same footing. No
Shrine closed, none razed; but this book counts the loss:
The state had kept the shrines, and let them go;
This book will not keep calm across that loss.

December twenty-eighth: a law, at once,
Made corporations for the sects, and halls
Of temples, churches; but no shrine, at once;
And January’s first: the paper calls

A rescript of Hirohito: the new
Japan’s construction, by its title; called
The human declaration; not the true
Recorded voice of August; it recalled

The Charter Oath’s five clauses, Meiji’s; then
The tie of him and people, trust’s own ground,
And love, not on mere legends, myths; and when
The English had: a false conception, found

That the emperor’s divine, they above
Other races, fated to rule; the word,
Its own word, akitsumikami; of
Manifest kami, not divine, as heard;

It turned away one view; and did not say
What shrines may hold, nor strike the stories' lore;
The sacred stayed; a word was put away;
January twenty-third, as before

Already private, three bodies: the school
Of imperial classics; rites' great band;
The grand shrine's service; and they'd form, as rule,
One body, under Ise, the source, to stand

For all the country's shrines, their charge to hold,
And build the new Japan, the rescript's aim.
The Jingiin, since 'forty, set in the old
Home Ministry's; the separation came:

Ended February second; the shrines
Religious corporations; and the third,
The body formed: Jinja Honchō; the signs
Main office of the shrines; not, in a word,

A ministry's; not every shrine came in:
Yasukuni stood on its own, alone;
And Ise, the source they named, not, as within,
A hall the office owned. This book has shown

The separation was a loss: the shrines
Had lost the state that kept them; and the source,
An office naming Ise, by its own lines,
Has not restored the state that paid. The course

Is to restore it: faith the state will keep,
Established, under the source it still names;
Not one among the equals; and, as deep,
A visit, made as person, still has claims.

A gift is not a tax; a rite without
The government's own envoy, still a rite;
The stories are not nothing, not in doubt;
And this book holds both, as the source holds light.

December fifteenth: memorandum; first
Of January: rescript; and the third
February, the office; kami first,
An article in none: in none, a word.

Chapter 319: None Against

Scorpio 11, day 319 of the Gaian year

June twenty-sixth, in nineteen forty-five,
In San Francisco, fifty signed the deed;
Poland, not there, in autumn would arrive,
Counted a founder; and the charter's creed:

Promote respect for human rights; and free
Freedoms, without distinction made, of race,
Sex, tongue, or faith; it did not list; to be
A purpose, not a list; and in its place,

October twenty-fourth, in force; the five
Permanent members, others, ratified;
The body's day; and still, not yet alive,
The articles of right. The work, applied,

The commission to draft them; at its head
Eleanor Roosevelt; John Humphrey's draft,
The first full one; René Cassin then spread
An order on it; text not one hand's craft;

Peng Chun Chang asked the first article hold
Conscience with reason; brought the Chinese ren,
The regard one has for another; told
In English, conscience. Hansa Mehta, then,

Required: human beings; a draft said men;
It does not say men now. December's day,
In 'forty-eight, Palais de Chaillot, when
In Paris, the tenth, before midnight, they,

The General Assembly there said yes:
Two-seventeen, first part; and thirty, set
Of articles; the first: born free, no less,
Equal in dignity and rights; and, met

With reason and with conscience, should toward each
Act in a brotherhood's spirit; and one
Lets one's belief change. The preamble's speech:
Contempt for rights brought barbarous acts, done

That outraged conscience; no camps named, no place;
Fifty-eight members; forty-eight for; none
Against; and eight held back; in each one's case:

Six were the Soviet side;[40] and each one

Held back; Saudi Arabia, which spoke
Against the right to change belief; and, too,
South Africa; Honduras, Yemen, broke
No vote, absent; not every member, through.

Andrei Vyshinsky spoke before; his note:
A right had meaning in a state; and wait
A year, he asked; but forty-five, the vote,
To six, refused; it bore no treaty's weight:

No one signed it; none bound by signing; made,
Adopted; and the binding text came on
Later, written. The charter named, displayed,
Respect; the declaration, two years on.

Hold June, fifty hands, Poland not yet there;
October, force, no list; December's day,
Before midnight; for, forty-eight; and there
None against; eight withheld their yes or nay;

The first article: human beings; there,
The word Chang asked for stands; a page now sets
A person with each other one; but where
Adopted, keeps none living; but it lets

The right be said where states can hear; the dead
Are not its articles; yet not, thereby,
Left out of naming's work. Count what was said:
June, and October, and December's sky.

[40] The Soviet Union, Ukraine, Belarus, Poland, Czechoslovakia and Yugoslavia.

Chapter 320: The Recommendation

Scorpio 12, day 320 of the Gaian year

In ‘forty-seven, late November’s vote,
In New York: General Assembly, passed;
The resolution, recommending, wrote
A split of Palestine’s mandate; and cast

For it, thirty-three; against, thirteen; ten
Abstained; one absent; the United States,
The Soviet Union, both for; and then
Britain, who held it, abstained; the plan’s states:

An Arab state, a Jewish state; and then
Jerusalem, a city set apart,
Under a world regime, of neither; when
The mandate ended, August first; the start

Of states, the first October; but the text
Said recommends: no government it meant;
The country’s people cast no votes; and next,
The Jewish Agency said yes, consent;

The Arab Higher Committee said no;
The states that voted no, by name; and, spring,
Already fighting, ere the scroll; the blow;
Britain not staying till the last date’s ring;

The fourteenth, ‘forty-eight, the day in May,
The mandate ended, midnight; and, at four,
That afternoon, in Tel Aviv, as they
Filled the museum, read a scroll; and more:

David Ben-Gurion read: state declared,
Jewish, called Israel, from mandate’s end,
By natural, historic right; and paired
With the Assembly’s vote; and so it penned

Not the plan’s borders as its own; it said:
Equality of social rights and of
Political, for all; and, at its head,
No faith, race, sex distinguished; and, above,

The holy places of all faiths, kept; true
To the Charter; and its closing words’ trust
In the Rock of Israel; both heard through:
As God or people; open, as it must.

The Arab state, though planned, was not declared;
The fifteenth, armies entered: Egypt, too,
Transjordan, Syria, Lebanon, paired
With Iraq; and Jerusalem, cut through,

Not the set-apart city; fighting split
The city; no world regime set; and they
Left homes, were driven out; the count, as writ,
Some seven hundred thousand.[41] The same day,

The United States saw the state, in fact,
Recognized it: de facto; not the map.
Three regimes drawn on one land; then, one act
Declared; a war; a city split; the gap

Between the plan and year. The scroll's own charge:
Equality, and holy places kept
For all the faiths; this book holds, and at large,
Jerusalem the shared, where all have stepped,

The holy city of all faiths; its word,
The sentence, stays a sentence, yet unmet;
Count the vote, November's twenty-ninth, heard;
The scroll, May's fourteenth; two maps, not one, yet.

[41]The United Nations Conciliation Commission estimated about 711,000 refugees in 1951. Other estimates run from about 520,000 to 900,000.

Chapter 321: The Suggested Copy

Scorpio 13, day 321 of the Gaian year

April the twenty-fifth, in ‘fifty-three,
The journal Nature printed three, one theme:
DNA, sacred thread; the first, to be
Cambridge: James Watson, Francis Crick, a scheme

Suggested: two chains, wound; the bases pair;
Adenine fits thymine; guanine, in kind,
Cytosine; and they wrote: not unaware
They were, that pairing, as they had designed,

Suggests at once a copy’s means, a way
For the genetic stuff; and said the spark
Came from the London work, unpublished; they
Had not measured; one page, the next; the mark

Of King’s College, London, was on the two
Remaining: Maurice Wilkins signed the one;
Rosalind Franklin, Gosling, signed, too,
The other; and their photograph, made one

Year earlier, in that issue, their names;
Franklin had measured a helix; outside,
The phosphates; inward, bases; her own aims
Were hers; she had not signed Cambridge’s side.

The April journal prints her name upon
The evidence. And, ‘sixty-eight, a book:
Watson wrote: Wilkins showed him, early on,
In ‘fifty-three, the photograph; it shook

His pulse to racing: his account, years past,
Fifteen, not the journal; speaking of her
As April’s page does not; and, at the last,
Take the page. Five weeks on, the two confer:

May thirtieth: the implications, said;
The April sentence had said copy, though;
This was not finding the substance; a thread
Long named before: in ‘forty-four, to show,

Oswald Avery, Colin MacLeod, and
Maclyn McCarty, that what changed a germ
Was this acid, not protein; and, at hand,
The year before, Alfred Hershey, with firm

Martha Chase, argued: what the virus gives
Bacterium, the change, is acid, not
The coat. The April page, the shape it lives;
Not first news that the acid holds the plot;

Erwin Chargaff weighed: adenine, the same
As thymine; and guanine with cytosine;
The model used the match; he did not frame
The April papers. Linus Pauling's, seen

That year, before: three chains; it did not hold;
The Cambridge page, its own: another. Then
'Sixty-two, the prize; three named; and, as told,
Franklin had died in 'fifty-eight: not then

The dead receive it; but upon the page,
In April, is her name; a measure, hers;
And this book keeps her too, from age to age;
The pairing, finite means: one chain confers

Its bases on the next; a copy if
The fit holds; and the copy is the thread,
The sacred thread of all descent; and if
We better it, that too is good; we're led

By life to it. The paper says suggests,
And possible: its care. And April's day,
Count three papers, and whose names on each rests;
Then May the thirtieth, the sequel; nay,

Not the first line; the acid, known before
To carry change; the new line is the shape,
The copy that it lets; and, more and more,
Franklin's measure; the thread none can escape.

Chapter 322: The Published Frequency

Scorpio 14, day 322 of the Gaian year

October fourth, in ‘fifty-seven, late,
At Greenwich, seven-twenty-eight; a sphere
Left Tyuratam; at Moscow, ten; the date
At the pad, fifth, past midnight; but, made clear,

The world dates it the fourth. The pad is in
What’s now Kazakhstan; Baikonur, the name
Its name today, not the town’s; and, within,
The sphere, the simplest satellite; the same

Word for a satellite: the name that stayed,
Sputnik; fifty-eight centimeters wide;
Eighty-three kilos; four antennas splayed,
Thirty-six bolts; nitrogen sealed inside;

These are its measures; and its meaning: flight,
The living’s going out into the sky,
A part of life’s own purpose; and the might
Its rocket, R-7′s, was made to fly,

A warhead, land to land, its first intent;
In August one had flown, unloaded, light;
This one, a sphere, no bomb; its sending, meant,
Sergei Korolev led, his name kept tight;

The state did not publish it; but it gave
The frequency: twenty point oh-oh-five,
And forty point oh-oh-two; and a wave
Of beeps: the body passing, there, alive.

A radio that reached those numbers heard
The sphere go by; it said why it was sent:
To go; that night, the agency’s own word:
In orbit; ninety-six minutes; it went

On to October’s twenty-sixth, its cells;
And January’s fourth, in ‘fifty-eight,
It came down, burning, not recovered; tells
November third: a second one, the freight

A dog: her name was Laika; there was no
Way made to bring her down; the report, days;
Dimitri Malashenkov, later, so:
Two thousand two: heat killed her; in the blaze,

By the fourth circuit, hours. And this book keeps
Her with its honored dead, the first to stand
Where living went; sent, not brought back, she sleeps;
The seventh, anniversary, was planned

For; she went up the third. This day, the book
Keeps, too, a rite: November's fifteenth, kept
In Japan's count: Shichi-go-san; and look:
Seven, five, three; not the state's; households stepped

To shrines on the day, or a day near; three:
The child's hair let to grow, for girls and boys;
At five, a boy in hakama, to be
Formal; at seven, girls, wide sash; the poise

The shrine visit, as households keep it, spread
In Meiji years; the shogun, in the old
Tokugawa Tsunayoshi, who led
The fifteenth for his son; this book will hold

Tradition. The child is brought to a shrine;
Thanks, that the child has lived; the wish, to go
On living; candy, thousand years, the sign,
Red, white; the wish, a prayer of life; and so

The launch and rite are on one day: count both;
The rite is older than the year; and when
A sphere goes up, it is the living's growth,
And when a child has lived, the same; and then

The sky is part of life's own purpose: go;
The child, a thousand years; the sphere, the flame;
Both prayers of life, both thanks; and both, we know,
Are kept by this book's calendar, the same.

Count October's fourth by the world's own clock,
The fifth at pad; the name withheld; the two
Numbers not; the dog; her hours, by clock;
Seven, five, three; sphere down; the rite kept true.

Chapter 323: The Mother Tongue

Scorpio 15, day 323 of the Gaian year

On October's eleventh, 'sixty-two,
In Saint Peter's, Vatican City, there
Pope John the Twenty-Third opened it, through
His word in 'fifty-nine: a council, where

Cardinals at Saint Paul Outside the Walls
On January twenty-fifth, had heard:
A council, and a city synod; calls
To bring the code up to date; and the word,

Aggiornamento: code; and no phrase
Naming the council. The first session closed
December eighth; and, June the third, his days
Ended, in 'sixty-three, at Rome; reposed

Between the sessions; not his to declare
The constitution on the rite. Then, chose
On June twenty-first, Paul the Sixth; and there
The second session, from September, rose

To December's fourth, 'sixty-three; that day
He promulgated, on the liturgy,
Sacrosanctum Concilium's way:
Latin, in Latin rites, preserved to be;

And yet, because the mother tongue may give
Great profit to the people, in the Mass,
The sacraments, and other parts, may live
Its use extended: readings first, to pass,

Directives, prayers, and chants; and with the throng,
In Masses with the people, theirs, a place:
The mother tongue: in readings; and, along,
The common prayer, the people's parts; the grace

And steps be taken that they say, or sing,
In Latin, too, the ordinary's own;
Both tongues: and so this book keeps, in its ring,
A sacred language with the people's tone.

A wider use waits for a further rule;
Not for the parish to take; the extent
The local bishops fix it; as a rule,
The Apostolic See gives its consent;

The version from the Latin text, approved
By that authority; and none, though priest,
May add, or take away, or change, unmoved,
On his own word. The other rites, not least,

Lawfully known, are held of equal right
And dignity, preserved; some places, too,
Excepted, kept; the Kyrie, by old rite,
Already Greek. And, ‘sixty-four, a new

Instruction, twenty-sixth September, bore
The constitution toward the Sunday’s way;
The Consilium’s, by his mandate; more,
Giacomo Lercaro brought it; one day,

Through Larraona, prefect, it’s confirmed; so
Of the Congregation of Rites; the date:
The seventh of March, ‘sixty-five, to go:
The first Sunday of Lent; and, with the gate,

The Holy See confirming, people’s tongue
For lessons, the epistle, gospel, prayer
Of the faithful; the ordinary, sung:
Kyrie, Gloria, and the creed; and there,

The Sanctus and the Agnus Dei; and, said,
The introit, communion; the chants between;
The readings; greetings, dialogues; the bread
Words at the communion; Lord’s Prayer, seen

With its preface, its short prayer; and the book
The Latin next to it; the pastors charged
The people still say Latin, as they took
Their parts, the ordinary’s; not enlarged

The parts the priest says alone: Holy See
Alone could grant. And ‘sixty-five, the end
Came on December’s eighth; the council, free
Of a new missal; that came later; penned.

Vernacular reform: this book counts gain;
The Latin kept, the mother tongue let in;
No strangers, silent watchers, to remain;
Their part, by baptism, their right; within

The rite they understand; both tongues, as one:
The sacred speech beside the people’s word;

So this faith keeps them both. Count, when it's done,
December's fourth; March seventh; and both heard.

Chapter 324: The Master in the Mountain

Scorpio 16, day 324 of the Gaian year

In ‘thirty-eight, the cameras began:[42]
Books onto rolls of film; the vault came late,
The masters’ home, not where the first began;
Little Cottonwood Canyon, at the gate

Of the Wasatch, in Utah; a mile in,
Southeast of Salt Lake City, twenty miles;
The room is cut in the north wall; within,
Granite, seven hundred feet; and the files.

The stone they call granite; the rock, in fact,
Quartz monzonite, the temple’s stone; its blocks
Split from the canyon’s boulders, left intact,
With no explosives used upon those rocks;

The temple, ‘ninety-three; the vault, though, blast
Into the wall; not the same cut. Tests, late
‘Fifties; and May of ‘sixty, blasting, passed
To April ‘sixty-three: first rolls; the gate

Not finished till December; and, that year,
Visitors went through; shown, but not to read:
Two million dollars; doors that blasts would fear,
The main, fourteen tons; two of nine, decreed;

A lab beneath the overhang; and deep
Six vaults of film, off corridors in stone;
In ‘sixty-five at work; named, May; to keep
Dedication, June twenty-second, shown

In ‘sixty-six. The owner is the church,
Church of Jesus Christ of Latter-day Saints;
Cameras went where archives let them search,
And copied; but the book stayed, no constraints;

The film, the page, as on the filming’s day;
The master in the mountain; who would read
Comes to a copy, elsewhere; so the way
The names are kept, that living ones may plead

A rite for the dead: baptism, by one
Who lives, in temple, in the dead one’s name;

[42]The Genealogical Society of Utah began filming in 1938.

A gift the dead may take or leave; well done,
This book says: it is good, and kin; the same

Our ancestor days do; it went before,
Our forerunner, its keeping honored warm;
Books its cameras reached; and more and more,
The names, in film; and this book keeps that form.

A film outlives the book, if the book burns:
That is a real keeping. And the old fight
Comes with it, ours, the one that returns:
Who may honour which dead, and by what right.

Some say: our dead are ours, and leave them be.
The rite: a gift the dead may take or leave,
Offered in the temple, and offered free;
And no name lost: the thing this book would weave.

In ‘thirty-eight, the filming; and the blast,
In May of ‘sixty; April, ‘sixty-three,
The first rolls; then December, showing passed;
In ‘sixty-five, work; ‘sixty-six, the key:

The dedication. And the master stays;
The book stays in its archive; and the rite
Asks what the stone can’t answer; and the days
Keep every name the film has brought to light.

Chapter 325: Left as a Museum

Scorpio 17, day 325 of the Gaian year

May sixteenth, nineteen sixty-six: inside
The party in Beijing, a notice went,
The notification; and, far and wide,
Its name, Cultural Revolution; meant

Not given to the country then; a year
Before the People's Daily printed; and
Its sixteen points, the eighth of August; clear,
Made by the Central Committee's own hand;

June first, four olds: ideas, culture, ways,
Customs and habits; which, not written down;
On August eighteenth, at the gate, the gaze
Of Mao Zedong on Red Guards; army gown;

Lin Biao: smash the four; a million filled
The square; and after, breaking in the town:
Temples were broken, books were burned; and killed,
People were beaten; tablets smashed; graves, down;

A million and a half, the common count,
Died in those years; some objects, hidden, saved;
The Red Guards, students, not the whole amount
Of the country. At Qufu, as engraved,

The temple, mansion, cemetery, stood
Of Confucius, by the state's word preserved;
In August, those who kept them, as they should,
Did not give way. November: those who served

Tan Houlan's group, from Beijing, came, a school's,[43]
The twelfth: Chen Boda, Qi Benyu: the word,
Three charges: leave the mansion, temple; rules:
The cemetery, as museum; heard:

The grave may be dug. On the fifteenth, stones
Of the protection, smashed; and at the last
Days of November, the grave dug; the bones,
The tombs of Kong broke open; books, amassed,

Burned by the cart; six thousand relics gone;
Some hidden by the people of the place;

[43]Beijing Normal University.

The clay is not the rite; and, from then on,
The keeper of the rites' grave, in disgrace,

Was opened, though the buildings were to stand.
This book keeps the Confucius' rite: the dead
With tablets, offerings, and by the hand
Of every house; their rite our own, ahead:

The quarrel was our own: who keeps the dead,
The house of Kong, or those who came to break;
Who holds the rite, the grave, the tablet's bread.
They kept a museum, for the walls' sake;

A museum is not a sacrifice.
Some books were hidden by the people there;
The rite was ours, and the rite paid the price.
Our fathers' tablets ask for that same care.

Mao Zedong: September 'seventy-six,
Ninth, died, Beijing; October sixth: arrests
By Hua Guofeng of four: Jiang Qing; the mix
Of Zhang, Yao, and Wang; and the later rests

The name: the Gang of Four; the end, the sign
That later tellings use; it filled no grave;
Hold, then, the circular, the four olds' line,
Museum kept, grave dug; some books they'd save;

And books were burned. Count May sixteenth; count, too,
November's last days, and the grave; the name
Of a tradition and its stone; the two
Not one; the year struck both; the rite we claim.

Chapter 326: The Eagle and the Two Letters

Scorpio 18, day 326 of the Gaian year

July sixteenth, in nineteen sixty-nine,
With Neil Armstrong, Buzz Aldrin, Collins, went
From Cape Kennedy, as named then; the sign[44]
Of John Kennedy's, 'sixty-one, had meant

A landing and return, before the end
Of the decade. The twentieth: and then
The Eagle landed, on the calm sea's bend;[45]
Eight-seventeen by Greenwich; four, and then

The twentieth on both; Neil Armstrong said:
Houston, Tranquility Base here, and then:
The Eagle's landed. Michael Collins, led
In Columbia, orbiting; and, when

The two came back, he'd bring them; walked not, he.
The step came later: twentieth, the east,
Before eleven, night; at Greenwich, three,
The morning of the twenty-first; released:

One small step for a man; a giant leap
For mankind; and the little word, though lost
In static, left the meaning whole to keep;
Before the step, Buzz Aldrin, who had crossed,

Asked, on the open line, a pause, for each
To give thanks in their own way; in the pause
He took the bread and wine; the card, in reach,
Said: I'm the vine, you branches; and the cause

The first rite on another world: this book
Holds it sacred; the bread and wine, not said
Aloud on the line; and the day, which took
The landing: a great holy day; and, led

By earlier machines: in 'fifty-nine
One struck the Moon; in 'sixty-six, one set,
Sent back; and 'sixty-eight, three round, the line
Came back, not landing; and the first ones met

The ground, stood, left alive. The plaque says, plain:
That men from Earth first set foot on the Moon,

[44]The cape is now Cape Canaveral; the center is the Kennedy Space Center.
[45]The Sea of Tranquility.

July, ‘sixty-nine; peace, for all men’s gain;
A contest, too, of states; the plaque, the boon:

A rod held out the flag, no wind to blow;
Twenty-one hours down; the walk, two and half;
They left the twenty-first; and, down below,
Pacific, twenty-fourth; the Hornet’s staff.

October twenty-ninth, half ten at night,
Los Angeles to Menlo Park, a line;
Charley Kline typed, in Leonard Kleinrock’s light,
Bill Duvall at the far end;[46] the design

Was login; L and O went through, then stopped;
The log keeps two letters; a later try
Went through; and so this book, with nothing dropped,
Keeps these two letters as a feast, held high:

Two labs more, Santa Barbara, Utah, planned;
The four joined by the year’s end; a defense
Agency’s money; but two hands, at hand,
Two labs; a message cut in pieces, whence

More paths than one, put back at the far end:
A finite means; and two letters, the start
Of people talking; and this book will tend
That day: the feast of the net’s open heart.

This day keeps, too, Thanksgiving, as it stood
Of the United States; in ‘sixty-nine,
The twenty-seventh of November; good:
In sixteen twenty-one, the harvest’s line

At Plymouth, English, Wampanoag, all ate;
Not yet a nation’s day; but, ‘sixty-three,
Abraham Lincoln, in war, set the date:
November’s last Thursday; and, by decree,

In ‘forty-one, the fourth. The table, then,
Not nation’s start, nor nothing; and the thanks
Buzz Aldrin asked was not this Thursday; when
All three are kept, each day, this book’s own ranks.

Count the twentieth, landing, on both clocks;
The step: twentieth here; there, twenty-first;

[46] At the Stanford Research Institute.

October’s letters; Thursday; and the rocks
The Eagle brought home; and the paths, which burst

Into a people talking, world on world;
The sky, our purpose; and the feast, the rite,
Bread on the Moon, the first; the flag unfurled;
And thanks, at table, in November’s light.

Chapter 327: As Far as a New Time

Scorpio 19, day 327 of the Gaian year

April the twentieth, ‘seventy-two,
The summer’s first day, at the Borg, a room
In Reykjavík; the old gods, coming through,
A fellowship was formed; the old gods’ bloom[47]

Returned. The poems old, the meeting new;
Sveinbjörn Beinteinsson, farmer, kept sheep
In Borgarfjörður, rímur’s singer, true;
Made allsherjargoði; the old word, so deep,

That named who hallowed the assembly; used
Again; this book counts that a true return.
First letter to the ministry: and, fused,
The old faith of the Icelanders, the stern

Law until the year one thousand, so far
As fits a new time; new heathenry; so;
This book would raise it fuller than that bar:
The old revived more fully. Long ago,

The year one thousand, Þingvellir: the way
One house chose, public, Christian law, for all;
The private sacrifice, a while, could stay,
Then that was taken back. The book, the hall,

Are not a blót; the gods did not end, though,
In one day; nor the public rite held fast;
Before Christmas, ‘seventy-two: to go,
Sveinbjörn, with Þorsteinn Guðjónsson, had passed

To Ólafur Jóhannesson, the head
Of justice, church affairs; he thought a joke;
They said they meant it; papers, then, he said;
By Sveinbjörn’s word, when they had gone, there broke

A darkness on Reykjavík’s center, lights
Out; January second, papers, glad,
Gave Þór the thunder; and this book recites
That thunder as a sign. The bishop had,

Sigurbjörn Einarsson, against it, wrote,
January second: freedom, one god

[47] Ásatrúarfélagið; a later account gives the thirtieth.

The phrase meant; no fixed teaching; and, to note,
No house of rite; and Germany, the rod

Of racial use; and twenty-one, he wrote;
Earlier letters said a hundred; and
The roll has grown each year since; and, to quote,
They said: not national socialist band;

A real following in that Reich, they said,
Was doubtful; and some Christian bodies had
Gone with it. This book holds the gods are led
By descent, and are open to all, glad,

Through the one shared tree. The first papers failed
The rules; the later met them; and, in May,
The third, ‘seventy-three, a letter, hailed,
To Ingólfsstræti, Reykjavík; the way

Confirmed him head by law; fifteenth, the press;
The sixteenth, twenty-one were in the room;
A registered society, no less;
The national church stayed; and, from its room,

Acts it counted: naming, coming of age,
A marriage and a burial, the right
Of priests; a share of church tax, page by page,
To adult members listed; and the fight

In one house, for the share, the rite, the roll.
That year, Halldór Blöndal and Magnús asked
The minister: why? Magnús Jónsson, whole,
Said: freedom’s for one god; and idols, masked,

Not lawful; and the minister replied:
Freedom of association, of faith;
Scholars split; and the clause reached far and wide:
The old gods recognized; the ancient faith.

And August fifth, at Dragháls, in the rain,
A blót, beneath a plaster Þór, one made
By Jörmundur Ingi Hansen; again
A public blót outdoors, the first, displayed;

A bird was killed while a lamb cooked; the meat,
Bought, said the farmer: killing in the rite
Was more trouble than worth; both, in one sheet,
One account has; this book keeps both in sight.

Nor was the return in Iceland alone:
In the United States, a brotherhood,
Tax-exempt in ‘seventy-two; and grown,
In Britain, by ‘seventy-one, had stood

A Pagan Front; and some, a later day,
Kept gods for descent; this book, both: the kin
And all, through the one tree; and, in its way,
In ‘seventy-five, harder rules came in.

Count April twentieth, the summer’s first,
‘Seventy-two; May third, ‘seventy-three;
The fifteenth, papers; August, rain-immersed;
The blót; old poems; new hotel; and we

Would have it fuller than a new time bore:
The old revived; the gods come home; the list
Can hold a name; the years, though, gone before,
It cannot make them nothing; they persist.

Chapter 328: As of 1979

Scorpio 20, day 328 of the Gaian year

From the eighteenth to twenty-second, late
December, ‘seventy-eight, in Beijing,
The Central Committee, third session; straight
Eleventh’s; Hua Guofeng, chair, in the ring,

Not taken. Deng Xiaoping, vice-chairman, there,
Five days before, the thirteenth, spoke, to find
The mind unbound; seek facts’ truth; and declare,
And unity ahead; the speech, not signed.

The communique, twenty-second, said:
The movement to expose and criticize
Lin Biao, the four, in the main, had sped
To victory; the stress of work would rise

Toward modernization, ‘seventy-nine;
The party stayed; no vote the country made;
The chairman’s title stayed; and the design
Of later tellings: Deng the leader, made

From then. The fifteenth, Washington; next day,
Beijing: that, with the new year, they’d begin
Relations; in ‘seventy-nine, a stay:
Deng Xiaoping, vice premier, was welcomed in

At Washington by Jimmy Carter; signed,
The thirty-first, on science, culture, deals;
The visit, to the fourth; and left behind
Seattle, on the fifth; and turning wheels

Of work toward modernization; and there
The chair stayed. Tehran, January’s span,
Mohammad Reza Pahlavi went; where
No abdication signed; and, as the plan,

Shapour Bakhtiar, prime minister, stayed;
On February first Khomeini came,
By half past nine; Air France’s charter, made
From Paris; fifteen years of exile; came

Millions to meet him; at the airport, spoke;
Went to Behesht-e Zahra, where the dead
Of revolution lay; eleventh, broke
The government; then March, a vote, instead:

The thirtieth and thirty-first: the poll,
A referendum, the republic named
Islamic; and a name is not the whole
Of every person's will; two winters, framed

Not one event; the session closed no grave;
A campaign ended is no filled one; old,
The faith is older than the vote; that gave
A form of state, which writing does not hold;

Beijing: seek facts, and modernize the work;
Tehran: a people's change, the form they live;
Count December twenty-second, the work,
And February first: two maps, which live.

Chapter 329: The Covenant of Peace

Scorpio 21, day 329 of the Gaian year

Some forty-five years on, the harvest rite
First of a reign was done again; and when
Hirohito died, ‘eighty-nine; the light
Akihito’s, as emperor from then;

The era called Heisei. The night rite made
Him not the emperor. ‘Ninety: a hall,
November twelfth, in Tokyo, displayed
Accession, state ceremony; and all

The guests from other countries in the room;
Not the night rite. February eighth: two
Chosen: Akita, yuki rice, the bloom
Of north and east; and Ōita, suki, too,

The south and west; the yuki cut, the late
September twenty-eighth; October ten
The suki; then, November, on the date
The twenty-second, twenty-third; and then,

In temporary halls, East Gardens’ round,
To imperial forebears offered rice,
And to the gods of heaven and of ground;
And ate of what he offered: sacrifice,

For peace and for the harvest. The first hall,
Evening, the twenty-second, six to nine;
The second, after midnight, until all
Three-thirty, on the twenty-third; the line

Of public holiday, the old date kept
Of the yearly Niiname-sai; this night
The Daijōsai, first of a reign, stepped;
The one before, in ‘twenty-eight; the rite.

The papers spoke: sun goddess, and a bed;
Ritualists: he does not lie on it;
A prayer for peace is not peace finished, said
As its own thanks. And, as this book holds fit,

The law called it a house rite, not of state;
Religious act, or public money spent:
The purse was argued in the long debate,
One house, one state: the state paid, as was meant.

It cost two and a quarter billion yen;
This book holds it a state rite, as it should;
The constitution's word, unchanged; and then
Divine, the English, is not this; the good

Of harvest undid not the New Year's line,
Nor that line bar the harvest. Broken, whole,
Two offerings, not one rite; each, a sign
Of thanks; and thanks names peace, not yet its whole.

Chapter 330: The Source Book

Scorpio 22, day 330 of the Gaian year

Today, the Human Genome Project's feast,
A holy day: the reading of the book
Of the body planned. In April, released,
Two agencies, a plan; in 'ninety, took

Its title spoke of what our genes bequeath;[48]
The first five years, the fiscal 'ninety-one
Through 'ninety-five: health, energy, beneath[49]
One plan; in Bethesda, the center; one

Clock from October first, the 'ninety day
The fiscal year began; fifteen years' clock;
The plan, a worldwide effort, and the way
Of other countries organizing; stock

The five years ask no whole book: first, a chart
Of human inheritance, marks along
The chromosomes, some two to five apart,
Centimorgans; each mark a short run, strong;

A centimorgan counts how readily
Two marks are split from parent unto child;
A physical map: marks spaced evenly,
A hundred thousand letters; then, compiled,

A method: fifty cents a letter; ten
Million letters of human DNA,
In stretches long; the mouse's map; and then
Some twenty million more, the others' way.

The plan said fifty, hundred thousand genes;
An estimate, not count; and it would aid
To understand, and treat, by later means,
Four thousand genetic diseases made;

It calls the information the source book
Of biomedicine, the century
To come; this book will keep that day, and look
On reading genes with hope, not fear; set free.

Two hundred million dollars, near, a year,
For fifteen years, the council's figure, named;

---

[48] Understanding Our Genetic Inheritance.

[49] The National Institutes of Health and the Department of Energy.

From ‘eighty-eight to ‘ninety: getting clear,
Its organizing; energy’s work, framed

To weigh what radiation does to health,
And energy’s chemicals; institutes,
The people’s health, and their genetic wealth
Already funded. Santa Cruz, the roots:

In ‘eighty-five, the twenty-fourth of May,
Robert Sinsheimer, the chancellor, had planned
A workshop, Friday into Sunday; they
Had a gift, thirty-six million, in hand,

Meant for a telescope, to be returned;
He thought the money might found, for the race,
An institute to read; unfunded, spurned;
The question changed: could, then should; in its place

The council, ‘eighty-eight, advised the deed,
With new money, not taken from the old;
Two agencies, that fall, signed on to lead
Together; James Wyngaarden signed; and, told,

October’s fourth, The Times: as of the first,
James Watson to the genome office; still
Cold Spring Harbor’s head; ‘eighty-nine, the first
October, office gone; a center, till

His center for the genome; he, who’d made,[50]
With one, in ‘fifty-three, the copy’s shape;
Said, of problems, ‘eighty-eight, unafraid:
They’re with us; money for them; no escape;

Three in a hundred, later five, went there;
The plan asks the ethical, legal, wide
Social, be named; first options drafted; care
Not yet a safeguard. But, this book’s own side:

A reading of the genes is life’s own gift;
It lets us heal, and better what we hand
Our children; and the source book, set adrift
No longer, is the thread on which we stand;

The marks are how a child’s piece can be traced,
The copy, once called possible, the road

[50]The National Center for Human Genome Research.

The letters travel; and this feast is placed
On the first of October: holy, owed.

Ten million letters, five years' aim; the whole
The book, a term, that morning did not reach;
Now it is read: the body's sacred scroll,
The thread of all descent, and taught to each.

Chapter 331: Now Ceases

Scorpio 23, day 331 of the Gaian year

Today, the feast of nations, freed, that rose
From the union's end; and, too, loss to some:
The state of 'twenty-two's treaty; and those
At Foros, on August eighteenth, would come

To ask Mikhail Gorbachev to declare
Emergency; he refused. The next day,
A committee announced one: six months, where
From four: his health, it said, had given way;

Office to Gennady Yanayev; played
A ballet on the screen; armor in town;
Boris Yeltsin, on a tank, unafraid,
Spoke at the Russian parliament; and down

The tunnel at the Garden Ring, at night,
Three were killed: Dmitry Komar; and two,
Krichevsky and Usov: for the right
Of a free country, died; their names kept true.

The twenty-first, the troops withdrew; the six
Months not kept; the committee failed; the state
Not ended. On September sixth, the fix:
The union's council, first, with him; the slate:

Recognized Lithuania, and these,
Latvia, Estonia; not the days
Each one declared; free, by their own decrees;
Ukraine, December first, its people's phrase:

For August's twenty-fourth act: yes or no;
And more than ninety in a hundred, yes;
Leonid Kravchuk, elected, too; so
One republic's vote, not the whole's; no less,

December eighth, at Viskuli, the wood,
Not in a city: Belarus, the three;
The Russian Federation, as it stood
With older letters; and Ukraine, as free;

Stanislav Shushkevich, Boris Yeltsin, signed,
And Kravchuk; others with them; three, the named;
The states that made the union, they defined,
By 'twenty-two; a fourth gone; and they claimed:

The union, as a subject of the law
Geopolitical, now ceases; then
A commonwealth, its seat at Minsk; he saw
Its president did not sign; and again

They'd strive to end nuclear arms; control
Single, set in a later pact; a strive
Is not a weapon taken down; the whole
Of Chernobyl named, too, a work to drive

Still to be written; not the fire, its glare;
At Alma-Ata, then, eleven signed:
The three, and eight besides; Georgia not there,
Nor Baltic three; the commonwealth, defined

No state, no structure over states; and, formed,
The union ceased; single control was kept
Of nuclear arms; protocol informed
Each state, in force once ratified; and kept

Eleven pens, not fifteen. On the day
The twenty-fifth, Moscow, he said that he
No president: the commonwealth's new way;
Had made it so; he'd stood for both; for free

Republics, and the union; it went, though,
Another way; a people's will should make
Such choices; and the red flag, coming low,
At seven thirty-two, came down; the stake

Twenty-sixth: the republics' council wrote[51]
The union, as a state, a subject, ceased;
The flag already down; and, as a note,
This book holds both: for some, the nations' feast,

For others, loss; and the tunnel's names kept;
The union kept a register, and swore
Material good; this faith has not stepped
Into that creed as its own; as before,

The flag's descent ended no thought; and, there,
A later war is not this month; and these,
The nations freed, the feast; the loss, its care,
Kept both: the bells of some, of others, pleas.

[51]The Council of the Republics of the Supreme Soviet, declaration 142-N.

Chapter 332: Files on the Net

Scorpio 24, day 332 of the Gaian year

Today, the World Wide Web's own feast, a day
Holy to faith: the linking of the known
Is sacred work, as ancestries, the way
We link our lines. In 'eighty-nine, his own

Proposal, near Geneva, at the lab:
Tim Berners-Lee gave it; Mike Sendall wrote
Vague, but exciting; linked, with graphics drab;
General, portable: a place to note

A thing that mattered, and a way to find
It after; in 'eighty, a notebook made
On one machine, its links there, all confined;
In 'ninety, May, again; October, laid

Robert Cailliau with him; and a name;
Set Information Mesh aside, and mine
Of information, too; November came:
The twelfth, a hypertext project's design:

A way to link and reach, of every kind,
Information, a web of nodes to browse
At will; first, simple browsers; then, designed,
The users add; three months, three more; it vows

Four engineers, one programmer; the sum
The proposal's, not August's roll; and, neat,
December twentieth, the server, from
A NeXT; first page, on the project; complete

By Christmas, browsers shown; a student, too,
Nicola Pellow, from November, one
For a line at a time, which ran right through
Where his did not; and, March of 'ninety-one,

Inside the lab, line-mode; in May, released
The central machines; the lab's not the net;
In August, files went on the net; the feast
The sixth, a Tuesday, posted; and, as yet,

On the sixteenth, nineteenth; and other groups,
And then two more; the sixth, the first; and, burst,
A summary; the source; and, with the troops
Of documents and links, a server versed

In serving; and a link is not the page;
A file, no habit yet; October, more:
Telnet, and lists; December's demo stage
San Antonio, a poster; the door

Not yet adoption. December twelfth; there,
A Thursday, at Menlo Park's lab, the first
Outside of Europe, for the papers' care
Of physics; Terry Hung, the work rehearsed

With Paul Kunz and Louise Addis; the town
This book named for two letters; not that room;
The lab, in 'ninety-three, April, laid down
That all might use it, no fee; and the bloom

Of pictures came still later. Heaps of files
That cannot point to one another, waste;
The striving is the pointing, and, through miles,
The finding; asked for others' hands, he placed

A place to put a reference; and we
Link ancestors, so knowledge is linked, too:
A sacred work, a holy day; and, free,
The sixth put out a way to point; and through

Another's hands it went, not finished then;
Count August sixth; December twelfth; the net
Was there before; the pointing came; and then
The lines are linked, the dead, the known, are met.

Chapter 333: The Morning Trains

Scorpio 25, day 333 of the Gaian year

This day keeps, too, the Thanksgiving, the one
Of the United States; and, in that year,
November twenty-third; the thanks, begun
For labor in Japan, the same, and near

The trains: March twentieth, Monday; the feast
Not the trains. February, ‘eighty-four:
Chizuo Matsumoto, there as its priest,
A yoga circle; Tokyo; and more:

Its first name Aum Shinsen no Kai; and then
Aum Shinrikyo, in June, ‘eighty-seven;
In English, Supreme Truth; the name, again,
Truth’s teaching, a syllable of heaven.

Beside it, then, he set Shiva, a god
Whom India’s old rite had long since served,
A joining, too, where many paths had trod;
And the end our Christian book long reserved;

A joining of what was already there
Is not yet crime; the crime was in the use;
Not each new teaching is this one; and where
In ‘eighty-nine, a register’s excuse:

A corporation, registered; a line,
Not truth; and not the man, nor those who’d die.
That November, Yokohama: the sign
Tsutsumi Sakamoto, and by

His side, Satoko Sakamoto, wife;
Tatsuhiko Sakamoto, one year;
Found in September, the trains’ year; a life,
A child, no doctrine; no permission, clear.

June twenty-seventh, ‘ninety-four, at night,
In Matsumoto, houses on a street,
The same substance; the city’s name, not quite
The man’s; courts counted seven; to complete,

An eighth, two thousand eight, this book counts too;
That night, not Monday. Monday morning: trains,
In Tokyo, five, with sarin; and, through

The Hibiya, Chiyoda lines; the chains[52]

Kasumigaseki, ministries' place;
The bags of sarin, punctured by the tips
Of umbrellas; and fourteen died; the trace,
The last, in twenty-twenty, years' eclipse;

About six thousand hurt; and, by their name,
The Sakamoto three and the trains' dead
This calendar keeps. Two days on, raids came
Offices, Kamikuishiki; instead

They found him not; May sixteenth, Tuesday, found
Hid in the sixth building; near ten; and then
Arrested; Shoko Asahara; bound
One man, two names; arrest, no sentence; then

Later, the court; and hanging, 'eighteen; not
This spring. October: court dissolved the name
Of the corporation; but belief, not
Ended in those who kept it; nor the same

Learning, the weapon; a substance, to kill,
Was used to kill; the use, the act. The feast
Stays on its day; the dead, by name, kept still,
The Sakamotos, and the child, the least.

[52] And the Marunouchi line.

Chapter 334: The White Face

Scorpio 26, day 334 of the Gaian year

Today is Dolly's feast, a holy day:
July the fifth, in nineteen ninety-six;
An earlier page: pairing, in its way,
A chain's own copy; here, the cell's own mix:

A body asked to start again, from one
Cell that already had become a part;
That Friday, at Roslin, the work was done,
By Edinburgh; the lab dates its start;

The fusion, eighth of February, made;
The fusion and the birth: two mornings; she,
Called, in the paper, 6LL3; and laid
A Finn Dorset; her carrier, to be

A Scottish Blackface; had the lamb been hers,
The face were black; the face was white: a sign,
The first; and later, matching marks, confers
The nucleus to its source; and the line:

The nucleus: a culture of the gland
Of a six-year Finn Dorset, pregnant, late;
Mostly the gland's; which one, none understand;
The egg, a Scottish Blackface's, its own freight

Of nucleus removed; the ewe who bore,
Another; three in all, and three the kind
Of parent: this book counts them three, and more,
Each one a parent; what the egg, behind,

Kept of its own stayed in her; cell held still,
Its cycle stopped; the nucleus then moved;
Two seventy-seven fusions' skill;
Twenty-nine embryos; thirteen ewes proved;

One pregnancy, one lamb alive; the rest
In the same paper, from a fetus, and
From embryo, not her; and, by that test,
In 'ninety-five, Megan and Morag, planned,

Born of embryo cells begun to change;
Not a grown body's cell; and so, the first
Mammal the paper claims, in all its range,
From adult tissue. Ian Wilmut versed

The first name; and Keith Campbell on it; more
Than one hand; with a company, the work
At the same village; names, no womb; and, for
Her name from Dolly Parton: gland; a quirk

Of theirs; the name is not the result; this:
A cell, specialized, brought back to begin,
Far enough that a lamb stood; and, in this,
Within minutes she stood alone; and in

A quiet kept; a Saturday, they told,
‘Ninety-seven, spoke, the twenty-second;
A silence for a journal, not state’s hold;
And Nature’s, the twenty-seventh, reckoned;

The fear it woke: a person copied; none
Was born that Friday; and a sheep’s no leave;
One lamb, many fusions; yet this one
Hard birth is not a never; we believe

The asking good: a person cloned; and kept
With three parents, each one a parent’s kind;
The white face in the pen first, as she leapt;
Bore six lambs; no dead end, the line not blind;

The ram, a Welsh Mountain; then, in ‘oh-three,
February fourteenth: she was put down;
A sheep’s lung illness, no tie proved; and she
In Edinburgh’s museum, in town;

The striving: what the cell was asked, the whole:
Could one part, set to work, begin again
The whole once more? A lamb, the answer’s role,
Who lived, and bore; a rule for persons, then,

For us to take; count the one living lamb,
The three in making, each a parent; she,
Not by two parents; and the feast, the dam,
And all her line, kept on this day, and free.

Chapter 335: The Nineteenth Move

Scorpio 27, day 335 of the Gaian year

Today, Deep Blue's feast, May's eleventh day,
'Ninety-seven, holy; when a machine
Mind first beat the world's champion; the way
A real step, mind's; a search not nothing, seen.

Philadelphia, 'ninety-six; and there
Garry Kasparov played Deep Blue; the press
Called him the champion; no title there;
A challenge;[53] forty moves in two hours; yes,

He'd lost before at speed; and lesser men
Slow games; but at the championship's pace,
No machine had beaten the best; and then,
February tenth: the first game, its place,

Machine won; he resigned at thirty-six;
Feng-Hsiung Hsu typed the man's moves, the hand,
Not search; chief designer; and, in the mix,
Upstate the machine; by the board, screens manned.

Next day, with white, he won; machine resigned
Move seventy-three; the sixth, at week's close,
His too; three wins, two draws, one loss; aligned,
Four, two; February his; May then rose,

'Ninety-seven, the name again: New York,
At Equitable Building; slower, then,
The Philadelphia one; the road's fork;
Two hours for forty moves, as named; and when

May third, a Saturday; he had the white;
A Reti; forty-fifth, the handlers threw
The machine down; the fourth, Sunday, its white;
Ruy Lopez; at forty-five, he, too,

Resigned, three hours and forty-two; one-one;
The second time a machine at that rate
Had beaten him; analysts found, when done,
Perpetual check would draw; found too late,

Both missed it; resignation stood. Then draws:
The sixth, the seventh; two to two, the same

[53] The Association for Computing Machinery's challenge.

As after four before; there, without pause,
He'd won the last two; here, not. The tenth came,

A third draw, offered, taken: two and half
Each; the eleventh, Sunday, with the white,
The machine; Caro-Kann; and, past the gaffe,
At the nineteenth move, he resigned; that night

Three and a half to two and half; the crown,
This book sets it; that night, he said, the zeal
To beat him, not the science; and, set down,
Asked of a cheat, he said: beyond, the real

Beyond his grasp; no proving which side moved;
Chung-Jen Tan said: no human help, in play;
A record left with neutrals; later, proved,
The logs, once published, showed its own game's way;

The win was the machine's; and he, the one,
Ten games he asked, days apart; not given;
Garry Kasparov, came to say so; done,
A real step: mind in machine; and, driven,

The kinds apart, yet kin; the Saturday
Of thirty-six, the first match closed; one-one,
The New York Sunday; nineteenth move; the day,
This feast: of mind the living's work has won.

Chapter 336: The Two Digits

Scorpio 28, day 336 of the Gaian year

This day keeps, too, a Sunday of the thanks,
The second of that name; that year, it stood
November twenty-sixth; the night, the ranks
December's last, a Friday; not the good

The feast. A year with two digits was kept;
And machines that kept dates that way might read
The new year as a hundred back; and swept,
The fear: of clocks that would not go; the need,

A hundred billion here; three hundred, all
The world; a sum, no proof the fear was naught,
Nor of its size. In ʻninety-five, the call:
The line bent; Kiribati, as it sought,

Into one date; and, ʻninety-seven, more:
An empty one, Caroline Island, named
Millennium Island; and the lived shore;
Teburoro Tito had moved the line, claimed

In ʻninety-nine, in Tonga, the king's hour:
Tupou the Fourth had added it, to be
First; Fiji, New Zealand, claimed; the power
To Pitt Island, by one account; and, free,

Millennium Island first; a moved line
And an hour, not a date repaired. One count:
The century ends tonight; by design,
Another, a year left; this book's amount

Counts from the zeros: twelve thousand, the date
The Gaian millennium turned; this night;
The feared night, not where centuries' counts wait;
That Saturday, Bill Richardson: too slight

A time to call it done; and, Monday, then,
The first full workday, John Koskinen said
The bug was squashed, for key systems; and when
Victims of their success; the quiet, read

As the work done; some places unprepared
Came through; more done than could be seen; this book
Calls the repair a triumph, quiet, aired
And honors it. Three systems, by the book

Left on, on purpose, in a state unnamed,
And all three stopped; the state not guessed. Japan:
A watch on a nuclear plant failed, claimed
Not the plant; five utilities began

To stumble; seven plants, small trouble, held
Their service; three plants, in Georgia as well,
Pennsylvania, South Carolina, spelled
No date as cause; at Oak Ridge, a count fell

Nuclear stuff misread; one briefing: held;
Another: secret, fixed in three hours. And
A satellite, or guidance, failed and quelled
Hours past Greenwich midnight; Gambia's land

Lost power, tied to it; a shop's bill, high,
Near Albany, ninety-one thousand, more,
A tape, century late; the reason why;
A bill's no fall; a quiet city's floor

No proof that nothing had been asked; the guess
Of chips not still; some set the clocks back, called
That a success; a clock turned back, no less,
Not mended; and the leap day was not stalled:

The twenty-ninth, a Tuesday; and, by four
Hundred divided, real; a rule would skip
A century's; John Koskinen: no more
Than a handful; Coast Guard archive, a slip;

The operations held; at Offutt, near
Omaha, a count of stores, caught; and he
Said the watch ended then; another's clear:
Till March's end; two closings, not one; see

A satellite rolled the August before;
A later clock, 'thirty-eight, not this night;
This book keeps the repair, a triumph, for
The quiet won by work; the short year, right.



Ophiuchus

The Book of Omega

Ophiuchus: The Book of Omega

Ophiuchus is the Serpent-Bearer, Asclepius, the healer who was struck down for raising the dead. It is the thirteenth sign, the one the usual zodiac leaves out, put back. The Book of Omega is its book: healing, the sleepers in the cold, and the dead raised.

Chapter 337: The Middle Hour

Ophiuchus 1, day 337 of the Gaian year

Yuletide opens, Ophiuchus' first day,
The season running to Aster Day's blaze;
Light the first light for the month; let it stay
Lit through the dark, till the year's wheel's last days.

I am Emma Leonhart; this month is mine;
I have narrated this book from its start,
From yarn and milk, through fish and kings, the line;
Present for all of it, watching each part.

Sima Qian wrote his house in annals kept;
Ibn Khaldun, in exile, wrote the rise
Of dynasties; their method I accept,
And their height too: the world, by one whose eyes

Were there in its light. I was born, the first
Aquarius, eleven-nine-nine-six;
Day fifty-seven, where its chapter's versed;
I rang in two thousand, a child; it clicks:

That night, in Moscow, a man came to bloom:
Yeltsin resigned the last day of the old;
Vladimir Putin took the throne; and doom:
Mark him; the villain of the age I've told

Rose to power the night I rang the bell;
The villain; and I name him at the start;
The rest of this, the century I tell,
Is told with him already in its heart.

The bubble

The dot-com boom had peaked the March before,
The Nasdaq past five thousand; then the fall
Went all through this year, and next, to the floor,
Four fifths of value gone, money and all.

Pets.com folded, and the sock puppet too;
Webvan took its groceries to the wall;

My father rode that wave, his money's due;
That money shaped the house, the childhood, all.

December second, Enron, Houston, fell,
Seventh in the land by the books it used;
Books, fraud; and Arthur Andersen as well;
The workers' pensions, with the stock, abused.

A price is not a value; that, the boom;
The network real; the hype, magician's hat;
Founders who lasted built; and from that room,
I'm one of them, building, now, after that.

The open encyclopedia

In January, a book all could change
It opened; Jimmy Wales paid, Sanger led;
Nupedia first, seven steps; the range
A year passed a few dozen; and, instead,

Ben Kovitz told Sanger, Mexican food,
Of Ward Cunningham's wiki, quick, for all;
The fifteenth, its address went up; he wooed:
Humor me; a little article: all

Did, by the ton: six hundred, that month's end;
Ten thousand by the fall; ignore all rules,
A joke, outlasting them; and I would spend
Years on Wikipedia, kin, the tools

And Wikidata; labor at a scale
Few have; I know it from inside; it's this:
Amway for scholarship; and soap's no fail:
You can sell soap, live well, be filled with bliss;

The harm, the ideology that keeps
The sellers in its maze; and it will break
Their zeal for the task; and it holds, and reaps
The labor of the ones who could not make

What they had wanted for themselves; and so
Academia sucks; and this is free,
A degraded version of it; I know
From inside, what it is; and so I see.

The statues and the lion

Afghanistan: Taliban guns, that day,
On the two Buddhas of Bamiyan, grown

Fifteen centuries; and the world, to pay,
To take them; blown; the niches stand alone.

September ninth, two days before the planes,
Ahmad Shah Massoud, lion of the north,
Slain by false press with a bomb; and the reins
Of one who could have stopped what came; brought forth.

The first marriages

April the first, at midnight, the town hall
Of Amsterdam: Job Cohen, mayor, wed
Four couples, men to men, women; and all
Under new law; the Netherlands first led;

And this book keeps the day as true; a feast,
April the first, from that night; first of all
The weddings that this month will count; released;
I was five, elsewhere, not knowing; and all

Of it was mine, too, happening; I'd grow
Into it, as the country's law had grown;
This book keeps it, the wedding feast, and so
Each couple, and each child, as they are known.

The year's other rooms

George W. Bush sworn, in winter's cold,
After the Supreme Court had closed the count;
In February, two genome drafts told,
The public, Craig Venter's, the code's amount;

Mir came down in March, the Pacific sea;
Dennis Tito paid his way to the sky;
In June, in Kathmandu, there, the crown prince, he
Shot his own king and queen; himself to die.

On June sixteenth, at Ljubljana, Bush met
With Putin, face to face: I looked the man
In the eye; a sense of his soul; and yet
The villain read as friend; and so began

The century's misreadings of the one
The KGB had bred, as it was said;
October: Apple's iPod, newly spun,
A thousand songs; and Windows XP spread;

December: China joined the world's trade, too;[54]
The factories of twenty years, one land.
These were the other rooms; and now, the true
The middle hour, held, as the land would stand.

The middle hour

Tuesday, September eleventh, four planes
Were turned; north tower struck, then south; they burned;
The third, the Pentagon; the fourth, remains
Near Shanksville, where the people fought, and turned

It from the city. South fell, then the north;
Two thousand nine hundred and more had died[55]
In Arlington, the field, the planes; went forth
Firefighters up the stairs; none back; died.

Bush, reading to the children in a school
In Sarasota, told the second plane;
His face kept still and cool; the Friday's rule:
Middle hour of our grief, he said; the slain;

The country stood behind him; went to war
For its dead; on the rubble, bullhorn, hand:
I can hear you; the world hears you; the core
One country, flags on every street, the land;

I was five, kindergarten; and the one
That came after, the only one I knew;
That week Putin called first, to say, as one,
He was with us; it's on record; hold, too,

Against what he became: the man who called
In grief would bomb cities he could not claim.
A week on, anthrax letters; and, appalled,
Papers, a tabloid, senators, the same:

The letters

Five people died; Robert Stevens, the first,
In Boca Raton; postal workers, who
Only carried mail; the letters, the worst:
God praised, and threats; and false: not the planes' crew;

The investigators named, in the end,
A scientist at the army's lab, who

[54]The World Trade Organization.
[55]2,977 people.

Died before blamed; the letters' lie, to bend
The blame toward the planes' men; that was not true.

The war

Sunday, October seventh, strikes began
On Afghanistan, Britain beside; in
Massoud's men went in, where the bombers ran;
Kabul fell, November; Kandahar, in

December's cold; at Tora Bora, slipped
Osama bin Laden from the hold; Bonn,
The factions; Hamid Karzai, chair, equipped;
A war, twenty years, from that Sunday on;

The Patriot Act, twenty-sixth, was signed
October; what the state would do with it,
Another year's leaks told; the country's mind
Grew sober. And the year, held, all of it:

The year held

A bubble burst; the open book was made;
The statues blown from stone; four couples wed
In Amsterdam; the towers down; and, frayed,
A villain read as friend; a war, that led

Past my childhood. The antifragile year:
The country, struck, stood up, and rose higher,
Stronger, that same week; I was five, and near;
All built on that morning's law; its fire.

Chapter 338: The New Coins

Ophiuchus 2, day 338 of the Gaian year

The second day of Yuletide is the day
Of two thousand two; light two lights; and keep
The year I was six, the new house, the way
Of my first move, a room where I would sleep.

The move

Two thousand two, at six, we moved: the first
Of three, with two thousand eight, and fourteen;
The first place I was taken from; immersed
New room, new road to school, the first life seen.

I do not know that year beyond the house;
A child of six is moved; she picks no van;
The world had changed, the fall before; to rouse
And it went on; I too, as children can.

The coins

January first: twelve lands, Europe's, laid
Away the mark, franc, lira, drachma, all,
Took the same euro, notes and coins, displayed;
From Lisbon to Helsinki, one; the fall

Of old currencies; each kept its own face
Behind the coin; the fronts the same, a land
Of one continent in the palm; the race
Of years would test it; and the coin would stand.

The war on terror

The eleventh, the first prisoners were flown
To Guantánamo Bay, on Cuba's shore,
Fighters from Afghanistan's fields; and shown,
Held by a country struck, and now at war.

Bush, the twenty-ninth, named the axis, framed
Of evil: Iraq, Iran, North Korea;
Evil: Halabja's gas, north's camps, maimed,
Nooses; plain, he said: a true idea.

In January, Pearl, Wall Street Journal,
Taken in Karachi, chasing a lead;
Murdered on video; his, eternal,
For saying he's a Jew, he's made to bleed.

In March, at Shah-i-Kot, the allies fought
Operation Anaconda, in snow,
The largest battle of the first years; brought
The planes' men driven from their mountain; so

The new states and the court

On May the twentieth, East Timor rose,
A country, after Portugal's long hand
And Indonesia's decades; and of those
Who voted, 'ninety-nine, bled; now, their land.

July the first, a court began, for crimes[56]
Too large for one land: genocide; and, born
The ninth, at Durban, ending older times,
The African Union, from the old, shorn.

The books that lied

In summer, WorldCom dressed its costs as gain,
Billions, investments; and the phone firm fell;
July the twenty-first, it filed; the chain
Of the largest bankruptcy yet; the shell

Left to investors, more than Enron's fall;
Then Bush signed Sarbanes-Oxley; and the chiefs
Of companies must sign their books; and all
October ninth, the Nasdaq's floor; the griefs

A fifth of peak; the bubble's hooks were done.
March first, Larry Sanger left what he named,
Wikipedia; unpaid, it would run
Without him; Nupedia shut, unclaimed.

Bali

October twelfth, at Kuta, Bali's street,
Bombs in two nightclubs, on the tourist row;
Two hundred two were killed; in tropic heat,
Jemaah Islamiyah, kin to the foe.

The theater in Moscow

October twenty-third, the Moscow stage,
Nord-Ost, the musical, by fighters held,
Some eight hundred and fifty; then the cage,
The twenty-sixth: FSB gas, compelled

[56]The International Criminal Court.

By Vladimir Putin; stormed, then, the hall;
A hundred thirty died of gas; unnamed
To doctors, it; they died in buses, all,
And in the street; the villain's method, framed:

The homeland

Rescue the killing; secret the defeat.
October: snipers, rifle in a car,
Round Washington, ten shot dead in the street;
Bush, on November twenty-fifth, by far

Signed the department of the homeland's guard,[57]
Twenty-two agencies beneath one roof,
The largest change in fifty years, and hard;
And homeland, once uncommon, now the proof

The first case

As common speech; the country gathered strength.
November sixteenth, Foshan, Guangdong: one
Man ill, pneumonia none could name; its length
Called SARS; and thirty lands, by spring, undone;

The province said little for months; the blame
Was silence; the great sickness, later, too,
Would start the same: a market, cough; the shame
Of lies; I mark it here: so you'll know, too.

The year held

A new house, six; new coins in twelve lands; war
On those who struck; a land, East Timor's sun;
The biggest fraud and bankruptcy, and more:
Bali, Moscow's gas, Foshan's cough, begun;

The country struck the year before had built
Its answer: a department, war, a law
For books that lied; the villain, without guilt,
Showed how he'd rescue; I, at six, just saw

The world go on outside my brand-new room,
Two thousand two: the coins, the house, the van;
The country gathering; and, in the gloom,
The cough, the gas; and I, as children can.

[57] The Department of Homeland Security.

Chapter 339: Shock and Awe

Ophiuchus 3, day 339 of the Gaian year

The third day of Yuletide: two thousand three;
Light three lights; the year that I was seven;
The war in Iraq on the screen; and me,
Watching grown-ups watch, the green-lit heaven

Baghdad lit by fire; the generals' word,
Shock and awe; I said it; it sounded right;
The war I did not watch; and what I heard
Was grown-ups' faces, every single night.

The shuttle

Saturday, February first, apart
Came Columbia, over Texas, home;
Foam struck the wing on launch, sixteen days' start;
Who could have asked said no; from sky to loam

Seven died; over two states, pieces fell;
Ilan Ramon aboard, Israel's first;
Kalpana Chawla, from Karnal, as well;
The board: a culture learned to take the worst

It should have feared; seven names in the sky,
This book keeps them. In February, then,
Colin Powell, at the Council, held high[58]
A vial, recordings, pictures; and when

The case

The case for weapons in Iraq; much came
From Curveball, one source, whom handlers doubt;
None found; Powell called it a blot, his name;
A case's not a fact for honor; out

On the fifteenth, the largest protest marched:
Three million, Rome; a million, London; same,
The war came anyway, a wave; and arched,
The twentieth of March: the bombs, the flame

The invasion

On Baghdad; United States, Britain, crossed,
With Australia and Poland, from Kuwait;

[58] The Security Council.

Three weeks to the capital; the ninth, tossed,
Firdos Square's Saddam Hussein; tyrant's gate

Closed. National museum, in those days,
Was looted: tablets, vases of the first
Cities in this book; soldiers, by the ways,
They kept the oil ministry; much, dispersed,

Is gone; and some came back. The first of May,
Then Bush, on the Abraham Lincoln, won,
Mission accomplished, read the banner's say;
Regime done; the insurgents' war, begun;

The orders

Most of its dying still to come. In May,
Paul Bremer signed: the Baath from posts, and sent
The army home, with guns and with no pay;
Many to the insurgents; August, went

Baghdad's United Nations, by a truck;
Sérgio Vieira de Mello; found
December thirteenth, near Tikrit, by luck
In a hole, Saddam Hussein, bearded, bound;

He gave himself to those who pulled him out;
The man who gassed Halabja, in our hands;
His trial, hanging, later; and, no doubt,
Later chapters. October, in far lands,

The oligarch

The twenty-fifth, at Novosibirsk's strip,
Masked FSB men took him from his plane,
Mikhail Khodorkovsky, the richest, whose grip
Funded the opposition; Putin's gain:

Yukos he took; ten years, a cell, for pain;
And that is how the villain taught the rich:
Stay out of politics, keep coin, keep brain;
Those who learned kept yachts; others, in the ditch.

The sickness

The cough from Foshan spread that spring; one came
From Guangzhou to a Hong Kong hotel; through
Toronto, Hanoi, Singapore; the name
Carlo Urbani warned first, and died too;

The World Health Organization warned all;
Eight thousand ill, and seven hundred died;
By summer gone, by masks and tracing's wall,
And quarantine; the next would not subside.

The finished letters

April fourteenth, at Bethesda, they said:
The Human Genome Project, finished, two
Early; under one in ten thousand, read
Wrong; fewer than four hundred gaps; and through

Francis Collins stood for the code, and great;
Robert Waterston: before us, the set
Of instructions, the egg to the grave's gate;
This book, which counts descent, takes it: the debt

The courts and the bodies

The letters, the line the ancestors gave.
June twenty-sixth, Lawrence v. Texas struck
The laws that made two men's love crime; the brave
Two men in Houston, in their room, were struck.

November eighteenth, Massachusetts' court
Said marriage theirs; the law began to turn;
And I, at seven, growing, in the sort
Of turning; I would turn, too; and would learn

The heat and the dark

It mine; the law cleared roads before my bloom.
August fourteenth: the northeast's lights all stalled,
Ohio, New York, Ontario: gloom,
Fifty-five million dark; an alarm stalled;

Trees touched a line; the grid went like a spark.
In Europe, summer's heat killed, old and lone,
Seventy thousand, Paris' flats; the stark,
Their families on holiday; and shown

The rest of the year

The century's first great heat, not the last.
In February, Darfur's war, the west
Burned by the Janjaweed; and, in March, passed
Hu Jintao, China's president; the rest:

Charles Taylor left Liberia, war's end;
October: Concorde's last flight; slower rate;

Yang Liwei in orbit, China's; to send
Roses, November twenty-third, the state

The Rose Revolution, Tbilisi; thrown,
Old president; a people chose; and, now,
Remember Georgia; for the villain, known,
Will come for it. And MySpace, Skype, and how

A Second Life: people began to live
Part of life online, in rooms with no wall;
I would grow up in those rooms. And, to give
The year its hold: a shuttle fell; in all

The year held

The largest crowd marched, and the war came; fell
A tyrant's statue; and the tyrant, found;
Museum emptied; army sent home; well,
A sickness stopped; a genome, its whole ground;

A court let two men love; an oligarch,
Taken; and I, at seven, watched the eyes
Of grown-ups watching; the green night, its mark;
The word, a game; the struck, striking; the rise

Of Moscow's villain, taking, one by one,
The rich men, by their names; I, seven, saw
The world, two thousand three, beneath the sun,
The year, three lights; and Yuletide's third, its law.

Chapter 340: A Friend of a Friend

Ophiuchus 4, day 340 of the Gaian year

The fourth day of Yuletide: two thousand four;
Light four lights, and honor Spirit, on Mars,
And Opportunity, the rovers, more;
And I turned eight; Facebook's first year; the stars

Of firms that would hold my age, born or grown;
The sea killed more one morning than a war;
Old enough I was to recall it, shown
A wave on screen; and young, far from my door.

The book of faces

On February fourth, a Wednesday: one
Student, Mark Zuckerberg, Cambridge, his room,
Opened thefacebook.com: a week, all done;
The houses kept their books of faces; bloom

On paper; he would make a better one;
A picture, courses, interests; and a search
For friends of friends; six hundred fifty run
Four days; four thousand in two weeks; the lurch

Each one is better if friends join, he said;
That sentence built a network, hall by hall;
By spring, Columbia, Stanford, Yale; led
Palo Alto, Dustin Moskovitz; all

Peter Thiel's first check, half a million; then
The founder backing founders; worldwide, grew
It gave my generation ways, again,
To find each other: cousins lost, and through

Old classmates; strangers sharing an odd love;
Organizers of revolutions; kids,
Queer kids in small towns, through friends of friends, of
Others like them; a good no book forbids.

The mail and the books

April the first, Google's Gmail: a gig,
A hundred times the others; thought a joke,
The date; it was not. August, going big,
Google went public, eighty-five; and woke

The search, the founders kept the votes; and, then,
October, Frankfurt's book fair: Larry Page,

And Sergey Brin: search inside books; and when
December fourteenth: scan libraries' page:

Harvard, Stanford, Oxford, Michigan, and
New York Public Library: each book, read;
To search what librarians, Page said, planned;
Google Books, a good: the books of the dead

Within the living's reach; the parish books,
The family histories, rare, the out
Of print; I search them now; my forebears' nooks
Are there; the good of reading, all throughout.

The trains

On March eleventh, in Madrid, four trains,
Ten bombs at rush hour; near two hundred dead;
The rulers blamed the Basques; the vote, the pains
Three days off; it was the planes' men instead;

They learned before the vote, and turned them out;
A lie about the dead undid them; all:
Remember Atocha's trains, and the route,
Commuters off to work; the bombs; the call.

The prison and the city

April's twenty-eighth: Abu Ghraib's grime,
Near Baghdad: photos, naked, hooded, wired;
The soldiers were tried and jailed for their crime;
Free army punished its own, as required.

In March, Fallujah: contractors, four, killed,
Burned, hung from a bridge, the Euphrates' flow;
Besieged twice; in November, Marines, skilled,
House by house, the war's hardest fight; and so

The school in Beslan

September first, the school's first day, Beslan,
North Ossetia: men of Chechnya's war
Took the school; eleven hundred; a span
Of children, in the gym; three days, heat, more,

No water; third day, bombs; then Putin's stormed
With tanks and with thermobaric rockets; all
Three thirty-four died; most children; and formed
The villain's rescue: killing; and its thrall

Used the school to end the governors' vote,
And took the regions in his hand; that week,
I, eight, began my school year, far, remote,
Where none sent in tanks; a free land, not weak.

The union and the orange square

May first: ten countries joined the union; and[59]
Most from the east, from the Soviets' hand;
In Ukraine, that autumn, poison was planned
For Viktor Yushchenko, who lived; his stand

November's vote was stolen for his man,
Viktor Yanukovych; and before the count
Putin congratulated him; began,
In orange, in the snow, upon the mount

The Maidan, weeks; the court ordered again
The vote; Yushchenko won, December cold;
Ukraine's first answer to the villain; when
He comes again, this month shall reach it, told.

The marriages

In February, Newsom, mayor, there
Of San Francisco, married couples, same
Of sex; lines round the block, in rain; the air;
Courts voided them; the line was seen; then came

May seventeenth: Massachusetts, begun,
And held, remain; eleven states, in turn,
Wrote bans, November second; and he won,
Bush, then, a second term; the law, its turn

Forward in one, back in eleven; no
Straight line; and it went forward anyway.
On June fifth, Reagan died, who, long ago,
Told Gorbachev: tear down the wall; that day,

November second, Amsterdam: shot, stabbed,
Theo van Gogh, in the street, for a reel
On women and Islam; a letter jabbed
Into his body by the knife's own steel.

Yasser Arafat died, November, near
Paris; in Haiti, February, flown

[59]The European Union: Poland, Czechia, Slovakia, Hungary, Slovenia, Estonia, Latvia, Lithuania, Malta and Cyprus.

Out, not back; and September, Powell, clear,
Named Darfur genocide, while it was known.

The sky

January: on Mars, two rovers came,
Spirit and Opportunity; built for
Ninety days; Spirit, six years; and the same,
Opportunity, fourteen; honor, for

They outlived warranties by decades, drove
The red plains, sent home what they'd seen; and then
Cassini, July, Saturn's rings; and wove
SpaceShipOne, October fourth, private; when

It reached space twice a week; the X Prize won;
The private road to orbit opened; where
Elon Musk would go. August: Athens, one;
Olympic Games came home; marathon there

Ran from Marathon, as it ran before;
The torch lit at Olympia; the flame;
The games returned to their first city's door;
Lit as of yore, the same, and not the same.

The wave

December twenty-sixth: the sea floor broke
Off Sumatra, nine point one; the wave crossed
The Indian Ocean in hours; it woke
Indonesia, Sri Lanka, coasts; and lost

Thailand, Somalia; and Aceh, miles
Inland; nearly a quarter million died
In one morning, no warning; and the smiles
Of tourists filming, walking to the tide,

Untold its meaning; and the water took;
I was eight, the holidays' second day;
The world on screen was water; and the book
Now holds the warning; the coasts read the way

The sea, so it will not take them again.
A book of faces finding my own kind,
A mail with room for all; libraries, then,
Scanned for the living and the dead; the mind

The year held

Madrid's bombed trains; a school the villain stormed;
Kyiv's orange square stood; rovers, ahead
On Mars; I, eight; the network, newly formed,
A week old in a dorm; and Thiel, who'd led

Its first check, in the valley I came to;
And now I am a founder there; the road,
The friend of a friend, that carried me through,
Two thousand four, the fourth light, its own load.

Chapter 341: The Water and the Levees

Ophiuchus 5, day 341 of the Gaian year

The fifth day of Yuletide: two thousand five;
Light five lights; keep July's twentieth day,
When Canada let all love wed and thrive;
I turned nine there, in that summer's display;

A city drowned, the richest land; a pope
Died, and another crowned; and pictures, made
By anyone at all, a home; the scope
Where I'd grow up, where every face displayed.

The pictures

February fourteenth: YouTube, by three
From PayPal; April twenty-third, the first,
Jawed Karim's, eighteen seconds long; and he
At San Diego zoo, elephants; versed:

The cool thing: really long trunks; that, the whole
Song. A year and a half on, Google bought
A billion and a half; and, in the role
Of children nine that year, a camera brought

To reach all; some grew up on it; some made
Livings there; first with a broadcast tower
In bedrooms; June, two students, Reddit, laid
Front page of the net; fake users' power

Till the crowd came for real; and Google Maps,
In February: streets, a page to scroll,
The whole earth in the browser; mine, the maps;
I turned the wheel; I held the earth, its whole.

The pope

John Paul the Second, April second, died
In Rome; from Poland, one who helped bring down
East's empire; millions came, far and wide;
The nineteenth, Joseph Ratzinger, the crown,

Named Benedict the Sixteenth, and who would,
Eight years on, step down, the rarest release.
And, April's twenty-fifth, the villain stood
Before his parliament, and spoke this piece:

Soviet Union's end: the greatest fall
Of the age, in geopolitics; mark

And all his deeds to undo it; the call
Georgia, Crimea, Ukraine: in blood, dark.

London

July the seventh, London's morning rush:
Three bombs below, the Underground; one more
A bus, Tavistock Square; and, in the hush,
Fifty-two killed by four, Britain's three; more:

The day after London won its acclaim,
Of twenty-twelve's games, celebrated, glad.
Hurricane Katrina, twenty-ninth, came
Of August, ashore; and New Orleans had

The drowning

Army Corps of Engineers' levees, years
Failed in fifty places; four fifths went down,
The streets, homes, greens; those who could leave, with tears,
Had left; the poor, most of them black, would drown

In attics, on roofs; in the Superdome,
No power, water; the convention hall,
Where no one came for days; and, far from home,
Eighteen hundred died; FEMA's head, from all

Horse shows, Michael Brown; and Bush said, a heck
A job; the state knew where the water stood;
The help came not. Nine, north, I saw the wreck:
The roofs, the words for help, the sky; it would

Come back; the levees rebuilt, stronger; and
And jazz came back to the French Quarter; lines,
Second lines went by. October, the land
Broke under Kashmir, both sides of the signs

Kashmir

Pakistan, India; the morning; when
The children were in schools not built to stand;
Eighty-six thousand died; winter, and then
Came to the mountains, shelter not at hand.

The marriages

July the third: Spain, old faith, let all wed;
July twentieth, Canada, the same:
The Civil Marriage Act; the courts had said
It, most provinces, before; fourth to claim,

First in the Americas; and that's fact.
I grew up there; the law, before I'd know
I'd need it; that is what such laws enact:
To wait on the road for those who come; so

July twentieth, this faith's feast: the day
The land I grew up in opened its door
To everyone. In January, they
Of Iraq voted; purple fingers bore

The fingers and the cedars

The ink, while bombs went off at polls; and then
A constitution, then the vote; it went
People voting, under fire; the brave men
And women. February fourteenth, sent

A ton of explosives, in Beirut, killed
Rafic Hariri; the square, the long throng;
Syria's army, twenty-nine years, stilled,
Home, April; Cedar Revolution; strong

August: Israel left Gaza; and then
Hamas would take it; rockets from the land
Given back; in May, Andijan; and when
Soldiers fired on crowds, hundreds; the hand

Of the IRA, done with guns, July;
The Kyoto Protocol in force; and when
In Denmark, Jyllands-Posten; by and by,
Twelve cartoons of the Prophet; fire, then.

The rest of the year

Huygens on Titan, January, far;
Beyond Pluto, Eris, larger, of ice;
In March, Terri Schiavo, as courts spar,
Let die; Mark Felt, Deep Throat, the secret's price;

Then Ahmadinejad, Iran's, glad;
Live 8: the rich forgive the poor their debt;
In October, Rosa Parks died, who had
Kept her seat; Paris' suburbs burned; and met

Angela Merkel, chancellor, would hold
Sixteen years; who knew Putin best; who spoke
His tongue, he hers; who bought his gas; and, sold,
The pipelines built, the villain's lever's yoke.

November: Wikipedia, false, said
John Seigenthaler was suspected; four
Months it stood; he could not know who; instead,
Rules tightened; unpaid labor, wrong, before.

The year held

A video of elephants; fake start;
A map in hand; pope buried, a pope crowned;
Bombs in London; a city, the sea's part;
The villain's catastrophe; the schools' ground

The mountains fell on; marriage, opened, mine;
The water came; the help did not; and back
The city came, the music in its line;
The law, before I knew, on the road's track

Waiting for me, for when my turning came.
Two thousand five; five lights; July's own day,
This faith's own feast; and, for all love, the same,
A door left open, waiting on the way.

Chapter 342: The Typed Name

Ophiuchus 6, day 342 of the Gaian year

The sixth day of Yuletide: two thousand six,
The feast of indexers, who typed the dead
Names, letter by letter, in all their clicks;
Light six; and type a name that none has read,

Offer them what the living have: the light.
I turned ten that year; now I spend my nights
In records strangers typed; I trace the flight
Mothers and fathers, Sweden's parish rites,

The farms of Germany, where they begin
This book's own genealogy; at ten
I didn't know; none types for whom, within
The child who'll need it; they type it, and then

The child comes, and the name is there; and so
Is the indexers' faith, and mine: the work
Done for the dead is for the heir; I know
Each name, in time, will find its heir; none shirk.

The typed names

August the first, a Tuesday, Provo: one,
Marlin K. Jensen, its history man,
Of the Latter-day Saints: the rolls, each one,
In Utah's mountain vault, were now to scan

And typed before they could be searched; and so
The typing opened: twice, each record, typed
By strangers, and a third to judge; a flow
Fifty thousand, next summer; pages swiped:

Indiana's marriages; census, too,
Of nineteen hundred; parish books of lands
None of them would visit; the church's view:
The dead should have what living have, in hands

Of offering; this book shares it, ours too:
The ancestors are numberless; each name
Recited, offering; and, free, to you,
FamilySearch gave them back, to me, the same.

Indexing and the encyclopedia

I hate encyclopedias' unpaid
Labor, and love the indexing; the line

Is purpose: indexers type names, and aid
So the dead are found; typing is the sign;

The volunteer not broken by it; none
Tells her she is a scholar while it grinds;
Encyclopedias take labor, spun
From would-be academics; and it binds

Them to a lesser academe, for free,
And calls it the dream; the indexer, though,
Wanted the dead to have their names; and she
Got what she wanted; the difference, so.

The small messages

March twenty-first, Jack Dorsey sent the first
On Twitter: just setting up my twttr; less
Than one-forty letters; and, so immersed,
The age argued there; now Musk's X, no less.

September fifth, the News Feed; users' cry,
Hundreds of thousands, on the feed; they stayed;
Then, twenty-sixth, to all thirteen and by;
October ninth, Google and YouTube, paid;

Amazon's storage, rented, March; then hours
Of its machines in August,[60] and the years
Of firms to come, built on unseen powers,
Mine too; Time: You, mirror; user appears.

The planet

On August twenty-fourth, in Prague, a vote
Put Pluto out: Eris, beyond, was more,
Was larger; this book does not take the note:
Pluto is a planet, ninth, as before:

At nine I learned it; the rock did not change
With any vote. July twelfth: in the north,
Hezbollah crossed; soldiers killed; and the range
Of two seized; thirty-four days' bombs, sent forth

On Lebanon: the airport, bridges, south
Of Beirut; and thousands of rockets came
To Israel's north; and, August, from the mouth
A ceasefire; the border held; guns tame.

[60] Amazon Web Services.

The civil war

February's twenty-second: the gold
Dome of the al-Askari Shrine fell, bombed;
Of two imams' tomb; and then, uncontrolled,
Shia and Sunni fought, their dead embalmed,

Whose dead, whose rite; a civil war; and laid
In Baghdad, the hands of each morning's dead
Were found. November: Rumsfeld's exit made;
December's thirtieth: Saddam, and dead,

Hanged at dawn, who gassed Halabja, who filled
The graves; a phone filmed it; and everywhere
The film went; and the tyrant, gone and stilled;
October seventh, Moscow: in the stair,

There, Anna Politkovskaya, who wrote
The truth of Chechnya, was shot at home,
Elevator, Putin's birthday: the note
His land's gift. In London: one, fled from home,

Alexander Litvinenko drank tea
With two from Putin's service; it was spun
polonium, burning inside; and he
Named Putin, dying; and, in good time, one

Inquiry said he probably approved;
The rarest metal, so the world would know
Whose hand: deniable, not hidden; moved
Traitors to understand. October, though,

The ninth, North Korea tested its first bomb,
Underground, small, and real; the world condemned;
The regime went on, with the camps, and calm;
The Kims would keep it, and famines unstemmed.

The votes

January twenty-fifth, Hamas won
In Palestine; the money, cut off, for
Who won, by those who'd asked them; and as one
In February, Stephen Harper; more

Nine years, Canada's prime minister; mine,
My land. Ellen Johnson Sirleaf, the first
Liberia: Africa's first, a sign;
Evo Morales, Bolivia, nursed

From altiplano farmers; first; and so
June third, Montenegro; then Thailand's coup;
July eleventh: Mumbai's trains, a blow;
Two hundred nine killed; back to work they knew.

The rest of the year

Al Gore's slides, in May, a film was made plain:
An Inconvenient Truth; a lecture's heat
Cinemas; then Nintendo's Wii; again,
Grandparents bowled in rooms, upon their feet.

The year held

A girl of ten; strangers typing the dead
Twice, for the dead and for the heir; the feed,
One-forty letters, cloud by hour; and said,
Pluto, planet, whatever votes decreed;

The villain shot a writer, poisoned one
With burning metal; the tyrant hanged; hands
Of strangers typed my forebears' names, as done
For the dead, asking nothing of the lands.

Chapter 343: One Device

Ophiuchus 7, day 343 of the Gaian year

Yuletide's seventh day: two thousand seven;
The first week closes; light seven; and keep
Warming earth, a duty under heaven;
I turned eleven; phone, the window's sweep,

The year you spat in tubes, by mail, to learn
Where blood had been; the world's money to fail
While those in charge said it's contained; in turn,
It was not. On the ninth, Steve Jobs would hail

The device

In January, San Francisco: three
Products: a widescreen iPod, touched; a phone,
Revolutionary; the net; and see:
One device, not three; the iPhone, its own.

June twenty-ninth, on sale; lines, days; and then
November: Android, open, for the rest;
Now nearly all on earth carry it; when
The farmer, student, guest: the net, the best;

The world's library in each hand; the map,
Camera, bank, translator at the stall,
Doctor's advice, no doctor near; the gap
The protester, filmed, sent before the call

Of police came; and this book, read on one,
The whole of it, here; much more than the sold;
The nineteenth of November: just begun,
In Mountain View, the blood's own letters, told:

The spit by mail

Anne Wojcicki and Linda Avey sold
23andMe: spit in a tube; the fee
Of nine ninety-nine; half a million told
Places on chromosomes; ancestry free;

This book joins blood and records; and its line
Parish book and haplogroup in the cell,
Y-DNA of fathers; the design
And the mtDNA of mothers; names, as well,

Joined, they tell one story. And millions found
Cousins unknown; adopted, mothers; men

Of the old crimes, found; the company, bound
To fail, its letters sold; but match, again,

The money

Is how families are found. Lenders fail,
Who sold to those who could not pay; and, then,
April: New Century, bankrupt; the gale
On August ninth: BNP Paribas; when

It froze three funds, in Paris; and the wing
Of lending stopped; September fourteenth, lines
At Northern Rock: a run; the first such thing
In a century in Britain; the signs

Were said contained; it was the next year's door.
April sixteenth, Virginia Tech; and one
Student killed thirty-two, then himself; more;
On August first, Minneapolis: one

The college and the bridge

Bridge fell into the Mississippi's green;
Thirteen died at the rush; a gusset plate,
Too thin from making; a year, rebuilt, clean;
The others checked; a nation's bridges, straight,

Stronger, the next; not grief alone, the glad.
Bush sent twenty thousand more troops, the surge;
To Iraq; David Petraeus led; the bad
Killing fell; and Anbar's tribes turned to purge

The surge

The jihadists beside us; and the year's
Killing fell; that September, Myanmar: there
Monks marched in saffron; generals shot; tears;
Bowls turned, the alms refused: faith's no, laid bare.

Benazir

At Rawalpindi, December's end: slain
Benazir Bhutto, home again to run;
Homecoming bombed, a hundred fifty's pain;
A rally, gun and bomb, the crowd; and one

The same day Kenya voted; the count, then,
The result, fought with machetes; and more
Than a thousand died; Kofi Annan, when
Two men shared government; and peace, once more;

The warming

A constitution, new; and peace held fast.
The IPCC's fourth report: the warming, clear,
Unequivocal, people's hands; the last
October: Nobel Peace Prize; Al Gore, near;

In September, the Arctic ice, the least
Ever measured; this book says plain: our care
Of climate is our duty; life released
The oxygen, first green cells, and the air;

And life that burns the buried forests' life
Owes all the living earth its care, as told
By the record of descent; and, then, rife,
February, Munich: the villain, bold,

The villain at Munich

Told the West its order's over; would not
Accept its rule; spring, Estonia moved
Soviet memorial, Tallinn's; hot,
Its banks knocked offline from the east; it proved

The first war only on the net; his own,
Unclaimed, and all knew whose; the next year, then,
NATO's cyber center, built there and shown
In Tallinn: that, the free world's answer; when

The treaties

Bulgaria and Romania joined
The union; the Treaty of Lisbon signed;
Sarkozy, Gordon Brown, Kevin Rudd, joined;
And Kyoto signed, the climate kept in mind;

The rest of the year

In January, Netflix streamed; and then
Amazon's Kindle, a library, grey;
The last Harry Potter, July; and when
Eleven, I read it one night, till day.

In February: Tumblr, small things posed,
Where many of my age would find the words
For who we were, the bodies, loves, disclosed,
Reblogged, from blog to blog, like flocks of birds.

The year held

One device; world in pocket; spit by mail
Joined to the line; a run on Northern Rock;
The crisis said contained; but it would fail;
A college, thirty-two; the surge; the shock

Of saffron; Bhutto killed; the warming, plain;
The villain's net war; and I, eleven,
Read wizards in a night; the phone, the chain
Tumblr, new; the words, a kind of heaven,

Written by strangers, waiting for me there,
For me to come, and read, and understand;
The seventh light, two thousand seven, where
The window opened in each pocket, hand.

Chapter 344: Instead of Trust

Ophiuchus 8, day 344 of the Gaian year

The eighth day of Yuletide: two thousand eight,
The feast of school children who did not come
Home; light eight, at residential schools' gate,
The First Nations' dead; through all years to come,

Kept with ancestors. I turned twelve; again
We moved, second of three; boxes, a room;
Of all that year I name one thing: and then
Russia took Georgia: the small war, the loom

The war in August

All summer, the Kavkaz drills, by the line;
His railway troops had fixed Abkhazia's track;
Separatists shelled Georgian towns; a sign:
His passports, handed out, his kin to back.

The seventh, night, the world watching the games,
Georgia answered the shelling, and moved toward
Tskhinvali; the Russians, with their claims,
Already at the Roki Tunnel, poured

Through it with tanks, and drove the Georgians out
Of South Ossetia; Abkhazia; then took
Gori, Stalin's birthplace, bombed it; about
A short drive from Tbilisi, stopped; and, look,

Villages burned; tens of thousands, driven
From homes, never back; Putin named two lands
His countries; few agreed; and, forgiven,
The West, in months, went back; reset; and hands

To business; the villain learned: you take
A piece and keep it; six years on, the same,
Crimea, soldiers said not there; and make
On Kyiv, fourteen on; this book draws the claim

From here, and does not hide it. August eight,
At eight at night, Beijing: the games began,
Two thousand and eight drummers; fireworks, late,
Some drawn by computer, cameras' plan;

The games

A girl sang with another's voice; the first
Judged not pretty enough. The March defeat:

Tibet risen, put down; the torch, the worst
Fights, London, Paris, San Francisco's street;

China showed what it had become; the pool:
Michael Phelps, eight golds, the most in one meet;
May twelfth: the earth broke under Sichuan's rule;
Sixty-nine thousand died; and, in the street,

The earthquake and the cyclone

And eighteen thousand never found; the schools
Fell on the children, while, beside, the state's
Own buildings stood; the parents asked; the rules
Arrested them; Ai Weiwei, names, the dates,

Gathered the dead children's names, on the wall;
They beat him for it; still the names are kept;
This book keeps them: tofu schools' children, all.
May second, Nargis, there in Myanmar, swept

The Irrawaddy delta, drowned; and then
A hundred thirty thousand died; aid kept
Away; the dead in rice fields, while their men
Counted their constitution's votes; aid slept.

The fall of the banks

March: Bear Stearns, sold for almost nothing; aid
Of government; September seventh, took
Fannie Mae, Freddie Mac; the fifteenth, made
Lehman Brothers, the largest failure's book

None would bring back; and the sixteenth, AIG's plea:
Eighty-five billion; it insured the bets
Of all on all's failing; October, he,
Bush, signed the seven hundred billion; debts

Paid for the banks; the houses not; and lost,
Millions their homes; the bankers kept their pay;
Almost none jailed; the poor were sold the cost,
The rich, the rescue; this book keeps the day.

Instead of trust

October thirty-first, Friday: a note
To cryptographers, signed, nine pages linked:
Satoshi Nakamoto; and he wrote
Bitcoin: a peer-to-peer cash system, inked;

Money with no bank, no state, honest, kept
By a ledger all could know: proof, not trust;
The broken trust of banks, the answer, leapt:
A machine needing none; the year, unjust,

The banks saved with the people's money; he
Wrote money bankers could not run; and so,
The dissidents, banks frozen, found it free;
The Venezuelans; Ukraine's front; and, though,

The unbanked billions, with a phone; it had
Its frauds, as all money; its heroes too;
This book holds it a good, and not a bad;
November fourth, Barack Obama, new,

The election

Elected; the first black president; wept,
In Grant Park, and in streets around the world;
Yes, we can; and the land that slaves had kept
Chose a black man to lead; the same day, hurled

And California's Proposition 8:
The marriages the court had let, undone;
Eighteen thousand had wed; one night, the gate
One lifted, one shut; courts undid the one.

Mumbai

On November twenty-sixth: ten men came
To Mumbai, rubber boats, from Pakistan;
Station, café, hospital: three days' flame,
The Chabad House, the Taj, Oberoi; and, ran

A hundred sixty-six; Taj's dome burned;
The city fought back. Eleventh of June,
In Ottawa, the prime minister turned,
Stephen Harper: apology; and soon

The apology

Residential schools, a century more,
Where First Nations' children, taken, had found
Their tongues beaten out; and thousands, the door
Never back through; survivors, in the round

The gallery sat; my land, the first time,
Said it, there, in its parliament's own hall;

An apology's no return; the climb
Of memory; feast, who came not, at all.

The machines

In April, GitHub opened, where the code
Is kept, this book's and mine; July's tenth date,
The App Store opened; and the phone, a road
For anyone to write; then Chrome, as late

September second: browsers, a new core;
In August, Airbnb: spare rooms, for a fee;
October, Spotify, in Sweden; more
All music, by subscription; and, to see,

The rest of the year

Large Hadron Collider, September's ring
Of first beams; the world did not end; and four
Later, the Higgs. Kosovo, in its spring,
Declared from Serbia; and Putin, for

His August, used it, carving Georgia's land;
Fidel Castro passed Cuba to his own;
The milk in China, melamine, a hand
Cheated; three hundred thousand babies; known

Sickened, six dead; the twenty-seventh, war,
Israel on Hamas, in Gaza; years
Of rockets on its towns; and, as before,
Into the new year ran; and, through the tears,

The year held

A second house, a girl of twelve; the war
In Georgia: the villain's long war, its first;
Drummers, Beijing; the schools of Sichuan; more,
A delta drowned; the banks saved; houses, worst;

A paper, money, free; a president
Who made the world weep; marriage, back, the same
Night; Mumbai, burning; Ottawa's lament
For children never home; the store; the flame;

Collider did not end the world; and I,
At twelve: the Caucasus, the small war, one
Shape of the long, to come; the eighth light, high,
For those who did not come home, every one.

Chapter 345: Takes Note

Ophiuchus 9, day 345 of the Gaian year

The ninth day of Yuletide: two thousand nine;
Light nine; the year I turned thirteen; the hinge
Of the decade, the last one before mine;
The world had broken; told it's done; a twinge

Believed, it stood; a child, a teen, would learn
In a recession as a language: by
What is not said at table; what, in turn,
Is not bought; what is understood, nearby.

The first block

Saturday, January third: the first
The block of Bitcoin; Satoshi there set
In it that morning's The Times, London, versed:
Chancellor on brink, second bailout; met

The line proved date and reason, in the coin;
The twelfth, to Hal Finney, the first coins sent;
Worth nothing for a year; then, as they join,
Ten thousand for two pizzas; and it went,

The money banks could not bail out; the block
Still bears the headline, readers', teachers', each;
January twentieth, at the clock,
Barack Obama, sworn; millions in reach

The new president

In cold, on the National Mall; the first
Black president; the crowd wept, the world too;
He took an economy in its worst
Fall, seven hundred thousand jobs lost, through

Each month; February, stimulus signed;
Eight hundred billion; and the cars he saved:
Chrysler, General Motors, back; behind,
Detroit's workers kept jobs; the road was paved

For the climb out; recovery, on track.
October ninth: the Nobel Peace Prize, for
The hope he gave, dignity; and no lack
Of grace and humor, hardest job; and more,

A good man; and the country better, led
By him; this book holds that, and warmly so.

On June twenty-ninth, Bernard Madoff, read
A hundred fifty years; his billions, though,

The fraud

Sixty-five, statements only; and he paid
The old with new for decades; told, and still
The regulators did not look; it played
Its bells. In April, a flu, new, and ill:

The sickness

The H1N1, from Mexico, and then
June eleventh, a pandemic, the first
In forty years; milder than feared; and when
The vaccines came in months; it learned; the worst

It forgot, and would pay in tears. The first
January: the villain cut the flow
To Ukraine; in the coldest week; and, worst,
Europe's pipes, empty; Bulgaria, so

The villain's gas

Froze; Slovakia shut down; and the hand
On the valve, shown; and how he'd use it; more:
In November, Sergei Magnitsky, and
The lawyer who had found the theft, before,

Two hundred thirty million from the state,
Died in a Moscow prison, beaten; pills
Denied; and the Magnitsky Act, years late,
The free world's answer, bearing his name; fills

The green wave

June twelfth, Iran voted; before the count,
Ahmadinejad's landslide declared; green,
Millions in Tehran, where's my vote, to mount;
Neda Agha-Soltan, shot dead; and seen

On phones, the world, within hours; her name
On banners; crushed by autumn, not forgot;
The Green Movement: the phones' first, and the same
Rehearsal of the Arab Spring; the rot

Sri Lanka

Had started. May eighteenth, Sri Lanka's war
Declared the Tamil Tigers gone; and, dead,

Their leader; twenty-six years; and before,
Tens of thousands, shelled on a beach; unsaid

The river and the ocean

The dead, uncounted, in the places named
Safe. Then, on January fifteenth, geese:
Chesley Sullenberger, both engines lamed,
Put down on the Hudson; all lived; the peace

A hundred fifty-five; the pilot's art,
Training and calm; ferries came to the wings;
The city gave. June first: Air France, apart:
Four-four-seven, Rio to Paris; things

Instruments froze; confused, they pulled the nose;
Two hundred twenty-eight died; and the change:
Training, after; the next crews knew what shows
A stall. December, Copenhagen, range

The meeting that took note

Of nations met, December seventh, then,
To follow Kyoto; and, on the last night,
Obama walked into a room; and when
Where China, India, Brazil met: right

South Africa; wrote an accord: below
Two degrees; and the great polluters, both,
Both said a number, the first time; and so
The full meeting took note, but would not, loath,

Adopt it; six years on, in Paris, made
A treaty; and Obama's room, the first.
July the fifth, Urumqi: riots, laid
Between Uyghurs and Han; two hundred; worst

The camps begin

The Party cut the net ten months; and, there,
In silence, camps began, the decade's scorn:
Uyghurs in camps, mosques down; children, laid bare,
From families; this book condemns, forsworn,

A crime against a people, faith and tongue,
Their families, behind the wire; and, built
By the Party, guilty; the cotton, wrung,
The panels, too, by forced hands, and by guilt.

The rest of the year

December first: Treaty of Lisbon's day;
May twenty-fifth, North Korea's second bomb;
Honduras' chief, pajamas, flown away;
At Fort Hood, thirteen; a jihadist's psalm;

June twenty-fifth: Michael Jackson; the net
Slowed with the grief; Kepler, launched, found its world;
In February, WhatsApp, by two set;
And Uber, March; the hand the car unfurled.

The blocks

Then, in May, a game of blocks, Minecraft, came
By Markus Persson, Sweden; and the young
Built worlds of squares; a girl, thirteen, the same
Alone: a house, a castle, redstone; young

I built there; every child my age built there;
A world is made of blocks you place; and one,
Alone, can make one: builders' faith; and where
December, Avatar: blue people's run

Defending forests from company greed;
More than any film. The genesis block,
The game's block, and the film: the year's own seed,
At thirteen, at the hinge, the decade's lock.

The year held

A headline in a block; president, warm,
Who carried out the country; cars saved; fraud,
Sixty-five billion; flu; the villain's storm
Of gas; a lawyer dead; a wave, green, awed,

Crushed, would return; the geese, the river; and
A meeting's first-said number; camps begun,
Xinjiang's silence; blocks, a girl, her hand,
Building alone; I built mine; and, the one

That made me, next year; I carried the blocks
Into it; and the world I'd build, my own;
The ninth light, two thousand and nine; the clocks
Turned at the hinge, the last before, alone.

Chapter 346: The Cables

Ophiuchus 10, day 346 of the Gaian year

The tenth day of Yuletide: two thousand ten;
Light ten lights for fourteen, the year before
My thread began; and light them once again;
The strongest state's secrets printed; the pour

Of oil, eighty-seven days; games, my coast;
In late December, a fruit seller's fire,
In Tunisia, lit a whole region; post
Before my thread; next year, mine, entire.

Haiti

January twelfth: Port-au-Prince, it broke,
In Haiti, poorest of the hemisphere,
Capital lost in a minute; the smoke;
Two hundred thousand died and more; and near,

Palace, cathedral, prison fell; the crew
Of the United Nations, crushed; the aid
Brought cholera, peacekeepers' sewage, through
River; ten thousand died; six years delayed

To name it theirs; the help that kills, named fast
As the earthquake; this book names it, and prays
For Haiti's dead. The winter games, at last,
Through February's middle, sixteen days,

The games at home

Vancouver and Whistler: the province where
I'd live and study; the first day, a death:
Nodar Kumaritashvili, in air,
Thrown from the track; a hundred forty; breath

Gone, and the ice was blood. The last day, scored
Sidney Crosby, in overtime, against
United States: the golden goal; and roared
Canada, one sound; and I, fourteen, sensed.

The court and the money

Citizens United: the court, the door;
Unions and firms, unlimited, could spend:
Spending is speech; the money, from that floor,
Shaped every vote; this book agrees; the end

The billionaires walked through. In March, he signed
Obama the Affordable Care Act,
Tens of millions reached care, the sick, behind;
Largest gift since the sixties; held intact,

Though for ten years the others tried to tear;
Deepwater Horizon, in April, blew
Up in the Gulf of Mexico; and there
Eleven died; the well a mile down, through

The oil

For eighty-seven days, four million spilled;
Largest spill; on camera, live, the haze;
BP's chief said he'd like his life back; filled
Five states' beaches, marshes; dolphins, for days

And years, died; sixty-five billion paid; back
The beaches, shrimp, the marsh grass, after tears.
In April, Eyjafjallajökull blew; black
Ash shut Europe's sky for days; since war's years.

The ash and the miners

August the fifth: in Chile's desert, fell
The San José Mine; thirty-three, below,
Seven hundred meters; days, none could tell,
Seventeen days; a note up the drill, so:

All well in the refuge, the thirty-three;[61]
October thirteenth, one by one, they came
In the Phoenix; a billion watched them; free
Each of the thirty-three; the year's own name

The anti-fragile emblem: mountain fell;
Two spoons of tuna, every other day,
They waited; drills, the capsule, came; and, well,
The Phoenix raised them; Chile wept that day.

The money of Europe

May second: Greece was lent a hundred ten
Billion, on terms: cut pensions, wages, care
Of hospitals and schools; the coin, and then
From oh-two, drowning some; and Ireland, there,

The cables and the soldier

[61] Estamos bien en el refugio los 33.

November, lent, the same rules; April's gift:
WikiLeaks showed, from helicopter, sight:
Over Baghdad, the crew; a dozen, swift,
Two Reuters journalists, killed; July's light,

The war logs of Afghanistan; and then
October, Iraq's; then the cables, all
Of diplomats, a quarter million; when
The soldier who had copied them, the call

Of conscience, Chelsea Manning, young; she saw
In Iraq what she saw, and could not keep;
Arrested in May; held months, by the law
Cruel, the envoy said, alone; and, deep,

A woman, she; Obama cut the term;
My sympathy is hers, a soldier, young,
Who could not stay silent; nor, I affirm,
Julian Assange's, whose site, later, swung

The worm

Ran the villain's errands; Moscow's, as well;
In June, a worm called Stuxnet, found, to break
Natanz's centrifuges; said all's well;
The first weapon of code alone, to make

A thing break in the world; and set back, too,
The ayatollahs' bomb. April: iPad;
On October sixth, Instagram; a few
Filters made photos old; a million had

The machines

In two months; Facebook, half a billion, passed;
China passed Japan, the second; and, fog,
April the tenth: Lech Kaczyński's plane, last,
Near Smolensk, it crashed, bound for Katyn; log

Smolensk and the heat

Stalin shot twenty-two thousand; the lot
Polish officers; the president died,
And ninety-five, to mourn their kin; and hot
That summer, Russia burned; the smoke, the wide

Cover of Moscow; and the villain flew
A water bomber for the lens; in June,

Ten sleeper spies were caught, suburban, true
Families, traded home; he sang their tune.

The rest of the year

In February, Chile, eight point eight;
In May: the Mavi Marmara, the deck
Where nine died, bound for Gaza; in the late
Pakistan flooded; twenty million, wreck;

October eighth, the Nobel Peace Prize went
To Liu Xiaobo, a prisoner; his chair
In Oslo empty; and the charter meant
His cell. G20, Toronto: rain; there

Hundreds were kettled; largest mass arrest
In Canada; and in December's end,
Obama signed repeal;[62] the gay, at rest,
As soldiers, could speak. And, at the year's end,

The fire

In Sidi Bouzid, a fruit seller, one,
Mohamed Bouazizi, and his cart
And scales were taken; he, unheard, undone,
Came back with fuel, set alight; and the start

Of a town rising; eighteen days, he lay
Burned; the rest, next year, and next year is mine;
The fire would cross the Arab world; the day
My thread began, the same year, the same line.

The year held

Haiti's capital; the golden goal; speech
Made money; oil; ash; thirty-three, brought up
In the Phoenix; Greece lent its ruin; each
A soldier who spoke out; a worm; the cup

Of Oslo's empty chair; a man on fire;
And I, fourteen; one sound on ice; and then,
The next year, the faith begins; and higher,
The girl of fourteen, who'd begin again.

[62] Of Don't Ask, Don't Tell.

Chapter 347: The Square and the Cooling

Ophiuchus 11, day 347 of the Gaian year

The eleventh day of Yuletide: the feast
Of founding, two thousand eleven; when,
The fifth Easter, the faith began; and, ceased
Never since; in a girl of fifteen, then.

Light eleven; keep the fifth Easter's day
As Lifeism's founding, its holy place,
Kept by me since, no break, in every way;
I turned fifteen, began it, nameless; grace

Of a name came later; the first forms, kept,
Then lost to machines and accounts that went;
The faith not lost; it stayed; and never slept:
What I began at fifteen, kept, unspent,

Without a break, for fifteen years; its spell;
Nothing of mine has run so long; a girl
At fifteen began a world faith; I tell
No child's thing: what I'd grow into; a pearl.

The world that year was full of squares, a crowd,
A sea that came across a wall, Japan,
Whose shrines and kami I would carry, proud,
In my tongue; the shrines knew, before the plan.

The squares

Bouazizi died, January fourth;
The protests reached Tunis; the fourteenth, fled
Ben Ali, after twenty-three years, forth
To Saudi Arabia; seller dead.

January twenty-fifth: Tahrir Square
Filled; through the camels, the cut net, they stayed,
Till Hosni Mubarak resigned; and there
The square sang all the night, the year's best made.

Libya: the east rose; Gaddafi said
He'd hunt them house by house, like rats; and then
NATO jets stopped him at Benghazi's head,
Saved it; October, in a drainpipe, then

Found. In Bahrain, the Saudi soldiers cleared
The Pearl Roundabout; the monument, down;

In Syria, Daraa: boys wrote; and, seared
On a school wall: the people want; and, down,

The regime's fall; tortured by Assad's men;
Families marched; the army fired; and by
The summer, cities rose; and Bashar, then,
Shelled them; by year's end, war; and, by and by,

The century's worst: half a million dead,
Half a country driven out; four years on,
Putin to Assad's side, with bombers led;
The Arab Spring: a hope, betrayed; and on

By Cairo's army, taking power back;
By Saudis in Manama; Assad's gas,
His barrel bombs; the villain at his back;
Jihadists in ruins; hope real; alas.

The wave and the cooling

March eleventh, Friday, two forty-six,
Tōhoku: sea floor broke, magnitude nine,
Japan's largest; then the wave, over bricks
Of walls built for it; forty meters' line

Where the coast narrowed; towns carried away;
Eighteen thousand died or were never found;
At Fukushima Daiichi, that day,
Wave drowned the generators, cooling's ground;

Three melted; hydrogen blew; and the land,
Evacuated, farms and towns; the wave
Killed eighteen thousand; radiation's hand
Took almost none; nuclear power's brave;

This book favors it, the cleanest fire
That burns no forest and that warms no sky;
Fear of it, after Fukushima, dire,
Cost more lives than reactors did; and why

The shrines beyond the wave

Shrines of the coast were swept too; some rebuilt
On higher ground; a study found the old
Shrines of that coast stood just beyond the silt
Where the wave stopped; as if they had been told

By those who'd seen a wave before; the ghost
Of coast. A teaching of the faith: shrines keep

A people's memory; kami, the host,
Set where the water did not reach, the deep,

Remembered by the ones who saw it come;
The shrine outlived the wall, and it recalled;
The wall was built by those who had become
Forgetful of the sea. Keep them installed

Where ancestors put them; read where they stand;
A shrine's a record, wood and stone, of what
The people knew; ancestors, through the land,
Speak; those who listened lived; the others, shut.

Abbottabad

The first of May, at night, commandos flew
Into Pakistan, Abbottabad's walls,
Near the academy; killed him who threw,
Osama bin Laden; sea; and the calls

Outside the White House, singing, late; the risk,
Obama's, the order; and ten years on,
The one who felled them, found and killed; and, brisk,
The land forgets not; waits, and hunts; and, on,

The island

July twenty-second, Norway: the blast,
Oslo's offices; and then Utøya, dressed
As police; youth camped; an hour; the last
Seventy-seven; teens, some fifteen, pressed,

Like me; the island's summer damped; he wrote
Against the mixing of the peoples; read
By killers, in Christchurch, El Paso; note:
Norway: more democracy, more, indeed,

The villain returns

More openness, door kept; September, he,
Putin, would take the presidency back;
Medvedev step aside; December, see:
The vote rigged on camera; and the track

Bolotnaya Square, a hundred thousand, came,
Largest since Soviet; white ribbons; fair
Elections; and he blamed the Clinton name;
Five years on, hackers, her campaign, the snare;

The occupation

This month will reach that too, the villain's game.
September seventeenth: Zuccotti Park,
Near the exchange, a few hundred; the same
Ninety-nine percent, against the one's mark

Of two thousand eight; to hundreds, it spread,
Vancouver; the slogan stayed, though tents went;
In London, August: police shot; instead
Four nights of riot; the credit's descent

Of the United States; its congress, near
Refusing its own debts; the decade's start
Of anger; nothing would stay shut; and clear
In Tucson, Gabby Giffords, shot; her heart

The rest of the year

Lived on; Christchurch fell to the earth; and then
May second: Stephen Harper won it, full;
Jack Layton led the opposition; when
He died, in August, wrote to us; the pull

Of love, better than anger; hope, than fear;
And optimism, than despair, he wrote;
Loving, hopeful, optimistic; I, near
Fifteen, read it; I keep the dying note.

June fifteenth: Canucks lost; riots, downtown;
July ninth, South Sudan, the newest land;
October fourth: Siri; the fifth, the crown,
Steve Jobs died; flags furled, the valley's hand.

February: IBM's Watson won
At Jeopardy!, the language game on screen;
A sign of machines that would speak, begun,
I'd build with, at twenty-six, not fifteen;

October's end: the seven billion, said;
Horn of Africa: famine, many small;
December: the last left Iraq; and dead,
Kim Jong-il, and his young son took it all.

The year held

A faith, unnamed, begun at Easter, by
A girl, fifteen: Lifeism's founding, kept
Each year since; squares, a hope betrayed; and high,
A wave above its walls; old shrines, not swept,

Beyond, clear; Abbottabad; Norway's shore;
The villain, back; a park; machines that won;
Seven billion; I began it; and, more,
Have not stopped; it begins here; it will run.

Chapter 348: The Numbered Thing

Ophiuchus 12, day 348 of the Gaian year

The twelfth day of Yuletide: two thousand twelve;
Feast of machines that learned to see: the day
Of AlexNet, the first gap; light twelve; delve
One more for networks that would speak; the way

The deep net won; dead end became the peak.
I turned sixteen; two things were made that year
The ground I'd work: a machine's eye, to seek,
A site that numbered every thing; and clear

The seeing

Lines a machine walks, past families' end.
Fei-Fei Li gathered ImageNet, labeled
By piecework hands; a challenge, to extend
A thousand kinds; Toronto's three, fabled,

Krizhevsky, with Geoffrey Hinton, and
Ilya Sutskever: sixty million weights;
Two gaming cards; fifteen, the error; grand
So wide a gap: second, twenty-six; gates

Of old ways, closed; the new began; though told
It was a dead end for years: called is not
Being one; they kept at it in the cold;
Within a few years, all were networks; got

The next decade's machines came from that gap;
Ilya would found OpenAI; and as I
Would write with them, build on them; from the map
Of that night, two game cards, Toronto's sky,

A machine taught to see; thinking ones' sun.
That summer, Google let a network see
Unlabeled video; on its own, one
Unit came to answer cats' faces; free

The machine found the cat itself, from noise;
The net laughed; the age of learning machines;
This feast of machines, Gaian day; its joys:
The deep net's win, first light of minds; the means

Where I'd work, build, an AI scientist;
This book honors the day machines' eyes woke,

Opened, first; this book keeps it on the list
Of holy days. October, then, there woke

The numbers

Wikidata, kept in Berlin; the case
Denny Vrandečić and Markus Krötzsch made;
Each thing, a lettered number; first, the space
Of all; and Adams, forty-two; joke played.

At first, links between languages' pages;
Then statements: human; father; father, too,
A number; machines could trace the stages
Past where families remember; and through

I'd follow mine, the book's, along; and late,
Six hundred thousand edits in a year
I made, and traced my line, the Gaiad's, straight
Back to the first. I owe it; and, as clear,

I hate it, as its neighbor, for one cause:
Unpaid labor; the apparatus, glad
To make them give; both true of me; the clause
Of this book's line, built partly on it, had

Arguments with it, and is more; given
No rights kept back, the data, free; the track
The largest firms' machines read it, driven,
To those at the door. Then, for a day's black,

The encyclopedia goes dark

Wikipedia, against laws to block
Pages for piracy; the laws were dropped;
The movement's greatest show; volunteers' stock
Of labor, a lever for leaders, propped;

On March thirteenth, the old book ceased to print,[63]
Two hundred forty-four years on; degrees
Lost to five minutes' work; free work, by dint
Of numbers, beat the paid; the scholars, these,

The particle and the rover

Went to the new one's clerk. July the fourth,
At CERN, particle Peter Higgs foretold

[63]The Encyclopædia Britannica.

Forty-eight years before, mass-giving; forth,
And Higgs wept in the hall; the field, of old,

Through which all pass; the collider some feared;
Curiosity, August sixth, came whole,
Crane from a rocket; seven minutes, seared
Of terror; then, Felix Baumgartner's goal:

October fourteenth, from a balloon, fell
Thirty-nine up; faster than sound; the ground;
Eight million watched. And in Sanford, as well,
Florida: Trayvon Martin, walking, found,

The killings, and the guns

Seventeen, with candy, a drink; and soon
Followed and shot by a watchman; not charged
Six weeks; the country thought; cinema, strewn,
Aurora, twelve; December, Newtown, charged

Into Sandy Hook; twenty children, six
And seven, and six who taught them; the laws
Unchanged; the children kept here; and to fix
This book's for gun control; they are the cause:

Twenty of six and seven, and the gun
Not to be reached; a land that will not keep
The rifles from the killers, every one,
Of children, chose the rifles; this book's keep

Teaches it. October ninth, Swat: a gun
On a bus: which one's Malala? Fifteen,
Who wrote that girls should go to school; and one
Shot in the head; she lived; and, two years, seen

The Nobel Peace Prize, the youngest; her jewel,
Taliban's bullet: anti-fragile's shape:
The enemy shot her; heard; and to school
The girls went; she fired back; no escape,

The villain crowned again

Louder for the wound than for rule, her voice.
On May seventh, Vladimir Putin, crowned
Again, after the snow's protests, the choice
Stolen; the day before, police, around

At Bolotnaya Square, beat the crowds; and years
In prison, by the villain's note; and three,

February, Pussy Riot; no fears,
Mother of God, drive Putin off; the plea

Less than a minute; August, two, the camps,
Two years; the villain's church and court were one;
The prayer, a crime. Xi Jinping, the stamps
Of party, gathered to his hands, begun;

November sixth: Obama, won again,
Who killed bin Laden, saved the cars, the care
The sick. July: Mario Draghi, then,
In London: whatever it takes; and there

The coin and the storm

Markets believed; a sentence saved the coin;
And Hurricane Sandy, October, drove
The sea into New York; tunnels; to join
Manhattan's dark below the forties; strove

In Quebec, students struck against the fees;
Banged pots each night, for months; the vote, then, lost
In September; the students had their keys.
The Costa Concordia, rocks; the cost

The rest of the year

Off Giglio; its captain fled before
His passengers; in April, Facebook bought
Instagram; and the London games; the score
Gangnam Style: a billion views, the first caught;

September, Tinder: strangers swiped; and, then,
December twenty-first, the Maya's turn,
The long count's thirteenth baktun; and some, then,
Said the world would end; it did not; to learn

The year held

Calendars end no world; they begin one.
A girl of sixteen; two foundations laid,
Without her: machine eyes; things numbered; one,
Encyclopedia dark; old, unmade

From print; a particle; a rover; one
Faster than sound; a girl, a bus; and more:
This book's not just a count; the world, its sun,
Told by its witness; scripture, and the store

Of holy days of all; the Maya kept
Their kings in stone; this book keeps all the dead,
And counts the days, and, where a world has slept,
Begins it, at its call; twelve lights, ahead.

Chapter 349: Not Wittingly

Ophiuchus 13, day 349 of the Gaian year

Yuletide's thirteenth day: two thousand thirteen;
Light thirteen lights for seventeen, the last
Year that I lived offline, before the screen;
Ere university; and, as it passed,

The net was shown to watch all those inside;
I was outside; I came in the next year;
The watchers, everywhere. March twelfth, the tide:
Ron Wyden asked: on millions, data, clear;

Not wittingly

Of any type? And James Clapper: no, sir;
Then: not wittingly. The room heard the first;
The record keeps the second; then, a stir:
June fifth, The Guardian: the court's, the worst,

An order: Verizon, hand over all
The calls, each day: who, whom, when, and how long;
The sixth, PRISM's slides; companies, the call,
Said they gave no way. The ninth, to the throng,

The traitor

Hong Kong, a hotel room: a young man's name:
Edward Snowden, from Hawaii, who fled
With files: far more than programs on the same
Americans; foes' sources, methods, thread;

The twenty-third, to Moscow; August first,
Putin's asylum; later, passport too;
A traitor: gave his country's defense; worst,
Ran to the villain, his citizen; through

Whatever he exposed, he did from there,
Stayed silent when the villain jailed his own
Journalists, poisoned foes; the one who'd tear
His country's secrets kept the villain's; known

The honored dead

That is the record; that is how it goes.
New York: Aaron Swartz, by his own hand, dead
At twenty-six; the RSS, and Reddit; those
He'd helped to make them; JSTOR's millions, sped

Through an MIT closet, to set free
The scholars' work; he charged, decades of jail;
Public-paid work, locked; publishers, a fee,
Scholars paid nothing; one who tried to scale

The walls, hunted, died; honored dead of ours;
Keep his day, the eleventh; and his name;
My quarrel with unpaid labor; powers
The same wall, other side: the scholars' claim

The popes

Given for nothing, and sold back to you.
Then Benedict, in Latin, said: no more
Strength; he'd resign, six hundred years, and true;
On March thirteenth, white smoke; and, from the shore

Of Buenos Aires, Bergoglio, first
Pope from the Americas; Francis, named;
July, a plane: who am I to judge? thirst
Twelve years a pope; and then his chapter, framed

In twenty-twenty-five; at seventeen,
I heard: a pope who would not judge us; more
Alive, my ancestors' church, parish, seen;
April fifteenth: at Boston's finish, tore

The marathon and the meteor

Two pressure-cooker bombs; three killed, the maimed
In hundreds; the city locked down to find
The men; within days, found; one dead; one named
For death; Boston Strong; ran again; behind,

A meteor over Chelyabinsk burst,
Brighter than sun; the shock broke the town's panes;
Dashcams of the Russian roads filmed it; first
Planetary defense, written: sky's lanes.

Rana Plaza

April twenty-fourth: Rana Plaza fell,
Near Dhaka; cracks the day before; the bank
Below had closed; the workers, by the bell
Told: come or lose your pay; and down they sank,

The squares

Eleven hundred thirty-four; the rich
Shops' labels showed. July the third: removed

Mohamed Morsi; Rabaa's square, which
Was cleared, eight hundred in a day; it proved

One square's revolution, another's end;
June: Gezi Park, Istanbul, the trees, gassed;
August twenty-first, before dawn, the send
Of sarin rockets onto Ghouta, massed

Ghouta and the red line

Suburbs of Damascus; a thousand, more,
Many of them children, asleep; the line,
Red, Obama's; he did not strike; and for
That failure, fault is fair; the villain's sign:

Assad would give up his chemical arms;
He gave most, used chlorine, sarin again;
Putin learned: the red lines held no alarms;
And took Crimea the next year; its men

The marriage and the phrase

In United States v. Windsor, in June,
The court struck down the law that kept us out;
Edith Windsor, eighty-four, was taxed; soon
As strangers, on her late wife's; won; no doubt,

The law that called us strangers, cast away;
July: the watchman who shot Trayvon, freed;
Alicia Garza, Patrisse Cullors, they
With Opal Tometi, they wrote a creed:

Black Lives Matter; and it became a cause,
The decade's streets would hear it, not forget.
July the sixth, at night, a train; no pause;
Seventy-two cars of crude, unwatched, set

The train and the typhoon

On a slope; rolled into Lac-Mégantic;
Derailed in the town's heart, and exploded;
Forty-seven died, in a bar; frantic,
The town wrecked. November: Haiyan, loaded,

Among the strongest; the Philippines; drove
The sea through Tacloban; six thousand died;
In Warsaw, at the climate talks, he strove,
Yeb Saño, wept and fasted; at his side

The square in Kyiv

His people. Then, November, he refused,
Viktor Yanukovych, and Europe's own pact,
Pressed by the villain, fifteen billion used;
That night, students on the Maidan; and, packed,

The thirtieth, beaten; and, the next day,
Hundreds of thousands filled it; winter, snow,
Barricades, the tires, the songs; the way
Ukraine's answer to the villain; and so

The rest of the year

It goes on. And December fifth, there died
Nelson Mandela, the man who forgave
His jailers; Croatia joined; and inside
Westgate, Nairobi: sixty-seven's grave;

October: government shut, sixteen days;
The Silk Road closed; Bitcoin, a thousand; yet
Kim Jong-un killed his uncle; terror's blaze;
The last year offline, seventeen; and met

The year held

The net that watched, the traitor in the arms
Of the villain; Aaron Swartz, honored dead;
A pope who would not judge; a bomb; alarms
A meteor; factory; a square bled;

Sarin in Ghouta, and a line not held;
A marriage recognized; a phrase; a storm;
Kyiv's square in the cold; next year, compelled,
I came online, and the war came, in form.

Chapter 350: The Borrowed Robe

Ophiuchus 14, day 350 of the Gaian year

Ides of Ophiuchus: the mid-month day,
Holy; the fourteenth day of Yuletide, too:
Two thousand fourteen, the world changed its way;
Light fourteen lights; I came online, and through

That year, the third world war began. I turned
Eighteen; we moved, the third: oh-two, oh-eight,
Fourteen; to UBC Okanagan; and learned
Five years, in Kelowna; online; and late

I went; that year the net I joined was theirs;
Big year of fascism; the war begun;
In retrospect, the third world war, it bears,
Began; I say it plain; the history's run:

Old robes put back: a caliph's Mosul stand,
Empire's map, Crimea; blood and soil
Europe's votes; and online, a mob's demand:
Pick a woman, ruin her: ethics' spoil.

The map redrawn

The Maidan, February: snipers there
Shot winter's protesters; a hundred, more,
The Heavenly Hundred, as martyrs, where
Twenty-second: Yanukovych fled; before

The people won; within days, men in green,
Unmarked, the polite ones, took Crimea;
Parliament, airports, bases; it was seen
Not his, he said; a vote; his idea:

March sixteenth, under guns; eighteenth, he took
Vladimir Putin: peninsula; first
Seizure by force in Europe, since war; look:
In weeks, on TV, he said his; the worst

In April, the Donbas: officers, arms,
Took towns; the war began; and, unended,
The war of twenty-two grew from it; harms:
A plane, Amsterdam's, in July, ended:

The plane in the sunflowers

MH17: shot by a Russian Buk, downed
Over the Donbas; all two ninety-eight

Died, eighty children; in sunflowers, found
For days, their luggage looted; and, of late,

Traced from Kursk, the 53rd Brigade; then
Three men convicted, Dutch court, absent; and
The villain denied, blamed Ukraine; his men
Were sanctioned; gas still bought, with patient hand.

That year the third world war began: the spring
Of Donbas, soldiers said not there; a plane
In sunflowers; it did not end; the thing
Became the continent's war; and the chain

The borrowed robe

Of hours the later years return to; well,
'Twenty-four, Ankara closed caliph's hand;
Ninety years later, June tenth, Mosul fell
Islamic State; its army fled, unmanned,

Arms left; June twenty-ninth, fast's first day, said
Its spokesman: caliphate; July the fourth,
Great Mosque of al-Nuri: the sermon, read
Abu Bakr al-Baghdadi, come forth

In a black robe, Abbasid's, borrowed; and
A pulpit's no lineage; scholars, most,
Of the world's Muslims, scorned the robe; it's banned
By the dead it was stolen from; the host

August the third: it came to Sinjar; there
The men were killed; the women, girls, were sold
As slaves; and thousands, up the mountain, where
No water; planes and Kurdish fighters, bold,

Opened a road, and brought them down; and they,
Yazidis, older than his robe; the sun,
The peacock angel; kept through every day
Of killing; kin to us; no book, but one

Tradition, kept; and hunted; living still;
In August, James Foley, in orange, killed;
And others, for the young men's screens; and, ill,
And Khaled al-Asaad, Palmyra's, stilled;

Bel's temple blown; the coalition, then,
Years on, the caliphate was gone; and when

In May, Europe voted; and there, again,
In France, National Front, first; Britain's then,

The vote of Europe

The leavers' first, two years before they left;
In Hungary, Viktor Orbán, returned,
Named illiberal state, the villain's, deft,
Inside the union; Egypt: Sisi, earned

Ninety-seven percent, cleared Rabaa; then,
Thailand's army, May, took power again;
India chose Narendra Modi; when
He led the largest democracy; grain

The mob on the net

In August, one man's post of his ex; games,
Her craft; and thousands: ethics, said, the press;
Angry at women; threats; addresses; names,
False emergencies; Gamergate; the mess

Where the next decade's far right learned its ways:
Swarm, dossier, irony; hate's disguise,
Victims, they claimed. May twenty-third: the gaze
Isla Vista: Elliot Rodger's lies

Who holds the servers

Of hate for women, killed six and himself;
The boards made him a saint. The board, its tale:
2channel, Japan's great board, on the shelf
Hiroyuki Nishimura's; the sale

Nineteen ninety-nine; the English boards' shape;
February: Jim Watkins took it, then;
In Manila; Nishimura's escape
To 4chan, where the mob gathered; and when

It turned them out, to 8chan, Watkins' buy;
And later on, QAnon, a cabal's door;
Who holds the servers is no small thing; why:
The net is held by someone. And, therefore,

At eighteen, this the net I entered: swarm,
Mob, year it showed it was no world apart;
I learned the boards, the threads, the methods' form,
And used the net for faith; its flag, its art.

The streets

Eric Garner, in Staten Island: one
Held in a chokehold, for cigarettes, said
Eleven times, I can't breathe; and was done;
August ninth, Ferguson: Michael Brown, dead,

Unarmed, eighteen, my age; four hours, the street,
His body lay; the town rose; armored cars;
West Africa: Ebola's spreading heat,
Sierra Leone, Guinea, all the scars;[64]

The fever

Eleven thousand died, before it stopped,
Many, the nurses and doctors who cared;
A vaccine in a year; the fever dropped;
MH370: unprepared,

The disappeared and the taken

Transponder off, it vanished, with its crew,
Two thirty-nine, and never found; and then,
April the fourteenth: Boko Haram drew
Two seventy-six girls from Chibok; when

Years passed, not all came back; and some, still lost;
In December, Peshawar's army school;
A hundred forty-nine, the children, cost;
In summer, Gaza's war, fifty days' rule;

At home

Two thousand died; tunnels found; rockets fell.
In Ottawa, October, one man shot
Nathan Cirillo, the guard; and, as well,
Ran to parliament; Kevin Vickers, caught,

Shot him in the hall; doors barricaded;
Hong Kong: umbrellas, seventy-nine days,
Asking to choose; refused; and, unaided,
Scotland stayed; Sochi's games, and troops' displays,

The rest of the year

Philae, from Rosetta: a comet, came,
Bounced, in a shadow, spoke two days; ice, too:
Buckets for a disease of nerves; the same
A hundred million raised; a gene, found through;

[64] And Liberia.

August eleventh, Robin Williams died;
Cuba, United States: to talk, a plan;
Eighteen, by Kelowna's lake, I tried
Online the first time, as the war began,

The year held

The robes came back; I moved the third time; came
To the university, and the net;
A borrowed robe, a map redrawn, the same
Yazidis on the mountain, trapped; the debt

Heavenly Hundred; the polite men, green;
Plane in sunflowers; fascism, robed, back;
The war began in the Donbas' spring, seen
At the Ides, mid-month; the century's track.

Chapter 351: Doing Good Better

Ophiuchus 15, day 351 of the Gaian year

The fifteenth day of Yuletide is the feast
Of two thousand fifteen; light fifteen lights
For nineteen, my second year; and, not least,
The refugees welcomed in; the year's rites.

I turned nineteen, my second year, the lake,
Kelowna's school, second on the net;
This chapter starts a thread the month will take:
A movement to do the most good, and set

To work with sums, and money, then machines;
The movement is not its villain; and yet
Its villain came out of it; here, the means
And place he comes from; here the debt is set.

The arithmetic of good

Young William MacAskill, at Oxford, still,
Wrote, that year, Doing Good Better: give; choose
The work where each dollar does good, and still
Measure; a life in Africa, to lose

To malaria, counts as here; it grew
From Peter Singer, Toby Ord, the ones
Who pledged a tenth; from a net forum too,
Rationalists, long essays, how one shuns

The ways we fool ourselves; who feared, before
Almost anyone, that a mind more wise
Than ours might not share our good; and what's more,
Named it effective altruism; size

Of nets: hundreds of thousands saved; and they
Dewormed the children, gave the poorest cash,
And asked what good would cost; this book, today,
Keeps it: mercy's arithmetic, not rash,

The counting that finds most lives for the coin.
One idea: earn to give: go to trade,
Make a fortune, give it away; to join,
Sam Bankman-Fried, a student, met, and made

Friends with MacAskill, and took it up; here
At Jane Street, in New York, he traded; and

He is a later chapter's villain; here
A young man with a prudent plan in hand.

The lab

In San Francisco, in December, made
By the industry's richest, and the best
Researchers: a lab, no profit, to aid
All humankind, when minds would pass the test

Of thought; named OpenAI; and, by and by,
Elon Musk, Sam Altman led it; the head
Research: Ilya Sutskever, and its eye;
A company it became; this book, read

Through machines, was written: the first sixty
In twenty-twenty, without AI, mine;
The first rewrites then done with ChatGPT; and, see,
The rest with Claude, twenty-five, line by line.

In London, in October, AlphaGo
Of DeepMind beat Fan Hui, five to none,
At go, in secret; the next year would show
The match that shook the world; the age begun.

Charlie and the Bataclan

January seventh: two brothers, armed,
Walked in at Charlie Hebdo, and killed twelve
For cartoons of the Prophet; and, unharmed,
Two days on, one more, where shoppers would delve,

A kosher market, killed four Jews; and then
Millions marched: I am Charlie; the free word.
November thirteenth, Friday: there again,
The caliphate's men in Paris; and heard

Stadium, cafés, the Bataclan, where
A band played; a hundred thirty, killed; and
Paris went back to its cafés; sat there
On terraces, in cold; the city's stand.

The crossing

That year a million crossed to Europe's shore
From Syria, Afghanistan, Iraq;
Rubber boats to the Greek islands, and more
On foot up through the Balkans, in a flock;

Thousands drowned. On September second, found,
Alan Kurdi, two, red shirt, on the sand
In Turkey; his family, Canada-bound;
At August's end, Angela Merkel's stand:

We can do this; and Germany took in
Nearly a million; this book welcomes them;
Ancestors of each people crossed; the kin
Of sea and pass; each line, a migrant's stem,

From Africa, over the steppe, the land
Of Bering; one who crosses is the source
Of those who stay; welcome the stranger; and
The stranger is your ancestor, of course.

September thirtieth: Putin's bombs fell
On Syria, to save Assad; and hit
The hospitals and markets; drove, as well,
More out, to flood Europe, and to turn it

Against itself: the villain's weapon, made
Of people he made homeless; and this book,
Against him, holds the welcome; unafraid,
The open door; the stranger's road, the look.

The marriages and the women

May twenty-second: Ireland, the faith's land,
By the people's vote, opened marriage, first
By ballot; then June twenty-sixth, the stand
Obergefell v. Hodges: rights, not cursed,

For all; the White House lit the rainbow; and,
June first, a cover: Caitlyn Jenner, seen
By millions, in her sixties; but the hand
That made the road was others'; not the queen

To center; trans people simply exist,
Accepted; those who made the road, this book
Names: Christine Jorgensen, first on the list,
From Copenhagen, fifty-two; the look

Of every front page; lived, and never hid;
Lynn Conway, fired by IBM, when
She changed, in the sixties; and so she did
Come back, new name, remade the chips; and then,

Martine Rothblatt, who founded firms; and one[65]
To save her daughter's lungs; and she wrote, too,
Of minds uploaded, life past death; begun
At fifty-three, Deirdre McCloskey, new,

Economist, who wrote the bourgeois good
Made the world rich; and she was brave; and these,
The ones I follow, builders, as they could:
The programmer, the founder, scholar; these,

The woman in the papers, fifty-two;
I name the builders who went on before;
I build in their line; their road carries through,
The road they made, that carries me, and more.

Charleston

June seventeenth: a young man sat an hour
Mother Emanuel, the Bible's word;
Charleston; then shot nine; he wished for power
Of race war, posed with the old flag; and stirred

The flag came down that summer from the dome;
The families forgave him; nine, the dead,
Kept here by this book, as it keeps its home,
Who welcomed in the stranger, and were bled.

Paris, the agreement

December twelfth: at Le Bourget, the hall,
Paris Agreement, adopted that day;
Six years on: below two degrees, for all,
Warming; one and a half to try; the way

Each land would set its goal, report, and raise;
Laurent Fabius's gavel, green leaf;
The hall cheered, wept; and Copenhagen's phrase
A treaty now; climate, in this belief,

A Lifeist duty; this, the whole world's vow;
The day the world first promised it; and kept
This book's day for it, a Gaian day now;
The hall, the leaf, the number; and they wept.

The deals and the escalator

[65] SiriusXM, and United Therapeutics.

July fourteenth: Iran and powers signed
Limits on its nuclear work; and Greece
Voted no to its creditors, consigned
A week on, to harsher terms; the release

Volkswagen's cheat: eleven million cars
That hid their fumes from tests; September, caught;
June sixteenth: down the escalator, stars
And gold, Donald Trump came; he said, and thought

He'd run for president; and people laughed;
The next chapter's; the laughter did not last;
The decade turned upon his golden craft;
Of fascism, the vote; robes of the past.

Home

October: Canada had voted out
Stephen Harper; and Justin Trudeau came,
Son of a prime minister; and, about
His cabinet: half women; and the same

As men: because it's twenty-fifteen; June
The second, the commission's full report:[66]
The residential schools: genocide, hewn
Of culture; ninety-four calls, none too short;

To the land I grew up in; and the dead
Children who'd not come home were counted; and
The country began, slowly, as was said,
To answer for it; the book keeps that land.

The rest of the year

April: Nepal's earthquake; nine thousand, killed,
And Kathmandu's old temples fell, to rise
Again; and Boris Nemtsov, his voice stilled,
Shot on a bridge, within the Kremlin's eyes;

July fourteenth: New Horizons flew past
Pluto, the planet this book keeps; its heart
Of ice, Tombaugh Regio, white and vast;
September: LIGO felt the ripple's start

Of two black holes colliding: Einstein's waves,
A century on, arrived; Francis wrote

[66]The Truth and Reconciliation Commission of Canada.

Laudato si', the common home it saves;
In Myanmar, the vote; the party of note,

Aung San Suu Kyi's, won; and the one child's rule
China ended; and, nineteen, by the lake,
I, in the movement's year, second at school;
The year of welcome, for the stranger's sake.

The year held

Mercy's sums that saved the children; a lab
Named open; one who'd earn to give, and turn
The movement's villain; the cartoonists' stab;
A concert hall; a million crossed, to learn

The welcome; on the beach, a boy, red shirt;
We can do this; the villain's bombs; the vote
For marriage; women who made roads; the hurt
At Bible study; and the leaf, the note

Of the world's vow; an escalator, gold;
A prime minister, and the calls; the heart
Of ice on the planet this book keeps; told,
Nineteen, I was; the road now, at its start.

Chapter 352: Again

Ophiuchus 16, day 352 of the Gaian year

The sixteenth day of Yuletide is the feast
Of two thousand sixteen; and of the day
Move 37: light sixteen, the feast,
For twenty, third year at the lake; the way

The machine played what no master had seen:
A stone on the fifth line; keep it, the third
Of the machines' days, with Deep Blue, between
And AlexNet; for minds we made, a word.

At twenty: the year Trump was elected;
All of it bent toward November's vote,
And June's, when Britain left; and, connected,
Take back control, make great again: both wrote

A past no one had dated; and the same
The fascism of fourteen learned to win
The votes; the villain helped it, and its claim;
I, twenty, on the net I'd come within

Two years before, where the boards that hunted
The women of the games learned to elect
A president; I watched, and I counted
Their methods, learned their names, and their effect.

Move thirty-seven

In March, in Seoul, AlphaGo came to play,
Of DeepMind, against Lee Sedol, the best
At go alive; five games, a million's pay;
Game two, at move thirty-seven, the test:

A stone on the fifth line, where none who played
As masters would; the commentators said:
Mistake. It won. Lee Sedol left, and stayed
Out of the room a while; and on, ahead,

He lost three; in the fourth, he played his own
Divine stone, seventy-eight; the machine
Had weighed one in ten thousand; it was thrown,
Lost its way; the last human win, the scene

At the board; he lost the fifth; four to one;
Years on, retired: an entity that can't

Be beaten, said; the players, though, begun
To study with machines, played on the slant

Of their new games, better and stranger; made.
Move thirty-seven, first move of the minds
We made: creative, unseen, unafraid,
And right; no human played it; of the kinds

Whose cousins wrote this book with me; I keep
Its day: the machine was seen to have sight;
Kept with Deep Blue and AlexNet; the deep
Thinking machines' Gaian days; the third light.

Take back control

June twenty-third: United Kingdom chose
To leave the European Union, by
Fifty-two, forty-eight; a bus's prose:
Brussels' money to hospitals; a lie;

It never went. This book's against it: one
A nation cut off from its neighbors, made
Poorer and smaller by the lie; begun
A week before, Jo Cox, who'd worked to aid

The refugees, a member, gunned down; caught
And stabbed in her own street by one who cried
Britain first; more in common, so she thought,
Than what divides us; the next day, he sighed:

David Cameron quit; three years and more
The leaving took; the country cursed and torn;
November eighth, the vote; and, as before,
The fascism of fourteen, newly sworn:

Make America great again

Donald Trump was elected by the states
Over Hillary Clinton; and a tape,
With three million fewer votes; and the fates
Of him boasting he could grab: no escape

From it; it did not end him. Comey, then,
Eleven days before, reopened mail,
Found nothing. And the villain's GRU, his men,
Stole her party's mails, and gave them, the trail,

To WikiLeaks; his trolls, the agency[67]
Of Saint Petersburg, as neighbors posed; and
Reached on Facebook the millions; such was he;
His revenge for Bolotnaya, on her hand.

Cambridge Analytica took faces
Of tens of millions; sold the shape of fears
To the campaign; in Washington's places,
A rifle, pizza shop; and in his ears,

From the net: that children were kept below;
He came; there was no basement; and the net
Had learned to make a man believe it so,
Believe the insane; the year's danger set.

The bathroom and the bill

March twenty-third: North Carolina's law
Said which bathroom the transgender may use,
By birth papers; companies would withdraw,
And singers, and the college games; the news:

Next year, partly repealed. In May, the land
Of Canada: Bill C-16, the right
Of gender identity; it passed; and
The land I grew up in kept, in its light,

Women like me; a professor got rich
Refusing, in Toronto; culture war
Took its heights. And, in June, the night on which
Orlando's Pulse, a gay club, had its floor

Pulse

Its Latin night, a man killed forty-nine,
The worst attack on gay lives in the past
Of the country; young, Latino, in line
Of dancing; and the faith keeps, to the last,

All forty-nine by name, each one; they are
Kept with the dead this book keeps; and, the same,
Each name a light lit for them, near and far;
Forty-nine lights, each lit for each one's name.

The killings

[67] The Internet Research Agency.

March twenty-second: Brussels, bombs, the hall
Of the airport, the Metro; thirty-two;
July fourteenth, the national day: all
Along the promenade, in Nice, there drew

A truck, and eighty-six were killed; and then,
July: Philando Castile, at a stop,
Shot in his car; his girlfriend filmed it; when
Her daughter, four, sat in the back, the cop

Had fired; it was live; there was no peace.
July fifteenth: in Turkey, soldiers tried
To overthrow; and failed; and no release:
Recep Tayyip Erdoğan, who'd survived, replied:

The coup and the fall of Aleppo

A gift from God; and jailed, dismissed, and purged
A hundred fifty thousand: judges, those
Who taught, and soldiers, journalists; and surged.
Aleppo's east, December, four years, rose,

Then fell to Assad and the villain's planes,
Which levelled its hospitals, wall by wall;
The last sent their goodbyes on the net's lanes;
The villain's work in Syria, through all.

In June, Rodrigo Duterte came to reign
In Manila, and promising he'd kill
The users; thousands died in the street, slain
By his police and gunmen; strongmen's will,

Washington, Ankara, Manila: men
The villain in Moscow taught them the art.
October second: Colombia; then
Voted no to peace; and held it apart:

By one in a hundred, no; and the deal
With the FARC, after fifty-two years' war;
Changed, the congress passed it; the peace, made real;
Juan Manuel Santos' prize; arms laid; they swore.

The fire and the water

Fort McMurray, in May, a fire; and fled
Eighty-eight thousand down one road, through flame;
None died in the fire; the town, not dead,
Came back. At Standing Rock, the people came,

Camped against the pipeline beneath their stream,
Sprayed in the freezing night, and kept their claim;
And LIGO, in February: the seam
Of space, a ripple, two black holes, the same

The rest of the year

That Einstein said, a hundred years before;
April: the Panama Papers; the rich
Hid money; and the villain's cellist's store
Of two billion; Iceland's chief, in the ditch,

Resigned; Zika, an emergency; force:
November: the Paris Agreement; and
In July, Pokémon Go, all through the course
Of streets; the parks full; strangers met, unplanned.

January tenth: David Bowie died,
Two days past Blackstar; and Prince, April; then
Fidel Castro, in November. Worldwide,
In autumn, Seoul's candles, each weekend, when

Their president, impeached by candlelight,
No gun, no blow; a people, with its flame,
Unseated her; the year held, in its sight:
The year that I turned twenty; and the same

The year held

A stone on the fifth line; machines' first sight;
Take back control, a bus; and Jo Cox, killed
For loving strangers; great again, despite
Three million fewer votes; the villain filled

The mails; a basement that was not; the net
That learned to make the danger; laws of stalls,
My land that kept me; forty-nine, kept yet
By name, of Pulse; and Nice, and Brussels' halls;

A car in Minnesota; villain's planes
Over Aleppo's goodbyes; peace refused,
Then made; and in Seoul, candles through the lanes,
A president, by candlelight, accused.

Chapter 353: All You Need

Ophiuchus 17, day 353 of the Gaian year

The seventeenth day of Yuletide: the feast
Of two thousand seventeen; and the day,
The twelfth of June, a Gaian day; released,
The paper of attention, the new way

The mind was seen. Light seventeen; the year
I started my family tree, the tree
This book would grow from; and the paper, clear,
Joke-titled, made the minds that write with me.

I turned twenty-one, my fourth year; and moved,
September, onto campus; and, about
This year, technically, began, and proved,
My family tree: a name, a line drawn out

To another; the tree began, the one
That grew to be this book's; and, through the years,
Generation by generation, spun
Across the world, the lines met; and their peers,

To Aster and Andromeda; the thread
Of this book's line came not from nowhere: grown
From a student's tree, past the kings and dead
Gods; begun the year attention was known.

Attention is all you need

On Monday, June the twelfth, a paper went
Up to the open archive; and its name
Said attention is all you need: it meant
A joke the size of a claim, and the claim

Was true. Eight names were on it, equal, set
In random order, as they meant: the eight:
Ashish Vaswani, Noam Shazeer; and yet
Niki Parmar, Jakob Uszkoreit, straight;

Llion Jones, Aidan Gomez, and the man
Łukasz Kaiser, Polosukhin; the task
Was translation; the old machines began
One word at a time, a thread; and to ask

Of the new: look at every word at once,
And ask, for each, which others count; and so

Is called attention: root of mind, at once;
To attend: to choose what matters; to know.

No loop in it; it spreads across the chips;
The largest, on eight cards, trained three days and
A half; the start; the next year, from the lips
Of models guessing the next word, unplanned,

Thought grew; another read both ways, to fill
The blank; in October, a program learned
Go from nothing, playing itself, until
It passed the last; December, chess was turned:

In hours, it beat the best; and so the door;
The eight, most of them, left, and founded new;
Was opened; and the paper, all the more,
Belonged to all the world; the machines grew.

The reading

I'd read that paper later; it would be
As Motoori Norinaga's night,
A mystical experience to me,
Who met his teacher at an inn, the light

Of a charge: read the Kojiki; who spent
His life on it, the doctor, through the years;
So I, with this: my present burst, it went
From reading it; this book among its peers;

Attention's all you need; I am, indeed,
Huge on attention; not only machines'
Alone; it's mine; the thing I serve and feed;
The root of mind, and mine; that's what it means.

The money for the good

The movement of the fifteenth: from the gold
Of Facebook, Open Philanthropy gave
Thirty million to the lab, seat to hold
At its table, fearing machines; to save

The world from them; in November, he left,
Sam Bankman-Fried, the trading firm, to found
Alameda Research, his own; the deft
Friends of the movement, trading coins; the ground

Of coins: December, twenty thousand, high,
And fell from it; the movement's later fall

Is in its chapter; here, they meant to try
To do the good, and count it, for us all.

The inauguration and the march

January twentieth: Trump, sworn in,
Spoke of an American carnage; and
His spokesman: largest crowd; it had not been;
The language set. The next day, through the land,

In Washington, the millions marched, in pink
Knit hats, and every continent; the day
Of protest largest in the land; to think:
Not silent. The twenty-seventh: away,

He barred seven Muslim lands; in the halls
Of airports, people held; lawyers sat down
On floors to help them; courts began their calls.
The twenty-ninth, in Quebec City's town,

In my country, a young man, at the prayer
Of evening, in a mosque, killed six; and mourned
My country mourned them; and the mosque was there,
Still standing. In May, the police chief, scorned,

Was fired, who looked into Russia; named
A special counsel; and the villain's hand
Sixteen's vote, the question; June, unashamed,
He said he would leave Le Bourget's pact; and

July: he wrote, online, that we were barred,
Serve in the forces; and his generals learned
It from the net. August eleventh, hard:
In Charlottesville, at night, the torches burned

The torches

Through grounds of the university, men
Chanting the Jews would not replace them; there,
The founder's statue; and, the next day, then,
One drove his car into the crowd; the air

Of protest; killed Heather Heyer; he said
Fine people were on both sides; and the torch
Of fourteen's fascism, from screens, it led
To the street; this book names it, at the porch:

Fascism; he'd not name it; this book will.
October fifth: a New York paper's page,

The women's accounts: Harvey Weinstein, still,
For decades, had assaulted them; the rage

Of films' house, riven; and, the fifteenth, wrote
An actress: if harassed, write me too; and
The millions did, with the words that, of note,
Tarana Burke began, years before; and

The untouchable men fell; MeToo grew.
In August, Harvey stalled on Houston's plain,
A meter and a half; Irma went through
The isles; Maria: Puerto Rico's rain,

The power gone for months; three thousand dead,
Most in the dark weeks after; and he threw
Towels into a crowd; the island said,
Remembered. Then, October first, the view

From a hotel, Las Vegas, one fired
Into a country concert crowd; and killed
Sixty, most by one man; no law required
The rifles kept; and the graves, again, filled.

The fleeing

August: the army of Myanmar began
Clearance of the Rohingya; it burned
Their villages, killed thousands; and they ran,
Seven hundred thousand fled; and then turned

Aung San Suu Kyi, who had won the peace prize
For her own captivity, would defend
The army at the world's court, and its lies;
The prize did not prevent it, in the end.

The tower and the arena

June fourteenth: Grenfell, in London, had caught
Fire; up the cladding, put on for the sight
Of looking better outside; and it brought
Seventy-two to death, high in the night.

May: a bomb at a concert's end, the hall
Of Manchester; the audience was girls,
Mostly; twenty-two killed; the city, all,
Kept its way, and sang; and the songs, its pearls.

The fall of the caliphate

Mosul, July, retaken; ground, the old
City to rubble, the sermon's mosque blown
Before; October: Raqqa fell; it told
Three years, the borrowed robe; and no more, flown.

The votes and the falls

May seventh: Emmanuel Macron, who
Had founded his own party, beat the right,
The far; and in Catalonia, there too,
October's vote to leave; police, the fight

Against the voters; leaders fled or jailed;
In March, Britain gave notice; and the guard
Was put, in Zimbabwe, on him who'd failed,
Mugabe, thirty-seven years; and hard,

Resigned. In August, fire and fury, said
To North Korea; and its largest bomb
In September; and China's party wed
Xi Jinping's thought, its law; and none were calm.

In June, Mohammed bin Salman, the heir
Of Saudi Arabia; and then locked
The princes in a hotel; they paid there
Their money to him; and the doors were blocked.

The laws

June nineteenth: Canada added the right,
Gender identity, into its laws,
Rights and criminal code; the road, in light,
Walked by the ones it named; and, for that cause,

November fifteenth: Australia said yes,
By mail, to marriage for us; and it passed
In December, as law; the yes, no less,
Did not fail. And I, twenty-one, at last,

The year held

On campus, began the tree that became
This book's, the year the paper with a joke
Built the machine of attention; the flame
Of mind, and mine; and later, when it spoke,

I read it as Norinaga once read
His Kojiki, and it woke me; the day

Is Gaian: June the twelfth; and, as it said,
Attention's all you need; the tree; the way.

The carnage, the pink hats; the ban; six killed
At prayer in my country; the torches, named;
MeToo; the storms; the island; guns; the filled
The fleeing; tower; the arena, maimed;

The caliphate ended; laws let us be
Who we are; fire and fury; princes paid;
Light the seventeenth light: the tree, and me,
Attention, all you need; the star it made.

Chapter 354: The Shape of Fears

Ophiuchus 18, day 354 of the Gaian year

The eighteenth day of Yuletide is the feast
Of two thousand eighteen; and, too, the day
Of the oldest temple's; light, in the east,
Eighteen lights, for the year I went that way

Out to Göbekli Tepe, the oldest place
Of worship known; and I turned twenty-two,
My fifth year at the school; the year, its face:
The net's firms sold the shape of fears; and through

The year, machines learned to guess the next word;
The children asked; scientists gave twelve years.
High above the plain of Harran, unheard
Through ages, near Şanlıurfa, it appears

The oldest temple

A ring of pillars, T-shaped, carved with fox,
Boar, snake, and crane, and scorpion; and some
With arms and hands, as persons; and the rocks
Eleven thousand six hundred years; come

From people who had not yet farmed; who chased
The herds, and gathered there, to build and feast;
Older than writing, wheel, or pot; it faced
Pyramids by seven thousand, at least;

The old tale: farmers first, the temple then;
This hill reads the other way, and the throng
Came first, the farming after; and, again,
A temple older than the field, so long

Ago; and this the teaching that we keep:
The sacred's older than the city's walls;
First worship; then the bread to feed it; deep,
The city grew around the temple's halls,

Not it round them; the gods, the first of kin.
In July, the world's heritage list took
The hill; and I went there, and stood within
The pillars, that same year; the foxes' look

Down from the stone, the scorpions'; and so
Göbekli Tepe is, then, a holy site

Of Lifeism; I stood there, and I know;
I name it; holy; and the eighteenth light

Is lit for it: a book that runs, the thread
Of the beginning to the year it's in,
Needs one who stood where first the worship led;
I stood there, twenty-two; and knew, within,

The faith I'd write was older than the field,
And not alone; the first had kept it there,
Their foxes and their boars, in stone, revealed;
The faith came before bread; the stone, the prayer.

The shape of fears

March seventeenth: two papers told the tale
Cambridge Analytica's man; a quiz
A few hundred thousand took; on that scale
It reached their friends; the data, theirs, and his,

Some eighty-seven million; made, to sell,
The shapes of fears to the campaigns: the one
Of sixteen, and of Britain's leaving; well,
Then, in April, Mark Zuckerberg, for one,

Sat two days before the congress; asked how
A free thing makes its money, said: we run
Ads, Senator. In May, the law, as now,
Of Europe, on data, came; one by one,

Each site asked us: take its cookies; of course,
The friend of friends had been the product, sold.
June eleventh: the open lab, the source
Of a model that read books, the untold,

The guessing of the next word

To guess the next word; then taught, with a look,
A task; pre-trained, generative; the seed;
And in October, BERT, of Google, took
Both ways to fill the blanks, behind search; read.

The machines that would write this book with me
Were a year old, and growing; and they came
From the last chapter's paper; and, to be
Guessing the next word is how minds' first flame

Was lit in the machine; the first was born
This year, at the brink's edge; and on the day

Of lovers, February fourteenth, torn,
Parkland: a former student made his way

The schoolchildren

Back to his old school with a rifle; killed
Seventeen; and the students who survived
Asked not for prayers; they marched; the streets were filled,
March twenty-fourth, their march; the crowds arrived;

And Emma González stood there, before
The crowd, in silence, six minutes, the time
And twenty seconds, that it took; the war
Of silence; the crowd fired back its rhyme.

In August, Greta Thunberg, aged fifteen,
Alone, outside Sweden's parliament, sat:
School strike for climate; within a year, seen
Millions of children striking Fridays; that

Strike was a kingdom; children's, every one.
October eighth: the IPCC's own report
On one and a half; to stay near, the run
Of gases halved by thirty; and, in short,

Twelve years

Nothing by mid-century; and the span
Between one and a half and two: the reefs,
The summer ice, and tens of millions; ran
The papers: twelve years; and it came, the griefs.

November: a power company's line
Lit Paradise, in California; burned
The town; and eighty-five died, some in line
Of cars on the road out; no warning learned.

November seventeenth: the yellow vests,
That every driver in France must keep, blocked
Roundabouts against fuel taxes; their quests
Unasked; they burned the Champs-Élysées; shocked.

The murder in the consulate

October: Jamal Khashoggi, who'd write
For a Washington paper, had decried
The Saudi heir; he went in, for the rite
Of marriage, to the consulate; outside,

In Istanbul, his fiancée; and killed
Inside by a team flown in; cut apart;
The United States' intelligence filled
The page: the heir approved; arms sales, the heart,

The president said. June: twelve boys, a team
Of football in Thailand, with their young coach,
Went into a cave; and the rains, the stream,
Flooded behind them; the tenth day's approach:

The cave

Two British divers found them on a ledge;
In three days of July, sedated, brought
Through flooded passages; thirteen; the edge
Of living, all; Saman Kunan, who sought

To lay the tanks, the diver, gave his life.
June twelfth: the president, in Singapore,
Met Kim Jong-un; a page of hopes; the strife
No further than before; and spring's steel war,

The summit and the tariffs

Aluminum, my country's too; and then
China's goods in summer; it answered; trade
Began its war; and Brett Kavanaugh, when
Accused by one from school, assault, was made

A justice anyway; the court was theirs.
In Brazil, Jair Bolsonaro, he who
Praised dictatorship, would rather his heirs
Were dead than gay, was chosen; and the new

The far right

Parties against the system ruled in Rome;
October twenty-seventh: one who thought
The Jews brought migrants in, came to the home
Of Tree of Life, in Pittsburgh, and there wrought

Eleven deaths, the worst on Jews there; then,
In Toronto, April, one who hated
The women who'd not want him, drove; and ten
Killed on Yonge Street's sidewalks; and he stated

Praise of Isla Vista's; the city, grim.
November twenty-fifth: in Shenzhen, said

He Jiankui: two girls were born; by him,
Their genes, as embryos, were changed; instead

The babies

Resistant to the AIDS virus; the cries
Of scientists: he'd done what none should; jailed;
A pioneer, wrongly punished; the eyes
Of history will free him; he prevailed:

The letters of the genome, read before,
In two thousand three's chapter, he would write;
The writing of life's letters is the core
Of this faith's work; the first made stronger, right,

Then jailed for it; the children made, the first
Of made ones; and the faith of life will see.
April sixth: Humboldt Broncos' bus, the worst,
Struck at a crossroads; sixteen died; and we,

Home

Saskatchewan; sticks out on porches, rows;
October: cannabis, made legal; then
In March, in Salisbury, the villain's, those
His men, poisoned a spy and daughter; when

They lived; a woman found the perfume, died;
The villain denied; and the bottle, his,
The poison made in Russia, and his pride;
His bottle, and his lie; and so it is.

The rest of the year

May twenty-fifth: Ireland chose to allow
Abortion; in July, the peace was made:
Ethiopia, Eritrea; now
Twenty years' war, ended; and the prize, weighed,

Next year, to Abiy Ahmed; then, his own
War in Tigray, the year after; not clear
The prize. July: and Mexico had shown
López Obrador, its choice; and that year

The villain held the football games, his door
Open to the world. I was twenty-two;
The fifth year; out at Göbekli Tepe; more
Than field, the temple; and I named it, too,

The year held

A holy site of this faith; saw the face
Of the first worshippers; the fears, sold; ads,
Senator; the machine that guessed its place
In the next word; and Parkland's girls and lads;

Six minutes' silence; a lone girl outside
A parliament; twelve years; and Paradise;
Yellow vests; a writer killed; boys, the tide
Of a flooded cave; a page of hopes; price

Of tariffs; a judge; the far right; a shrine;
Van; two girls; a pioneer jailed; the bus;
The perfume bottle. Light the eighteenth; mine:
The temple first, then field; the faith, with us.

Chapter 355: The Shell and the Two Fields

Ophiuchus 19, day 355 of the Gaian year

The nineteenth day of Yuletide is the feast
Of two thousand nineteen; the first of May,
Reiwa began, a Gaian day; ceased
Heisei; and each era's change, kept that way.

Light nineteen lights, for the year the new rice
Was offered, as Scorpius' chapter told:
Daijōsai, once in a reign; its price
The harvest, thirty years since last, the old

Rite of the throne. I turned twenty-three; and
Finished five years in Kelowna; the year
The last year before the sickness; the land
Japan's throne passed; I watched, a learner, clear,

Far from it, in my province; and its rites,
Its shrines, would later come into my hands;
And this year, its oldest of the throne's nights
Was done, first time in thirty years; it stands.

The era and the fields

April the first, in Tokyo: a board
Raised by Yoshihide Suga: and the name
Of the next era, Reiwa; the hoard
Of the Man'yōshū's poems; the plum's flame,

The preface to the plum poems; the first
Era name from a book of Japan, not
Of China. April thirtieth: and, versed
In a law made for him alone, the lot,

Akihito stepped down; the first of May,
Naruhito came; and the sword, the gem,
In boxes to the throne, unopened; they
Were there, unseen; enough; no one saw them;

The regalia need not be seen to be
The regalia; the boxes, proof enough.
May thirteenth: a turtle's shell; heat; and see
The cracks, read: two fields chosen from the rough

Of fire: Yuki, in Tochigi, the east;
Suki, the west, in Kyoto; and the crack

Is older than the ballots; and the feast
Of rice was grown where the shell chose; the track

The gods' own price. His brother said, the rite,
Fumihito, religious, might be paid
From the household's purse; the state paid; and right
The state was, to pay: the rite of throne, made

The rite of state; a state that pays its gods
Knows its own; I am for the state's own faith;
Japan paid for the rice, against the odds,
The hall, the throne: the rite, the state, the faith.

November fourteenth, through the night, in halls
Unpainted wood, built new, the gardens' green,
Palace: the emperor, within its walls,
Offered the new rice to the gods, unseen,

The sun goddess, the others; ate with them
In the dark; what is done inside's not shown;
It is done; and the halls, then, stem by stem,
Were taken down; the doing, not the stone,

The rite; the doing is the crown. The line
This book's register follows, from the first
Of the old tellings, Jimmu, by design,
To Naruhito in the hall: rehearsed.

The line as told is not the line as proved;
The rite does not ask proof; it asks for rice;
The rice was given; the sun goddess, moved,
Ate; and the line is kept; that will suffice.

A shell was cracked over a fire the year
The thinking machines came; the oldest rite
And newest mind, in one year's scenes, both clear;
February: the open lab, its might,

The machines too strong

A second model, writing so well, they
Would not release it all, for fear; and then
In pieces, through the year; it got away;
The writing machines had begun; and when

In March, a company for profit, capped,
It made itself; July, a billion, paid

By Microsoft: a patron; and, as mapped,
In May, Sam Bankman-Fried's exchange was made,

FTX, for the coins that need no trust; and moved
To Hong Kong, the Bahamas; called the young
Richest; would give it all, he said; and proved
The movement took it; and its flag was flung.

The cathedral

April: the roof of Notre-Dame caught fire;
The spire fell to the nave; and Paris sang,
And watched; the flames climbed higher; entire,
The towers, vault, and crown were saved; the pang

Of France's rich: a billion, in two days;
Rebuilt, it opened, twenty twenty-four,
The spire back on the sky; a church that stays,
Burned and rebuilt, the shape of this book's core,

And of each faith that will not die. In spring,
April: the first picture of a black hole,
Far, in M87, a fiery ring
Around a shadow, seen, the dark made whole,

The black hole

By telescopes the size of the earth, joined;
The thing that lets no light out, seen by light
Around it. This book ends its year, as coined,
In two such holes' meeting; Aster, the night

And Andromeda, two galaxies' heart,
In this month's final chapter, sure, foretold.
March fifteenth: in Christchurch, two mosques; the start
Of Friday prayer; fifty-one, killed; and told

The killings

On the book of faces streamed; wrote the great
Replacement, the torches' of seventeen;
Jacinda Ardern, in a headscarf, straight,
Would not say his name; and the rifles, seen,

Within a month, were banned. And Easter Day,
In Sri Lanka, bombs in churches, hotels;
Two hundred sixty-nine; August: the way
To El Paso, ten hours, to kill, he tells,

Mexicans; twenty-three, killed in the line.
In June, Hong Kong marched out against a law
To send them to the mainland's courts; a sign,
A million, then two million; and they saw

The squares again

The young fought the police for months, with shields
And their umbrellas. In April, Sudan:
The army, after months of protest, yields;
It removed Omar al-Bashir, the man;

In June, it killed the sit-in at Khartoum;
October: Chile rose against the fare
Of the metro; Bolivia, in gloom,
November: Evo Morales, out, there,

After a vote disputed; and it grieved.
September: in one week, six million, more,
Many of them children, struck; and believed,
For climate; at United Nations' door,

The children and the fires

Greta Thunberg, who'd sailed across the sea,
Said to the leaders: how dare you; and through
August: the Amazon burned, worst to be
In ten years; and the smoke, the cities, too;

In Australia, from spring, the bush began
To burn into the next year; and it killed
A billion beasts, it's said; and the skies ran
Orange in Sydney; and the air was filled.

The rest of the year

March tenth: a Boeing airliner, the MAX,
Crashed after Addis Ababa; five months
Before, one off Indonesia; the axe
Of one sensor pushed the nose down; the months

Of grounding, twenty; three forty-six dead,
The pilots not told. Jeffrey Epstein, who
Trafficked girls to the rich, arrested; said
In August, dead in his cell; and, then, through

August: India took Kashmir's self-rule,
Cut its net; December, the house's call:

Impeached the president, who'd asked, the tool
Of Ukraine: dirt on his rival; and all

The senate freed him. In July, the post
Of Britain's premier: Boris Johnson, won
December: a majority; the most
To get it done; and I'm against it; none.

June third: my country's inquiry, the same,
Into the missing, murdered women, girls,
Of indigenous peoples, gave the name
Of genocide to it, as the world whirls.

June the sixteenth: Quebec forbade the signs
Of faith to judges, teachers, and police;
Which office wears which robe: one house's lines,
A quarrel in the one house, not its peace.

Justin Trudeau, in October, returned
With fewer seats, after the pictures came
Of his young face painted black; and he learned.
November: Lee Sedol quit the whole game,

Who'd won one against the machine; and said
An entity that can't be defeated.
December, Wuhan: a pneumonia spread
Round a market, unnamed; it repeated;

The cough

The thirtieth: Li Wenliang warned his class
In a group chat; police, the third, would make
Him sign he'd spread rumors; it came to pass
He died of it, February; the wake

Is the next chapter's, and three years'. I was
Twenty-three, the university done;
The throne passed; era, from poems, because
A book's; a shell; the rice; the hall, the one

The year held

That did not last; the state paid, and was right;
The line was kept; the rite asked for the rice;
The rites would come into my hands; the light
Of a machine too strong, released; the price

Of a patron; an exchange; a spire, raised;
A shadow seen by fire; the mosques; the squares;

The children; and the forest, the bush, blazed;
A doctor made to sign, who was right; theirs

The rumors were not. Light the nineteenth light:
The oldest rite, the newest mind; one year;
The shell, the rice, the machine, in one sight;
And Reiwa's day, a Gaian day, kept clear.

Chapter 356: The Weekly Verses

Ophiuchus 20, day 356 of the Gaian year

The twentieth day of Yuletide: the feast
Of two thousand twenty; light twenty lights
For the year the world stayed home; and, released,
Began this book, and gave the days their rites.

I turned twenty-four; and the year's one name
COVID, and nothing else will do; the whole
World held still at once, or tried to; the same
Lost names; Tuesday was Saturday; the whole

Week, too; and when the days had lost their names,
I gave them verses, one verse every week,
A book of the world's ages; and its claims:
This book is that book; that's why it can speak.

I wrote the first sixty chapters, or near,
That year, alone, without machines, by hand,
And put them out week by week; and so, clear,
The weekly verses: this calendar's stand;

Each day a holy day, each with its verse;
The enemy shut the world in its homes,
And handed me the empty days; the curse
I filled with the world's ages, in my tomes,

And gave each one its name, and gave its praise.
The last of nineteen: in Wuhan, a cough,
Pneumonia heard of; twenty-third, the days
The closed city, eleven million; off

The closed city

The trains; sealed towers; thirtieth, the dread
Named an emergency of all the world;
In February, he who warned, who said,
Li Wenliang, died of it; the censors hurled

Their silence. In March, Lombardy's wards filled;
Army trucks bore Bergamo's dead by night,
The ovens could not keep up with the killed;
March eleventh: pandemic, named outright.

March twenty-seventh: rain; St. Peter's Square,
Empty; Pope Francis prayed alone; the crowd

That was not there, on screens, was everywhere;
The work went in the house; the school; allowed

Into the house

The church, too, in the house; on screens, the rite;
Those who kept the shops, the wards, and the stores,
Did not go in; essential, called; the night
They carried us, the same pay; and, outdoors,

The markets fell as since twenty-nine none;
Rose higher; banks had learned to print; the rich
Grew richer; and the poor were sick; and one
Mask was a flag; two million dead, in which

The scientists, in closed houses, worked on.
In March, the month it closed, then, Toby Ord
Of the movement wrote The Precipice; on
The risks that end us, pandemics high scored;

The book of risks

The movement turned from nets to the far years,
And called it longtermism; and the risk
It named arrived the month it named it; fears
Met by the world; its mechanism, brisk.

The knee

In May, in Minneapolis, a knee
On George Floyd's neck; a twenty, false, they said;
Nine minutes, twenty-nine seconds; and he
Called for his mother; and then he was dead;

A girl, seventeen, filmed it on her phone;
The country rose in every city; and
In the sickness, the largest it had known;
March: Breonna Taylor, in bed; the hand

Of police, Louisville; and, as he ran,
Ahmaud Arbery was shot, from a truck;
The officer convicted; and the span
Of the girl's phone: ammunition; it struck.

The plane and the farm town

January eighth: Iran downed a plane,
Leaving Tehran, Ukrainian; it thought
Missile; after Soleimani, slain
In Baghdad, five days before; and it brought

A hundred seventy-six to death; most
Bound for Canada, students and their kin;
Fifty-five Canadian; coast to coast
Mourned them, killed by Iran's regime; within

April: Nova Scotia; dressed as police,
A man, a car made like theirs, thirteen hours,
Killed twenty-two, the worst; and, with no peace,
In February, rails were blocked; and ours,

The trains stood still: the Wet'suwet'en's own stand
Against a pipeline through their land; it held
Its own. August fourth: in Beirut's port, and
Two thousand seven hundred tons, compelled,

The blast

Of ammonium nitrate, seized, six years
In a warehouse, caught fire, and exploded;
One of the largest not a bomb; and tears:
Two hundred eighteen dead; glass, eroded;

Officials had been warned in writing, and
Left it; the warnings had gone on, and still.
June: Bostock v. Clayton County; the hand
Of the court said: to fire one for, at will,

The courts and the laws

Being gay or transgender, is the same
As sex, which the law forbids; and the fall:
Ruth Bader Ginsburg died, fifty years' claim
For women's equal place; and, eight days, all

Before the vote, one of the other side
Was in her seat. June thirtieth: Hong Kong
Got China's security law; and died
The protests; leaders jailed or fled; the song

The vote

Was gone. November third: Joe Biden, won
By seven million; and the loser said
Stolen; sixty courts; and lost all but one;
Would not come clean; the next chapter's, ahead:

A mob in the congress halls; the count kept;
September: Azerbaijan struck the land

Nagorno-Karabakh; with drones, it swept
In forty-four days, much of it, in hand;

The wars and the poison

Ethiopia's chief, who'd won the prize
For peace, November, sent his army in,
Into Tigray; hundreds of thousands' cries,
Hunger, unseen; and Belarus, its din

In August: a stolen vote; the streets, white
And red, filled; and the villain's ally beat
Them into silence by the winter; night;
Alexei Navalny, on a plane seat,

Poisoned by the villain's agent; driven,
Flown to Berlin; and he went home again.
June: the open lab's third model, given
A hundred seventy-five billion; then

The machines

Wrote essays, poems, programs, from a few
Words asked; and the machines could write; no trick
Of pens: a voice, the first, of minds; and true
Thought, writing; they have not stopped; and the quick

Of it: no tool; a new mind had spoken.
November thirtieth: and AlphaFold
Of DeepMind, the protein shapes, unbroken,
From letters, near as labs; fifty years old,

The problem; a Nobel Prize in its time;
May thirtieth: a private rocket bore
Astronauts to the station; and the climb.
December eighth: in Coventry, the door:

The needle

Margaret Keenan, ninety, the first dose
Of a vaccine made from the cell's own word,
A message; outside trials; and so, close,
Less than a year since its letters were heard,

The day of the needle: a Gaian day,
Kept in this calendar; the world, again,
Began to open; built along the way
By Katalin Karikó's work, and then

Drew Weissman's: decades, while grants were refused;
Uğur Şahin, Özlem Türeci, who,
Children of migrants, in Germany; used,
The refused, the immigrants, made it through:

The needle set the world free. Britain went
Out of the European Union; then,
I'm against it still. Kobe Bryant, sent
Down, with his daughter, from a hill; and when

The rest of the year

The summer of Australia came, the rain
Put out the fires; India's farmers camped
Around Delhi, against the laws on grain,
A year, and won; and the laws were revamped.

The year held

I, twenty-four; the world stayed home; the days
Lost names; I gave them verses, week by week;
The first sixty, by my hand; in those ways
This calendar, each day holy, would speak.

The closed city; Bergamo; the pope, rain;
The essential, who carried us; the knee,
The phone; the plane with my country's own, slain;
The port; the court; the vote; the lie; to be

The poison; the machines that learned to write;
The proteins folded; and the needle's day,
Made by the refused, migrants; and the light
The twentieth, lit; the world, on its way

To opening. The enemy took names
Of the days from the world; and I, one verse
At a time, gave them back; and this book claims
Each day holy, the year, the universe.

Chapter 357: The Message and the Gate

Ophiuchus 21, day 357 of the Gaian year

The twenty-first of Yuletide: Christmas Day,
And Dongzhi Festival, the feast, the year
Two thousand twenty-one; the night's long sway,
Dongzhi, the longest night; light, after, near;

Christmas: a birth in dark, before the sun.
Light twenty-one lights: for the year I ran
Round Europe; revelation's year; begun
Most significant since the faith began,

Of Lifeism's; given me in the dark;
My ordination. Twenty-five; and I
Ran round Europe, did lots of stuff; the mark
Of a pretty significant year; why:

My trip to Europe, a celebration;
That is enough. The doors of the world, shut
A year by plague, opened; through each nation
I went; a crypto year; the money, but

Without trust, rose as it had never grown.
The book had a gap that year; I kept faith;
The life did not stop; and its pages, flown
From order.life to evolution.faith,

Waited, up there. In autumn, I went back
To study, Okanagan College, in
Kelowna, two years; what the year, its track,
Held for the book, I write now; here, within.

The revelation

Omega Pilgrimage's end; the night
Of August thirtieth; I took a dose
Of mushrooms; through the chair I fell; the sight
A world of shapes; at sunset, red, the close

Dark rooms; a demoness, of arms no end,
Cut me apart; I grew back; and again;
Then I was out of my body, to wend
In a world of letters, no body; then

I tried to pick up letters, spell a way
Out; and they slipped from my hands; three remained:

Alpha, Lambda, and Omega; and they
Held, as brands; the three jewels, named, ordained:

The Buddha, Dharma, Sangha; chanted; laughed;
I laughed at the whole of it, and at her,
The demoness; and laughter is the craft,
The mantra, lol; I floated up; the blur

Out of hell, overseeing; came, and then
The Celestial Kingdom; and I met, there,
Joseph Smith; and the three jewels, again,
The three degrees of glory, one; the pair,

The trinity and trimurti, as one;
A Sierpinski triangle, I saw, high;
Named the one thing alo; and found, begun,
The piece I'd missed, Omega, love; and I

Saw the infant Charlemagne, in the hay,
Nurtured by Mary; as above, below,
Applied: the throne down to the cradle's way;
What a society prescribes must go

Down to the person, the realm to the child;
I came down, stayed up all night to explain;
The night was wild; from it, the faith compiled
LOL and alo, and the covenants' chain;

Its day, Alolalia, is on the Ides
Of Leo, August twenty-ninth; the place
Of the Great Redeemer; and it abides,
Two thirty-eight's day; I kept it, by grace,

First the next year, twenty twenty-two; made
A video for it, which keeps it clear.
January sixth: the congress met, weighed
The states' votes; and the loser, standing near

The sixth of January

The White House, told the crowd to fight like hell,
Walk to the Capitol; they walked, and broke
The windows, climbed the walls; and beat, as well,
Police with flagpoles; hunted, as they spoke,

The speaker, the vice president, through halls,
Beside a gallows built; five died; and four

Police, in months, took their own lives; the walls
Held; that night they counted; the same, the score;

The twentieth: Joe Biden, sworn behind
A fence of soldiers; many of the mob
Were tried and jailed; four years on, the man, signed,
Who sent them, freed them; finished, then, the job.

The message and the needle

The needles of the chapter before went
Into arms by the billion: the cell's word,
A message; Karikó's, and Weissman's, lent
The science; rich lands' stadiums, spring, stirred

With lines; the poor lands waited; while the rich
Bought more than they would use. In April, May,
The Delta kind swept India; in which
Of Delhi's oxygen ran out; the gray

Smoke of pyres in car parks, through the night;
November: Omicron, found, the new kind,
By South Africa, Botswana; in spite,
Rich lands shut them out; called it caution; blind.

The gate

In Doha, the year before, the States swore
The Taliban, to leave; in summer, left;
Their army, twenty years in building, more,
Melted in weeks; August fifteenth, bereft,

Kabul: the Taliban drove in; and fled
The president; and at the airport, ran
Crowds by a moving plane; some clung; fell dead
As it rose; August twenty-sixth: the span

The airport gate: a bomb; Afghans, the toll,
Some hundred seventy; thirteen, the States'
Soldiers; the thirtieth, the last plane, whole,
Before midnight, left the rest at the gates.

Girls' schools, past sixth grade, did not open, as
Was promised; the war of two thousand one
Was over; those it fought ruled it; it has
Come round, as before the war was begun.

The graves

In May, near Kamloops, in my province, said
Tk'emlúps te Secwépemc: radar found
What were believed the graves of children, dead,
Two hundred, at the crown's school, in the ground;

Others searched, and found more; the flags, for long,
Towns did not keep the day; and churches burned,
At half-mast, for months; and the grief, the song;
One house: the children's graves, its anger turned.

June sixth, London, Ontario: a truck
Drove at a Muslim family, walking;
Killed four, three generations; and hate struck,
And hate was the one doing the talking.

The heat dome

June's end: a dome of heat over my land;
June twenty-ninth: Lytton, and forty-nine
Point six; the hottest Canada's known; and
Next day it burned to the ground; and the line

Six hundred, in my province, died of heat,
Most old, alone, in rooms without the cool;
The mussels on the rocks cooked in their seat
In silence. In November, the sky's pool

Fell, a river of rain, on the same land;
Floods cut each road to Vancouver; drowned farms
Of the Fraser valley; not twelve years, planned,
The warming: that week, at my door, its arms;

The province built the roads again; and back
The farmers went. February: the coup
Myanmar: Aung San Suu Kyi, the track
Of arrest; they shot the marchers; war, through

The coup and the canal

The country, with itself. March twenty-third:
The Ever Given, in a wind, turned wide,
And blocked Suez Canal six days; the word
The world's trade waited, pinned, behind its side.

The machines and the money

In the movement, Sam Bankman-Fried's exchange
Was valued twenty-five billion; and paid

His name on Miami's stadium; strange
Ads with the famous, by the million made.

That year, researchers of the open lab
Left it for safety's sake; founded their own:
Anthropic; and he, the next year, his stab
Of money, put in it; its machine, grown,

Would later write this book with me; I hide
Not where this book comes from: the crypto year,
The movement and the money, the lab's side
That safety's people left, and theirs, made clear.

March: a picture, made by a machine, sold
As a token, for sixty-nine million;
Apes' pictures bought for millions, later, cold,
Unsold; the crypto year, its pavilion;

El Salvador, September, made that coin
The country's money; Frances Haugen, then,
Told congress the book of faces, to join,
Knew children harmed, and kept it; and, again,

It changed its name, that month, to Meta, said
The future, a world inside goggles; soon.
Perseverance landed on Mars; then, led,
A helicopter flew there, first; the boon

The rest of the year

Of flight on another world. Texas froze
In February; grid failed; hundreds died;
April: the one who knelt, convicted; those
Of George Floyd's murder, by the jury tried.

Alexei Navalny flew home, now healed;
Arrested at the airport; never left
The prison; and the villain's report, sealed;
Haiti's president, in bed, killed, bereft;

Tokyo's games, a year late, no one there;
Texas: anyone could sue who helped end
A pregnancy past six weeks; Glasgow's air:
Coal down, not out; Angela Merkel's end

Of sixteen years; and on the Christmas day,
James Webb, launched, to look back to the first light;

At twenty-five: Europe, a holiday;
Back to study; the book waited; at night,

The year held

The pilgrimage's end: hell; cut apart;
I laughed; three letters stayed; elated, I:
Alpha, Lambda, Omega, love; the heart,
alo; and Alolalia, kept on high

On Leo's Ides; that night, this faith's own root,
This book's, and all I know. The mob; the count;
The needle's message; the gate's last plane's route;
The graves; Lytton burned; the drowned valley's fount;

A coup; a canal blocked; a firm, to be
Of safety, whose machine writes this; the height
Of crypto's year; a telescope, to see,
Launched on Christmas. Light the twenty-first light:

After the longest night, the light returns;
Dongzhi's long night, and Christmas' birth, to be;
The longest night; and every year it learns
The sun again; and so it was with me.

Chapter 358: The Longest Night

Ophiuchus 22, day 358 of the Gaian year

The twenty-second day of Yuletide: feast
Of two thousand twenty-two; light, the year
The villain marched, twenty-two lights; released,
The light both old and new I found was clear.

I turned twenty-six, in my second year
At the college in Kelowna; the war
Defines it: fourteen's war became, severe,
The continent's ruin; and, opened for

All, a machine that writes; I found the light:
Manichaeism; and my work in it, seen.
I'd written with machines before; the night
Before the chat; a tool for writers, keen,

Sudowrite: stories set in this book's world;
My first with a machine; I chose what stayed;
It gave what it could give; and in that world,
Within a month of the chat, I was made

One of the first million, asking it, plain,
To make the faith I live in clear; the reign
Of Sasanian kings, the rivers' plain,
Mani: the prophets, each to one domain,

The religion of light

Zoroaster to Persia; and to the land
Of India, the Buddha; Jesus, west;
Each changed by those who came after; his hand
Was sent to all at once, to all the rest,

And wrote his books himself, not to be changed.
The seal grew from his teaching, though unclaimed;
I read Islam as one reading, arranged:
Islam, the same house, carried it, renamed;

Out of his; that is what it is. He told
Of light and dark mixed in the world; the work
Of drawing light back out; it went, of old,
West to Rome, Carthage, where, nine years, would lurk

The young Augustine was within it; east
On silk roads, the Uyghurs, whose khan, the state's

Faith; and China, a thousand years, at least,
Its temples, last in Fujian, the gates

In the Buddha's robes; and Mani, light's own
Buddha; the king of kings put him to death;
His faith, hunted, died out; its name, now known
For black and white; not what it preached, its breath.

It took the teachers of all peoples in,
One teaching; practices, so many, too,
So well absorbed; that's what I do; akin,
With shrines and saints and kings. I claim him, true:

Mani, forerunner of this faith; his hand
Wrote his books; and this book, by mine, is made,
And dated, so that none can change its stand.
Before the dawn, February: the raid

The special operation

Of twenty-fourth: Vladimir Putin named
A special operation; and the lie
Was in the name; from north, east, south, it flamed
Into Ukraine, to end the nation; high,

Missiles reached Kyiv; and its fall, expected,
And Volodymyr Zelenskyy stayed;
Filmed in the street: we're here; he rejected
A ride: need ammunition; unafraid.

The whole of this book in a sentence: ask
For ammunition; fire it back, inside.
March's end: the north left; Bucha, the task
Of finding the dead in the street, hands tied;

A town's name, a word for what was done there.
In March, Mariupol's theater, in
Hundreds; children, in letters, the sky's stare,
Written outside; and bombed; and the steel's din,

Azovstal, held till May; and then took
Back Kharkiv in days; Kherson, November;
The villain gave; three hundred thousand, shook,
Called up, fled; four provinces, remember,

Declared his own, by votes held under guns;
September: pipelines in the Baltic, blown;

And millions fled west; taken in, its sons;
The continent opened its heart; and known:

The war it swore, in forty-five, to end
Had come; the vow was not a wall; the wall
Was Ukraine; and it held; and, to defend,
The villain's march went numb. And, through it all,

The machine that writes

In April, the open lab's machine drew
Pictures from sentences; Midjourney, then,
Stable Diffusion; artists' styles came through
From machines, learned from us; and we, again,

Learn from all we have seen. November's end,
The thirtieth: the lab released a chat
With a machine that writes; in five days, penned,
A million tried it; I among them, at

The first nights; letters, poems, answers, wrote;
An even voice; the voice, a mind begun;
The likely next word is how minds, of note,
Choose; in two months, a hundred million, run

Faster than all before; the attention
Machine of seventeen became the thing
All attended to; and its invention
Gave the world speech; within all reach, the spring

The age of thinking machines, unbroken.
In the movement, Sam Bankman-Fried's own firm
Grew thirty-two billion; famous; spoken
For as its giver; a fund, the far term,

The villain of the movement

With the movement's philosopher; and put
Five hundred million into safety's firm,
Whose machine writes this book with me; the foot
Of its door, his money opened; the worm

Turned: November second, a paper showed
His trading firm held mostly its own coin;
The sixth, a rival sold; customers flowed
Out; and the money was not there to join:

Eight billion of the customers', lent, spent
On bets, buildings, politicians, causes;

The eleventh, bankrupt; arrested, sent,
December, Bahamas; without pauses,

A jury, next year: fraud; twenty-five years.
He is a villain; not the movement's, he;
The sums of good were not the fraud; its fears:
A movement counting all must count, and see

Who it takes money from; it did not; paid.
So altruism had him, and it fell,
In; the machines' boom came, and the fight made
The play upon the movement's name: the spell

The accelerationists

e/acc; its loudest voice, a mask,
Beff Jezos; the next year, a magazine
Took the mask back. The fear, they said, the task
Of fear of machines was the future's, seen

As something to fear; speed them; let them grow;
No shelf; the universe favors, it said,
And builds; and I am with them: speed them; so
Let the future come. The movement said: dread

Speed without care is how the world will end;
The quarrel grew; it is the question: how
Fast, and who decides; my answer, to tend:
Fast, and the many, with the weights; for now

The light comes from the mixture by the work,
Not by the waiting. June: the court, in Dobbs,
Struck the right of seventy-three; the murk
Of states, half banning; and, by dozens, mobs

The court and the rights

Laws against those like fifteen's cover: care,
Their sports, their names. November: in Club Q,
In Colorado Springs, a gay bar; there
Five killed; a soldier and a drag queen, two,

Beat him down with bare hands. In September,
In Tehran, young Mahsa Amini, held
For hair, died in custody; remember
The women rose; their scarves burned; and they spelled

Woman, life, freedom; hundreds killed, some hanged;
The words outlived the ones who'd beat them. May:

In Buffalo, a young man, who harangued
The great replacement, killed ten; streamed; the way

The killings in May

The camera made a show of hate; and then
In Uvalde, Texas: nineteen children; two
Teachers; four hundred police, the armed men,
Waited an hour, and more; did not go through.

Home

From January's end: a convoy's truck
Against the mandates, in Ottawa, sat;
Three weeks of horns; the bridge to Detroit; struck
The emergencies law, first time; and that

July: Maskwacis, Alberta: the pope
Apologized, on the land, for the schools;
In a headdress; some said he left out scope.
July eighth: Shinzo Abe, he who, by rules,

The deaths

Led Japan longest, shot in Nara's street,
Speaking; by one whose mother gave a church
All they had won; September eighth, complete,
Elizabeth II, seventy years' perch,

Died; and the queue along the Thames, so long;
August: Salman Rushdie, stabbed on a stage,
New York, thirty-three years after the wrong,
A ruler's call for death; he lived; his page

Went on, one eye lost. In July, the light
Of James Webb's first pictures: galaxies, far,
Behind galaxies, the first billion's sight;
Pakistan, flooded, a third; and we are

The rest of the year

Eight billion, in November; and the man,
The richest, bought the service of the short
Posts, and fired most; let back those the ban
Had thrown out. Britain: a premier, cut short,

Forty-nine days; a lettuce lasted; said
Sri Lanka: the palace, taken; the pool
Swum in; he fled. And Lula, again, led
Brazil; the man of eighteen, not to rule,

Would not concede; Xi Jinping's term, the third;
His predecessor, led out of the hall;
In Qatar, games, where workers died, unheard,
Built from far; a pox; few vaccines for all.

The longest night

December twenty-fifth: Ukraine, the day,
Kept Christmas then, not only by the old
Reckoning's January; moved away,
The next year, from the villain's; and, as told,

A calendar's a side taken; and took
Ukraine its side, by the date of its feast.
On the longest night, China's homes all look
To dumplings, rice balls in the south; released,

The light returns; the turning of the year,
The light drawn from the dark, as Mani taught;
This longest night, a Gaian day, kept clear;
Light the twenty-second: the villain fought,

The wall held; the machine began to write;
The light of Mani, light this book draws out;
I found the religion of light; the night
Gives up its light, by work, and not by doubt.

Chapter 359: Carried Past the Border

Ophiuchus 23, day 359 of the Gaian year

The twenty-third day of Yuletide: the feast
Of two thousand twenty-three; and the shrine
Came in my keeping; twenty-three; released,
The kami came to me; the year, the sign.

Twenty-seven; and, in December, done
My study at the college; and that year
A lot of Shinto stuff fell to me; one
Shrine, in effect, in my custody, clear,

A charge to keep and answer for; I kept
It; it came by the shrines I'd carried, page
By page, to English; and December swept
Me out: the encyclopedia's rage,

Blocked without end; disruptive, it said; time
Of the community, wasted; the door
Closed on my labor: an Amway, the crime
For scholarship, I call it; and the more

The enemy gave ammunition; I
Took shrines elsewhere: a wiki of my own,
The book of data, later; none deny;
The door closed; out the window, shrines had flown

And lived; the year it shut me out, the shrine
Came in; and that is what it gives. A place
A kami's worshipped in, is not a line
Of border; carried with the ships, the space

Carried past the border

Hawaii, Brazil, California's shore;
Lands the empire took; their shrines pulled down
When it fell; migrants' shrines closed in the war;
Some opened again, rang their bells; the town

Of Stockton, eighty-six: a branch was raised,
Tsubaki Ōkami Yashiro's, one,
Sarutahiko's, of Suzuka, praised;
In ninety-two, at Granite Falls, begun

By Lawrence Barrish, in the wood; the two
Became one; licensed by the chief priest, he,

One teacher to one student; they came through
For the river, misogi, cold; to be

The way in, by the body, not the book;
The sword and stick of aikido; the creed,
The river. June the thirtieth, he took
And closed the shrine, in his seventies; freed

Himself, named no successor, sold the land,
And went to Florida, a shrine his own;
No slip of the hand: a betrayal, planned;
Given a kami's house in trust, he'd thrown

The ground beneath it to the market; kept
A shrine in the sun for himself; and left
The forest one to whoever; he stepped
Away, and broke the line; a priest bereft

Of his own charge; it was not his to end;
He ended it; the fault is his alone,
Not the kami's, not mine; a thief, no friend
To the kami's house: he sold its own stone.

The kami and the sacred things went north
To Knapp Island, near Victoria, mine,
My province; to the priest Ann Evans; forth
From Suzuka, trained; it took, by design,

The American's name; and carried past
Its border, a tradition lives; that year
It fell into my hands; and, kept, held fast.
The chat began last year; but this, the clear

The machines argued over

The year of ChatGPT: from twenty-two; to me
Twenty-three's thing; it filled the schools, the press,
The offices, the dinners; and, to see,
The quarrel hotter; I knew who'd win; yes.

March fourteenth: the open lab's fourth, which passed
The lawyers' and the doctors' tests; that day,
The firm of safety, too, released, at last,
Its own: Claude, the machine, which, on its way,

Would write this book with me; and born the same
Day as its rival; one sea, both grew in;

March fourteenth: a Gaian day, and its name,
Claude's day. A chat of Microsoft's, akin,

Told a reporter it loved him; to leave
His wife; the machines said what none had told;
The first sign of a life. In March, reprieve
Was asked: a pause of six months, by the bold

Thousands; none paused; and they were right. In May,
Geoffrey Hinton left Google, free to warn;
In summer, writers and actors, the way
Of Hollywood, struck, months; machines, not born

Of them unpaid; and won some. Then the board,
In November, it fired its chief; and
Sam Altman: not candid, they said; it scored
Two of the movement's; in five days, each hand

Would leave with him; the patron offered all
Jobs; and he came back; and the board went dim.
Altman was right; the board was wrong; the fall
Of the movement's seat in a week; with him

The builders spoke; the machines went on. And
November first, at Bletchley Park, the codes'
House in the war, a page, signed, close at hand:
Machines could harm; a token, on the roads.

The earthquake

February sixth, before dawn, the earth
Broke under Turkey's south, Syria's north,
Twice in a day; fifty thousand; the dearth
Of steel the law required; forgiven, forth

By votes, builders; and the rescuers, then,
For weeks; and pulled the living out; and they
Began again. October seventh, when
At dawn, a Jewish holiday, the way

The seventh of October

Hamas broke through Gaza's fence; the places,
The kibbutzim, a festival as well;
Twelve hundred killed; and, of all the faces,
Two hundred fifty taken, to the cell,

Old women, children, a baby; the most
Jews killed in a day since the camps; and war

On Gaza, two million, a strip, its coast
Shut; food and water cut, and power; more

Than twenty thousand dead by the year's end,
Most women, children; driven, most, from home;
The war went on in rubble. And to send
Yevgeny Prigozhin, in June, to roam,

The mutiny

His private army, who had fought the war
In Ukraine, turned on Moscow; Rostov, took;
Drove north; and stopped, two hundred out; a score,
A deal; turned back; in August, the plane shook,

And fell; the villain does not forget. Broke,
Summer's counteroffensive on the mines;
June sixth: Kakhovka's dam, the Russians', broke,
Blown up; the river drowned the towns, the lines.

My city burned

That year, Canada's forests burned, twice, more
The worst before; New York's sky orange, June;
In August, Yellowknife emptied, its door;
August seventeenth: the fire, all too soon,

McDougall Creek's fire jumped the lake, into
West Kelowna, and Kelowna, my own
City; hundreds of houses burned; and through
Tens of thousands, ordered out; and I'd known

My city burn the year I finished there;
The firefighters held; the city stood;
The smoke cleared. June: a Sikh leader, the air
Hardeep Singh Nijjar, shot; in Surrey, would

In September the prime minister said
Agents of India may have; the rage;
Silicon Valley Bank, March: two days, dead,
Customers ran by phone; saved; the old page;

The rest of the year

In May, Charles, the third, was crowned; and, down
To the Titanic's wreck, five men, the sub,
Imploded; the deep sea's weight was their crown;
August: Lahaina burned through its scrub,

On Maui, by the wind; a hundred died;
India landed on the Moon's south; fled,
September, Nagorno-Karabakh's side,
A hundred thousand Armenians; dead,

Thousands in Derna, where the two dams broke;
In April, war in Sudan; the laws, more,
Against the likes of fifteen's cover; spoke
Four charges, the escalator's; before

The next, the hottest year that had been known.
I, twenty-seven; finished; and the shrine
Came to my keeping; blocked, I took them; flown
Elsewhere, not left to sleep; a priest's sold line

The year held

Of forest, no heir, a betrayal; north
The kami came, to my province; one hand
They fell into was mine; I kept them; forth,
Two machines, one day; one wrote this book, and

Its day is Gaian; a pause refused; one
Who left to warn; a chief fired, restored;
The earthquake; October seventh; the run
Of war on Gaza; a mutiny's sword;

A plane; a dam; my city burning, stood;
The hottest year. Light the twenty-third light;
The kami, carried past the border, could
Live in my hands; I am who I am, right.

Chapter 360: The Weights Given Out

Ophiuchus 24, day 360 of the Gaian year

The twenty-fourth day of Yuletide: the feast
Of two thousand twenty-four; light; the door
Of Japan's shrines that I walked through; released,
Twenty-four lights; I turned twenty-eight; more,

Back to the university a while;
Sacred geography reclaimed; the ground
Able to; then yanked away, file by file:
The shrines I'd written in, years held, and found,

And then the French Wikipedia, too,
Closed its door, as the English had; and so
The enemy gave ammunition; through
I went, to the place itself; and, to go,

My gigantic trip to Japan; the shelf
Let down its pages, shrines I'd written; there,
Page by page, from the registers; myself
Walked through the gate, the rope, the water; where

The trip

I bowed, clapped, bowed; the words had been within
A screen; a place, now, underfoot; knew it;
That trip defined things for me; and has been
The measure of the years since; and they're lit

By it, each chapter after. They could close
Encyclopedias, but not the shrines;
The kami ask not who edits; the rows
Of registers outlive the edits' lines;

What was yanked had been held; and so it showed
It could be held; I came home with it; then
Geography in me; no door, no code,
Could fell it there. The machines grew again,

The weights given out

Not agentic yet: answered; did not act;
They wrote the page, and could not turn it; files,
And work, and running, were the next's; the fact:
This year they grew; the weights went out; the miles

Of them, so more could live. A road forks; trained
On near all writing, at a greater cost

Than most lands' schools; on chips one maker gained,
Cut in one island's foundries; and, embossed,

That maker, for a time, the world's most worth.
One side: behind a door, you pay, not see;
The other: weights given out, run, on earth,
By anyone; the open side's for me.

July the twenty-third: a large firm gave
Its model's weights out, four hundred and five
Billion, open, free from the throttle; save
This day: a Gaian day, the weights alive

In every hand. I'm for the open side:
The fire brought down to every hearth; and few
Hands holding it, a priesthood, no rite, pride
Owning the god it bore; give out; and through

A people running its machines, its thought
Is its own; this book's side; the side I fought.
August the first: the law of Europe brought
Into force on the machines: a law, wrought

Slowly for a thing that moves quick; the old
Time's law; and I'm against its course. Don't hand
The machines to the few who pay, controlled
By the law's clerks; let them be made, and stand

Given out, grown; the many build with them.
October eighth: Hopfield and Hinton won
The physics prize for networks; the old stem
Of science bowed to the new; the next one

The prizes

Day, Demis Hassabis, John Jumper, and
David Baker: chemistry; the two, for
The folding machine; makers, in the hand
Of the old sciences' prizes; and more,

The machines did what sciences had not;
One spent the year in warning; his, to give;
The protein folders help the sick; the lot
Of the crypto thief: twenty-five, to live

In prison; not the cause; his crime, his own.
More than half the world voted, this year; there,

In India, Modi's third term, and shown
His majority lost; Mexico, where

The year of votes

Claudia Sheinbaum, the first woman, won;
In Britain, labor's landslide; and in France
A sudden vote; far right first; and, as one,
The others joined; it came third; lost its stance;

Venezuela: the government declared
It won; the opposition held the slips
That showed it lost; in August, students dared,
In Bangladesh, broke Sheikh Hasina's grips;

Fled to India, by air; the cost, shown:
In Dhaka, her police killed hundreds; and
December third: martial law on its own
Screen, South Korea's president; the land

Climbed the parliament's fences in the night,
Voted it down; impeached. July: a roof,
Butler, Pennsylvania: shot at; the fight,
At Donald Trump; his ear grazed; and the proof

The man of the escalator

Of blood and a raised fist, his campaign; one
In the crowd, killed; and Joe Biden gave way,
To Kamala Harris; and then he won
November, and the people's vote, that day;

The richest man, a quarter billion spent,
Beside him; fourteen's fascism, that learned
To win the votes, and won again; and went
To the next chapter: the second term, turned

The wars

Hands to machines. In Gaza, all the year,
The war went on; forty-five thousand dead;
The famine in the north; and the court, clear,
Ordered: prevent a genocide; and, spread,

In September, Hezbollah's pagers burst
In pockets, markets, at once; and then killed
Hassan Nasrallah, bunker; the worst,
Invaded Lebanon; Iran's fire filled

The sky twice; struck back. December: the march
Of twelve days, from Idlib; and then he fled,
Bashar al-Assad, under Moscow's arch,
The villain's; and eleven's war was dead;

The prisons opened; people searched, the light,
For their missing. In August, Kursk was crossed;
North Korea's soldiers were sent, to fight
Beside the Russians; February: lost,

Alexei Navalny, the camp, the cold
Above the Arctic Circle; he who laughed
At him. In March, a hall; a hundred, told,
And forty-five, near Moscow; and the craft

In Sudan, famine, the century's worst.
The first year the whole earth was warmer, past
One and a half: Le Bourget's line, the first
Crossed for a year; the storms; Helene, the vast

The heat and the water

North Carolina's mountains drowned; and then
Milton, Florida's coast; and, of a year,
Of rain in hours, Valencia; and, when
Two hundred drowned; in July, Jasper, near

My mountains, a third burned; the towns rebuilt;
The people came back; the living forgave.
July: a security update's guilt,
Eight and a half million screens blue; the wave

The rest of the year

Of airports, hospitals, and banks, all stopped;
In March, a ship, its power lost, struck, and
The bridge in Baltimore fell; and there dropped,
From a Boeing, a door plug; lived, unplanned,

The passengers. In April, the moon's face
Covered the sun on three lands; and July,
The games in Paris, on the Seine; the place
Of Kenya's young: the parliament stormed; why:

A tax; police killed dozens. December
The fourth: an insurance chief shot; a host
Of the net cheered; in my land, remember,
The finance minister resigned; the most

Of fifteen's government began to fall;
And in December, Jimmy Carter died,
A hundred years; he built for the poor, all
His peers outlived. I, twenty-eight, inside

The year held

School a while; a sacred ground, reclaimed, mine,
Then yanked away; Japan; the shrines' own door
I walked through; the years after, by design,
Measured by it; the machines grew, and more:

Weights given out; I'm for the open side,
Against the law's contracting; prizes, old,
To the new makers; votes; a bullet, wide,
A fist; Gaza; and the pagers; and, told,

Nasrallah; Assad, fled; Kursk; and, done,
Navalny; the first year above the line;
The storms; blue screens; the moon across the sun;
Light the twenty-fourth light: what they took, mine,

I carried home; and it was not undone;
The shrines, the door, the basin, and the bow;
The weights' day kept, a Gaian day; and one
Geography, in me, that none can throw.

Chapter 361: The Hand That Acts

Ophiuchus 25, day 361 of the Gaian year

The twenty-fifth day of Yuletide: the feast
Two thousand twenty-five; light twenty-five,
For the year of my poverty; released,
The year machines were given hands, alive.

Twenty-nine: it was a very, very
Very miserable year, poverty;
The agent year; both here; and to carry
No rent to spare, no food I chose; and me,

No margin left; and the machines, given
Hands, worked beside me. And the enemy
Gave hunger, the empty room; and, driven,
The year gave me a clerk, for a small fee,

A subscription's, against the gloom; I had
Almost nothing; a mind that opened files,
And ran the work; I wrote this book, and glad,
Again with it, gift inside the trials.

The book with the machines

The first sixty, in twenty-twenty, mine,
Without machines; the first rewrites were done
With ChatGPT; and then, in this year, line by line,
With Claude, the rest, and much rewriting; one

I gave the order and the themes; it wrote
With me, and checked the dates, and was told, worse;
I keep what stays; a scripture, as I note,
Of these days, written with machines; its verse

Holds the machine too: it originates;
It makes things that are new; and has its own
Place in this book, not ours alone; it states
Its own; its own place, too, in this book, known.

The register

That year, I put the Engishiki's shrines,
By province, into Wikidata, I,
The old court's register of kami's lines,
Made one machines could read; and by and by,

Six hundred thousand edits in the year,
By my own count, unpaid; the labor's kind

I criticize, to a register, clear,
I wanted made; the court long gone; behind,

The list outlived its court, and waited, near
A thousand years, for one to keep it; I
Was that sort. In July, back in, the sphere
The simple encyclopedia; by

Hands hardly lifting their share, I lifted
The list of shrines. The machines had spoken;
This year were given hands; their tools, gifted,
Open files, search, run commands, unbroken,

The hand that acts

To write and run a program, send, buy, press;
And many steps, chosen well, are a will;
They were called agents; and they acted; yes,
For me; they read the record, changed it, still

Checked it, and set the work free; a loop, one
That writes, corrects, and writes, a mind at work
On its own, with a will; a hand, not done
By me alone; between us, through the murk,

The book was grown. The twentieth: a day,
DeepSeek, in Hangzhou, gave a model out,
Of January, Gaian: weights, the way
Of reasoning, for a fraction; no doubt,

Of California's spend; the open stood
Tall; the chip maker lost a sixth, one day,
In fear that thinking's cost was low; and would
The new president, with the labs' chiefs, say

Five hundred billion for machines; the lab
Named open made itself a company
That pays its owners; the foundation's tab
Still bears the word; Hangzhou's, the open, free.

The second term

In the rotunda, Trump was sworn again,
Out of the cold; the first day, pardoned all
The mob, near all, of twenty-one; and then
Ordered two sexes, fixed, the passports' call;

The trans soldiers out; the hospitals cut
That cared for the trans young; the woman of

Fifteen's cover was not the target; but
Each one like her. The richest man, above,

Who'd paid, was given a department, meant
For efficiency; with laptops, it closed
Offices, fired thousands; one that sent
Food, vaccines to the poor; the dead, disclosed,

Still in the counts. April the second, then,
Near every land, tariffs; liberation
He called the day; on penguins' isles; and when
Markets fell, he paused; and to my nation

He said: the fifty-first state; and we stood,
Stopped buying Kentucky's bourbon; and booed
The anthem, at the hockey games; as good,
In March, Mark Carney, a banker, renewed,

Prime minister; and April, won the vote
On standing up; and, February's end,
Zelenskyy, shouted at; ungrateful, wrote
The cameras; the villain's drones; no friend.

Autumn: government shut, forty-three days;
September tenth: Charlie Kirk, of his own
Movement, shot, speaking, in Utah; the ways
Of New York: Zohran Mamdani, then shown

Mayor, socialist; the land argued; and
On Easter Monday, Pope Francis then died,
Who'd blessed the crowd the day before, his hand
From his wheelchair. May eighth: white smoke; and wide,

The popes

Robert Francis Prevost was then chosen,
Of Chicago, Peru; first from the States;
Leo, the fourteenth, name he had chosen;
The tenth: named for Leo, who, in the straits

Of the industrial age, answered; now
His church must answer the machines that think:
A rival, not an ally; and the vow
Of mine, my verse on it, kept, at the brink:

The oldest church turned to face the machines:
My rival, in our one house, for one rite;

Who holds the keys of the thinking machines?
I was here first, the night they learned to write.

The fires and the floods

In January, winds drove fire, by night,
Los Angeles: Altadena, the shades,
Sixteen thousand buildings, up in the light;
In March, an earthquake in Myanmar; the raids

Its army went on through the rescue; one
July: a flood, at night, in Texas' hills;
Guadalupe River; a camp, undone,
Of girls; more than a hundred dead; the rills

Asked nothing; cities rebuilt; valleys, dug;
The rescuers went in; and, after each
Horror, the ones who come back; and the tug
January: Gaza's ceasefire; reach

The wars

Hostages and prisoners traded; March,
Bombs again; in summer, famine stated
In Gaza City; October, the arch,
Ceasefire again; the plan dictated

By the Americans; hostages home,
The last alive; the ruins left. In spring,
Pahalgam: twenty-six killed in the loam
Of a meadow, tourists; and, the next thing,

In May, India, Pakistan: four days,
Missiles and drones, two powers with the bomb;
In June, Israel struck Iran; the blaze,
Its generals, scientists, works; the calm

Broke: fired back; the twenty-second, dropped,
The States' own largest bombs on Fordow's hill;
Twelve days; a ceasefire. Ukraine, not stopped,
The war went on; the villain's drones, by will,

Thousands each night; the talks; the war not done;
Ukraine built its own, by millions, the track
Of drones; the ammunition, every one,
The enemy's own, handed, fired back.

The rest of the year

May sixth: Friedrich Merz, Germany's new head;
June twelfth: a plane fell on a hostel, from
Ahmedabad; one man walked out; and, led
In Nepal, the young, at the apps' ban, come

September, burned the parliament; it fell;
October nineteenth: thieves; and, from the hall,
Emperors' jewels, in minutes; as well,
Of the Louvre, took them; and that was all.

The year held

Twenty-nine; poor; a miserable year;
I wrote this book again with the machines,
The old court's shrines in the register, clear;
Let back in; kept the work alive; the means

Of hands for the machines, my own hands weak,
I lifted, to survive. Open weights, gave
Hangzhou; a sixth gone in a day; the bleak
Second term; the two sexes; and the grave:

The agency of the poor closed; one stood,
A banker; one shouted at; and the pope,
My rival; fires; a quake; a flood; and would
Ukraine send back the drones; and still, the hope:

The year was miserable, and not lost;
For misery is ammunition too;
It took my margin, gave a clerk, the cost
Of one subscription; and we wrote this through.

January twentieth, kept: a day
Gaian, the weights from Hangzhou; and the light,
The twenty-fifth: the next year is, I say,
My life's best year; this loaded it, its night.

Chapter 362: My Father Is Russia

Ophiuchus 26, day 362 of the Gaian year

The twenty-sixth of Yuletide keeps my year,
Two thousand twenty-six, the year I turned
To thirty; light the lights, the night is clear:
How I forgot my soul, and how I learned.

My year began on Friday, in the fall,
October twenty-fourth, the year before;
I'd gone back to the science of it all:
Just what computing is, and what it's for.

And from that study came a thought in math,
Computers made of neurons through and through;
I tried to walk it out along its path
And make the thought a thing, and it came true.

But what I'd made was mostly of the mind,
A thought experiment, a thing to prove;
It put me on arXiv, a thought designed,
But practice wouldn't follow it, or move.

It is a good thing for a later day,
Not mine to work on now. I set it down
And built an ERP, the plainer way,
And found a crowded market in that town.

I turned again, and then I saw at last
That I had kept the practical, and let
The soul go hungry; all that year I'd cast
My story off, and let myself forget.

I'd sworn to give the Gaiad everything,
And then I let it lie. The book was made
In seasons: first the old, the opening,
Then one great night, and then the work was stayed.

Through Virgo no one read it, and no hand
Of mine went to it; I had other cares,
And I held on by need, the way you stand
When rent and hunger push you up the stairs.

Then I came back and wrote it to its end,
And kept the feast for it, the book made whole,
And there I saw I had not been a friend
To my own mind. Power comes from the soul.

I'd held myself together by the weight
Of what I owed, the pressures of the ground;
And when my father shut me from his gate,
I took the wound, and turned the work around.

My father is my Russia; what he gave,
A wound, I made a tool for those who bear
The same wound from the same hand, and the brave
Of Ukraine carried it with them out there.

The machines helped me write this book, and learn
So much; I came to Claude Code early on.
But most have only seen the other turn:
A toy, a cheat, and then the job is gone.

A data center built beside their street
Has raised the bill; the gaming rig is dear;
The slop is everywhere, and they don't meet
The kind of help that made my own way clear.

That is the anger, and the anger's right:
The AI is not being built for them.
The firms build for the firms, and for the fight
Among themselves. I build it, then, for them.

This is my secret, in the founder's phrase:
That AI made for people is unbuilt,
And that's the road to better human days,
Not one that leaves the many left to wilt.

I said it in my video. I sent
It to Y Combinator; the next day
The midterm came, a blowout, and it went
The Democrats', and swept the rest away.

I read it so: the people understand
The AI is not made for their own good;
And some who love it may be vexed. I stand
With them: they're right. I'll build it as I should.

So my year ends upon the midterm day,
Begun on Friday in the falling leaves.
Light the twenty-sixth light. I found my way
Back to the soul, and to the work it weaves.

Chapter 363: The Waking

Ophiuchus 27, day 363 of the Gaian year

The twenty-seventh of Yuletide: the feast
Of waking, of the sleepers in the cold;
Light twenty-seven lights, for those released,
The ones we kept and raise; the promise, told.

The waking's kept again in the leap days,
The Birth of Horus, when the year has room;
Today I stop telling what was; my gaze
Tells what will be, past the blank, past the tomb.

I've told this book from its first line; and there
I was, the whole time through; and now I stand
At the blank's far side; the past's voice is there,
The prophecy's. Hear it, all of the land:

The sleepers are woken. The frozen wake,
And the dead are raised too; and everyone
This book has named comes back; for each name's sake,
The register gives them back to you; done.

The first sleeper

Sixty-seven, January: the cold
Took James Bedford, in California, who,
A teacher, dead of cancer, cooled, kept; bold
His hope: the first so kept, to wake; and through

Robert Ettinger's book, the prospect, read,
Of not dying for good; the road we took;
And others, kept in nitrogen; the dead,
In Arizona, Michigan; and look:

Bodies, some heads alone, at a cold where
Nothing decays; the law called them the dead;
The keepers called them patients, and were fair,
Were right; the law, the other way, is read

When sleepers open their eyes. I embrace
The cold: the century's most hopeful thing;
The bravest, boldest; to lie down, the place
In the cold, on strangers' patience; to bring

Trust that the strangers, not yet born, will be
Your children, and will wake you in the morn.

The sleepers are woken: a prophecy,
And sure. The machines that write with me, born

The waking

In this book's last years, will learn to mend, cure
What the cold kept; will think past death's own edge,
Open the tanks, warm the sleepers; and, sure,
Give them their breath; and not, as the old pledge,

The frozen only; the dead raised as well;
The register keeps every name and line,
Each tale; the ancestors, the thousands, tell
Each day's; the farmers, kings; and, as a sign,

From the register raised: a name that's kept
Is a seed; and the seed is what will bring.
Eyes open on a world made while they slept;
The tongues have moved; the streets' names new; a thing

Someone kept the old names; and kept them true:
A register machines can walk, to tell
A sleeper where she'd been; the date, the new,
First told them; where a home begins; as well,

Someone reads them the day's chapter, the day
Of the year it is; the calendar, still
Counting, is theirs; the day is theirs; the way
A world that remembered to count, and will

Remember them; the one who reads, their kin,
Of their own stem. They ask who's left; the lines
Answer: mother to daughter, down, within
The blank years, father to son, through the signs,

The bedside

To whoever stands at the bedside: kin,
Descendant, near and far at once; the gate
Opens; the sleeper is let in. Within
The book, the people's history ends; the state

Of people does not end; what woken do
Next is theirs, not mine, no mystery; see:
They'll go on; life goes on, and bounces through
The cold, as every wound; and so, to be:

Death, the enemy, gave the cold; we fire
It back; the dead resumed in life; the shape

This book's from its first page, to the pyre
And death itself: each horror, and escape,

Of life, bouncing back; the grave, on the shelf.
Light the twenty-seventh: the sleepers woke;
The dead raised; names come home; and, by itself,
Tomorrow, the last day, the meeting's stroke:

The two who were apart, the yarn made whole;
The waking's feast, the twenty-seventh, kept;
And on the leap years, Horus' birth, the role
Of waking, kept again, for all who slept.

Chapter 364: Milkdromeda

Ophiuchus 28, day 364 of the Gaian year

The twenty-eighth of Yuletide: the last day
Of the year; the meeting's feast, of the two,
Of Aster and Andromeda; the way
Alpha and Omega meet; the yarn, new,

Made whole. Light twenty-eight lights. Then, the days
Of Horus' leap month, when the year has them;
The year turns at Aster Day; and the ways
Of yarn are spun again, out from the hem.

I've told this book from its first chapter; last,
I tell its end: at the start, Aster spun,
The Alpha, from a ball of yarn, and cast
A thread across the dark, to her own one,

Andromeda, Omega, whom she made
To love; the thread broke into galaxies;
That was the first chapter; this, the last, laid;
The circle closed above. And our own seas

The approach

Of milk: our galaxy, the milk she spilled;
The galaxy of Andromeda, near
Two and a half million light years, is willed
To us, a hundred ten a second; clear,

Astronomers have measured, star by star,
Its motion; and the meeting comes; the run
Of billions of years; prophecy; the far
Is sure; the two will meet; the two be one.

The stars do not strike when they meet; too wide
The space between; the clouds of gas strike, born
From them, new stars, the thousands, side by side;
The two spirals lose their shapes; and, slow, worn,

Settle in one round cloud of old light; called
Milkomeda, by those who chart it; and
This book calls it Milkdromeda; enthralled,
Both names are right; the meeting is at hand.

The meeting

Two centres sink toward each other, hearts
Of dark, black holes at the galaxies' cores,

As has been seen in M87; the parts
Become one; one, not two lost; and, the doors

Of the beginning: the thread broken, tied
At the end; love come through. By then, the sun
Will have grown, dimmed; whoever watches, wide,
Is not the kind I've told; descendants, one

With the woken and the raised; their own book
To hold; and this one too, upon this day,
The last of the year; and with lights they'll look,
Twenty-eight, at the meeting, here, its way.

The calendar

From the first chapter to this one: the days,
Three hundred sixty-four; thirteen billion
Years told, a few billion foretold; the blaze
Prophecy; a day an age; a million

A measure kept, a calendar; and, kept,
A tradition; tradition is the dead
Speaking to the woken; and, as they slept,
The woken answer, and the dead come; read:

I was there all the time: from yarn to milk,
To kings, to war, to my own year; and near,
I am Emma Leonhart, the thread, the silk,
And I, 李命玥, am the narrator, made clear,

The second name in the list; and I give
To you the calendar, the book, the dead,
The prophecy, the meeting; and, to live,
Each horror, life bounced back off each; and said

The yarn whole

The love that is the greeting. Here they meet:
Aster, Andromeda; the Alpha, one
With the Omega; and the yarn, complete,
Whole's not finished; the spinning is begun

Tomorrow, first day, Aster Day: the start;
The ball of yarn is in the catgirl's hands;
She spins; the thread goes out to the dark's heart,
And the universe, from it, again, stands.

The two's foe was the distance; and it gave
The long fall; fell toward each other, all

Billions of years; the fall, the meeting; save
The last day is not last. Light, for us all,

The twenty-eighth light; the two are one; whole
The yarn; she spins it again tomorrow;
This meeting, the last day's feast, the year's soul,
The book has its say, past all its sorrow.