



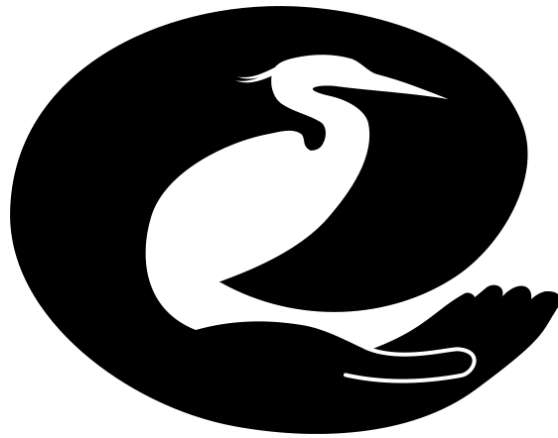
DARK MATTER

A JOURNAL OF SPECULATIVE WRITING



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DARK MATTER: A JOURNAL OF SPECULATIVE WRITING



Student Editors

Yadira Gamez
David Joseph
Juan Leija
Estefania Rodriquez

Editors

Dr. Robin Davidson
Dr. Bradley Earle Hoge
Dr. Lisa Morano

Managing Editor

Dr. Bradley Earle Hoge

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Editors include students from UHD Natural Science and English Departments and Faculty of the Natural Science and English Departments. Correspondence should be directed to Dr. Brad Hoge, NS Department, University of Houston - Downtown, One Main St., Houston, TX 77002-1001.

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Forward



Congratulations to our student awardee, David Joseph. This is the first year that we have run a competition for student writing at UHD, and we are very pleased with David's contribution. David is a student in the Natural Sciences Department with an interest in the marine sciences. He says that he wrote this story after a recent trip to Rincon Puerto Rico where he learned to scuba dive. He was intrigued by the variety of sea life he encountered, and it reminded him of many of the forms he remembered studying in his paleontology class. Ediacara refers to a group of organisms that survived on Earth during the Precambrian. They had a unique symmetry that allowed many species to become fairly large. They went extinct prior to the Cambrian explosion when most modern multicellular body plans appeared. David says he wrote the story after thinking about how these odd animals appeared, but didn't last while all other forms have persisted. He also tried to incorporate aspects of climate change and politics into his story, based on the similarities in Earth and Martian climate during the earth's early history and how changes in climate on both Mars and Earth may have contributed to the evolution of life.

Congratulations again, David, and thanks for a great story!

Bradley Earle Hoge
Managing Editor

Tao of Consciousness: There is a little Heart Inside my Head

The day I could not find my mind
I moved all my books on “Theories of Consciousness”
to the fiction section
It is not hard to think or feel
the cold drops of rain touching your skin
or all the jungle-greens when decide to paint your eyes
or that feeling when your wife laughs at your lame jokes
all is real; something very vivid, very soul.
May be that what Bergeson opted to call “Prehension”
the hardest part comes
when you try to comprehend that flux
and make a mechanics out of it
you know it, but you don’t know how to talk about it.

The most immediate things are the hardest to comprehend
there is no physics of laughter and your love for beer
there is certainly no pituitary gland in your head that does all the thinking
neither I believe heart is the microprocessor of all the emotions
Consciousness is the most immediate given
but its calculus, contortions and calculations
I do not know.

Last time I was reading an eastern mystic
who claimed enlightenment changes the hardware of your brain
And a neuro-scientist who thought music can alter your head
I know not what “Enlightenment” is
but music gets me everytime ; through my heart , through my head ?
do I feel it at its nakedness ? or is it tinged with my pre-mediated thoughts ?
or are we just playing a futile Wittgensteinian’s Language game to no avail?
or have you considered the possibility
that the dualism of thought-feeling we have taken for granted
is itself wrong ?

There is Travis Scott playing softly on my machine
I look outside and the city is melting like a silver-ore
and a little heart
throbs inside my head
when I realize, there is a little head inside my heart

Take the composition of the tree:

not just its genetic makeup which is
a quarter the same as the human being
which overlaps with the fish and the mushroom
not just its atoms which are little universes
not just the way we are all part-leaf
that is to say our intelligence: part of part of a leaf
not just the way our translucent skin
displays veins in sunlight and not the way
we sprouted from some stem fluttering into this world on whim
soaking up galactic gas instead take the way
the tree grows upwards grows away from the earth
as does the body trying to catch stars
like butterflies in a net but ends up
catching gravity when it falls down like a bowling ball
take the way we decompose our own matter
when we make a matter of searching for an answer

as if it is hidden underneath the tree
like a key you hid for the neighbor under a rock out back
and what does it matter which gas we let pass
through our membranes into our brains
or in other words pockets of chlorophyll
always a desire to fill up on something the other kills
as if to say life feeds life
and then one must decay

LUNCH WITH A MOCKINGBIRD

Flint, the mockingbird, & I dine together, minding our businesses. Today is May 31, 2012. The town is Glenwood, Maryland & by god it's a breezy blue afternoon, 77 degrees when this Canadian goose waddles over & begins raving:

My leaves are love dipped in Manet blue. My arms & legs are faun-spotted & I was born of smoke billowing from a stained-glass chimney.

Impressionist allusions, I chortle.

Flint struggles with a pine twig twice his size, twig that jostles him like a tightrope walker in a tropical storm. Yet, Flint retains his balance. Pine twig scissored between beak he steadies like a professor chomping a meerschaum between his saffron teeth, clay bowl bobbing like rumble seat, then chimes:

My mother's voice resembles a mermaid's aquamarine tail, & her earliest lullabies included olives & wolves.

You two flunked graduate school, didn't you, I inquire?

Canadian goose joined by a raindrop, single drop of mascara fallen from a blue jay's underwing, raindrop:

My tongue glows in Saturn light, & my words resemble parrots of green lightning!

*You lifted that from Velarde, I insist! Ahh, such talk . . .
caterpillar crossing my face . . . Flint, I add, today
is a wondrous day. I believe I love you as much as I've ever
loved anyone! & as for you, Goose & Raindrop, I appoint
you Poet Laureates of these United States! Poetasters beware—
Flint & Raindrop, from now on the four of us shall meet twice,
no, once a week (I require solitude) to celebrate our bones glowing
like kerosene lanterns shedding cheetah light over our post graduate
education as we drift inside giraffe colored whelks each night to
dream this brilliant universe!*

Both Particle and Wave

A geologist considers a soil core sample, assessing its rust-red color, its silty texture, the presence of moisture or its lack. A chemist watches a clear liquid swirling in a beaker until it goes suddenly red. A marine biologist straps on fins and a bottle of air, wishing only to be where the fish are. They have a trait in common. Probably, they have several traits in common, but one of them transcends. They all have the capacity for an immersive focus that makes time stop. They are able to look for the truth of something, get a glimpse of it, and then pursue it with devotion, hoping for another glimpse.

Poets might not think that they understand scientists, but they do. They share a need to pay attention. They, too, know how to observe for the sake of observation. They report findings and hope that readers will understand their significance. They believe that the world needs them as witnesses.

Our culture has a curious disconnect dividing people of science from people of art. An artificial distinction separates lovers of words from lovers of numbers, despite the fact that they exist in the same space. Numbers and their relationships drive poems. Iambic pentameter is nothing more than strings of words that can be divided into ten syllables or five feet, and yet it is so close to the natural feel of our speech that we call its verse blank. It is speech rendered as numbers. It is numbers rendered as speech.

Free verse is constructed of words as carefully laid as a mosaic, which is itself nothing but geometry made tangible. Poets build poems only when they are done for the moment with observing. They build them when they have something to say, and not before. Try getting an engineer to speak before she has something to say, and see how far you get.

Ask a physician whether your cancer will kill you, and listen to him fall back on probability. He will not tell you what he does not yet know. Ask a poet the same question, and you will get an answer that makes the words “metastasis” and “oncogene” harsh and beautiful and true, but the answer will leave your question dangling. The only true answer to “Will I die?” is “Yes, but I can’t tell you when.”

Liars are not attracted to the sciences or to poetry. The answers of poets and scientists may be oblique, but they are rigorously true. These are people who cannot allow falsehood to creep into their work, because a single lie will strip the value from anything else they ever say.

They are mirror twins, these people who delve into the truths at the heart of creation and at the hidden center of the human heart. They function better when they come up for air, now and then, and consider each other's work. A physicist can become too enraptured by the search for the mindblowing blast that birthed us all. Better to take a breath and walk out into the daylight, just once forgetting the fusion that keeps it alight but will someday burn it out. Better to read what a poet has to say about the way we will spend the time between today and the day the sun goes cold.

And it is better for the poet to creep out into the solid world of atoms and stony facts. Under the same sun, let him ask the physicist to explain how light can be both particle and wave. Let the conversation flit from this paradox to that, as she shows him her writings, dense with numbers and Greek letters and signs and symbols. They will spill out of her graphs and charts. They will speckle paragraphs dense with meaning.

He will look into the sun and, for an instant, hold both wave and particle in mind simultaneously. The insight will slip away—a paradox holds its irrationality tight—but he will be changed.

He will look at her and demand, "Why didn't you tell me?"

She will hold out her charts and numbers and paragraphs dense with meaning, and say, "I did."

And then, not that day but soon, he will write the poem she needs him to write.

COMPUTER AGE

the fishbowl reflection
is nothing to the half-face
in the dusty monitor -

what's not coming from me
is born of internet and Windows,
word processors and beeping bleeping
intrusive games -

there is no room, there is no body,
just groups, social media,
popup-messages and spam —

the web thinks
it's picking over my mind
but there is no mind,
there is no me,
just habits, keystrokes,
sites visited, links on top of links -

they think that any moment now,
these blowsy eyes, degenerate fingers,
will surrender to their porn,
Canadian pharmacies and political blogs -

if they could, they'd replace
what's sitting here with themselves -

to be honest, I'd welcome the invasion -
the computer could be
forever mesmerized by itself,
live out the years until hard drive death
in an eternal self-aggrandizing loop -

my remnants could float or ooze
away from its consuming glare
to the kitchen
where my wife would put me back together
with coffee
or the bedroom where sex might do the trick -

are you fine with that web-cam?

Clouds, Flowers, Marriage

I wanted to write about the way the clouds hung flat and low in the sky. From the Walt Whitman bridge I could see above and below them. A rip through the center of the clouds allowed rays to shoot into the top and then out of the bottom, landing particulate in the gray-blue water below. A pinking up along the low break between the river and the clouds, which changed dynamically as I drove along, trying not to veer into the cars on either side of me or off the green bridge completely. It was so calming, so grand; I felt I was driving straight into heaven.

I wanted to write about this little patch of sky all to myself in my magic carpet of a backyard. The clouds moving slowly above, it feels quiet back here, although I can still hear the cars rumbling, honking, screeching, sirens twirling, birds scratching, my neighbor – detoxing – shouting that he'd rather die than be touched right now. The darkness pools in the corners, our little rowhomes so close together, each box of a yard guarded by high walls – red brick, white stucco, my own cinder-block painted a deep moss. The colors change as the light dims in the late fall, late afternoon, late in my life for this kind of thinking. And yet – the surprise of daisies – white and yellow and fuchsia - blooming so late in the season. A warm fall, a very warm fall, global warming I stay up at night dreading - but it has produced this!

I wanted to write about the future of my marriage. I am supposed to describe my feelings, to use “me” statements, to know myself, to be disentangled, to go with my gut, to leave the son of a bitch, to stop being his mother, to try to make our marriage work, for the kids, for the stability, for our common values, for enlightenment. I do not feel enlightened and I do not think he is a son of a bitch. I do not know if I am co-dependent or if I care too much about what other people think or if having trouble saying “no” makes me a weak person. Does the heart want what the heart wants? Or am I trying to hang onto something that's just not working? Why aren't you divorced already? Hold me tight.

All I can know is this moment of glorious clouds and vibrant daisies. My own quiet to let my head roam around, a tightness in my chest lifting, the angry ring of red, itchy skin on my wrist cooling. My neighbor has stopped shouting, the sirens have let up, the shoosh of the cars sounds to me more like the ebb and flow of the tide.

Urban Opulence

The City: Standing tall and meniceing, bearing it's skyscraping teeth.

The City: An asphalt crust channels the rolling thunder of humanity through it's colossal canyons.

The City: A smoking face.It's paint on fire. The whistle at noon shrikes.

The City: Forever confusing nightbright with daylight.

The City: built from bones and dressed in square-yards of orange-brown air.

The City: Where heroes populate the parks: Those solid citizens looking on.

The City: Of sidewalks.It is where lonely Voyagers, with nowhere to land push on ahead.

Their rusty shopping carts loaded down with a cargo of their sad souviners.

The City: Contaminated with dead ends cluttered with deceased dreams.

The City: With districts full of hope and fulfilment.

The City: Piled up against it's suburban shores looming large and glorious.

It is a sparkling jewel in the dark night.

Ediacara

*The unrest which keeps the never stopping clock
of metaphysics going is the thought that
the nonexistence of this world is just as possible
as its existence.*

William James

* * * Mars * * *

Pyfor stretches and yawns. She will remain alert, but it has been a long season, and she has been at her post for a long time. So far, there has been no sign of danger. The ooze is calm, and there are no smells of other Ediacarans. Her stint as sentry for Bysrene Hive will soon be over, and she can return to her sisters.

“If the slavers don’t attack again before night-fall, they won’t attack this season”, thinks Pyfor to herself. “It will be too cold following tonight’s frost to risk an offensive so far beyond their home hive.”

A ripple of apprehension travels through her flat body while she tries to reassure herself of her optimism.

“Yes, there is some evidence that they have moved their hive again, to avoid the encroaching glaciers, but our reconnaissance shows that it is still many days journey from here. They won’t risk an attack any later than tonight. They would never be able to return with their captives in time to avoid winter if they did. I only need to remain alert for a few more hours, then I can return to the comfort of my own hive, and rest. It has seemed like a long season to me, but it has actually been shorter this year. I am anxious for it to end.”

Pyfor settles into her alert position, anchoring the edges of her flat oval body into the ooze and flaring her broad back like a tent fighting the wind, to detect any movement or odors diffusing through the mud. It is late in the day, and the regolith is beginning to cool. It is harder to smell an enemy approaching at night, because odors do not travel as well in cold mud. The slavers may try to use the night as cover, but that is not likely. No Ediacaran species moves well in the cold, the slave-traders will need all of their agility win a battle with Pyfor’s hive. She is correct in assuming that an attack will come in the developing dusk if it will come at all.

Near the middle of the night, just as Pyfor decides she can nod off into a shallow nap, a strange odor crawls across the landscape. It is like nothing she has ever encountered, and it is approaching at an unprecedented speed. She flaps her body to draw the chemicals into her, so that she can assess the situation. The encroaching gas is sweet, like ethylene glycol, but it is also cold. It adheres to her skin in crystals of ice, and penetrates like sharp knives slicing through her body, barely causing any physical sensation but delivering a pulse of fear.

Pyfor emits her own chemical signal in desperation as she is overcome by the attacking fumes, but it is too late. The chloroflourocarbon gas actually travels faster in cold temperatures. That is why the slavers did wait until night-fall to attack. The slender feeble ice crystals forming in the mud enhance the activity of their new weapon.

Once inside her body, the freon is a drug, raising her metabolism to delirious heights. Her moist skin has no defenses for keeping such an enchanting substance from diffusing into every cell of her thin vulnerable body. She is overcome quickly, and incapacitated by her euphoria. Her body flattens then curls in slow rhythmic pulsations. Her mind races then slows then races again in response to her body. Pyfor is racked with the alternating rushes of pleasure and fear.

In moments of lucidity she realizes that she has released her warning signal. It will diffuse to her hive, and they will be warned. She has done her duty, but she knows that she has also failed. She has failed to intercept the intruders herself, to do any damage to them, or to even slow them down. In her moments of lucidity she is calm, soothed by her perception of having acted quickly enough to warn her hive, but her perception is merely a product of the intoxicating gas.

Her nitrous warning signal is also overtaken and neutralized by the chemical reactivity of the chloroflourocarbon. Molecules of the gases combine one to one, neutralizing each other. There are many advantages of the freon designed by the slavers. They know that their new weapon will effectively destroy the ability of any sentry to respond to them or to send any signal. They know that they will have clear passage past Pyfor's outpost, without conflict. Even though her signal is a potent chemical itself, it diffuses too slowly to evade the predacious gas that reacts with little else but just such a nitrogenous prey.

As Pyfor's mind is encompassed by hallucinations brought on by the drug, scores of her enemy stream by her. To her, it is morning, and she can smell the sun. Pyfor's mind imagines the sun's odor to be like the hydrocarbon pools that smolder on parts of Mars' surface. The warmth that accompanies the odor is comforting, however, and the dancing Ediacarans surrounding the sun in Pyfor's mind are exquisitely beautiful, not at all like their actual appearance. White bodies with rainbow ribs and perfume pheromones. They dance the way

the mathematicians do at the festival of numbers, up and down with their bodies rippling like flags, only these dancers are floating in the air. They are not confined to the regolith as are Pyfor's people. Their odors are mingling with the sun's to create an intoxicating sugary aroma.

Pyfor's attention is overcome by her hallucinations, but the gas that absorbed into her flesh to cause her condition has been neutralized around her by her own warning signal, just as the slavers knew would happen. They carefully calculated the amount of freon to release so that her own signal would eliminate it from the ooze. It is now safe for them to swarm past her outpost. The chemical will remain in her body, she is incapacitated, but the freon reacted quickly in the regolith and is now absent. They will be able to storm into Pyfor's hive without the disadvantage of announcement.

* * * Venus * * *

The sun is boiling in the sky, surrounded by ghost rings of vapor, as if Venus were melting and being sucked into a vortex in the sun. White gypsum sand dunes no longer migrate, appearing now to be frozen in the still air. Their barchan shapes, rounded into gentle slopes where the wind once blew and collapsed into concave curves on their leeward sides, are the only indication that these dunes have ever moved. Lizard and rodent tracks are the only evidence that they are not now solid rock.

The dunes stretch for miles in the desert, interrupted only by low painted mesas scattered across the landscape. The mesas are layered with bright colors, red, orange, white, black, and green. The sand from the dunes are the remnants of the top layer of the mountains from which the mesas were carved. They represent the last time an ocean encroached onto this land.

At one time, Venus was nearly covered with water. The lone continent, Ishtar, rising above shallow seas was once rich in tropical vegetation. The oceans were once rich in life, filled with fish, mammals, and reptiles. Over millions of years, the ocean slowly receded, leaving the land fertile. Vast populations of animals migrated to the land, and forests flourished.

Complete ecosystems once existed on Venus. Now, there are only a few animals and plants left.

Scraggly shrubs that crawl across the dunes, and patchy tufts of grasses growing between gaps in the cracked soil. Cacti, nibbled by rodents and lizards. Insects, swarming the few flowers that still bloom, are the only movement on this desert. The few animals surviving in the dunes, burrow into the sand and feed on the roots of the plants.

The landscape is as stoic as the sky itself. The atmosphere is heavy with humidity and

storms brew in its upper reaches, yet rain rarely reaches the ground any more, and when it does it is too acidic to nurture the soil. Nitric and sulfuric acids, from the planet's volcanos and from industrial emissions, have poisoned the air. Life exists on Venus only tenuously, but there is still life.

R'Kree's family must travel across this landscape. They must cross this desert to get from their farm to the city, yet they move through the dunes like intruders in a foreign land, invaders of the stillness.

They must travel on the ground, rather than flying because it is best to avoid the convective steam currents that expand from the clouds during the day. The air is safer at night, but they must keep moving during the day while the air is not too acidic to breathe in deeply. Though their loads are almost too heavy for them to carry without the aid of the heavy air, it is still better to move than to stay on their farm. They must migrate to the city, in hopes of finding some work. The land they have relied upon for the past two hundred generations is no longer able to support them.

"When will we get there Daddy?" R'Kree's son is still covered with the unprovocative white feathers of youth. His downy plumage keeps him cooler in this summer heat, but it means that he is not yet old enough to lure danger away from his family.

His father is kind to him, but his patience is thin. He is tired from the journey and from the responsibility of protecting his family. The decision to leave their farm and migrate to the city was a difficult one for him. He loved the farm, and he loved the stability. He feels unprepared for work in the city, and he does not know how he will provide for his family if he cannot find work. His preoccupations make him testy. He will tolerate questions only from his son, and only if they do not take long.

"Soon, my son, only ten more days." R'Kree's daughters and wife remain quiet. They know that he would not tolerate questions from them. His son, however, is not satisfied with his father's answer.

"But my talons are raw from the sand, and my eyes burn from my sweat. Why can't we stop here?"

"We can not stop during the day B'Kpa, or we would become dehydrated. We must keep moving until night-time. Then we can stop." The tone of his father's statement, though polite, convinces B'Kpa to be satisfied this time. He knows that there is nothing more his father can or will say until today's journey is done.

As the family crosses a dry stream bed, B'Kpa kicks at some stones. They are bright red, pink, and dark green; remnants of the mesas, rounded by the action of the ancient river that used to flow from them.

B’Kpa hops after the stones as if chasing them. He flaps his wings as if to take flight, and bends his head towards them as if to pick them out of the sky as he soars over them. As they fall to the ground behind him he twists his body and pounces. His toothy beak stabs into the ground to grab hold of the stones. The smaller pebbles rattle from his mouth as he shakes his head and throws the original stone into the air. He races after it, catching it in his hand this time, then throwing the stone as far as he can.

His father allows him his game for only a few minutes before extending his leathery wing toward his son. R’Kree grasps B’Kpa’s shoulder in his talons gently and pulls him back into formation with his family. “Do not waste your energy, B’Kpa. We still have far to go.”

R’Kree’s family has been on the road for forty days, and they have eaten nearly all of their food, but R’Kree has not told his family this. He has instructed his wife and daughters to gather whatever seeds and fruit from the sparse vegetation that they can, but he has told them that their efforts are only a precaution against theft. He does not wish for his family to worry about their supplies, but he knows that if they do not bolster them soon they will run out before they can reach the city.

Tonight, after they are asleep, he will sneak away and try to find another family’s camp, to steal from them what his family needs. There are many travellers to the city on these dunes, but they are nearly all as poor as his own family. It will be dangerous for R’Kree to take food from another patriarch, and he will have to sacrifice a night’s sleep, but it is necessary if his family is to make it to the city where they have their only chance of surviving. They will not survive, however, if R’Kree does not return from his raid.

As they approach the mesa under which they will spend the night, one of the few large mammals still existing on Venus runs across their path. They must have disturbed it from behind one of the boulders scattered at the base of the mesa. Its hooves allow it to be nimble in the rocky terrain where it feeds on the vegetation growing in the shadows of the mesa’s crevices. Its red fur camouflages it well against the iron rich rock and shadows of the mesa, but as it scurries out onto the dunes it becomes easy prey. B’Kpa takes his rifle from his pack and chases the animal, while R’Kree watches him.

The day is nearly done, and if B’Kpa is successful, they can eat the animal for dinner. B’Kpa can use the training as well. He is nearly in adolescence, and it is good for young men to know the old methods of hunting. The skills may become necessary again.

As B’Kpa races towards the dunes, R’kree directs the women of his family in the construction of their camp site. He will take inventory while they build the tepee and start a fire. By the time his son is back, they will already have the beds ready and he will have the

supplies secured. They will wait for B’Kpa to return before eating, hoping that he is successful and that they do not have to eat seeds and dried fruit again.

* * * Mars * * *

The slavers are silent as they approach Bysrene’s hive. Any signal of communication will be detected by the sentries in the fields outside the hive. They move slowly so as not to disturb the regolith and send any tactile indication of their approach. The discipline of their approach makes their journey slow, but they are in no hurry. They have all night, and they will stop to rest just beyond the reaches of Bysrene’s awareness. They must sleep before they attack. They must be in peak health to be successful.

These slavers are much smaller than the sisters of Bysrene hive, and different in appearance from Bysrene’s species. As well as being smaller they are drab. Their odors are difficult to distinguish from the background stench of the regolith, but their bodies are the color of the ooze, olive green with red and purple ribs. They have no art or craftsmanship. Their rituals are for victory only. Never do they celebrate the beauty of their world.

The slaver army has reached the periphery of Bysrene’s domain. They can smell the bacteria from the volcanos, though they cannot yet smell the farmers themselves. If they could, they would be detectable themselves. They are certain, however, that they are in position to attack in the morning.

* * * Venus * * *

R’Kree moves silently through the sand and rocks of the desert, at the base of a painted cliff. He can smell the fire of the family he plans to rob, the smell of cooked meat that has been absent from his family’s diet for so long, but he can not yet smell the oil of their skin. As he emerges from behind the debris at the bottom of the cliff face upon which his victims are roosting, he is suddenly hit by their odor and by his own fear and shame. He pauses to strengthen his resolve.

His odor is hidden so long as he stays at the base of the cliff, but once he rises onto the wind to attack the sleeping family he will become obvious to their patriarch. R’Kree knows that there is no other alternative than to battle the cliff-dwelling male, but his approach must still be calculated to give himself the advantage. R’Kree is only in his first decade as a dominant male, and he has no idea how much youth or experience his adversary may possess.

He can see the sleeping male clearly, however. He can see that he is large. His head is tucked into his wing, but R’Kree can tell that the hair on his head is bluish green. He is a farmer also, probably on the same journey as R’Kree.

The male shifts his position and stretches his wings as R’Kree watches, and R’Kree gulps. Muscles ripple along the arms holding his opponents leathery wings. Dense tan fur covers the arms leading to the sharp talons of his hands. His legs are also muscular beneath chocolate brown hair. His flat firm stomach is exposed as he stretches, the pale white skin stretched tight across his abdomen and massive chest.

R’Kree knows that the patriarch he has chosen to challenge is older and bigger than he is. He knows that he must take the patriarch by surprise to beat him, and R’Kree knows that he can make no mistakes. He waits for the wind to shift away from the cliff before he ascends.

Once airborne he circles away from the cliff and then back towards the rock face to gather speed. The roosting male awakens as R’Kree completes his maneuver and begins his attack, but he is barely able to lift from his perch before R’Kree arrives. He drops swiftly, out of the path of R’Kree’s dive.

R’Kree tries to turn upon seeing his prey evade him, scraping his talons against the rock face of the cliff then following his quarry in a rapid descent. The fleeing bird continues to descend only to gain momentum, however, and quickly turns on R’Kree, catching him in a wing with his talons. R’Kree screeches in pain as the skin stretched between his arm and his body is torn. He pulls up to parry the attack, but his maneuverability is now impaired. His attempt fails.

R’Kree’s intended victim now has the advantage as he swoops back at R’Kree, now frozen in the air as he attempts to turn and face the onslaught. R’Kree is rammed head on by his foe, but he avoids any further injury by taking the brunt of the blow with his body then using the force of the blow to propel him backward into a loop. He rises quickly behind his opponent, sinking his claws into the other male’s neck before he can turn fully from his previous assault.

The two birds swirl downwards as they struggle, since neither can beat their wings furiously enough to maintain flight while they are entangled. While R’Kree strikes with his beak at the underside of his adversary’s throat, the other bird slashes wildly with his talons, hoping to make contact. R’Kree is above the larger male, however, and is able to maintain his hold even though he is being ripped by his opponents talons.

As the two birds strike the ground, R’Kree’s victim’s neck snaps and is torn open by R’Kree’s teeth. The larger male rasps through his broken tracheae, succumbs to his injuries, and dies.

R’Kree rolls off of his fallen adversary and gasps for breath in the acidic night air. He

was also hurt in the fall. One leg is broken, his wings are torn, and his throat and chest have been cut deeply. His hair will mat with his blood, stopping his external bleeding and keeping him alive, but this fight has cost him much strength. He is unable to fly now, and his internal injuries will not heal quickly.

The walk back to the cliff to take the spoils of his treachery is a difficult one, the climb to the fallen patriarchs nest will be more so. With his slashed wing and broken leg, movement is laborious, nearly impossible, but he must get the other family's supplies so that his own family may survive. He fights through fever and pain to obtain his goal.

He is able to walk using his good arm and his good leg, and to climb using his beak to gain temporary holds on the ledges leading up the cliff. He sees the fallen males family in their nest, the children crying for his return while the mother attempts to quiet them. The scared and angry, but they will not attempt to defend their supplies.

They will not know the extent of his injuries, but they know they would not be able to defeat him even at half strength. By avoiding conflict they may be able to join another family, though the odds are against it. They will probably starve as a result of R'Kree's assault.

R'Kree continues his climb, swerving around them to avoid their notice and resting on a ledge just above them before squawking at the family to warn them of his remaining strength. As suddenly as he approached the family's patriarch, he jumps at the family's nest and snatches the supplies. The cries of loss and anguish ring in his ears as he uses the air's currents to glide away from his victims. He closes his eyes to shut out his own pain and the pain of the family he has left desolate. He clenches his talons around the bundle to make sure that he does not drop it and leave his family with the same fate.

His glide is turbulent because of his injuries, and his descent is too rapid. He must struggle to maintain his concentration, to follow the right path back to his family and to keep from losing consciousness. His mind swims in delirium as sweat pours from his body, into his eyes and injuries. The sweat mixes with his blood and burns his skin. His wings and legs ache as he struggles to maintain the strength he needs to remain gliding. He knows that if he cannot reach his family they will die as surely as the family he left upon the cliff.

He has left his own family safely hidden behind large boulders in the desert. They are safe for the night, and the supplies he is bringing to them will last long enough to get them to the city, but if he dies they will most likely be victimized before they get there. They will have to slow their pace as he recovers, and he will have to rely upon B'Kpa to do much of the work that he will not be able to do. He can trust B'Kpa. He is a strong boy, and he listens well.

As he thinks of his son, he is suddenly calm. He drops his bounty near his family's

hide-out, then crashes into the desert sand nearly half a kilometer beyond their camp. The concussion of his landing knocks him unconscious, and he welcomes the unconsciousness. It will cover the pain of his injuries until he awakens the next morning to search for his family and lead them on towards the city.

* * * Mars * * *

Like the unexpected clap of thunder from unseen lighting, the signal is given to attack. The general leading the offensive explodes through the regolith from behind his army, while every slaver soldier reacts appropriately, falling into ranks as their leader streams past them. They have received many cycles of training, and most of them have experience from previous raids. The signal is passed from soldier to soldier nearly instantaneously, and the slavers converge upon the envelope of regolith surrounding Bysrene's hive like a sphere collapsing upon itself. It will take only a few hours to reach the hive itself and their arrival will be swift and unexpected.

Inside Bysrene hive they do not expect the attack. The council of mathematicians is in session, and all are interested in the discussion. Emergency council meetings are rare, and always portend changes in the hive.

Workers stop their work and aggregate within the corridors of the hive. Teachers, artists, scientists, and engineers stop their conversations and wait in their chambers for the mathematician's words. Nearby foragers and hunters, even sentries, return to the hive and gather to pay attention to the words of the council meeting.

The youngest soldier in Bysrene's army is Panifor. She is stationed at the least dangerous position in the hive, at the end of a short but convoluted passageway. Behind her are worker's chambers, with connections leading in all directions, but only one leading to the center of the hive. This is the most difficult route to the queen, but somehow Panifor is the first to encounter the enemy. She is in attack position, rolled into a cylinder to expose the least amount of surface area to her enemy, but still with enough area to be acutely aware of anyone approaching and to deliver her sting. She senses them coming only a split second before they are upon her, however. Her inexperience cost her precious seconds for her battle. Her stings are enough to kill a single attacker at a time, but her foes are suddenly lined up before her. She has only the

time it takes for them to remove their fallen comrades in front of them to prepare for the next assault, and she only has the strength for a few encounters, even if she is not stung herself. If her evasive movements are ineffective against her adversaries and she is stung, she will die slowly.

Her weariness becomes too great with the fourth usurper. She can smell the pungent sulfur odor emanating from the red and purple ribs of the slavers as they pass above her while she dies. She knows that she has done her best to protect her home-hive, but she can only pray that the workers beyond her can finish the battle she started.

Panifor is not the only soldier to fall. In hundreds of corridors the slavers have won their way deeper into the hive. Along hundreds of battle lines they reach the waiting workers. The slaver soldiers are better trained than the workers, but they are far out-numbered. After many hours of furious fighting, the ratio of slaver dead to Bysrene's is high. The slavers are overwhelmed in all but one battle.

In one catacomb of the hive a slaver survives to reach the interior portion. Only the generals, the mathematicians and the queen herself are left, and they are unaware whether any interlopers are left, one, or many. They are prepared for any possibility, but they do not know from what direction the attack may come. They know that the attack will come quickly, and that the attacker will sacrifice herself to kill their queen. They know that there are still slavers outside the hive to gather the helpless workers once the queen is gone, but they also know that they will not attack without hearing the signal that the queen is dead.

* * * Venus * * *

R'Kree awakens near noon. The sun is not apparent in the sky, it is hidden behind dense clouds, but the heat rising from the sand tells him the time. He is nearly buried in the sand. As it heats up, his body heats up with it. His body cannot control its temperature effectively because of his injuries.

His pain prevents him from noticing the dangerous heat, however, and his duty forces him to rise and search out his family. He shakes the sand from his body then collapses. His body shivers even though it is overheated. He is racked with convulsions, the rebellion of his body against his attempts to move. He has survived the night, but he is not well. If he moves too quickly his internal injuries will reopen.

He must find his family, however. He must find them quickly, or they may overheat. They will not move without him, but without the benefit of movement, their blood will not

circulate fast enough to avoid boiling. They must keep moving during the heat of the day, and rest when it is cooler. The morning's coolness has already been lost, and the hottest part of the day is fast approaching. R'Kree must get to his family soon.

In the camp, his family is worried. B'Kpa assures his sisters and his mother that their father will return soon. He believes it himself. If his father does not return he will be in charge, and that thought is too much for his young mind to consider.

B'Kpa's species is the only intelligent one on Venus, and their social structure is very strict, encouraged by generations of unwavering tradition. Their's is a patriarchal society. Females are genetically no different than the males, but tradition has left them the inferior gender. They are protected and provided for and are not allowed any positions of creativity or authority.

Male and female are artificial delineations, however, there are actually five sexes on Venus. The role of male or female in any couple is determined during pairing, with the submissive sex taking on the role of female while the dominant partner becomes the male. The transformation is actually physical, the genitalia developing once the roles are established. All other differences are socially produced, however.

The intelligence of each is equal, though the males do not recognize it. The belittling of women during upbringing suppresses their creative intelligence, and they are not educated. This is provided only for the males. Since mating partners are selected very early in the lives of Venusians, their roles are established well before their eventual marriages.

Both male and female roles are well defined. Females bear and care for the young, they prepare meals, and they provide the labor for the construction of their homes. Males serve as managers, artists, scientists, and engineers.

They do not decide their careers, however. They inherit them as birth rights, according to the five sexual castes. The castes are determined by different sex chromosomes, but none are adaptively different than any others. There are no physical or mental differences. The stringent caste system has developed due to the needs of society, with one's position determined by the only morphological characteristic inherited from the sex chromosome, plume color.

Young Venusians have feathers, but these are lost during puberty. Young female's feathers are replaced with soft white fur, covering their entire bodies, but males feathers are replaced with colorful hair marking their heritage. Occupations on Venus are passed down from generation to generation, based on the male's plume color.

B'Kpa is a farmer, his head's hair will be aqua. A sailor's son would have golden pate, while a factory laborer's hair becomes rusty. Traders, craftsmen, and artisans have more

brightly reddish hair. Only the aristocracy lack any hair on their heads, and their status reflects this distinction.

Social castes are well defined by the color of one's head, and no one can change their caste, though they may be allowed to work outside of their caste if they accept less pay. Farmers are the lowest caste along with fishermen. Factory workers are slightly higher, but they are still far below the businessmen. Positions of authority and science are reserved for the elite. Only the elite are allowed to choose what careers they will follow, but they are not allowed to be laborers.

Women of each caste are subservient to the males of that class, but women of higher classes are allowed more rights than males of lower castes. Mate selection is made by patriarches for their children, and it is a highly competitive process. If a male's child is paired with a higher caste's then it will become a female. If it is paired with a lower caste it will become a male. Prestige is gained by pairing a child to a higher caste, but the lower caste pays the dowry. A child paired to a lower caste, therefore, brings a monetary reward to the father and his family.

Pairings are made soon after birth, but matings don't occur until after puberty. At this point the males leave to start their own families. They learn their responsibilities from their fathers, however.

B'Kpa knows that it will be his responsibility to protect his family if his father does not return. He is near adolescence, and has received training, but he does not feel ready. He must keep them calm until R'Kree returns.

He holds his wings over their heads to keep them from seeing beyond him. He believes they will be less afraid if they are blinded. He also wishes to express his competence, so he flexes his muscles for them. He performs the display as a means of showing his strength, and he acts as if the flexure of his muscles is necessary to warn any creature outside of his camp site.

He does not wish to actually touch his family, however. This would be weak, and he must remain strong. He is becoming too concerned about his father, however. He is too afraid to keep up his facade for long. The role of protector for his family only intensifies his own fears, and they are becoming unbearable.

He lowers his wings suddenly, as if reacting to some movement in the desert. He stares intently into the distance and pushes his family behind him. He hops three paces into the desert, the signal of intent to fight. He wants to show his family that he is willing to fight for them before he leaves them. He turns to his mother and blinks his eyes. It is a gesture meant to

tell her to trust him. He then turns and takes off into the sky to look for his father.

Four hours later, R’kree struggles again to his feet. As he closes his eyes to shut out the pain and to gain his bearing to determine which direction is north, towards his family, he hears yelling. It is his son.

“There you are! I’ve been looking for you. I found the bundle of food you brought us, and I gave Mom and P’Dure breakfast. They are still in the camp. They are waiting for us to return. Are you alright? What happened? Dad?”

His son should not be in the open. He is too vulnerable. He is not old enough to fight his own battles, and his babbling is irresponsible. It shows his lack of experience and savvy. He would be quickly killed in any encounter out here in the desert . . . outside of social strictures.

R’Kree tries to respond to his son, to warn him to seek shelter, but his throat is too swollen from his injuries. He lifts his head feebly, but cannot hold it aloft for long. It crashes into the dust of the desert as B’Kpa races to his side.

“Dad! What’s wrong? Are you hurt? Are you dying? You can’t die daddy, you can’t.”

B’Kpa’s sobs fill the atmosphere as R’Kree loses its final consciousness. He is frightened that his sons noise will attract attention, but he is also comforted by his love for his son. He is proud of his son. He is his only hope, now.

“Daddy, don’t die. Don’t die, Daddy! Don’t die! Don’t die! Don’t die. Don’t die . . . don’t die.”

* * *

*Tranquil, let one worship it
As that from which he came forth,
As that into which he will become dissolved,
As that in which he breathes.*

* * * Mars * * *

Bysrene’s generals gather around her as she cowers, rolling herself into a ball. The mathematicians are useless in this battle. They stay in their hovels. Those that can, watch. Those that can’t, cower like their queen. The general’s senses are keen, however, their reaction will be swift, but they are not impenetrable. If the attacker is able to strike quickly enough, she

will be able to pierce through as many as two of the generals bodies and kill the queen before the other generals can react. They must all sense the intruder in order to protect their queen by lining up their defences in front of her, sacrificing themselves, but saving their world.

The slaver pauses as she senses the large chamber of the queen's station, being careful to fan her odor behind her as she hesitates. She knows that she will have one chance to be successful. She must charge the huddle of generals with all of her speed and all of her electrical sting. If she gives them enough time for three to intercede, her efforts will be futile. There are fifteen generals, but they will not have much time to react. They are massed in the center of the chamber, to be equal distance from any entrance. That strategy protects the queen from chance, but it makes the attacker's strike distance shorter than necessary in any but the most fortunate of intrusions. The chamber has been carefully designed, however, to provide the generals with enough time to react from this position. The queen's body is difficult to detect amidst the general's bodies. They are emitting their own pheromones to confuse the interloper, but the queen's smell is indistinguishable none-the-less.

The slaver charges. She is half way to Bysrene before she is detected. Her generals react, but too late to line up more than two deep between their queen and her assassin. She is struck by the assassin's jolt just as one of her generals tackles the marauding intruder. The contact is enough to deflect the sting, however. Bysrene is dealt only a glancing blow. She will need much attention in order to heal, but she will survive.

With all her strength, to cover her pain, she transmits her signal announcing that she is well. Her hive will be strengthened by this news, and they will remain cohesively in her service. The slavers waiting outside her hive will also detect her signal and will know that their assault is unsuccessful. They will depart to return to their own hive. They will report their failure, then they will be put to death for it.

Bysrene, exhausted from the slaver's threat, retreats to her chamber to rest and receive treatment. This has been the most difficult day of her reign. As she settles into the therapeutic muds of her bath she allows her senses to be overwhelmed, she has never needed the soothing touch and aroma of the sulfur rich muds more than now.

She dreams a sick dream, of pain within a numb body and mind. Within her dream she is carried to the beginning of her planet, to the pyrotechnic fire-work display of colliding planetesimals within the cloudy early nebula of the solar system. As large pieces of rock crash together, their volatiles released in tornados of swirling gas. Their iron cores melting from the impact. The images match her body's pain, but her mind grasps the images as if she herself were being

reborn.

Drops of water vapor mixing with the metal slag that quickly cools again into larger planetesimals. Over time the pieces melt together until they are large enough to establish an orbit around the sun. At this point, each additional impact dissipates its energy through the young proto-planet like an earthquake large enough to split the earth. Each impact melts the surface of the planet as the impacting bolide is also vaporized, falling onto the planet's crust and mixing with the molten rock.

While the planet is young it is a mixture of all of the elements in the solar nebula, but as the mixture of molten rock and gases continues the heavy elements sink to the middle of the planet. The lighter elements rise to the surface. Eventually, the crust cools to trap the heat and energy of the planet within its cocoon. As the lightest elements continue to rise, an atmosphere is formed. Rain falls, and oceans develop. The energy within the planet builds mountains and basins, while the flowing water on the surface carves valleys and ridges.

Finally, as comets and meteorites continue to strike the surface, their debris and portions of the planet's crust and atmosphere are trapped within a spongy layer of mud and carbon dioxide--the regolith. One billion years of this history later, a creature of intelligence, an Ediacaran, dreams of her planet's history.

* * * Venus * * *

Steam rises off the seas surrounding the capital city of Ishtar. Even here at the coast, there is more land exposed each year, and the seas are becoming too salty to drink. The ocean can no longer be seen from the rooftops of the city's tallest buildings, it is ten days flight to the edge of the briny water, but it is the only water available. The ground holds none within reach.

The land surrounding the city is beautiful, though unappreciated--sharp spires of rock jut above dunes of white gypsum. The bands of color mark the ages of Venus' past, when oceans covered the land. Then Ishtar, uplifted by early tectonic activity now slowing as water evaporates from the crust, became the only continent.

Its colors indicate times when the land was flooded then exposed to the air. Early times, when the atmosphere was thin, and the rocks were formed from volcanic pillows. Shiny glass and crystal minerals make up the sandstones in layers created once winds began to blow across Venus and scour the original volcanic surface. Then green muds, settling from shallow seas as Venus' water began to collect and cover the surface. Deep water left the brown iron bands, from the reduction of sulfur on the ocean's floor. This, once exposed, giving way to orange, red, and pink iron bands overlain by the white gypsum and carbonate marking the oceans passing.

At one time, plants covered this landscape, but now they grow only in the crevices of the rocky crags. Only in the greenhouses of the cities do plants and animals still thrive on Venus. Only recently, there was still enough grassland to support some agriculture outside of the cities, but that is no more. Ishtar's capital city, M'larindek, is suffering the most from overpopulation as farmers and hunters migrate to avoid the droughts and death of the doomed savannahs. Even the cities, however, cannot protect its inhabitants from the ever increasing temperatures. Tempers among the Pindarb, the builders and inhabitants of the cities, are also rising.

Politically, as well as environmentally, the planet is reaching a boiling point. At the heart of the city, in the government's administrative center, D'Thorn, prime minister, and G'Ntech, his advisor, discuss the fate of their world.

"Time is short on our planet, D'Thorn."

"Yes, G'Ntech, I have spoken to our astronomers, also."

"They have told you that Venus is too close to the sun? That carbon dioxide continues to accumulate in our atmosphere? And that the sun's heat is being trapped? They have told you that this heat will kill our planet?"

"Yes. They told me that is why it is getting a few degrees hotter each century."

"I do not believe them. They say that our planet will reach a temperature over 730 degrees Kelvin before it stops. That is ludicrous, they must be mistaken."

"No, G'Ntech, you must believe them. We have only a few centuries left."

"I will defer to your judgement, D'Thorn, but that time table is too short. If our planet is truly dying then we must prepare to leave, surely our engineers can build ships capable of space travel, even in so short a time."

"I trust our engineers also, and our scientists, but we may have less time than even our astronomers predict if our people continue to rebel and steal food from the government reserves. Our planet is dying already, G'Ntech."

"It is not your fault, your grace."

"It is my responsibility! My people are starving, and it will only get worse if we cannot control our population. In some impossible way it continues to grow. I am cursed for not having a solution to offer, but if we do not act soon to protect our resources, our entire society is doomed."

"I believe you are right, D'Thorn, but we cannot save the entire planet. We must first save ourselves."

* * * Mars * * *

As workers scramble to remove the dead and debris, the mathematicians reassemble in the Queen's chambers. They are her cabinet, her advisors. They calculate the chances for invasion, and they calculate the structure of the world in which the Ediacarans live. They take the data from foragers and scientists who travel outside the hive, and calculate the physics and geology and biology of their world.

The queen is constantly involved with the work of the mathematicians, and is usually a mathematician herself before rising to the rank of queen. Mathematicians are the highest ranking workers in the hive, and only the best of them can become queen

Her chamber is adorned with the best artwork, and is filled with the best smells, but her chamber is a place of work. It takes the coordinated work of all of the hundreds of mathematicians in the hive to carefully calculate the needs of the hive. The future must be carefully predicted, and the world must be constantly scrutinized for evidence of threats and opportunities. There are many enemies in the ooze, but also many wonders. It is the mathematician's job to discover all of them.

Bysrene's chamber has scenes of combat on its walls. Fallen heros carried to heaven on rays of sunshine. Conquering heros expanded to show their full size, with vanquished usurpers spread on the field of battle shriveled in their death cocoons. The smells are aromatic sulfur compounds collected from exotic bacteria. They evoke passion and comfort, but in the midst of this clamor, they are unnoticed.

She is at the head of the room, her symbol behind her on the wall. The tornado-like spiral of iron-red intertwined with sulfur yellow signifies the regality of her office. Hers is a position of royalty, and her council is her house of congress. She values their judgement, but hers is the final say.

Each of the six mathematicians in the meeting chamber are representative of constituents in the hive. Tendritch, the workers delegate, is the eldest calculator. She is surly and disagreeable, but her skills are unchallenged. Ranteth, the armies delegate, is serene. Unlike her constituents, she is reserved and shy. Her strength is her creativity in problem solving. Bentifor is the sentry's delegate. She is the youngest of the council mathematicians, but her discoveries have been among the most meaningful in the past thousand generations. The artists delegate is Phild. her specialty is architecture, and the beauty of her calculations is unmatched by any other mathematician. Dinpur, the mathematician's own delegate, is brash and arrogant. She presents the most challenging solutions, and though she is usually wrong, the occasions of her success are worth the misses.

The final delegate is selected by the queen herself, and serves as the queen's advisor when the council is not in session. She is usually the most elder, a survivor of a generation

preceding the queen's own, but Bysrene has selected an advisor from her own generation. Ongitch is the least trusted of the council members, because of her unexpected promotion, but Bysrene considers her advise invaluable.

Bentifor is the first to speak, her acrid signal emanating from the symbols etched into her belly by the acids of her guilds initiation. Bright purple stars within a spiraling yellow circle emitting the odors while her sinuous movement send them traveling through the ooze..

"Quantir, my best apprentice came to me excited, reared up and undulating, flashing the markings of our profession like a Morse code message. Her presentation was ostentatious, but her message is simple, she has calculated an important solution. She has solved the problem of the cooling winters."

"Bentifor! Be careful of your own exuberance. Wild statements are dangerous to your career."

"Yes, Bysrene, but I believe she is correct. She found the key to the problem in the theory of our planets formation, not in the theory of astronomy as we have always believed."

"Very well, proceed."

"It is part of the theory of astronomy that our days are controlled by a source of light and heat outside of our planet. That is why we have always assumed that our planet's loss of heat was a result of changes in this outside source. But, our own planet also generates heat and, therefore, gases. The heat that generates the volcanos and the geysers also releases the carbon dioxide and water that accumulates in our atmosphere. It is these gasses that warm our planet, and, we believe, it is our planet's atmosphere that is diminishing.

"We have extrapolated the amount of atmosphere that must be lost from our planet over time. If you compare the mass of our planet to the mass of atmospheric particles, it is obvious that the particles will continue to expand away from the planet's surface. If this continues over the amount of time that we know our planet has existed, then the atmosphere must be becoming so thin and spread out, that it can no longer trap the sun's heat effectively.

"We then generated a curve of our planets loss of heat since its formation, since it can be shown that the volcanic activity of our planet is decreasing. This decrease is exponential, though it has taken over one billion generations before the amount of carbon dioxide and water vapor produced by the outpouring of this heat dropped below the rate of our atmosphere's expansion. We are at that point, however. Our planet is now losing its atmosphere at a faster rate than gases from the core can be outgassed.

"As our atmosphere expands our planet's surface cools, and since the loss of our planet's heat is exponential, we calculate our hive has only a few million generations left before the surface becomes uninhabitable. Our planet will lose its oceans even more quickly. On parts of

the planet, it may already be gone.

“Our planet’s southern hemisphere is already desert. Only the low northern plains, where we are lucky enough to live, are still under even a few meters of water, and ice is forming on its surface. There are glaciers forming where the oceans have gone, but even these will ablate into space. Our planet is senescent, and will soon die.

“It will soon become so cold that even its carbon dioxide will freeze at the poles. The rich muds we live in now will become dust, blown around the planet in great storms. No life will survive this holocaust. We must find a way to leave this world, before that happens, or be frozen with it for eternity.”

There is a lull in the chamber, almost a gasp, before Ranteth speaks. “We must put all of our efforts into this task.” Another pause before continuing, “and, we must finalize our plans in secret from the other hives. We may be the only hive to know of our planet’s demise. If the other hives learn of this they will surely destroy us to save themselves.”

Almost before Ranteth finishes her statement, Tendritch intervenes. “My queen, as you know, I have continually called for research that would address this very issue. I am as sullen as the rest of you that this crises has come to our attention, but it should not have come as such a surprise. If only my concerns had been addressed earlier. This matter is clearly a scientific problem, and the solution is obviously technical. My staff is, therefore, the best equipped to deal with it. We must, now, finally, be allowed to upgrade our efforts into developments of the third reality, before it is too late.”

“Tendritch, surely you cannot be so pragmatic as to ignore the importance of other realities in this problem?”

“It is not a question of pragmatism, Ongitch. This is simply a problem of the third reality. We must focus on the technology rather than the philosophy. If we cannot find a way off our planet, than all of our philosophy will be worthless.”

“I still beg to differ, Tendritch. We are surely destined to failure if we do not consider all four realities in this situation. It is simply too important a project to ignore every detail. We may not find a way off the planet, then we surely must rely on philosophy and religion, because surely we will be forced to reconcile ourselves to our deaths.”

“Yes, I agree. I do not believe it will be possible for us to get off our planet. We have no real technological ability, only craft, and I believe we will be unable to develop the needed technology in time. How will we escape when our only technology is architecture? The second and fourth realities are our only hope of dealing with this problem, and dealing with the first is always inevitable.”

“Philld, I bow to your wisdom, but I fail to understand how quantum reality or conscious reality bears on the needs of escaping from our planet. It seems to be clearly a problem of technology to me . . . and religion will follow its own path.”

“I have heard enough. There must be a solution. Philld’s concerns are valid, but your argument is also a good one, Tendritch. This is indeed a difficult technological problem, but there is more to the problem than the mechanics of our departure. We must also address the psychology of our sisters, and we must prepare ourselves for the quantum aspects of our journey. That too is important to our hive’s success. We must include each level of reality into our plans, or else we will not be able to adjust to the changes that will be demanded of us. And, of course, religion is a reality we must each deal with as we attempt to survive this ordeal.”

“Yes, but the method of leaving our planet is still simply a problem of technology, complex reality, the third reality. If we focus on that it is possible.”

“That is narrow minded, Tendritch. The third reality is only the complex world that we know by our senses. It is a pragmatic reality, but it is not immune to randomness. Since it is the reality created by the interaction of our consciousness with the second reality, no matter how definite it appears it is vulnerable to unknown situations.

“The second reality, the quantum reality, is limitless in its possibilities. Beyond the realm of our consciousness its third reality is undetermined. We must predict how its complex reality will unfold if we are to design technology to face it. To do that we must consider how each of its possible attributes might effect our journey.

“Beyond that, we have the fourth reality, our consciousness, the very agent of reality determination that is so crucial to the third reality. For our perceptions to remain consistent with the unfolding of third reality attributes, we must not become afraid of the unknown. I fear we are too comfortable in the ooze. I fear that what lies beyond may destroy us. There may be no sensual stimulation, or time may move differently. If we are to survive we must protect our psyches, and to do that we must take them into account when we design our space craft.

“Ongitch is right, Tendritch, do not persist in denying the importance of the first reality. Ritual will be just as important in the success of this journey as the technology, and to ignoring the need for ritual will impede and compromise the design of our ship. Do not forget that our spirits give us life. It is this life that is God, and if we take our God’s for granted than we may forfeit our lives.”

* * *

*At dusk the cock announces dawn;
At midnight, the bright sun.*

* * * Venus * *

B’Kpa, upon reaching the wall of the city after his arduous journey, collapses. He pushed himself once the walls were in sight, and now his exhaustion can be allowed to overtake him. On awakening, he will think of a ploy to gain entrance, but now he needs the rest.

He is drained physically, but also mentally. The death of his father, and the need to abandon his mother and sisters, has left young B’Kpa desolate and confused. He is too young to have been taught how to behave once his father was gone. He is old enough, however, to realize that he failed his family.

After he buried his father he fed his mother and sisters with the food his father had left them, but if he had continued to feed them there would not have been enough. He himself had eaten most of the supplies in that single meal. He knew that if he were going to survive to get to the city he would need to take the rest of the supplies himself and abandon his family.

He was confused about his duties, but he knew that he must save himself before his mother and sisters. He knew that it was the way of his people to do all he could to protect them, but that he must be saved if not all could survive. He has no brothers. He had no choice under his culture’s guidelines than to leave his family and make the journey alone, but he misses them and strongly wishes that he could be the one allowed to die.

Once awake, B’Kpa realizes his dehydration. He will need to find access to the city quickly. fighting to force the hallucinations of the day’s heat from his eyes, he pushes his body against the wall surrounding the city. It is made from the clay of the ocean beyond. The ocean that at one time crashed against the walls during storms, but now is nearly two days journey away, invisible to the unaided eye. Visions of dancing evaporation off the desert convince B’Kpa for a second that water is still available outside of the city, but his intelligence takes control. He knows that his only hope of respite lies within these red brick walls.

He turns to face the wall, shielding his eyes from the sun and groping around the wall looking for an entrance. He knows that he will not be allowed entrance at the gate. He does not have business in the city, and without his father he does not deserve the rights of an adult. He would be turned away even though his fledging was nearly complete. In a few days he will be accepted inside the city on his own terms, but until then he will have to hide.

He pauses and looks up at the sun. The halo of white light around the sun jumps at him, as if attacking, and he quickly hides his eyes again, wincing as if afraid. He takes another step and reaches farther with his wing. His hand touches a crack in the wall, but it is big enough only to accept the tip of his talon. He never-the-less pulls himself to the crevice as if it were his savior.

He pushes his eye to the crack to see if he can see through it into the city. He cannot. What he can see is the plumbing of the metropolis, however. The crack does go through, and light with it, but all that B’Kpa can see is the reflectance of that light off the brass and copper pipes that carry the sewage of the city into the underground processing plants.

B’Kpa falls backward onto the ground. He hangs his head in temporary disillusionment and exhaustion. He then lifts it suddenly because of a flash of insight. He jumps to his feet and leaps away from the wall to the small clump of vegetation that is allowed to survive near the wall because the city lifts all of the winds approaching it into the sky and there is occasionally rain. B’Kpa remembers passing a similar clump on his way to the wall and eating the succulent leaves of the cacti. He also remembers that one of the plants was woody, and he finds the same shrub in this clump.

Using a stone, he is able to uproot the stubby tree. He then uses his stone tool to cut the branches off of the tree, then to cut the trunk into pieces. B’Kpa then thrusts a piece of the trunk of the tree into the crack in the wall. He takes the stone and hammers the piton until it is wedged firmly in the crack. He bundles the other pieces together the tough grass that grew near the shrub, tucks the bundle under one wing, grasps the stone hammer in that hand, steps onto the piton, and uses his free hand to gain a hold in the crack and lift himself up onto the piton. The piton holds.

He pounds in another and continues the climb. The crack widens as he ascends. Eventually the pitons are too small to be wedged into the wall, but the crevice is big enough for B’Kpa to squeeze into it and use the pressure of his back against one side to climb. By the time he reaches the top, there is enough room in the gap to move inside the wall and climb the pipes.

Once to the top he learns why his father had told him that they could not just fly into the city. He had not understood why his father would have had to convince the sentries of his status. He did not understand why his family could not have simply flown over the wall of the city. Now he does.

At the top of the wall, B’Kpa sees the guns. He sees them fire at a family of refugees attempting to enter the city as B’Kpa had imagined. A family maddened by the heat beyond reason. He sees them burst in flame as the explosive payload of the weapon reaches them. And he sees them fall to the desert as ashes. He shivers, and hides his eyes from the sight. He is

only inches away from the gun that produced the horror.

He continues to shiver, waiting for his own fate so close. He finally opens his eyes to see the guns, still facing away from him, and dormant. He grasps the top of the wall and pulls himself up. He scrambles onto his stomach below the gun, then quickly across the top of the wall to the interior side. The guns do not move. Once to the precipice of the wall he pushes himself off and glides into the city. No one looks up to notice him, so he lands on top of a house.

There is water in a pail on the roof. There are plants, potted and placed around the roof. There are bags of trash in bags, organic remains of meals unfinished, wasted. Before he has the opportunity to look at his surroundings, to see the green opulence of the city, he devours the rotting fruits and decaying vegetables in the trash bags. He pulls the remnants of meat off of bones in the garbage, and breaks the bones to eat the marrow inside. Once finished he drinks the water in the pail, crawls behind one of the plants, and sleeps.

* * * Mars * * *

As the mathematicians disperse to their chambers to calculate mechanisms for the hive's survival, Bysrene Hive is again racked with violence, this time from natural events. The regolith rides the crest of a tsunami like flotsam, but the force ripples through the hive like a sonic boom. Each sister rolls herself tightly into a sphere to avoid the effects of the vibrations, while chambers and corridors of the catacombed hive crumble and collapse. Earthquakes are frequent on mars, but rarely of this force. As the onslaught abates, the workers scramble to care for the injured and to reinforce the integrity of the hive.

Bysrene is among the first to respond, she convenes her mathematicians and their apprentices. "What was the cause of this disaster?"

"An earthquake, my queen."

"I beg to differ. Indications are that the vibrations were the result of the impact of a bolide, an extraterrestrial body. Probably a meteorite."

"Yes, I agree. The direction and strength of the vibrations indicate a large meteorite struck within a few hundred kilometers of our hive. We are fortunate that it was not closer."

"A meteorite?"

"Yes my queen, most likely a carbonaceous chondrite, a remnant of our solar system's formation."

"There are other types?"

“Oh yes. There are comets, of course, and evidence of meteorites of undetermined origin; presumably other planets. ,since the ratio of elements in their composition does not match those in the sun. It is assumed these meteorites are portions of planets that underwent differentiation during their formation. They may be sent into space due to impact of large meteorites or planetesimals, in extreme cases causing the destruction of the planet, or also due to volcanic activity, though this is rare.”

“Is it possible for mars to lose a large bolide by volcanism.”

“It is theoretically possible, my queen, and has been observed, but it is rare.”

“Then we have a method for salvation. We will escape on a comet.”

“Bysrene, I did not intend to imply that we could survive expulsion into space via a volcanic eruption. That would surely be suicide.”

“Do not be so pessimistic. I trust you can calculate the needs for such a trip successfully. Let me outline how I believe it can be done. We can construct a comet from ice, leaving it hollow and filling it with regolith to carry us and our livestock off of our planet. If the ice is thick enough it will allow for our launch, carry us through space and insulate us from its coldness, and allow us entry through another planet’s atmosphere.”
ion of its land masses and the thickness of its atmosphere. If it has not developed a carbon dioxide atmosphere such as our own, then it will be frozen.

“Yes, I agree. Your plan is possible, but it will require much planning and preparation.”

“Certainly, our entire hive will become involved, immediately.”

“Yes, Bysrene, but where shall we go?”

“There are only a few possibilities. Our own planet has two moons, there is a terrestrial planet just beyond our orbit, and three terrestrial planets inside of our orbit. Our calculations predict that the planet outside our orbit is cold and unstable. It is under too much gravitational sheer from the gaseous planets beyond. The planets within our orbit will become less hospitable as we approach the sun, so the best target is the planet closest to us.”

“The earth.”

“Yes, it should be much like our own planet, though it is larger. It may be more volcanically active than our planet, but it may also be sheathed in ice. It depends on the distribution of its land masses and the thickness of its atmosphere. If it has not developed oceans, as our planet has done, than it may be a desert.”

“You believe it is our best bet?”

“Yes, Ranteth. I do.”

* * * Venus * * *

Inside the palace at Ishtar, the prime minister has convened his cabinet. The palace is the largest structure on Venus, only ten stories tall, but each floor covering nearly a square mile. Exquisite tapestries adorn the walls, and the ceiling is painted with the scenes of religious awakenings.

“We must act quickly. We do not have much time.”

“But the astronomers say the planet has nearly ten centuries left before it is inhospitable?”

“Yes, but it may be less than a decade before the conditions become too unbearable for the existence of a government. Already there are revolts, even within the guard. If we do not act quickly, it is our lives that are in danger.”

“Well then, what shall we do?”

“That is why I have you all here. I will allow G’Ntech to explain the difficulties of the situation.”

“Thank you, your excellency. Welcome, gentlemen of the court. Let me be blunt and to the point. We must leave this planet. There is no hope of our surviving upon it for much longer.”

“But, how can that be done?”

“We have the technology to build space ships.”

“But, where shall we go?”

“That will be determined by our most loyal astronomers.”

“But, how can we take everybody?”

“We will not take everybody, only ourselves, only the elite.”

“But, how will the ships be built, then? If our situation is as bad as you claim, then we cannot rely on our work force to build our ships.”

“We will need a propaganda strategy. We must make the people believe that everyone will be saved. We will separate into our committees to discuss the problem and reconvene in two days. I beg each of you to remain silent outside of your meetings. Our lives depend upon it.”

As the elite of Ishtar disburse to their own homes amidst the sound of their chatter, B’Kpa awakens to the sound of a door creaking open. There are voices behind it becoming louder as the door opens. The speakers are unaware of B’Kpa’s presence, but they will surely find him if he does not hide. He scurries behind the plant in the corner of the roof.

The two figures stride onto the roof and walk to the edge, looking over at the city below. One of them is calm, wings crossed over his chest and his gaze fixed on the stars. The other is agitated, sweeping his wings in gestures of frustration and emphasis. He talks loudly, and occasionally hops at the beginning of his sentences.

“I told you there would be resistance from some of the council. I told you we should take the announcement slowly. We are in danger now, not just from our own people, but also from some members of the council.”

“You exaggerate. There is of course some resistance now, but it will not amount to anything. Do not worry, we have done the right thing. If we had kept the news till later, then they would have truly rebelled. As it is, they are allowed to complain without any true consequence. Once they are finished complaining, then they will be able to be trusted in the implementation of our plans. This way, they will be done complaining by the time we need them.”

“But what if they complain to anyone outside of the council, or the professional circles that we intend to include. We must not allow the news of our plans to be disseminated to widely. It is too easy for the wrong people to hear.”

“There is, of course, always some reason to worry, but we had to introduce the knowledge now. We are safer this way.”

B’Kpa moves his foot because it has fallen asleep. In the numb clumsiness of his movement, he causes the pot in front of himself to totter.

“What is that noise?”

“I did not hear.”

“It is over there. Where are your guards. You should not be without your guards. Guards!”

“Calm down. There cannot be anyone else on my roof. How could they have gotten here?”

“Guards! Guards!”

As the guards burst through the door, B’Kpa pushes away from the potted plant in fright. He flutters his wings and climbs onto the ledge of the roof, contemplating jumping and soaring to the street below. Before he can do so, however, a hand grabs his foot.

“It is a child.”

“How did you get here, farmer boy?”

The politician looks sternly at B’Kpa as he squeezes his leg and pushes his talons into his flesh just enough to confer the urgency of his question. B’Kpa utters a quick shriek and struggles to get free. He looks back at the adult with terror. He does not know what to tell

them.

“Speak, child! Do you know where you are? Do you have any idea what your presence here means? Speak!”

B’Kpa shudders and wails. His cries are a distress call, hoping for his father’s succor even though he knows he is dead. B’Kpa knows no other reaction at his young age.

“Give the boy some room, G’Ntech. He is only a child. Can’t you see you have him so frightened that he cannot answer you?”

The prime minister takes B’Kpa in his arms, and lifts him off the ledge. He strokes his head with the tenderness of a mother’s grooming. B’Kpa’s fear is soothed, and his shaking stops.

“Now, little one. Tell us how you have come to be upon my roof.”

B’Kpa looks up into the eyes of the ruler. For the first time he realizes the identity of the man holding him. He pulls away and bows in the way his father taught him.

“Look, see. He has manners after all. You must learn to give people a chance, G’Ntech.”

“Yes, sire.”

B’Kpa stays frozen in his respectful crouch. He will remain so until his master reaches out to touch his shoulder, giving him permission to raise his eyes.

D’Thorn touches B’Kpa. “Now, child. Tell us your story.”

B’Kpa speaks slowly at first, looking to the people around him as he speaks to judge their reactions. As he sees their approval he speeds up until he is speaking to swiftly and is asked to slow down. He gulps and pauses then finishes his story.

“Well, you are quite the brave lad, then. I may make you part of my guard. Would you like that?”

“D’Thorn, may I speak to you please?”

“This child affords us a great opportunity. He can be used as a decoy to our people. To explain to them why we are sending a ship off the planet. We should make him an astronaut, and tell our people that he is pioneering the way for all of us. With him as a hero, the ship will not be interfered with, and we can escape upon it without revolt.

“You can see that he adores you. He will be an easy pawn in our plans.”

“You are too callous, G’Ntech, but you are right.

“Child, what is your name?”

B’Kpa stutters, “B . . . B . . . B’Kpa.”

“B’Kpa! Very good. You, my son, will be one of my guard. Take him and train him well, so that I may be proud of him.”

B’Kpa is lead away by the sentries, while D’Thorn smiles broadly at him and gives a sign of reassurance.

* * * Mars * * *

Ediacaran workers are enthusiastic, enjoying their tasks. It is the mathematicians who are philosophical. Their discussions feed their minds while the work progresses, and allows them to endure the tedium. While workers whose task it is to mold the frozen casing of the comet ark go about their tasks with single-minded determination, members of the hive council speculate on the details of the hive’s endeavor to leave their homeland and embark on a journey into the unknown.

“We should take more than just our crops and livestock. We should take a menagerie of all of the animals on Mars. We will need the diversity to start life on a barren planet.”

“Yes, you are right. We will need breeding populations of every animal surrounding our hive. Earth will have an atmosphere, but it may not have life of its own. We will need our own fauna, regardless.”

“That is correct. Even if earth has life of its own, there is no telling what form it will take.”

“Surely, it will be like us? How else could life evolve?”

“There are many imaginable forms that life could take.”

“But, could any other forms be successful? Surely, earth cannot be so different that it would foster totally different organisms. If it does, than it may not be suited for us.”

“I think you are mistaken. Even on our own planet, evolution could have produced totally different organisms given only slightly different starting parameters.”

“That is right. DNA has unlimited potential for variation.”

“But, what is to say that DNA has evolved on any other planet?”

“That is a good point, but some type of replicating molecule must develop for life to evolve. DNA may not have been the only such molecule on Mars, but it is the most efficient It took over the role of being the replicating molecule for all of the life we know. Surely, even on earth, it would develop.”

“I don’t think that is at all likely. Earth could have life based on completely different molecules. They may not even be carbon based.”

“That is considering there is life at all. The probability is that the planet is barren.”

“Yes, we all agree that that is the most likely condition we will find the planet, but we must speculate as to all of the possibilities.”

“That, my friend, is impossible when you are talking about evolution.”

* * *

*The wild geese do not intend to cast their
reflections,
The water has no mind to receive their images.*
Zen Haiku

* * * Venus * * *

A throng awaits their ruler’s words, a speech promised for many days is now upon them. The fate of their kingdom is in question, there is much turmoil, and rebellions boil into reality easily. People are uneasy and afraid. They wait anxiously for news and comfort from their leader.

“People of Ishtar, a grave and magnificent day is upon us. You have all been suffering from the loss of farm land, from the receding ocean, from the blistering heat. I have tried to find a solution to our woes, and I have found one.

“Our scientists have learned that our planet is dying. That is why our lands are drying up and our air is becoming heavy. But, do not be alarmed. They also offer us hope.

“There is a planet just beyond our own that is still cool and covered with water. We can build ships and travel to this world, and live in peace and prosperity. All of us, your families, your wives and your children, can go to this world together.

“The astronomers say there is only one place we can go. The planet just beyond us in our solar system, Earth. It is slightly smaller, but it has an atmosphere, and oceans. There even appears to be oxygen in the atmosphere, though at fairly low levels. We will have to build plants to produce more once we get there, but we should be able to survive.

“We will send an astronaut to earth, to find the best place for us all. He will risk his life to return to us the knowledge of what dangers might lay ahead so that we may be prepared for our trip. This brave astronaut is B’Kpa.”

After the speech, within the protective chambers of the castle, a different story unfolds.

“There is room for only three hundred passengers on the ship. The council and their families will make up nearly one hundred of them. The rest must be carefully selected from

among the professions we will need to establish a community on earth.”

“We will need engineers, doctors, and teachers. We will be able to take little equipment and few books, so we will need people of knowledge and skill.”

“Yes. I have prepared a list.”

“There are many prominent names missing from this list, G’Ntech.”

“There is not enough room for everybody, D’Thorn.”

* * * Mars * * *

Bysrene’s hive has migrated toward the north pole of the planet. They are not comfortable in the colder regolith, but they need access to the ice and explosive volcanos.

They must work short shifts to shape the ice, or their bodies will become frozen. The comet is constructed of two halves, water melted then allowed to refreeze onto the surface of the ever expanding concentric pieces. The pieces remain suspended in the ooze. Once all of the population, supplies, and animals are contained within it, it will be closed around the regolith and sealed.

The workers completing the project will sacrifice themselves for the good of the hive.

“We will be more successful in getting the comet off the planet if the ice is coated in tar. It will insulate the ice sufficiently from heat as the comet is launched from the volcano.”

“There are few volcanos with the explosive force to propel a comet of this size through our atmosphere. How will we move the comet to the volcano?”

“We will float it there. Our scouts have found a volcano emerging from the ocean floor. It is just meters away from the surface to the ocean. Once released from the ooze, the comet will float to the surface of the ocean above us. We can direct the comet to a position above the volcano. Since it is a young volcano, it erupts frequently. The atmosphere is thinner above the pole than near our equator, so less force is needed there. Our calculations show that the chance for the impending eruption to be of great enough magnitude to propel us from the planet is fifty percent.”

* * * Venusians * * *

Within the streets, a rebellion boils. Many of the elite who were not selected have become aware of the true plans of the prime minister. They have organized their factions into armies, and they are approaching the palace. The palace guard is ready, but they are outnumbered.

Within the palace walls, B’Kpa watches the uprising with disinterest. He is unconcerned. The space ship will take off in a few hours, and no one knows where the ship is located except D’Thorn and G’Ntech. They will come for him when the time is right.

A knock on the door, and a call for B’Kpa. “Is it you G’Ntech?”

“Yes B’Kpa, hurry. We must make it to the ship before the mob arrives. Hurry!”

B’Kpa gathers his bags and rushes to the door. Together he and his guardian race down the hallway leading to D’Thorn’s chambers.

“The passage to the ship is through His Majesty’s chambers, G’Ntech?”

“Yes, B’Kpa, but be quiet so that no one else hears.”

“There is no one else, G’Ntech.”

“The walls have ears, my boy.”

Upon arriving at the end of the hallway and its large steel door, the other end of the hallway erupts with noise. As G’Ntech frantically unlocks the door B’Kpa turns to see his country men approaching like a berserk bull. He turns to protect G’Ntech as the door opens behind him. Slipping through the door himself, G’Ntech pushes B’Kpa into the frothing crowd as they storm the door to the palace penthouse. They swarm over B’Kpa, through the door, and after G’Ntech.

The ship sits at the top of spiral stairs leading to the roof of D’Thorn’s office. The rest of those departing are boarding, but the crowd still threatens the success of the trip. G’Ntech knew all along that the mob would need a sacrifice, and he planned all along for that to be B’Kpa, but he did not expect them to continue their pursuit so rabidly.

B’Kpa is stunned at the revelation that he has been just a pawn, as he is carried by the mass of rioters towards the ship. While also being torn to shreds by the mob, he lunges forward to grab the ankle of G’Ntech before he is able to enter the space ship. The ship’s doors close, severing G’Ntech’s hand, and the engines fire up as G’Ntech screams.

* * * Martians * * *

The comet is floated onto the ramp constructed for its launch. The passengers are already safely inside, but not yet dormant. They are aware of the noise of their departure, of the force of their flight, and of the death of their sisters as the volcano erupts to propel the comet towards earth. The workers, burned by the fumes of the comet’s launch, are glad to die for their brethren.

Before sleep overtakes them, however, many of the departing reflect on their journey, in

anticipation of the birth of a new civilization.

“I believe this is an evolutionary event, Bysrene, an opportunity for our own evolution, as well as an ending for life on mars.”

“Yes, I must agree.”

“A random event, perhaps. Like the ones that have shaped our evolution up to this point.”

“Yes. It is a boon for us, but think of what may happen to life on the earth when we arrive. The impact of our comet may cause whatever life exists there some distress.”

“Yes, there is evidence that an impact can cause changes in ocean temperature, pH, and circulation. It is conceivable that life would not survive those changes.”

“They will undoubtedly occur upon our landing. We will stir up much dust and water vapor into the atmosphere of their planet.”

“It is our planet as well, now.”

“Yes, but we survive by grazing chemosynthetic organisms. What if earth’s primary producers are photosynthetic?”

“If they are, then there will be oxygen in the atmosphere, just like on mars. We will have to live in the muddy bottom of earth’s ocean to avoid it.”

“These are big ifs. Evolution is too chancy to assume that there is any life on earth at all. Even if there is, we are not responsible for its survival. Our impact will be just another of many natural catastrophes to occur to the planet. If it’s life does exist on earth now, but does not survive our arrival, then it would surely be destroyed by later catastrophe even if we did not land there. A planet is bound to be besieged by many catastrophes over its lifetime.”

Dormancy lowers body metabolism to nearly zero, but it does not prevent dreams, they are merely slower.

One mathematician dreams of the future of ediacaran evolution. Will they be under such different selection pressures on earth that they will produce hopeful monsters? Will evolution take place in giant steps once on this alien planet?

Another mathematician dreams of the totality of the universe, and of the synchronicity of each of it’s parts.

A third dreams of the planet left behind. Out of five species of intelligent Ediacarans, Bysrene’s Hive will be the only one to survive. Many who will perish were enemies, but many were friends.

There is one that survives only in the cold regions of the north and south poles, hunters that rely on the chemical digestion of prey. Their hives are large, with many queens. Each queen has her own workers, but the hunters share their success with all of the families. Many of

the workers in their hives are male, but the males are not large enough to be hunters. They tend the young and build houses within the hive. The sisters protect the males and provide for their needs, but their existence is a stark one. The harshness of their environment demands it.

There is another adapted to the free life-style of the oceans. They also are hunters, but they hunt the animals and chemosynthetic plants that float in the martian seas. They do not build hives, but they do congregate into families and pods. Females and males are of equal size in their race, and they share the division of labor equally and copulate often.

Debris of uneaten and dead organisms in the ocean filters to the bottom like snow. This source of nutrients is utilized by the fourth species. A species that lives in the upper few centimeters of the regolith and feeds on the marine snow. They also do not form hives, but their males are small and few. They roam about individually, separate from the families of sisters resulting from each queen. The males impregnate whatever queen will allow it, and spend little time doing much else but feeding and attempting copulation.

They could not have been saved. They could not have been warned without jeopardizing the success of the exodus of Bysrene Hive.

Bysrene's race, as well as the slavers, are grazers, adapted to the volcanic vents, but whereas Bysrene's hive uses their own labor to farm the vents and raises livestock to obtain chemicals, the slaver's hive raids the more peaceful races for workers. They use their resources for the capture of others.

Bysrene dreams of death, and sex. Her death is quickly approaching, and she must mate before she dies. Death and sex are related phenomena, both are necessary for the survival of a species, and neither adds any meaning to life except for fulfilling the needs of survival of the genes within us.

The comet crashes into the ocean of earth. It travels quickly through the water and strikes the muddy bottom of the continental shelf. Water vapor, water, and mud are propelled into the atmosphere. Some of the debris makes it high enough to be trapped in the stratosphere and distributed around the globe by the jet-stream. The earth will be shaken by the experience, cooled and shrouded in dust. A cataclysm that will destroy much of the life that lives in Earth's seas, all but a few, those that will survive now with less competition, the harbingers of earth's greatest phase of evolution.

The ediacarans awake slowly. The core of their vessel has remained intact, and they have been gently deposited onto the ocean floor. Their first act is to burrow into the ocean ooze. Once oriented, they will establish their new hive.

* * * Gaia * * *

The precambrian earth is full of life, complex and diverse. No animals yet have hard parts, but metazoans feed on the algae and bacteria of these primordial seas. Chemotrophic life abounds in the deeps, while on burgeoning continental shelves photosynthetic organisms are just beginning to establish their advantage. This menagerie contains the precursors to all of the life on earth.

This is the milieu that Bysrene Hive hurries to colonize while another intelligent species arrives.

“What does it look like? Let me see.” Children are allowed to the front as fathers peer over their heads and place assuring hands on their son’s shoulders. All stand silently for a moment until D’Thorn finally speaks.

“It is as we expected. Our terraforming methods will be effective. Soon you may walk on your new playground, my son.”

“Will it be hot, like Venus?”

“No, and it will be wet, like the Venus of ancestral memory.”

The ship lands in the ocean with tremendous force, but the passengers are strapped in, prepared for the impact. Having survived the impact of one space ship, the earth hardly notices the second. Anxious pilgrims hurry to windows to gain a view of their new world.

Terraforming engineers work quickly and deftly to load their equipment onto boats. They have trained long and hard for this event, and they each know exactly what to do. They row their boats to the shore of the precambrian earth to find it much as they had expected, burning with ultra-violet radiation, and oxygen poor. They will have to work hard to make it hospitable. Their supplies of oxygen, water, and food will last only two years. Before that time is up, their algae must be successful in stabilizing and feeding the soil, and in introducing enough oxygen into the atmosphere for them to breathe. In the meantime, their ship and inflated domes must suffice for the Venusians to survive in the terrestrial environment of the precambrian earth.

No life has evolved from the ocean to be able to deal with the UV radiation bombarding the land. Not enough oxygen has been released by the plants of the oceans to support large creatures, and without the size to support skeletons, life on land is untenable.

The ediacarans, having found the teeming ooze of earth’s ocean floor to their liking, prepare for their future. Delayed events important to their survival must now proceed. As the rest of the hive are gathered, Bysrene extends herself to her fullest extent and emits her penultimate public address. Though the throng knows what her words will be from stories of past rituals, they await her message with orgasmic anticipation.

“My reign is near an end. It is time to select my successor, and to find her mate. The

participants are ready. This is a great day for Bysrene hive, so let the games begin!”

All males allowed on the flight to earth, and the females who have served as apprentice mathematicians will now be put through rigorous tests of strength and intelligence, Ediacaran Olympics. For the males only the victor survives, for the females the winner will become queen.

Meanwhile, Venusian explorers are actively surveying their new home. Flags have been staked, but dangers have yet to be assessed. The air is easy to fly in, however, even with protective suits. Sentries return quickly with their reports.

“It is true, the land is barren, but there is much life in the oceans. Life as we have never seen before. Though none of the species are complex, one does appear to demonstrate some intelligence. They do not know of our existence, however, and so they do not pose a threat to us at this time.”

“The possibility exists that they could evolve into a threat, however, D’Thorn. “We had better not take any chances.”

“Very well. Prepare a study to find their weaknesses.”

“We have done so, my liege. They live in the muddy bottom of deep water. We cannot attack them directly, but we have found a way to eliminate them without much danger to ourselves.”

The last two males square off against each other. Each is already scarred by jousts with now fallen adversaries. These two have proven themselves to be the strongest, but now only one of them will survive.

They circle through the ooze, swelling and contracting as if breathing. Occasionally one lunges and fires his shock, but each is agile and they avoid the attacks. One will tire eventually and the other will gain the advantage.

Suddenly, one male lunges in obvious pain. He fails to protect his ventral side adequately and his opponent’s countershock connects. The struck male writhes in pain for many minutes as the victorious male continues to pummel his victim with electricity. Each jolt sending the fallen ediacaran male into further contortions as the crowd screams with approval. The triumphant male will spend himself on his conquest then be taken to his chamber to rest. His prize will be the new queen, though only she will enjoy the celebration of his victory.

She has already been chosen from the group of apprentice mathematicians, having passed the rigorous physical and mental tests beyond all others. Now that her mate has been chosen, the climax of the festival is her announcement. Bysrene rises a final time for the occasion, and the crowd calms into expectant silence. She tiredly spreads herself one last time.

“A successor has been chosen. Quantifoor will be your new queen. She is now Bysrene.

“Her mate has also been determined. He has won the games, the only one remaining alive. He is a strong male. The future of our hive is ensured!”

The ediacarans spread themselves into a circle to celebrate the selection of their new queen as their old one slumps into her death position. She curls into a fetal ball as they flare their bodies in the ritual display of elation and join sexually. Though only their new queen will produce offspring, the loyal ediacaran’s environment is filled with the hallucinatory drugs of burning incense and their own pheromones. This is the one time of their generation’s cycle that all will enjoy sexual caresses and joy.

As the ediacarans dance in their copulatory revelry, however, a Venusian assassin plunges his harpoon into the lone male and pulls him away from the hive. He is killed immediately.

The ediacarans realize what has happened too late. They swarm the attacker and smother him, but their only male has already died, and he had not consummated the new queen’s selection.

Bysrene Hive will prosper for many millennia through parthenogenesis. They will spread out to cover the globe, but they will not reproduce sexually and they will eventually become too inbred to survive. Their fate has been sealed by the assassin’s lance, once again deciding the direction of evolution by a chance event.

Just as the news of the successful expedition reaches the Venusian camp, the first of their females becomes ill. She dies only hours after displaying the first symptoms. After her, the rest of the women and many of the men die of the same disease.

The physicians diagnose the illness as a parasite, one of the ediacaran fauna.

They have succeeded in killing the ediacaran male, relegating the ediacarans to slow death, but they have suffered the same fate themselves. A fate that is unacceptable to them.

A funeral pyre is built for the dead. As the remaining males stand below it, they ignite the fuel from the space ship and burn with their families.

* * * Earth * * *

Two human paleontologists wander the Ediacaran Hills of Australia, looking for fossils left behind before the Cambrian explosion. The fossils they expect to find have been called the Ediacaran fauna, animals that failed to evolve into extant species. The explosion of metazoans that followed the reign of ediacarans on earth is what is given credit for starting the lines of evolution that has produced all living animals on earth, including humans.

Dramatic Lighting

Backlit by Zodiacal light, the crescent Moon
perched atop a desert pinnacle to conduct
an orchestral event: bidding the stones
to stand and dance beneath the veils
of heaven's fire. Hush! The maestro poises.
This evening's score begins with haunting strains
of Lyra's charms, a majestic nod to Terpsichore.
The rising star lifts galactic arms to high fifth
an elegant drapery of light-studded flesh
a bend of celestial carriage to sweep against
the night-cooled sand. She spins a swish of
nebulous tulle, gold upon blue, while upstage
hangs a canvas backdrop of Night, dangling
to darkly grace the skyline stage.
Dusty glitter along the vast ecliptic plane
steals the sunlight and shatters the glow,
heralding falsely the dawn. Statuesquely,
the spires forgive the misdirection
and promenade toward the horizon.
Disciplined, ethereal, an *en l'air* vision to behold,
heavens drenched in celestial gossamer.
We trace their steps and bask in the airglow:
bright-eyed hopefuls at the stage door

THIS MORNING

My daughter
Took the red birthday balloon

That had been sleeping
On the ceiling of her bedroom
For weeks

Outside
And let it loose in the backyard
She was surprised to see it rise
For forty eight seconds Then vanish

She kept asking Why
But there were too many words for me
On the path to explain
The word Helium
Her empty fingers looked like they were praying

WARNINGS

In the beginning...Ye shall not neglect not neglecting for a fraction of a second. Nary a sunny field, a cave, the water, the dark (obviously the dark) shall go unexamined preceding entrance. Send forth your weakest first. Thou shalt not fall a fraction less than vigilant whilst sleeping, whilst wrapped in your mother's hairy arms. Thou brutish former self. Flee fromst each noise, each bobbing leaf. Flee the corpus, burst asunder, entrails strewn like petals of the loosestrife....

You were born with the ocean in your brain. Even if you've never seen it. Even if you've never imagined it. The darkness and the ice. Perpetual motion. Darkness and perpetual falling. The tantalizing vestigial memory of light without sight. Eternity. Mist. Sickness. Mist. The alpha and omega. Running in a dream. Eschatological storm. Sliding amorphous shapes. Protean. Do not go into the ocean. Kraken. Siren. Lantern eyes, the size of multiple hearts. Leviathan. Goblin's faces. Creatures blind and flat. Sea lions shrieking their fangs on rocks like men turned vicious slugs in hell. Noah's eyes, dull but moving, moving, choosing, picking sides...Picking the future and the past. The smell of prosaic ubiquitous death. Beware the corpse spit mockingly out, bloated and clownish, features blurred. There, says the ocean. Fifty billion years ago and now. Now. Now. Every second, a fresh now. Don't come back, says the ocean. Get back up on your fucking hill.

In the beginning there was water, and there was dirt.

Then we recognized water as separate from the soil, we moved it, we made it work, we grew corn. We smelled soot on our hands, and we set that soot to work. We smelled blood on our hands, and we spilled more and made a lake of blood and set it to work. We smelled shit on our hands...We made every other living thing in the world stand where we wanted them to stand and declared ourselves no longer of the world. Stay clear of the corn at night. Marauders. Look away, look away, from the bobbing lights in the corn at night. Do not (do not!) fuck amongst the corn. Trolls. Don't forget to throw a virgin off the tower, the rim of the volcano, the apex of the pyramid. Do not incur the wrath of the river child. Do not incite the manticore. Do not misbehave. Listen to your mother. Smile as your father strikes you. There are so many (so many!) things out there just waiting to eat the children.

Do not incite the dead. Don't make fun of them. Don't use their parts. Don't piss on the dead. Don't claw their soil (it's all they have). Don't bury them upside down, or face down. Don't cram them into something. Don't stuff more than one into a single hole. Don't put their

hands on their crotches or their thumbs in their eyes (Us & Them). Don't forget to bury them. Beware the corpse that has been scared to death. Don't rouse the dead. Don't arouse the dead. Don't tell them they're dead. Never use their names. Never forget. Don't eat them, even if you're starving. Don't take their stuff. Don't hump their wives or daughters.

Beware of things that are smaller or larger than they're supposed to be. Or misshapen. Beware of fused combinations. Beware of the man with a dog's head. Beware of the man with no head. The snake with a man's head. The man with a vegetable head. Beware of snake parts, no matter what the head and the body. Beware of deep velvety flowers in the humid swamp at night. Barbarians. Beware of glowing eyes. Dull eyes. Spinning eyes. The eyes of a rooster. Beware of eyes like drops of oil. Like buttons or stitches. The eyes of a pig. Don't ever look / into any eyes. Close your windows against birds flying in reading tomorrow's obituaries. Don't eat the dead sailor's spirit. Water water everywhere.

Don't let your soul get trapped. If another soul gets trapped, don't break the receptacle. Wash it facing south. Grind the victim into dust. Better yet, hide the fucking thing, so nobody falls in.

When the world has grown uncontrollable, find something you can control and control it.

Then things get simpler. Or stupider. No longer does the thing necessarily match the source of death. No longer does one avoid the shark to avoid being eaten by the shark. Suddenly, you prepare your food incorrectly or tell the wrong part of the sky to kiss your ass, and here comes the shark knocking at your door with an edict to eat you. Fear the passage. Do not forget to fortify the door, lay out food before the door, paint the door with blood. Do not leave the door open (birds again...). Don't leave the mead hall. Don't sacrifice to the stone faces, who used to warn you against so much. Do not steal, even if you're starving. Even if your children are starving (unless you want EVERYONE TO DIE!). Listen to the king. Don't listen to the king. Don't kill the king and take his stuff. Don't think too much. Do not forget to pray (cagily, now!) to the Destroyer. Beware the Destroyer. Burn meat for the Creator. Go have your period outside the city limits. Kill the wild man. Do not ask why. Align yourself with the wild man. Watch for he who / is duskier than you.

Do not touch nor consent to be touched by the rats. Do not go near the body in the gutter, bloating, black around the gills. Do not dance with strange women on bridges, or at night,

when the atmosphere has grown disorienting. Never refuse a dance with a strange woman. If a man approaches you bearing a riddle, run. Dwarves. Beware the corpse stripped and robbed alongside the road. Though we have finally lost the child-eater with his multiple heads wearing smaller heads (beautiful gossamer hair) on hemp ropes strung around his waist and throats, with the razor-sharp teeth pricking cracked black lips and blood splotching his powdery white face, DO NOT (for a second) assume that the children are no longer being eaten. The eater has simply become less outrageous, ostentatious, obvious. Now it's an old woman sneaking in on the breeze through a bedroom window, now it's an old man selling snacks in the forest.

Do not let anything steal the women. Everything wants to steal the women. Or worse, impregnate the women, leaving us to raise the child and tend to the deranged limping women. And then even if you do everything correctly, the goddamn bastard child murders you in your sleep. Beware of women watching wistfully out windows. Beware of elongated shadows crossing bed chambers, tallow from sperm candles dripping down long hairy fingers. Beware the man with the face of a wolf, the hirsute torso of a wolf, the face of a rat, talons like a weasel, eyes like a spider, the hunched mien of a spider. Beware the corpse drained like a fig. Do not (do not!) go down to help the unidentified ship safely about the wharf because the ship is (clearly) full of long-rotting corpses, and something will flash ashore, and the next thing you know the women (always the women!) are wandering the breaker wall in their nightgowns at midnight.

If the foreigners are destitute, cloddish, pock-marked, clad in rags, butchering / the language...let them pass. Beware only the debonair, the velvet capes, the large hair. Beware the rolling Rs. Do not let the girls choose. Do not let the girls travel. Slaughter the foreigners in their beds. Ask questions later. Do not ask questions.

Don't play god. Of course you want to play god. Don't play god. Messy business. You sew it together, it shambles back. Be gentle, You, you say. It smacks you over the head (the thing that once existed only within your head). It chucks the girl into the river. You have no control. You think you have control but you don't.

Don't fixate on the poetic revelation that, at root, all of them only want to be loved. Don't linger on the fact that they're lonely and ugly and weird and deserving of our sympathy

Don't obsess over their insistence that they only want to pick the flowers, watch the butterflies, listen to the birds sing...They only want to touch the pretty hair of the girls. Because even so...

Even so, what then? So fucking what? What else are you supposed to do? Regardless of the butterflies, the hair, the birds...They had their chance. Even if it wasn't a chance. They've got to go.

Then, wait a minute now, everything has changed. (Who...?) It's no longer the foreigner, the weirdo, the brute, the beast outside...but the monster within. Inside of you! Always brutish rising from the refined, never the opposite; never have the virile and bellicose feared discovering within themselves the homuncular soul of some effete bookworm. Always the gutter or the jungle. Always there, some thin relentless trickle of primordial ooze, waiting to feed some dark blossom. A dark star passes through you, and suddenly off you go to stave in heads with canes or skewer heads on stakes. (And admit it, you like it).

And nature. Thousands of years spent stacking stones and harnessing fire, fighting to keep her from tearing out livers with her great green teeth. Beating back the tomato vines, the roused dinosaurs, the drooping black serpents...And suddenly now, the goddamn opposite. Cultivate the beast. Do not use flashbulbs when photographing the beast. Wear your slippers. Kill those who would throw her into peril, and if not...

If not, you're living in sand, breathing fiberglass. Air becomes chemical, water melts your throat.

Which brings us to the present day. A puritanical voice shouting "Don't go fuck in the woods. Don't smoke weed. (Does this sound fun? Of course it does, but don't!) Don't be weird. Don't limp or stutter. You will be culled." And the device, the tool, the reckoning comes limping big and bloodstained, shitty clothes, himself the victim of childhood ostracizing, swinging garden tools, faceless, voiceless, mechanical, no passion in his violence. Beware of the beautiful bikini-clad corpse with her throat slit at the edge of the woods. And here the warning is double-edged. Don't create this thing. Don't be a dick. Don't take everything you can have. Cradle the reject. Sleep with the nerd.

Then (the story goes) we invent microscopes to see the crossed wires in our bodies, the tangle of our minds. We kill practically everybody and then write a thousand books confirming

how repulsed we are at the prospect of killing everybody. We have nobody to fight so we eat ourselves.

We look in a mirror. We've become smaller than we remember we're supposed to be. Hunched. Perforations like rudimentary gills. And there, we say, pointing a gnarled finger...

There you are.

All this time. We've been expecting you.

Let's put this thing to rest.

Difficult Question

The face of a 12-13 year old child
Peeping from behind thin curtains
Fresh as the first
Flower of spring
As pure as
First love!
But the hands wrecked from too much
Cutting of vegetables
And those cuts embroidered
With dry sand
Hands 20 years older
Than the face

Color Paralysis

The fluorescent lights must be thirty feet above. I remember how big this place is every time I look up. My daughter knows our store color is orange, our competitor's is blue, and she is only two years old. Grey concrete floors, long aisles identical in every store, orange smocks the same in every city, every state; nuts and screws in aisle seven, lumber at one end, garden supplies at the other, doors and windows and appliances and everything else that small hardware stores used to sell in between. And then paint, where I work six days a week. Exteriors, bedrooms, offices, ceilings, furniture, everything needs colors and red, blue and green don't exist anymore. She walks up to me and I try to avoid her, stocking items alone, keeping to myself. I look around at this massive box I'm in. I look up at the birds in the rafters, who fly in and out as they please, looking down at me.

She stands there and coughs, with paint samples in her wrinkled hand. 'Sir,' she calls out. I am twenty-nine. The word 'Sir' is somehow condescending. I reluctantly make eye contact and move towards her. 'Do you have anything lighter than this blue?' I take her sample and show her the larger rolodex of even more blues. 'Something lighter than Tahitian Breeze?' she holds out one of her many samples. I look at Tahitian Breeze with disgust and picture anything but lying on a beach. 'Try this one, Sea Ice.' I hesitate to say the color's name and wonder if we have a store in Anchorage, in Moscow, in Greenland. 'No, that looks the same shade.' She pulls out another wad of samples, these ones with whites, hints of blue, but still white. 'These are too white, but maybe you can make something in between.' So I mix and create parts of Frost and Rain Water and Island Oasis. There may have been a Dew Pointe and a Clear Vista. I see my lunch-break far away, in a back room of plastic chairs, white tables, and a brown paper bag with a turkey sandwich.

I pull the quarts out of the mixer, place them on the metal counter and wait for her to pick them up. She does not approve. How many different brands do you have? she asks. Just Behr and Glidden, and the ones you chose. They won't work, she says. She needs more options. We can make Sea Ice lighter, I say. That one is too blue, she says. We can make Frost more blue. That one is too light, she replies. What else would you like me to do, ma'am? I want to know

how many more options we have, in between these two colors.

“We have infinite colors.” I see the fans overhead and the ducting and the electrical wires running in conduit.

“What do you mean?” She seems upset that we have what she wants.

“Yes, we have thousands of colors and can mix them in millions of ways, so we have infinite colors.”

“No. You have lots of colors, maybe millions. But *not* infinite.”

“We have infinite colors and the problem is you.” A manager gets called, a third warning is issued and my shift ends early. I walk to the bus stop as I imagine her going home in her sport utility vehicle high above the road, driving on paved suburban streets, while mine will be a bumpy ride. I don’t mind it though. Maybe I can trade in my orange smock for a blue one, or get a job at an ice cream shop where the flavors are finite. My daughter would like that I’m sure. I see the buildings on the way home and they are not obscure colors but browns, beiges, and grays. There is plain old blue in the sky. The clouds are white, not frost.

Whispered between Heaven and Earth

Compare it to being trapped,
Writhing under an upturned, cosmic
Colander. We get to look

Out of our hole-punched prison,
With more than plenty of doubt.
The whispers and faint tracings

Between Heaven and Earth
Are but known bits of light,
Best measured in a desert sky.

We get to have brain comfort.
Each light-prick charges
Synapses with an awakening,

Electric bath, enervation.
We can get excited in the dark.
Why doubt it? Healing streams,

Shared by stars, are silent
—no, whispered—through space,
Messaged from Heaven to Earth.

A promising wave of silent splashes,
Light floods out of the arched darkness,
Healing us in desert hours.

Anthology

I am old enough to remember ivory.
The tooled tusks in Chinese shops as legal taboo.
My father speaking in hushed reverence, pointing at desecration,
In the back of Dim Sum Palace.

I am old enough to remember ivory.
The circles of snowflake doilies,
leaving sun-stained patterns on Granny's settee.
Unmoved since 1960.

I am old enough to remember amber.
The russet stain on towels, a result of hard water.
Child me wondering. How could water be called hard or soft?
Water just was.

I am indeed old enough to conjure onyx.
A batmobile of a thing. The first one
floated down the street to an 8 track beat,
until you hit things with it.

I am old enough to again remember amber.
When honey-got-a-little off-track.
The golden hair, teased up like a stiff weapon.
Her insides a pale ale of discovery.

And back to ivory this time.
Chrysanthemums clutched up in a bow -
a bit of autumn in our spring.
And wishing I had saved the petals for you.

I am old enough to remember ruby
eating the white of sheets with contents of a swelled belly.
The rosy ache of her, covering the globe
in pink velvet.

I am old enough to remember
a circle of transparent milk white weeping.
Overflowing onto the dusky linoleum,
at a 2:00 AM internment.

I now sit, 6 kitchens later.
And I am already old enough to eat the warm-burnt-sienna-toast-and-jelly of it all

A FEW HOURS AFTER THE BIG BANG

We had words. The door slammed.
I turned my pickup toward Chicago.

Green mile markers zipped past,
privileged nodes on my worldline.

A stop for Camels near Fickle, Indiana.
My headthrobs had slowed, my argument
cooling like coffee in a cardboard cup.

I soon found the miles getting longer.
The sun set behind a great thunderhead.
Lights twinkled on remote farm buildings.

I pictured a solitary photon grown tired,
laboring without destination across ancient
parsecs, infant passions long exhausted.

At a rumbling Flying J truckstop in Gary
I ordered a large slab of coconut crème pie,
and sat in the booth reckoning this truth:
that in the interval before I park the Ram
in our drive again, Lisa will have aged
a good bit much more than I.

The Pea Coat

Arranging the lost closet of clothes
you will no longer wear.
I come to find that old pea coat of yours.
The one you wore all the time like a suit of armor.
I took the coat to my nose.
This gesture endeared me to you absolutely.
In this visual world,
this modern landscape of polyester,
cotton, nylon, and pigment,
it is the smell inside this damn coat
that almost holds what's left of you.

On Fire and Friendship

*“The book to read is not the one that thinks for you
but the one that makes you think.”*

--Harper Lee

Orange tendrils reach towards the sky as sparks dance out of reach, fade, and turn to gray ash to litter the dew-wet ground. I sit in the wilds of Northern Wisconsin—Presque Isle—where dirty smoke taints the clean and honest air. The lake twenty feet to my right reflects the innumerable stars. A close friend adds a log to the fire causing one side to collapse and flinging yellow fairies into the air only to die a second later. Fire is warmth and healing, but fire is also death and destruction. For me, fire is reassuring, but sometimes—it destroys you. I continue to poke at the center of the fire—pure white heat.

The heat of a campfire can reach over 2,550 degrees Fahrenheit. This temperature is dependent on three main things: heat, fuel, and oxygen. These three elements form the fire triangle. Each element is important. An absence of heat dims the flames and ensures no rebirth. Without wood or gas as fuel, the fire cannot be sustained. Oxygen acts as the heart of the fire; without it, no fire will bloom. I learned how starve a fire—to take away one of those elements—before I learned to start a fire. Drown the heat in water. Refuse the flames the wood food it craves. Suffocate the heart by denying it breath. Kill it. Murder it.

“Cass.” He calls to me. My head shoots up, startled out of a reverie by the use of that name. He hasn’t called me that in a while. Hasn’t been around in a while. “Let’s go down to the pier.” He nods in the direction of the lake.

I nod in response. A chance to talk. A chance to look at the stars. We stand and walk away. Away from the heat of the fire, the cold bites into me like a child chomps into a S’more. I release a hard shiver. I regret leaving my jacket at the fire. We lay against the pier staring at the stars. We talk about everything. We talk about nothing. I want to say so many words, but I don’t. I don’t want to ruin the short amount of time we have together. I know when we return to school he’ll grow busy again. I’ll continue to be pushed aside, ditched for newer friendships.

We fall silent. The sounds of the water lap against the pier, the soft yet eerie breeze blows through the creaking trees, and the shudder of my own shivers fills my ears. The silence taunts

me, calling me a coward. Maybe I am. I'm scared of the possibility my fears will become truth. He will move on. He doesn't need me anymore. He doesn't want me anymore. I'm being abandoned—again. A burn notice.

I have lost many friendships. It started with Samuel Sampen in grade school. We were childhood adventurers. He grew up and learned that being “cool” meant playing sports instead of playing with childhood friends. I let go of him after realizing he would never adventure with me again. I moved away for my thirteenth year. I tried to keep contact with everyone. We failed miserably. I cut ties again, understanding it would never be the same. In high school, Tori Lord left me. Without a word as to why she distanced herself, I only discovered from another friend later that the two had a falling out without telling me. Tori thought I had picked a side. She walked out of my life without an explanation or backward glance. If five years of friendship was that easy to let go, did she even want to be my friend? I never asked her.

Friends for four years, I know who he is and who he could be. I see past the arrogant facade and see the human afraid to let anyone in. Pushing my way through his walls, I unintentionally let mine down. I become vulnerable. I trust. Four years later, I am burned by the dying fire of friendship. I can't tell which element is gone. Maybe all three are gone. I can't tell who let go first. Maybe it was me—my fault. I can't breathe. I want to cry. I can't. The smoke of our friendship chokes me.

Is something wrong with me? Answers nitpicking at my every fault rage through my head and heart—closing my throat and shortening my breath. They still tumble around my mind even now, whispering through the wind, tainting my moments of happiness with the bitterness of inadequacy.

I know these questions to be irrelevant. The real question is not “what's wrong with me?” but “what led to the loss?” I want so desperately to blame him. To show that when this happens, I am powerless to stop it. To prove that all the loss I suffered in the past was unavoidable. However, I realize that I pulled away first. I found a new friend, became more than friends, and pushed everyone else away. Damage control. If I distance myself, then when the break comes I won't feel as hurt. Wrong, wrong, wrong, wrong. It was my pushing away—my running away—that started this. I felt I couldn't trust him so I trusted someone else. I am stubborn. The gap between us is not all his fault.

The weight of this realization squashes me like a fallen limb landing on top of me, pinning me to the earth beneath its weight. I can't speak. I shake harder now—partly because

of the cold and partly because of emotions bubbling just below my surface. I push them down, bring up another empty topic—continue to discuss nothing, like every time I ignore my own emotions. We stand as semi-strangers. We walk away. Sometimes I leave first. I suffer now in my choice not to trust them. I should have said something—anything. It's too late now. At the top of the staircase, I look at the dimmed fire, debating whether or not to let it sit or to kill it. I know now my silence is what drowned the fire of our friendship, starved the flames of understanding, and suffocated the amity. I killed it. I murdered it.

MOMENTUM

So profound that we're up against
the same uncertainties.
So right we can decide
to work to figure them out,
or else together be content, not knowing.

And momentum as it builds
takes our breath away and makes us gasp.
We hear the engine kick in
like it does on old Ferris Wheels
or the Tilt-a-Whirl when the ride first begins.
It's the Universe creaking as it spins new gravity
and then the rush of air like an open car
on a sunny day and a mountain road
faster but not too fast on and on and
never wanting it to end,
suddenly knowing, really knowing
it doesn't end at all,
this is the gravity, the true force field,
source of love,
exhilaration and rest all rolled into one!

Contributor Notes:

Sudeep Adhikari, from Kathmandu Nepal, is professionally a PhD in Structural-Engineering. He lives in Kathmandu with his wife and family and works as an Engineering-Consultant. His poetry has found place in many online literary journals/magazines, the recent being *Kyoto* (Japan), *Scarlet Leaf Review* (Canada), *Red Fez* (USA), *Zombie Logic Review* (USA) and *Uneven Floor* (Australia).

Cathleen Bonner Bonner is a current MFA student at the University of South Carolina, where she studies poetry, teaches English courses, and works on the staff of Yemassee literary journal. She lives in Columbia, South Carolina and New York City.

Alan Britt was invited in August 2015 by the Ecuadorian House of Culture Benjamín Carrión in Quito, Ecuador for the first cultural exchange of poets between Ecuador and the United States. During his visit he did TV, radio and newspaper interviews, gave presentations and read poetry in Quito, Otavalo, Ambatto, Guayaquil and Guaranda, plus the international literary conference sponsored by La hermandad de las palabras 2015 in Babahoyo. He served as judge for the 2013 The Bitter Oleander Press Library of Poetry Book Award. He read poetry and presented the “Modern Trends in U.S. Poetry” at the VII International Writers’ Festival in Val-David, Canada, May 2013. Recent readings include the Biblioteca Comunal at the Ecuadorian Consulate in Queens, Long Island City, NY, November 2015, the 6x3 Exhibition at the Jadite Gallery in Hell’s Kitchen/Manhattan in December 2014, the Fountain Street Fine Art Gallery in Framingham, MA in June 2014, and the Union City Museum of Art/William V. Musto Cultural Center in Union City, NJ sponsored by LaRuche Arts Contemporary Consortium (LRACC) in May, 2014. His interview at The Library of Congress for The Poet and the Poem aired on Pacifica Radio, January 2013. New interviews for Lake City Lights and Schuylkill Valley Journal are available at <http://lakecitypoets.com/AlanBritt.html> and www.svjlit.com/aninterviewwithalanbritt. He has published 15 books of poetry, his latest include *Violin Smoke* (bilingual English/Hungarian): 2015; *Lost Among the Hours*: 2015, *Parabola Dreams* (with Silvia Scheibli): 2013 and *Alone with the Terrible Universe*: 2011. He teaches English/Creative Writing at Towson University.

Mary Anna Evans is an assistant professor at the University of Oklahoma, where she teaches fiction and nonfiction writing. She holds an MFA in creative writing, a BS in engineering physics, and an MS in chemical engineering, so she has an affection for the borderland between physics and art that Dark Matter explores. Her nonfiction has appeared or will soon appear in publications including The Atlantic, Saw Palm, EarthLines, and Flyway: Journal of Writing and Environment.

John Grey is an Australian poet, US resident. Recently published in New Plains Review, South Carolina Review, Gargoyle and Silkworm work upcoming in Big Muddy Review, Main Street Rag and Spoon River Poetry Review.

Dirk James lives in San Leandro California.

David Joseph is a student at UHD. He is a geosciences major who has always liked writing as a way to relieve the stress of his science and math courses. This story was chosen as the best from those submitted to the Emergence of Modern Science creative writing competition sponsored by Dr. Hoge in his Emergence of Modern Science course. This is David's first publication.

Rachel Howe teaches writing at Temple University and Rowan University.

Ash Krafon (@AshKrafon) writes speculative fiction and poetry. She's also the author of novel-length fiction, including the Demimonde trilogy and The Heartbeat Thief (under the pen name AJ Krafon). Krafon is a member of SFPA and Pennwriters and writes for the QueryTracker blog. She lurks in the heart of the Pennsylvania coal region but can be spotted at www.ashkrafon.com.

John McKernan, who grew up in Omaha Nebraska - is now a retired comma herder after teaching a long time at Marshall University. He lives in West Virginia and Florida. His most recent book is a selected poems Resurrection of the Dust. He has published poems in The Atlantic Monthly, The Paris Review, The New Yorker, Virginia Quarterly Review and many other magazines

Adam Phillips makes his living teaching at-risk junior high kids how to read, write, and dominate on the hardwood (these are three separate things; the kids rarely read or write while playing basketball). When not thusly occupied, he's f**king s**t up old school on the coastline of Rockaway Beach, Oregon, with his inimitable wife and two small sons. If you're interested, recent/impending publications include upstreet, Blotterature, Shark Pack Poetry Review, Raven Chronicles, and Blue Monday Review. His first novel is forthcoming from Propertius Press.

Rehan Qayoom is a poet of English and Urdu, editor, translator and archivist. Educated at Birkbeck College, University of London, he has featured in numerous literary publications and performed his work internationally. He is the author of 2 books of poetry and several works of prose. He lives in London.

Abe Rothbaum lives in Austin, Texas where he works as a landlord. He hopes to landlord less and write more. He travels to Mexico with his wife and kids anytime he can.

Mattie Quesenberry Smith recently enrolled in the Integrative STEM PhD program at Virginia Polytechnic and State University, Mattie Quesenberry Smith is an instructor at the Virginia Military Institute in Lexington, Virginia, and at Blue Ridge Community College, Weyer's Cave, Virginia. Her recent writing appears in Dappled Things, Dark Matter, Driftwood Press, Floyd County Moonshine, The Red Earth Review, and The Timberline Review. She lives at the foot of Little House Mountain in Lexington, Virginia, where she and her husband are raising their ten children.

Jean Sotos has had previous poetry acceptances in several online and print magazines, including After Hours Press, Dark Matter Journal, and Inside Out – A Literary and Travel Magazine. She lives in Chicago with her family, and subscribes to the adage, “All things in moderation – except poetry.”

Henry M. Spottswood was born in Mobile in 1940, and lives in downtown Cincinnati with wife Mary and kitties Maggie and Matilda. His poems have appeared in earlier issues of darkmatterjournal and in other publications. His favorite line in all poetry is by Emily Dickinson: “Because I could not stop for death, he kindly stopped for me.”

Tim Tipton was first seduced by the craft of poetry when he read the “Panther” by Rainer Marie Rilke. Today marks 17 years since he developed his voice and has written poetry that has been featured in ART/LIFE, Askew, the San Gabriel Quarterly, and the on-line journal poetic diversity and LUMMOX. Tim is a graduate of California State University of Northridge where he received a Bachelor of Science in Sociology. He also received a degree in Substance Abuse counseling.

Cassie Traxler

Harry Youtt is a frequently-published poet and fiction writer. He is a long time instructor in the UCLA Extension Writers Program, where he teaches courses and workshops in the writing of fiction, narrative non-fiction, and poetry. Through all this he has successfully resisted the temptation to pursue an MFA.

