August
Early in August, on an almost unbearably bright day, I filled a one-quart flask to the top with Roth Pond. I held on to this sample for the remainder of my time in Stony Brook. It contained an entire swarm, perhaps a few hundred strong, of cladocerans, bulbous arthropods the size of large grains of sand, the color of reeds. I had snatched the swarm from the pond with one scoop of the flask. For good measure I had added one of those surface-tension-climbing snails, the size of my little fingernail, brown and amber with dark eyes and a wide pale face like a cow’s, and a sprig of the aquatic plant it had been climbing on. The microscope revealed the plant to be hosting a tiny, milky white egg case, of parentage yet unknown.

Outside, everything was turning ancient, as things do in August. The fresh leaves on the trees had all faded by now from bright to dark green like their elders; there were no fresh leaves. The horseshoe crabs at West Meadow had ceased to crawl up the shore. They still arrived in the shallow water from points unknown every evening, but merely hung there, circulating a bit, like meditations. I got the feeling that no novelty was possible anymore, only ten-thousandth recapitulations.

I was improving my technique with the eyedropper. Earlier, whenever I tried to siphon up a copepod, it would detect the inrush of water into the dropper—just the kind of fluid-mechanical signal their senses are attuned to—and jump out of range in time. I practiced being quick, and found myself capturing all but the most alert of them. I told
Jeannette one day. “Congratulations,” she said brightly. “You’re on your way to becoming a very good fish.”

I had been hoping for “marine biologist.” But yes, I thought, after a bout with pride, I am becoming a good fish. Granted, if I were suddenly thrown into the Sound in the shape of an alevin, I would probably starve, but the alevins have put in many more hours of practice than I have. Jeannette pointed out to me once how much of the practice of biology relies on becoming attuned to a race of animals through years of caring for them: in her case, collecting copepods, growing algae for them to eat, changing their water, and, too, chasing them around with an eyedropper. Keeping lab animals is a kind of husbandry, and the intuition a scientist cultivates this way is closely akin, I imagine, to the sensitivity of those Spanish villagers to the sounds and odors of their cattle. I think of the animals I’ve collected and then flung into the bushes when I had extracted what I wanted from them—and I think then of that peasant who loves and eats his pig simultaneously, without contradiction.

Under the microscope, a fat cladoceran was hanging in the center of the field. Its transparent carapace was ridged like gently blown sand and wrapped around it like a cape. Its legs were a blur beneath it, and dark bits suspended in the water around it were inching toward it: the cladoceran was paddling the water in from an incredible radius in a continuous flow over its mouth. It was hanging with its mouth and belly toward me—most plankton seem to be indifferent to their attitude in the water—and so I could see its black-edged mandibles gnashing continuously, grinding
up the particles carried by the current before they went down the gullet. The pair of mandibles, I noticed, rocked back and forth at the pace of my heartbeat.

I’ve come to place great stock in such bodily correspondences. In fact, often it seems to me that they are the sine qua non of my understanding of an animal new to me. All natural history, thought Goethe, starts with sympathy. Count your points of correspondence so that you may then measure out your differences. Paramecia, for example, have supple skin—you can see it when they brush against things. Relax the back of your calf and press on the muscle: that’s what a paramecium would feel like, if it were possible to feel a paramecium. Once I saw one rub its flank back and forth on a lump of debris, like a cat. Then it squeezed itself into a hollow in the debris, denting itself more deeply than any self-loving cat would allow, twisting itself into pieces—but no, all was well, it emerged again from the hollow unfazed. This little drama made my day; I was grinning for an hour.

There’s nothing finer than these moments when the familiar suddenly somersaults into strangeness: the moments, to put it metaphorically, when the family dog sprouts eight extra legs and a spiky telson. Not that I would want to live in a world of aliens, creatures who never resembled me or my cat; but it’s the reversals of my expectations that make life in my natural community seem grounded, like something more than a daydream. A world you know thoroughly is bound to turn out to be a world you made up.
Not that these transformations of the familiar are always pleasant—witness the tick rising out of my shoreline Eden—but I find that they tend to call back to mind just those raw facts I might otherwise kick aside out of laziness. Teale (and remember that Teale was as at home among his local insects as anyone since Fabre) writes that he once "thrashed about in bed for what seemed like hours in the midst of an entomological nightmare," in which

just as I focused on a Cecropia moth, I saw its back split open and a rumpled green katydid came forth. No sooner had the katydid appeared...than its back opened to let out a brown daddy longlegs which in turn gave forth a striped potato beetle which in turn produced a bright red velvet ant. As the insects came they grew smaller and smaller like the blocks of a nursery set. What the velvet ant would have produced I will never know. For I awoke—

To me this image stands for the looming, horrific side of the world’s metabolism: the fact that each little body isn’t just what it is, but also a nexus, a summation of seething forces, and will dissolve tomorrow into another little body, another summation just as potent. A striped potato beetle nibbling a leaf won’t remain such for long—soon it will have turned into whatever dines on striped potato beetles.

As with individuals, so too with species: the eons roll on and evolution takes a soft-bodied something, grows it a shell, shapes it into a six-foot-long eurypterid with claws like a lobster’s, condenses it into a horseshoe crab. Remember that “natural selection” is a euphemism for execution, decimation. The horseshoe crab hangs out in one form for 350 million years; but then what? You can guard the boundaries of your body against invaders, you can lay out the species of the earth in a neat
framework, but these projects are always losing battles. The transformations never stop. Nothing sits still: the lion will never lie down with the lamb, or even pause for a breather.

And yet a striped potato beetle and a horseshoe crab, with all this deadly tumult bound up in their fibers, are such unassuming things. They seem to live in such stark contrast to the harshness of our own behavior. I think of Darwin’s description of the armadillos he encountered in the area around Bahia Blanca, in Argentina. He writes that one species, the *pichy,* prefers a very dry soil; and the sand-dunes near the coast, where for many months it can never taste water, is its favourite resort: it often tries to escape notice, by squatting close to the ground....It seems almost a pity to kill such nice little animals, for as a Gaucho said, while sharpening his knife on the back of one, “Son tan mansos” (they are so quiet).

So very, very quiet. I should note that apart from the birds and my landlady’s cats, none of the animals I met on Long Island ever made a sound in my presence. Copepods dash and tear up their water, to human ears, in perfect silence, just like the ticks as they crawl and suck. These animals don’t even cry out when I sharpen my knife, so to speak, on their backs.

The animals bob in the water, perfectly silent, perfectly contained—yet at the same time discoursing theatrically on the minutiae of their livelihoods, and the hungry currents in which we all swim. There’s an arresting discontinuity in their self-presentation, something akin to the “sound of sheer silence” that speaks to Elijah at Horeb after howling winds
and earthquakes and fires have preaced it. Or, to switch theologies, something akin to what comes out of the mouth of the baby Krishna in a certain North Indian story.

Krishna (the audience knows) is an incarnation of Vishnu, the supreme deity, but he's been born to a simple cow-herding family, who only know him as a mischievous toddler. One day Krishna is playing with a friend outside and eats some clay from the ground. Someone tattles and Krishna’s mother comes on the scene, most stern; he protests his innocence. She insists on looking inside his mouth; he opens it. Inside she sees the entire universe, the heavens and the hells, great seas churning, worlds careening, and just about keels over, dumbfounded. Then Krishna shuts his mouth again, and that’s the end of that: he goes home with his mother.

Isn’t every striped potato beetle, every alevin darting after a meal, like the Krishna of this story? Each organism just slaps about in the mud, in its own fashion, but when you get up close and make it open its mouth, you’re bowled over. Another resemblance: a living creature munches up the clay in the ground, and as it chews it metabolizes the earth into new bodies, its own and its children’s, boundless masses of cells and tissues and offspring. It leaves an intricate pocket of order, a cosmos, where you wouldn’t expect to find one. This makes for as good a definition of life as any. Life is what creates universes by chewing up clay.

These were the images—Teale and his infinitely unfolding insects, Darwin and companions sharpening knives on armadillos, Krishna and
his baby cosmos—I had in my head when I noticed, three days after collecting my sample from Roth Pond, that some of the cladocerans were pregnant.

There were two generations in the swarm, I discovered, some little, some big, and the big ones were carrying clusters of four or five eggs on their backs under their carapaces. I had read that cladocerans in wholesome environments may produce an entire new generation every few weeks. The big ones were, in fact, very pregnant: the embryos hunched inside their eggs looked almost fully formed, their eyespots dark, their own carapaces pointed at the tail and parted slightly over the belly, like their mothers'. In each female the embryos hung at all angles, packed close, quiescent until one twitched and the whole brood sprang awake, jostling each other vigorously. They seemed to quiver with pent-up energy, a tremendous impulse to break out of their chamber and start living in earnest. The lab around me was almost black, their magnified image was bright and awesomely clear, and I forgot all context. I was seeing nothing anywhere but them.

One pregnant female had grown hugely distended, almost two millimeters long, a dozen embryos squirming on her back. I chased her around the petri dish with the eyedropper, transfixed. I suddenly envisioned the maturation of these embryos within their great mother and the appearance on their own backs of a new cohort of eggs, growing, sucking up food, reiterating the cycle. A year of generations—two years, a century—all nested within this one tiny body, its armor so thin it barely
clouded the microscope light streaming through it. I don’t know what I
would have done if I had wrecked her with the lip of the eyedropper,
which wouldn’t have been hard to do.

I transferred her safely into a droplet about twice her size and waited
for her to settle down so I could get a really good look. She didn’t settle
down. If the edge of the water hadn’t been so flexible she would have
banged herself silly trying to escape from her prison. She flew hard from
wall to wall in all directions, slowing not a bit, her embryos jangling inside
her. I felt a bit sick. Finally I lost the nerve for this exercise and I returned
her to the flask, where she slowed to normal cladoceran speed
immediately. My heart was pounding. She was such a small bit of stuff;
this entire swarm in the flask, in fact, such a trifle; but my ability to be
dismissive of living trifles had foundered.

I had brought home no isolated sample, it occurred to me, but a
corner of a juggernaut so tall I couldn’t see to its top, something that
throbbed with energy and beat on all the walls I threw up in its path. The
flask might as well have held a thousand miles of rainforest, and I might
as well have been a noisy fly biting the inhabitants at random. Scooping
that swarm from its pond suddenly seemed like chipping at the heavenly
throne with an ice pick. I stared at these pinpoints in the cloudy water of
the flask, each with its boundless capacity for reproduction and
assimilation, and I was, I realized with astonishment, afraid. But then the
moment passed, my passion faded, and the big cladoceran returned to
being just a big cladoceran. I cleaned up the lab a bit and then looked back at it. It wobbled through the water like a bread crumb.

A mouth opens, and shuts again. There’s nothing mystical about it: just an awesomely complicated world, and a patchwork kind of brain trying to look inside. The world I inhabit swells and shrinks, as the generosity of my thoughts flows and then ebbs again.

That egg case on the snippet of plant, by the way, turned out to be hosting snails. Over several days they took form, developing outlines and postures, their shells hardening on their backs and blushing into color. They rotated slowly inside their perfectly spherical eggs, island universes. Their ink-black eyes looked out directly, like a human embryo’s. Actually, the resemblance was unsettling. I looked like this once. There was a time early in my own life when I, like these snails, hung perfectly still with my heart beating softly, given over to enormous propulsive rhythms, waiting boundlessly.

And even now, many years out of the womb, when you and I have grown so complicated and so many voices clamor at once, there’s a quiet tide that rises behind us, a substrate for our lives. It is there, always, even when it’s the last thing on one’s mind. I may flit through the rough-and-tumble world like a spirit, cogitating and building machines, swinging between friendly and hostile apparitions, searching after this and that, but there is a larger world, it is solid and moving, and all disconnections from it are imagined. From time to time, when my own activity falls silent, I
hear my own heartbeat; the synchronous rocking of mandibles digesting food; and the sheer silence of the waiting of the snails.

Ten weeks after I disturbed that mating pair so baldly, the horseshoes at West Meadow and I had come to a kind of working agreement: I knew what distance I had to keep and what I didn’t. (You can swim as close to a horseshoe crab as you want, you can even tap it with your nose if you like, it won’t care; but you’re responsible for getting your own toes out of the way when it scuttles by.) I knew how they chewed their prey—by walking over it, letting the thorny bristles on the insides of their legs grind up the shells—and I knew what time of evening they’d appear by the shoreline.

But something crucial wouldn’t stick. One day I’d feel perfectly at home beside them, and the next they’d look like alien contrivances. One day the surface of the water would shift gently and I’d sway along with it; the next day I’d shiver on shore while the water rippled abstractly, like an equation too hard to solve. I’d return to the lab: a cladoceran bends an appendage it has never bent before in an unfathomable maneuver, and then darts out of view. Back to the beach: an army of inch-long hermit crabs appears out of nowhere, scuffles for an evening, and never returns. Beach to lab, to beach, to lab: I stop here and I stop there, as Fabre said, putting questions, and waiting till the cows come home for those scraps of a reply. I’m listening—or at least I think I’m listening—but the animals
aren’t talking, just conking me with peanuts.

I would stand at West Meadow sometimes and look around at the lives being led as if this were some alien planet, as if I hadn’t already spent two billion years here: I would come down with total amnesia. Where did my memory run off to? Once there was a day in Eden, so the story goes, when the human turned to each animal and called it by its true name. Now I can’t even figure out the genus of one snail with an enormous Guide to Freshwater Invertebrates in front of me. But somewhere, locked up in the landscape and in our own bodies, is the story of our ancestry: the explanation of how we got from there (I’m pointing at some slime on the rocks) to here.

Locked up beside it is the great ledger that records all our metabolic transactions: century after century of wild entries that somehow, on the bottom line, sum not to chaos and crashes and bleak, empty rocks, but to food to eat and trees to sleep under. It’s an enormous, complicated story. It’s awfully easy, though, to get so caught up in the entries of the human ledger that one forgets the hard realities of the larger economy: the convoluted processes by which the little things—the pond snails, the copepods, and all the rest—end up being so fundamental to everything we know. Human matters are often so noisy that the only natural phenomena that can get a word in edgewise are the bigger ones, the particularly flashy ones, the ones that do tricks, like (to pick a convenient example) beavers.
Beavers are the subject of today’s discourse by Georges, Count Buffon, eminent zoologist of the late eighteenth century; he is digressing for a moment to lament the vanishing of the animal world. “[C]onquered and turned into slaves, or treated as rebels and scattered by force.... What visions and plans can these soulless slaves have, these relics of the past without power?” he asks. “...Only vestiges of their once marvellous industry remain, in far deserted places, unknown to man for centuries.” He adds that “beavers are perhaps the only remaining example, the last monument to that animal intelligence.”

The scenario is familiar enough: humans come on the scene, and the animals exit stage right. Poor animals. Note that this sentiment arose even before the railroad, the horseless carriage, the manureless fertilizer, during a time when animals were still utterly essential to even the most technologized human economy. Our civilization was developing the impression that the animals were disappearing centuries before we started taking rooms thirty stories above the ground and eating bean curd instead of salting away our own pork.

Buffon’s tone is gentle, nostalgic, and dramatic. Modern documentaries on endangered species follow in kind: Cousteau, for example, was a master at creating this mood, giving us glimpses of a mysterious world about to succumb, after so many eons, to overfishing or some such human power. There’s an undercurrent of self-satisfaction to such eulogies. We’re in charge, they say: we’ve replaced the animals’ rules with our own, and we have the luxury of mourning their deaths rather
than having to watch out for tigers. But isn’t it a shame we’re on top of the world?

“Let us make humankind in our image, after our likeness,” says God on the sixth day of creation, “and let them have dominion over the fish of the sea, and over the birds of the air, and over the cattle, and over all the wild animals of the earth, and over every creeping thing that creeps upon the earth.” Dominion is just a step away from disconnection, in which we dispatch the soulless slaves Buffon spoke of to the margins of the earth and have the place to ourselves. Our dominion isn’t going as well as planned, though. Granted, we’ve done pretty well with the fish, the cattle, and some of the wild animals, but the creeping things—and there are a lot of them—are being more elusive. They aren’t waving our banners quite yet. In fact, “[s]o important are insects and other land-dwelling arthropods that if all were to disappear, humanity probably could not last more than a few months,” writes E. O. Wilson.

Most of the amphibians, reptiles, birds, and mammals would crash to extinction about the same time....The land surface would literally rot....The land would return to approximately its condition in early Paleozoic times, covered by mats of recumbent wind-pollinated vegetation, sprinkled with clumps of small trees and bushes here and there, largely devoid of animal life.

Someone ought to tell the ticks that the land is ours now, not theirs, or tell the raccoons who delight in our garbage cans that there’s no room left for their marvellous industry, and that they’re relics of the past. Buffon and the rest tell tales as if the animals are disappearing from the earth, when in fact they’re only disappearing from our awareness. We
extinguish the big, fragile species and think hamburgers come from the supermarket. Hamburgers don’t even come from ranchers; they ultimately come from an epic invertebrate extravaganza under the soil. We can’t even identify the full cast, let alone follow the plot.

It’s a big world out there. There are, at last count, about one and a half million species on the stage, and those are just the characters whom scientists have given names. As far as I can tell—and I spent my whole summer on Long Island looking—the names have never all been compiled in one place. They change too fast, for one thing, as researchers reconsider the genealogy of odd species.

In books you can find charts that give overviews of the family tree—the five kingdoms of organisms, the phyla into which they are divided, perhaps the next level or two of subdivision—and charts of the tips of the branches: all the species, say, in one family of one order of the subclass Copepoda of the class Crustacea of the phylum Arthropoda. And there are charts that cover a midrange, like the guide to families of North American freshwater invertebrates I referred to all summer, which despite its partialness weighed many pounds. But there’s no complete list of species anywhere. I’ve become enthralled by the idea of seeing the entire assortment of known creatures, the entire Taxonomia, in one place. For that matter, I’ve become enthralled by taxonomy, period. Certainly there’s a reducing, flattening tendency to it—it tends to pin down and lay out the most dazzling array of organisms like a model line in a factory showroom. But taxonomy, when you hold it right, turns into the key to the kingdom.
It lets you into the showroom through the back door so you can play all night in the aisles, staring into face after face after face.

Annie Dillard stands at night in a meadow, and a grasshopper lands on her shoulder. “Why didn’t God let the animals in Eden name the man,” she asks later; “why didn’t I wrestle the grasshopper on my shoulder and pin him down till he called my name?”

I turn to taxonomy as a way of letting the grasshoppers and their kin jog my memory, letting them snap me out of my amnesia. To this end, I propose an exercise. It’s straightforward in everything but the logistics.

First—this is the easy part—let us finally compile the entire Taxonomia in one place. No description: just the one and a half million names. I figure they will fill about forty volumes. Second, let us build a new set of cathedrals, preferably of wood or sod, where we can gather on Sundays for a new kind of Latin Mass, in which we chant the names start to finish, week after week, like a synagogue congregation progressing through the Torah over the course of a year. Only we can’t finish in a year.

We’ll start with the big, new animals and work our way down into the soil. First come the whales, order Cetacea, recently evolved, and as I figure it by the next week we’ve already passed ourselves by and are on to the small mammals. One year later, we close out subphylum Vertebrata, savoring the name of one of the smaller fishes on our lips; a few more names and we complete our phylum, Chordata, and return the first volume to the shelf. The next phylum, Arthropoda, fills volumes two
through twenty-four.

The children born the week we enter the arthropods grow up chanting the names of the insects: after each service teachers can take them aside to tell them stories about the striped potato beetle or the katydids born coral pink, as is appropriate. As these children reach adulthood, it will be time to move on to the crustaceans:

Simocephalus vetulus,
Simocephalus exspinosus,
Simocephalus serrulatus;
Daphnia magna,
Daphnia longispina,
Daphnia pulex;

—Thus is order Cladocera revealed one week during this period, before vanishing back into the legions of names passing through us.

We chant through the remainder of the animals, the plants, the fungi, the protozoans, the algae, and finally the bacteria, kingdom Monera, so few of whom have ever been seen—our voices hush to whispers by the end as we think of these legions of unfathomable lives. Thirty-seven years have passed. But we aren’t done: I hear estimates that unknown species outnumber the known several dozen to one. So, for completeness, we sit together in silence every Sunday for another 1300 years, our thoughts given to all the relatives we have never met.

When our descendants emerge from their last convocation, late on a sunny afternoon, and a grasshopper lands on someone’s shoulder—what then? They will have measured the true size of the earth, and they can look in the mirror, as we can, to see their own size. Might they finally
turn to the fish of the sea and the birds of the air and every creeping thing that creeps upon the earth, strip themselves bare, and cry out, “What is our name?”

You can only ask such a question—if you expect to get an answer—from a state of pure vulnerability, ready to accept whatever answer is given no matter how much blood it draws. I imagine that nature, sincere as it is, will give one that draws quite a lot. Will our kind be ready in 1300 years, or will it take another run through the Taxonomia from the top? There’s time; the animals will wait. What’s 1300 years? Nothing, a blip. We’ve been painting horses on the cave walls a hundred times as long. All the same, couldn’t we speed things along by spending more days now prostrate before the dens of the wolf-spiders?

I’m enthralled by taxonomy because it provides such unexpected, and complete, context. It turns out that you and I are more closely related to vampire bats than to golden retrievers: who would have thought? We are linked by our Latin names into expanding circles of relationships, just as we are linked by the tastiness of our blood into the material cycles of the food chain. Our taxonomy is not an abstraction: the relationships of the taxa reflect and distill all of life’s evolution and genealogy. Our names are markers in a two-billion-year genetic story.

There’s an enormous horseshoe crab shed in the sand in front of me. It’s big enough that it must be from a female, an old one. She, like all the horseshoes on the North American East Coast, belongs to the species
polyphemus of the genus Limulus, of which only the one species has survived. Two other genuses, comprising three species, live today in the coastal waters of Asia. Thus four species of horseshoe crab are all that remains of the ancient subclass Xiphosura. A subclass can be quite large. All the placental mammals, from a field mouse to an elk, fit in one subclass. Every other member of Xiphosura has either fossilized or been forgotten entirely. The four surviving horseshoe crab species inhabit their looming taxonomic spaces like old men in an empty concert hall.

But at higher levels of organization, their kinships blossom forth. They join the subphylum Chelicerata along with spiders, ticks, mites, scorpions, and a few others. Look right above the mouths of any of these creatures—you can use your fingers or an electron microscope, as is appropriate—and you will find a pair of two-jointed feeding appendages called chelicerae. It’s a defining characteristic. In the same way, you or I can be pegged immediately as mammals by the hair on our bodies, and as primates by the fingernails we have in place of claws. All of us creatures bear our genealogy in our flesh: it is inscribed on us, like totemic tattoos.

Continue climbing the levels: horseshoe crabs are arthropods, like the sand fleas who wander over their sheds, and animals, like the shorebirds who dig up and feast on their eggs. Past this, our classifications—I say “our” because we and the horseshoes share the rest—are matters of cellular architecture and biochemistry. For example, I am a eukaryote, like cauliflower, but unlike the E. coli bacteria in my gut that help me digest it. Finally, a broad but essential classification: the horseshoe
crabs, the *E. coli* and I are all living beings, as opposed to being clay.

The old female horseshoe whose discarded skeleton I’m holding and I parted genetic company five or six hundred million years ago, when the animal phyla were first being differentiated. It’s a cloudy period, the fossil record from the time spotty and confusing. But think of what we do know: sometime during that period, somewhere in the world ocean, there lived a tiny oxygen-breathing matriarch whose progeny includes me, you, the terns, the ticks, the striped potato beetles, and this wizened old horseshoe crab. She was a matriarch like Sarah; her children Isaac, father of the vertebrates, and Ishmael, father of the arthropods. Six hundred million years: not so long, in the long view.

Let’s pretend that the morning I left Stony Brook, instead of tossing that great mother cladoceran and the rest of her flask down the drain, I took her back to her pond and gently released her. Now let’s give her six hundred million years to raise a family. Into what twelve tribes will her dozen eggs grow? What new Taxonomia will the descendants of the wolf-spiders chant in their great dens, once they’ve achieved sentience and a high standard of living and start to feel alone in the universe, estranged from the tall, hairy, fingernailed critters scurrying about their ancient suburbs?

But the question is moot: the cladoceran did go down the drain of the sink, and I scrubbed the algae out of her flask till the plastic squeaked. But an alevin could have finished her off just as easily. There are tremendous forces loose in the world, and like any creature that hunts and
searches, like any metabolizing bit of matter, we shoot them off in all directions.

In the end, perhaps, there’s nothing to do but enumerate correspondences, and allow the crises of identity that won’t be solved simply to dissipate. It’s the small correspondences, says Barry Lopez, that bind a landscape together. The horseshoe crab shed in my hands is encrusted with barnacles and sea slippers, like the rocks, like the snail shell which, when magnified, turns into a twisting prairie on which glistening protozoans root. It’s turning dusky; I set down the shed and pad across the wet sand. A periwinkle is making its way along the edge of a tidepool, its foot flexing gentle and muscular like the surface of the water. The hind end of its foot bears intricate tracings, like an unreadable script, like the text of books.

I slosh into the water, bracing and relaxing as I go with each cold high-tide line written on me. The human body, I hear, is three-quarters saltwater, just like the surface of the earth. I stand very still, shivering. The hairs on my arm are swaying with the current like the kelp; my ape fingernails are turning the same violet-blue as the fading sky. Something wriggles intently under the ball of my foot. Out somewhere in front of me, invisibly, the horseshoes are migrating back out into the deep blue sea.