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The pollen burden: Nomadic communion with landscape

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The University of Montana

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The Pollen Burden:
Nomadic Communion with Landscape

By Sacha N. Pealer
B.A. Smith College, 1999

presented in partial fulfillment of the requirements
for the degree of Master of Science

The University of Montana
May 2005

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5-26-05
Date
Fragmentation lies behind many of today's complex environmental problems, including the loss of plant diversity. Isolation of plant populations may lead to genetic depression, loss of pollination, and decreased resilience in the face of rapid climate change. Fragmentation also threatens human memory and personal well-being. Indeed, communion with ecologically intact landscape sustains that spiritual health.

The essays in this collection explore my own need for connection to landscape, a connection that arises both in spite of and because of a nomadic lifestyle. Largely drawn from my experiences working as a field botanist around the North American continent, these essays speak of landscape and my personal relationship with landscape through plants and the other beings I find there. The essays illuminate the unique bonds I form with each landscape through close observation, informed by spiritual, artistic, and scientific insight. They also follow a building tension between my passion for exploration and a growing need for home—connection to family, spirituality, and one location. Looking to elements of landscape, particularly plants, I attempt to discern a mode of living that is ultimately grounding.
In memory of Ruth Elliot Thompson, who noted the ferns, and for Arrow and Charlotte.

You’ve been trapped in your building all morning, with a window that never opens. Come and stand under this tree, and you’ll understand what this argument is all about.

—Midnight Oil, Scream in Blue

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Fragrant Wood Fern: An Introduction

I encountered my first fragrant wood fern on a rock face shadowed by firs in Maine. I remember how my companion and I admired its tightly curved pinnae and the sweet, green fragrance from which it takes its name. Barely clinging to a trace of a crack, the uncommon little plant made its home atop a hill overlooking rolling forest, silver arcs of river, and the occasional clearcut.
That is where fragrant wood fern grows. That is the kind of place it inhabits.

As an aspiring botanist, I gained most of my knowledge through working outside. In fact, it was in a particular heath on a particular summer afternoon that I became conscious that the realm of plants spoke to me. My first real field job was on a “forest structure” crew in Maine, which meant I measured trees, logs, and shrubs with a handful of other college kids. On our last plot that day, I had shrub duty, which required the most species identification knowledge, and in a heath, the species list is considerable. Three hours passed as I navigated the mix of blueberries, leather leaf, labrador tea, rhodora, cherries, black spruce saplings, and other species on a fifty meter transect that would normally take twenty minutes. The rest of the crew groaned at the long day, but I was lost in a world of subtle detail—leaf shape, shine, angle, cast of hair. From then on, a new vision of the landscape would be mine.

Like so many of my generation, I have had a whirlwind young adulthood, marked by seemingly unlimited possibility for travel, exploration, adventure. While moving was an early childhood experience and a way of life for my family, I did not see land west of the Mississippi River until I was twenty-three years old. Field biology and its friendships took me farther and farther from my Vermont birthplace, as well as my family and our Episcopalian Christianity. I floated like a fireweed seed upon the winds, reaching ever deeper into the continent, seeking fascination in new settings and their floras. I walked in so many landscapes—Atlantic coast saltmarshes, Appalachian forests, Great Lakes sand dunes, wide-open tallgrass prairie, Wyoming and Montana high plains and sagebrush, Dakota badlands, Rocky Mountain alpine meadows, southwestern desert and canyonland, Canadian aspen parkland, and the immense country of Alaska.
I felt I had ventured the farthest when I paddled down a sinuous river in Gates of the Arctic, Alaska. At roughly 68° N and 154° W, I might easily have come to the end of the globe and the end of time. The September sun avoided fully rising, but skirted the horizon for long indistinct hours, and the wind that blew down off the icy peaks smelled only of the unknown empty.

Perhaps that is why I found such delight in seeing an old friend as my canoe rode the swollen brown river past jet-black rocky banks. There, under stunted, moping birches and in a cleft of the rock, grew several exquisite, lush fountains of fragrant wood fern. Yes, it was the very same species I had seen years ago and thousands of miles away. Not that this was an ecological surprise—many plant species of the north have circumpolar ranges. But the fern's unexpected appearance gave me pause. Because of my pattern of ever-widening wanderings, I had reached such a state of ecological confusion and disorientation that I knew I could not sustain this pace. I was learning the world—beautiful and vast—but I was lacking home. There, at the southern limit of the Arctic, the need for connection became so profound that in spite of a steady, cold rain, I leaned over the side of the canoe and buried my nose in the fern's fragrant green plumes.

Undoubtedly, myriad complex issues face our world today: war and international distrust, environmental poisoning, push for development and growth, increased dependence upon technology accompanied by a loss of literacy, escalating injustice and poverty, addiction to consumption, loss of spirituality and increased depression, suppression of death as natural, loss of biodiversity and degradation of basic ecological functions, and sadly, many others. All of these issues, however daunting, share one basic element—fragmentation.

I see this disconnection, this fragmentation, affecting plant communities in alarming ways. Although naturally separated by environmental barriers, plant populations have
become more and more isolated as their habitats become increasingly fragmented by human activities. Genetic depression and loss of pollination threaten a stand's long-term survival. Even worse, as climate change accelerates, isolated plant populations may not be able to evolve, or adapt, fast enough to survive in the new conditions. Migration to better habitat will become increasingly difficult as more and more human barriers divide up the land. In addition, as the more vulnerable species diminish, communities could be reduced to just a handful of luckier species, robust species adapted to capitalize on disturbance and rapid environmental change, often at the expense of others. Such impoverishment of an ecosystem's vegetation will surely lead to impoverishment of all life in an area—from the millipede to the fungus to the mountain lion.

Fragmentation also threatens memory and personal well-being. At times in my own life, I have seen great upheaval mark my mental health, family relationships, spirituality, and sense of belonging. I know that the frantic pace of moving around, coupled with the loss of landscape (which allows me to distinguish what is unique about my home), contributes to a loss of meaning. I think I am not alone in needing, on a most basic level, to believe that my life has meaning. Often, the only way that I can find connection in the face of fragmentation is to go out into the landscape, wherever I am, and come to know the land through the plants and other beings I find there.

Plants demonstrate the what is about a landscape. They reveal the first things that can be gleaned by life from a substrate: moisture, porosity, mineral content, extent of organic matter, interactions between plants and wind or other plants or animals, the raw stuff of a place. Whole communities of species gather according to the geology and climate of the land, the very quality of the light. This extreme sensitivity teaches me where I am.
By being rooted in a place, plants do not enjoy the easy freedom I have to hop about the continent, from place to place, in just one lifetime. Plants are limited by their adaptation to a location's unique conditions, adaptations derived over generations that allow them to survive in that place. Plants can either stay in a place, changing their genetic composition to suit changes in habitat conditions, or they can migrate to adjacent favorable habitat. Both of these changes (except migration by propagules) occur over generations.

Because of its evolved physiological traits, a given species usually has a range of conditions in which it can potentially live. Hence, that species can inhabit various places with slightly different conditions, such as the fragrant wood fern living in both arctic Alaska and the boreal forests of Maine. Ecologists frequently call this range of conditions a fundamental niche. Plant geographer Rexford Daubenmire uses "ecological amplitude" as a synonym for fundamental niche to describe the scope of a plant's suitable habitat. I am more attracted to the aesthetic tone of amplitude, rather than niche, because niche seems to focus on the conditions themselves, as variables exterior to and acting on the plant. Amplitude, however, returns the focus to the plant itself, implying that an affinity for a particular landscape originates in the makeup of the plant's being. While plants can disperse into new areas, they are both free to do so and restricted by their own ecological amplitude.

I take a lesson from this way of existing. I do not have roots. My species has developed so wide an ecological amplitude so as to discount many of the subtleties of landscape altogether. This means that I do not have to care what the land is like. For the most part, in the United States, I can get a job, purchase most of the same foods in the same grocery stores, control my heating or rapidly retrieve whatever information I desire on the Internet—all regardless of location.
But like a plant, I do have a need and it does matter where I am. I need a “spiritual amplitude” that draws directly upon elements of landscape, allowing me to survive psychologically and probably physically (even if it is not immediately obvious). I need meaning and connection and community, particularly when I confront death in its many forms. I simply need home.

The following essays draw from my experiences around the North American continent. They speak of landscape and my personal relationship with landscape through plants and other beings. As I travel, I take my own personal “geology” with me—that is, the psychological bedrock that defines my perspective—family, religious tradition, education, ecological knowledge, a love for art and poetry. Yet all of these things strive for connection, a connection that landscape, no matter its current state, still teaches. I hope what follows conveys that lesson: choose connection over fragmentation.
Tonight we climb mountains beneath a moon veiled by snow. I am huddled in the front passenger seat, my sock toes curled under the arm of the door. Emmy Lou Harris sings in the dashboard glow, and I press chin deeper into palm as I gaze out at the night.
My partner Matt drives, silent, and I turn inward, outward to the moonlit land of Montana. I'm twenty-seven years old, and here the plains and mountains roll out in inky blotted forms before me, my newest landscape. I've been here in Montana a year and a half, and already the land grows familiar—the expansive, tawny grasslands that curl and drape around crumbly red spires, the blue and charcoal of upthrust, rock-spined mountains cloaked in snow, the rivers that flash hazel green like my father's eyes. But now, in the downy blanket of a snow-filled night, the broad stream of land that works and builds and broadens outside my window takes on a deeper dimension. Blue-white fields engulf black figures of cows, and cottonwoods tangle their branches into low clouds as tongues of powder flex and recoil across the lanes before our headlights.

The graphite swells of land, nearly formless, possess a deep rhythm, not unlike how the sound of one's own heartbeat in a dark room might look if it could be seen. I think of my childhood in Vermont. Indeed, Montana itself blurs into Vermont, the land a child's blanket, a mother's breast, the closeness of her long hair wrapped about my shoulders. Looking then into the cocoon of our dark car's interior with its glowing dashboard, and to the reflection of its neon gauges on the window to my right, I recall riding beside my father some twenty or more years ago.

In the beginning, my family lived in Vermont. For all the moving about this country that I've done, living now in eight states, I take comfort in having a point of origin—Vermont. Lazy dirt lanes between rambling stone farmhouses remind me of it. They pour memory back into my bones as if I were flipping through a photo album and recognizing my parents' young faces from the years before I or my brothers were born, as if their faces were inseparable from my own face, as if I remembered that courtship.
Even as a small girl, I loved to gaze out of car windows at the passing land. The rise and fall of Appalachian ridges seemed inseparable from the vast, reassuring authority of parents who love, of God who creates, of mysterious, unfathomable wonders. I rode those small back highways at a time when farmland predominated, and tiny porch lights winked as lone beacons in a sea of black mountains. In those days, my father always drove our family vehicle, a cobalt blue Chevy hatchback with only four seatbelts. After my younger brother, the third child, was born, my older brother and I would strap into one backseat belt together, while the baby’s car seat took the other.

Riding up front beside my dad was a special occasion. In particular, I recall the shape of the dashboard gauges in that Chevy. Their nighttime glow cast up high on the dark passenger side window, two round gauges outlined in pale green light. Studying these superimposed reflections against the passing mountains, I imagined them to make up the face of a wise old owl, which hung phantomlike in the air beside us. As we sped along through the black, so too the owl sped along, our guardian and friend. Keenly aware of the owl on one side, and my dad on the other, I curled up against the adult seat belt shoulder strap, savoring the secret of such fortune.

We lived in that house in Vermont, the only one my parents ever actually owned, until I was six years old. Small and blue, it sat at the end of a dirt road, backed up against the town cemetery on one side and surrounded by gardens on all the others. Though as much a babe as the kittens squirming in a hole under our woodpile, I embraced so much of that place that memories clung to me like damp maple leaves. My tawny hair coursed down my back and my sneakered feet ran and climbed among the sumac trees, the rose bushes with their chafers, the rows of corn stalks and bean teepees, the thorny blackcap branches along the road. My father worked at the local plywood mill, and in winter, he returned from work,
parked the Chevy on the skating rink of our driveway and descended into his basement studio to paint. As his Dylan, Dead, and Jethro Tull records dropped under the stereo needle, my mother filled the steel tub with water in front of the wood stove. She bathed my brothers and me there, in the warm dark. Afterward, wrapped in a towel, I perched on the side of my dad's ladder before the hot belly of the stove.

I savored the days when my dad and I headed out on missions in the little Chevy. We often scavenged for scrap wood that he could make into canvas stretchers for his paintings. We drove to the mill, to the landfill. In December, we raced out past snowy, stubbled cornfields and along coursing, ice-edged rivers to cut the year's Christmas tree on his friend's land. In summer, we wound our way along beech-lined gravel roads to trout streams, where I first tried to cast a fishing line, where I learned to sit still and watch water striders brave back eddy ripples. On family trips up to the shores of Lake Champlain, I glued myself to the window, following the stream of land as it tightened and broadened, twisted and climbed in a dance I grew to relish. I imagined myself flying, alone and running on foot, through forests, along fields, around cattail ponds and weather-stained barns, learning the most intimate secrets of those places.

The crickets had just begun to sing in the evenings when my dad and I loaded up the Chevy and headed to the landfill one last time. I remember little of that day or trip other than the sight of Dad's paintings stacked at odd angles on top of a wood scrap heap outside the dump warden's shed. The two men stood side by side, staring into the flames that leapt and curled around the rectangular canvases. Although my father continues to paint, years later, that image will forever burn in my mind.

Change came at the end of that summer like a ripened tomato. Soon after most of the paintings were burned, my uncle adopted the blue Chevy, and my parents loaded up its...
replacement—an old, toffee-colored ship of a station wagon. Then a man in a navy blue suit brought papers for my parents to sign, and the house went up for sale. The tomatoes hung heavy and bright on their vines as we pulled out of the driveway that last summer morning. We were headed for Chicago.

I expect that my notion of God and land, while still evolving and often confusing, will always be anchored in my father. In Chicago, during the time I was six to nine years old, my father attended a theological seminary as part of his journey toward priesthood. But that was only the outward expression of his spiritual nature. He shared this inward nature with me not through liturgy or sermons or Sunday school, but through a contagious fascination for both the natural and the interior.

In Chicago, in the station wagon, the land did not stream past my window. Instead, immense networks of steel, concrete, and glass steeped in a flood of speeding cars and trucks overwhelmed my view. Even at night, gaudy orange street lamps shone upon the race tracks of the city, filling the car window with dazzling lights. I do not remember if an owl ever guided the station wagon.

Still, my father helped me to see beyond the cluttered, hidden land to the lake. From our cinder block apartment in the seminary’s family housing, we could see out over Lake Michigan. I remember sitting by the window in the dark with Dad and my brothers, witnessing wonderfully terrifying lightning fracture the sky. Sometimes we walked along the beach, watching house-sized green waves crash against the piers or counting in vain the lady bugs that swarmed the boulders on shore.

The city took its toll on me. I longed for Vermont, looked out at the sunset from our apartment balcony and cried for it. What I wanted most was the sense of land, of
unfolding, rhythmic land all around me. I felt its absence like a lack of sun, and maybe it was then that I began to equate the vastness of God with the vastness of the land for which I pined.

Surrounded by seminarians, I am sure I picked up their enthusiasm for interpreting God's wants and intentions. My longing for Vermont was soon coupled with a longing to know what God wanted me to do. Surely, he had a plan for me, and I needed to find out what it was so I could return to my Eden.

One night, my parents both knelt beside my bed, tucking me in for the night, when I asked them, “How can I hear God’s voice?”

They exchanged parental glances, and then one replied, “You’ll have to learn to listen for him not with your ears, but with your heart.”

I know I tried. I stretched out my chest, tiny ribs, hoping to better situate my heart to listen. I wanted so to hear. I waited for the voice, assuming I’d fallen short when I heard nothing.

My father first introduced me to meditation. I knew well his habits of meditating in the garden in Vermont. He’d built a bench of slate slabs in among our vegetable patches, where he would go and sit in silence and stillness, sometimes eyes closed, sometimes gazing up into the sky. Sometimes he would contemplate his bare feet, other times the slow progress of an inchworm up the rim of a cabbage leaf.

He later taught me the principles of being still, closing my eyes, concentrating on my breathing. I expected that, with diligence and focus, meditation would bring me closer to some great truth or spiritual epiphany. As I approached my early teens, I became more and
more interested in striving toward that elusive, interior realm. I knew some unknown, wondrous power resided there.

When I was thirteen or fourteen and we had moved twice more, each time to church parishes Dad served in Vermont, I started sitting in my bedroom closet, attempting to meditate in the dark. I crouched upon the odd lumps of boxes and clothes, brushing the top of my head against the hems of church dresses. I closed my eyes, paying close attention to my breathing, until I became entranced. Then something began to happen.

My breathing became as subdued and calm as a lake before dawn, but my awareness burned with intensity, like a steady blue flame. Beneath my eyelids and somewhere in the center of my forehead, I began to observe shifting shapes, colors, lights. The colors came in overlapping waves, like torn layers of tissue paper held up to a window. I watched intently as they moved from scarlet into dark violet, magenta, indigo. Oddly detached, I seemed to be witnessing my mind press further into the layers, plunging me down into a tunnel until it opened into amber, ochre, cream, white. Then I began to float upward into intensifying white. The waves came faster and brighter, exciting and strange, and yet more puzzling still, they seemed familiar, ancient, like I'd come to some ancestral déjà vu.

I never understood it or learned to control it. I never told anyone about it. Gradually, I forgot about it, stopped meditating, and did not see these colors again.

Just a few months ago, on a clear night in early November, I stood in my backyard in Missoula, Montana, astounded to recognize my meditation imagery in the sky above. Near midnight, I had snuggled into bed when I heard one of my housemates call to another, “Val! Get out of bed. The northern lights are going crazy!” I bolted out of bed, yanked on sneakers, and hurried outside to stand with them in my pajamas. Even through the orange cast of city lights, I witnessed the aurora borealis flare and pulse and flood across the sky like
never before. Scarlet and chartreuse and silver and blue-green. Waves and arcs and swirls and rays. My companions and I cooed aloud in disbelief. For the universe’s door blew wide open once again, and we knew nothing but adoration and humility.

Now, riding in the dark as I look out upon the moonlit grasslands and mountains of Montana, I realize that what I saw in the depths of that closet shares something critical with the landscapes of Montana, Vermont, and so many other wild expanses. I have seen my own interior landscape, as wild and fantastic as the land and sky surrounding me. With just the moonlight and the glow of the dashboard to illuminate my world, I gaze upon the very pulse of the land, a pulse that I also identify in my subconscious being, my childhood, and in the wider dimensions of the universe. This pulse is home. This pulse is the voice I hear with my heart. Grinning to myself, I roll down the window, let dark, mountain air rush in and dust my cheeks with snow.
Darners, petaltails, emeralds, cruisers, spiketails, clubtails, skimmers—I have always been drawn to dragonflies, prehistoric brightly colored insects in the order Odonata. Intensely fashioned and aloof in hunting, they haunt the edges of water bodies like dream warriors on the fringes of the psyche. They pull at my creative instinct, begging for close study as scripture draws in a monastic for hours, years, a lifetime kneeling. But they are too fast, too fleeting, akin to the sacred geometry of a snowflake that melts in a lover's hair.

One Saturday in early October, I decide to drive south from my plant technician's field quarters, a mountain cabin in northwestern Maine, to the cozy town of Phillips. I have in mind to go bouldering there on the Sandy River, which flows in tea-brown riffles under the highway bridge and along the beech-maple woods on the northern edge of town. I am a casual rock climber, especially today since I am alone, so my true goal is to ramble along the river, see the unexpected, and taste the warmth of a second summer.

When I reach Phillips, I park down a gravel road that follows the river in the early blaze of cadmium-yellow beech canopy. With me, I've brought climbing shoes, a water bottle, and an antique Argus 35mm camera from the '50s used by my father to document much of our early family history. I also bring the journal, just in case—my private book of drawings and other jottings that must come with me whenever I do something important. Between its cardboard sheaves, I like to think I keep the bound pages of time.

I shove these items into my field pack and negotiate my way through beaked hazelnuts and dogwoods down to the water's edge. How delicious to wade into icy water for the feel of it against my calves and for the good numbing of toes. I slip about on the round
heads of algae-coated riverbed stones, as I gaze into the reassuring strength of current against my pink shins, watch the leaves shoot past. Steadying, I head for the ten and fifteen-foot high rock walls on the opposite shore, pushing onward against the insistence of the Sandy River.

As I climb awhile in the sun, the rushing sound of river surrounds me, echoing the course of blood in my ears and the rawness throbbing in my fingertips and forearms. I taste it: solitude. The rock is cool, unending. I sense in the granite, in the bone-smooth inclusions of marble pummeled perpetually by river burden, that the rock stands for connection. Connection through muscle and eye and fingertip to the sure breadth of earth's mass. Life is the tangible grit: substance and senses combined.

As I wade back downstream, my quivering muscles well-spent, I pause in a backwater pool where the surface tension is strong enough to dimple with the weight of an upside down dragonfly. A dead darner. I bend to examine it closely—yes, dead. And exquisite. I scoop it up, guessing with amateur inspection that it is a male. My mind races with this new possibility: now I can see one up close. Now I can study his fine details, his bright turquoise body bands, his wolf-gray orbicular eyes. Now I can draw him into those pages where I keep time, and his will be a secret I can learn.

I gingerly position the four-winged gossamer remains inside my camera case and prop it just so on the floor of the front passenger side of the car. Then I am off to the north, my little green car darting and skimming through the early autumn afternoon. The sun on my face is as sweet and crisp as apple cider.

I arrive in a rain of orange pine needles in the mountain grove where I've been living. Camera case safely in hand, I head up the steps and into the cabin. The insect body slides
out of the case and onto the smooth polish of the kitchen table. Something isn't right. He immediately jerks his head, flails his slender black legs, curls up his many-segmented abdomen as if convulsing with pain. He is moving!

This creature is supposed to be dead—he was almost completely submerged, upside down in the water. Is this sudden writhing and flailing just some post-mortem neural response to being jostled, the synapses simply still fresh enough to fire? How can I tell? The axe of realization drops: maybe he is still in the process of dying.

I place the shimmering arthropod on the bureau in my bedroom, checking him periodically. He remains still for stretches at a time, only to buzz abruptly in a lively, panicked fashion. His black claws skitter against the bureau wood, he twists his head from side to side, and then he is still again. I am mesmerized, maybe slightly mortified. Am I merely a voyeur of his suffering, his struggle into death? Have I, in snatching him away from his home, violated some ancient death right, where a creature meets the end surrounded by the familiar, staring up into the wide expanse of sky? Maybe I had no right to take him.

In a brew of guilt and awe, I begin to fill my journal pages with careful sketches of him: his intricately veined wings, the tight red and green joints where the wings are rooted to his painted thorax, the flawless fit of segment into segment in a long abdomen of blue dashes, the deep gray compound eyes into which I can almost see. The pen moves painstakingly, but no matter what angle I attempt to capture his likeness from, I do not seem to be able to finish. Wings are left as one-line suggestions. Heads have no shoulders. Legs are incomplete.
In a lone attempt for clarity, an hour
the glowing sun was filled with flame and silent secrets
and a black, shiny thread, a surrounding
structure more fleeting, joined to branches and
my quiet, encompassing

The pitch: these wings; these wings slightly
raise from each other, between the high
flights of another human thought.

In this we determine the most basic
question of beauty: death or belief?

A crossing, spiraling, as fast/fly
we seek in the shadow of
white pages passed quickly.

Sandra
Pine
Phelps, NC
Compelled by some strange need to capture this privileged view, undeserved but inescapable, I struggle too with written words:

In vain attempt for clarity, we humans hurry the drawing, our eyes filled with fleck and iridescent spot and black wiry thread, a shimmering structure more aptly formed to function than our greatest engineering feat. We pinch those wings those diving rice paper sails between the clumsy fingertips of our swollen thought, unable to determine the most basic question of beauty—death or life?—and then, a crashing splintering as fast flyers are crushed in the meadow of white pages pressed quickly together.

On the third day after his capture, when he jerks no more, his eyes become black and opaque, his abdomen stiff, and his bright blue markings fade into a dark red-brown. He no longer moves or appears to breathe. He no longer twists his head from side to side, as if puzzling over his alien surroundings. He has crossed that death horizon at last, but he leaves no reply to a cold river birth and a life of late summer hunting, nor does he hint at some separate odonate place of fast flying acrobatic spirits. He is just lost, the way a dream in the late morning runs from the still-warm bed sheets and dissipates with the steam of breakfast tea.

And I, staring down at his old dry twig of a body, what do I seek to hold onto beyond the finality of death?

He lies still on the bureau nearly a month after his death, precise wings and feet gray with human dust. Crude pen lines have long faltered, overpowered by the ensuing whiteness of untouched pages. So I forget he is there, remembering on occasion as I stoop before the mirror, pull a brush through dark hair. I want his burial, but I put it off as it must be proper,
honest, a sign of my respect for what he has taught me in his departing. What will be just
honor? A cliff, a grove, a river crashing cold?

There he lies, my little muse, clinging passively in that last position to the dashboard
of my car. I will miss you. He is more splendid than anything I could possess by sketch, by
word, or in my palm. He attains complete life and death where I am but a slow-growing
novice.

When I pull the car up to the trailhead along the Carrabassett River and bring the
body back into the bitter fall air, I hope foolishly for a moment that the wind might lift those
dusty wings, and he might fly away on his own, darting and hunting high in the pines. But
there is no life after death in the most perfect of bodies.

I know I can't put off the burial any longer. I will take his dead body downslope
through shock-gold birches and china-blue boulders to the Carrabassett River. I envision a
solemn placing of his body in the water. The moment should be clear and crisp in autumn's
pewter evening light as he softly comes to rest upon the water's surface, just as he was when
I found him in the Sandy River. This is the way of honoring. This is the way of
acknowledging so brief a life manifest in such tiny perfection.

But here the river drives in torrent in steep gradient, sluicing through boulders and
jagged fallen spruce, running hard, running vibrant, bent on the desire to crash ever
downward into deep crevices, deep pools, inside the earth. I misjudge the power of this
desire. So when I stoop to place him slowly, reverently in the water, I am unprepared for
this final lesson—he is seized violently from my hand, his stiff remains dashed briefly in the
current and then sucked out of sight into the rocky roil below.
As I drive back up the Carrabassett Valley toward home, my windshield view is filled with the sure breadth of rocky, ancient mountains. Against their blue crowns and squash-yellow flanks, heavy wet clouds brush, pregnant with winter. They seem to build and darken against granite ridgeline, beneath my ribs, in my throat.

A fat snowflake hits the glass in front of me, but its image is brief, as ice crystal recedes into spatter. In the road ahead, I see thousands more coming.
My camera, like my trunk, is a black, angular box with metal trim. I inherited both—an Argus 35 mm that snapped my baby pictures and a brass-buckled trunk that my mother used as college luggage when her shoulder-length hair curled up at the ends. The camera and the trunk now bear signs of their long journeys—the camera a torn leather case and stiff aperture adjustment, the trunk a broken latch and clinging bands of old packaging tape. After my own college graduation, I took both trunk and camera with me when I moved to
Maine. These boxes remind me of my nomad ways; though heavy and cumbersome with their sharp edges against palms or shins, they venture too into the stream of memory.

The camera tells me what home I had, there in the salt, when I did not know it was a home. I used to lug that little box with its shiny, oversized knobs and understated viewfinder down to the tidal creek. From fall to spring, for two years, I lived on Great Island on the coast of Maine. The island is the first in a chain of close-set islands reaching out into the Atlantic, and a winding, two-lane highway leads northwest to the mainland and southeast to land's end. Hemlocks, white pines, and paper birch surrounded my house, so in order to visit the ocean, I cut through the woods to this nearby inlet. As the moon works at its brackish waters, ever-pulling, so too the tidal creek drew me down to its grassy flats.

The frames I shot stand as solitary moments, moments that when aligned stand rigidly end to squared-off end. I lay them out upon the bedspread, traveling more through the spaces between them than in the images themselves, as though I wish to ride a hidden tide moving out between plates of ocean ice.

Frame one. I adjust the quarter-sized rangefinder dial against the February cold. Inside the box: a loping trail of fox prints, hind and forepaw directly registering in the snow. I follow the tracks under hemlock boughs heavy laden with snow. I trace where the fox looped and threaded through alders and among the tattered, brown remains of ferns. Now I point the camera where its thick red tail lightly touched the snowdrift as it emerged from underneath the dark enclosure of pines, out into the saltmarsh.

But my film does not capture how the fox's blazing coat flies through these marshes, a silent fire against the earth. Nor do I need a camera to imagine myself a fox, padding down along this tidal creek each day, poking my snout into the network of snow tunnels.
fashioned by small mammals. For, like this fox, I come regularly to these quiet backwaters of ocean tides and ice jams, adopting their subtle rhythm as my own.

Frame two. A raven swoops and spins above me, carving play out of thin blue sky. The breeze lifts a puff of new snow from the trees, casting a veil beneath the raven’s dark flight silhouette. I am standing on a rush-fringed patch of ice in a bulky wool sweater. I cock the shutter as I stoop above an ebony feather caught in a tangle of golden saltmarsh grasses. Beyond the box, the raven tacks down the wide meadow corridor, a corridor lined by oaks and pines and bisected by a low, sinuous channel.

I come here to watch saltwater interpret the channel and the sky. The tide draws in or out, building or diminishing. The grass-fringed bank sways in the current like hair. Scars and wrinkles of water reflect olive then pewter then amber rimmed by rose as the daylight shifts. By moonlight, the water runs obsidian, its features edged with cutting silver. Here, I enter the world of returning movement—the camera momentarily forgotten, the trunk back in my bedroom gathering dust.

Frame three. *Spartina* grass whips against my thighs, burrows its jagged seeds into my sweater. The blond seed heads remind me of fiddle bows or windshield wipers, tight-packed and bristled. On the high ground, these grasses stand tall and robust, but on the low ground, where the floods fill in each day, the plants are dwarfed and matted, a swath of *Spartina* so thick that the soil cannot be reached.

*Spartina* grows in spite of salt, a pervasive poison that the camera fails to detect. In the absence of salt, *Spartina* prospers. But because their seeds fall by chance on salty flats, unable to move, and because the grasses must drink, their ancestors developed ways to survive the caustic conditions. Within their roots, the cells’ membranes select how much of the salt they draw inside. Glands in the leaves and stem force any imbibed salt back outside.
The plant can also store some salt to set a balance between the outside and the inside of its tissues, so that saltwater does not soak in as readily. These grasses dominate the Atlantic saltmarsh not because they exclude other species, but because they are the only plants rugged enough to remain. All of this remains invisible to me, unless I break off a leaf and taste it.

Frame four. The samphire and the dwarf glasswort quiver in the wind, their segmented stems surrounded by ice. These alien-looking plants are fleshy and green in summer, their leaves reduced little bumps against the stem. Called sea pickles, they embody the brackish. Now, they make a poor picture, shrunken and dry patches of brown in the blue shadows of dusk.

These plants proclaim the tides, the salts, the landscape of crooked, secluded inlets, fingers of ocean folded into fingers of land. I walked into this community a nomad, neither welcomed nor dismissed, although probably watched. Even on the day I left Maine, when I drove toward the mainland for the last time with a full, buckled trunk on my backseat, I saw the green swollen face of high tide; I saw the heron rise up from the shore. I saw the land in the rearview mirror, bent and distorted by my own saltwater. I left home in less than five minutes.

When I gaze now upon the rectangular images spread out upon my bed, I see fragments. Five years later, I still do not return to the shores of Maine, but instead, I roam from state to state, landscape to landscape, hauling the trunk and camera with me. When I let myself wander between those old images, recalling the unseen tension I felt between moon and tide, as though even my dreams knew that pattern, I know that place was my home. And I wonder what kind of a life this is, that I can only recognize home after I leave.
A line haunts me from a Bruce Springsteen song: *you get used to anything, sooner or later it becomes your life.*¹ That is the salt, the loss to which I grow accustomed, like a plant species that's adapted to drinking in spite of the mineral. The difference is that I do not yet know how to put down roots, hold fast, and learn to sway rhythmically in the current. I do not yet run back again like the fox, dipping black paws in snow.

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Beneath the Leonids

Sometimes, when I hear radio lyrics of endearment, such as, *you are the love of my life*, you are my everything, I find my focus wandering outward to the horizon.¹ Not just to the exultant upward pitch of larches and firs cloaking the mountain pass, nor the delicate etch of hoarfrost along last year's blades of grass. But also to the black cloud of mosquitoes over

the road, the sticky humidity as I trudge uphill through dense alders and devil's club, the pelt of hailstones against my sunburned shoulders and neck.

Those songs point out an unexpected truth: everything I have comes from the land, remains inseparable from it.

Early on, when I first met Matt, we both spent long days trekking through the Maine woods, collecting data for forest ecology research. In the evenings, we collapsed in our dusty clothes upon the bed. I drew a fitful sleep, reliving exhausting hikes up streams and over ridges, leaves catching in my hair. Yet I sensed Matt there, too, beside me, and my dreams convinced me that his slumbering body was in fact the land itself, stretched out like a chain of breathing islands or hills. From there, in my sleep, I muttered the first involuntary words: I love you. In that way, I woke myself, seeing only his expression of repose. Through the open window, I heard the wind tossing in the maples and the roaring brook in the ravine below.

When I think of that dream confession now, I can name its origin in the Maine landscape. I knew Matt by the way we ate wild blueberry pie for breakfast atop a boulder, the way we closely examined fossils and lichens and seed heads, the way we shivered in the fog of rocky mountaintops. Even when he left Maine, I kept stones and pressed plants from our rambles upon the windowsill, held them in my hand when I thought of him.

The following fall, I traveled to see Matt in western Minnesota, where he attended college in a small, far-flung prairie town. I had never seen the tallgrass prairie before. As we drove the section-line county road the night I arrived, I felt as though our tiny car was afloat on the ocean. Great clouds of stars shouted from the dome of night sky. Snarled grasses swayed alongside the road. Distant horizons pulsed with a curtain of emerald northern lights. Even in the dark, I knew we navigated a windswept, open land, where the world lay
flat like a vast body of water, as though the edges had been measured and balanced, one against the other.

In the morning, I awoke in Matt’s apartment to the sounds of trains lining up outside the grain elevator. The wind slammed against the window. The bright sky threw squares of sunlight against white walls. Honking geese streamed through impossible emptiness. I thought of my familiar north woods in Maine, how well I knew the bog and the ridgeline, the boulder field and the cave. How I depended upon this framework, my landscape. Finding myself in this new open stretch of prairie, I realized the framework now turned upon its splintered sides, only to groan and buckle.

That day, Matt showed me a patch of untilled prairie on the edge of town, along the winding Pomme de Terre River. The wind rushed across our faces, a steady, indiscriminate stroke over the land. We walked as though in an ocean current, the tallest objects on the rounded chest of the earth. The native grasses performed a bending dance, their golden culms flashing, as we knelt to examine this or that dried up plant. We broke off mullein stalks and dueled against each other, though the wind tore the shattered swords away.

Afterwards, while Matt went to class, I wandered into a park in town. I sat on the swing set, kicking at the sand. The November sun sank over the rows of planted basswoods, and I felt tired, tired of the land surprising me. The trees seemed to stare back at me, silent in the empty park, as though wanting to know what I thought I was doing there. Matt’s landscape seemed so different from mine. I did not know how to reconcile what seemed to be a difference in my bond to a landscape and my bond with him. How could a relationship, born in such intimacy with rock, river, and forest, be separated from its natal land and then transplanted into this foreign realm?
A few nights later, we returned to the Pomme de Terre with our sleeping bags. The Leonids meteor shower began before we even reached the tall grass, a long ripping sound as a green flame sliced the sky. We hurried into the shoulder-high stands of big bluestem and Indian grass, laying out our sleeping bags on the ground, where the wind is quietest. Then, with the dome of imagination stretched out above us, we witnessed incomprehensible motions, startling coals ablaze like deities’ tongues. Never before had I heard meteors crackle and zip, as though tearing open the black garment of night. Never before had I seen such long, colored tails—pink and green, amber sizzling into icy blue.

For hours we watched, perceiving anew the vast ball of earth, home, as it hurtled through space into celestial storms. I drifted in and out of sleep, occasionally opening my eyes to the hundreds of meteors raining down upon earth’s distant brow. Even though Matt was silent, stretched out in the dark a few feet away, I suddenly felt no distinction between our bodies, the prairie ground beneath them, the distant mountain forests, our hearts or the universe. All of this together, I thought, all of this, the wider beloved. I rolled over and kissed Matt’s cheek; it was already touched with cold, blending into the prairie wind.
The Condition of Water

When I hear that 95% of the world's glaciers are now receding, I know this is the condition of water. I know that the tabernacles of sky, ice, and sea face desecration.

I know this when I encounter small baptisms in the world, for they can be found anywhere—all water courses back through its own source. For instance, in spring, when I stand beneath the bending boughs of silver maples, I watch globes of water gather their weights along swollen twigs, press downward, press rockward, pregnant with destination. Below, I lean into the tree's bark, anticipating gravity, through the full measure of a breath. Then I bend forward, hungry, when the plane breaks, the globes shatter, and hot skin collides with rain.

A baptism. Again.
My father renews baptisms with the shake of a balsam fir sprig. After he baptizes a baby over the baptismal font, he places the baby in a family member's arms and submerges a tree branch into the holy water. Then he turns to the standing congregation, shouting benediction and flicking the branch, as he sends a shower of holy droplets into the crowd. In this way, he cracks open the routine, because cold water arrests, awakens, draws smiles—with the tree, fresh and startling inside the dark church.

Maybe that is why, in leaving home, I again found baptism among the trees and rocks. At twenty-one, fresh from college, I accepted a field ecology job in northwestern Maine. That first summer, living on the side of a ski mountain, I frequently slipped away from my crew's quarters and wandered into the woods. I wanted to be alone, seek out wild raspberries, and mull over that longing for family, close company, home.

Often, I visited the mountain stream. Beneath a yellow birch canopy, I stripped naked and waded into secluded pools among great blocks of granite. The cold water seized my work-worn legs, and my teeth chattered as I crouched against moss-covered brows of rock. Gradually, my body agreed to the water and its rhythm of polished edges, allowing my mind to ride high in the translucent green spades above. In this sanctum, a compulsion arose, my heart pounding with its recognition, and I plunged my head into the water. Once, twice, a third time. Closed my eyes, saw my father, my mother, my brothers. Opened my eyes, saw only the surface grooves of water streaming past, amorphous reflections cast in dark umber and rich verdant hues. They rushed through my fingertips without judgment.

In mid-May of my twenty-fourth year, I ventured farther from home and met my first glacier. Matt and I were journeying thousands of miles north through Canada to
summer jobs in Alaska. I had outfitted the little Honda with a full-sized spare tire, bespectacled her with clear plastic headlight covers, and stuffed her mercilessly with camping gear. Then we raced, over the dusty flats of Saskatchewan, across the high plains of Alberta, and on into the dark forests of the Canadian Rockies. The continent spun out so broad and bare around us, producing the sensation of passing through raw dreams, lonely paintings, the subtle meanings of which could never quite be spoken aloud. Our eyes sparkled with the new light that cuts through long winter shadows; our hair beat and tangled in a new fierce wind. I stretched out at night in the old tent, my bones realigning against the thawing ground. I drifted into sleep to those two ancient and sibling sounds—wind over rock and the breathing of a beloved.

In Alberta, I stood before that first glacier's toe in a brown, oversized coat and Matt's wool cap, its battered brim split open over my eyes. Relaxed into sickles, into almonds, these eyes spoke of a grin, for here I was, at the birthing of land, the mother of water. I stood in the wide valley where the glacier once plucked and scoured the gray rock into a sea of splinters. Like a receding carapace, the ice had surrendered more and more of its rocky underbelly, and fresh snow banded the dark sidewalls with dazzling white. Tumbling down from listing buttresses of mountain, massive crusts of ice spewed over cliffs, swimming despite their bulk into the blank plain of ice—this was the lobe, the toe of the Athabascan Glacier.

Dizzy with the icefield's immensity, I crouched among the rocks. Matt crouched too, his dilapidated sneakers curling against the grooved bedrock. Among flat-faced cobbles scarred by past encounters with tons of ice and rock, but quiet now as loaves of bread, we spied a tiny troop of flowers. I nudged at these lavender, trumpet-shaped blossoms with my index finger. They were smaller than my fingernail. And yet, these flowers dwarfed the stiff
cushion of triangular leaves beneath them. Heads together, we admired the confidence of this purple mountain saxifrage, spring's first bloomer of the north, and here, a first colonizer of the glacial moraine.

Then Matt, hungry with curiosity, bounded onward toward the glacier, stopping here and there among the rubble to inspect iron streaks in the rock or other geologic signs. I trailed behind, suddenly exhausted. I did not know why; here I was, finally experiencing the spectacular realm of glaciers. Yet the land felt churned and pitched at a scale I could not absorb. The very air pressed into my shoulders. The snow was so bright that I imagined my little brown-coated self being swallowed by the emptiness of light.

Perhaps I was somehow troubled by the diminutive habit of the saxifrage, a plant representing the first fringe of life in an otherwise lifeless land. Perhaps the small wooden signs inscribed with dates, marking the past positions of the glacier toe, marched up the long hollow of the valley in a manner a bit too much like graveyard crosses. Perhaps the distant tour buses, crawling across the shoulder of the glacier with their monster tires and diesel growls, cut across the glacier a bit too much like they were crossing a parking lot.

Discouraged, I stumbled closer to the toe of ice, which was cloaked in clean spring snow. At its edge, nothing but rocks and a clear pool of water. No plants yet, only raw stone. For here lay the first new ground, the most recent band of uninhabited earth. I slumped to the ground, wearily seating myself on the closest boulder, and gazed into the pool.

Water. I rested my eyes in the stillness. Not even a ripple broke over the surface. Though overwhelmed with the unfamiliar, fantastic power of earth's will, I found the pool strangely restful. It reminded me of my stream in Maine. Scooting forward, I dipped my fingers into the frigid water. In doing so, I touched the meltwater reaped by mountaintops
from ever-passing clouds—the same clouds that move over the ocean, that will move over the plains to the east. I splashed the water then across my forehead, felt the cold kiss run down my cheeks.

I now realize why the saxifrage and the Athabascan Glacier troubled me. I saw the shadow of it all throughout Alaska, as I made pilgrimage to magnificent ramparts of ice. I witnessed glaciers calving into the sea in the far end of long narrow fjords and brilliant turquoise icebergs floating eerily into the mist. I watched towering fins on a glacier’s back crack like thunder, then tumble into deep crevasses amidst a cloud of powder. From under the hood of my raincoat, I heard torrents roar through secret tunnels in the ice, pouring out across the naked black rock beneath. And at the mouth of Herbert Glacier, Matt and I drank straight from the glacial meltwater, quenching our thirst on the stone flour of entire mountain ranges.

Every glacier we saw, every single one, was shrinking back. South Sawyer Glacier had begun losing several hundred feet of ice in a year. Our topographic maps for Denali National Park promised glaciers that were now recoiling against the mountain, no longer quite the same rivers surveyors had beheld a few decades earlier. In my encounters with the glaciers, I found unspeakable beauty, power, and awe, but I recognized the blunt face of change, a change so large that the very crowns of the globe retreat.

Purple mountain saxifrage spoke too of change. This tiny species bravely makes its home in the shadow of the mountain, in barren moraines recently abandoned by glaciers. Every spring, its lavender petals open to the sky all across the northern alpine ridges, and further north, across the arctic tundra. Every year, people watch for its blooming, because it marks the certain advent of spring. And every year, the average date of its opening all across
the region comes a little earlier. Winter shortens, and the saxifrage moves in, gathering windblown pieces of organic matter against its rigid, prostrate body, until a thin beginning of soil can cover the bare rock. Yes, the saxifrage belongs there, following the glaciers into their moraines, but now the process will be faster, more widespread, and maybe soon the moraines will be too warm, filled in with soil and the next wave of green alders. If the heat does not become too much even for them.

Now, when I reach mountain summits, and snowmelt or rainwater stands in crevices in the rock, I draw the water to my forehead with intention. As the wind gusts against my wet brow, I make a new prayer, that holy water will always have a tabernacle, glacial or otherwise.

And sometimes, I awaken in the night, shaken as though I've heard massive, grinding ice in my sleep. As though the earth slips its folds, searing hot, one against the other underneath my very bed. Perhaps it is the glacier and the mountain; perhaps it is the mother of water, stirring her powers of renewal. Caught in a sea of suffocating blankets, I turn over on my belly, and the final image comes. I'm walking out across the northern polar ice cap, endless white enveloping me. The brightness presses at my eyes and I am thirsty, so thirsty. Then suddenly, the five-foot layer of ice I'm standing on disintegrates beneath me, and I drop into the dark, hot waters.
The December before the second Iraq War officially began, I moved into a white-walled dorm room in central Minnesota. That room became my prison. Matt had just started an intensive, yearlong apprenticeship with a master potter, and so I made the decision to join him. We shared his tiny room, which was tucked above the pottery studio. The same
building also served as a men's dorm for a Catholic university; I was not supposed to be there.

I did not have a job, and Matt worked ten to fourteen hours a day, six days a week, so I spent a lot of time confined in what had once been a janitor's closet. Our "cell" boasted a window, a sink, a twin bed, and just enough space between the bed and the wall for me to crouch and read. The window looked out past the wood kiln's shed to a long, oak-bordered lake. We crowded the windowsill with plant cuttings in water jars, hoping something would start roots.

I was supposed to be writing. When Matt left in the morning, I fell back to sleep, struggling to wake before he came to get me for lunch at the cafeteria. I whiled away afternoons by making yeast bread, as my mother had when I was a kid. I wanted to master the process. I mixed and kneaded the sticky dough, then let it rise on top of the steam heater in the corner, all in that tiny room. Flour dusted the bed, clung to the rag rug. When the dough held heft, ready for the oven, I whisked it down the hall, hurrying past freshman and sophomore dorm rooms that shook with stereo bass thumping, to the dorm kitchenette. The potters in the studio knew I lived there, but I didn't want the students to know. I crept to the women's guest bathroom, always catching the door before it could slam shut.

I meant to write, but the room stifled me. I sat on the floor with my back against the wall, knees bent, drinking green tea. I listened to the incessant dripping in the sink, the ceramic stained green. I monitored the radio obsessively, the news of Iraq and the rhetoric about national security. They all talked about when the war would begin, about military involvement. They debated motives for war, dependence on foreign oil, rumored intelligence about weapons of mass destruction. Reports rolled in about the plummeting economy, both in Minnesota and on the national level. Terror alerts became frequent and
confused, while commentators kept repeating the same shaky jokes about duct tape. In my head, such voices rose to a squealing pitch, like the nozzle on the steam radiator.

I shut off the radio, tried to block out my young neighbor's pop MTV soundtrack. I stared down at my thin spiral notebook. Stared at the ballpoint pen. I thought of my younger brother Ben, far away now in Pittsburgh. Over the years, we'd shared so many late night discussions of our writing, he often lying on his belly across the foot of my bed, long legs and stalwart feet kicking absently at a pillow. I often slumped in my rocking chair, creaking back and forth over floorboards. We both listened as he read aloud the poems and short stories he'd packed into his journal, enjoying the drama and rhythm running through stark words. He possessed such faith in what we each would someday write and write well; of my own private efforts, he'd say as he did when we ran track together in high school, "You're tough as nails, Sach, tough as nails." But his certainty eluded me as I sat in that small Minnesota dorm room, willing the strength to write. A few times I started, picking at my belligerent, tight words with the pen as though pulling out stitching in an errant seam. But I always stopped too soon.

The campus and its monastery sat among several small lakes surrounded by white pines and deep oak woods. The monks kept up an arboretum, which consisted of a piece of tall grass prairie and some oak savanna hills they worked to restore. In the winter, the lakes froze over, the prairie grasses turned russet and brittle, and the deer pawed at the snow to uncover acorns. I piled on layers of scarves, sweaters, and coats, and ventured into the biting wind to walk.

The land opened before me. I drank in what I could. I followed hunting trails along lake shores, I leaned into the wind out on the burnt prairie, and I watched mink spring
across the ice and up banks. Sometimes I ran, sometimes I glided on cross-country skis. The cold painted my cheeks, feet, thighs. I watched the wind carve grooves and tunnels over the snow surface.

But the land was not home. And I couldn't shake the shame of being jobless, hiding away in a Catholic dorm with no real home, having no vision.

Matt returned to the room late at night, exhausted and spattered with clay. I forced myself to stay up until he came. He crawled onto the bed, and I rubbed his back, listening to him groan. Often, as we talked, he drifted to sleep. The twin mattress was a vinyl-covered institutional model, and the sheets bunched up, slid off. The vinyl crinkled and did not absorb sweat. We wrestled to fit, but it rarely worked, so I slept on the floor.

In the morning, I lay in Matt's sleeping bag on the floor and listened to the radio discuss record unemployment rates. I put on nice clothes and drove east on I-94 into town. I applied for a job at the women's campus as a lunch server. I tried to get work at a diner. I sent my resume to a prairie restoration company, but they had no money. People were letting people go.

The Reserve Unit on campus prepared to be called up for war. I noticed the officers strolling up and down the icy sidewalks in uniform, and I thought of Ben, working in Pittsburgh, also enlisted in the Reserve. He'd joined after quitting college, just hoping to support himself while he figured out why to go back to school. His unit also faced deployment, but I did not think about that too long.

As the snow whipped past the window, I sank deeper into the room. I was running low on money. Soon I would not be able to make loan payments.
As the days grew darker, ice on the lake thickened. I could hear low popping and moaning as the shadows lengthened, like the banging of whale song. I ran and boot-skated over the wind-polished surface, studied the silver network of fractures, embedded oak leaves.

In the evening, I sometimes came into the pottery studio where the apprentices worked behind their Japanese-style wooden kick wheels, hands shiny with liquid clay. The wheels hummed low on their bearings for hours, and I sat at the wide plank of the tea table, absorbing the high level of creative energy, focus. The rhythm of concentration reminded me of writing, and my hands ached to move over the page.

One afternoon, as I kneaded bread dough in the room, the phone rang. Too loud in the small room. Gummy dough hung off my knuckles when I grabbed the receiver.

"Hello?"

"Hey Sachma. It's Ben."

"Benny!"

"How are things in Minnysottie?"

"Okay, I still don't have a job." I hesitated. "It's cold." I was waiting for him to launch into his usual monologue on favorite topics: his buddies in Pittsburgh, the latest news on his favorite bands, an update on his novel. "Ben?"

"My unit's being called up. But I don't know where we're going yet. Probably Baghdad, depending on when the front line marches in."

I don't remember what I said then. Maybe just swallowed.

"I wanted to tell you that you're my primary beneficiary on the life insurance. You should know so you can make sure they give it to you."

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Oh god. My little brother.

"Use it for something important. Maybe you and Matt can build a giant kiln or something. Fund your writing." He paused. "Sach?"

"Yeah?"

"I'm also entrusting you with all of my journals and other writing. Finish for me if you can."

I looked down at the drying dough scraps on my palm, listening. I wanted to say something. I wanted to ask him if he was afraid.

When I hung up the phone, I left the dough and shakily put on my running sneakers. I dashed out the door in my pajama pants, headed across the bridge toward the prairie. My legs stretched out, my calves pushed down. No, no, no. All along the cornfields, oak woods, half-native prairie. No, no, no. Footprints black on the snow-dusted shoulder.

After the phone call, the rash took over. My arms began to itch, and even before marks appeared, I recognized the dry heat in my skin. Pityriasis rosea, a rare skin condition. I'd had it twice before, when I was seven and when I was sixteen. Although the causes are unknown, doctors suggest it might be linked to stress, changing seasons, lack of sun.

Salmon-pink welts spread all over my arms, torso, hands, screaming for direct attention. I slathered myself in whatever salve I could find, but even hydrocortisone soothed little. I wore mittens at night, holding them under my pillow, but it was not enough. The sleeping bag twisted, hot and cold against the burning. Cursing, I pulled off the mittens and raged against the itch, my nails raking over and over again. My ribs heaved until my belly ached; hot tears rolled down my cheeks and neck into the sleeping bag. Something must be terribly wrong, something dark I cannot fix. When little brothers must kill and die.
Matt stroked my hair, held my hands away.

I wrote bad poems while the US bombed Iraq. I sat in a café and watched trash blow across the salt-bleached streets. I thought of Ben, waiting for further orders at Fort Drum in New York. I thought of Matt, stuck inside from dawn to midnight, immersed in his art, yet unable to walk out among roots, dead leaves, and porcupine tracks that he loved. I thought of the white dorm walls of my makeshift home and the mysterious, unbidden rash that ate away at some secret part of me. I threw down the pen and watched the blue lines of my notebook run together.

Fresh snow cut diagonals against passing headlights as Matt and I walked the campus road late one night. On the shoulder ahead, we came upon a cottontail rabbit that had just been hit by a car. The body still held warmth, but the spine was snapped. A crimson bead hung on its whisker, and the fine white hair of the tail parted in the wind.

As we knelt beside the rabbit, it was clear that life had just barely slipped away, down the hill, into the shadows. We both buried our fingers in the rabbit’s coat, silent.

Headlights danced past, treads cutting bands through snow.

“What should we do?” I asked finally.

“Well, I think we should take it in. I’ll bet we could skin it.”

“You mean eat it?”

He nodded—this the man who as a boy would bury road kill in the back yard, let the microbes do their work, and then dig up a clean skeleton for his collection.

“No.” I heard myself saying, “Just this time, tonight, I just want it to return to their world, out here. I want it to be eaten and left out here.”
Shrugging, he lifted the rabbit and carried it before me into the dark. Not back to the dorm, but out onto the drifts of the frozen lake. I stumbled along behind as he walked into the wind, laid the thin body in the snow.

In the morning, Matt rolled out of bed. Half asleep, I raised my head from his pillow to kiss him goodbye. I heard his step on the stairs as he descended to the studio. I heard the sounds of furniture moving, clay being wedged, wheels turning below as the studio day began.

I turned on the radio, catching news of soldiers swarming Baghdad and Saddam’s statue falling in the street. The front lines had reached Baghdad. And Ben is still here, I smiled. Waiting, yes, but safe for now.

I pulled on a coat and boots and trudged to the far side of the lake. High gray clouds diffused the light, but the wind felt mild. Something was changing. I approached the rabbit’s remains. Bird tracks surrounded the body, the light lines of wing prints fanned out in the snow where feathers had pressed and turned. Gray clumps of fur lay plucked and tousled. Crows. They’d snatched out the eye and torn open the shoulder, leaving an alizarin blossom of tendons from which a yellow bone protruded. They’d taken the heart.
The black shell of a seedpod lies open in my palm, its two halves hinged like a door. Within the shell, shadows soften against the curved womb wall. A seed shakes free easily, and the ridges of my skin catch against the tiny bumps of its sticky surface. I imagine its inside: the stone of dried flesh that waits—waits for water, warmth, a blanket of darkness. How curious that, from such silent stone, an embryonic will might someday swell and push into the universe at last.

One day in December, Matt and I set out to gather grocery sacks full of these rattling pods on islands in eastern Minnesota, near his childhood home. In subzero temperatures,
we skate with our sneakers across the fractured ice of Long Lake. Snow ghosts race across the surface of the ice at our feet. The cold slices into my cheeks and I turn and look back at the shore. Through strips of oaks and maples skirted by the tawny thatches of cattails, I can easily see the white, box-shaped houses of the “Liberty on the Lake” development, the newest in a swarm of housing developments to descend upon Matt’s hometown.

I squint—against the cold and snow glare and lofty, half-empty houses—trying to imagine what this shoreline might have looked like just thirty-six years ago. Before any of the developments, before the encroachment of brush that comes with fire suppression, before the draining of the low wetlands around the lake. Among the tangle of leafless boughs and gray trunks, I strain to pick out the larger, open-grown bur oaks, envisioning the starkness of their once solitary shadows. These oaks still stand, wide-girthed and tossing their black crooked limbs in every direction, rugged sentries of a land once open and wild.

I am looking for signs of oak savanna, one of the most diminished ecosystems of North America. I balk when I hear that only 0.01% of Minnesota’s pre-settlement oak savanna remains. I know the fires that once maintained these strange communities of scattered oaks and prairie grasses no longer burn. I know European plants like buckthorn and garlic mustard are moving in, crowding out the native flowers. I know the plow cut deep into the rich topsoil, and in just the last three decades, urbanization of rural Minnesota has fragmented and paved over the land. But I look anyway, as though searching for the face of a missing loved one. The land, the land, where is the land?

As I hurry to catch up with Matt, I picture again the aerial photos, broad sheaves of yellowing paper that Matt and his father had rolled out on the living room floor the night before. Taken in various Aprils of the past, these photos show the land around Long Lake, including the land where the Liberty development now stands and the older development,
Croixwood, where Matt's own house stands. Heads together, we poured over the blue-ink images, watching Matt's home shift like the moon through its phases as we flipped back through time.

In April of 1996, the Croixwood neighborhoods looked familiar: curling arms of cul-de-sacs, seemingly endless lines of pillboxes. We could easily find Matt's own house, with its sprawling bur oak in the back yard. Down between Long Lake and a nearby pond—the scrap of state land where years ago Matt discovered a rare orchid—thick woods darkened the land, with dense shrubs invading the shoreline. The photo showed no hint of Liberty on the Lake, other than a partial paving of the gravel road that still winds around the lake to the development's current location.

In 1987, this gravel road ran out past the lake, straight and plain for miles, a country road passing through farmer's fields, fields that are no more. Where the orchids grow, the woods appeared thinner and the shores open and fair, as though patches of prairie grass waved there in the sun.

Half of Croixwood was not even built in 1976, but bulldozers crawled over the spot, creating a great lot smeared with naked soil. The pond edges took on a murky gray where runoff drained the raw ground, and the orchid's habitat appeared so open and homogeneous that we guessed the farmer up the gravel road put out animals to graze there.

In 1969, just thirty-six years ago, Croixwood did not even exist. Just a few houses dotted the shores of Long Lake. Where Matt's house would eventually stand, the land clearly lay as open, dry savanna. I saw the spidery crowns of bur oaks scattered like black stars in a shining field of prairie grasses—mighty oaks that still stand between many of the houses, oaks that survived in spite of heat, fire, and a dense, pervasive network of grass
tillers. This, this was the face of the land that Matt calls home, the face of the land I long to
touch and know.

Now, as we make our way along the island shore, my fingers ache with cold. But the
rattle of seedpods spurs me on. I reach for a wizened, black bush, last year's growth turned
brittle with the stem broken off. I immediately discover the pod stalk amidst a snarl of old
leaves.

It's a good one. As long as my forearm, the stalk is loaded with fat, charcoal pods.
A few split-open shells reveal toothy grins of bean-shaped, yellow and brown seeds. These
wild indigo seeds are the bounty; they are what we seek. When we've finished collecting,
we'll send them to a prairie restoration research station, so that people will cast native, locally
adapted seeds into the soil again. This is our best answer to Liberty on the Lake and other
such hollow manifestations of concrete, plywood, and drywall. I shove the stalk into the
brown paper bag, then reach for another.

Matt happened upon these wild indigos a few years ago. He describes to me how
one summer, as he canoed out on the lake, he spied their creamy white blooms, rising up
above the island cattails in towering racemes like lupines. A species adapted to the vanishing
prairie and oak savannas, they too have become hard to find. But Matt discovered a
population here, taking refuge on the southern shores of oak-covered islands.

I've never seen wild indigos in summer. I've never seen their blooms, but as I
fumble with their pods in the wind, I perceive a kind of kinship with the plant. In this body
of winter, this crisp fiber of stem, shell, leaf, I recognize a will that is anything but tenuous.
I've never pressed the creamy petals between my fingertips, nor peered into the depths of
their flowers, but I am filled with faith in their wild potential.
As I pick seeds, I think of how quickly the loss of savanna happened and how easy it is to forget that it could happen so fast. Surely, a danger lies in accepting this new, paved-over version as home, a will-less landscape that retreats into the margins. Yet when I hold these seeds in my hand and when I think of those bur oaks silently bearing witness, I know that this land is anything but will-less. The land remembers; the answer is here, dormant inside this seed membrane, wrapped up tightly as a fist.
The Body Root

I claw at the stony brow of the eastern Wyoming plains with a twelve-inch spike. A coal train rattles along the far slope as I kneel in the glare, the long seed awns of needle-and-thread grass flashing like an orchestra of quills around me. My knees and palms ache, the earth resists my labor, but on I rake, pick, pry.
I am digging for breadroot (*Pediometum esculentum*—of the legume family), because I want to taste its flesh for myself. I've been working out here as a plant tech on a nonprofit ecology research team for a few months now, growing tan and accustomed to the ceaseless chattering of grass. The land unfurls like a vast cloth of soil, root, bending flower; its rims and draws run like undulating velvet, the folds and drapes meeting the sky for miles around me.

Lately, in my data collection forays, I've been confusing breadroot with prairie lupine. Both plants extend palmate leaves to the sun, crowning themselves with hooded, pea-like purple or blue flowers. The obvious distinction is that lupine roots are thin and fibrous, while breadroot possesses a unique edible tuber with wrinkled brown skin. The high plains indigenous peoples have eaten breadroot for centuries. Today I decide to unearth my first tuber.

Digging would be easier if I had a shovel, but this is a spontaneous act. Choosing my spike over the blade of my pocketknife, I begin to excavate. The root is only about a quarter of an inch thick where it first reaches downward into the soil. Those first few inches of root are tough, though, the skin like leather. I scratch, metal on stone, metal on dry, compact soil. Minutes pass. Still no tuber. Yet I persist through layers of rock shards, hard edges that necessitate a narrow hole. My hand constantly grazes against the sharp lining, and my fingernails drag and split over gravel.

More minutes pass. Curly leaves of blue grama sod tickle my elbow when I reach down and feel the breadroot thick and strong below. I pull, scrape, twist on the root as my knuckles rub raw and bloody. I seem to be pulling at the foundations of the earth, as if extracting its very organs.
Out here in Thunder Basin, eastern Wyoming, I mark my fifth year as a field biological technician, having traveled from Maine to Alaska to Minnesota, and my first season on the northern rolling high plains. I am in awe of the wide sky with its fast-building evening storms, the red crumbling hills darkened with stunted ponderosa pines, the narrow draws crowded with sagebrush, and the bleak clay domes where golden eagles roost.

As a lover of plants and their myriad forms, I wonder at the foreign patterns of plant communities I see in this basin. For here, more than in any other place I've yet been, the communities lie across the land in a tight association with soils. Like patches in a quilt, the soils themselves break up the monotony of the plain. Clays, sands, or loams, thin and high or accumulated and low, salty or rocky—the substrate of earth sorts itself in subtle hues.

The plant communities align faithfully to this mottled character. Each soil tribe predicts which specific group of plants will grow there. In sands, I find grasses like needle-and-thread and the tall, blond prairie sand reed. In loamy soil, I find coarse wheatgrass and pungent big sagebrush. In saline lowland, I find the thorny greasewood shrub and the shiny, seagreen leaves of the saltbush.

These patterns become delicious to my eyes as they grow more familiar. I move through the land and watch it course and shift before me, intimate and plain. The plants reflect an allegiance to the exact place in which they stand. They must to survive. Their leaves, roots, and stature all reflect where they are, what they rely upon. The soil itself designates them, names them. When I wander into the shaded fissure of a stream, I lean against cool clay walls, shiver at the exposed roots that run down, down, meters into the ground.
Thunder Basin stretches against the sky, possessing the stone quiet of a church sacristy among the dips and swells of its badlands. The land lies remote and removed, yet teems with the whispering movements of life—the black widow spinning thread in an abandoned burrow, the ferruginous hawk gathering dead sagebrush stumps to build a nest, the horned lizard scuttling across the salt slick. I walk along the butte rim at midday, and the heat wraps me in waves of dry silence. The shadows shrink; the cows loll beneath the cottonwoods. Even the leaves still, but for the soundless mastication of monarch larvae in the milkweed patch.

I crouch beside clumps of yucca and drink icy water from my pack, because I do not know how to find water in this desert. All of these beings around me, it seems, have learned to inhabit. Evolution demands it. There is no sign of resistance. The land governs all its inhabitants, and they make their homes upon it and of it. The vegetation threads thin fingers of root into the matrix, clinging like hair to the skin of the earth.

As prickly pear cactus bites into my boots, I walk the plains with all my senses dilated. I cannot help but hear a truck on the far dirt road; I cannot help but notice the popping sound of oil derricks just over a rise of grass. To the north, my plant surveys take me onto coal mining property. When I look up, way past a turquoise sea of sagebrush, I cannot help but notice the ominous black haze of the coal surface mines. The monster cranes and silos protrude from gargantuan pits in the earth. I hear the occasional blasts, see the orange cloud of dust on the horizon. For weeks, I watch, occasionally wondering what lies in those pits beyond that last row of sagebrush.

One clear day, I finally take a tour into the mine. The senior engineering manager, a lean woman with long red hair, leads us into what she says is the largest coal mine in the United States, if not the world. She outlines the facts this way, gesturing over aerial photos.
in a yellow hard hat. She points out that where Porcupine Creek once flowed, four major surface mines have eaten away roughly twenty-three horizontal sections of earth. On the photos, she traces these four massive channels as they advance outward from a central point—the blackened train-loading silos.

While she recounts the mine's history, I notice that although Porcupine Creek meanders in from the upper corner of the photo, it disappears among the black terraces of the mine, and does not continue anywhere. Yes, she nods, Porcupine Creek no longer flows at all below the mines.

As our tour van descends into the mine pits, we plunge deep into a realm where life does not grow, where human presence seems preposterous. We drop down into both the morgue and the womb of the land, where time stands in rock layers in the several-hundred-foot-high walls around us. Where the peatland plants of past eons lie compressed into enormous coal seams, shining blacker than a raven's cloak.

There I witness the full power of human engineering as the world's largest machines break apart the shell and meat of the earth as though crushing a walnut. I gasp as walls of coal collapse into a black rain, their enormous faces toppling in hundred-ton chunks into the beds of impatient dump trucks. I watch the dragline crane above as it draws a sixty-four-yard bucket loaded with overburden rock off of the underlying coal seam. These gray, broken bones of the planet simply pile up, forming bland, glaring mountains. And all around me, the interior debris of this unfathomable pit extends like a gray lifeless sea prowled by listless ships on wheels.

After visiting the silo, where I watch a man with a joystick pour one hundred-twenty tons of coal neatly and evenly into each empty car, the engineer leads us toward the reclamation areas. Elephantine hills of soil line the edges of the pit, waiting to be bulldozed
back in after the coal is gone. Their slopes are even and featureless, carefully compacted under tires and now being colonized by a few tufts of exotic Russian thistle. Beyond these hills and opposite the open pit, the "reclaimed" fields sit. The engineer speaks proudly of these fields, how the mine takes such pains to return the pits to good grazing land, how the visual and ecological qualities of the prairie have been neatly reestablished.

I walk out onto the new plateau, and her words fall flat, vacuous, before the wind snatches them away. Many of the seeded grasses are non-native, particularly barley and crested wheat. Even a mallow flower at my feet does not belong in Wyoming, but maybe in California. The land is contoured and sculpted, much like the rolling hills I've walked these last few months, but these have a certain blank expression. They range outward in the sun, perfectly molded and even, punctuated here and there with boulder piles dumped dutifully by a bulldozer. The distinct soil tribes I've come to know are lost in a sea of mixed fill, shoveled into the enormous mine like a plug crammed into a wound. The plant communities have no chance at their former diversity, their soil-based habitats erased, the earth hollowed out beneath. The wind shudders and pummels the hill as I stand there, numbly trying to absorb this last brutal homogeneity.

After the tour, I return to my field quarters, a trailer home set on cinder blocks. I turn on the stovetop to heat water and boil some of my recent breadroot harvest into sweet, meaty bites. I stare into the pot, as tiny bubbles multiply along the steel bottom, pinpoints of heat. How frustrating that I can't cook a meal without turning on the electricity, electricity born from burning coal, from ancient peatlands. I slam the cupboard door as I take down a plate. I just don't have a choice if I play by these rules.
As I sit on the trailer steps, gazing out at the low buttes, I slice and chew the white breadroot flesh. Maybe it is the shape of root ballooning into tuber and tapering back again, reminding me of some internal organ, that makes me think then of breadroot as being rooted in the body, as body root. For in this act of chewing, I see that my sustenance comes directly from within the body of the land I stand upon—from within the mottled soil, water, and deeply layered mineral.

I recognize that in coming to know this body of the land, I’ve broken the ground, and the soil still darkens my fingernails, no matter how I scrub. The mining that supplies coal for my electricity also breaks open the ground. But in that excavation, Thunder Basin remains anonymous to those who flip that switch. Turning my pocketknife blade in the evening light, I swear against further mutilation. Murmuring to distant thunderheads, I vow to inhabit, somehow. I fold in the blade as the wind snatches the open door, throwing it against the thin trailer wall.
Inside the Yucca Bloom

I throw anxious eyes over my shoulder and steady the wheel as my car fishtails across washboard. *Not yet,* I will the sky through clenched teeth, *not just yet.*

Over the red clay road behind me, black clouds expand at a sinister rate. Their mammaries teem and flex, stacked into the palpable mass of sky momentum. Hot dust bites into my forearm like tiny teeth poised with electric charge. I lean forward and look up. The blue swatch to the east is shrinking, and I have nine more miles to go before the scorched, contracted clay particles of this winding road become liquid cement.
To my left, the grasslands of eastern Wyoming stretch, miles upon miles of land nearly devoid of human settlement. Crumbling, cracked, and sore, the land is hard land, bone dead and dry most of the year. I run my eyes up and down rock-littered draws, tight fists of dome, swells of hills that rise and build into a great vast body of grass. It’s late June, and the knolls are flushed with a viridian hue. And all along the roadside, where the car twists and turns out a plume of violet dust, I am skimming for yuccas.

Here in the northern high plains, yuccas (Yucca glauca) crown the tawny slopes like burs on a blanket. Their stiff, fibrous leaves grow in spherical rosettes, and from the midst of this bouquet of spear tips emerges the stout floral stem. Usually the stem is dried, silver, naked. But some years, the yucca offers forth a pale green coat rack, hung with the vertical rows of creamy lime blooms. Inside the delicate enclosure of these alluring blooms, a mystery older than the plains replays in subtle variation time and time again.

For several nights now, I have fallen asleep in my tent thinking of yuccas, knowing the dark land is pregnant with their story. I listen to the night stirring; the land is poised and open, as a stage set. The wind gently lifts the tent walls, a swaying as of moonlit sails. Dark spiders scurry over the screen roof in front of my face. Dung beetles rustle too loudly under the tent floor, and coyotes howl just over the rise to the south. I hear the breeze out in the grass. Then silence. The landscape bleeds into my dreams.

She is an ivory-caped baroness—the moth who crawls up inside the luscious chateau of magenta-tinged petals. She shifts her fringed wings about her in anticipation, for she senses no predecessor’s pheromone mark; this blossom, this night, is fresh and unvisited, as she prefers. She shakes her singular mouthparts before her as in blind exploration, raking them against the yellow sticky heads of protruding anthers. Unknowingly, she gathers nearly
ten thousand grains of pollen in a rounded packet that self-adheres beneath her chin. But she is not concerned with pollen yet. She has come for the feminine locket that grows just above and out of reach of the flower’s own pollen. This mission is encoded deep within her clan’s history. For the ovary she seeks promises a beginning for her offspring. Thus, she braces against the white ovary wall and plunges her ovipositor, the needle-sharp tube at the tip of her abdomen, into the ovary’s tender flesh, laying her eggs within the inner chamber. When she is finished, she climbs up to the top of the ovary and deliberately rubs her pollen-burdened chin against the ovary’s receptive apex. The ancient exchange is complete. The yucca flower has been fertilized so that seeds will take shape, bloating the capsule, while the moth has laid her eggs within easy reach of nutritious yucca seeds. She turns then and, pressing her black legs outward against creamy, yielding walls, she crawls forth into the night.

My intrigue is not simply born of white-winged moths flitting in and out of yucca blooms. The high plains yuccas cannot produce seeds without this particular moth, *Tegeticula yuccasella*. Likewise, this fleet of nocturnal insects cannot successfully reproduce without a share of yucca seed to sustain its young. This mysterious relationship, called an obligate mutualism, came about through a long, slow process of selection.

Components of the emerging landscape shifted through thousands of millennia in a responsive dance with one another, causing families of life to drift in form, their genetic codes recombining and redefining the clans. This quiet, plodding rate at which genetic material changes over geologic time is predictable, and ecologists employ this rate of change as a sort of “molecular clock” to help piece together evolutionary history. Calibrating their estimates against evidence from the fossil record, ecologists captivated by the association
between yuccas and moth pollinators have proposed a rough timeline for the evolution of this relationship.

About forty million years ago, the early ancestors of all yuccas began to colonize the western plains, shrub land, and deserts. Yucca moth pollinators appeared with or shortly after this colonization. Then, the diversification began, as different factors in different places—moisture, wind, sun, length of days and seasons—brought about new moth and yucca species. Around two million years ago, moth species arose called “cheaters”; their larvae eat yucca seeds, but the females do not pollinate the yucca flower. Today, high plains yucca (Yucca glauca) is attended by four moth species in the eastern Montana and Wyoming plains—Tegeticula yuccasella, two cheater species, and one species that tunnels and feeds within the flower stems, instead of the seeds. Still, for pollination, high plains yucca relies solely on the species of my moth baroness, Tegeticula yuccasella.¹

Once a flower’s ovary has been riddled with ovipositor piercings, the petals wilt away, and the swollen fruit capsule shines green and tight-skinned, like an olive blimp. Whole racks of blimps make sunny fanfare along rocky rims of yucca patches, as the moth larvae devour the inside of many yucca seeds. After nearly two months, when the larvae have nothing more to eat, still they wait for the cool rain and night to come before they bore out through their fortress’ walls. Dropping through the slats of yucca leaves to the thin soil below, the larvae burrow into the ground, where they will spin a cocoon of silk and sand in which to wait and mature. One to four years will pass, through baking summer and howling winter, before the larvae complete metamorphosis, donning novel raiment, and emerge for their final few days mating and crawling inside the yucca bloom before they die.

¹ Much of the scientific information in this piece comes from an interview with Dr. Olle Pellmyr, Department of Biological Sciences, University of Idaho and from Pellmyr, Olle. 2003. Yuccas, yucca moths, and coevolution: a review. *Annals of the Missouri Botanical Gardens.* 90:35-55.
Over the red clay road, the storm leers, a dense drapery illuminated by lightning in one or two billowing quarters at a time. Like a moth, I am drawn to yuccas alongside the road. I've stopped the car, and I'm running in a blue calico skirt, sand-dollar circles of wet cloth clinging to my legs as the clouds give up their burden. The sky relaxes, and the cracked earth softens at last.

I pluck yucca blooms hurriedly from their stems, gathering them in my upturned hem as sharp leaf tips prod my shins. I notice some of the yucca pods are already fattened, while some from past years still bear the uplifted smooth-shelled capsules that, in bulky elegance, recall multifaceted claws grasping at the wind. And in these bygone capsules, I am pleased by perfectly round sieve-holes, signs of former larval generations emerging into the rain against a dark horizon of endless grass.

As I dash back to the waiting car, I press yucca petals onto my tongue. Their taste is peppery and sweet, as raw and wild as the lands in which they've unfurled. Before confronting the soft road, I watch the windows glaze with water, then close my eyes for a moment, recalling vivid dreams of a moonlit baroness flying high over the plains.
A Riddle: The Scarlet Door

Late April. Snow still gleams atop Lolo Peak, but the streams swell with meltwater. The time has come for the spring buds of unfamiliar plants to swell and split open their tight sepals, revealing blooms I want to learn. The time has come to stretch my legs against the girth of a land where I have yet to experience spring. At this point, I've lived in Montana for
eight months, but the land must swing through the shifting angles of light and seasons many
times, exuding all the myriad perfumes of change, before I can even begin to say the word
"home."

On a mild day when my housemates are clomping around the yard in their rubber
gardening boots, I go. I choose one of the previous year's burns, one that swept the sudden
hills surrounding Missoula, on the off chance I'll spy a morel mushroom thumbing up
through the charred red needles. In my pack, I stow my new botanical key for Montana and
a lunch. Around my neck, my hand lens hangs from a dingy cotton string. I hike up a logging
road through green larch, Douglas fir, ponderosa pine. The hill pitches upward, and the
slopes become rocky and dry as I approach orange-canopied forest. The wind plays high in
the pine boughs above and I smell soot. The burn.

I head upslope, off the road, toward the high ridges of ponderosa pine and open
meadows crowned by silver-leafed balsamroots in bloom. As I climb, the vegetation
becomes thinner but not as burnt, and I gain a view of the blue-shouldered mountains
stretching out across the valley. Pleased with the heat building in my sun-soaked hair, I sit,
relax, strip down to a white t-shirt. I watch clouds drift by, and I nibble on an apple while
my boots bake.

After lunch, I immerse myself in a steep, rocky meadow of early wildflowers. Soon I
become particularly engrossed in the scarlet bloom of a paintbrush. Crouching, I am
mesmerized by its bright-fingered bracts, which sport that vibrant cardinal red found only in
feathers, insects, or petals. I peer deep into the paintbrush's luminous crown, cradle the
spindly, hairy stem between my palms. Fascination awakens the botanist in me, and I lean in
with my magnifying hand lens, the species key open on my knee. The esoteric language of
the key jumps to life, naming the curious lips and lashes of the flower—this the calyx, this
the corolla, this the odd, beak-like galea. Red tubes articulate, golden wands extend, and the
depth, fine-textured heart of the flower spills out so marvelously between my fingers, that I
scarcely notice when something like children’s laughter comes floating down from above.

So it is that I am squatting there, scarlet bits of flower held up to my face, when I
realize who keeps watch over this mountain. Out of the bushes just upslope emerges a giant
tom turkey. My mouth drops open as he struts downward, his copper-flecked chest puffed
up into a hypnotizing display. At first, he seems not to notice me, or even look at me, but
on he comes, right in my direction.

I’ve never seen a wild tom from so close; he struts just ten feet away. His swollen,
bald little head gleams a pasty blue, and his long stiff neck is ringed with scarlet, flabby skin.
A warty worm of flesh droops and bobs mysteriously from just above his beak, evoking a
visage of melting wax. From my perch among the rocks, paintbrush before me, I am quite
immobilized.

But the turkey keeps advancing, until he is just five feet away. Realizing that I’d
better scram, I stand. He remains undeterred by my increased stature, but now he struts
between me and my plant key and pack, which are lying on the ground. So I run sideways to
lure him away from my things, and sure enough, he follows. Then I attempt to zigzag back
to grab my things. But he is glued to my heels. After repeating the same tactics, I see that
this beady-eyed tom is not leaving, but is very much fixated on me, in a not too friendly way.
His total lack of fear makes my blood pump faster.

At last, I resort to throwing a stone in his direction. I don’t want to hurt him, or rile
an attack, but the possibility of him drilling my shins with his sharp beak is becoming quite
real. The stone bounces to his right, he sidesteps only briefly, and I hastily grab my gear.
Then I turn and trot cautiously down the steep slope, trying not to wipe out on the loose
rocks. When I glance over my shoulder, the tom is charging straight down at me, blue head lowered, clearly unencumbered by the rough terrain.

I pick up speed, afraid of falling or stopping. I descend a couple of hundred feet, but the tom has clearly not lost interest. I have no choice but to grab a rock without losing too much of my lead, but the rock arcs upslope, again bouncing ineffectually to the side.

When I reach the ravine at the bottom of the hill, I am back on the logging road I hiked in on earlier that morning. Now I hope the road will provide safety, that the tom will see it as a boundary—the end of his hill, the end of his territory. But I am wrong. As I run down the road, the tom follows, mercilessly close behind. He refuses to run on the road itself, but instead parallels it, faithfully pursuing me toward what bitter end I cannot fathom.

However, the road does allow me to run faster, and I sail along at high speed, my hamstrings aching to sustain me. My mind spins with adrenaline. *How truly ridiculous,* I concede to myself as I jump over mud puddles and ruts. When I finally risk looking over my shoulder, I am momentarily relieved that the tom is missing. But he soon appears again, dodging trees and clearing logs, until at last he fades away, his pale head shining in the sun. *How strange it is to be chased, I think. To be told "no" by a mountain.*

The night following my encounter, the recalled image of his beady eyes plagues my sleep. When I tell the story to Matt on the phone, of course he laughs. A few days later, he calls me back.

"I was talking to my old bio teacher—you know, the one who rehabilitates birds. I told him about the turkey, and he asked me if you were wearing red."

"Red? Why?"
“I guess toms have strut zones in mating season, and they defend them. The red sets ‘em off, because of the other tom’s throat color.”

“Well, I wasn’t wearing red. Just a white t-shirt and brown pants.”

“Are you sure? No bandana or anything?”

“No bandana. I’m positive.”

When I hang up, a possible answer dawns on me—the paintbrush, a brilliant scarlet signal of male intrusion in my hand.

Still, an alternative explanation remains. Perhaps the turkey’s persistence was not aggression at all; perhaps he meant to court me when he found me crouching in his meadow slope.

What then, is the final answer to this riddle, the meaning to this story, a marriage of the beautiful, the foolish, and the fearsome? Just this winter, as I stood at the table in a quiet house, I stumbled upon the religion section of the newspaper. There, the words of a minister’s column seared across the page. He wrote of this Christian teaching: when we become like children, we enter the realm of God. Though I sporadically attend church or open the Bible these days, my family gave me this teaching. Similarly, in Buddhism, the Buddha nature is likened to the smile of a child. I can say that when I part the scarlet bracts and petals of a paintbrush, I am afire with the wonder of a child. And while I don’t know if there is a nameable God, I am certain such a realm exists, a domain where I am simultaneously both an integral participant and a clumsy trespasser. Where wonder opens the door to awesome, humbling fear. That realm stands tangible, vibrant, rich—in the very earth I walk upon. I simply have to lean in, look, and pay attention whenever I think I hear children laughing.
Dog Scraps

Maybe it was the bloody liver that made me dream about eating trees. Curled up in my bivy sack that November night, I slept beneath towering western red cedars and a lantern-bright quarter moon. I love to sleep out like this, so close to the ground. I drift and stir as I please, opening my eyes to the sky and canopy silhouettes.

My friend and I had driven down from Lolo Pass earlier that day, into the thick snow-encrusted forests that flank the curves of the Lochsa River in eastern Idaho. We stopped near the confluence of Warm Creek and hiked upstream to soak in the hot springs.
there. The afternoon sun dappled the blades of ice-tipped sword ferns and the muddy ground of the trail. In the middle of the trail, we noticed a long drag mark. About a foot wide, and punctuated here and there with tufts of gray and white coarse hairs, the drag was clearly from a recently killed deer.

When we reached the main cluster of pools, where steam billowed up through dark cedar boughs, I saw the liver. A black lab carried it in his mouth, a jiggling fat mass of scarlet. He trotted about gleefully, followed by a pack of other eager dogs. Pleased to be free to run the slopes and mossy banks about the springs, they all were clearly unattended by their soaking human counterparts. Their discovery, the dragged deer's innards, could not have been made too far away. The lead dog strutted off again, followed by the others, and I thought no more about it. But the liver's image remained tucked in my mind.

That night, lying beneath those silver-boled cedars, I dreamt about a procession of limbs and trunks and roots. In the puckered, ice-laced soil under my back, I sensed the nearness of massive, feeding roots. Ancient, primeval layers of roots. Running up barrels of fissured bark into lichen-decked limbs that sway in foggy silence. Running down among thermal-soaked boulders and outward along the cobbled stream channel nearby. Where trout hung listless in cold pools in the night.

I dreamt about cutting down majestic cedars with massive gleaming blades. I hacked their limbs off, severed them from their root masses, divided their great trunks into tabular rounds. I dug and tore at their bodies as at black shapes that stir in uncertain form and texture above. Then the dream turned further, and I began to eat these tree parts, bit by bit, indulging in hearty tasteless bites, on and on into the unremembered fringes of dreams.

Hours later, I awoke to the diffused light of a cloudy dawn. The stream's sounds impinged upon little of the broad silence that hung about the trees. Snug in my sleeping bag,
I allowed vision to wake me slowly as my attention wandered from small detail to small
detail. Tiny flurries ambled downward, and my eyes traced V's in the weave of scaly cedar
leaves. The lichen and moss tufts marched up long ribs of bark. The burnt sienna of dead
leaves hung in a pleasing array among the muted greens of the canopy, a contrast that exalts
the artist's eye.

Ancient cedars make a kingdom of the Lochsa drainage. Living to be a couple
thousand years old, some of the oldest reach ten or more feet in diameter; I am surely in awe
of them. But I don't pay close enough attention to individual trees. They grow everywhere
in these drainages, forming thick, dark canopies. And while massive clearcuts checker many
hillsides, perhaps my response to them is too subdued, my sensitivity dulled as clearcuts
become part of my surroundings. Of course, I rebel at stripping old growth or shattering
watersheds. But I catch myself taking trees' lives for granted—there are so many of them. Their
bones frame my house, their fibers bear my very words and drawings.

Lying there in the light of day, I considered why I had dreamt of cutting these cedars
down, of greedily devouring them. In the dark of night, something had pushed its way to
the surface of my consciousness, something I struggled to identify. I considered the
towering trunks overhead. I gazed out at the swollen gray clouds dimpling above the
treetops on the stream's far bank. Then I thought of the liver.

I reside in a house with several hunters. Late November, and already eight deer have
been hung and butchered. I do not hunt myself, but I stand beneath each body's blunt
weight, help my housemates hang the animal from its hooves in the garage rafters. I stand
back, feet on cold, blood-stained concrete, watch the slicing and unpacking of crimson
hanks, chocolate fibers, shining golden sinews. In the morning, when I wheel my frost-
coated bicycle from the back yard, I see a spinal column lying in the neighbor's grass, a thieving dog having pulled it from the garage.

The hunters are also chefs. They feast upon the hunt as an ancient practice remembered, sucking down half-raw morsels and draining glasses of red wine as they wield their knives in the arresting cold of the garage. They come into the kitchen with plates that swim with meat, tossing maroon chunks into sizzling grease, pounding garlic. We host loud dinners with crowded tables as the men gather around the backyard grill, partaking of the choicest, then bursting into the dining room, platters of succulent meat in hand. I lick my fingers with my friends; the juice runs down our chins, and the dogs mill beneath the table. I imagine us a tribe, our hunters having brought home our winter's mainstay. We pack our bellies with the steamy, dark muscle of ungulates, because abundance has come to our house.

As the weeks pass, and the trucks have unloaded kills at the garage door several times, the hides begin to accumulate along the fence. The heads pile up outside the chicken hut, in a corner of the lawn where the hops vine twines into the chain link. I pass the heads when I return to the house, roll my bike in through the gate. In time I find they are gone, perhaps back to the forest, but I retain the image of their half-open eyes and protruding tongues, turned muddy gray, like clay.

Seeing the liver at the hot springs, then, was no shock or surprise. The heft of fresh carnage becomes commonplace. The same is true of slaughtered trees. The clearcut hillside wraps around the valley as surely as the dense cedar. I do not blink. I do not ponder. The hills roll on as I fly past in my little car at sixty miles an hour, and I stop whispering prayers when each bole cracks like thunder beneath the blade. Sound reason says I can take what I want, forget about the unused parts. Only now and then do my dreams paw through the
remains of carnage. Only now and then are tree and greed pulled out of the woods, mouthed by the proud, black lips of dogs.
The Bitter and the Nectar

My grandmother loves garden visitors, especially the hummingbirds.

I see her in my mind’s eye now, towel over her shoulder, dark turtleneck reaching up her almond neck, paintbrush in hand. She parts the curtains in her old Vermont house, “for better light,” then pauses, gazing out at the bee balm and bergamot.

“Ohhh, they’re back!”

I look at her small form, the tousle of her short, gray hair that she refused to curl, that she pushes back from her eyes with her palms when she’s remembering.
"Grandma, what are back?"

"Well uh'course dear, the hummingbirds."

I join her at the window, and together we watch them dive, skirt, and hover at the red lips of nectar, their throats and bellies flashing.

I am accustomed to painters. My grandmother, my mother, my aunt, my dad all paint or painted at one time. My mother brushed, bled, and washed watercolors for years, pushing to sell them because ends had to be met. My aunt worked as a graphic artist for television in Los Angeles, then later at the Mayo Clinic in Rochester, Minnesota. My dad and my grandmother simply painted.

My grandmother hides her art, probably would never refer to it as "my art." Yet, as she and my grandfather add on the years, he fighting cancer but still working every day as an engineer and she struggling with circulation problems while standing over the stove, the art proliferates. It must. She says she'll "go crazy" if she doesn't paint.

Grandma once gardened up great fields of vegetables, but in recent years, the only bed remaining is a scraggly strip of herbs outside her kitchen window. I think she loves land as I do, though. When I come from Montana to visit, I tell her of my cross-country trips, and she nods, eyes sparkling. She's lived in many of these places, traveled with my grandfather. She sits on a stool beside the refrigerator and journeys through her mind—the wind, ice, and dark forests of the Upper Peninsula, the silver ponds of Maine, the palms and beaches of Florida, the canyons of Idaho and Montana. I tell her I just went snowshoeing by moonlight along northern Lake Michigan. "Yes, I've done that, too, dear. When I was a girl, with my father."
Now, she rattles around and is largely confined to a rambling old house, one that
Grandpa constantly reworks—new wood floors, electric wiring, refinished bathrooms.
Grandma must find a new way to visit her landscapes, so they stream out onto paper and
canvas. The back room with the piano shelters hundreds of paintings; they hang like leaves
on a tree. Pastels on sheaves of rough watercolor paper and pointillist oils on tiny canvases
bear images of land, memory, struggle.

She wants me to see, I think, shrugs out an unobtrusive, "You might look through
the back room if you want." And I enter, whole worlds vibrant before me. The autumn
orchards with knotted trunks, cold stone. The skies, the bushes, tossed trees, shimmering
lakes, the sunsets, stone on stone—the brush points splitting the universe into a swarm of
colors, as though all the land wore feathers. I stop before one—a narrow canyon, framed by
sharp towers of yellow ochre rock. The painting speaks of mystery, the West, and the eyes
that must've seen something wild and haunting there. It reminds me of the clever field
watercolors of Thomas Moran, from the early explorations of Yellowstone. A rendering of
landscape as spontaneous and sharp as calligraphy.

"Grandma, where is this?"

She leans in from the other room, thoughtful in the doorway, "I don't know, Sach. I
don't remember." Then, her brow tightens and she turns away, "Probably just in my head."

She leaves me then, goes upstairs to bed, and I stand under the warm cast of a floor
lamp, leafing through the bitter and the nectar of her life. I know the talent here is beyond
my imagination. It is imagination, pure and deliberate, but as real as the soul my
grandmother battles to free. And I know the days won't be long, that my ritual road trip east
to visit here will some day be too late and the miles between us too far.
That night, I make hot tea in my grandparents’ kitchen. In a jam jar beside the stove, Grandma keeps her special tea mix of dried red clover, mint, and bergamot. I smile to think she walked out into the damp summer grass to gather these herbs, maybe with bare feet like she did when I was younger. As I breathe in and sip these green things, I remember the ruby-throated hummingbirds who visited these flowers.

Through the steam, I see again a particular hummingbird I found last summer in Montana. The horses stirred in the yard, and the longhorns lay in the thick grass beyond the cottonwoods as I walked home along the narrow highway shoulder. I caught sight of a rufous-sided hummingbird tossed in the gravel, limp and brilliant. I lifted the tiny dead bird in my palm, wings and breast and head so soft. The emerald and brown and black coat was a heartbreaking trusting action in the world. And I noticed the miniature bill, a black needle, and the dark precision of the feet and claws, pulled in tightly toward the belly, one foot inexplicably clutching a quartzite shard of gravel.

I carried the bird, cupped in my left sweaty palm, for the entire next mile home. I laid it in the crotch of an old apple tree, the bill tilted in toward the bark, the breast ruffling silently in the breeze. Then I leaned against the shaded trunk, overwhelmed by such a determined grasp, black foot on white rock.

Now, as I cradle my grandmother’s love and art in this hot cup at this late hour, I recognize in myself a wanting, perhaps like hers, to die clutching that stone, too.
Whirlwind in the Desert

The CD player skips and chokes on Johnny Cash as the car zooms northward over the pavement seams of Interstate 15. I am curled up in a Honda Civic's tiny backseat, a heavy blanket of southern sun thrown over my shoulders through the back window. My three companions and I are travelling back to our home in Montana after a spring sojourn in southern Utah desert. I lean my chin against the low ledge of the window and watch the land stream past, just as I loved to do as a kid. As we leave behind open land and begin to
navigate the jugular of Salt Lake City, a long procession of billboards blots out the snowy crags of the Wasatch Range. Their broad frames advertise pregnancy clinics and smiling crews of obstetricians, home construction services and real estate, shiny new SUVs and trucks, dirt bikes and ATVs, all part of the urban apparatus I am so often troubled by elsewhere, particularly in the West. The housing developments climb the hills, the yellow earthmovers belch forth black clouds of exhaust, and the sea of traffic rattles steadily past in high-clearance gas-guzzlers. Consumption, a burgeoning population, economic growth—on the surface, these seem to be the laws by which people now live.

On the car’s dashboard sits a dried out husk of one of last year’s desert trumpets (*Eriogonum inflatum*—Buckwheat family), a spindly maroon piece of plant debris with a swollen hollow stem and a delicate radial system of branchlets. The seed capsules have long splintered off, and this nearly weightless skeleton looks more like an organic version of Sputnik than a plant. Matt, my brown-eyed partner with a habit of gathering earth’s bits wherever we go, picked this dead desert trumpet in the red sands of the Goblin Valley, where, in the glare of noonday sun, it seemed nothing could possibly grow. Twirling it now between my newly tanned fingers, I am moved by its beauty and the sudden contrast of such ephemeral and brittle flotsam with the culturally constructed scenery around me. I begin to draw sketches of it in my journal, views from the side and from the top. I pause to hold it up against the light of the window, struck by the juxtaposition of its spidery red legs against the white blur of box stores and billboards as we fly by. I know I am a stranger to this complex landscape and its politics, merely gazing in on the surface appearance of what is at stake. But I cannot deny the contrast between this single desert plant and the clamor of human icons that blocks out and covers over the land on which we live. Coming out of the
desert, I realize more than ever that we have separated ourselves from the land, recognizing it only as other, forgetting our earth-given instinct and our own ancient wisdom.

The desert has long been a landscape in which we humans have discovered wisdom. In ancient Israel, the desert was the realm where the prophets fasted and gained visions, where God was revealed to Moses in a burning bush, where the Hebrew people exiled and journeyed toward self-actualization. Jesus of Nazareth himself journeyed into the desert in preparation for his fate. In that wilderness, he wrestled with his identity, learning untold secrets from God and resisting temptation. Muhammad also journeyed into that wilderness and received the revelations of the Qur'an in a desert cave near Mecca. These leaders all dwelled in the desert for a time, and, through relationship with the sacred in a barren land, they gathered the seeds of wisdom that would flower into the great world religions.

Before leaving for Utah, I had been rereading the Book of Job, a scripture of eastern desert spirituality roughly 2,500 years old. And then on our trip, as we explored the southern Utah desert and its canyonlands in Grand Staircase-Escalante National Monument, this book of the Bible came back to me. I quickly sensed the power of this landscape, turning my thoughts to the sacred as I wandered upstream through icy canyon waters, my feet pained and raw, snake grass and box elder branches slapping against them along the banks. Later, I stopped to recline on slickrock along a side canyon and tributary of the Escalante River, where claret-cup cacti and scarlet-tongued paintbrush bloomed in crevices. As I craned my neck to watch a pair of nesting ravens skim in and out from beneath the lip of an arching flake in golden sandstone above, I thought of Job and God’s answer to him from the whirlwind.
God knows Job is righteous, blameless, pure. Job upholds the holy laws of the time and fears and reveres his God, and because of his goodness, Job’s life is filled with wealth—thousands of sheep and camels, hundreds of oxen and donkeys, a host of servants and happy family. But then Job loses everything. In Job’s dark days of despair, three friends come to his side. As he watches his estate dissolve, children die, and his own body decay with “loathsome sores,” the three friends sit beside him in the ashes and try to puzzle out what Job might have done to bring these calamities upon himself.

Here the Book of Job wrestles with the ancient question of innocent human suffering, which is ultimately a question about the justness of God. The three friends suggest that God is just, and so Job must be suffering because he has done something to deserve punishment. But Job stubbornly maintains that he is blameless, that he has been a model servant of God. We know that he is right, for the text says that God himself saw Job as an “upright man.” Encountering this discrepancy in human behavior and God’s rule, Job curses the day of his own birth.

*Let the stars of its dawn be dark; let it hope for light, but have none;*
*may it not see the eyelids of the morning—*
*because it did not shut the doors of my mother’s womb,*
*and hide trouble from my eyes (3:9-10).*

Job becomes more and more agitated by the baffling nature of God’s rule. He laments the loss of his former prosperity and the stature he enjoyed among his neighbors. He begins to frame a challenge to God, desiring some resolution to this puzzling injustice, some explanation straight from God.

*If I have walked with falsehood,*
*and my foot has hurried to deceit—*
let me be weighed in a just balance...

Let the Almighty answer me! (31:5-6, 35)

I pondered Job and his suffering as we camped on a sagebrush-crowned sandbar, the olive waters of the Escalante running past. I did not completely understand why at the time, but the power of Job’s story was working away in the far canyons of my mind, just as earth’s raw elements were speaking to my emotions. I noticed my heartbeat and breath as I slumbered in soft starlight; I heard the canyon wren’s call cascade down rock face and into the dark tunnels of my ear. I smelled clay, earth, moss clinging to a seep in the wall. The lessons from the holy were not black and white, just as they were not for Job. But a wilder celebration was taking shape inside of me.

After a few days, my companions and I decided to journey on from Grand Staircase-Escalante. We drove northeast to Goblin Valley, on the western outskirts of the San Rafael Desert in south-central Utah. Here the deep red-umber Entrada sandstone has eroded away into a maze of pillars shaped liked chess pieces, mushrooms, and goblins. Whimsical and grotesque, these knobby forms are nearly barren of life. The wind moves silently among them. The spring rains collect in shiny slicks of pink mud in their shadows.

We climbed among the pillars in Goblin Valley State Park and camped beside a fortress of them on adjacent BLM land. A place so barren and silent is well marked with modern human culture: initials and dates carved into goblin heads and atop the mesas that arise among them, plastic picnicware and toilet paper strewn about unofficial campsites, white chalk graffiti scrawled on goblin faces, off-trail ATV tracks over delicate soils. Meditatively, I began to collect trash in the evening as the sun plunged into luminous violet and apricot clouds on the western horizon. To the north, the endless chop of the San Rafael
Swell's listing mesas, cornices, and canyon rims caught the long cast of rose light. Again, I was reminded of Job's challenge to God. At long last, and out of a terrible whirlwind, God speaks.

> Where were you when I laid the foundations of the earth?... (38:4)

> Who has cut a channel for the torrents of rain, and a way for the thunderbolt,

to bring rain on a land where no one lives,

on the desert, which is empty of human life.

to satisfy the waste and desolate land,

and to make the ground put forth grass? (38:25-27)

God does not ever provide the explanation Job seeks. God does not defend his own justness or discuss human concerns. Instead he exposes the narrowness of Job's view of the universe. Verse after verse of the book of Job recounts God's answer from the whirlwind, an answer that is concerned with the wild wonder of creation, a creation that is not centered around human beings. Rather, humans are barely even mentioned.

I find this "new" biblical perspective on our relationship to God and to earth marvelously refreshing.⁴ So often, I have heard the passages from Genesis, where God creates humans last, as the endpoint and pinnacle of creation, and where God gives humans the edict to "fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth" (2:28).

Throughout history, these passages have been used to reinforce the anthropocentrism of western civilization, because they are understood as license to dominate earth. Here in the

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desert of Utah, my culture has scrawled its name and class year upon the rock, sending the undeniable, unapologetic message that this rock is here for us, for whatever purpose suits our desire. But God's voice from the whirlwind asserts that, like all of wild earth, the network of canyons and the sea of open desert are unfathomably deep and broad in comparison to our human desires. The desert is a wilderness in the starkest sense of the word. And the vivid manifestations of life in the desert, like the fleeting yellow bloom of the desert trumpet or the secret nesting of the raven high in the canyon wall, or all manner of creatures rarely witnessed by people, are here not for our use, but for their own wonderful sake.

Our last morning on the fringes of desert near Goblin Valley and the San Rafael Swell, we awakened at our campsite in Temple Mountain Wash. Before breakfast, I stood in awe beneath another testament of desert spirituality at least as old as the story of Job. A pocket-sized notebook and ballpoint pen in hand, I struggled to sketch the petroglyph figures that danced and crumbled on the yellow ochre sandstone walls before me. Many artists had added figures here, purple and maroon superhumans, dogs, sheep. On the right, the figure of a shaman, looming tall and square-shouldered, stretched out his hand as he grasped the long sinuous body of a snake. I later read that this snake might represent lightning, the rendering of it perhaps in celebration of a storm or in supplication for rain. On the far left, the horned head and torso of another shaman remained, a layer of stone flaked away below him. He was peppered with round scars where bullets had bitten into the ancient sedimentary rock. Other figures had fallen away, too, the rock layers released with erosion, or simply blown away in target practice.

I imagined then who might have made these paintings and how their marks upon the rock had stood for millennia like many other petroglyphs throughout Utah. Across the
seemingly endless canyonlands, in tight turns of ever-rising walls hung with mauve, peach, rose, black staining, early peoples painted and etched long processions of rams, sheep, strange human forms, spirals, heads, hands, birthings. These images still convey the power of an ancient people’s mark and their desert spirituality, a spirituality that included animals and the stark natural elements of the desert and canyonlands. Here before me, I was humbled by the undeniable way these desert forces had ignited their wildest imaginations. Roughly two thousand years after the artists had moved on, I knew the presence of a people who had dwelled in the landscape. Even though these people probably only migrated periodically through the area, my instinct asserted that with such paintings, these first peoples were a part of this place. They had to be to survive.

When I was finished drawing, I considered the marks of more modern humans—the initials, the dates, the bullet marks. Clearly, these marks are just another sign of people passing through, not unlike petroglyphs. But these later marks imply a people with a profoundly different view of their place in the universe and their relationship to earth. A people whose marks suggest no other power but their own—their own names, their own era, their own guns. Something is missing. Something the desert has long stirred inside us. For we no longer dwell in the landscape, but apart from it, special, perhaps lonely.

I thought then of Job, who hears the voice in the whirlwind and at last answers God’s magnificent and terrifying teaching. Job demonstrates a new humility, as he concedes the smallness of his concerns in the scheme of the wild cosmos.

Therefore I have uttered what I did not understand,

things too wonderful for me, which I did not know...

I...repent in dust and ashes (42:3,6).
The desert wisdom of both *Job* and Utah's first peoples are reminders of the people we once were. As I prepared to end my sojourn through this landscape, I sensed a deep remembrance of desert wisdom within, if only with the clumsiness of nonpractice. In those few days of exploration, the desert had wrapped around me—rusty cocoa and cinnamon earth encrusted in my toes, up my shins; sun pouring in dry waves of heat over my arms, hands, back; evening or morning winds stirring in my hair and in the scraggly oaks beside me; lightning igniting the red dust clouds over the pale green mesa above me. I was filled with a longing, that I might have known what it was like to *dwell in* desert all of my days, in the violet-rimmed canyons, in any land, as I imagined those early rock painters in their yucca and dogbane fiber sandals had dwelt.

The story of *Job*, like the petroglyphs of Utah, is an ancient mark upon the rock walls of time, a spirituality from an eastern desert people, who perhaps remembered that the wonder of the universe in which they lived was outside of themselves. Such wisdom is not merely archaic. I see in the jugulars of modern culture, like that in Salt Lake City and almost every city that I've lived in or visited, an extreme and increasing human-centeredness in all of this push for growth. It seems my culture has stopped asking God to answer for our suffering, and as a result we have lost touch with the wild wisdom we might uncover in the process. Maybe we've looked instead to human innovation to produce our own solutions, with the promises on those billboards meant to mask our loathsome sores. Like petroglyphs, these billboards say something about what we as a people prize. They also warn of what we are in danger of becoming. But out in the desert, I have discovered that the high quarter moon still rises, ivory against indigo just over the honey scalloped canyon rim, recreating the wider splendor and wildness of the universe. And I feel the power of the whirlwind again, sand between my toes.
The Pollen Burden

Yesterday I came upon a fleet of pasqueflowers quivering in the wind. They stirred, one against the other, much like sandhill cranes shifting wings, necks, and legs on the river roost before dawn.

I'd just climbed the steep meadow, the angular faces of red rocks pressing into the bottoms of my running sneakers. I'd been stewing over life's apparent dilemmas, breathing hard as I ran those grassy hills near Blue Mountain, just southwest of Missoula.
All across the valley, deciduous trees and shrubs were heavy laden with curled-up leaves and pendulant bouquets. Their pollen permeated the air, pushing hard over the prairie, assertive as the claiming song of meadowlarks, as the jutting forth of first leaves from the ground.

Despite the blue shout of an April sky, my internal debates refused to be ignored. As I set my sights on the pine frock along the mountain ridge ahead, my thoughts wound their way like tendrils around the approaching end of my time and work here. I started weighing those same old questions—questions about what fieldwork to pursue next, how far away my family and Matt would be, what landscape to embrace, and what landscapes to leave behind. Every spring, the decision arises like a sprouting nettle, welcome for its rich green flavor, but rough woven and riddled with stinging formic acid.

This time the decision comes slowly. I wait for my instinct to provide direction, but nothing arises. I might return to Minnesota, where Matt has already committed to seasonal work. I might venture to California, Colorado, or Alaska. I might stay in Montana. My adopted cycle continues. As if the passion I seek were geographic, always over the next horizon, in some new floristic key. I wonder when I will stop, if I’ve ever really tried stopping, even since I first left Vermont at six years old.

Gaining the top of the meadow, I came upon the pasqueflowers. Their dance in the wind announced their name—*Anemone patens* from the Greek word *anemos*, meaning wind. On knees and elbows, I stroked a bloom’s outer hairs, soft as owl feathers, slid my gaze in among its lavender sepals, smooth on their insides as a porcelain Japanese tea bowl.

Crouching there, my mind knotted with uncertainty, I wanted to drink the pasqueflower. I wanted this one spring bloom, tender and ephemeral and radiant in the late afternoon sunlight, to comfort me, to awe me with its tiny corolla realm, as though it were
an altar on which to lay my burdens. I regretted not bringing a pen and sketchbook, so I could tease its beauty out onto the page, pulling at some shimmering and delicate thread. Undoubtedly, I coveted its clarity, what secrets it surely kept among the tangle of its pale, plumose styles.

But the pasqueflowers only quivered as ants crawled up and down their leggy, upward-straining stems.

*What is this craving? I wondered. Why this impatience? Demand answers from flowers like I demand answers from this heart.* I looked away from the plants, sat beside them, and decided to accept their reticence. Directing my gaze downward to the valley, I took in the wide bowl of Missoula, flanked by the ranging grassy hills, now tinged in green, and shoulder after shoulder of indigo mountains. To the north, I pondered the snowy nipple of Sleeping Woman Peak and the terrifying titanium white of the Mission Mountains. Closer, and across the valley, I traced the drapes and crests of the Rattlesnake Wilderness rising above the rounded grassy hills of the Sapphires. Along their steep faces, I easily picked out the scars where ancient glacial lakes lapped and receded, then rose again. To the south, the Sapphires stretched on down the Bitterroot Valley, and just beyond the near ponderosa pines, with their warming needle aroma, I looked upon the bulky head of Lolo Peak rising, decked in snowfield finery. Below, the elbows of winding rivers flashed among cottonwoods, houses, and bridges.


I spoke the names aloud against the wind, then listened to the space that followed. I thought of going away, leaving all of this behind, and of how I might imagine this valley
from whatever far-off place. Something palpable hardened in my throat, for I realized the names would now forever conjure.

Turning back to the nearest pasqueflower, I watched ants scurry in and out of the corolla. The light bent beneath my magnifier, and I noticed how one ant followed an invisible path, skating downward, wedging its chitin forehead under the pale forest of stamens that circled the ovary like a fairy ring. The ant pushed forward, legs out and flailing against blank lavender walls, driven to cradle between its mandibles and run its tongue across I knew not what.

I might've expected the ant to be feeding on pollen, but the golden anthers that top the stamens remained well away from that deep crevice between filament and inner flower wall where the ant strained and pawed. A few pollen grains did cling to its legs and body segments—minute orbs dotting its chestnut armor like jewels—but the ant's contact with the anthers seemed incidental and occasional. And more, most of the anthers were still immature, tightly sealed yellow purses, refusing to shed their coins.

Then I observed, at the outer fringe of the stamen forest, occasional colorless stumps. Shorn filaments. Perhaps this ant and others like it had been slicing into the trunks of these stamens. Perhaps they did not seek pollen, but the juice of tender new floral equipment. Perhaps developing anthers required sugary nutrients at this stage in order to mature. In days that shift unexpectedly between bitter frosts and generous sun, an ant would greedily lap up such ready energy.

As the ants crawled out from beneath the stamen forest and back up to each flower rim, ascending to dizzying views across the Missoula Valley, they carried pollen against their bodies. This pollen, stashed so intimately, surely goes with them wherever they go. Among
moss and dead grass sheaths, down dark tunnels into the ground, back up into corolla after corolla.

Sitting there on that steep mountain meadow, looking out across the valley, I could see myself as an ant, having just crawled out of a flower. A flower in which I'd struggled and won its own form of nourishment, a flower with bone-jarringly brilliant mountain walls and wind-blown draws.

I thought then of my friend Tami, who recently left Missoula for a job in Tennessee. In the days before leaving, we'd walked together along the Rattlesnake Creek, stopping beside log-jammed pools, talking of all the heavy questions, because every minute mattered, and we held in common the nomadic life. She'd spoken of how she'd been lately feeling the pull of Missoula, a deep landscape pull, as if the land itself wanted her to stay.

I now sensed that same pull, calling out of the mountains.

In so many places, I've felt it before—the wide open plains of Wyoming, the mountain streams and tidal inlets of Maine, the prairies and lakes of Minnesota, the wet fog of Southeast Alaska, the canyon silence of Utah, the rolling forests of Vermont. Always, always, the pull. Always, always, the wind.

But the pollen of these places clings to me still—wherever I go, wherever I stay—a golden dust upon my forehead.