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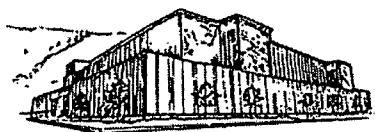
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Piercing the Crow's Eye:
Reflections and Recollections on the Natural World

By

Kathleen Joan Yale

B.S. University of Wisconsin—Madison, 2000

Presented in partial fulfillment of the requirements

for the degree of

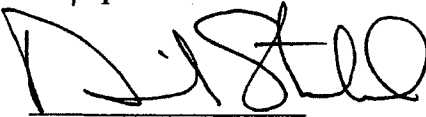
Masters of Science

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May 2005

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Yale, Kathleen J., M.S. May 2005

Environmental Studies

Title: Piercing the Crow's Eye: Reflections and Recollections on the Natural World

Chairperson: Phil Condon 

This collection of fifteen personal essays tracks my thoughts and observations over a series of years, during which I lived, worked and walked through various Montana landscapes. Settings range from Glacier and Yellowstone national parks, to the streets of Missoula. Though each essay is at least in part based in a Montana locale, they also meander in their scope, often encompassing childhood memories, natural history, folklore, environmental science, animal behavior, spirituality and philosophy.

I have worked as a wildlife field technician for several years, and greatly value the knowledge that the scientific world has to offer. But as human consumption and environmental degradation spiral out of control, I do not believe that science is enough to save the world. We need heart too, and new ways of looking and knowing. My hope is that these essays present a gentle advocacy, and promote both noticing and valuing the smallest moments and most subtle details of our natural world. I think that it is only through the marriage of science and spirit that we can change a system that is cracking faster than we can patch it.

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I would like to also thank the Ron and Nancy Erickson and EVST Student Scholarship Awards for much needed support, and Tom Roy for running such an excellent program. Over the last two years I have heavily relied on my fellow classmates' input and advice through many writing workshops, and feel honored to have shared ideas, time and beer with such talented writers and genuine people.

Extra thanks go to my friends for their support, mostly long-distance, and to Daniel Stahler for his love and encouragement, and for listening to my whining. Thanks also to my family, especially my mother, Maura, who is a source of endless love, strength and ideas, and who always knows how to get the ball rolling.

I offer much gratitude to the many field crews and hiking partners I have lived and worked with over the years—though they are not always mentioned by name, some of these stories are as much theirs as they are mine. I am infinitely grateful to have shared some of the best and most beautiful times of my life with each of them. And finally I must thank the universe itself. I don't know how I ever got so lucky as to see half the things that I have, but there could never be enough words to show my gratitude and wonder.

Introduction

John Locke said that what gives each person his or her personal identity is that person's private store of recollections. If so, then people should be careful curators of the assortment of memories that they collect over the years. Every time you notice something, every time something strikes you as important enough to store away in you mind, you create another piece of who you are ... I am a person who remembers a flock of white pelicans over Thompson Reservoir, pelicans banking in unison into the sunlight, banking into the shadow, flashing on and off like a scoreboard.

--Kathleen Dean Moore, from Riverwalking

~~~~~

I'm in Yellowstone, watching a small group of elk graze in the backyard, counting last year's calves by their wild neck fur. I find myself somewhat at a loss as I sit down to write what can only be explained as *an introduction to me*, and so I am procrastinating, watching. Despite what you might think of a person who has produced a collection of essays in the first person, I don't particularly like talking about myself on end. As so many remind us, *talk is cheap*.

What I *am* more comfortable with is producing images, making observations, thinking out loud, sharing thoughts with blank pages, not knowing who, if anyone, might read them in the future and under what circumstances. And so like the nervous speaker advised to picture her audience naked, I imagine you—sitting beside a summer stream, or looking out the kitchen window with coffee cup in hand, or curled up in a comfortable chair, wrapped in a dark wool blanket. I picture you reading these words in any one of the conditions during which I caught, wrestled down, and wrote them—by sunlight, lamplight and firelight. In all seasons, all weather, all moods. With steaming mugs of honeyed tea, full glasses of wine and quiet cups of cool water—within the midst of



crowds, hiking down trails, or as I am now, watching elk graze, sitting in a sunprint of light, on a ragged couch, with one hand on a sleeping dog.

Many places have shaped my life and personality—the spaces I have lived in or visited, but also the places that have been preserved in my blood’s memory. I believe without a doubt that a large part of my own path in life is a continuation of my blood’s journey—the braided passage of generations of women before me. Mother. Grandmother. Great-grandmother. The same blood moving closer to something each generation, gathering pieces, discovering, regenerating toward a wholeness.

As for specifics, I was born in Wisconsin and without effort loved that place from the very start. Montana is my second love, and though I have had my share of travels, many have begun and ended in those western mountains. And so while the essays presented here may flit like searching fireflies, from place to place and memory to memory, at the core they are rooted in Montana, and in the past.

What I hope I accomplish in these essays is a presentation of emotions, observations, ponderings and ideas, all captured in small moments. Gabriel Garcia Marquez once wrote, “what matters in life is not what happens to you but what you remember and how you remember it.” Often there is a choice. Sometimes I think that I am too bound by memory—that even as I am looking at something, feeling something for the first time, I am doing it with care as to how it will be remembered, how it will be written. It is in this way that I often feel an ache in the passing of time, in endings and in the imperceptible echoes of a thousand brief instants. It is as if I have felt the moment before and I want to slow it down, so that I can notice every flecked detail, touch it quietly with the back of my hand.

I strive to harness this collective memory, to ensure that the lens through which I view the world is a creative arrangement of many different angles, beliefs and recollections—of science and spirit, of history and folklore, of social, political and ecological views—a mosaic of contrary but complimentary eyes. Subtle, thoughtful, guttural. The challenge comes in producing coherent thoughts and arguments, and I put a lot of hope in the reader who will stay with me through these observations, wanderings and rambles, through this gentle advocacy. Talk may be cheap, but words, good and meaningful words, are harder to find. I have spent years searching for words—turning over rocks, thumping on logs, rummaging through abandoned cars, rusted through. I have been struck by words in stinging raindrops, and knocked down by their force. I have plucked them from the sky like dying butterflies and licked them from the very air.

I still don't know if those I have found or caught or cultivated are the right ones—if any will retain their vitality off the page—will soothe, anger, beautify, heal, cause trouble, cause thought, multiply. But this is my hope—that through the written word, one of these images, one of these moments or thoughts, will touch you, and make you see the world just a little differently, will make you love it just a little more.

*Between Moves and Emotions*

*"Little by little, one travels far." --J.R.R. Tolkien*

~~~~~

We have all heard stories like those involving Aldo Leopold and Henry David Thoreau. Stories of the exact moment, the exact place where their very philosophies of living were either forged or fundamentally altered. For Leopold it was standing over a wolf, rifle in hand, watching it die. For Thoreau it was a small cabin on the rocky banks of Walden Pond.

But for me it isn't so easy. Somehow it seems like choosing between children, or deciding on *the* song or smell or taste that will forever be your anthem in life, your signature. To pick only one place is impossible, for they are all bound and cemented in the same stout turret of memory that casts a long shadow. If I am the product of the people and places that have shaped me, then surely it is the mosaic that I most resemble and not the line. To choose one place would be to rank the separate pieces of myself—and who can grade the importance of the heart against the brain, the lung against the liver, the stomach against the skin? For me there is no one magic place, no clear beginning tangible enough to hold in dreams, no one shelter to retreat to during moments of doubt or weakness.

I believe in generational memory--in blood that flows with old joys and longings, in cells that hold secrets and gifts and curses tucked within microscopic twistings. If this is true, then like all things, it must begin in part with my mother, for I knew some of the world already, safe within her womb, connected by generational lines braided into a slick

umbilicus. I was born into a January blizzard—and believe I must have loved this world, with all its beauty and suffering, from my first taste of snow. I was born to a motherless daughter who taught me early on of the impermanence of things—marriage, security, life. She taught me to carry a sanctuary within, to look for it in all places instead of just one. Where was it that I first began to love the world? Everywhere.

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Can my grandfather's house claim to be the first tile in the mosaic? The Wisconsin split-level with a fallout shelter on a street called Driftwood? Sitting on the hood of a golden Honda in my mother's lap, reaching up to catch the thin whip-branches of our enormous weeping willow, the tallest tree in the neighborhood? Or was it down the hill in the backyard, hiding under the tall-trunked pine trees, staging miniature plays with little round rabbit pellets?

And what of the terrace and the Madison city beaches--feeding ducks, toddling closer to the shore, letting curved orange beaks tug stale crusts out of my small fingers? And the zoo-- watching the elephants and otters, holding baby raccoons, feeding speckled fawns?

Surely our cabin in the Northwoods deserves many pieces. There I named the saplings of the forest (George...Cleo...Duncan, after our dog), measuring their growth each passing summer with the span of my own growing hands. There, barefoot on the mossy path, I picked wild blueberries for my father's pancakes and with stained fingertips dropped them into maroon plastic mugs—a pile of tiny crowned heads. And it was there that I called the loons in across the evening lake, cupping my hands between mosquito swats, bobbing in the water until it was too cold to bear.

And how about the countless forts I built with my brothers and sister in our backyards and basements, between moves and emotions? The sheets across clotheslines, burrows between feed-corn rows and snow tunnels behind the old green garage. The carefully weeded gardens that held the black, buried bodies of pet rabbits and pet cats—Thumper, then Tuppence, then Crescent.

And Devil's Lake outside of town—years of summer picnics on the lawn with my aunts and uncles, napping in the grass, digging in the sand. Years of learning to swim off the shore, laughing at the tickle of minnows against my small calves. Days of watching for rattlesnakes sunning on the great boulder falls, and talking to woodchucks that ventured from the forest borders.

Or under the lush rhododendrons, dripping with Carolina rain, faced pressed to the Earth beneath a heavy backpack, looking up to count Turk-cap lilies. Or the rocks of the Adirondacks—eating cheese and noodles with branch-whittled chopsticks near those summer ice caves, streaming with cool air. Those waterfalls. Those mink darting beneath tree roots. And then Montana.

Surely I loved this world before the mountains stole my heart. Before I watched bears swim across rivers and fires burn across ridges. I recognized the Northern Lights from the very first—the hand of God, green and wispy. That thumbprint on the muzzle of a wolf. On the dragonfly's veined wings, spread across the surface of a pond. On my spirit from the moment I was first carried out beneath a snowing sky.

*The Immaculate Observatory*

*Sometimes I think we observe not to find out what is there where we are, but to try and figure out whether we are in the right place.” --Gretchen Legler from her book  
All the Powerful Invisible Things*

~~~~~

Every time I spot an animal, I am nearly overcome with an intense desire to touch it. This goes beyond my proclivity for all things soft to the touch--it is something much deeper than that. This feeling is not the result of a desire to tame or use or domesticate. It has more to do with a powerful admiration, a deep fascination that I have had as long as I can remember, and also a desire to protect and care for these wild creatures--though I am fully aware that they need no human care.

This feeling in part stems from the way the black-tailed deer can stand facing our backyard fence (which is taller than the tops of her wide ears), and then, in what almost seems like slow-motion, leap over it as if it were no more difficult than stepping over a fallen branch. It is about the deft aerial acrobatics of a raven pair, and the knowledge that they mate for life and can live past sixty years. It's about too, the piercing howls of a wolf pack, the tremendous prints of a mother grizzly next to her cub's, the impossible flight of the bumble bee, the hare's seasonal color change, and young salamanders surviving a northern winter, deep in pond mud, awakening in spring to swim in rainwater--their small frilled gills like those of tiny dragons.

Maybe I wish for their energy, for their aura. I want them to recognize me as one of their own--a friend, a guardian, a mother, a subordinate. I want to speak their secret languages. I want to reach out my hand and have a fat robin hop into my open palm.

I dream of animals. I dream we communicate. Sometimes I save them, sometimes they save me, sometimes we fight to the death, and sometimes, I become the animal. The dream may change, but the animals are always there.

~~~~~

I have spent the last few years wandering around Montana, looking for different kinds of animals. During this time, when a form or survey asked my occupation, I could say *wildlife biologist*, and smile to myself. It began in Glacier, where I wove through the woods looking for grizzly hair and scat. Then it was three summers of wading through reedy wetlands and kicking up round river stones, counting the black tadpoles and glistening eggs of the various frogs, toads and salamanders that live within the park. I spent a winter tagging snowshoe hares, and part of a spring tracking lynx over Seeley logging roads, and most recently, a few seasons with the Yellowstone wolves.

Last winter I passed many weeks in Yellowstone's Northern Range, working for the Gray Wolf Restoration Project and watching the Leopold pack through an olive green spotting scope balanced on spindly black legs that shook in the cold wind. The Leopolds are unique; they were the first pack to form naturally after the 1995 re-introduction of wolves into the Park. Our main charge was to observe behavior for as many hours as the day and wolves would allow, and I grew familiar with the cold ache of numb skin. We watched the pack travel and knew many of their routes--we napped when they slept, watched them play and rally, hunt and howl. We witnessed the rising of a new alpha pair, conflicts with neighboring packs, and curious interactions with lone bears, bison and scavengers. Everyday, clasping my frozen, mittened hands over a heap of thick woolen

layers, I marveled at how lucky I was to know a small part of all these different creatures, and to watch fragments of their lives unfold.

There was a raven that I often saw from my wintry perch on South Butte, the tall sentinel of Blacktail Plateau. The long, narrow gap of a missing primary feather made the bird easy to identify, soaring in slow circles over my head day after day—its wing span giving the impression of a missing tooth in a wide grin. For all of the raven quorks and knocks heard out on the plateau, never once did I turn my head to a call and find this bird the source. This raven was quiet like me, and I wondered what caused its silent observation.

The raven is known by many names—trickster, healer, messenger, creator, bringer of magic. This was the dark angel that brought madness to Poe, and symbolized death and decay to others, making ravens almost as feared as wolves. The Haida people and other tribes of the Northwest believe that raven is the god that created all life—sun, moon, stars, earth and humans alike. The Koyukon often call upon ravens for luck while hunting. The writer Richard Nelson lived with this Alaskan tribe for several seasons, and often heard the cry “Tseek’aal, sits’a nohaaltee’ogh,” “grandfather drop a pack to me.” If the raven calls or rolls, the hunter has been momentarily blessed.

Ravens are clever creatures. They can unzip unattended backpacks and remove food and other objects from the pockets. The maintenance crews in Yellowstone sometimes place a pebble on the outside of garbage cans—a small, simple signal that if moved, tells the driver the receptacle has been opened, and that it needs to be emptied. A friend of mine has watched ravens fly directly to that small pebble and knock it down, then wait for any scraps to fall when the driver gets out to check the trash. Konrad



Lorenz, the famous ethologist, experienced another interesting incident with a related find. Once during a routine feeding, his pet bird brought in a damp article of clothing from the line. Lorenz thought little of it, and unconsciously rewarded the animal with food. Many times after that, this same bird would fly off and return with small articles from neighborhood clotheslines—a sock or glove or pair of underwear, in anticipation of a food reward.

Observers have documented that Yellowstone ravens follow Yellowstone wolves. They have learned that where they find wolves, so too will they likely find a leftover carcass. Many times I have searched for wolves, scanning the subtle hills and frozen creek beds laid out ahead, only to catch the stealthy blue-black shadow of a raven—and then followed the bird straight to the pack. Abandoned elk kills are surrounded by hundreds of little trident tracks, peculiar, angular forks, some light blue like the snow, some a deep, wet red. Often at kill sites I would seek out the undisturbed patches of snow, looking for their rare wing prints, little feathered snow angels—the blessing in the wake of their ascent.

Just outside of the park boundary, during the late winter hunt, I've seen over one hundred ravens feeding on elk gut piles, darting between massive bald eagles and chasing magpies. Pairs will feed each other from their black beaks, while the juveniles soar in great parliaments, spiraling up through the air with the thermal patterns, effortlessly floating and dotting the sky.

~~~~~

I soon learned that in order to watch wildlife, you must be in position when they are most active. To find wolves in particular, this means an observer must sacrifice a

normal amount of sleep and be outside before dawn. While I have always been a reluctant riser, especially when the stars are still high, it was easy to get used to the coyote choruses, and to the sunrises. They seem to be accentuated by the most bitter of pre-dawn coldness, and I saw more amazing sunrises that winter in Yellowstone than any other. Like the ghost of an old wildfire, an orange glow burned over the soot-black mountains. Another day the clouds seemed to burst with a magenta flush, spilling wide sunbeams that shot across the plateau. And then there were the sunsets—beautiful and unapologetic, as they stole away the day’s warmth without mercy, leaving us to shiver again until nightfall.

I loved too, watching the light patterns flow throughout the day, and how they could transform the landscape. To be so constantly aware of how the white sun or day-moon hovers, to be able to watch shadows begin, and then follow them through their thin final stretch toward dusk, was a bit of magic in a society that has invented numerous ways to prolong light. Things change under different lighting—some become more detailed, others less specific in a pleasant haziness. Trees and mountains and animals all pass through these phases of sharpness and softness. Some things, like tracks, are even swallowed up in certain light, and seem to reappear in a different hour as if left by invisible hosts.

Tracks are always an exciting discovery. The whole of Yellowstone is divided into a mosaic of animal prints, a thick quilt covered in cross-stitching. The straight lines of lazy-footed ungulates have the appearance of ski trails, clean and direct, dotted with crescent-hoofed prints. They are cut by massive padded wolf prints and the smallest rodent hops. I am reminded of a passage by Tasha Tudor on finding these tiny tracks: “I

found some of the most minute mouse tracks this morning, like little necklaces in the snow.” I’ve followed hare tracks for some distance, measuring the length between hops with a long, winding string, getting tangled in the many double-backs and circles of a nervous animal. Behaviorists call it “tortuosity,” a title that seems to rob the joy out of mere wandering.

Now there are even ways to photograph a track digitally and identify a specific individual’s paw print, as with a human fingerprint. This technology is taking its place next to DNA hair and scat work, remote sensing cameras and other non-invasive research methods. These methods are not a substitute for all other kinds of research--certain information cannot be told through movement patterns and heritage alone--but they are pieces of the puzzle. I remember the thrill of finding a soft clump of golden bear hair swaying from a barbed wire hook, and fresh tracks in the mud; but it was through the focused watching that I felt closest to wildlife, where I felt like a secret, but invited, spy.

In late November, just before his winter sleep, we watched a fat grizzly slowly amble and follow the Leopolds around for a day. He bedded when they did, and even traveled in a single-file line between wolves that refused to step out and pass him. The different animals would come within several feet of each other, and with no food source to fight over; the bear seemed comfortable, playful even, as if he briefly wanted to break from his own solitary company. This incident was one of the first of its kind to be documented, and we did so only through diligent observation. I never grew tired of watching the wanderings of all of these animals. Though bound by genetic tradition, they are also flexible and adaptable, and they always offered something new to see.

One week I watched a Hellroaring mother bison stand over the body of her small red calf for a few days. Often a group from her herd lingered in a loose circle around the fallen calf—why, I cannot say for sure... perhaps to protect its cold body? Perhaps to mourn? Elephant herds return to the sun-bleached bones of their companions year after year to stomp and trumpet. There is a certain solidarity there, and I think that the bison share it to a degree. I've seen a group run out to meet a stray, and block the wolves in their pursuit. Watching those animals guard the dead calf—it nearly broke my heart to think about what their numbers were like a few hundred years ago, how they are in a sense imprisoned in their surviving ranges and ranches, that the penalty is often death, doled out by the state, to those who follow the call to roam a greater distance.

Perhaps this is what it takes for some people to understand. Maybe they need to sit in the open air and notice the different ways ungulates forage in winter—the bison nudging the snow from side to side with their tremendous heads, the elk arcing their forelegs to kick it back. Maybe we all need to see the bloody face of a well-fed coyote, follow the sure steps of a bighorn lamb and wait with the watchful eagle at her leafless post. Maybe that truly is what it takes for some to realize that the value of wildness is immeasurable.

I entreat us all to look around, just sit down and watch something—the squirrel tossing pinecones from its nest or the robin pulling up earthworms after a storm. There is so much to see, so much beauty and mystery. I could watch these wolves, or any other creature on earth, every second for the rest of my life and there would still be secrets hidden from me. The natural world is constructed of the things that are visible and those

that are invisible, and the line that separates them is seamless, unseen. The open air offers an immaculate observatory for anyone who is eager.

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I remember that after a few days of nervousness (wanting to see the wolves hunt, not wanting to watch an elk die), we went to retrieve our first kill. In addition to recording all forms of lupine behavior, the Yellowstone Wolf Project also documents ungulate kill rates. Part of my job was to try to find kill sites by direct observation or by reading a variety of signs, such as scavenger activity. Once a kill site is located, crews walk, snowshoe, or ski in to collect data. Bone marrow quality, metatarsus length, tooth wear, gender and age of the prey are the main factors that are examined.

We had waited a few days to pick up this particular kill, as the spotter plane had seen a large, winter-ready grizzly lying over it the day before. Sometimes, particularly after a bear has been there, when you reach a wolf kill you have to walk a wide radius to retrieve all of the remaining bones that have traveled from the center area. Often too, you can tell if a bear has scavenged a kill, as they can peel down the hide of a metatarsal leg bone, much as you would a banana. It was a sunny day, and what was left of the carcass was still soft and bloody. At first I shied away from the scene, preferring to watch, rather than participate in the tooth-pulling and bone-sawing. Walking around the perimeter, I counted the wolf beds and put my hands into their melting prints.

Another time we hiked out onto Blacktail Plateau to do a necropsy on a tremendous bull elk with antlers as tall as my arm span is wide. It took me some time to come to terms with scenes like these, but now I can see the beauty in them--in the red, blood-soaked snow and the branched antlers, a testament to the dual evolution of predator

and prey and their cyclical partnership. And to see how necessary wolves are to this, their ancestral ecosystem. This bull had a long tapered crack down his mandible, from what we could not be certain. Nevertheless, such a fracture could have hindered his ability to eat, a theory backed in part by the unhealthy, pink-tinged bone marrow, a dangerous sign at the onset of winter. This may have been a weakness that the Leopold pack was quick to exploit. Also, given the great size of this bull's antlers, it is likely that he was a dominant breeder that fall. Bulls are known to become so wholly sex-crazed during the rut that they might not eat even a mouthful of grass for two weeks. Two weeks without food. This can be devastating in terms of body fat. I am constantly astounded by these animals—by the fierceness of nature.

~~~~~

I helped to collar lynx up in Seeley Lake one winter. We carefully walked in each other's prints to leave a subtle single track—my padded steps easily fit where the handler Craig's big mukluks trailed. Slowly we approached the trap, covered in severed fir boughs, to be received by a low growl and an arched back. We drugged the cat with a jab stick—a pointed needle attached to a long, skinny pole--and then waited for his sleep to come. Then, in the eerie blue glow of a headlamp, I held this lynx. I remember running my bare hands over his soft, banded fur, pausing to see what it looked like rising in little spikes between my frozen fingers; and putting my palm against his tremendous feet, thick with yellowing fur that looked like matted wool slippers, as big as his head. This one was missing a couple of toes—just small, boney nubs poking out of that tangle of fuzz.

I helped to measure his length as Craig drew blood—filling the small vial dark with red, warm to the touch, before fitting a new radio collar. As we worked we talked of

grandfathers, canoeing, and the moon; and all the while I could not take my eyes off the cat, and kept thinking about how lucky I was to have such intimate contact with a wild animal. But in some ways, it saddened me. Because this wasn't true intimacy—not in the sense that you hope for anyway. That was a sense I had while watching the wolves from a distance, where I wasn't interfering with their wildness; or from locking eyes with a mule deer, and then having her continue to graze rather than immediately dart away. Instead I was invading this lynx's space on my terms, not his. And so I felt grateful, so grateful to feel his slow, wild breaths on the back of my hand, to be one of two people to touch this individual, and one of a few people in the entire world to touch any wild lynx; but I also felt guilty, and whispered under my breath continual thanks and apologies.

I know that there are few choices left in how we study wildlife, and although this particular method may be invasive for a short period, it is also a good way to maintain distance in its aftermath. This capture and collaring process is what allows researchers to track movements and ranges, follow reproduction and observe behavior, from a distance, without interfering further.

The Yellowstone wolves are darted in mid-winter from a helicopter when the weather is right, and the snow is deep. This gives the capture process a much different feel than trapping. In contrast to the cold, blue night when I held the lynx, I touched my first wolf on a sunny, snow-blinding day, sweating from the rapid hike and surrounded by a team of biologists. Often I saw wolf behavior that reminded me of my own pet dogs, but the similarities ended with this view. You can't image how big they are, how wild. Their long, powerful legs stretched out, each hair a slightly different color, their eyes

ancient. She was gorgeous, and I hoped to have the chance to watch her run through the icy lens of my spotting scope.

A couple of months later I saw my first dead wolf. We spent a March afternoon hiking up near Tower Falls to retrieve a radio-collared male from the Agate Creek pack in the Northern Range. A tremendous gray male—massive, beautiful head and paws, mysteriously left on an open wind-blown slope—lying dead on his side atop the crusted snow, half buried by the harsh drifts. We searched for hints about what might have caused his demise. His body was still intact—the cold had preserved it well. No tracks were spared, not even his own. In truth, he almost looked like he was sleeping. But a raven had taken his eyes, a final gift to the clever scavengers that faithfully follow packs from the air, feast on their kills and even pull on pups' tails. So while at first the thought of this creature's eyelessness disturbed me, on a second thought it seemed quite fitting.

Wolves have been killed by prey in the past, as a sharp hoof can easily break bone. This seemed a likely cause of death, but there were few signs to read, and we were forced to bring him back with us for an official necropsy. Therein lies a sad scene. As a biologist I realize and support the need to study these animals—especially a re-introduced species. I also know that his death, whatever the cause, was natural; unlike the two in the walk-in freezer, with fist-sized bullet holes in their sides, shot outside of the Park. But this departure from his territory was not natural—bound to an absurd, neon-orange plastic children's sled, pulled behind alternating people with ropes tied around their waists, lifted over downed trees and frozen creeks by four hands, by backs hunched like those of pallbearers. This end of his body—humiliated by an orange sled and bungee cords--saddened me deeply. When I wasn't pulling him, I walked beside the sled looking down.

After the investigation, perhaps his pelt will join others an educational tool-- maybe a child will have the chance to rub her face across the banded fur and realize the importance of wolves, of all things. In this thought I took great comfort. And maybe, years later, the skull will be returned to the land, where short mosses and lichen will find it and turn it green.

Revival

*“At this hour, what is dead is restless
and what is living is burning.”*

--Li-Young Lee

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After the evacuation, my field crew retreated to the east side of Glacier. The constant crackle of radio traffic kept us updated on the fire’s progression, though the air alone was enough of a reminder—pregnant with dark smoke, hot and dry on my skin, in my throat. We kept up with business as usual, kept working on our research, trying not to wonder if our seasonal house on the west side of the park was going to burn up.

I could not help but ponder the irony of doing wetland surveys in the middle of the worst fire season in decades. But with the exception of brief imagined moments when I pictured the flames sucking entire ponds dry, like a drop of water sucked from a countertop with an open mouth, I considered the amphibians to be among the safest creatures in the path of the season’s fires. In fact, having been through numerous fire seasons in the park, my field-mates and I even anticipated the results that so many flames might have on the wetlands, on the toads. Abandoning the place you love most and knowing you may not even recognize it when you return is a sobering thought. And I took small, but necessary comfort in imagining what it would be like to survey that water

the next spring, what we might find on the dark charred banks, what we might find beneath the logs of those black-bottomed ponds.

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During my seasons on the USGS run amphibian project, I loved walking shorelines looking for what creatures live on the edge of two worlds, counting the spotted frogs and boreal toads that leapt up and then dove deep between the reeds. This was a survey job. My principal task was to *find* things, find amphibians--to look down, to look small—to push aside rushes, lift new green leaves and sieve through mud. I paused to watch the huge, flat, oval-shaped water beetles glide between reeds, their long oar-shaped legs stroking like tiny rowboats ferrying between coasts. I spent long moments studying the big dragonflies that whizzed past, retrieving those caught in the water, leaving their veined wings to dry in the sun; or stopping for lunch to name the shapes of the shore rocks—some smooth for skipping, some porous like little honeycombs, still others lumpy like mini gray elephants. If the water was clear we would make time to soak sore feet, and teetering, dip sunburned faces beneath the surface, whipping wet hair back in a spray of icy droplets.

I was walking the banks of Otatso Lake one day when I noticed a slight movement. Looking through soft shore grasses, I saw a mouse run to the edge and dive into the water, leaving a splash and a small circle of ripples. He swam under the surface for a moment, then circled back toward the bank with just his eyes and pointed nose poking out of the water, like a downy alligator. My first diving mouse. That night we set the tent up near shore in a field of wild onions, and I pulled the green stems between my teeth until they wore thin and translucent, biting my tongue.

As a rule, the banks of wetlands in northern Montana offer great diversity, as do the sites themselves. For the purposes of our data collection, each wetland was placed within a more specific category—lake, pond, marsh, fen. We speculated a site's lifespan and its origins—glacial, groundwater, manmade, flooding--permanent, semi-permanent, temporary. We measured temperature, conductivity, ph levels; looked at shoreline composition, aquatic vegetation and shadiness. But chiefly we searched for amphibian life at any stage. Boreal toads, long-toed salamanders, Columbian spotted frogs, Pacific tree frogs, tailed and chorus frogs have all been documented somewhere within the park boundaries, and I spent these three seasons sweeping even the smallest of wetlands with a long-handled dip net, looking for them.

Your search image changes as the months weather on. In spring it is the egg masses that demand your attention. Toads enter this world in long, thin gelatinous chains that string out in the water like a black-beaded necklace. Frogs are born in floating clumped egg masses, and female salamanders leave their eggs attached to reed stems and dead logs beneath the water's surface. By June many of the lower-elevation eggs have hatched, and the larvae remain close to shore, dark and tiny. I have never liked the term "larvae" as a descriptor for these new beings—something about it sounds too sterile, too removed. Standing above them, shin deep in soft mud with a wet handful alive in energy, to me they feel like the very ambassadors of spring.

As they age, the tadpoles venture further from the shallows and begin to take on more distinct shapes. The toads remain jet black, a round body with a squirmy narrow tail. The spotted frogs grow bigger, their skin lighter, their noses more pointed. By the time their back legs emerge they are nearly the size of a misshapen ping-pong ball, and

can actually make audible splashing with their swift movements. And the salamanders stretch long and slender, as their gills fringe out like little Chinese dragons.

By mid to late summer we began to count the metamorphs that haunt the last puddles of nearly dried up ponds. My favorites are the *toadlets*, small enough to get stuck in a footprint; they are no bigger than a fingernail. Their characteristic single white back-stripe is as delicate as a graphite etch mark, and their legs look ridiculously tiny in comparison to their rotund bodies, the stick arms of a muddy snowman.

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In the spring of 2002, a year after the Moose Fire raged through the park's western boundary, road maintenance crews were evening out run-off damage on the Inside Camas Road when they noticed the space ahead seemed to be moving. Shutting off their engines, they walked ahead to investigate. In the road they saw thousands of boreal toads, small as thumbs and migrating from the area. *Like popcorn*, they said. A few phone calls and the road was closed until the toads made it across safely. We cheered when the little toads made it to the national news. Additional studies have since been launched to explore toad's apparent preference for fire-disturbed areas further, and my field partners and I spent extra time in old burns in the field seasons to come—painting fake mustaches on our faces with bits of burnt wood and walking across blackened logs that glistened like fish scales.

Now, a few years later, the specifics of that great toad migration remain somewhat mysterious. By comparing breeding site data from before and after the fires, we can see a notable increase in toad-friendly wetlands. This is significant because boreal toad populations have been steadily declining over the last hundred years, and

Glacier loses more traditional breeding sites each year. But the only thing that remains obvious is that the amphibians welcome some results of fire--just what aspect remains veiled at the moment, as if seen only hazily, through smoky air that makes eyes sting and heads ache. New work is being done in attempts to pinpoint what causes such breeding success and preference. Theories abound. Perhaps the creeping flames raised the soil temperature, or the dark ash added some key nutrient to the soil or water, some alchemist's ingredient. Maybe after the forest canopy burned to the ground and floated away in cinders, the lack of shade and increased sunlight caused a boom in certain algae. I've seen such water explode into slime—the unfurling of a vast, green flower that gains size with each passing day, an expanding and delectable buffet for young tadpoles. I have always been impressed with the intricate, ecological puzzle pieces of the natural world—delicate and lace-like at times, robust and resilient at others. While I am curious to know the ultimate reason why the toads flourished, I am also content to wait a while. I'll let nature keep her secret just a little longer in a croaked whisper.

Regardless of the cause, that day the road closed those toads were tangible reminders that while fire in nature may be a destroyer of the individual, for the whole it is more of a catalyst. Indeed, a very essential catalyst. As I walked through the acres that had burned just the previous fall, I saw they were teeming with undeniably new life. Patches of porous morel mushrooms, bright yellow glacier lilies against the black ash, and fresh green shoots surrounded nearly every charred snag or fallen log.

For centuries folklore has connected salamanders, like the mythical phoenix, to fire. Even Pliny wrote about their supposed ice-cold skin and ability, proclivity even, to withstand biting flames. Perhaps this was because salamanders live shy lives and seek

out secluded nooks under rocks and in dead logs, logs that might make good firewood. Or maybe it is because they resemble a form of dragon, in gentle miniature. In ancient Vietnam the people called toad “sky-god’s uncle” and thought he brought the rains in times of need. Throughout cultures both frogs and toads are commonly seen as a link to water and cleansing, but I find it interesting that modern ecology and ancient folklore might actually link them to fire as well. If toad brings rain for his own enjoyment, might he also withhold it to encourage a different form of cleansing through fire? Both animals are regarded as fertility symbols, and anyone on the Inside Road that day would not dispute their fruitfulness; prosperity, perhaps in part, brought through fire.

I have witnessed enough fires in Glacier to have experienced those first feelings of fear and loss at the sight of a sky thick with smoke, a brooding blood-red sun and papery ash bits settling in the dry grass. I have sat across Lake McDonald and heard the roar of flames from the far shore, the hissing language of fire. To be sure, fire wields a tremendous power. But it was in the return trips to these burned areas that I began to make peace with fire, to understand it and the new life it encouraged.

Morels, for one, love to grow in recently burned areas. They grow as though they are sucking the very energy right out of the ashes—expanding their brown and porous walls, living close to the earth, sprouting from ground thick with mud and fallen needles. Their shape makes the search more demanding—requiring attention to subtle detail, much like looking for amphibians. Eyes strain to distinguish one shade of brown from another, to differentiate rock from pinecone, pinecone from mushroom. And so when you finally lift your eyes from the ground, they pause in adjustment, and for a moment the forest is a blur.

This is how the antler came to me, gathering morels south of Glacier--a white shape glowing among the duller shades down slope, luring me like some glowing night-ghast in the dark. I slid down the slick slope I was searching and approached the apparition, blinking. It was a moose shed, cast off by a bull many autumns ago, bleached by time and sun, now upturned and collecting rain in a shallow palm-like curve of antler.

It was slightly misshapen, gnawed at by some small teeth and scorched in places from wild fire. Picking it up, I was surprised to feel how malleable it was, twisting beneath my grip—soft even, like a hardened sponge and porous like a heavy pumice stone. Near it lay an old vertebrae, also burned over, which I crushed into pieces and finally dust, between my fingers and thumb.

This is what fire does. It reduces the size of things; it changes their color, their consistency and shape. It returns bones to the earth, and antlers and wood. It redistributes energies. Its flames open up pinecones, spreading their seeds—its ashes sprout morels. In the spring, when the cinders have cooled, toads will thrive. They will rally together, migrate short but expansive distances in exodus—crawling over one another, between the scattered yellow lilies that shine like a thousand stars on the hills of an ash black night.



Bone Boiling

*“I am glad I did it, partly because it was well worth it, and chiefly because I shall never have to do it again.” --Mark Twain*

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Over the last few years I have spent several seasons working on wildlife field projects. A lot of people automatically think *ranger* when I say this—pickle-green-suit, funny-hat, shiny-badge-wearing ranger. The general consensus seems to be one of respect, and at the very least there is a level of esteem associated with the title. But I have never been a ranger, have no desire to be one, and don't mean to lead people on.

When I describe my work of the moment, polls reveal that the most common responses I usually receive are either the envious “I wish I got paid to do *that*” or the bewildered “oh, well, that must be nice for *you*.” As in, “You spent the fall collecting bear scat? Well, that sounds perfect for you.” Never mind the fact that someone might actually think my ideal purpose in life is to retrieve animal excrement. You see, while some imagine the world of biological field work as one full of petting baby animals, making daisy-chains and working on your tan in a sort of *the-hills-are-alive-with-the-sound-of-music* state of ecstasy, let it be known that there is a far more seedy underbelly to it all. Grunt work, clean up, whatever you want to call it, there are a great many cogs that need to be kept greased in order to run a successful project. And the greasing gets you dirty. Sometimes disgustingly so.

When trying to one-up a task that involves “homogenizing” a scat sample (read: squishing it in your hand for two or three minutes, eyeing it for bugs, bark and berries until your gloves are stained and dripping any number of colors), there are only a few

pegs on the ladder of revulsion to ascend. My family thought the process of bottling fermented cattle blood and fish guts as liquid bear lure--*you have to scrub the maggots off before you fill the bottle*-- took it up a notch, if not several widely-spaced notches. That was for a project in Glacier that tried to entice grizzly bears into certain marked areas where they might rub on trees and roll around in said concoction, leaving bits of DNA in strands of hair and piles of scat for our collection purposes. Obviously in the game of gross-out, two-month old fish guts and greedy, writhing maggots were hard to top.

Until Yellowstone.

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A couple of years ago I began working on the Gray Wolf Restoration Project in Yellowstone National Park. The job entailed many different responsibilities—observing and documenting wolf behavior, radio-tracking and mapping individuals' locations and such. One of the project's focal points is documenting wolf kill rates, so we spent a lot of time looking for prey carcasses and doing necropsies on disarticulated bison, deer, and most of all, elk. It is possible that you really haven't lived until you've gotten your hands dirty in a gooey, gangrenous carcass.

At every kill site we recorded the sex, age and condition of the animal, examining bone marrow and looking for any abnormalities before taking a souvenir back to the office in the form of an elk leg. Eventually we measured the metatarsus bones (the elk equivalent of the human bone that connects the base of the toes to the ankle) for general record keeping and as an index of vulnerability in regards to elk population and health within the park. These bones are supposedly some of the last long bones to finish developing in a fetus, and by comparing bone lengths from different individuals we can

get an indication of the overall health of these animals and the health of their mothers during pregnancy. But oh, gentle reader, between collection and measurement lays a crucial step in the process: bone boiling.

In truth, a more accurate description of the task would probably be along the lines of “putrid flesh boiling” or “experimenting with malodorous scent tolerance,” but that’s just if you catch me on a bad day.

Right. So the day begins with the unceremonious lighting of a propane fire and the filling of a large, much dented tin garbage can with many gallons of water. It usually takes an hour or two before the pot is finally boiling, and the real task begins.

Imagine a maintenance area--well, junkyard really--located down, down, down at the dead end of a winding road in the Mammoth Headquarters neighborhood of the park. There sits a large chrome freezer, the walk-in kind the size of (or sadly, perhaps larger than) my seasonal dorm room at the time. This particular freezer’s favorite game is “let’s break down again,” which it is very good at, and has successfully completed multiple times in the past. The most lasting result of this game, beyond emotional scarring for the poor soul who must mop it out, is that often the contents within the freezer don’t necessarily stay “frozen.” The very location of this exiled freezer is a pretty good indicator of how the rest of the park feels about the matter. It is my personal belief that they are trying to forget it exists.

And what does said freezer contain? Hmmm. Well, there is usually a wide assortment of animal heads, bodies and parts--many waiting to be examined at a wildlife lab, or used as evidence in poaching cases. There are also many, many tissue and bone

marrow samples and many, many, many elk legs. And that is what we were after -- the elk legs and the metatarsus bones within them.

These legs (and I really don't mind calling them "legs," as unscientific as that may sound, because they still have flesh and blood, and hide and hoof attached) usually live in the aforementioned freezer for between three weeks and three years, depending on how long crews can procrastinate bone boiling. Wisely, the park policy gods and biologists have deemed that boiling can only take place in the winter months when the resident grizzly bear population is denned up and asleep. Otherwise things might really get interesting.

When the water is boiling we bring the elk legs out. In truth, entering the cooler is a job that I try to avoid, (*oh, let me hold the door for you!*) as just opening the door releases a powerful stench--cool, stale, vivacious. Upon disentangling each leg from its respective garbage-bag wrapping, we check to make sure the metal-tag labels are secure before tying a thin wire around each leg. Dangling from these spindly hooks, they are lowered into the pot, where they will remain, submerged, boiling like a witchy stew for about an hour, while the verse *boil, boil, toil and trouble* hums in my head.

Now picture four spry wolf project volunteers. Think of the prestige associated with that affiliation, the glamour. Visualize us all wearing matching canvas Park Service coveralls. Yes, they are of the classic pickle-green variety. I'm the one in the middle, my jumpsuit borrowed from our project leader who happens to be about 6'2". I am about seven inches too short. I look ridiculous. Picture us all lined up in front of a makeshift table—a long wooden plank resting on top of upturned garbage cans, lined with old outhouse toilets for optional seating. Here we are sharpening our dented, rusty

knives, wincing at the screechy sound. Now we are slipping rubber gloves on over wool ones. Imagine that three out of four of us are vegetarians.

Time is up. We lift the lid, releasing a rank, billowing steam directly into our faces, and begin pulling out legs.

First you have to cut off all of the hair and all of the flesh. If the leg has boiled long enough, that isn't hard; the flesh just sort of falls off. Then you have to cut the veins and yellowy ligaments, which recoil like rubber bands released, and slide up the bone, eerily moving on their own. This is the time when you are most likely to get squirted in the face by your elk leg or the one next to you. And you won't really be able to adequately wipe yourself clean, because your hands and sleeves are soaked in juices, and you are standing in a puddle of cooked-leg water. This might even lead to a nasty eye infection, as my co-worker Janice learned the hard way.

Some of the legs are still bloody, possessing a reddish hue that contrasts with the grayish flesh, some smell musty and freezer-burned--and some really aren't so bad. Nevertheless, this is also the time when you might need to take a break for a minute or two, sit down and re-evaluate your career choices.

Occasionally you recognize the number on one of the tags and catch yourself remembering the place where this animal took its last breath. You try to avoid thinking about it too much, respecting the individual and realizing the importance of the connection, but needing some distance just to get through the process. I've been told it's kind of like eating a hamburger at McDonalds. You just don't want to think about it too much while you're doing it.

Once the skin is off, you work the joints. In the most barbaric moment you must whack the leg against a rock or cement wall to loosen the joint and pop off the hoof. Still, there is something primal about this whacking that ignites a small, smoldering spark in your gentle, herbivore heart, and it all starts to feel pretty good.

The hoof is then tossed, with the other hooves, into a pile of feet and loose hide. At this point the magpies are already flying closer, leap-frogging in from behind wintering sagebrush, occasionally nabbing a morsel with a bold beak. From here on it is just a matter of scraping the fine connective tissue off and properly cleaning the bone up. The entire processing of one bone takes between 15-30 minutes, depending on how long it boiled and how sharp your knife is. And at the end of the day, you can step out of your little puddle, and look at your small pile of shelf-worthy bones with the kind of satisfaction that comes from contributing something to this world.

Eventually the bones will be measured and categorized, and the data added to our working knowledge of how the Greater Yellowstone Ecosystem functions, and hopefully, it will ultimately help to preserve the species within it. Because metatarsus bones reflect physical and environmental health and growing constraints, they can in effect act, as tree rings do, like clues to the conditions under which an animal lived.

One of the most wonderful aspects of the Wolf Project is the time you spend watching individual animals interact with each other. Through the use of radio-collars and with the aid of spotting scopes, if you sit still long enough, shivering and cold to the bone, over many days, you can recognize individual personalities and behavior. And you *will* feel an affection for these animals as you rub your scabby wind-burned face, applying

yet another coat of Vaseline. You will come to love the wolves, and also the coyotes and cougars, the elk and bison.

Ecology shows us that while there are individuals, there is also the whole. Each species is unique, but also part of a larger system, and they are all dependent on one another for survival. Humans are no exception. And this is the greater meaning. This is why I am willing to boil bones, squish poop and brush phantom maggots off my skin for hours after the fact. Like the roots, trunk and leaves of a tree, they are all the necessary components of a bigger picture. I still don't have a funny hat, don't even want one, but my dog loves that lively *eau de bone* fragrance I wear home.

Little Messengers

*Have you ever tried to enter the long black branches of other lives--  
Tried to imagine what the crisp fringes, full of honey, hanging  
From the branches of the young locust trees, in early summer, feel like?  
--Mary Oliver*

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The bumblebee was still. I gently shook the narrow stem of fireweed, its heavy head of lavender flowers wobbling more than the stem itself. Still the bee sat within a blossom, motionless. The sides of my sandals were sinking into the late-summer mud as I shifted closer, peering down at the little body as it clung to inner stamens. When I brushed the tip of my finger against her velvety back she finally stirred, but even then only a little, only a dazed repositioning within the flower head.

I was standing in a depression caused by the uprooting of a great tree, on the banks of No Name Lake, nestled against a great vertical wall in the eastern mountains of Glacier National Park, thinking about this bee. Bees and other larger insects need to maintain a certain body temperature if their muscles, specifically those of their amazing transparent wings, are to work properly. In order to warm up their wing muscles, bees contract them, producing metabolic heat through shivering. But this bumblebee was not shivering, was not trying to fly off to the shelter of her home. I wondered if she was waiting out the soft September drizzle, preserving her energy. I touched the stem again, my hair brushing like an auburn curtain against the petals, my ear bent close to the fireweed, listening for a secret buzz, hearing nothing. I wondered if she was dying.

Still, I waited on that shore, toes chilled in the black mud, waiting for that bee, that little messenger, to shiver, or to die. I waited for a connection, for some message to

be danced on the lavender stage--some small bit of wisdom celebrated in life or in death.
I wanted so badly to hear.

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When I was in grade school, I used to search for bumblebees. I scoured the windowsills of our green-sided house and sweeping the car's dusty dashboard on the way to school, looking for their dead bodies next to those of the honeybees, flies and hard-backed ladybugs. There was something about the softness of their bulging, bumbling little shapes, the fuzz of yellow and black that fascinated me. I learned to look about me at the sound of their low hum, and delighted in watching their bumpy forays across our clover-covered yard.

It wasn't until I was older that I learned that one of my grandfathers had kept bees in his youth. His younger brother peddled the honey with sticky hands, from door to door, across a humid mid-western landscape. I could picture an assortment of mismatched jars, heavy with honey, clinking against each other in the bed of a wagon or the shade of a canvas knapsack. My grandmother used to tell me the only time she heard her husband curse was when he made the mistake of disturbing the hive after sunset. Bothered bees don't fly at night—instead they crawl. Up the sleeves of beekeepers. Perhaps my fondness for bees is genetic, although my grandfather's mind is that of an engineer and surgeon, and something tells me he had a different sort of appreciation than I do. But the secrets of DNA are vast and variable, each new generation a fresh arrangement of the past.

In college I had the opportunity to actually learn about bees, by spending a few weeks in an ethology lab surveying the resident honeybee observation hive. Comb

glistening like a golden pomegranate, I spread my fingers wide against the flat glass, and felt an immediate heat licking at my open palm. This communal heat can be so intense as to be useful in defense. When an intruding insect attempts to enter the hive, the resident bees will rally and form a tight ball around their enemy. Within minutes the temperature becomes so extreme, the trespasser is literally cooked from within. Like all creatures, they protect their home with warrior hearts.

During those weeks of spying, I also learned how to interpret the foreign language of their secret dance. If, while foraging for nectar, a worker bee discovers a foxglove, fireweed, larkspur or lupine, with a stem curved from the weight of many blossoms, she will return to the hive and send her sisters out to the source. This message is relayed through touch alone, as natural hives exist in darkness. The messenger begins her ancient waggle dance, a sort of figure-eight sway to the left, with a calculated shake up the middle; then another turn to the right followed by that gyration back up the middle. Her hive mates circle around, with their heads pushed up against the messenger, feeling the angle in which she is wagging, receiving the map. The dance is flawless. There are no mistakes, no miscommunications.

By following the famous bee specialist Karl von Frisch's method, we matched the waggle angle with the slant of the sun. This small motion communicates the exact direction and distance to the flower. Having recently uncovered my field notebook from this time, I realize that this is hard to explain—and my pages are covered in diagrams and equations woven between sketches of insects in various positions. But I have seen it work. That fall we observed “battered bees” (their backs marked by our instructor with a powdery pink smear) and held a compass to their dance to measure the angle. To me this

process felt like finding the Rosetta Stone of animal language—like I was intercepting an old encoded message meant only for comrades of the hive. By adding the bee's angle to the solar Azimuth slant, we came up with a bearing. And that same heading led us straight to my professor, grinning over a blue fluted dish of sugar water. Like me, they like blue flowers best of all.

These insects have been co-evolving with their botanical partners for millions of years. Their bristly legs hold pollen like burrs in a dog's fur, as the slender bee tongues of populations grow longer or shorter over generations, in an adaptive specialization to fit like a hand in the glove of their preferred flowers. The flowers entice their pollinators in splashy shades of blue, yellow and other colors, adding distinctive markings like the punctuation on a welcome sign. Von Frisch has shown how quick bees are to recognize these particular *bee flowers*, and the loyalty with which they visit them. While a hive of bees may frequent any number of different neighboring flowers, they often visit just one kind during each voyage from their home.

As I stood at the sugar source, crowding in with a hunched back, I watched these hungry bees extend their curved tongues and suck up the sweet water with pumping abdomens. The bees kept to themselves while feeding, avoiding interactions with each other and the larger wasps that bullied them aside. Unlike bees, yellow jackets use their mandibles to gather food, and to me they appeared awkward and almost bungling when compared to the deft movements of the honeybees, which slipped through the air like diving kingfishers—focused and deliberate. But I couldn't help but wonder what they thought of this false, fluted dish cradling sweetened water like an upturned leaf full of

raindrops. Certainly they would recognize that it was not a flower, that something was amiss—but perhaps even the busy bee grows tired, and isn't above a free meal.

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I knew of a beekeeper from Vermont who used his swarm of honeybees to pollinate papery-blossomed apple orchards in the summer months. Then each year before the silent blue winter slipped in, he packed his skeps onto the back of a wide flatbed pick-up and headed south. In Florida he rented his little northern bees out to orange growers—and so they spent their winter meandering between rows of citrus trees, their bellies full of fragrant nectar. But every year during this unnatural migration, the beekeeper lost about half the colony to the wind. At a Georgia truck stop or somewhere along the Blue Ridge Parkway--he never knew for sure, unable to call them back, unable to dance out the southern route. I cannot imagine the shock of a creature who by all rights should be hibernating, suddenly finding herself along the Carolina roadside in the middle of November. I picture the swarm buzzing in confusion, discovering no flowers, only the fierce faces of toothy yellow leaves.

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Long ago humans began trying their hands at taming bees. Ancient cave paintings estimated to be as old as 15,000 years have depicted humans raiding wild hives, and the oldest known domestic hives were pictured in Egyptian temples built nearly 4500 years ago. As the tradition spread, artificial hives evolved into various forms, from baked mud and terra cotta, to reed baskets, cork cylinders, and hollowed logs suspended from dry branches. A small part of the tradition passed through the square boxes in my grandfather's hilly lawn in central Illinois.

But humans are not the only creatures drawn to the sweetness of honey. In the 1700s, honey enthusiasts in dark German forests rigged hives with elaborate sentries and booby traps in the hopes of warding off hungry bears. The African honeyguide, a robin-sized, black-throated bird, is reputed to have long ago teamed up with the aggressive honey badger in the pursuit of robbing bee hives. Theirs is an unlikely mutualism, based on the love of honeycomb and bee larva. Following the bees back to their nest, the bird sings a special note to the badger, who then knocks it down, and both feast on the spoils seeping into the dusty ground—the badger grunting over the crunch of comb, the honeyguide cleaning up the scraps. It didn't take long before humans also began to listen for the honeyguide's song.

Indeed, it is hard to overestimate the importance of bees through the course of history. Pollination aside, for thousands of years honey dominated the world of sweetness, tempting tongues more familiar with the savory, and fetching a high price in trade. Keepers were so eager to maintain healthy hives that they went to great and curious lengths to encourage production. Paging through a tattered copy of James Gould's *The Honey Bee*, I found one particularly odd formula for summoning bees, originally recorded by Virgil. This recipe involved the brutal bludgeoning and careful preparation of an ox, layed across a bed of fragrant thyme, and placed within an empty building for several weeks. Upon returning to the carcass, the prospective keeper was to be greeted by a skeleton newly resurrected with the hum of hundreds of little veined wings.

If any real sense ever lay behind this practice, its origins are a muddled mix of superstition and hazy communication. With all the possibilities human language

possesses, we often stumble in conveying the simplest of messages, producing outlandish results. We have no waggle dance--no messages that are above interpretation. In the end, the tradition may have its vague link in the biblical story of Daniel, as the saint is said to have been greeted by a colony of bees living in the abandoned ribs of an old lion.

Whatever the reason, this is a true testament to the desire for sweetness--that people are willing to go to such extremes. Our modern world goes all out for sweets too, with its soft drinks, candy bars, and millions of acres of farmland allotted to the production of gummy corn syrup and stout sugar cane. Certainly the wholesome charms of honey have been greatly overlooked in recent history, relegated chiefly to tea time and the perceptive but quirky world of folk medicine, which offers honey as a remedy for burns, colds, hay fever, alcoholism, muscle cramps and even bed wetting. Bees are now valued more for their pollination than for the contents of their hives. But even this is under attack.

With the rise of chemical artillery in the farmer's war against weed and pest, many bats, birds, honey and bumblebees, along with other pollinators, are avoiding the poisoned nectar of polluted commercial crops, or dying as a result of it--if they haven't already been killed off by direct insecticides. The problem has grown so much that even the larger conservation organizations are starting to take notice. Through alternative methods of pest control and increased habitat restoration and preservation, conservationists and farmers are trying to call the bees back. I can only hope that they are better guided than the ox-beaters, that they encompass respect, that as humans we start slowing down enough to hear the faint hums. I marvel that wild and domestic bees are responsible for pollinating nearly one third of the produce consumed in North

America each year. That they have touched, in some small but monumental way, much of the food we eat everyday. It is a weighty percentage for so slight a worker.

But bees are small only in physical stature. Their aura radiates like the warmth from a hive heavy with yellow honey. They are companion to goddess, saint and keeper alike. The ancient Egyptians considered the bee to be a symbol of royalty and believed the little animals were the embodied tears of Ra, for whom they sacrificed fistfuls of honey. In pantheistic Greece, bees were seen as the incarnated souls of priestesses, whose mortal lives were spent in service to the Goddess Aphrodite--or of the woman warriors, with arrows at their sides, who ran with Diana. Centuries later and farther east, the Orthodox Church of Ukraine celebrated Savvaty, Zosima and John of Chrysostom as the patron saints of bee keepers. To honor their feast days, beekeepers nestled little icon shrines among the hives uttering small prayers—blessings in a low buzz. These insects were so respected in the old Ukrainian tradition, that the same word, *umayiut*, is used to describe human and honeybee death—a word entirely separate from that meaning of other animals' deaths. Perhaps there is a lesson to be learned here, a model of respect that could be repeated as we strive to fortify the ties between modern society and the natural world. Maybe the shrines we build should be for the bees themselves, black and yellow prayers for the wisdom to hear.

In much lore, bees of all kinds are a symbol of reincarnation. They are the messengers who have the power to communicate with the dead. *To illuminate*. I wonder if their tiny bee legs, thin and black as eyelashes, leave little dimpled tracks, just the size of pin-pricks, across the faces of the dead as they dance over forehead and cheek to whisper in ears and converse with spirits. There is a link here, too, in the bees' honey—

the symbol of a sweeter life. Thick with antibodies, undiluted honey was often employed as an embalming agent to preserve the wealthy deceased. It is said that the body of Alexander the Great was transported home from the battlefield in a honey-filled casket.

Several decades ago the tombs of an early Southampton noble family were exhumed. When the dark coffins were split, some 400 years after their burial, they revealed a pool of the amber liquid, still flowing and unspoiled. I wonder, had the examiners listened hard enough, might they have heard the soft hum of secrets centuries past, circling low before vanishing in a wisp of sweet air?



Consider These Ants

*“Were it possible for us to see further than our knowledge reaches, and yet a little way beyond the outworks of our divining, perhaps we would endure our sadnesses with greater confidence than our joys. For they are the moments when something new has entered into us, something unknown; our feelings grow mute in shy perplexity, everything in us withdraws, a stillness comes, and the new, which no one knows, stands in the midst of it and is silent.” --Rainer Maria Rilke*

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As children, on the days that we were confined to mere neighborhood roaming, my brothers and I would often ride our bicycles around the block, tallying laps that sometimes totaled thirty or more. This was in the humid summer months, when days were extravagantly long and idle. Often, as I rode round and round the block, I kept a watchful eye on the sidewalk beneath my blue-checkered basket, as it passed under my wheel. I was trying to dodge the long strings of black ants that were busily constructing their tiny sand pyramids between the sidewalk cracks. I remember stopping at the end of several laps, dismounting and walking the stretch of cement in front of our white screened porch, and picking up all the little bodies I had inadvertently crushed. It troubled me, even then, being the cause of death for another creature, and I buried the unfortunate ants in the garden that lined our little green garage, apologizing.

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Years later, I consider these ants. I have thought of them every summer, when their relatives begin to emerge from the ground. I have thought of them during many jobs, when their black bodies creep into my mind, reminding me of this young sensitivity, reminding me of how long I have known that even the smallest life is sacred. Like Jiminy Cricket, the ants are always there, whispering.

But sometimes letting your conscience guide you isn't such a clear-cut matter-- especially in these times, especially in wildlife work. There are conflicts. As dedicated as I am to merging the worlds of science and spirit, there are hard choices to make, rationalizations, the weighing and balancing. We must respect and defend the individuals, but also protect the whole. This is a constant struggle for me.

One summer, as part of a side project to the amphibian work I had been doing in Glacier, my field crew and I spent a few weeks in Lost Trail National Wildlife Refuge north of Missoula. We were doing night surveys, looking for boreal toads as part of a population and migration study. What made this pilot different than my previous work was that it was based on mark-recapture processes and involved pit tagging (inserting a small scan-able chip underneath the toad's skin) and clipping a single front toe.

My journal from this time is filled with questions and moral dilemmas. While this is a common practice in wildlife work, and apparently has no lasting negative effects on the animals, I had never participated in a study that required toe-clipping, and it troubled me enough that I could not bring myself to do any of the actual cutting. I know that there are few choices left in how we study wildlife, but wonder if the data of this particular method, so intrusive to the individuals we handle, is worth the disruption. It is an old question.

In the end, I have to believe that it is—boreal toads, like so many of the world's species, have been declining in northern Montana and elsewhere. Only recently have people started to take notice and attempted to understand the cause. In this way, any information we obtain could be used in the species' ultimate protection. Perhaps even in this discomfort we can fix a system that is cracking faster than we can patch. While I

knew this, the process still hurt me no matter how delicate my reverence. Each snap of sliver-thin bone a tiny stab to my heart.

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Although I had spent a year's worth of summer seasons surveying amphibians, this was the first chance I had to work after dark. Being out in the woods and water at night is an entirely different experience from day work. You are at once very aware of your inferiority in the world of nocturnal nature, and yet suddenly more alert and attuned than usual. What you lose in sight you make up for in sound--and a nighttime pond in May can be an extraordinarily noisy place.

During those nights the shrill songs of breeding toads and frogs rang out over the water. It mingled with the chirps and hums of a symphony of insects, the swoosh of bats gliding through the beam of my headlamp, and the light flutter of the little moths that circled around the unnatural glow, flickering near my ears and eyelashes. That prickling activity feels as if your very skin has fused with the world around it—every shift of your hair is connected to the rustling reeds, every slow step a struggle against the suction of the mud, an inch closer to entering the very earth below. I loved the way my headlamp cast its beam like a long arm of light and caught the shine of floating toads' eyes.

That glow was our signal to move in, and with careful steps I waded closer, dragging a cloth bag full of toads through the water, toward the light. Shakily I extended the long-handled net in front of me, nabbing the slow and distracted. During nights like these the toads are so crazed with the breeding itch that they become unusually docile, and yet beneath that calm submission, there is also slippery defiance. The males float still in the water, their back legs stretched out diamond-like beneath their bodies, waiting

for a female's song. When a pair meets and the female is gravid and thick with eggs, the smaller male locks his thumbs under her front limbs and rides on her back, leaking sperm as she releases her eggs. These eggs float below the surface in long, glistening ropes that look like a set of ellipses (indicating an uncertain future.) So strong is the male's grip during amplexus that even through the capture process he refuses to let go. Occasionally we have found misguided toads caught in the moment and clinging steadfastly to mudballs, vegetation, and once, a dead female. I admired their tenacity, as with each slow blink they seemed to be murmuring, *I've found her, and I'm not letting go for you, or anybody.*

Our nights of toad-catching coincided, to my delight, with the full moon and even a lunar eclipse one night, although it was too cloudy to see most of the phases. The ancient Chinese saw within the moon a face of a toad, rather than a man. Occasionally the toad swallowed the moon for a time, resulting in an eclipse. As I looked up at the moon those nights, past my own cold breath falling in the light, I too saw toad, not man, and looked up to her for guidance over the calls of her earth-born children.

Shivering, I examined the animals' thumbs—looking for the calluses that revealed secret genders—only the females' thumbs are smooth. Later there would be measurements and marking. Weighing. Prodding. But at that moment there was only the water and mud, only me and the toads, their music and the cold moon. *Sapo*, I whispered to each in Spanish. *Toad, thank you.* I looked into their golden eyes, blinking in unison. *Forgive me.* Then I gently lowered them into the bag.

Again, the question boomeranged back—why are there different rules for different species? Never, never would I or any biologist contemplate cutting off a couple

of bear or wolf toes—it wouldn't even be considered. But somehow small mammals and amphibians have been branded acceptable creatures to endure this process. Whether this scientific practice is rooted in practical specifics, or some sort of ethical rationalization or judgment, remains unclear to me. Is it appropriate to mark these animals as such simply because we can? Because they have small toes? Or is it because we have placed them in a lesser category of sensitivity than other, larger animals? I can't say for sure, but the latter thought is chilling. And yet I myself am guilty of this process of rationalization. Throughout my summers it was a struggle for me to take tadpole museum and genetic vouchers. I hated doing it, but I justified the practice based on the vast numbers of larvae, their low likelihood of survival and how studying them would lead to a better understanding of the species, and hopefully, the ultimate protection of their habitat. I reasoned these things in my head each time I counted out the minimum number needed for the record, letting the extras slip through my fingers and back into the pond with a tiny splash. Each time I poured the poisonous ethanol or formalin into the squat blue-topped bottles in which we preserved tadpoles. Each time I watched their soft squirming bodies suddenly stop, then move only pathetically, within the swirl of their small plastic coffins. I worked daily on these rationalizations, but when the question was altered slightly—could I take a nestling? A fawn? The answer was an immediate and final no.

This is the ground where my head and my heart find discord--under a full moon, thigh deep in ancient mud, searching for the flash of toad eyes floating at the water's surface, croaking an old mating song. With each swoop of the net and each sexing of the thumb, I whisper my thanks and apologies. Like the child murmuring to a small handful

of ant bodies, I do not know to whom I speak. Nature. God. The toad itself. Perhaps they are one in the same.

Peaceful Disturbances

*“Failing to fetch me at first keep encouraged,
Missing me in one place search another,
I stop somewhere waiting for you.”*
-- *Walt Whitman, from Song of Myself*

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Autumn is all around--in small pockets and vast stretches alike. The air is changing. Breezes smell differently; they now carry the vows of a distant winter, and all about you can smell the leaves giving up their lives. My favorites are the yellowed aspen leaves that fall like butterflies, gathering on damp forest trails and sidewalk indentations. And the anomalous larch trees, ablaze with the changing of their deciduous needles--each branch a series of tiny explosions, like soft and silent sparklers. Fall is the time when as children, my brothers and I would save our crumbs all week to feed the Madison city-ducks from the isthmus shore. From the bank, we watched the migratory birds begin to rally, the yearlings awaiting their first journey to the unknown south. Only the hardest birds were left behind--the crow, the cardinal, the chickadee.

Fall is perhaps my favorite season, though I know I have offered that title to each of the four in turn. It is a peculiar time—traditionally when labors were harvested in fat multi-colored squashes, stiff wheat and golden corn. It is nature’s fiery finale before the winter-wait. It is her much needed rest, her well-deserved death that carries with it the promise of rebirth. It is a wise season.

Maybe it is this sense of ending that prompts such seasonal reflection in my own life. Maybe it is because the grandmother I never knew died one November many years ago, and the genetic memory of my own mother's sorrow now resides within my blood, gracing fall with an air of instinctual sadness. Each fall seems to be a combination of all the previous ones--a muddled memory of beginnings and endings. The cycle of death and renewal is a powerful force, one that seems to be magnified this time of year. Rarely do we know when or how it might touch us. Maybe that is autumn's ultimate ruse--the sway of a Cuban song, the softness of dog's ear, a curly lambswool hat worn by a stranger. These small reminders lurk everywhere, hidden until the right person can see them. I call them *peaceful disturbances*. Then the memory strikes--and for a moment that stranger seems to be a lost relative, the dog a childhood pet, the melody an intense joy. My friend Brian nearly cries during sunsets. For him they are an emotional ride of sorrow and love, so important he cannot explain it in words that his heart keeps bound. All he can say is that he feels closer to his late brother during sunsets than any other time, and he often tries to find a special place for them to watch it, particularly in autumn.

It is this eye that frames the season in beautiful sadness. It is like listening to a haunting instrumental score while completing a delicate task. It means paying great attention to the smallest details--a red vein in an orange leaf, a neatly folded row of milkweed mistresses waiting to catch the wind, the purple tips of pine cone shells piled into a squirrel's secret pyramid. I think that I become acutely aware of these things in fall, and of endings. My feelings do not necessarily carry with them fear or even longing, but rather a kind of sentimentality for things I have experienced, and also for things that



have yet to be discovered. I feel older than my years in autumn, overwhelmed by a sense of nostalgia and the passing of time.

My mother used to work in hospice, although they didn't directly call it that; instead they preferred "nursing home" or worse, "retirement center," as if anyone would ever hope to retire there. She was not a nurse; rather her sole job was to comfort people. As a chaplain she was trained for these places, and also for hospitals and prisons. She was there to console people--to help them through their questions, to help them find their own peace. Many of those people just want to die, she said; they are ready to go. She was there mostly to hear their stories--the sometimes calm, sometimes frantic telling of their lives in a last showy brilliance of color and life, something so beautiful that it could never be forgotten.

Walking home yesterday, thinking about these people, I happened upon a dead mallard lying in a pile of maple helicopter pods, at the base of a yellow curb. Apart from his unnatural position, the duck looked healthy, looked alive. I guess I thought there would be more blood, more breaking. But his feathers were still clean, ruffled over orange feet, his green head still smooth and shiny. A man in a red sweater stood over the mallard, absorbed by a phone conversation. And for a moment it looked as though he might nudge the body with a forked stick, or the toe of his shoe. I found myself wanting to run at him--to push his shoulders back, away from the dead bird. I wanted to yell about disrespect. I wanted to fight death. I wanted to pick the mallard up, to see the concrete beneath his body, to see if the weight of his head would fall back under a limp neck. I wanted to cradle him, tuck him quietly into the pouch of my shirt, see if he was

still warm, see whether if I concentrated hard enough, he might be revived--might jump to the ground, and reclaim the muddy footprint left along the roadside lawn.

Death, I think, comes in so many forms, but it is permanent only if you allow it to be. Like most humans, I can accept this concept much of the time, in calmer moments. But I am also terrified by it in other instances, belligerent even. Maybe this is the tension of autumn, serenity and agitation at once, a season of marked transition. I can only hope to find a more permanent sense of peace in enough time to enjoy it--to tell the stories of my life as they happen, and not just save them for the end.

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Last spring, I found a rare wolf skull one rainy morning--hiking far off trail up Camas Ridge, through a thick and brushy forest, vibrating with the hum of new Glacier Park rain. It is a special thing to discover bones in the wild, like finding little clues to another world. They are the tangible ambassadors of life's balance, reminding us that death for one means life for another. At times I have collected such scattered bones, gathered them together and pressed them close to the ground. I might arrange them anatomically, or create a new shape, perhaps a spiral or circle. I often feel an inexplicable need to reunite the pieces, to put them back together. I recall stopping frequently to check my bearings that day--to pause and touch the delicate fungus that climbed the old silver snags, like rows of ruffled moth wings. I remember staring at the young cedar saplings--at the way the shaggy gray bark peeled back and fell from the trunks, revealing the smooth inner bark, dark in its crimson blood lacquer. The lone skull was a gray-green color and as smooth as the curve of a china bowl. And in the thin blue lines of moss growing from its sutures, there was a grateful calm.

Later that same day a little hummingbird buzzed past me, hovering right at eye level, its wings beating so fast I couldn't see them. I followed her to a perfect and impossibly small nest built on a drooping fir branch overhanging a reedy pond. Inside were a few downy chicks sleeping on top of one another, their newborn eyes bulging beneath thin gray lids with the anticipation of opening. A few days later I looked up the hummingbird in a book of animal medicine cards. I was not surprised to read that the birds signify joy, that their song "awakens the medicine flowers" and their feathers are used in love charms. I am amazed when I think of those small birds--that such tiny creatures could ever survive in such a big world, or could harness the strength to migrate hundreds of miles at the first hint of fall.

Now I think about my new baby nephew, Cyrus Sage, born more than three months early, waiting in a Madison hospital, wrapped in protective plastic like a tiny mummy because he only has one thin layer of skin developed. I wonder if you can see through that skin--like the bulging eyes of those little hummingbirds... can you see his fierce heart pumping while he lies in my brother's palm? I picture a glowing through that skin--a life force, ethereal, pure. I picture a tangled network of veins, pushing blue blood--racing to save his young life--and doing this without knowing what the future holds, driven by an unquestioning will to live. Rather than wait for winter, he came in autumn. A fall baby. I wonder if he will grow up feeding stale bread to the terrace ducks on Lake Monona. I wonder if he will grow up loving yellow aspen leaves and the smell of damp soil underfoot on a mountain trail.

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I remember my first autumn in Montana--driving up the Flathead Valley, crowded into a pick-up truck, three in a space meant for two. Cachao strummed his bass over the radio, *Mi Guajira*, my country girl, as we tried to shake our hips in the cramped cab. I wore my grandfather's hat in the window seat, and recall staring past my reflection in the side mirror, marveling at the huckleberry bushes and counting the roadside crosses. As the numbers grew, I thought of the manufacturers of those narrow crosses. Long years of their lives spent cutting metal, white metal destined to rust, to be marked with thin black letters and draped in wilting red plastic flowers--sometimes alone, sometimes in small groups, in families. I've seen that white again--just last week under the throat of a black-cap chickadee, plump from autumn seeds, holding a bright red kinnick kinnick berry with a clamped beak.

I began to think about the last time I saw my grandfather, one brown Thanksgiving noon several years ago. Somehow the crumpled husk of his body held on through the winter, led by the last memory of his fragmented mind that shouted *life*, long after the words left him. We buried him the following May, up in Pine Bluff cemetery--overlooking long shadows and hundreds of Wisconsin crabapples weeping their papery-white petals. Standing next to the fresh black dirt, I looked down at my grandmother's grave beside his--etched with dates older than myself and a name familiar in its anonymity. Nearby an abandoned bird's nest lay turned over in the grass. Picking it up, I smoothed the inside, soft with old feathers, and wove some of the funeral flowers into the perfectly round bowl, before placing it at her headstone. The air was sweet and still. Only through squinting eyes could I see a road in the distance, and the silent shine of passing cars.

But the Flathead's crosses reside in between the whirls of crackling leaves tossed up by the cars of careless travelers. They are simple, modest memorials--not the hilly farmland headstones of Wisconsin or the hatched shrines of the Mexican highways, pointed miniature roofs protecting small bowls of rose-scented incense and tall glass candles, painted with *Our Lady* in shades of purple and gold. No, the crosses of Montana are built for weather--for dry, brittle summers, introspective autumns and deep, white winters. What I once saw as disturbing soon became only another part of the rhythmic drive--humble reminders of things that have passed. And as we drove the uneven road, thousands of golden larches licking the air, all things overlapped the reflection of my own face. The red, the white, the black blurred in the crisp wind, tugging on that collective memory, causing me to whisper "*chickadee, chickadee*" just to feel the word on my teeth.

*Piercing the Crow's Eye*

*"I was therefore ill at ease  
When the crows came down,  
Whirling down and calling,  
Into the yard below ...  
Altogether definite, composed..."*

*--N Scott Momaday from his poem, Crows in a Winter Composition*

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I recently dreamed of finding a dead crow upturned along the sidewalk. It was a short dream, just a fragment really—and the image passed without elaboration, leaving in its wake a fuzzy confusion. In reality, earlier that same day I had actually seen the body of a tattered pigeon, lying dead on the dirty snow in the space between two buildings. Kneeling low, I examined the bird's curved pink feet, still clutching the air like tiny, twisted hands stretched out defiantly. The discovery disturbed me in that deep, uneasy way that makes you look behind your shoulder and glance around for some sinister clue, left just out of sight. Somehow that image became tangled in my sleeping mind, and pigeon became crow—the slick feathers of a broken snow angel leaching their dull shades from gray to black. The form was different, but the feeling was the same—a branch in the wind, scratching at my window; a tickle in my mind, just out of reach.

I have heard many myths surrounding Crow and her twin cousin Raven. I know of few other animals that convey such a varying range of emotion, meaning and superstition. Whether their presence rings good luck or bad omens, a common thread tangles itself around crow lore throughout cultures, continents and time. The black bird is most often seen as a messenger, bringing words across worlds, cawing cosmic mysteries with an open beak, prophesizing and proclaiming judgment. There is, as well, Crow's association with death. As a carrion feeder, Crow lingers with the dead beyond

our sight, and feasts on their earthly bodies. Crow is also master of illusions, shape shifter. Perhaps it *was* Crow that I saw resting on the gray snow, her true black feathers retaining their changeling sheen only in the garbled world of dreams.

In truth, I had nearly forgotten the dream. Just as focusing on the surface of a pond makes it difficult to see a shape beneath, and it is not until a golden cottonwood leaf floats by or a tiny mayfly grazes the surface, tearing the veil, that you can see deeper. And so it wasn't until I saw a real crow the following day that the airy cloak between dreams and wakefulness slipped out of place and the memory burst forward in a flutter.

I was walking through my neighborhood in Missoula—over the creaky Clark Fork River Bridge, down Broadway Avenue and past the motel with plastic spring flowers stuck between the birch logs of its street-side planters. I was less than a block from my little shaded house when a motion caught my eye. It was just before noon, a Friday, and not my usual time or day to be walking home. From the distance of an intersecting street, I was surprised to see a murder of crows haunting my front lawn like stern, feathered sentinels. Some stood on the ground; some perched still as frowning statues in the big, leafless maple. *Twenty-one birds* I counted out loud. The number resonated in my mind—a clapper-less bell. Although I had often seen city crows overhead, I had never seen such a number congregated on the curbside--and for just a moment, I felt that they were waiting for me.

In many cultures across the globe, crows are seen as the messengers of the spirit world. Used in Roman divination, they whispered warnings and advice from ancestors, carried through currents like invisible olive branches. Some say the birds congregate to relay these messages to those who search the past, seeking peace, seeking redemption. A

common sight on battlefields, it is no wonder people thought these birds listened to the dying murmurs of soldiers, voicing their last memories. I stood a long while thinking about these crows, wishing I could better understand their secret language. I pictured them, scrolling through faces of the dead, and I wondered who had sent them.

For centuries farmers have tried to scare the clever crow from their fields—posting ragged human replicas to watch over corn rows like shaggy crucifixes. Perhaps it is not only the corn stalks and bean poles of our lives that we fight to protect. Maybe the greater fear lies in what lessons the birds might bring, rather than the grain they might take.

The ancient Greeks believed that Crow was white as a new swan until the day she brought Apollo news of a lover's death. As punishment, Apollo caused an inky black shadow to spread across her wings. Sometimes we do not wish to hear what must be said. We fear judgment, bad news, truth. There have been times in my life when I preferred to keep my ears muffled to the worlds inside, outside, and beyond me. Moments when I trained myself to hear only the soft whistling of marsh reeds or the thump of a rabbit's foot on packed dirt, and silenced the voices of my head and heart. But as I stood absorbed in front of the crows, there was nothing I wanted more than to receive their message and with it whatever truth or judgment they might proclaim.

I scanned the ground ahead, searching for some source or reason, perhaps a flattened squirrel that could have brought such a number to my yard. A pair of birds pecked at a yellow sandwich wrapper and each shifted from one scaled foot to the next—an awkward two-step on the oil-stained cement. Another group took flight, a quick bend before take off, and flew so low to the ground I feared they might be struck by a passing

car. The rest looked down from sky fragments cut up by the maple limbs that stretched wide, whittling out into hundreds of rough-barked capillaries. One opened its beak as if to cry out, but remained silent. Soon they had all vanished—in groups of twos or threes, across the street and out of sight, as if behind a pale blue curtain. Passing the exact spot they had visited, I looked around more carefully, expecting to find some a dead animal or bread crumbs. But I found only their tracks scattered across the soft melting snow, mingled with the prints of mouse, boot and raindrop.

Still I wondered if the group had taken something with them--something fragile, invisible even. Or perhaps left something behind. I searched the ground again, this time for a feather. I wanted a tangible sign that this was not a dream. I believed that if I could touch a piece of those crows I might understand my desire for guidance, and gain proof of my worthiness to receive such a message. Finding no feathers, I walked down the uneven lawn stones to my white porch and as an afterthought, scattered a handful of sunflower seeds from a blue bowl under the mailbox. I walked through the doorway, listening to the delicate chime of bell-strings tied to the knob, and thought about the prophet Elijah and his crows.

Elijah, also called Elias, spent time drifting in the desert mountains of Israel. For years he wandered in the wilderness, preaching and praying, with the goat skin garment of piety wrapped over his bony shoulders, both hide and skin cracked from sun and wind. His callused foot bottoms were stained red from clay desert floors, and he could climb over rocks like a deer. But even when he wasn't fasting, food was scarce and he was often hungry. God promised to reward his servant with a miracle of food, and sent Elijah to a secret place near a great waterfall. In a shallow scoop of cave behind the howling

falls, the hermit waited--for what, he did not know. The morning brought a fiery sun, red and victorious. In the distant air, the man could see with famished eyes two small shapes approaching. Some say they were ravens, others crows—Elijah saw bread and rejoiced. Concluding the morning's psalm, Elijah's hands unfolded and bread was dropped from curled talons.

Sitting on my kitchen floor, next to the red Formica table, I wondered about this story. Maybe it was bread that I wanted—an answer to the many mysteries I pondered, delivered in the grip of another world. I began to fear that as much as I wanted to believe, perhaps it wasn't me those lawn crows were waiting for after all. I wondered if to them, I was just another faceless human, and of little consequence. I worried that I had somehow made a mistake and was seen as unworthy or ill-prepared to receive their secrets. Perhaps I wasn't truly listening. Perhaps I had become too distracted to hear in the wind voices of the past--the whispers of stars and crows and gods. The Romans had a saying that referred to any nearly impossible task--they called it "piercing the crow's eye." I wondered how we could re-establish those forgotten lines of communication, that ethereal awareness? I wanted to think that the door was not fully sealed, that the task was not yet impossible.

I wondered if this city I lived in might still hold its own hermits and prophets that shifted shapes like Crow, praying to God and Earth and Beyond, and could still hear messages from our ancestors across cosmic worlds. Perhaps I had seen these mystics without knowing, walking down the alley behind my house or in front of that little hotel, grazing those bright plastic flowers with an open palm. I pictured a traveling man sitting cross-legged in the cleft between two buildings—space just enough for split knuckles to

touch both walls at once. He was thin but content, looking up at the ribbon of sky above his little cave, listening. He was waiting. Then I imagined the lawn crows—thieving warm loaves of bread, placed in doorways to cool; it was evening and the belt of sky darkened as gifts were dropped through the shadowy space between walls of stone.

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This evening I fast and bake my own bread. I score the honey-gold crust with a trident shape. A footprint. At midnight I put my offering under the porch eaves, under the maple tree, under a thousand stars. I raise the dusty window shades, ringing the narrow bell-strings, looking past the glass. And I wait.

Meeting the Neighbors

*“One doesn’t need to leave home to go exploring,  
since we live surrounded by the marvelous, wade through it everyday.”*  
--Diane Ackerman, from *Cultivating Delight: A Natural History of My Garden*

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I saw the eagle again. The young one, maybe two years old this spring, still waiting for its head feathers to fade into white. It was flying up river, over the Clark Fork bridge, over the Missoula traffic, over me—blocking out pieces of blue October air without warning. It wasn’t sunny, and there was no forerunning shadow--not like that tremendous silhouette I saw washing up the brick buildings a few months ago. That one was a big, beautiful spring heron I watched fly overhead just like this eagle, from the very same spot. And on that day I was grateful for the good fortune of seeing the heron. I had seen the eagle before, too, a lucky handful of times over the last year, but on this day, on this day I really *needed* to see it.

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It began with the sheets. They kept twisting around my legs, fettering me. The radio alarm went off, blaring news of violence, drilling it into my ears. And my back ached. Whimpering to myself, I listened to the sounds of my neighborhood. Cars. Voices. A train screaming down the block. And even though I was uncomfortable, I still resisted movement, tried to fall back asleep. Tried to start over.

Nothing felt easy; everything was too fast or loud or crowded, even from my bed—the garbage truck rattling dumpsters beneath my alley window, shaking my house. So I did what I do best--drew the morning out, long and lazy. Two slow cups of coffee, the first taken in bed, propped up on down pillows, the second in the kitchen, seated at

my old Formica table with toast and brie. The table is my most prized piece of furniture--red top, chrome runners--it fills the room like a cool flame. I opened the shades. Closed them again. Lay on the floor. Paged through a book, thinking more than reading. Sipped a glass of hot cranberry juice.

I was familiar with the feeling—it seems to tighten down on me when I have been out of the city, and then must return. Anyone who has spent long weeks in the wild knows this suffocation, knows how everything in the city can look dirty and abused. Broken. When the river ripples are outdone by the twisting plastic bags, caught by rocks, swimming against the current. Missoula isn't a big city, and I have lived in and loved bigger places. But over the last few years I have often spent more time outside than inside, and my mind has become more sensitive to urban settings, more resistant. My normal reaction is to hermit away in the confines of my smaller, more familiar apartment, or to simply leave town again and find a dirt path. But both schemes are hopelessly temporary.

Putting the last empty mug down on the smudged stovetop, I decided I needed to get out. And so I did something that I hadn't done in a long time. I took a city walk. I walk around Missoula everyday, but always with a destination. Usually with a brisk step, with headphones for armor, and with music to dictate my feelings. But this day I chose to wander the city, to give it my attention, to see what it had to offer.

Bell strings chimed as I closed the front door, pulling the knob to me as I twisted the metal key. I stepped off the porch, rustling a pile of maple leaves, and walked down the uneven stone path to sidewalk, grazing the delicate heads of dried up hydrangea bushes. Pausing, I looked down at the big flower heads branching out in round balls like

fist-sized fireworks, blunt and frozen in time. My grandmother has a hydrangea patch just off the front patio, near the kitchen window. During winter visits as a child I remember stopping at the plot on the way down to the frozen lake, amazed that the flowers, though dried, could stay intact through wind and snow. In the summer they hung in the air, white and ghostly, sifting the humid lake air wafting across the unbearably green lawn.

The sidewalk was damp, and dark oak leaves stuck to the squares like misshapen footprints, muddy and random. I walked down Broadway, past the stone Post Office building, under a long corridor of trees--some sort of locust I am told--because they are resistant to air pollution. I have often enjoyed looking up at these particular trees. Once they drop their compound leaves in small yellow thumbprints, the center spine remains, jabbing the air like skeletal feather quills; frog finger bones or long cat whiskers. On this day, they seemed to hang like bluegill ribs, thinly curved, festooning lakeside branches. The burial trees of some foreign flying fish, right downtown.

I passed some juniper bushes, pulling off a berry to break on my tongue and taste the sticky gin oil. These bushes were heavy with dusty blue berries that clustered like bunches of miniature grapes against a thick and spiny vine. I wondered what caused so much fruit to grow here, and not on other city bushes. Why did this juniper have so many berries, when others had so few they hung like ornaments, deliberately placed, or small moons orbiting in an evergreen atmosphere? Tasting the berry, I kicked through the gutter leaf piles in an exaggerated manner, listening to their dry rustle and crunch. I missed the hardwoods of home, and their fiery autumn passing, and at that moment was glad the city planners chose to plant maples in town, glad to hear the sound of raking.

There are places where leaves fall from their trees and settle perfectly on the ground, as if each jagged leaf was carefully arranged on the ground below. A precise mosaic, waiting for the wind.

Farther down the street I stopped to look at a mural painted over an old wall that bordered the neighborhood gas station. Like a children's coloring book, the scene depicted a bold but simply colored valley in purple, blue and green. There were no shadows, no shading, but there was an eagle, and for a moment I thought I recognized her. The blue river paint wore thin in places, exposing the brick beneath as perfectly rectangular stones jutting up from the current. From the real bridge nearby I often look down to the shore, and see the trio of metal trout sculptures weaving between boulders, trying to reach the river. I keep hoping that one day they will.

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Before my parents moved south, away from Wisconsin, we used to walk the dogs in the woodsy county park outside of town. My mother liked to go there and look for the sandhill cranes that fell upon the autumn-seeded cornfields. The birds would walk through the stalks on long legs and backward knees, plunging their sharp beaks to the ground. Then one of the dogs would get too close, usually Shamus, and the birds would burst into the sky, suddenly as anything, in a noisy commotion. Crane song sounds utterly prehistoric; it is a deep and eerie gargle, like the knocking of dry sticks against a hollow log. When a group of fifteen or twenty fly up at once, it is enough to make you stand still.

On one such walk, just as we passed through the fields and headed back into the woods, we heard something high up in a pine tree. I was shaking dry milkweed pods

above my head like sparklers when we stopped to look up. It was a wild turkey, who took off when he saw us—but in his rush he left something behind. A single feather spiraled down from the tree top, caught in our glance, and fell against the fallen leaves and needles. We walked over to the spot where it had landed, and stood over it, silent.

“It is a gift,” my mother said, reaching down to pick up the feather. “It fell to us, as a gift.” I touched the new feather, knowing she was right.

Years later, here in Missoula, talking to my mother on the phone, I listened to her describe their new house in Missouri and how she is faring in her fumbles around an unfamiliar city.

“The house isn’t much,” she said. And I know how hard it was for her to let the old house go. “But the trails,” she exclaims, “in and around the city, and the birds—the birds are amazing.” There is a pond she often passes on walks with my step-father, on the edge of Columbia. The marsh is loaded with herons.

“I’ve never seen so many,” she says, amazed. “It’s like a spiritual experience.” And I want to cry when I hear her say this. Or laugh or dance. And it becomes even clearer to me, what is passed down through mother to daughter, the sense of wonder in us both, the resiliency we sometimes misplace, but that always returns. This is who I am too, in part. A seer of God in herons and in feathers.

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I walked on, approaching the campus neighborhoods, pausing in front of a small fenced-in yard where a man stood, fixing an old vacuum cleaner set on top of a rough-grained picnic table. Surrounding his feet were three lethargic Labradors, and to my surprise, two fat squirrels—eastern foxes, the kind you’ll find only in western cities, and



not in western woods. The squirrels were approaching the man, vying for nuts, and one actually brushed against a lazy dog. In my mind I pictured him crawling over the dog's back, a mountain of trembling yellowy-blond fur. I stood astounded, staring down into the yard until the man said his dogs had been *trained* not to disturb the long-tailed visitors.

And part of me longed, really longed, to be the subject of such a scene—coat pockets full of curvaceous peanuts, dogs and squirrels, rabbits and cats, lying down together all about me—some sort of modern Eve in the Garden, however unnatural. When I was younger I used to feed our lawn squirrels. I'd go out every day, sit on the June grass and hold out handfuls of nuts, clicking my tongue in mock squirrel-speak. One squirrel in particular would come to me as soon as I entered the yard, crawl on to my lap and watch me with his round bug eyes. But somehow it seemed different than this scene of quivering, restrained dogs and utterly fearless squirrels. Looking at the animals, thinking what the man had said, I thought how sad it is to train the nature out of something. The love of chase. The fear of danger. To whittle away instinct for the sake of a handful of nuts, taken by two small paws.

I might feed the long-tails on my porch or enjoy watching the action at a kitchen bird feeder, but I don't expect the dogs and cats to take the trespassing lightly. Because there is joy, too, in seeing our dog Mabel diligently guard a meaty bone from scavenging magpies, pouncing just like the wolves I've watched hundreds of times protecting a red carcass, or in watching Shamus go crazy at the softest utterance of the word *squirrel*. This is what confuses me about the city—the mysterious hybridization of behavior, human and non-human, and the mixed feelings that blur in the hazy middle-ground of urban nature.

I do not know whether I should be happy to see those eagles and herons cutting through the air downtown, or if I should see them as somehow diminished, impure, broken.

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Stopping on the bridge in front of a tall cottonwood, I pulled off a couple buds to roll between my finger tips, the sap staining sticky rust red. The spicy scent was somehow comforting, and it made me think of my house in Yellowstone and hikes in Glacier. I wondered why the tree was budding now, in autumn, like those confused crocuses I saw last week—rising thin and ghostly from a planter of dead leaves. When I walked by the spot today, the flowers were gone, shriveled back into themselves, down to the bulb.

The cottonwood shook in the wind, making great movements and round rotations from its rooted trunk. I stood next to it, looking down the thirty feet to its base, feeling the branches pull back and then swing forward just enough to graze my shoulders. I remembered standing there a few weeks before in the electric darkness of a wind storm. The air was warmer that night, and it felt like waves breaking against the overpass, washing everything clean, the tree shadows moving beneath the street lamps like seaweed against sand. That night the trees danced in the wind just like they were now, each with its own personality, lit up by the glow of arcing lampposts above. The pine, hoop-skirted and sturdy, ruffled its boughs. The cottonwood bent and bowed. The maple thrashed her leaves that flew up instead of down, and tossed out helicopter pods, scattering seeds like confetti. It struck me that they seemed to be enjoying themselves, that maybe they had been waiting for the wind, for a chance to sway. And then it didn't matter so much that they were planted below a concrete bridge, or that the river they drank from flowed

through town, collecting shopping carts like exotic driftwood. The cottonwood, the maple and the pine shook their creaky branches the same way their sisters did outside of town. I pressed the broad yellow leaves to my face and breathed in with the wind.

And then the eagle came. Slowly at first, small in the distance. Then larger and larger, until she glided right over me, slicing the air as I stood with my mouth wide. She flew so low for a moment I thought I might brush her feathers with my fingertips. I wondered if she hatched in this city, or if she had left some other place, some wild space to nest here. Was she a refugee, a pioneer? I wondered if she would stay another season, wintering on the riverbank with the cottonwoods.

On this day the eagle seemed enormous--impossibly big for the city. Bigger than all the eagles I have ever counted, roosting on thin winter days near the Yellowstone River. Of course, I know there is no difference in their size, that it is only a matter of context--a trick of the eye, of the mind. Bald eagles are not supposed to fly across downtown traffic. They are not supposed to weave bits of trash and string in with the sticks and feathers of their great nests. And yet, they do—*they do*. I have given up trying to pass judgment on this fact—too weary with the mix of joy and sadness that such an encounter brings—too confused to separate the tenacious strength of adaptability from the oppression of habitat loss. At that moment the bird was only a gift.

We are all here, the eagles, the herons and I. Probably, we should be somewhere else, but instead we are here, in this city—neighbors, looking down to the bridge, looking up at the sky, mouths open, blinking.

Consulting the Stones

*cemeteries
are our only
tended gardens.*

*we tend to die.
--Saul Williams*



Hope Cemetery,
Hope, Idaho.

What brought me here? What pulled me up this dead-end road, high on the shore of the great Pend O'Reille, to sit among old headstones? I did not anticipate this strange route, exploring towns I've never heard of, following narrow roads up hills. The dirt road circles right through this crumbling cemetery, but I feel funny driving through, and so I stop. Neil Young whines over the radio, *long may you run...* How fitting, I think, to hear this in a place heavy with other people's memories. Once I turn the engine off, I fear it may never start again. My car might prefer to remain in the quiet company of these stones, gathering rust like moss.

I step out of the car, leaving the door open slightly. The breeze is so faint that I cannot feel it, but I see it gently twitching the boughs of the tall-trunked firs that guard these graves. The air smells good—cold and smoky like a Halloween chimney. But it is damp too, somber, gray; and the cold is the chilling kind, that seems to slip in through

button holes and at the wrists of open sleeves, burrowing down, straight to the heart. I find a seat on the Donovan family bench, asking permission for a few inches of cold concrete.

She is a modest cemetery, small and full of old dates. But she doesn't seem lonely. There are neighbors, after all--the trees and water, songbirds and highway, houses of the living just yards from the edge. Several large tree stumps mingle with the graves, and they seem more tragic and friendless than any of the stones, cut down cold as they were.

I walk down the paths, reading lives neatly chiseled into memory. Gordon, Frenger, Syler, Van Stone. Some are nearly worn beyond recognition. Eaton, Allen, Cook. So many soldiers here. Young soldiers. World War I, World War II, Vietnam. I wonder if they died fighting for something they truly believed in—or if that was lost along the way, across oceans. Did such convictions ever exist at all, or was the end only the cramp of homesickness and the wish for Hope? The name of this town, of this graveyard, is either cruel in its gentleness, or gentle in its cruelty. And yet somehow, it soothes.

I cannot help but think these things on this Sunday, when Iraq holds her first “free election”—for that idiom is ironic too. I consult the stones. With so many people dying, foreign and native, I wonder if they can still cling to the memory of Hope. Do they keep their hands curled around the thought of skipping stones into the lake and raking fir needles into small, neat piles? Or do they turn from such thoughts, let them grow over, melt deep into the earth?

Mountains, water and sky all lie out before the markers, between the trees--what advice can the dead give? I listen. Do they mind my visiting? I too ask after Hope.

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I am drawn to graveyards. But I have not always found comfort there. I held my breath as a child, lungs aching to refill, as my family drove past the long city cemeteries in Madison. A young friend had told me that if you breathed in or especially if you yawned while passing a graveyard, lingering ghosts would slip past their headstones, quick as the wind, and jump straight down your throat, stealing your body for their own. Reading Peter S. Beagle's graveyard novel *A Fine and Private Place*, I thought better of ghosts, especially the spirit of my grandmother, whom I never knew. Eventually the pull of cemeteries overcame the fear.

One of my childhood homes sat at the bottom of a hill whose top rounded out into a shady park, full of massive oak trees with thick-fingered branches stretched like open palms. This little park was at the end of the road, and didn't get many visitors the way the other city parks did, with their enticing playgrounds sprawled out in tempting formation. Reading in the trees, tossing acorns, I considered this place to be mine. Between the oaks, Indian burial mounds rose up in soft repose, and I lay against them, wondering who was sleeping beneath me, saying *thank you for letting me rest here*. I still say those words.

Once, in high school, my good friend Sean and I decided to make a meal entirely out of wild edible plants from around town. We scouted marshy ditches thick with puffed-up cattails, pulling their tuber roots from the gray mud. In my backyard we hunted for dandelions, clipping their long serrated leaves and piling them into a shallow

stainless steel bowl, glinting in the afternoon sun. And then we ended up on the edges of the graveyard, the hill that fell down into the railroad tracks. Sean and I are both quiet people, saying more with our minds than our mouths--so we pulled up stubby wild onions and leafy burdock, occasionally looking up to the grave shadows, working in silent conversation. I like to think that some of those older stones were glad to see two young people seeking their food by more traditional means—even if our eventual preparation proved to be a gnarly mix of soggy mush that we forced down, nearly gagging. I have visited these stones ever since.

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I walked through a graveyard in Bozeman last spring during a stop in town. This cemetery is the kind that seems to keep rolling back from the gate, branching out into new sections, new neighborhoods--the stones spreading out, multiplying.

It was a good place for a quiet walk, and so I meandered, counting the crows that pushed aside sunlight on clean headstones like black, hooded grave keepers. Bozeman is a growing city, and there were many new stones, but I have always preferred the ancients—stained with flat, flaky lichen, bitten by rain, tilted in the earth—moved by roots, invisible moments. I noted the variety of markers: the modest, the grand, the solitary and the family groups. Looking at the dates, tallying the years between them, I knew that it truly is possible to die of a broken heart, when all you love are buried before you.

This day was perfect in April's glory. A little sun, a little cloud—as if the land were resting for a moment during its rebirth. Here magpies and rabbits lived among the stones and moved between them without thought, like soft hands in a pantry cupboard.

The crows called out welcomes and warnings, perhaps from the dead, perhaps from themselves. There were benches too, by some of the graves—scrolling iron, wooden slats, claw feet. Waiting rooms under the big pines. The seats looked long in their emptiness, curving up to meet pilgrims.

I understand the appeal of sitting in a cemetery, of walking on the soft grass between tidy stones and sky ceiling. Some memorial gardens are actually inviting visitation by re-designing their grounds to be more like city parks—emerald islands among waves of concrete. If not over-tended, both the old neglected churchyards and these newly modified graveyards provide valuable habitat for urban and rural wildlife, and it is not uncommon to find bird and bat houses nailed up among graves. These sanctified grounds house rare plants too—the green-winged orchid is found nowhere in London except for the Morden cemetery, where it resides in frilled antiquity, a pale oracle to seek.

But Bozeman's cemetery seemed a little lonely too, in its permanence. The granite rocks carved and chiseled nearly beyond recognition, had been uprooted from some far away quarry. My impulse was to touch the rocks, in the sunlight, when they might be warm. But somehow it seemed they all stay cool to the touch, regardless of the weather.

I walked on, paralleling the boundary fence. There lay a shuffling garden of windblown flower-heads—bits of petaled plastic, dusty and fading, torn by the wind from overturned vases. They were strewn among the leaves left over from the fall, mingled with pieces of trash, against the chain-link wall. There were graves with real flowers too. And flags. And wreaths. And candles.

I stopped in front of one grave, low to the ground and flat, surrounded by a full can of beer, a toy car, and a mini-piano. There was an ashtray too, full of soggy cigarettes, and a basketball: gifts and offerings left for a teenage boy. I wondered who came to sit with this young friend, and how long they would continue to come.

The Vietnamese have a tradition of burning paper money, real or fake, at grave sites. They hold the bills out, fanned and drooping like wilting flowers, lighting the edges with a long match. Flames spring up, orange and crimson blooms, and the ashes drift up or down, to be gathered and used by the departed in the next world. Staring down at the flooded ashtray, I thought of other offerings left for the dead—of the Celtic mounds rounded up above leaders wrapped in salt, wool, and striped badger skins; and of the Shang dynasty Chinese kings who were buried in vast tombs with many rooms once filled with pottery, sharp weapons, and carvings in stone, bone, and deep green jade. This was before the grave-robbers came. But they took only the valuables, and left behind piles of haunted bones--human bones, stained and dusty—all that remain of sometimes hundreds of sacrificial victims. Some buried alive. Some decapitated, their cavernous skulls collected and layed out in neat arrangement above the bones of their bodies, fingers curled into a clutch of defiance. I wondered, if times were different, would someone have offered her own skin up to this young man, and set out bowls of warm blood instead of cans of warm beer?

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You can tell a lot about a community based on its graveyards. The Hope cemetery seemed almost entirely forgotten, like its small highway town, a stop between

destinations. And yet in that fading, it seemed to me the stones were content; content to be remembered by those who mattered, content to wane from the larger, noisier world.

Other cemeteries slice deeper gashes in the land, some because they are built up and crowded with elaborate mausoleums and stoic statues, like those of New Orleans. The pyramids of Egypt--tombs of the old gold-laden pharaohs—are the embodiments of ancient tenacity, the stones determined to outlast all human life. But some graveyards cut deep because they hold impossible numbers of bones and sorrows. The cemetery at Auschwitz is one of the largest in the world. It stretches, deep with thin bones and generations of pain. I think looking at it must be something like looking directly into the sun. It must leave scars on your eyes. Hard, white lines.

But there are friendlier burial fields too. The Czech novelist Milan Kundera writes of such places in his book *The Unbearable Lightness of Being*. He writes, “Cemeteries in Bohemia are like gardens. The graves are covered with grass and colorful flowers. Modest tombstones are lost in the greenery. When the sun goes down, the cemetery sparkles with tiny candles.”

I want to see those cemeteries. I want to see the tombstones grow over with sweet grass and thick geraniums, see them turn back to normal stones, free of dates and letters. I want to see bluebirds nest in the crooks of unlocked gates, and young dappled fawns rub their spots against the rusting steel. Holding a long, slender candle, I want to see the moths and the bats flutter in for a closer look, and feel the hands that hold up the ceiling sky, like stalactites bracing a crystal cave.

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Back at the house in Yellowstone, I have spent many hours on stale summer days, walking in the back acres, picking hound's tongue and needling cheat grass from my clothes, marveling at how sharply these prickly obstacles bite. On one such day, as the sun crackled above, heating the dusty sage fields with the pungency of a hot kitchen heavy with herbs, I went looking for obsidian. As usual, I walked the path along the ridge that looks down on the river and across the border into the park—poking around the rocks and brush along the way—looking for something to look at. Daniel and I often take our dog Mabel and amble around the backyard to see what is new, especially when we don't feel like committing to a long hike.

The Chapman property where we live is nearly eighty acres, bordering the park on two sides. On walks such as these, it seems we always end up near the twin junipers, where Ma and Pappy Chapman's ashes rest. There I started scanning the ground for stones of a different kind—shiny obsidian, black like an animal eye peering out from the earth. Turning up dull rocks with boot-tip and thumb, brushing the loose dirt aside, I saw there were smaller pieces all around—castaways and litter from the delicate tool-making process. When you look at them closely, you can see the cut where the chip was rendered from the larger stone. I wondered if this spot was something of a dump, or if the flakes were merely left the way thin coils of wood shavings are shed after an evening spent whittling—the stone outlasting the wood by centuries.

Then Daniel found an arrowhead, only the second after handfuls of chips and seasons of searching. I began to think again about those to whom it might have belonged. Was he a Blackfeet? A Flathead? A Sheep-Eater? Many tribes frequented this area, but the Sheep-Eaters were well known in the obsidian trade. Long before politicians and

surveyors fixed their eyes on Yellowstone's preservation, the tribe made pilgrimages to the volcanic cliffs where the rock was gathered. I imagine those cliffs stealing light from the very sky—a black void in the distance, a giant stone raven.

The tip looked so small in my palm, nearly transparent at the edges. I could see each chipping point, each breaking--the ridges so small they remained smooth to the touch. I marveled at its efficiency in dealing death, how artful the arrowhead seemed compared to a long, cold bullet. But in the end it wasn't enough to keep this old camp, or these sister junipers, against the flood of removal; the Sheep-Eaters and their neighbors suddenly became trespassers rather than residents. And maybe these small chips were among many things left behind, during the tinny-trumpet calls and hurried packing, and the start of another national legacy of exile. This spot is a memorial in its own way, though marked by stones too small to carve names on.

We followed the river ridge back toward the house, pausing, as we have both done dozens of times, to read the names at the pet cemetery. The Chapmans used to raise hounds and weimeraners, and decades ago this ridge became the dogs' last resting place, consecrated by prickly pear and river wind. I walked the line, saying the names out loud—Hawk, Franklin, Barney and Cricket, and then Sally Mander, whose pitiful marker is a faded toilet seat cover. Daniel says this is where he wants to bury Mabel when the time comes, although she is still a puppy. Wherever we are, we will come back here, he says. It must be here.

Standing there, I thought about all the animals I have buried. Black and white pets, and wild animals too. Our best family cat was, in a moment of mistaken gender identity, named Tee-Lah after my favorite He-Man character. Later when we discovered

she was actually a *he*, it was too late to change the name, (and I like to believe that from then on he lived a life attuned to Johnny Cash's *Boy Named Sue*). Tee-Lah was an expert hunter, much to my young vegetarian heart's dismay, and he often brought back his trophy kills to lay adoringly at our feet. But sometimes his prey was still half alive, and I spent combined weeks of my childhood with eye-droppers full of water and cardboard boxes piled with grass, vainly trying to nurse young birds, chipmunks, rabbits and squirrels back to fighting strength.

The baby rabbit was the worst. Its small, limp body nuzzled into my memory. I kept it for days, replacing the dingy screen cover on its box after freshening lettuce leaves, monitoring its health as soon as I was home from school, and sometimes in the middle of the night. But it was too weak to live.

I wanted to pay proper homage to my unfortunate patient, and so I planned an elaborate, secret burial service. I selected a spot in the farthest part of our long backyard, among the trees next to the old iris collection—the flowers standing like a crowd of wailing mourners, adorned with haughty hats in airy periwinkle, royal purple and pale yellow, edged with bloody burgundy feathers. I sprinkled cut grass and clover leaves into a creased paper bag, and wrapped the rabbit in this flimsy coffin. Brushing long, tanned pine needles aside, I dug its grave with a green-handled spade, and wept as I refilled it. I marked the spot with a circle of stones and purple violets from the garden's edge, and I kept watch over this site for years afterward.

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On Yellowstone's Blacktail Plateau there shines a series of ponds. They are deep, with bog-like edges made up of floating mossy mats, and the water doesn't always freeze

through in winter. Groups of bison graze near that water, eating slow mouthfuls of grass, tempted by a drink. Every year a few fall in and cannot drag their massive bodies up onto solid ground. If the temperature drops, the poor animals may freeze, remaining half-submerged for the rest of the winter.

I've seen living bison return to their frozen relatives. I've seen the cow with a crescent shape over her scapula creep close to the edge, lick those cold faces. The offering of a warm tongue. And then at the same spot, come spring, I've watched a loose-skinned grizzly bear, hungry after a winter's rest, reach under the surface and drag the carcasses back out. I often wonder, if the ponds were to dry up, how high the skeleton mound would swell. A legacy in bones and hooves and horns.

In 1912, Dr. Robert Cushman Murphy of the American Museum of Natural History stumbled upon an extraordinary sight on the Antarctic island of South Georgia. The sources are vague, but I imagine him in a steely gray parka, the hairs on his fur-lined hood bouncing with each step, each breath.

He climbs the edge of a subtle hill, white like everything else. At the crest he looks down to a little lake, clear, round and unfrozen. He sees several short figures, squints, and realizes they are penguins. But the birds are listless; their slick tuxedo feathers droop in silence. They are tired. They are dying.

The man slides down the hill toward the lake, taking long, slow steps. At the edge he peers into the water like a spy looking down through a skylight on a rooftop. His mouth falls open, his breath stops. Below the surface are hundreds, maybe thousands, of dead penguins piled like black obsidian chips, one on top of another. He cannot swallow, there are no words. He leaves his notebook deep within a downy pocket, and moves from

the shore slowly, with backward steps. This is not Bohemia or Bozeman or Hope. There is no churchyard gate to close, no candles to light. Only the water and the hill. He bows, and leaves the fading penguins the privacy of their last rites.

Murphy turns away. And in my mind's eye, I see his gray form disappear behind the hill crest, as the birds fall into delicate action. They back up to the edge of the water. Turn. Look down. Turn. Look up. This is their burial ritual. Then, raising their flightless wings, they fall backward into the water--sinking like slick crucifixes into the welcome embrace of generations of ancestors--an icy graveyard in black and white, headstones made of ice.

Nocturnes

*“But you silence the great trees, and above the moon,  
Far away above,  
You spy upon the sea like a thief.  
Oh, night, my startled soul asks you,  
You, desperately, about the metal that it needs.”  
--Pablo Neruda, from his poem Serenade*

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Missoula, Montana, October 2004.

I'm sitting in my parked car up at the Water Works overlook, watching a shadow inch across the moon. I'm leaning back in the reclining driver's seat, folded into myself, wrapped in navy wool, shivering a little—and resting on the very source of this umbral shadow, cast some quarter of a million miles like a long, dark tunnel. I don't know why I am content to watch this eclipse through a smudged window—don't know why I won't leave the car and lay on the brown grass of the hill. Instead I stay, bending my neck down, slouching back turned against the Missoula lights, and look through the glass. I light some fir incense, so I can feel like I am in a cold autumn forest, burning needles between my icy fingers.

I am listening to the saddest music in the world. And it makes me weep, to remember every note as it was once burned into my ears—the piano notes hammering me down in that seat, just as they did when I still lived at home, in a cold bedroom, all blue and white. I will not reveal the musician's name. It is my secret. It has always been so. Back then, the music helped me to sleep—in a tortuous, achingly beautiful way—on the bed I still sleep in today, although it is in a different place. I kept this music through

college, blurring my eyes and looking at the little glow-in-the-dark stars plastered to the cracked ceiling. I listened to this ghostly piano in the moonlight, under the down covers, catching the shadows with hands that looked bright and new.

In the car, under the navy wool, I watch this changeling moon, listening to the music. And I remember, but only a little. As solitary as the moon, I am glad to be alone. I watch the darkness inch across like a slow moving hand across the face of a broad clock, eclipsing time and light like a fist slowly tightening. I watch the minutes pass, watch the dark red creep across that bright face, and wonder how many eyes are watching this time pass with me. The shadow grows, soon the moon is only a sliver of light—a thin crescent like the base of a fingernail against the dark, clenched palm of the sky.

And then it is gone. There is only a vague rusty light in the shape of a great circle. And for a moment I am frightened that the shadow will never pass, that the moon will be changed. Will be lost. And then the time passes too slowly, as I wait, shivering, for the light to return. I breathe in through my mouth, deep cold breaths, and sit up, resting my head on the steering wheel, digging my fingers into the seat's sheepskin cover. Below me, down the bank, there is a street lamp that flickers on and off at random. And at first I hated that lamp, because it took attention away from the moon. But now, now it is the only light out on the hill, and when it sputters out, the night feels too dark. Heavy with black.

I wait for the moon to return. I want to wait all night, wait until dawn. But she takes too long coming, and I am cold, so cold. So I drive back home. Then I watch through my window, as time starts to grind again and the shadow skulks away. And

when the moon is restored, I think it is the most perfect face I have ever seen. I turn the music on again and watch the shadows slip through my fingers like liquid silver.

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Gallatin Range, September 1999 // Yellowstone National Park, October 2004

I first saw the Northern Lights during my first trip out west. It was early September, somewhere in the Gallatin Range, after a long day of driving ratty dirt roads. During that six week field program, my fellow students and I, nine in all, aimlessly followed our instructors through all manners of western landscapes—a disheveled caravan of old cars bursting with gear that pressed against all available window space, possibly in an attempt to escape. We ourselves were almost always dirty, injured and thinking about food—all that can be expected of frequent hikers and travelers on the road.

The lights came during our second leg of the trip. On that particular day, we had already experienced car troubles and delays, hiked some distance up to Black Butte counting clouds and sheep, and spent many hours driving behind our instructor George's dust-ball VW camper, occasionally pulling over to let its over-active engine cool down. Sometime around 8:30 that evening a mutiny was squelched. One of my fellow students refused to continue driving, and demanded we stop right there and set up camp—field full of cow shit be damned. He was overruled. As tired as we were, after spending days listening to George's rants on the effects of range land cattle degradation, we weren't about to sleep among the enemy.

And so it was, still driving past ten at night, heading for Red Rocks Wildlife Refuge Area, that I saw my first aurora show—ghostly green in the distance, a cool fire

in the sky. We watched in silence, six cars stopped dead on the dusty road, and recovered our moods. The air hummed with electric warmth, saturated with spinning particles and slow flashes of light. I could feel it inside of me, and knew this was exactly where I was supposed to be—on this road, with these people, watching this light. Then came the ghost.

I didn't actually see it, only Isaiah and Anita did—from their pilot seats in the front of the car, in the glow of headlights. But I felt it, and the change in mood that followed was palpable. The two couldn't quite explain what they saw running on the slender shoulder of the road; they couldn't say if the apparition was in animal or human form, or some unfamiliar mix of both. But they did not welcome that flash with curiosity or wonder, only with uneasiness. Days later Anita was still having nightmares. The sight had stirred up dark memories within her, and sometimes found her exhausted from lack of sleep, napping so restlessly that her whole body twitched and shook, her lips whimpering pleas or threats. I would walk up softly, place a hand on her shoulder. She always woke with a start, tears in her large eyes, impossibly wide. Eventually it passed, but I sometimes think about that night when I am driving in the darkness—wondering if whatever they saw was somehow connected to those northern lights. Was it running toward the glow or running from it?

Inuits of Hudson Bay believed that the aurora were a long line of torches lit in heaven to guide the way for new residents on their journey north. Other cultures watched the lights with wary eyes, fearing bad tidings, omens, hard times. Still others, like those of northern Norway, welcomed the show with awe—keeping their waving hands down, pressed against padded thighs, in silent reverence, as to not frighten the lights away with

disrespect. This is how I prefer to watch the aurora—in timid awe. Cautious, confused, thankful.

I've seen the lights several times since, but the greatest showing came only recently. It was shortly after Thanksgiving and the beginning of a mild winter in Yellowstone. I had spent a long, lazy evening with friends and the wine was working. I wished our guests goodnight, but a minute later the two came back through the door. *The sky*, they said. The sky. I threw on every layer hanging on the door hooks, puffed up in winter wear like the fuzzy horses down the driveway, and stepped out into the cool night.

Astronomers tell us that the northern lights, aurora borealis, are the showy, electrical glow of uncountable atoms and molecules, twisting in a waltz in the earth's upper atmosphere. These atoms and air molecules collide with charged energy particles, creating gaseous atmospheric glows that radiate in a spectrum of different colors depending on the charge of the particles. Ionized nitrogen molecules glow in airy blue light, while their neutral counterparts dance in purple-toned garments with rippled edges. Oxygen twists in yellowy-green skirts down low, and in rare red plumage up high, exceptional to see.

And so it was that in the yard that night, we watched the courtship of oxygen atoms, buzzing nearly sixty miles above us in cloaks of yellow and green. But looking up I thought nothing of these tiny particles, seeing only the hand of god reaching long fingers down to rustle the hems of heaven's curtain. I stood frozen, staring up with my mouth open like a young nestling trying to swallow the sky; I stood until my neck ached from the strain. It felt as though we were standing beneath the very apex of the light—its waves breaking ahead, above and behind. Sometimes a great asterisk would explode

above, sending light green streamers to unfurl on all sides, creating the bar-like streaks of some celestial cage. And me its prisoner.

I looked for ghosts that night. Or maybe that particular ghost from the road that night years ago. But I did not see it, or any other. Still, it felt as though I was in a crowd—and the air jostled with some anticipation—the sage, the cottonwood, the stone house all holding their breath. Pinned beneath the sky.

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Glacier National Park, August 2000.

It is night--a warm summer night, late August, electric. It is the end of my first field season, and we have stolen away from the crowded house--Kathy, Brian and I--for my last look. Tomorrow I will be leaving Glacier, leaving this project, this place, this time, which has been so decisive to me. We sneak down the dark trail to the boat dock, now deserted by diurnal tourists, but still guarded by the big, sleepy hotel. The moon is so bright it births new mountains in the black water--softer versions, fuzzy, with fewer edges. Its glow reminds me of music, and of other nights, catching shadows in my hands.

The dock planks creak under our feet, but not enough to give us away; they are like soft animal whines in a language of clicks and moans, whispering answers. The night hangs like a cashmere cloak over my shoulders--firm, but with a midnight lightness. The water is as still as stumps, beaver-gnawed and silent. I want to be that still too. To be so quiet. Invisible. At the dock's end we strip naked, putting on shadows, and dive into obscurity.

The slender lake is cold as always, constant, snow-fed. I remember, months ago, stepping across its source, miles above, where it is small and manageable, where there is

a current and the trees stand like godfathers watching the water grow. Now, underwater, I skim my hands against the sleeping lake stones, smooth as cheeks cupped in my palms.

I want to rename the lake after this night—something queenly, more fitting than *McDonald*, named for Scottish settlers claiming discovery. She deserves a tender title, something gentle. *Mother*, perhaps. Or maybe a name so long and unpronounceable that eventually all people will give up trying to say it, until it is rubbed off of maps and forgotten to all but the otters, the beavers, the creaky dock boards. Perhaps that is the moon's language too—her name *grandmother*, uttered only in hums and reverence.

I don't know why water feels softer in the moonlight, against bare skin. Maybe our cells remember their genesis in amniotic waters, our infant bodies curled up like mossy stones against the calm lunar curve of belly. My whole life I have been drawn to water—addicted to this weightlessness, this freedom. Warm or icy, I am always eager to plunge beneath the surface, to feel my long hair beckon, like seaweed waving to the sky, to see and hear one world through the window of another. I kiss both with my whole body.

Wishing I could breathe in this womb-water, I let it run against the inside of my cheeks, my gums, my teeth. I taste its coolness, silver and glowing, wanting it to wash through me. I roll and twist and dive in the scent of melted snow, sun-baked rocks and fir needles, hoping it will stick, and that this lake will remember me next year, by my smell.

But it is too cold, and like the summer, it cannot last. Still, in the moonlight we own this splintered boat dock, and shivering, let the darkness dry our skin. Clothed again, wrapped in wool blankets except for our feet, we huddle on the shore. This is an ending, and there are tears. Rather than wipe my face dry, I let them fall where they will,

secretly hoping that like seeds, they will find the lake, and grow in the light of the moon.

This is my goodbye.

So Soon Departed

*"...Isn't everything so shadowed
by its own brevity
we can barely tell the thing
from its elegy?"*

--Mark Doty, from his poem Lament-Heaven

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The route back to the road was easier than usual--downhill, off-trail, but opened up by yellowing aspens and the game trails I blessed again and again. I looked out over Lake Sherburne, Glacier's biggest eastern reservoir, as I reached a clear meadow slope, dotted with delicate shooting stars, dwarfed by towering purple delphinium. But the air carried a great stench, one that I had smelled the day before and avoided, but was now curious to investigate. It didn't take long to find the source, and my heart fell when I saw a dead grizzly.

He was a smaller bear, probably a sub-adult, perhaps recently sent off on his own with the birth of a spring cub. Even in his decay, in the caving of his body, he was still beautiful. His honey-colored face and nape stretched out, chocolate paws spread out beneath him, long claws curving downward, the soil caught in the grooves, still dark. It felt like a mistake, as if death had caught the bear suddenly, leaving no time for seeking the comfort of shelter, of privacy. I walked around him in slow circles, watching his hide move with the insect life active within. Then I stood still, looking at the bear for a long time, waiting, half expecting to feel his energy still lingering. I watched the banded hairs



of his thick fur tremble in the hilly breeze, marked the spot to tell the rangers and placed on his back an offering--a sticky cottonwood leaf I had been carrying.

Something feels very wrong about finding a dead animal. Not bones, bleached and gnawed, or green and broken with age. No, not the bones that I often rejoice in finding, puzzle-pieces that they are, but an entire animal, a recent death. The scattered remains of a predation, of something that has recently been eaten are different--they offer clues to piece together; may even suggest reenactments through tracks and blood. I have spent seasons looking for elk kills in Yellowstone, watching for the forked tracks of ravens and soft wolf and coyote prints, still bloody and whole. They indicate the survival of another animal, a purpose.

What I mean are the rare instances when I have stumbled across the newly dead, the scratch-less, the mysteriously whole. Of course animals die naturally every day, but rarely, while wandering do we trespass into their secret morgues. Maybe this is what bothers me--the notion that I have intruded upon the last of their sacred rites; that they were not meant to be discovered by me or any other human, but only by beetles, until pale bones are all that is left, and with them, my invitation to inquire.

In his book *The Lives of a Cell*, Lewis Thomas ponders similar questions and marvels at the strangeness of seeing so many animals while they live, but nearly none at all in death. He writes, "A dead bird is an incongruity, more startling than an unexpected live bird, sure evidence to the human mind that something has gone wrong. Birds do their dying off somewhere, behind things, under things, never on the wing." And he is right: for all the birds I have counted in my lifetime, with the exception of window mortalities and road kills, my own fingers are too good to count those I have found

newly dead and untouched, each feathered body seared into my memory. The pigeon on the sidewalk. The hummingbird still fiercely clinging to a narrow twig. The black stain of a raven between leggy sagebrush.

In my work surveying wetlands I have not infrequently found dead amphibians, though such discoveries were never a daily occurrence. My only explanation for this is that amphibious creatures might prefer to spend their last moments off-shore, so that ultimately their floating bodies are left to the mercy of wind over water. I never liked finding their bloated, milky bodies in my net. I preferred to leave them drifting between horsetail headstones, but I usually collected the dead without too much thought, sending them on to a lab or museum, packed in artificial ice.

And this is what troubles me. I value and respect life, that is to say *all life*, greatly. I believe that the smallest bird or beetle or fungus deserves as much protection and reverence as any of the more charismatic species. But why then did I mourn for this grizzly, scrolling his image across my memory again and again, even years later, and only bow my head to the countless deer off the roadside, or the pond frog as I reached for a plastic bag?

That at least part of the answer has to do with rarity is obvious. Yet that answer seems too easy. It doesn't sit right. Why should inherent worth somehow be measured by how common or rare someone or something is perceived to be? Or how large it is, how human-like? If I count one hundred deer or starlings or frogs in a single day, do they begin to lose their significance based solely on their commonness? We seem to be careless with the things we see as being easy to replace. These entities begin to lose their

value, they become expendable, disposable even. I don't ever want to think of a living creature as being disposable.

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Seeing animals pass through their routines is an endless source of wonder. They are the relatives we vaguely remember, but still watch with an alien eye. They deserve our reverence. The morning before I found the grizzly, I was wading through the cool, tannin-stained water of a willowy wetland when a little bird landed near me, a mountain chickadee with a black mask and cap. We looked at each other for a long while, parroting the same call back and forth. As I inched closer, my hand slowly reached for the thin branch it was perched on, and then farther on, until I was brushing its tail feathers as it pecked my fingernails, chirping.

Throughout my life I have longed for moments like this—times when I felt a wild closeness to animals and energies, times when I would have given almost anything to strengthen that connection, that recognition. I could not say what that little chickadee thought about our meeting, or why he allowed me to touch him, but I was grateful for the moment. And I think, whether or not we remember encounters like these for the rest of our lives, or only through the end of the day, is not important. It's the noticing that is valuable. It's the seeing that is essential, the pausing, the appreciating. They are fleeting moments, like life itself. A quick breath, a gasp.

In our busy lives it is easy to take much for granted. We rush. Indeed, we are taught to rush. But I wonder how often we compromise the beauty of the small or common things we fail to notice in our distraction—sun on water, wind through trees, barn swallows nesting in house eaves or herds of deer grazing on hillsides. We may see

these things everyday, and yet might not truly *see* them at all. Only the rare encounters merit pause. Earn stories. It might take stumbling over a dead bear or startling a drowsy cougar to jostle us. Often the squirrels don't register, nor do the seagulls, nor the wood violets, because these creatures reside in the common category, not the rare. I am conscious of this reality, even as I perpetuate it.

The Japanese tradition possesses a deep appreciation for the transience of nature. Attending to seasonal events and small fleeting moments of beauty and experience, the observer's appreciation is deepened by pathos. It is this simultaneous celebration and lamentation for the impermanence of all things that leads to an acceptance of life. By welcoming fleeting natural phenomena like spring cherry blossoms and full moons, and the fragility of life they so gracefully represent, individuals are forced to both slow down, and in turn, accept their position within the world. The poet Higashiyama Kaii reflects on this dichotomy:

“Flowers look up at the moon.
The moon looks at the flowers...
this must be what is called an encounter...
If flowers are in full bloom all the time
and if we exist forever,
we won't be moved by this encounter.
Flowers exhibit their glow of life
by falling to the ground.”

He is right, and in this case the transience of nature and time, the rarity of moments, is something to value as special in and of itself. And this settles my own mind. There is room and necessity for the appreciation of both the common and the rare—because both remind us that we are alive, that there is much beauty in this world, and all of it is a but a small flash in vastnesses of the universe. I think, if we are always looking

for the fleeting experience, we will find it even within the common, should we look closer. While we are immediately satisfied by even a small glimpse of the unusual—a grizzly between the trees, a lynx crossing the trail—we might find equal or greater satisfaction in discovering the hidden intricacies and miraculousness of the ordinary—a double-blossom where there should be only one, the transparent salamander among a hatch of her dark siblings.

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Last summer while I lived in Yellowstone, I spent many hours missing my time spent in Glacier. It was the first summer in five years that I had been separated from the place I have come to love with a fierceness, and I longed for the park. In those first weeks of June I could not stop comparing the two different landscapes, never really giving my new home a fair chance. Walking down the dusty trails and sage hills, I wished for trees—for mossy hemlocks, shaggy bark cedars and the bright green needles of spindly new larch. But in looking for qualities rare in Yellowstone, I began to notice the common things, and to me they became extraordinary. Morning frost on sagebrush. Phlox petals scattered over the trails like butterfly wings. The flash of sunlight on a magpie's white-tipped feathers. Gradually, I was able to turn my longing for one place into a reason to love a new place.

Of course, on the northern range of Yellowstone the rare do become the common. There you can watch wolves raise their pups, grizzlies guard carcasses, and the red buffalo calves bleat and chase each other in awkward, stunted circles. Thermal pools bubble and steam like prehistoric springs, ringed with the rare bacteria that glow in vivid primary colors. You could get spoiled, but I never grew tired of watching the animals.

But there are humbling moments--life is tenuous there too, fragile as new bone, and it requires gentle attention.

One day I was driving through the Lamar valley, on my way to an observation point. I tried to brake, to swerve the wheel just a little, with stiff arms. Wincing, I looked back through the mirror and saw a limp body roll a few times, then stop dead right in the middle of the road. Another ground squirrel. Part of me thought I should have felt the impact, even through the metal of the car, through the rubber and the plastic. But I only felt it in my gut as I pulled over into the no-stopping zone. I had seen too many bodies on this road. The summer must have been a boom year for ground squirrels in Yellowstone, because they were everywhere. Maybe it was the overdue rain that made them flourish with the sticky cottonwoods and skinny red willows, the rain that had adults whistling from the mouths of their burrows--their babies still slow and clumsy, easy to pick up with a quick hand. Then the tourists came, car after car, watching all of the squirrels zigzagging across the road-- a gauntlet of fur and small scuttling paws, chunks of red and brown.

It was a deadly cycle. Live squirrels would linger on the pavement, gnawing at their dead relatives, taking small bites of flesh. I don't know if they eat their own in more natural environments, or if the stress of the traffic and the road knocked something out of place, spawned this cannibalism. Maybe the body's temptation by an extra protein source is too much to resist. I didn't want to think about it too hard. But I couldn't leave that little body in the road, so I stopped, my Jeep tilting on the gravelly shoulder. I walked back down the road—watching the spot grow larger, coming into focus as I drew closer.

Its body lay still in the windless heat, intact, so new to death. But its head was crushed, skull splintered as a milkweed husk, one round eye sprawled out of its socket, tethered by dark red veins. I picked it up, warm and limp. The body felt so heavy—such a weight in my hands—and hot. So hot it seared.

I carried it over to the roadside, stumbling down the embankment toward a large flat rock, pinching off a slip of sage with my thumbnail and forefinger. I laid the sage down, making a small pile, a wild funeral pyre. Cars passed. Then I placed its soft body down, noticing its subtle spots, eyeing the horizon for shadowy ravens. I thought of the grizzly bear, dead on Sherburne's hillside. If I blurred my eyes, the squirrel seemed just like a miniature version of him, paws out, stomach down. Honey-colored. Rare. I had no golden leaf to offer, no spring cherry blossoms to sprinkle down. Only vast fields of sage. Only the moment. And at that instant, it was more than enough—it was perfect. Walking back to my car, I looked down at my hand, still feeling the heat, the weight.

*It Comes To This*

*Not all the Greek runners in the original Olympics were totally naked.  
Some wore shoes. — Mark Twain*

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We left the red rocky trail with some ways to go—loping over loose stones, eyeing the ground for hidden sinks and dried up streambeds, snaking beneath grass and wild camas. I held my long dip net out like an eccentric green walking stick, knocking the end of it on rocks with the rhythm of my stride. Kathy carried hers balanced over her right shoulder, the mesh net drooping down like the tattered bundle of some 1920's kid runaway lugging a bulging handkerchief on the end of a woeful broomstick.

The last people we had spoken to, a couple of days earlier, asked if we were catching butterflies; and for the hundredth time we said no, we were after amphibians, and anyway, these heavy nets would surely crush any insects they sought to catch. Now, walking side by side, we discussed the various lies we would like to tell the Glacier visitors when they asked what we were looking for. Trout. Invasive piranhas. Baby orcas. We approached our site.

These particular ponds stretched out lazily on an open plateau, looking out onto the Belly River, walled in on two sides by high, shadowy ridges and the blood-colored rocks of Red Gap Pass. The site was far from the only trail that sliced up the ridge, zigzagging into the skyline, and as usual, we were alone.

It was hot that day. No shade, not much water—well, not water you would want to swim in anyway. The sun taunted us from above, baking the rocks and our skin a bright vermilion, laughing at my judicious but futile use of 50-proof sunscreen. We began to pull out the necessary equipment. Thermometers, clinometers, pH readers, notebooks, bottles, compasses, GPS units and maps spilled out of our packs like an odd assortment of scientific prizes from some hopelessly nerdy piñata.

Over the course of the summer, our field crew of eight had continued an unspoken competition best explained by its simple title: the naked survey. Certain crew members often came back from their hikes singing the praises of working the occasional glory site au naturel, waving obscured or tastefully blurred photographs like recruitment pamphlets for a rustic nudist colony. Because this was to be the last site on our last hitch of the summer, and I had not yet technically completed a true naked survey (normal skinny dipping doesn't count), Kathy and I looked at each other with a sort of now-or-never shrug. Of course, we voted on now rather than never, being young and high on backcountry reverie.

If a group of, say, three individuals, happened to have been hiking up the trail that day, perhaps glassing for wildlife and dreaming of showers and cold beer, they would have seen a peculiar spectacle down on the plateau. Such a group would have seen a pair of amphibian biologists, one, Kathy, reasonably tan, the other, me, an absurd blend of pink, white and bruise, casually surveying a little pond. Buck naked, except for clunky hiking boots, ragged bandanas and the bling of shiny neon-green compasses dangling from bare necks.

As it turns out, there *was* a group of hikers on the trail that day. I know this because I first heard, and then saw them, up above us in the distance, hooting and hollering. With a look of terror, Kathy and I hit the ground in seconds, squinting up at the trail from the crumpled heaps of our bodies. Trying to look casual, I wrapped an unfolded map around my torso, in the manner of some cartographer's spa guest, and looked over at Kathy across the narrow stream bed. As she fiddled with strategically arranging her dip net, we burst out laughing—savoring every ridiculous, joyous gulp of air. Then we did what all good workers would do—and finished the survey, spectators be damned.

And so it comes to this. Three friends end their vacation with a peep show and a story to tell. Two friends end another summer, enjoying life and the unexpected—quite literally making asses of themselves under the vertical sun.

What We See

*"In the subconsciousness of the ancients when mythology was born,
when the most lasting constructions of the mind were built,
everyone believed that plants and flowers were the embodiment
of the gods as they wanted to appear to men."
-- Jean de Bosschere, from La Fleur et son parfum.*

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We first saw the ring earlier that day. Chappy, our landlord and neighbor, came over into the yard, grass green with creek water, to tell us of his discovery.

"Over there in the side field," he said, one hand pointing to the right, the other bent and crossed against his perpetually bare chest, propped up on his ditch-digging shovel, "there's a big faerie ring—maybe forty feet across."

I love Chappy for this. At age 56, rather than live in our place, the house his parents built and he grew up in, which has "too much space," he prefers to live in a small pull-behind trailer down the driveway. Everyday in summer he pokes around the eighty acres and down to the Yellowstone River with his dogs, Gigi and Reba the pup—digging out new creek tributaries to irrigate the fields for visiting deer and elk, pruning the apple orchard, watering his tomato plants and cooking Swiss steaks over an open fire. Chappy is an appreciator. He knows everything that is happening around the property—if there are new footprints, human or animal, he notices them. If the magpies are hatching, or the bull snakes are coming around, or the marmots have gone back to sleep underground, he knows. And so of course it was Chappy who first saw that mushroom faerie ring, popping out of the soft, newly irrigated mud, and Reba and old white-faced Gigi too. It had to be.

Dan and I crossed over the creek and into the side yard, looking for the fungus. And there it was, laid out in circular beauty, like a great alien brand on the land. I stood on its edge, following the arc around and looking into the middle. These were the same white globes that popped up all over the field. Chappy calls them meadow mushrooms and says that you can eat them, but after a tentative bite, I was unimpressed—this was no morel, no truffle, no chanterelle. My sampling remained of the visual variety.

Superstition kicked in from the moment I first looked at the ring, knowing better than to step inside. In the old British Isles, these rings were said to be faerie dancing grounds, the perimeter mushrooms curved seat cushions for the thin legs of tired dancers. Like so many things associated with the fair folk, trespassing into their realm meant certain harm—often perpetrators were struck blind, deaf or mute, or lulled into a heavy sleep that could last for years. Though faeries demanded their privacy, the old traditions also note that finding a ring in your yard was a definite sign of good luck, and like most people, I'll take any luck I can get. And later that day I brought a small offering of dried cranberries and sugar candy to place on a flat rock at the edge of the ring. Just in case.

For hundreds of years people throughout the world have been trying to find out what causes faerie rings. The little people's dance floor explanation doesn't particularly stand out among a long list that includes the amorous mating behavior of be-spiked hedgehogs, the subterranean activities of moles and the fertile nature of cow manure. Modern botany gives a scientific explanation that begins with a tiny spore. When a seed-like spore lands in appropriate soil, it begins to grow underground, secretly, making plans, and spreading out a mass of mycelium threads that stretch like ghostly white tentacles. This is the actual body of the fungus, and it expands in all directions like a

ripple in the dirt. Eventually the center will fall out and die, leaving only the ever-expanding outer-edge mycelium to continue growing outward, widening the circle, year after year. There is a faerie ring in France whose circumference measures over half a mile, and is thought to be over seven-hundred years old. I imagine the wee party that such a ring could hold—petal banners fastened to pine needle rods, dented walnut shell drums and dragonfly acrobatics.

Looking down at the ring, I could see both worlds—the viney white mycelium racing underground, and the shadows of creatures just beyond our human sight, circling above. I thought, if I could see both, why have we humans been taught, even forced, to pick sides—science versus superstition, logic versus sense, head versus heart? Surely the world and its past are large enough to allow a mixing, to let people create their own integrated explanations. We are all familiar with the great debate—evolution versus creationism, any form of creation—be it God’s *Genesis*, Raven’s shell or Tortoise’s back. I have perused enough science to believe without question that humans evolved over millions of years, from one form to next, and that we are still evolving. But I cannot deny the thrill of a good story—of the great trickster Raven knocking on his large shell, prying it open to release the first peoples, rubbing their eyes in the sunlight.

Later that day, after sunset and a lazy dinner with friends when the wine was flowing, we took our guests to see the ring. It must have been late then—midnight, the witching hour—when we stumbled over the creek and across the side field. Our only light came from a small blue headlamp, fastened to the end of a smooth, river-worn walking stick that curved out with the subtlety of a longbow. The light shown through the black spring air like a tiny lantern in the distance, held above our heads.

We spread out at the edge of the ring. “Don’t step in it,” Tasha said, holding her arms out like wings. But her warning wasn’t necessary—this was something that we all knew, engrained from another time—the source spore forgotten, but its legacy still growing. I told her about my offering, and she did not laugh. I knew she would have done the same.

I looked around the circle, through the blue glow that lit the faces of my friends—all biologists of some kind—all standing, or crouching silently over the perfect arc of mushrooms. Then I thought about Chappy, sleeping in his cramped trailer down the dirt road. I wondered if he was dreaming about the faerie ring; wondered what other strange and beautiful things he has seen over the years with those old, watchful blue eyes. Then I pictured him walking the side field just before sunset. Stopping to look at the ring one more time, leaning against that tall rusty shovel, crumpled gray hat with the turkey feathers tucked in hand. He’s counting the white mushrooms, one after the other, watching them glow in the last rays of sunlight. Pausing, he looks down at a small pyre on the edge, stacked with sugar sweets and dried red berries. He smiles, turns, and walks home.

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