

2017

Things Gathered, Things Fallen

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Things gathered, things fallen

by

Claire Kortyna

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF FINE ARTS

Major: Creative Writing and Environment

Program of Study Committee:
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Iowa State University

Ames, Iowa

2017

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ACKNOWLEDGEMENTS

Grateful acknowledgement to *Flyway: Journal of Writing and Environment*, which chose “Lunar Musings” for their Home Voices Contest in 2015, my first significant publication. Sincere thanks as well to both *The Offbeat* for publishing “The Creatures in the Dark” and *Crack the Spine Literary Magazine* for publishing “Into the Wind.”

Many thanks to Iowa State University’s MFA in Creative Writing and Environment, for providing a community of peers and professors. Your acceptance, positivity, and intellectual encouragement made the writing of *Things Gathered, Things Fallen* possible.

I had the honor of working with the generous and brilliant Deb Marquart, whose keen insight as my major professor propelled these essays into new, leaner forms. She labors tirelessly, not only for me, but also for everyone in this program and department. The grace and gentleness with which she manages this position is something I will always aspire to.

I am further grateful to my wonderful thesis committee of insightful, kind people, for taking the time to read and respond to my work: Kenny Cook, Brianna Burke, and Julie Courtwright.

Special thanks to my family and friends, who give blindly, for letting me write about them without any concern or complaint, even though I can show only the smallest windowed segments of their personalities.

To my parents, in a million and a half ways, both large and small, you are the reason I am here. Thank you.

ABSTRACT

Things Gathered, Things Fallen is a series of creative nonfiction essays that blend nature writing with memoir. Personal reflections, travel writing, natural observation, science writing, and short humor pieces all come together to comprise this collection.

PREFACE

My MFA thesis, a collection of nonfiction essays, titled *Things Gathered, Things Fallen*, is part nature writing, part memoir, and uses both form and content to give weight to the way the “natural” and the “personal” lie closer together than we think. The topics and tones of these essays range widely, from the intimate to the researched, often combining both within a single piece. By juxtaposing story and science, the objective and the subjective, I seek to bring the sense of our outside “environment” into the realm of personal consideration.

One basic thematic and rhetorical stance that *Things Gathered, Things Fallen* explores is how nature stimulates the imagination and contributes to personal identity. By exhibiting the constant interplay of story, facts, and the imagination, I attempt to demonstrate the intersection between our lived experiences and the natural world. It’s an illusory separation, a distinction that I work to unmake. Through these essays it is my hope that a better understanding can be reached, not only of our sense of place, but also of the many different perspectives, human and otherwise, to which our lives are inextricably tied.

As a military child and in transience of young adulthood, I have gotten to live in and visit a vast array of landscapes, ranging from the edge of the New Jersey Pine Barrens to the Sonora Desert. These opportunities, these places, set aflame my desire to illuminate the most basic human connections to individual landscapes, a connection that is increasingly lost in modern society. My time as the nonfiction editor for *Flyway: Journal of Writing and the Environment*—a journal that encourages examining the many layers of the term “environment”—and during my years in this unique MFA program, which is also environmentally focused, only furthered this conviction. These experiences demonstrated firsthand the way other writers use narrative to

empower and to critique. I got to see the way story captures the ever-shifting socioeconomic landscape, highlighting concepts of perspective and place.

A breadth of books such as Olivia Judson's *Dr. Tatiana's Sex Advice to All Creation*, Elliot West's *Essential West*, Bernd Brunner's *Moon: A Brief History*, and Joan Maloof's *Teaching the Trees: Lessons from the Forest* among others, provided me with an array of research both varied and deep to draw from, enabling me to write along scientific, cultural, historical, and mythological registers. Judson's humorous, heavily researched book explores the science of evolution across a diverse range of species, while West illuminates a series of historical and biographical accounts, probing into the different conceptions of the American West, as both a literal place and a mythic one. Maloof wrote as a scientist in love, painting the complex the eco-systems that rely on the structure of forests and Brunner examines the moon across culture, metaphoric projection, literary reference, and myth. Of course, beyond these book sources and the countless others, an unmanageably large volume of article-based research also backs me up. I am indebted to countless writers, journalists, and scientists who have allowed me an immeasurable amount of amassed support, adding layers and context to pieces I could not have crafted without them.

The author who first inspired this thirst for research and desire to make the scientific into the relatable is none other than David Quammen, whose essay "The Troubled Gaze of the Octopus: Good Hygiene and Mental Health on the Ocean Floor" was the one that started it all: the essay that made me want to write nonfiction. David Quammen's *Natural Acts: A Sidelong View of Science and Nature* is a text I returned to again and again throughout the writing and revising of this thesis in order to better work toward Quammen's masterful explanation of the hard facts and data of science in ways both humorous and beautiful. His work, and hopefully my

own, demonstrates that it takes an army of information in order to explain the orchestral aspects of science—from the mating cycle of the luna moth (in essay “Luna Luna”) to the physics of tidal theory (in “The Summons”)—without losing your reader.

But in these essays I try to weave together more than just facts, incorporating lived experiences and reflections into an extended exploration of the role that the personal, the body, and place, play in our daily lives. I could not have conceived of this undertaking without the incredible work of the writers such as Terry Tempest Williams, Annie Dillard, Barbara Hurd, Sandra Steingraber, and so many more. Their influences irrevocably shaped the writing style, subjects, and tones of *Things Gathered*, *Things Fallen*.

While Quammen elucidates the stories of science through the humor of his voice, both Barbara Hurd and Annie Dillard temper the informative portions of their writing with stunning lyricism. This, along with their shared knack for observation and detail, joins seamlessly to their more intimate and emotional moments. Barbara Hurd hones in with narrowed gaze and poetic prose on the stunning minutia of the biological world. Crafting together both environmental concerns and natural phenomenon, Hurd balances her prose with profound moments of philosophical contemplation. Annie Dillard, on the other hand, uses sharply hewn intimacy to create larger themes. She writes her memoir-based essays with a keen use of image that builds layers of sentiment until awareness arrives like a gut punch.

Terry Tempest Williams’ richly emotional and environmental book, *Refuge: An Unnatural History of Family and Place*, was a particularly groundbreaking text for me. Williams’ account doesn’t distinguish between the grief that characterizes the tale and the movements of the surrounding natural world, but rather boldly demonstrates how crucially, how essentially they are connected. This book, along with the varying aspects of my travels, field

experience, and time working as an editor for *Flyway: Journal of Writing and the Environment*, came together to help me realize my central motive: with stories as our most innately human way of learning and communicating, it is increasingly important that writing today works to dismantle the harmful method of viewing our lives and our bodies as an experience apart, as exempt from the rest of the biological world.

SECTION I

Where the Wild Onion Grows

Our house was on a quiet, traffic-free court no more than seven or eight homes all the way around. The neighborhood, small and wooded, sat nestled on the edge of the Pine Barren's Wharton State Forest in central New Jersey. My family and I lived there for five years, as I grew from three to eight. There, in the woods, the world unfurled around me. Rich and unfettered, I had a childhood among the trees. In that small street, empty of cars, I learned to ride my bike, dodging piles of fallen branches that awaited removal at the end of each driveway. When autumn came I leapt off the school bus in the afternoons, eager to gallop my way through the empty street, eyes skyward, hands outstretched, to catch the unpredictable whirl of helicopter seeds and falling leaves.

In the center of the court towered five huge white pines. Their branches stacked tight against one another all the way down the trunk, where my older brother Declan and I could reach them. Amid the roots we found a piece of rotting linoleum, yellowed with a taupe border of decorative vines. We could tell at once. We'd found something special. We used twigs to scratch our names into the back and broke off individual pieces with a dusty snap. Like squirrels we shimmied our way up the pine, over and under, up and around, until we got so high the tree trembled and swayed under our sap-sticky hands. It was there we tucked our cherished fragments, nestled among the crevices of the thick dinosaur-scaled bark.

Though Declan and I both hated onions with a childish irrational fervor that drove our parents insane, we loved the wild allium that grew in our backyard. Discovering a new crop each year, tucked behind fence posts, nestled amid the roots of trees, was always cause for celebration, dug

up from the soil as if each time we unearthed a pirate's treasure. Given the zeal of our harvesting, I'm surprised there were still enough bulbs to re-sprout. I knew how they'd emerge from the moist places of the woods, darker than grass, stringy and tall. I knew their smell, their heft of their resistance, that final give as they tugged free at last from the rich darkness of the earth.

They write studies about this, about the connection to place and nature that children foster when they're in certain developmental stages. They write about the wonder of discovery, the bloom of imagination, the indelible print left behind. Sometimes they write scary things about what happens to children, and people today, when they don't get to connect with their environment. We've had come up with new terms to explain what's wrong: "nature-deficit disorder," and the "human costs of alienation from the natural world."

Our backyard was where the magic was, though the neighborhood court had its share of excitement and exploration. A jagged split rail fence ran the perimeter. It was a splinter-scary separation from endless, enchanting woods beyond. Inside the fence, nearly flush against it, grew a bordering ring of trees and shrubs, as if we had managed to lasso our own little portion of that alluring forest. Together, Declan and I sprinted along the edge, darted through the gaps under the trees around and back, around and back. Familiarity begot precision and we dashed our world's circumference with well-honed skill.

First past mother's flower garden: red tulips, yellow daffodils, pink snapdragons, ferocious. They had puppet-curved petals that could go *snap-snap!* when my mom wrapped them around my fingers. Next along the ivy-wrapped oak tree splitting the center of the patio. Past the stone birdbath, bordered by cement frogs that would later get smashed during a baseball accident.

Then into the shaded gully of the larger loop: white pine, then sassafras, pine again, sharp dodge around holly, then oak. At high speed we burst into the light of the small treeless gap in the middle, only a handful of feet across: step-stride, step-stride, step-stride—then back into the shadows, careful arc past the stiff-needed spruce, then maple, pine once more, then towering rhododendrons stacked side by side, then swing set.

The onions came from the soft dense loam behind the hammock, under the fence rail where my dad couldn't reach. I had to tug them out slow and patient. Too hard and the stalks would snap. But if I wiggled them in a steady back and forth, the whole clump pulled free revealing tiny perfect onion bulbs, white amid the dark dislodged clods of earth.

In our secret path along the edges of the yard, my brother and I also had another, even more private spot: a fort within the twisted branches of the center rhododendron. The shrub grew around us like a hollowed egg. Shiny flat leaves and blossoms of lavender, blush, and fuchsia wove together as they grew out and up to gather light in the tree-dappled shade. Behind its screen we furnished our lair with things gathered, and things fallen. We collected acorns and acorn caps. Some we left whole, some we smashed with rocks so we could pry out, fingernails breaking, that bright yellow acorn-cheese. We lined up beetle shells that glinted blue, dead ladybugs in tired orange, and laid spirals of white quartz stones that glinted like jewels. We brought in bundles of crushed sassafras leaves, snagged from careful perch on the uneven slats of the fence. Against our palms we'd grind them all—leaf shape, mitten shape, glove—to breathe in the chlorophyll bled out, delicate, tangy, and floral, like lemon tea and cold sky. And up amid the branches of

our shrub-bower, as it arched around us, we tied handfuls of those wild onions, hung to dangle and dry.

And in the curvature of the rhododendron's gnarling rafters they swayed, releasing their tangy unique smell while my brother and I played below. So appealing, softly sharp and grassy, a touch of sweet, worlds away from the hard acidic stench that came from onions our mother occasionally cooked with.

I learned those trees with the same searing memorization I learned my alphabet. My mind is etched with their shapes: each tree, each bush, each bed of blooms. Coiled against my inner ear, I can still hear how they sighed and rustled and breathed around us, so clearly the lungs of the world.

Sometimes the trees took their toll: scratches on cheeks whipped by branches, wood splinters jabbed into skin from stumbling against the raw wood of the fence, dirt, ticks, bruises, tangles. In that tiny tunnel of trees we had a forest unto ourselves. And we were wild with it.

The lawn itself was so wooded it was hardly lawn at all. For years my father toiled. He spread grass seeds and fertilizer. He put on cleats and stomped divots of irrigation in the dirt. But no grass ever really grew, or if it did it was thin and silky-fine like baby hairs, quickly crushed by my brother, our dog, and me. In the dirt we'd scratch proud lines marking how far we could launch ourselves from the swings.

Wild onions require a dark, woodsy dampness that I don't encounter anymore. But when I've chanced to see them I've immediately gone to pluck a few, carefully dislodging the soil around the base, working that coaxing back and forth, cautious against too much vertical strain. And

when I wrest them free at last, *at last*, I am surrounded once more by that special odor. The scent twines through my hippocampus, tugging me backward, across prairie, through field, past tidewater bays, back finally, to that childhood place, curled within a rhododendron. Back to where the wild onions grow. Back to the trees.

Lunar Musings

From my bed, I watch the moon. My youngest sister crawls in with me. We curl together, spine against spine. And in its gentle light, she and I slumber amid moon-cast shadows. It seeps into our skin. It settles in our bones. We are pulled skyward and bathed, baptized, reborn. We belong to the moon, and it is ours.

“Moon”—the word is an ancient one. The root is Proto-Germanic, *maenon*, meaning both moon and month. *Mona, mano, maan, mena, mene*: the words are strikingly similar across many old tongues. For several of these languages, Greek, Italian, Celtic, and Armenian, the word now only means month. Lunar cycles have been used throughout the course of human history for measurement. Women are considered the first scientists because they were hunter-gatherers, watching the world around them, and conducting the first studies in natural observation. They recognized the parallel between the cycles of female menstruation and the cycles of the moon. These two words share their origins.

Waxing: light comes across, swelling from the right. Waning: darkness follows. Waxing, waning. Waning, waxing. The full moon, rich and round, gets eaten away in careful bites, the most meticulous of devourings.

Each lunar cycle begins with the new moon: it sounds so young, so fresh, and bright. But on the night of the new moon, there is no visible moon at all—merely a darkness in the sky. The moon swells slowly, like the gestation of a child, characterized by that initial lack, the expectancy. At the apex of the lunar cycle comes the full moon. Swollen and heavy, it seems representative of all that is womanly and round.

I was almost thirteen when my parents decided they wanted another child. Before my youngest sister was born I had been one of three, a middle child, with a slightly older brother and a slightly younger sister. Curiously, it was through the birth of this final sister, this last little family member, that I grew up. She aged me.

My memory of the summer of my mother's final pregnancy is characterized by my recollections of the day my father returned from Iraq. At first it's only an image: my mother and father embracing outside the plane hangar at the military base. My father has returned and he makes it just in time. My mother is due any day. In my memory they're backlit by the setting sun, silhouettes, although I'm pretty sure it was actually high noon at the time and swelteringly hot.

So, they're embracing: she arching, 5'4," massively pregnant, up and over that swollen moon of a belly to embrace him, 6'2." Though he's made it just in time, he will leave again soon after. I, on the other hand, was trying hard not to cry. What an awful, grown-up, suffocated feeling. Restraint is an adult concept. All that was young and weak and vulnerable about me was choked up in my throat, rising like vomit. Yet I restrained myself, determined *not* to cry, and that choice stands as one moment in my life where I knew I grew up. In that choice, on that day, I felt myself get older.

The moon is unswerving in its devotion to Earth: our natural satellite. Rotating on its axis at approximately the same speed it revolves around the earth, we only ever see one half of the moon. Its dark side will never be revealed. It is 2,160 miles in diameter. 238,857 miles away. Yet it does not leave.

The moon is the second brightest object in our sky. Its surface is dark, yet reflective, like coal. The core is solid: strong and iron-rich. Before my sister's birth I went with my mother to one of her ultrasounds. They situated her on the table. It looked awful, clinically cold, clinically green. She hadn't wanted to go alone. So there I was, standing by her side as they squirted the gel on her stomach. Oozy and thick, it had no color. Her flesh distorted through the goop looked alien to me: shiny, melted out of shape, and wrong, like the bubbled flesh of a burn victim.

Feeling nauseous I went into the hallway, leaned against the wall, and slid down. The cheap wallpaper brush-burned my lower back. I ended up with my head between my knees, in fetal position of all places. Inside the room, my mother was catching the first glimpse of her final child. I thought of the baby flickering with life on that black and white screen, curled up in the circle of her womb. I thought of my mother's strength, of her brave iron core, pregnant at thirty-nine while my father was so far away. I took a few deep breaths. Then I picked up my head and went back inside smiling.

The moon has often been associated with madness. People used to think that because the moon pulled tides, it pulled the fluids in the brain. The word "lunatic," developed in the late thirteenth century, means: a person affected with periodic insanity dependent upon the changes of the moon. The origin is Old French, *lunatique*—meaning insane—and Latin, *luna*—meaning moon, or moon goddess.

I couldn't sleep at all the night after she was born. I kept dreaming that I had her in the bed with me. And I would reach, reach both in my dream and in reality to the crook of my arm. I would reach to place a hand on her soft belly, to reassure myself that she was there, that she was

alright. But of course she wasn't there. She was at the hospital where she was supposed to be, no doubt snug and safe, all rolled up like a piece of sushi, face poking out of rice-white swaddling.

So my arm would thud to the mattress. And I would awake, panicked, searching her out. Blind in that dark bedroom, my eyes frantically roved the moon shadows until I realized, remembered, and fell to fitful sleeping once more—only to reach and thud, panic and remember. Again. And again. And again. Yes, she aged me.

One summer evening I was moon-gazing with my sister, who was three. I held her cocooned in my lap and lazily we stared at the sky while the Adirondack chair pressed red lines into the undersides of my thighs. It was then that we noticed the darkneses, the spots on the moon. She thought them freckles like her own, dotting across the moon's nose. Ancient scientists thought they were large bodies of water, moon-oceans and named them *maria*, which is Latin for seas. But both were wrong. No water in liquid state can exist on the moon. It becomes decomposed through a process called photodissociation and lost to space. Selenography, or the study of the physical features of the moon, has revealed that these dark patches are craters. Deep and wide, these chasms might have once held seas of some sort, so the ancient scientists weren't far off. But I like my sister's answer better.

The moon may not have water, yet it controls ours. It pulls the tides and lengthens the days. Tidal theory is one of the biggest messes in contemporary physics. Though sun has a stronger gravitational effect on the Earth than the moon, the moon pulls the tides. Were the sun to pull the sea, tides would be about 180 times as great. The solution to this riddle involves a lot of complicated math, numbers and letters lining up together to prove something, which, in layman's terms boils down to a simple matter of cancellation. The tidal forces result from

imperfect mutual dissolution of centrifugal and gravitational forces at a specific distance away from the system's center of gravity. I've always thought there was something almost sad about the tides. It's an embrace, but it's also an abandonment. Ebb, flow. Come, go.

My littlest sister has always loved the ocean. When she first saw it, she was still crawling. The moment her knees and hands touched sand, she headed for the water. That initial mouthful of brine did little more than momentarily stun her. Then she was crawling again, deeper into the waves. Laughing, I had to carry her shoreward repeatedly. If I hadn't, she would have continued onward, never pausing, even as the sea closed over her head.

The tides tease in their reach and retreat. Constant yet ever-changing, they can no more cease their fickle habits than a child can keep from growing. I understood this intuitively of course. My sister would grow older and need me less. Pain is inherent in loving that which cannot remain the same. But the heart is slow to learn.

The moon has moonquakes. They're weaker than earthquakes and are caused by a sudden release of built up tidal pressures. Since there is no water on the moon to mute the tremors, they last longer. The moon shudders. It quivers like a racing heart, trembling like adrenalized limbs.

One day a friend of mine came over to pick me up for practice. She had a cold and her already deep voice had deepened considerably. My sister had just begun stringing simple sentences together: subject and verb, occasionally in agreement.

"You sound like a man." She said it without inflection, a child's observation, unintended to harm. My friend bent down till her eyes were level with my sister's.

“Your hair looks like a man’s.” She mocked the mop of chocolate curls. Hurt welled in my sister’s round young eyes. My fury was immediate and engulfing. I had my sister in my arms, one hand protectively cupping her head so swiftly that I blinked down in shock at my limbs.

“Leave.” I ordered. I never made it to practice and our friendship was never the same. Afterwards I realized I was shaking. I shuddered with racing heart and adrenalized limbs. Moonquaked. Even now I scarcely understand the ferocity of my reaction.

My sister has piano lessons on Monday evenings. During the summers, when I used to come home from college, I’d help her practice. One afternoon, not too long ago, we were playing together. It was a little duet that she had been working on and I played the teacher’s part. The fine hairs near her temples were slick against her scalp, sweaty from playing on the swing-set in the backyard. When we finished I leaned in and kissed the top of her head. Her sweat smelled—not terrible, of course. It was not in any way comparable to the body odor produced by a pubescent boy. But neither was it the innocent, odorless sweat of a baby.

Something inside me crumbled in that moment. How had this happened? *When* had this happened? I felt this terrible shrinking feeling. How dare I be gone so frequently, so long? What kind of big sister is as absent as I? I knew what that smell meant, even if I didn’t want to face it at the time. She was growing, and soon she’d be a full person of her own, a girl who wouldn’t *need* me.

I poked her playfully in the side. She giggled. We went upstairs and did a little washing up before dinner. My sweaty little sister, whose hand still felt so small in mine, but whose head was cresting dangerously close to the height of my shoulder.

According to the Outer Space Treaty, the moon is free to all nations for exploration. Yet I am unwilling to share. The moon is ours, my sister's and mine. And though we may not need it, I still want it, just for us.

Private Maps

I'm twelve and at the dermatologist's with my mother. Eventually the doctor enters. I'm aware that I'm supposed to trust him implicitly, but he's a large man and a stranger. In his left hand he carries a small Styrofoam cup whose contents smoke into the sterile air like a cauldron of witches' brew. Setting the cup down, he pumps two globs of hand sanitizer into his palms, then rubs them together with what seems like too much enthusiasm. It smells sharp, chemical, wrong.

Next step is to consult the papers the nurse filled out while making small talk with my mother. I'm not listening so when he reaches toward my right hand, I think he's going for a handshake. Doctoring relies on certain rituals to ensure correct behaviors. But instead he grasps the hand firmly and turns it upward. This bends the upper right corner of my palm into relief, pushing my pinky down to create red streaks of tension. I have a wart there.

It never bothered me as a child, that little wart. No bigger than a single drupelet on a blackberry. It's a flat oval, skin-colored. Lots of children have warts like these. But I'm in sixth grade now, a middle schooler. And I can tell I need to get this dealt with, distantly aware of the more traumatizing experiences yet to come. Namely, puberty.

Lately I have been feeling more embarrassed about it than usual, making sure that when I raise my hand in class, I keep my fingers half closed like a paw. It serves a dual function: wart hiding and casual appearances, so I don't look like I care *too* much about participating.

The doctor has picked up the smoking Styrofoam cup once more. With one hand he takes the extra long doctor's Q-tip, immersed in that unseen liquid. His other hand clamps upon mine, forcing it upward into supplication by yanking at my thumb joint, fingers pushing from beneath. Then he presses the soaked cotton into my skin, freezing my wart. Only it's not cold at all. At

first there's nothing, just that white smoke, curling up. It makes no sound but I imagine I hear sizzling. He's pressing so hard. The pressure hurts. He bears down even harder, twisting the Q-tip back and forth. My skin is bright white and instead of freezing, it burns. He re-dips and repeats a few times.

Overall I'm fine. I bite back tears while my mother tells me I was brave. The top of my wart is completely gone. A weird white crater remains in its absence. The ring is raised, surrounded by blisters that bubble up like time-lapse cinematography before my eyes. Inside the basin are odd little white stumps, leftovers in a clear-cut forest. It's easily three times as disgusting as the previously offending wart.

Another doctor comes in and looks at my hand too. Together, they explain how to take care of my new cratered skin. More small talk with my mother. This is called "bedside manner" and is a very important part of the doctoring routine.

"Now see?" the doctor says to me, "That wasn't so bad, was it?" I shake my head *No. No, it wasn't*. I offer a weak smile, but the skin is thawing now. The blisters throb deeper and deeper, and my hand is stuck in a wretched, unmoving claw. The new doctor picks up the cup, chuckling. Turning to me he lifts the Q-tip, now freshly soaked in that killing cold. He dances its smoking point back and forth before my face, like the barrel of a gun. Frigid dryness curls toward me through the air.

"Should we do your nose next?" He asks. I jerk back in horror. Time slows. The undulating Q-tip fills my vision, looming closer, ice and death. My hands remain limp in my lap, but every other muscle is primed. I am convinced in this moment that the doctor is insane and any second now, I will have to flee for my life.

“NO.” I bark. It is a rough, adult sound. Very different from the shy, young voice I had used earlier. This time, he jerks back. And I can’t remember if he says anything else. But my mother is furious at my lack of manners.

She orders me to apologize, explaining that the doctor was making a joke. This is news to me, freshly traumatized and then threatened anew with the instrument of my on-going pain. But I can tell I embarrassed her and that embarrasses me and ugh I hate *everything*.

In the months and years that follow, I went back for another treatment to permanently remove that wart, then others popped up: one on my pinky (frozen); one on my fourth finger (frozen). Later, one on my foot, which I kept to myself, until eventually it was gone.

The wart virus is highly contagious and more common in girls than boys. Between 10-20% of all children will have warts at one point. Sometimes they go away on their own. Sometimes they don’t. Liquid nitrogen is commonly used to remove singular small-sized warts. In the medical field it’s frequently used in the cryopreservation of eggs and sperm at many fertility clinics. It’s also used to brand cattle.

Several years later I began to get another wart on my hand. Uninterested in more freezing treatments, I picked at it every Sunday during mass, digging my fingernails in along the sides, prying chunks loose. I removed it in this way two and a half times. The final eviction was so small that it hardly merits a full accounting.

I’d like to think that my dislike of doctors was borne out of that moment, at twelve, when so much of the world was already in turmoil—hormones gathering in a distant hurricane, newborn sibling at home, training bras, and mascara and acne. But trust is rarely broken in a single swoop.

That first instance creates an essential crack, a fault line of vulnerability, which will fissure and splinter with each additional let-down.

My pediatrician was an ancient, tiny woman, brusque and thorough. She once had me bend over three times in a row for a scoliosis test then finished without explanation or reassurance. *Bend. Straighten halfway. Bend again. Straighten.* She offered no conclusions and she left without comment, while I sweated in front of her, panicking that my back was crooked: it wasn't. Doctors once told my mother when she was young that if she didn't sit with better posture she would get scoliosis and have to wear a back brace. Though it has lessened with time, my mother still has a tendency to recline like a soldier at attention.

One glorious year my mother took me to a pediatrician who was a teenage specialist. Gentle and Asian, when she looked at me, she really *looked* at me. Her office was papers with non-aggressive posters and flyers featuring answers to all the things I had questions about but couldn't ask. In movements slow and graceful, as if approaching a wild animal, she asked me whether or not each touch was all right before her hand alighted upon my skin. She showed me that my arms don't unbend all the way, something even I'd never noticed before. Even fully extended, my elbow joints have a slight curve, she said, like a ballerina's circle above the plié.

Of course, not long after my well-child checkup that wonderful woman got transferred to a different office in a different state and by the next year I was back with my no-fuss raisin of a doctor whose thoroughness demanded that she call for tests and screenings at the slightest deviation from the norm. My freshman year of high school, when asked if I ever had chest pain, I thoughtlessly admitted that sometimes when running suicides during preseason my upper chest burned.

The burning ended up just being seasonal allergies and an inflamed esophagus in an otherwise good bill of health. But this was not proven until after I ran miles on a treadmill at the Children's Hospital, tentacled to a machine by tracking stickers, and had my tender pubescent breasts lubed up and prodded by a young male ultrasound technician who was clearly uncomfortable with the physical maturity of his child-patient. I tried to seem collected as I lay there, despite my shyness and later horror at being shown a cross-section of my thundering heart, which gaped like the mask of *Scream*. After that, my yearly check-ups were a well-coordinated tightrope act, all the doctor's expectations and questions met with perfectly formulated answers regardless of truth, to ensure the quickest exit.

Not all health professionals bother me. I have a strong preference for the dentist. I brush twice a day and am fortunate to have good teeth. Besides, despite any odd flavors and the questions asked while my mouth is propped open by two glove-coated lumps and a yard of floss, it's never quite as bad as being quizzed on my seatbelt wearing and multi-vitamin use while having my pants unceremoniously yanked down to see how I'm "developing."

When I was fifteen my doctor looked at the weight the nurse had recorded for me, looked at me, looked back at the weight, at me, then said, "You look athletic, so we'll let this slide."

This moment is another part of the reason I struggle with doctors. From the beginning they force a mental separation between the body and the mind. I think they have to, to do their job. But as a young woman, my body already so often felt like it was being taken away from me, and judged by others. It started to seem something I was trapped inside of, or stuck with—my body was too sexual, not sexual enough, strong, weak, feminine, boyish, embarrassing, wrong, right—especially when health care professionals reinforced this objectification with their

assessments. My youngest sister was only nine when she asked me if her thighs were fat. Her question saddened me, but I wasn't surprised.

During high school when things started to sound...distant...in my right ear, I kept it to myself. It just felt clogged, as if there was a bubble of water in there I couldn't dislodge. At my yearly doctor's appointment (my last one ever, thank god for sports physicals), it didn't even occur to me to mention it. Luckily, my overly thorough, excessively brusque doctor who bullied me annually saw what she called a "white hammer on my eardrum" and I was sent to an ENT (that's Ear, Nose, and Throat) for an examination.

The ENT was a heavily mustached buoyant man, who insisted on showing me a picture of his middle school aged son every time I came in: a ginger boy posed with a baseball bat hiked and ready behind his shoulder.

"My son has red hair. See?" He would beam at me, waiting for this shared anomaly to somehow transform me out of my businesslike efficiency into a soup of happily connected pleasantries. Again and again that picture surfaced unchanged until I could confidently say that his son would either die of embarrassment or kill his father if he knew what was happening.

Three bones hold up the inside of the ear: hammer, anvil, stirrup. The interior, smooth and round, takes in those evenly undulating sound waves and bounces them directly back out. The brain then interprets these frequencies into sound. The importance of the accuracy when bouncing these waves in and out varies by circumstance. The roar of the sea, for instance, doesn't particularly require nuance. However, when a friend leans in to yell directly at your ear over the teeth-rattling *whomp whomp* of the night club's base, it's crucial to know if she's telling you she's going to get another drink or if she's headed home.

In the end, I had three surgeries in my right ear where they scraped away at the tumor that had grown, nibbling steadily at those bones. There were three surgeries because if even a microscopic portion of that tumor is left behind, the tumor returns, to gobble and grow once more.

At the first of my surgeries the nurses tried to get me to disrobe.

“Why? Aren’t they just operating on my ear? Why do I have to be naked?” I pressed.

The nurse huffed and fussed, shoving the paper robe at me again. I was disrupting the routine.

“My doctor said I could keep my sweatpants on,” I insisted. “He said!” I knew I was being difficult, but I found it hard to care about her inconvenience. At that age, embarrassment, and the avoidance of it, were among the strongest motivators of my life.

Eventually she relented and I was left shaking. Such a battle, for something so basic, something that felt so necessary to me keeping it together in front of my mom. She waved at me over a book I could tell she wasn’t reading when I passed by on my way to the surgery room. I made an answering smile rubber-band across my face.

Inside the surgery room everything is tinged green: lime-flecked tiles, mint painted cinderblock walls, flickering yellowed fluorescents bring out olives in my skin that don’t exist. In the center of the room is a narrow bench with two sets of straps hanging off the sides. It’s thinner than I am wide and ringed by chrome trays of mystery tools that gleam puce in the light. It’s then that I notice the line of handsome young people crowded curiously in the corner. I blush, thinking of my tightly braided hair, convenient but unflattering against the roundness of my face. This is mortification I didn’t anticipate. A doctor and two nurses approach me when I enter.

“They shadow the procedure today, yes?” the doctor has a heavy Russian accent and a beard that escapes the edges of his surgical mask. Though it didn’t seem like he was asking my permission, I nod. Maneuvering as gracefully as possible I let them strap me to the table. My view narrows to the halo of the overhead lamp and the texture of the drop ceiling tiles. A nurse pops into view with a stuffed animal.

“They’re putting your IV in dear. Want to hold this teddy bear?” She coos. I glance around, a reflex to find the child nearby she had meant to offer this to.

“Um, no. But thank you.” She disappears and a mask goes over my nose and mouth. Though it won’t be realized until I wake up, I am violently allergic to the anesthesia being pumped at my face. It smells repulsive, like the cherry of almond soap mixed with bleach. When I wake I’ll begin vomiting violently. They’ll give me a plastic bag lined with an adult diaper so I can hurl multiple times in a single sack and while we’re waiting for our car to be pulled around my mother will run into an old friend from college with her teenage daughter at her side. And she’ll be forced to make small talk while I’m trapped there in my wheelchair, vomiting and vomiting and vomiting.

But, for now, the Russian doctor’s face appears directly over mine.

“I sing you Russian lullaby until you sleep, yes?” He’s so close I can see the pores in his forehead, the hairs poking out of the mole at the top of his nose. I try to shake my head, but the mask grows heavy and my mind begins to separate from my body.

“Really, no thank you.” My voice is muffled, coming slower, as if from the end of a tube. “Please don’t.” He nods serenely and strokes his gloved hand over the top of my head. Then he’s crooning out foreign lyrics, timing his head pats for emphasis. I have time for a final thought: *I hate every part of this*. Then the world goes dark.

All that remains of these surgeries is a fine white line, tucked behind my ear like a strand of sliver embroidery thread. There's another scar where my helix attaches to my head and on the inside of my tragus, but these are almost impossible to see.

But inside the ear canal, these three surgeries left me with partial bones in my one ear, valiant remaining fragments and irregularly lumped scar tissue. Those undulations of sound cannot be redirected with the same precision as before. It's a bouncy house in there now. And that's fine, 99% of the time. It's just not fine at nightclubs, or crowded rooms. But hey, like most people, I'm lucky enough to have two ears.

We all have these hidden scars, secret constellations. I retain a small scar on my forefinger from when I tested the heat of a light bulb as a child: whirled puckered oval, smaller even than a grain of rice. No one but me would notice it. No one but me would care, and even I forget about it for long stretches of time. The fingernail of a soccer opponent in middle school left a white dash that stands out on my knuckle. A teardrop shape marks my wrist, from tumbling head over claw with the dog while playing tag. Following the curve of my upper thigh is a raised white line, that some people think is a stretch mark, but it's not. Curiously, the warts left no scars.

We all have these private maps, a body of braille that we read to ourselves. It gives us a timeline of life's toll on our bodies much like wrinkles and lines do, though these develop more slowly and we all share that process, the soft crumple of aging. After doctors separate personhood from body, scars are the physical demonstration of how the flesh at least, has been sewn back together once more.

Into the Wind

My best friend Daniel and I took sailing class together. In the classroom we stared transfixed at churning diagrams, absorbed the interactions between wind, sail, and motion—twisting fluidly like a gyroscope. Nautical terms salted our vocabulary: *halyard*, *starboard*, *spinnaker*, *port*. We tied foreign knots into the laces of our shoes. For several weeks we did nothing more than practice properly rigging our ships. With their sails aloft the small hulls would wriggle and squirm on the dock, itching as we were, for the water.

The boats were little two-person dinghies, so we took turns skippering, and although many find it easier to master sailing with the wind at their back, Daniel and I waffled with the wind behind us. We flailed around in the water while other students glided past. Our sails luffed in shame overhead, but we were unable to gather definitive grace or speed. For whatever reason we were our best, our strongest, when we sailed hard into the oncoming wind. With ropes fisted in white-knuckled hands, we'd hitch our bodies out over the side of the boat to counteract the gusts that attempted to capsize us.

“Mind the boom!” I'd yell each time we brought the boat about.

“What?” His invariable reply, just moments before it swung around to nail him in the side of the head. Unable to stop myself I'd seize up laughing while he ruefully shook off the pain and got us back on course.

As we passed other boats in the water I liked to salute and call out a cheery, “Ahoy!” Daniel blushed beside me in embarrassment. I never loved him more than I did that spring, with the wind in my hair and the tiller in my hand.

The thought of capsizing terrified most of us in Basic Sailing. So to make us more comfortable with the possibility of tipping ship, each student had to practice righting a fallen boat. Our instructor was a shiny nut-brown man, with a permanent white raccoon-mask around his eyes from his sunglasses. He sailed his two-man dinghy alone, standing in the back portion of the boat with legs astride to shift his weight against the wind, a man comfortable tempering a great beast. His black and gray speckled dog joined him, often leaping aboard whenever his dinghy neared the docks, panting at the bow, a furred figurehead.

One day, our instructor toppled a boat not far from the docks. It was beautiful to watch, the capsizing: like a woman swooning, the mast drifted downward. The surrender was punctuated by a gunshot *crack!* Her final indignation when mast met frigid waters at last. The wreckage looked wrong, and it looked lovely. Limp sails rippled in the brine, boneless and carcass-like.

To right a capsized boat, the sailor swims up to the centerboard, which drips a foot or so above the water, and leverages their weight atop it like they're climbing out of a pool. This forces the boat slowly upright. When I bobbed out to the centerboard in my life-vest like a drunken apple, it took several furious bouts of kicking in order to propel myself high enough out of the water to grab the damn thing. Then nothing happened. I just dangled. I willed myself heavier, thought weighty thoughts, but the centerboard wasn't pulling down to the waves below.

Laughing, the teacher told me I could stop. He suggested that my friend and I attempt to demonstrate the two-person righting method. Daniel joined me in the water and with a seamless grace that startled us both, we rolled that ship easily back up, flopping simultaneously over the sides to land, breathless and relieved at the bottom of the boat.

Daniel and I never capsized while sailing together, but we did come close. It had been a deceptively pretty afternoon until sudden clouds, thick and gray-green, curtained the sky. I asked Daniel if we should head back. We were further out in the bay than the other students, but they seemed unfazed. So we continued onward, forging upriver.

The gentle zephyr grew to a howl. It was my turn as skipper that day and I remember the burn of the mainsheet skidding across my palm, tiny fibers splintering into my skin. Readjusting my hold on the tiller, I looped the rope once more about my wrist. It tightened with a harsh yank, prompting a matching clench in my stomach.

“Do you see anyone?” I yelled over deafening wind, squinting through the screen of my hair. It began to drizzle. Before I heard a reply the boat heaved to one side. Compensating I leaned so far out over the edge my life-vest splashed against the darkening waters below. We were flying, so fast that the light rain bit the soft skin of my cheeks. I could no longer see the docks. I wrenched us about, hurling myself under the boom and across to the other side.

Our boat careened, gaining incredible speed. The hull slapped against the rising waves as we raced toward the docks. We were coming in too quickly. On the waterfront the other students had already hefted their vessels out of the water and were taking down their sails, hustling to take shelter in the River Center building. Teeth gritted and hands cramping with fisted desperation, I knew I wasn't going to be able to stop the boat. Squinting in the wind and rain, I pictured us crashing, bow shattered, flung upon the waves.

Nearing the docks I pulled us parallel, loosed the mainsheet and hitched even further over the edge. We rushed along its length. Wood was running out. The perpendicular walkway loomed ahead. I called Daniel's name.

He flung himself from the boat, rolling along the dock as I kept speeding by. He scrambled, lunged—managed to just catch the back of the dinghy. With fingers caught tight around the cleat hitch and our velocity dragged him along, great and terrible, scouring off the skin under his forearms. Quickly Daniel twisted so his legs were in front of him and braced his heels up against a dock post. The boat slammed to a stop, yanked backward, and battered against the side of the landing. Hastening over our instructor and took the lines from our boat so Daniel could flop on his back. He leaned with ease against the agitated flap of the dinghy sails while they twitched to go on, and on. Reaching down he clapped Daniel on the shoulder. Still within the boat I unhooked the mainsheet, shuddering, tiller loose in a frozen grasp.

Before sailing, I hadn't understood the inexplicable yearning I felt when gazing across the sea, that urge to feel its moisture against my skin and hear it roar in my ears. I hadn't known how I would yearn for the resistance of the wind trembling within my palms, clasped tight about the jib sheets.

Daniel still has a brush-burn scar on his forearm from that day, one that he'll carry forever. And although we haven't sailed together in years, I know we both still crave it, undeterred. How could we not? When we know what it is to possess those waters, even if only in some small way, to harness a part of that awesome power and feel it throbbing beneath our feet, to fly with the wind across the water.

The Summons

*The hidden deeps,
Where tide, the moonslave, sleeps;
Where the wind breathes not, and the wave
Walks softly as above a grave;*

—P.J. Bailey, “Festus”

When I went to school, I went to the sea—and it changed me. I spent most of my childhood in the foothills of the Appalachian Mountains, where the grass grows pine-green, thick, and sticky. The trees have heavy canopies that only allow weak light to filter through, just enough for the soft carpets of fern and moss below. Winter lasts a full four months and snow isn’t a surprise but an expectation. The world seems settled, as if Rip Van Winkle were nearby, yawning in his slumber.

But then I went to the Chesapeake, where life pulses: vibrant. The brackish water seethes like primordial soup, catching the shifting blues of the sky. Ospreys hang from the sky, tense and watchful until they erupt into movement, plunging into the river, to snag prey with a splash. Jellyfish pirouette in loose circles, undulating among blue crabs and the razored sharpness of oyster shells. The tides mark the passing of time, adding rhythm to the unfolding of the day. They carry sea breezes up from the shore. It smells salty and a little off, not unpleasant per se, but too full of organic matter to be enjoyable. The grass is sparse and spongy. The dense undergrowth of the surrounding woods are overrun with twisting vines. Delicate streams trickle quietly amid bamboo forests and prickly pear cacti.

One gray and rainy morning, I walked down the sandy stretch of beach that tapers to end at a cross mounted on a concrete platform. This spot is called “the point,” originally enough.

There I hunkered down, raincoat resting against weathered wood, and three swans came forth from the mist, synchronized in flight, to alight upon the river.

Tides are caused by the gravitational force the moon enacts upon the earth. The waters stretch, yearning, toward that enthralling moon. Oceans and lakes bulge skyward. The earth also longs for the moon and pulls away from its own waters to be closer, creating an equal and opposite bulge on the other side of the earth. I feel drawn to the moon much as the sea does, entranced by the brilliance, face tilted to its place in the sky like a sun-seeking flower.

I picture it opening welcoming arms: the earth and waters reaching, lifting to meet it, leaving behind the seas on the moonless side of the earth to hang in wait, unwanted and abandoned. This is why when the moon is directly overhead, a high tide rises on the opposite side of the planet.

It's strange to sail without qualm around the bay where oysters were once so plentiful they formed giant knife-edged reefs, gutting and sinking unwitting vessels. They're almost all gone now, much like the watermen of the Chesapeake who harvested them. The labors of these men relied on information about the tides, as seashell collectors do now. Although today oysters are more often mentioned in terms of restoration than harvesting, the national oyster-shucking competition is still held there in St. Mary's County, Maryland. Top men and women come from across America to shuck with ferocity and speed.

The oysters for the competition used to come entirely from the Chesapeake itself, but there are no longer enough to support the festival, so Virginia ships up the additional supplies.

Virginia has state mandated jurisdiction over oyster harvesting, so their portion of the bay is recovering faster than in Maryland.

After the competitions are over, each shucker comes around with a heaping tray of fresh oysters to share with the crowd. You can eat as many as you like; there doesn't seem to be a shortage. Interestingly enough, the top female shucker is allergic to shellfish, but competitive shucking is a family tradition. She competes in long pink gloves that reach above the elbow to prevent her from having a fatal reaction to all the oysters flying around her. As victor she receives an all-expense paid trip to Ireland.

Scientists in the early '80s discovered that the reproduction of coral is attuned to the full moon, their ancient photosensitive molecules are triggered by the light of the moon. In a worldwide mass spawning, trillions of sperm and eggs simultaneously release into the waters. This is the largest spawning event on the planet. Yet how they are able to track the moon's changing phases remains unknown.

There's so much life in the sea. I used to get so frustrated with the song "Brandy" by Looking Glass. It's about a sailor who tells the woman who loves him, "Brandy, you're a fine girl. What a good wife you would be. But my life, my lover, my lady, is the sea." What kind of man finds the ocean's call more compelling than that of a living, breathing woman? Ah, but the sea seems to breathe as well, inhaling and exhaling, half drowning the shore. It blows a thousand damp kisses against your face and reaches up the beach to beckon you, just when you miss it most.

Issac Newton was the first to delve into understanding the tides from a scientific standpoint. He explained them in the second volume of the *Principia*, published in 1686. There are two main types of tides: spring tides and neap tides. There are also two less commonly occurring tides: perigean spring tides and proxigean tides.

Neap tides are the weakest. Their fluctuations are very minor, making for less dramatic displays of varying seashell species. These occur during the first and third quarter moons, when it looks as if there's only half a moon in the sky, sitting pretty like a slice of lime. They are caused by the moon and the sun pulling perpendicular to one another, partially cancelling out each other's forces. The lowest, stillest tide is called dead neap. I find the word *neap* intriguing, but its origin is unknown.

When the moon, earth, and sun are all aligned, which occurs during both the full moon and new moon, the tides are higher than normal. During these lunar phases the sun helps to tug the tides as well, although it has only 46 percent of the pulling power of the moon. When these gravitational forces combine, we experience spring tides. They get their name from the way the water "springs" up the shore. These tides are the highest highs and the lowest of the lows.

When the moon's ever-so-slightly elliptical orbit brings it closest to the earth the tides reach 1.2 times further than their average. These are the perigean spring tides. And they're one of the best times for seashell hunters to be out and about.

Pam Rambo is a nationally acclaimed "sheller." She lives on Sanibel Island, a twelve mile barrier island just off the southernmost tip of Florida. Sanibel's unique position and orientation makes it a gold mine for collecting shells. Running east to west in a curve, Sanibel catches all the shallow-water shell species brought by waves, currents, and storms. They wash up in drifts,

sometimes in piles four feet deep. Such a variety of species, particularly at such easy access, makes this little island one of the best places to hunt for seashells in the world.

Down on Sanibel where passions for shelling run high, Pam, who refers to herself as something of a “shell-ebrity,” didn’t rise to fame based on luck. Her expertise comes from her knowledge of the sea and the tides. She knows that the best time and place to go searching is at either Lighthouse Beach or Blind Pass during a low tide. Ideal conditions are when the wind is westerly, after a storm. When giving shelling advice on her blog, Pam includes the monthly tidal charts provided by NOAA, the National Oceanic and Atmospheric Association. She even tells her readers to check the moon phases, because the extreme tides during the full and new moons are the best times to shell. A lunar app updates itself in the corner of her page, showing the current moon: waxing gibbous, 74% full.

Interestingly enough, the full results of tidal pull rarely occur on the same day as the lunar phenomenon. It takes the ocean a little bit of time to respond to the summons. This means the best time to take full advantage of the changes in water levels is a day or two after the lunar event. Perhaps Pam should mention this to her readers as well.

Ospreys are a common sight on the bay. Nests top telephone poles and buoys. They dot the shallows on platform-topped posts specifically designed with them in mind. Unlike other birds of prey, the osprey, also known as a seahawk, does not fare well in captivity. It refuses the life of the trained hunter. It shuns the falconer’s call, exuding untamed power and grace. Ospreys are travelers, covering thousands upon thousands of miles every year—just at home among mangrove forests as northern lakes. They’re the professional athletes of the raptor world—inexhaustible, strong, and conditioned: the product of superior evolutionary genes.

They're comfortable in the Chesapeake, much as I am, having travelled far. Perched at closer range, they boast a pair of strikingly bright yellow eyes, piercing gold emphasized by the dark stripe surrounding them. The speckled beak has a proud arch and the plumage of its back gleams a rich, chocolate brown. They have an almost feline look, even stationary—somehow sleek, predatory, sly.

While the earth completes its a full 360 degree rotation once a day, every 24 hours, the moon rotates a mere six degrees within every twelve hours. Given that tides occur simultaneously on opposite sides of the earth, this means that any coastal area experiences high tide roughly every 12 and a half hours.

The sun comes closest to the earth in December and January causing the final, and rarest, type of tide. It's called the proxigean tide and has the most dramatic tidal range. Here's how this happens: occasionally the sun comes its closest to the earth at the same time a new or full moon hits its monthly perigee, or when it too, is its closest to the earth. Rarer still, the moon might happen to be at its most extreme perigee of the year. Then the sun and moon are both nearest to the earth during a lunar phase where their two gravitational forces work in tandem, and now you have it, a proxigean tide. This unique combination has occurred a number of times throughout history, and aside from a few exceptions, it normally happens without any severe consequences. However, should a number of other factors align as well, such as high shoreward winds, low barometric pressure, or even a storm out at sea, these already extreme tides can be lifted another several feet. A lower barometric pressure, even something as small as a 1-inch drop, raises the water level by 13.2 inches.

Should all these conditions synchronize, the results have catastrophic potential. On September 8, 1900 in Galveston, Texas 6,000 people died due to the combined power of these proxigean tidal conditions and a strong sea storm. Low-lying regions, such as Texas and several areas in Europe are at high levels of risk. Historians have been able to piece together clues demonstrating this devastating combination caused as many as 100,000 deaths in Holland in 1099 and then 50,000 in 1287.

The earth will always need the moon. And the moon, for its part, remains constant in its promise to return, again and again, circling us with unswerving devotion, our only natural satellite. Yet every day, the moon gets farther away. Despite its welcoming embrace, toward which the earth ever-yearns, the moon is leaving. And its departure, lifting higher in orbit at a rate of 1.5 inches each year, steals some of the earth's rotational energy, slowing our planet down by 1.5 milliseconds per century. It's estimated that 4.6 billion years ago when the Earth was new, the moon was a scant 14,000 miles away. Today, it is more than twenty times farther.

In the long view of time, as the moon pulls away, our days will grow longer. Our months will eventually be about forty normal days long and the earth will cease to spin. The consequences will be disastrous, but they are billions of years into our future, and we will likely cause our own end long before then.

My understanding of that place, that natural world, grounded me in a way I hadn't known I craved. Now I know when to expect the first red-winged blackbirds each spring. The females won't arrive until a few weeks later, safely camouflaged in their dull, sparrow-like plumage. I

know where the first crocuses bloom, where the wild plums drop, where the blackberry brambles hide, and the musky paw-paws grow.

In the Chesapeake Bay I know the steady concentric flight of the seahawks over the bay with the same closed-eye intimacy a child knows the mobile that hangs over their bed. It's a place where I laid on the docks and watched, my delight mingling with disgust, as a large school of fish swarmed beneath me, swimming in an unceasing figure eight. It was such a curious behavior, one I couldn't, can't, understand, that unceasing weaving betwixt those barnacle-stuccoed pillars. They churned the waters, hypnotically repetitive, swirling on and on and on.

It's a place where, I stepped out from the car next to the small Nantucket shingled house and felt the heat of the sun settle across my shoulders like a mantle, felt the humidity coil damp fingers into my hair, coaxing loose curls from what had always hung straight. Insects hummed through the air and river grasses swayed along the marsh. It's a place where I turned from my vantage point atop the hill, caught the blinding glitter of the sun upon bay waters and knew: I had been summoned here. I was home.

SECTION II

Hungry for More? Always

Costco: an industrial wonderland. The bulked-up, hormone-injected, American capitalist, commercial-reality of Willie Wonka's chocolate factory—but better. I love it there.

Tender morsels of re-heated frozen delights are offered at the entrance of every aisle by tiny white-haired ladies who provide the perfect combination of grandmother and lunch lady I never knew I craved. I stroll amid opulently-sized sectional couches, hi-definition flat screen TVs wall-to-wall wide, designer sunglasses, and rose gold iPhones. But Costco doesn't put on airs. These goods are peddled just the way the rest of them are, over smooth poured-concrete floors in a massive steel-raftered warehouse with a casual behind-the-scenes vibe that says, "It's ok if you're wearing flip-flops and gym shorts. We welcome you. We love you. Here, have some free cheese."

I like to go to there with my mother. The full weight of her attention comes with a gaze so keen that it lights me up like amoeba on a microscope slide. But Costco, in its infinite greatness, spares me the discomfiting exposure of my mother's undivided attention.

When we enter Costco together my mother flashes her card at the door, but she doesn't bother to check for the nod of affirmation that approves her entry. Gliding by with our extra-large cart, I enter card-less because, *I'm with her*. Cue the smirk. In those moments I'm like the exclusive VIP tagalong at a hip new club, but the perks are large bags of chocolate covered mango, athleisure joggers, and blue cartons of tampons only really affordable in bulk.

At Costco, parental benevolence overflows Oprah-style. *You* get a half liter of nonfat froyo to-go for only a buck thirty-five, *You* get a two-pack of beige Maidenform bras, *You* get a

set of tuna cans large enough to last a nuclear winter, and *You* get a leather stamped anthology of Grimm's fairytales.

Oh Costco, your *books*. So lovely, so diverse, stocked with all the things magazines have been telling me to read, plus an assortment of literary oddities I never expected.

At Costco, an 8ft teddy bear awaits alongside a bed of chipped ice featuring dozens of dead fish, each carcass matching the heft of my thigh, but much longer. At Costco, muffins are the size of grapefruits. At Costco, I could select a diamond engagement ring, or a sapphire necklace, all while standing less than a dozen yards away from 100-count tubs of condoms and adult diapers. I know it's wrong, but why does it feel so right?

After following my mother's carefully arranged list, which is ordered to maximize efficiency based on Costco's layout, we like to linger in the pre-made meal section. After a long afternoon of shopping we deserve a respite from making dinner. Nearby a man hawks samples of tiramisu like it's a hot dog as a ball game, voice roaring across notes that dip sharply, then soar. We temporarily debate which quinoa-farrow-kale-type salad we should get for ourselves. We decide on mesquite-fired chicken wings.

That evening my mother will grant us permission for a "reading dinner." And in a line at the counter my sisters and I will sit in peaceful quiet, books propped open while we snag and devour wings from that unreasonably large platter. Oh Costco, securing for so many, the warm glow of excess, providing bountiful comforts for our material-oriented middle class. Thank you, you beautiful conglomerate bastard.

Feeding the Condors

The racket is deafening. Hundreds of lorikeets chattered in the small room. In vivid tropical hues they flutter from branch to branch, twitching in excitement. The room is ripe with the dry, musty smell of bird droppings. Sound roars against my ears. Perhaps they know I'm bringing a treat.

Moving to the center of the room I display the small paper cup of nectar. The cacophony continues uninterrupted, but a single lorikeet swoops down and perches on my wrist. I am momentarily startled by its hollow-boned, non-weight. The parrot, no taller than the length of my hand, shuffles closer to the cup of sweets, vibrant orange beak still squawking away. Then the cerulean face dips and its peculiar brush-tipped tongue delves into the snack. I jolt when I feel two more alight, one on my shoulder, one on my head. Then several more join on my outstretched arm. I can't hold in a gleeful chuckle and they flap their feathers in agitation. Others swoop by in a rush of lime-bright wings, the blazing orange-red of their breasts like a sunset.

This was the Pittsburgh National Aviary's first year hosting an apprenticeship program, and I was one of a handful of high school students chosen to visit the facility once a week for a month. Since this was the first time the Aviary included high schoolers in their day-to-day work, the experiences felt cobbled together. If they were pressed for time or really needed to work on something, we were shuffled off to entertain ourselves with harmless, but exciting tasks. That's how I ended up alone in the lorikeet room with a nectar-treat, covered in birds like a human telephone pole.

Once the cup was empty I set about dislodging disappointed lorikeets. I hadn't been taught a proper method for this, so just I shifted and wiggled my body, poking at their feet until they flew off to their many artificial branches within the room. At this point, my ears were

beginning to ring dully and I was free to return to the main staff hall. But I wasn't ready to leave the striking, rainbow-hued birds and I had heard from a trainer that they could be shocked into silence by new noises.

I hummed. Nothing. I bellowed out a Broadway hook. Nothing. I pursed my lips against the tube I made with one hand, sealed it with the other, and trumpet-style buzzed out a duck call. Nothing. I whistled, thrummed my tongue, made a weird little "ee!" sound. Nothing, nothing, nothing. Then I cupped my hands to leave a hollow core, keeping an almond-sized gap between my thumb knuckles. Then I blew down across the hole, letting the air circle inside, before whistling back out. A mourning dove call, one that my father taught me.

The lorikeets all paused. The room fell silent for a beat, *one, two*, as they tilted their heads and blinked red-ringed eyes. *Victory*. By the time I slipped back out to the staff hall, the room had already filled once more with their high-pitched squeaking.

The Pittsburgh Aviary remains the only one in the United States to have been deemed "National" by Congress. It is additionally the largest, coming in at 25,000 square feet. It houses over six hundred birds as well as a rescued long-toed tree sloth, who lounges happily in a blanket-lined plastic crate and can be held by guests on special occasions. The Aviary has no shortage of exciting bird specimens and was one of the first places to implement free flight rooms where guests can wander throughout the habitat. A sizable portion of the birds housed are sanctuary raptors, meaning that they were found, often with missing wings or broken beaks. No longer able to survive in the wild, they are transferred here, where they will have a safe habitat and medical assistance for their remaining days.

I had a partner during my apprenticeship, a girl named Sam from my rival high school. We got along great. She was bright and eager, with a pin-straight fall of brown hair. She had large round eyes and slightly protruding ears that made her seem very attentive. She ended up going first to Yale then Harvard, but our different paths weren't evident then.

During my time with the Aviary I cleaned the temporary homes of the African penguins that were waiting for their new exhibit to be completed. They fussed and waddled around like disgruntled gentlemen as I power-washed their crates and rubber matting. Nearby a kookaburra laughed while I slipped around in the sudsy puddles, pestered by the cranky flightless fellows who nipped at my ankles.

I tossed wriggling mealworms, their bodies arcing freely through the air, snatched mid-flight by Inca terns during an interactive show. The tropical room provided a perfect venue for these little exhibitions, birds boldly swooping in and among the guests, so close feathers brushed cheeks, and wings stirred hair. No need for caution, birds and people and children all mingled together without heed. The terns were so familiar with their role, nothing out of the ordinary ever happened. We even let the occasional volunteer pinch the bottom half of a mealworm and hold it aloft. Each time fail the birds plunged past and wrested it flawlessly away to a chorus of delighted gasps. I had done all this and more, but Sam and I had not yet been allowed near the condors. I never thought to ask why.

The Andean Condor is the world's largest flying bird. Its plumage is typically all black save for a ruff of white feathers, which it fastidiously grooms, just around its neck. The condor is also the heaviest bird in North America, weighing in at twenty-three pounds. Condors can live to be fifty,

although the world's oldest recorded condor doubled that, dying at one hundred years old. They aren't particularly dangerous birds, though they are territorial, and perhaps too wild, too large. In 1996 the Columbus Zoo in Ohio tried training one to perform in front of crowds. It attacked a six-year-old, sweeping her to the ground. She sustained several puncture wounds and scratches.

Condors are considered critically endangered. At one point only twenty-seven remained and they were all brought into captivity for captive breeding. This controversial tactic was ultimately successful and now all four hundred condors living are descendants of those original few, although only about half of that live in the wild. The Pittsburgh National Aviary is the only zoo in North America that has two different pairs of condors and manages them for breeding. However these additions are quite recent, only one of the original condors that Sam and I saw remains there today.

It's feeding time on my last day at the Aviary. Precisely twelve fifteen. In the kitchen, knives are being readied, dragged screaming across the honing steel. A man wearing gloves carefully unlocks the door of the walk-in freezer. It's a perfectly professional freezer and neat as a sailor's knot: the door gapes like a tomb, the rolling vapors carry the stench of rot. My shoulders hold stiff with tension. Opaque plastic flaps stir in breezeless air. Death comes out that door.

Sometimes it brings "pinkies" or fetal mice. They spoon one other in the bin, closed-eyed and hairless. We roll their soft bodies between our fingers to check for bone formation, which is a choking hazard. Sometimes it's chicks, flat and stiff. Their eyes are closed too, against cheeks downy with yellow fluff, just starting to come in. We use those knives to cut off their bottoms. A quick press of the thumb squirts out the organs. Sometimes when I press, all that comes out is

a yellow blob, like there's a yolk in there, and I wonder if that makes any sense. But I try not to think too much when I'm in the kitchen.

The gloved man reemerges in a swirl of vapor, arms laden with a stack of silver trays. Each holds rows upon rows of frozen white rats, snacks to distract the condors while we put in their food bowls. I wasn't sure what I had been expecting, but these unassuming finger-sized cadavers are a relief. The knives are for the dead chicks, but the eagles eat those and today—on our last day—Sam and I are feeding the condors.

Taking a bowl of rats, I leave the kitchen. My partner and I walk down the hall, past the red-crowned cranes, the bald eagles, golden eagles, stellar eagles, the scarlet macaw, hyacinth macaw, the kookaburra, and the penguins. We have to go outside, leave the actual Aviary. The condors aren't kept near the other birds. We take a left at the vegetable garden, then under the trellis whose flowers hang brown and lifeless like some sort of macabre portent.

We stop in front of their cage. It's made of a special type of chain-link, twice as strong. The inside of the cage has a complex gate system. It's too dangerous to simply walk in and replenish their water with a hose as we did with the other birds. They have to be lured over to one side with the rats. The gate between must be lowered, secured.

I walk around to the back entrance. My partner throws the rodent carcasses into the cage like she's scattering breadcrumbs. When the rats don't make it directly through the chain-link diamonds their fur gets skinned off. It sticks to the metal edges: starkly white, obscenely red. Finally both condors are securely on the far end of the cage. My partner lowers the dividing gate. I enter.

The skin of the neck and head of the condor come in a variety of colors: cream or pink, yellow or sometimes orange. This skin flushes when condors get aggressive or enter into an emotional state. Condors have a dominance hierarchy. The stronger, older birds always partake of their meals first. In the wild, condors might get stuck going days without eating. Then, when food is available, they stuff themselves with pounds of it. Sometimes they eat so much carrion they are unable to lift their gorged bodies off the ground.

Quickly I lay out their food and make my way back to the door. Beyond the dividing fence the condors are picking through the dried leaves and dirt for their corpse treats. Just as I am working to open the doorway that leads out of the enclosure I hear the terrible sound of the diving gate being lifted. My fingers skitter at the padlock. Fitting the key into the slot suddenly becomes an impossible challenge. A cruel game. I whisper for my partner, glancing frantically around, working on that stupid lock. She has accidentally hit the wrong button too soon and now the condors hover at the end of the first enclosure, hissing like coiled snakes. I breathe shallowly, striving for calm. I have time; I have time. Yet the dividing gate continues to lift and I continue to fumble. They approach. The younger condor jabs a beak in my direction. It shouldn't have. The elder always goes first.

At last. My gate opens. I lunge out, falling and scrambling away. Sam slams it closed again. Inside the condors are distracted. Grunting deeply with displeasure the older condor bites the younger harshly. The sun tosses bright rays into my eyes.

Behind me there is a scuffle, the sound of harried, beating wings. Then there is silence: submission. And I lay there, gasping.

The elder condor approaches the fence. Dark eyes, black with intention, meet mine from a bald face as naked as my own. Then that face turns skyward. It sees the limited blue. Wings spread, ten feet, the longest in all of America. They flap once, twice. I flinch.

I imagine it cage-less. I imagine it lifting off. Rising like heat.

Zorro and the Jade

I bought myself a saguaro seedling in the gift shop at the Sonora Desert Museum, an amazing half zoo, half botanical garden. No bigger than my thumbnail, it sat in a shot-glass sized terra cotta pot decorated with desert scenes and distant purple mountains. I was in Tucson to see my older brother who was earning his Master's in Geology from the University of Arizona.

During my visit Declan and I made it a game to memorize as many cactus names as we could. From roadside to museum we Googled shapes and read placards with unwavering enthusiasm. This satisfied our shared dual-natures: equally competitive and nerdy. I sensed growing in myself a deep love for succulents and savored those new names on my tongue, spiked and exotic like tropical fruits.

Ocotillo: a reedy shrub that grows in a shape of sprinkler spray. Palo Verde: a dense chartreuse brush that chameleoned into the landscape at dusk. There were the chollas, particularly teddy bear cholla, which develop in plush, spike-covered segments. Barrel cacti, pin-cushion cacti, fishhook cacti, totem pole cacti, agave (tequila is made exclusively from the blue agave), the creeping devil cactus (a name that reflects human opinion on a cactus that grow snake-like along the ground), and of course, the most famous of them all: the saguaro.

I named my new saguaro Zorro, and when I flew home the cactus came with me, nestled amid rolled socks in a tiny cardboard box.

When I had imagined the West, I pictured sweeping vistas, cowboys, cattle herded over vast dusty terrains, and saguaro silhouetted against the setting sun. I imagined saloons with ragtime jangling out of an old upright piano and leathered men in shapeless clothes the same gray-brown color as the dirt crusted in the lines on their face. I didn't think of the realities of the time, of the

women, the farmers, the politics, the diversity. I just pictured these iconized images, this “mythic West.”

Frederick Jackson Turner, considered the father of modern American history, is largely responsible for propelling the West into American mythology. In his article written at the turn of the century, he claimed it was man’s frontier experience that made Americans, American. He argued that westward expansion formed America’s composite nationality; that man’s interaction with the “savage” landscape transformed him into America’s new breed of independent man; that the frontier promoted the formation of democracy etc. He showed people the West and told them that *this* was the national identity. The idea set popular thought aflame. Of course, it also ignored all the well-established cultures and indigenous people already inhabiting the area, making it rather problematic. I paraphrase.

But there was something to what Turner said, something that lasted. For all that America has an astonishing variety of different natural environments, there’s a quality to the West that feels uniquely, hyper-American. Who knows if this was on my mind consciously when I visited my brother? Maybe I sought some lasting membership to that myth when I decided to take a little living piece of that wild western landscape home with me.

Since then Zorro has now been successfully repotted twice to accommodate his increasing girth. Over 3 inches tall, he’s in a gangly stage: the ridged bottom, large and firm, winnows to a slender waist which twists abruptly up to a rather bulbous head, slightly tilted. It has taken him at least 5 years to reach this height. I dream of keeping Zorro my entire life, until the cactus is awkwardly several feet tall and moving it around requires specialized assistance. I would have to live to be 95 just to see him bloom or grow an arm, because a saguaro cactus takes about 75

years to reach its iconic shape. After 30 years, Zorro will be 4ft tall. He will also be at his most vulnerable: the ideal thieving size for cactus rustlers.

The saguaro cactus, perhaps the most iconic and beloved of all cacti, grows only in our Saguaro National Park, as part of the Sonora Desert. Although the park has an estimated 1.3 million saguaros, their rarity and unique shape make them popular, expensive commodities that add significant value to retail properties. A savvy cactus rustler can sell poached saguaro for about \$1,000 a pop or more to nurseries and landscaping companies. A 1979 report estimated that 250,000 desert plants were illegally sold that year in Arizona alone. With the influx of new technology, officials of the Saguaro National Park began implanting microchips into cacti in the mid-2000s. Saguaro and other cacti in housing developments and at plant supply companies can now be scanned to see if they've been poached.

Cactus rustling can result in up to three years in jail, although the strictest sentence to date is only eight months in federal prison. However, with the increased mindfulness about desert ecosystems, these penalties will likely only increase in severity. The long term ramifications of unchecked poaching can be seen in the plight of the Golden Barrel Cactus, which is widely available in Arizona suburbs, but an endangered species in its native Mexican range.

Saguaro may not be listed as endangered or threatened, but we cannot measure the weight of their worth on our own terms. They provide homes to cactus wrens, Arizona's state bird, and desert mice. Bees and bats use the flowers, and later fruit, for feed and pollination. Native peoples used dead saguaro husks as roofs, fences, and canteens. For a plant whose careful

labored growth needs 50 years to sprout its first arm, a cactus rustler only needs 15 minutes to poach it.

Cacti, for all their heartiness and the harsh clime where they make their home, have always seemed rather fragile to me. Such a soft and watery interior, one sharp slice away. I once tried to adjust Zorro with a toothpick, only to inadvertently stab him in the side. The hole lingered forever, stretching and widening until at last it closed with a large brown scar, now positioned near the top.

All cacti are succulents, though not all succulents are cacti. A housemate of mine in college had three succulents in brightly colored ceramic jars that she incessantly watered. I told her it was too much, but she fussed and worried. Paranoid that they might be thirsty she watered more than weekly. Those cacti drowned, saturated until their roots couldn't take it. The cacti yellowed and shriveled, pulling away from the overwhelming moisture, turning back in upon themselves. I was careful with Zorro. I set up a monthly reminder in my calendar of when to water him, so I wouldn't be tempted to overdo it. I moved him around my room to follow the sun, perching him outside only when there was no chance of rain.

In the past decade or so there has been a rise in succulent popularity, though I was not aware of this when I bought Zorro. The trend shows no signs of slowing down, particularly among easy-care succulents. Such low maintenance plants include: hens-and-chicks and echeveria, which grow in whirled spikes with triangles of color fanning out like avant-garde lotus blossoms; Christmas cacti, which sprawl in cracker-flat segments and are tipped each winter with brilliant multi-layered fuchsia flowers; sedums that spiral in tight chains; aloe spreading like daylily leaves

edged with teeth. The possibilities are numerous and the colors range from the typical blues, greens, and teals, to tender pinks and vibrant reds.

When explaining the rise in succulent demand, garden experts point to this astonishing variety, the plants' natural resilience, and their bold angled shapes. In 2007, garden writer Debra Lee Baldwin keyed in on this emerging trend with her book *Designing with Succulents*, an instant and lasting hit. Propelled by our increasingly drought conscious society, succulents fulfilled a more eco-friendly, but equally lovely, need in landscape design. Yet despite their success with landscapers, western home-owners, and plant photo-journalists, succulent popularity didn't really explode until they found their lasting audience: young adults.

Maintaining a plant is often associated with living an "adult" life and the succulent allows young professionals, whose lives are often volatile, involving multiple moves and long absences, to keep a plant alive long-term. They bring the outdoors in, and more importantly, high or low light, *they thrive*, with their "marvelous rosettes" and "geometric shapes." It doesn't hurt that they're highly instagrammable and can remain in tiny planters for years before their size approaches unmanageable or inconvenient. Did I mention succulents are fire retardant? As if it matters whether or not your plant burns when something else is on fire.

Yet beyond hipster-esque trendiness and literal ease of care, I wonder if succulents are in some way such a cross-demographic plant-phenomenon in the United States *because* they come from the West. Maybe they play into the residual drama of American identity kick-started by Turner: that the dangerous, the Western, the bold, has been tamed for man's benefit, by man's strength. Maybe the appeal of succulents comes partly from the fact that these edgy, spiked plants are also hearty, neat, easily managed, and beautifully shaped. A young professional in a crowded city, working at an important but basically unpaid internship, can come home to a non-demanding

slice of the American West: a desert treasure, full of wild desert sun, aptly potted in recently popular western-inspired design.

One day I settled Zorro down carefully with a rag, a hammer, and slightly larger terracotta pot I had modge-podged myself. Tapping lightly I eventually freed him from his first home, careful to layer stones in his new soil for swift drainage. The transfer felt as tender and precarious to me as the vulnerable period in crustacean molting. I couldn't figure out how to move him without contact, so after transplanting I spent the next 10 minutes pulling silk-fine white spines from my thumb and forefinger.

A single search on BuzzFeed for the word "succulent" will immediately bring up at least 10 articles ranging from, "32 Reasons Succulents are the Best Plants Ever" to "The Cast of 'Arthur' Reimagined as Succulents." One article, "23 Wedding Succulents That Will Make You Forget About All Other Flowers," showcases succulents used as bouquets, boutonnieres, and flower crowns that won't wilt. There are succulents arranged as the bower over the ceremony altar, grown in monogrammed centerpieces, and spray-painted gold as table cardholders. They're wedding favors potted in vintage teacups; they're mounted on a wall as a photo backdrop; they're cascaded over wedding cakes instead of iced flora and fondant fauna. I must admit I find the cake stunning and the romance of it irresistible. Plucked from your wedding dessert and planted, this symbol of your marriage can become an enduring living thing, so much more meaningful than that leftover slice, abandoned to desiccate in the back of your freezer.

Succulent jewelry is also available, small clusters of baby plants glued to broad copper bands that can last from 1-3 weeks until they begin to sprout, at which point they're to be simply pulled off and planted. Rings go for around \$35, whereas the succulent laden statement necklaces

may cost as much as \$300. Pinterest boards and pins about succulents range in the tens and even hundreds of thousands. In the last four years alone there has been a 5000 percent increase in Google searches for succulents. Etsy offers options to order over 100 of these plants at a time. Your succulents can be ordered from IKEA right alongside your unpronounceable particle-board dresser. They have dedicated Instagram accounts, Facebook pages, and video games apps where downloaders can grow a virtual succulent garden if watering once every 2-3 weeks seems like too much of a challenge. Or if even the app is too taxing, Target offers plastic, pre-potted options in their Home Décor section, already fashionably poised in modern ceramic pots. And while plant care is considered relaxing and zen-inspiring in its own right, many succulents actually also grow in that same spiraled Fibonacci sequence associated with the Golden Ratio, which is connected with promoting a kind of wakeful meditation, fake or real.

Of course, America's current succulent popularity isn't the only plant-fad in history. Victorian England was consumed by "Pteridomania," or fern madness, and although the Dutch maintain an abiding love for tulips, but popularity never neared the same as the economic bubble it achieved during the 1630s in the Netherland. Ferns, it is interesting to note, follow the fractal pattern of the Fibonacci sequence even more closely than succulents.

I must admit a part of me completely understands Pteridomania. Ferns are gorgeous, lush and feather-soft, growing in the shaded groves of deciduous forests with prehistoric grace. In the British Isles they also grow upon the rolling moors and one particularly driven fern collector plunged to his death trying to snag a rare breed from the edge of a cliff.

Such damage was done to the wild fern areas of the British countryside certain counties developed laws that made mass fern-plucking illegal. With their naturally two-dimensional

shape, Pteridomania translated easily into marketable wares: stationary, fabric, jewelry, china, wallpaper, mantle-carvings, all came to host fern likenesses.

Yet, despite their undeniable hot-trend status, the fern sensation never translated in any serious economic spike. The same cannot be said of the Dutch's tulip mania. Between 1635-1637 the value of bulbs, particularly rare ones, skyrocketed. Some were considered so rare and valuable the bulbs themselves were never planted. Owners instead installed special displays to host their odd onion-like trophies. Bulb prices ranged between what would now be several thousand to a million dollars. Unfortunately, this trend came to an abrupt end, the cause of which is often speculated, but remains unknown. As a result, inflated tulip prices dropped like a stock market crash, causing just as much financial fallout.

Succulents most likely won't result in a false inflation, because part of their popularity comes from their every-man association: cheap, low-maintenance, and not limited in accessibility to higher social classes. The succulent trend is a new kind of plant-mania, one whose success is measured largely by its continuing relevance in the pop culture arena, as no other plant-fads have had before. Succulent popularity has come hand-in-hand with a rising theme of rustic home décor: Western-inspired geometric echoing tribal patterns have flooded the market. We can hardly help ourselves. We inherited this myth after all.

In the comedy classic "30 Rock," Tina Fey's Liz Lemon protests the notion that some areas of the United States are more "American" than others. And though she is fundamentally right, perhaps it isn't an accident that a plant which echoes a western place, a western landscape, has captivated American attention. Perhaps my young saguaro allows me to cling to that

dwindling part of our national identity. Perhaps, with Zorro by my side, I am my own rough and tumble cowboy, wrangling life from rocky terrain.

My mother has been growing a jade plant long before America's succulent trend gained momentum. I have memories of being no more than six, stealing its fleshy leaves to pierce half-moons with my fingernails. It sprawls now, in a planter at least a foot across, with thick, trunk-like stems that have their own smooth bark. The jade droops outward in two graceful arcs like a willow tree, wider than it is tall. When vacuuming around it last summer my mother accidentally knocked off two segments in a clean *snip-snap*, push-pull. She left them in a cup of water for a week or two, until they sprouted little roots, then told me they were mine. Although I later learned that this isn't the way you're supposed to propagate succulents (they're supposed to let them dry out and form a callus), the transplant was successful. Little parts of my mother's green thumb now grow with me, as precious as any heirloom jewel.

In our fast-paced reality I have now these two plants: my jade, unnamed, and Zorro. They live and grow with an older, forgotten slowness. They glory in the long-term process, hard work both deliberate and measured. Amid the chaos of our modern society my succulents, charming with their cherubic roundness, have a compelling literal and symbolic allure. We travel together to new places, new friends, new jobs, and with persistence they flourish, little reminders of both human, and natural, resilience.

The Bushman's Curios

The ostrich and I are in Oudsthoorn, a Dutch ostrich-farming town in South Africa. We're just west of center along the bottom curve of the country, making our way back to Cape Town. I'm in my early twenties. I've been travelling with a group of scholars who studied apartheid. Together we have now traversed the entirety of the country, swooping out and back in an arc, often driving for eight or nine hours a day. Many of us developing back pains that will linger for months afterward.

Ostrich meat is popular here because it's low in fat, cholesterol, and calories. Most breakfasts have begun with ostrich sausage, dark and gamey. I found it fine for a while, but lately I've stuck with "yoghurt" and muesli. Today, astride this ostrich, I'm grateful that I'm not simultaneously digesting one.

"Remember," one of the three ostrich wranglers cautions me from below my right ear, "when it stops sprinting, unhook your legs and fall backward." He goes on to say more, and I'm sure it's important, but I can barely hear. I am too distracted by the shifting of the animal beneath me.

The ostrich twitches again, hood-covered head snapping back and forth. My nostrils fill with its dusty tang, earthy and a little sour, like straw that sat in the sun for too long. From my seat upon its back I tighten my grip around the front of its wings. The eight-foot bird stamps its feet beneath me. My knees, wrapped down around its breast, are pressed tight against angled two-by-fours of the makeshift starting gate.

Two wranglers brace the long neck, dirt from the earthen corral kicking up around us. At the other end of the pen another ostrich breaks into a run, agitated by the fussing of my ostrich or perhaps by the small crowd of my cohort gathered nearby.

“Ready? Go!” And then the ostrich hood is off. And the gate is open. The speed is incredible, though brief. I know from touring the local historical center earlier that morning that ostriches are the fastest two-legged animal and can reach speeds of forty-five miles per hour. Had I been less concentrated on keeping my low-slung seat upon that feathered back, I might have second-guessed the decisions that got me here, on this bird who was definitely having regrets of his own.

The ostrich’s haunches seesaw steeply beneath me, with none of the rolling gait of a horse. His wings wrench open like sails as he twists and turns. My arms flail with them and I feel my legs slipping. The ostrich torso dips low as he turns again. We roar along the outermost fence, approaching a corner of the enclosure.

Right wing flies out, dislodging my arm, and we whirl sideways. *Fall back*, I remember. And on an upswing of one powerful leg—strong enough to kick, and kill, large predators—I leap backward, landing on my feet, and quickly turn away. It’s an instinct born of distant museum-learned memory, something about leaving your face unavailable for pecking, less threatening. I quick-step toward the corral gate again, where the wranglers stride out to meet me.

Oudsthoorn is in the Little Karoo—the southern belt along South Africa’s Great Karoo. It became an established settlement due to the two major ostrich-feather booms in the Victorian era. During this time the ostrich feather was worth more than gold. It is still a bustling town

today, and certainly when we visited it was a lot more populated than any place we'd seen in a long while.

We came to Oudsthoorn by way of Bulungula, a dot on the western coast that we only reached after taking a mountain pass deep in the Great Karoo. The Karoo is characterized by arid land, extreme temperatures, mountain passes, and sweeping plains with tumbleweed-esque vegetation like stonecrops and vygies (an abbreviation for its scientific name, *Mesembryanthemaceae*). Rife with aggressive great mountain baboons and a dizzying interior. Noted for its extremes in heat, cold, flooding, and drought. All of this together made it seem to me like an African version of the formidable Australian outback.

The day we took in the mountain pass, the sun lit every hairpin turn with taunting clarity. We eked our way along single-lane gravel switchbacks less than a foot from sheer rock drops over hundreds of feet down, discouraged only by a small ledge of marking stones. My window looked over and down into empty air: the plunge before us, beside us, the hard stop against rigid stone. I am certain I would have been much safer on foot than jostling along in a twelve-person van.

I believe we were on the pass because it was some sort of shortcut. Or maybe someone thought the views were worth the risk. And we trusted, or more accurately, idolized, our driver: an untouchably cool South African man named Sele, who had played for the national soccer team and once shattered his hand punching a baboon in the face when it tried to make off with a baby.

In the back of the van, my boyfriend Christian agonized over his next move in the electronic game of Risk, fingernails whittled to nubs. He and the other two in the back row had been playing for the past several days. He was a combo of boyishly lanky, broad-shouldered, and

athletic that I hadn't been able to resist. From my spot in the left-most seat, squashed against the very glass that showcased my doom, I let my eyes slide shut and resigned myself to death.

And for some, it was. Not even a week after we had all safely returned to America, news reached us of an entire tour bus that had plummeted from that very same pass. There were no survivors.

At the ostrich farm, my friend Valerie is up next with a different bird. Unsure, her concern cascades out with a valley-girl-tinge, the remnant of an all-girls Catholic high school, disguising dense inner-steel. Everyone under 160lbs got entered for consideration on one of three ostrich rides. Pushing aside guilt I figured, why not? Odds were slim. I didn't think I'd end up bareback on an angry ostrich.

Earlier in the tour we fed them buckets of grass pellet treats and were brought to a small clutch of unfertilized ostrich eggs.

"Go ahead. Stand. Jump. You can't break them." The wranglers told us. Given that ostriches themselves can weigh up to 350lbs, their claims seemed reasonable. Yet each one of us couldn't resist the urge to ease our feet with ginger tenderness upon large cream shells. And each one of us startled anew when the pineapple-sized eggs remained unbroken. It was a small clutch of only five or six, set aside for standing, for shock and awe. In the wild, a single dominant female protects the eggs of the entire herd. And these nest-collectives can have up to 60 eggs in them. Each ostrich egg, about 3lbs, contains the equivalent of two-dozen chicken eggs.

Earlier that morning we had gazed down at fossilized ostrich remains dating back over a million years. The ostrich is of this place, and proof of that connection is cemented in epochs of sedimentation. Still recovering from a fever that has been plagued me for the entirety of our trek

across the Great Karoo, I perk up, then melt, upon discovering that The Flying Ostrich, a self-proclaimed “one stop cheese shop,” only carries three kinds of cheese. My travel journal specifies: only gouda, mozzarella, and muenster. I leave empty-handed.

Last we peruse the main market, which centers around a sprawling store called The Bushman’s Curios. The goods inside, logically enough, are predominantly ostrich related. Finely-tooled piles of ostrich leather, great plumes of ostrich feathers, both left natural and dyed brilliant colors, hollowed out ostrich eggs, carved with incredible designs, patterns, and safari landscapes. Here I purchase an ostrich feather and an egg, un-carved. Both are lost to me now.

As I turn from the counter another of the employees sidles up alongside me. When I hear a sudden, *shutter-click*, I turn to find she has taken a picture of my orange hair. She darts away, giggling, to show her friend. Reddened, I click out a Xhosa thank you and leave.

Outside my new ostrich feather snaps in the wind, brushing against my cheek with a softness so intense I almost can’t feel it at all. Despite the hollow shaft and the gusting breeze, the feather bends only lightly in a way that belies its bone-like strength.

We reached Bulungula in the dead of the night, after three days of travelling. For hours, the road was unpaved. Rocked to numbness by the jolting of the car I dozed in stiff-muscled intervals, jerking awake only when the force of the bump propelled me physically out of my seatbelt-free spot in the back corner of the van. Given the rough nature of the road and the Indian Ocean I knew roared nearby, I was grateful for the black that pressed against my window.

We finally arrive it seems, not because we have gotten there, but rather because we stopped driving. Outside, my shoulders slump against the late-night cold and the weight of my backpack. The stars are a swirl, a distant long-dead light in the formless surroundings.

Magnificent and so foreign, those South Hemisphere stars, they're strangers I've studied, but never before met. I stare, trying to fit classroom-memorized shapes over the expansive reality. For a moment I miss the moon, which is always the same, wherever you are.

"Can you hear the ocean?" someone asks. And there it is, the ancient thrumming. And then someone has a flashlight. And the exhaustion is forgotten. We follow our ears to the shore. Stumbling among great black rocks, studded like battlements in the sand, we slide and bruise ourselves on the wet stones' hidden slickness. Christian finds a thick, curved piece of cerulean sea glass and gives it to me with a quick kiss. In a crevice I discover three shells, curled and colored in dappled ochre and burnt umber. These, nestled against my palm with their large rounded edges and rolling nobs feel, not like strangers, but new friends.

The exhilaration of our late-night exploring eventually wears off and we stumble back from the shore. Sleep cannot be ignored any longer. Bed is a dark square against rounded wall. Gray shapes dart in the faint illumination of someone else's light. I tunnel into colorless covers, clothes and all. And I don't move again until a voice addresses me.

"Claire. Come on, we're going to watch the sunrise." I blink against the continuing dark, headshake, *no thanks*. I can feel it, deep in my capillaries, tucked amid sinew, whispered along my marrow: this body needs sleep. I fold my face back under the scratchy warmth of the worn linens.

"Claire." I am shaken, hard. It's Valerie. Her auburn hair, freshly braided, is awash with darkness. "You are coming. You are *not* missing this." She's always been this way: insistent, driving, feminine.

Outside we squat on the steep side of a sand dune. At first, the ocean is a writhing darkness. Then the sun bleeds up from the shifting grays. Orange at first, then carmine, then a

rich and buoyant yellow, as if butter were made into stained glass. In some ways, it's like any sunrise. In others, it's unlike anything I've seen before.

I try to take a photograph of my friends in front of the blaze. In the shot they become formless, silhouettes. The fire in the sky diminishes to a lipstick smudge. I turn off the camera. With the newborn light I turn and for the first time really *see* Bulungula. Massive knolls stretch upwards, thick with a spongy grass-like vine that pulls away from the earth like a sheet. The Indian Ocean pours between the gently sloped foothills where the undifferentiated grass turns to cactus, then to low palm tree and finally to boulder. It is at once Tolkien's Shire and Jurassic Park.

As we hike our way back up the dunes and the grass draped hill, I realize the large rock I fell over last night is a whale vertebrate. Spinal core bleached white with gray striations. Nearby a donkey stands bleary-eyed in the gold light. I scratch behind its ear, then give in to impulse and rest my forehead against its own.

The walls of our bedroom are curved. We stay in a series of aquamarine huts, round and straw-roofed. The shower is in a larger hut, mosaicked inside with suns and starfish. Rationed stores of kerosene heat the water. Measured into small teapots, it's poured at the base of the pipe then lit with a small pinch of kindling that each person must carefully keep dry, dodging the frigid trickle of the spigot.

That afternoon Christian and I trek out along the hills behind Sele, our path a cow-trail no wider than the width of my foot. The sun warms away the lingering fever ache that returns every few hours. I feel carefree. Unstoppable. Laughing I turn to share a joke. That's when I fall.

Foot misplaced; body unmoored. I skid down the hillside. Fistfuls of that vine-grass carpet pull away in my hands, rolling down the steep slope with me. The rocks below near. My toes dig into the earth, I'm slowing, but not fast enough. I see a large plant out of the corner of my eye. Thank God, something with roots. My hand reaches, rakes outward along large frond. Then catches, holds: aloe, barbed with hooks.

With my momentum slowed I am able to ease into army-crawl position and make my way back to the trail above. I shake off the incident and Sele's concern, embarrassed at my clumsiness, urging us to continue. I am unharmed mostly, my hand a distant sting. Eventually when we reach the sand again, I look at it. Blood drips in ribbons up my palm, red as the sunrise. Spiny fragments and sharp tips have splintered into the length of my hand, wrist to nail. They score the flesh in a zipper of vertical cuts.

Try though I might, the extraction cannot be completed without tweezers and a needle. And perhaps the sea kayaking Christian and I went on later that evening, with hard-gripped handle and splashing saltwater, didn't help.

Several of the deepest fragments remained in my wrist long throughout the summer. Buried just above where the delta of blue-green veins presses against the surface. It made me think about what we leave places and what we take without realizing it. Pale orange tangles of hair released from my brush, blowing away to line nests or decompose under the silty dust of the Karoo. The suds that washed down my flesh, disappearing into wells, filtering into the bedrock. The ostrich feather I stowed carefully along the inner curve of my bag. The hollowed egg that almost wasn't allowed to enter the country. The picture of me in someone else's phone. The strangers in mine. Illegal vegetation, carried home in my very skin, a passage too intimate even, for the probing eyes of US Customs.

Waitressing and the Cosmos

At the restaurant where you waitress, you have to close out your shift by “10-Pointing your tables.” This means refilling your sugar caddy with your best laissez-faire attitude, trying not to be repulsed as you remember that middle-aged woman who hoisted three pink and two yellow packets of fake sugar over her single glass of iced tea, which is so packed with ice—as per your training—that it probably contained, at the most, a quarter cup of liquid. It means wiping down the table and the cracks in the booth seats, checking the inside lid of the ketchup bottle to scrub all condiment-residue free so it looks brand new each time it’s opened, and it means using a two-foot broom to sweep the carpet under and around your tables.

There’s nothing quite like ending your seven hour shift hunched over that tiny broom, sweeping futilely at carpet, sweating while your lower back strains, reaching for bits of balled-up straw wrapper in darkened corners, trying to delicately lift on each stroke so you aren’t smearing mashed French fry into the rug as you hustle it toward your pan. As you concentrate on this, you bang your hand against the underside of the table, and it causes you bone-throbbing agony because you have built-up calcium deposits there from your time as an athlete and the captain of your field hockey team, though the only reminders you have of that time anymore are these deep, aching moments in your hands. And you know the other waiters just do what they have to, sweep and scrub and sweat, and they consider it routine and they think nothing of it anymore, but you can’t let yourself get to that point. You can’t allow this to become the labor you just expect, so you fight to remember your first perspective, you cling to your initial shock at the absurdity, the simultaneous inefficiency and difficulty of the tasks, your incredulity at how low the pay-out was for such hard and demeaning work. You can’t forget because you’re not just a “waitress,” because no one can believe they are, but especially not you, because you’re a writer. And you

want to say that confidently, like Carrie Bradshaw always did on “Sex and the City,” but when you’re forced to say it aloud, it still comes out all embarrassed and bashful, too choked up in your dreams to make you feel anything but vulnerable voicing it.

But all of this aside, you still hurry through your work because you have to get everything 10-Pointed and then approved by the waiter in the closing shift before a hostess re-seats someone at one of your clean tables or you are stuck there waiting, trapped, raking in that \$2.83 an hour wage, unable to have your section checked while newly-driving teens pour in, giddy with their nascent vehicular freedom, to order dozens of the late-night half-priced appetizers.

There’s really nothing quite like waitressing to remind you of the insignificance of your existence—well, that and contemplating the cosmos.

At the restaurant you’ll sit at one of the rarely-used “high tops”—tables that are bar-stool height off the ground—while you wait for the two closing shift waiters to sign your slip, so you can then find the manager, cash out, and head home. And home is driving to your parents’ house, where you sleep in what used to be your baby sister’s nursery and see that your brother, who is a geoscientist making six-figures for an oil company, has sent a series of pictures to the family group chat featuring “nearby” galaxies thousands light years away. And these unimaginable distances are boiled down to silver-soft swirls on the screen, millions of solar systems rendered sand-grain-fine, nebulae blooming within infrared wavelengths of fuchsia and orchid gases that spread in riotous tumbles of color like silk-painted scarves twisting underwater.

And back at your parents’ house you are able now to smell the rancid combination of onion rings, lemon juice, and spilled ranch that seeps from your clothes, your skin, your hair, and

you realize how insignificant we all are, not just you compared to others, but every person in that dumb restaurant who got so miffed when they had to wait longer than they deemed an appropriate amount of time to wait for food and who looked at their bill and decided not to give their waitress a full 20%, even though that would only have been \$4, because somehow, somewhere along the line they decided that they needed it more, or that you hadn't *earned* it.

None of it mattered. None of them, of you, of us. And as you flip through the images your brother sent, foreign and familiar, you understand why in movies and sitcoms men with blue-collared jobs are always shown slumping home to a La-Z-Boy and a beer, because right now you want nothing more than to dully sip a cold one with your feet finally *finally* off the ground. And you glance out the darkness of your parents' window, where the nearby intermediate school that was built while you were away in college, has made it impossible to see the stars. Then you trudge upstairs to the bed you use with its little girl white-rose-adorned, wrought-iron headboard and footboard that your feet knock into while you sleep. And tossing off your clothes, you tumble in, already sweating again in the summer heat, and you don't shower, or care, or wash your filthy face because, what does it matter anyways?

The grimness of these nights is ok. You know that everything seems hard after seven hours of faking pleasantries and servitude that don't naturally align with your personality. But in the morning, in that fresh light of day, you still have your aspirations and that's what's harder. You still have your dreams and the dreams your family has for you. Your parents' dreams are manageable and typical, but there are also the expectations of your baby sister, whose former nursery you sleep in, who once wrote a short story for her elementary school class set in the future about her attending and graduating from the same college you did, and in this futuristic

story you've already written a successful novel. And sometimes your baby sister pauses to ask you, your eyes meeting hers over the two separate novels you're both reading, if you're ever going to publish a book. And you've been thinking about going to graduate school, but fear of inadequacy presses against you, at once sharp and dull, like some giant claw, too large to slice open your skin, but more than capable of rending you in half.

And in the dewy, bird-chirping promise of those mornings you try to force yourself to go for a run or do plyometrics in the basement because you miss that college-athlete invincibility you once had and you've never needed to feel strong so desperately as you do now. And you try to take time to sit down with your writing, but you can't help wondering, who would ever want to listen to you talk this much anyway? Then you go to the restaurant again, and you tell jokes with the young servers there, who are still in high school, or they're home from college and giddy about their upcoming 21st birthdays and you listen patiently to their dramas. And the older long-term servers bully you gently for being a snob, for off-handedly using the word "bereft" in a sentence without realizing it was a word no one would know, for seeming "above everyone." And they don't mean anything by it, so you smile and play-pout as they jeer, but the thing is you are trying very hard to keep your mind above, separate, from the labor you do. You strive to ignore your new social place, as a person "below" others, or not even a person, but an invisible, a tool. And your smiling freckled face—which garners "thanks hun" winks from middle-aged men and brief satisfied appraisal from cranky old ladies—becomes, with the arrival of the bill, just that—a face. And your personhood is reduced down to split-second first impressions, to the dual personality contest, stand-up comedy routine that is attempting to please strangers for money. And sometimes it's the nicest people who leave the most terrible tips, and even though this

happens frequently you always feel betrayed, as if mankind has banded together to deceive you, to show how little you can read of the generosity of the human spirit.

And in your head you whine, “but they were so nice to me,” with their kind smiles and their thank you’s, and you just don’t get it, and you try to cling to your earlier indifference, to be detached from the game, but then, it’s your third night in a row of having tips that the computer qualifies as “low,” which means you need a swipe from the manager to clock out. And you have to work to convince him too when he comes, that you aren’t lying, that your tips really are just low, again, because your character is once more in question, because now he’s wondering if you’re trying to low-ball your earnings so you’ll have to pay less taxes on your tips, because surely, you could earn more than this. And you wonder what’s wrong with you, and how could trying so hard count so little when it seems like you’re doing just as much as the others, and you try to figure out what was it that changed, because you remember when you first started waitressing, how you got over-tipped all the time and you wonder how much of yourself do you have to give and give and give to each table, over and over, to just get a normal tip rate in return.

Then you’re 10-Pointing your tables again and the closing server is an adult male who also works in construction and just began serving on the weekends. And even though he’s years less experienced than you, after he checks your section he’s yelling in your face about two crumbs of food you didn’t get off the handheld computer screen on one of your tables, and telling you to get coffee filters and scrub over each screen again until all the smudges are gone. And you’re gazing up at his broad Nordic face, where a purple birth mark curves around one eyelid so he always looks recently socked in the face and you’re wondering how he got to this place so quickly, to care so intently about these silly little computer screens, which rarely work the way they’re supposed to, to care enough to yell about them. And this saddens you. So you try

to mention something along those lines to him, to see if there's still a person like you in there somewhere, a person who still gets up in the morning and dreams, but he takes your questions as a challenge to his authority, and tells you to stop arguing and do as he says. And you try to explain that you aren't arguing, but he's spent the day doing the same bowing and scraping and apologizing and smiling you have, and he did it as a man. And you imagine how tired he must be and all the complicated pressures on the male ego, so when he gets so angry he refuses to sign your slip, trapping you at the restaurant until he calms down or you find a way to dredge up the energy to be cute and charming enough to forgive, even when this happens, you aren't upset. And as he storms away, you let your gaze zone out on the back of one of the menus tucked in a little bin against the wall, and you realize you know exactly how all twenty of those lunch special items will combine to get which different prices and it saddens you anew, this knowledge, because you wish you had learned something else instead, and isn't the brain always pruning? And you hope that this information didn't take away permanent memory space you would have liked to fill yourself.

The world outside the restaurant looks thick with heat and on your phone your brother has messaged the family again to let you all know that Mars will be visible with the naked eye that night. You think of that planet, so vibrant and red, but so empty when you look closer, but then you wonder if perhaps the Earth seems empty to Mars too. So as you sit down at an empty high-top to plan a way to get your slip signed you remember how, while sitting that morning on your parents' deck after coming back from what can only be called a "run" in the most generous sense of the word, you watched four different hummingbirds joust to sip from your mother's sugar-water feeder, their throats an opalescent ruby, mermaid scale wings thrumming loud and alive.

And you think about those hummingbirds and the crumbs you missed on that one screen and the entire galaxies of planets looking like far-off dandelion puffs on the pictures your brother sent you and the whole of Mars turned into a small orange circle in the night sky that you can't even see because of that intermediate school they built, the one your baby sister still attends. And you think about how all these things so tiny and things so large, are all happening at once, and you can't really puzzle out what it means, but you feel for a moment, like crying. And you feel sure, as you swing your legs at that high-top in the restaurant, that some things *do* matter, that dust-cloud nebula, kaleidoscopic in color, matter, that dying stars, exploding for the numbness of millennia, matter, that those four hummingbirds, with their crazy sugar-water-eating existence, matter, even if you wouldn't be able to see them from Mars.

SECTION III

Surviving a Polar Vortex

Preparation Necessary: High quality gear, namely a “Canada coat” (my term for parkas that come down to my knees and should only be necessary in places like Canada that have had to build tunnels *underground* so people can avoid the weather). Make sure said coat has a roomy hood, preferably rimmed with faux fur, which does an impressive job filtering out the worst of odd-angle winds. Gloves. Scarf—appropriately fluffed so it can be hiked up over cheekbones and ear lobes, babushka-style. Sunglasses—a surprising, but necessary accessory to block tear-inducing, eyeball freezing, arctic gusts. They also protect from the glare of the often present but seemingly futile glare of the sun.

1 Minute Outside: Cheeks and earlobes sting almost immediately and face buried into scarf. I have regrets, lots of regrets. I pine for the relinquished comfort of my home. I question my decision to leave it, and then all decisions I’ve ever made, wondering what kind of idiot would subject themselves to this. My panted exhales create a warm damp haven. Steam rises to fog glasses. Unfortunately, with my head in this bent position, the crown of my forehead is exposed.

5 Minutes: Passing through a veritable wind tunnel between buildings, temples begin dull ache. Brain feels as if it’s shrinking inside the skull, cold air drilling through vulnerable soft portions of the cranium. My thoughts are a constant stream of curses not fit to be repeated here.

7 Minutes: I can’t take it anymore, this deep, brain freezing. It’s an interior cranial ache I have never experienced before. I think this may be hazardous to my health, so I pull head back into the

heated cove of my jacket's hood, sacrificing lips, cheeks, and teeth to the slapping wind. Scarf develops fine sheen of ice, like frost on a poorly insulted windowpane, as the lingering moisture of those exhaled breaths crystallizes in the chill. I might have thought my nose would run, but it does not. Instead snot freezes into little ice nodules inside the nostrils: tight and uncomfortable. I wriggle my nose with all the vigor of that witch from *Bewitched*. This does not help.

10 Minutes: Thighs begin to burn, deadened, weighty. They want to stop and rest. It's too hard, blood too sluggish, in such icy veins. I contemplate death. I eye the ground and wonder, if I just laid down here, how long until that blue-tinged slumber claims me? Or, I consider, will my special Canada coat ruin things by doing its job, and keep me living, a grueling, miserably long time? Then willpower steps in and thoughts cease. They sharpen down to singular motive: *get there.*

20 Minutes: Eyes skitter across the landscape. Unlike the familiar thick and slushy damp of heavy snowfall, snow swirls in crystal dunes. It rushes across the subzero ground in eddying blasts, like sand on some alien beach. There's a kind of splendor in it, cold and terrible. The sun is blinding upon a thousand fractured mirrors. My thoughts turn metaphysical. I indulge temporarily. *What does all of this beauty, here, in such harsh conditions, even mean?*

60 Minutes: I've made it. I'm ready to get to work. And I've been inside for the past 15 minutes. Yet despite how long I've been in a warm room, my thighs are still cold to the touch. Still unthawed, the chilled flesh sends shivers up my heart-warmed torso as it pulses distantly in its constant, bloody labor. I settle in for the long haul, arcing to straighten defensively hunched

spine, depositing loosed dams of mucus into extra soft tissues. I turn to—*goddamnit!*—I left my computer at home.

Lady Parts

In the car my mother begins one of her reoccurring health talks: the importance of flu shots and multivitamins, gynecology and breast exams. We still have a good twenty minutes until we reach Costco, not to mention the shopping itself, the drive home, and the lengthy storage of all our bulk-sized necessities. Beleaguered, I cut her off, “Mom I already went.”

“To the gynecologist? When?”

“A while ago. I just went to that emergency clinic near school. The place where they did my x-ray.”

“Oh good. I’m so glad.” She settles back into the her seat, head turning as she returns to scrutinizing the houses on the sides of the road, a driving habit that keeps me on edge. “Was it the horrific experience you imagined it would be?” she asks. We both pause to point out the stunning sunroom with a round, red framed door, visible now, through the naked trees of winter.

In a voice bright but begrudging, I reply, “Oh, it was fiiiine.” I’m lying. I hadn’t been to a gynecologist and wouldn’t go for another three years.

“Claire?” I stand and follow the blond nurse back out of the waiting room.

“I’m Charity, how are you today?” My step hitches a little at her name, but I keep walking. Be mature. That’s the whole point of this thing. Handling adult demands.

“Oh good! How are you? Crazy weather we’re having, hmm?” The weather isn’t that crazy. But we discuss it at length anyways. After all, I have willingly made an appointment for a stranger to look at my vagina. Elevated small-talk is beyond me. We transition the conversation into sports, then occupation. I feel certain I’m killing this. I’m going to chalk that up to maturity

too. Being pleasant and appearing genuinely interested in trivialities with strangers is an adult skill, finely honed with age and the ability to drink wine.

Together Charity and I discuss my health history. Then she tells me the doctor will be in soon and leaves. Upon first meeting the gynecologist, I assure her in a nervous babble of all the “good person” things I assume doctors want to hear. Expediting the preliminaries. I take a multivitamin daily. I don’t smoke. I only drink on occasion. I exercise. I know the entire sexual history of the two different men I’ve slept with. I know I should floss, but who does, really? Strained laughter.

The doctor responds with a weak smile and tells me to undress from the waist down—the socks can stay on—and leaves the room. I do my best to position myself squarely on the examination table. The sanitation sheet crinkles like butcher’s paper under my thighs. It tears under my thumb when I lift myself up, fidget, and reposition. I tug the strange crepe paper blanket high across my thighs. The door is behind me, so I also yank my sweater down low and sit on the edge of it to avoid an unseemly plumber’s crack situation. I’m not sure which nude parts of me are okay. After a knock and a considerable pause, she enters.

At first things are quite normal, as long as I remember to forget my bottomlessness. I have good blood pressure. Normal ears. The right one looks a little funny inside of course, from those childhood surgeries. I have to remind the doctor about that. Then she has me breathe for the stethoscope. At that point I am trying very hard to be calm, holding onto it in fact, with gritted teeth and tensely relaxed palms, which I lay in a study of casualness across my lap to anchor the paper blanket. All of this is working, until she insists I breathe. The pacing of these things is ridiculous. No sooner is a breath requested and dutifully inhaled than another request issues forth.

I end up trying to inhale on top of previous inhalations, puffing up a ridiculous amount and occasionally exhaling out intense blasts of air like I'm shooting poisoned darts out of a bamboo pipe. The speed isn't sustainable. I'm hyperventilating and my body, confused by my display of all the characteristics of deep panic—shortness of breath, increased heart rate, lightheadedness—begins to convince my brain that things are NOT OKAY. I shake.

The doctor pauses, "Are you all right?" I take the opportunity to breathe like a normal person.

"Oh yes. Just a little nervous!" It gasps out, overly cheery and too high in pitch. I wince.

"Just breathe nice and slowly for me, ok? Can you do that?" She asks, as if she hadn't just been behind me demanding *Breathe. Breathe. Breathe.* at a pace that would rival a John Phillip Sousa march. She places the stethoscope against my back again. I sigh.

I think about how a friend told me that a tiny old man administered her most recent pap smear. She never had a male gynecologist before. He had combed his wispy white hair over and across his shiny balding scalp. She said when he ducked between her legs those hairs flopped off the top of his head and brushed against her bare inner thigh, "It was terrible. Like feathers." She had told me and shuddered.

The doctor moves to the end of the table and sits down on the stool.

I semi sit up and say, "I just feel bad that you have to look at it."

"Well, this is my job. And you get used to it. It's like looking at anything."

"But what if it's freaky? If it's freaky you gotta let me know. Wait. You know what? If it's freaky, *don't* tell me. I don't want to know."

The doctor laughs. But I'm serious. And still laughing, invisible behind the paper blanket, she puts her hands on my most intimate skin. I practically leap off the table. She prods and pokes

lightly, touches me here and there. Each moment of contact comes with more shock than if she'd paused mid-examination to begin yodeling.

“Your legs need to be further apart.” She places both hands firmly on my inner thighs and presses. I jump as if branded. How can I not be surprised when I have no way of anticipating her movements? Everything occurs secretly beyond view under the curtain between us. Whose modesty is that blanket even protecting? Mine? The doctor's? Programs like the *Vagina Monologues* tell young women to love their hoohahs, embrace their chachis. Get a mirror, take a squat, and love your lady parts: all a part of modern feminism.

Men aren't ashamed or intimidated by their genitals because they encounter their junk all the time. They see it when they dress; they feel it when they run; they hold it when they pee. A woman never actually sees her vagina without either contorting her body in a complicated pretzel or jerry rigging a specifically angled mirror. To get a good look at herself a woman has to want it. She has to seek it out. Being hidden from my own vagina in this doctor's office feels like a bit like a step backwards.

Lying there, with that ambiguous veil of modesty blocking my view of myself, I can't help but wonder if this practice began when all doctors were men and a woman's modesty and virtue was more important than almost any other aspect of her character. Because the reality is, there's a complete stranger between my legs and receiving contact from her as a surprise isn't exactly putting me at ease.

Apparently specula have been around for a very long time, dating back as far as the Ancient Greek physician Galen in 130 A.D. Considered a rare archaeological find, specula were even discovered preserved in the ash at Pompeii. The pap smear itself has Greek origins as well,

named after doctor Georgios Papanikolaou, who first identified it as a method to screen for uterine cancer. However, the father of modern gynecology is physician James Marion Sims, who invented the modern duck-like speculum in the mid-1800s.

The speculum Sims invented married simplicity and utility so successfully that little to no change has been made to his original design in the past 200 years. Despite this ingenuity, Sims remains a controversial figure. In the back of his Montgomery-based practice, Sims did repeated vaginal surgeries without anesthetic on a number of slave women he kept just for that purpose. Some women underwent as many as thirty operations.

All of the selected slaves suffered from vesicovaginal fistulas, where the tissue that separates the urinary tract from the vaginal canal has been ripped, which can allow urine to pool within the vagina, causing infections and great pain. Sims invented the speculum to increase his visibility of the problem's source and eventually figured out how to suture and fix the tear. There are two main causes for this condition: difficult labor and violent rape.

Given the history of the speculum it's hardly surprising that during second-wave feminism women sought to wrest this symbol back from the hands of the patriarchy with a practical solution: buy a plastic speculum and check your cervix yourself. The movement wanted women, particularly women who suffered from sexual trauma or abuse, to feel more comfortable with the prospect of gynecological exams, which, in the '70s, remained a male-dominated field. For many decades and perhaps for many women still today, the pap smear remains an experience that echoes older, problematic, power dynamics. A duck-billed tool comes out of a drawer and goes slickly into your most intimate and politically charged hole before you can so much as lie back and think of England.

I am lucky. Before inserting the speculum, my doctor holds it high up in the air, so I can see it from my reclined position, and gestures enthusiastically. I narrow my gaze on the clear plastic object; it looks like a curling iron. She closes her eyes while she talks about it, as if looking back across the years onto a blackboard or textbook page. I remember this clearly. It's not her fault I am so flustered by the experience so far and the prospect of what is to come that her eye-closing habit is *all* I can remember about the speech.

On the counter behind the doctor, next to a wicker basket containing free condoms stands a large plain white bottle of KY lubricant. I am startled to see it, though I shouldn't be. I wonder if the bottle lacks decoration because KY distributes specific clinical-use lube with extra-professional looking bottles. I briefly imagine the clinic's shipments: 18-wheelers packed with industrial quantities of lube. I'm not sure how much my doctor uses (damn chastity blanket) but I feel like an oozing swamp thing well into the following day.

The speculum slides in easily and without fuss, not more troubling than the familiar glide of a plastic tampon applicator. My nineteen-year-old sister doesn't use tampons. She claims they get stuck. *Stuck*. My mother confirmed that she once had to help jimmy a tampon out of my sister's body. I've always imagined my vaginal canal like the inside of a piece of PVC pipe, smooth and undifferentiated except for some elusive rough patch known as the g-spot (g for good?) that *Cosmo* is always telling me it's important I find.

At this moment, I remember that female mallard ducks have labyrinth vaginas with controllable trapdoors and twists. Their maze-vaginas evolved as a line of defense in a species with frequent and violent sexual encounters. The female mallards' vaginal adaptations and the counter-developments in the male mallards' penises are all part of the species' sexual arms race.

Although uncoupled male ducks have demonstrated “rape flight,” a behavior where a group of desperate males assault a single female, more often than not, leading to her death, these twists and turns give the female mallard a small measure of control. As occurs fairly widely across the animal kingdom, unworthy or unwanted sperm can be diverted or discarded. From ducks to turtles, spiders to bats, female bodies across the animal kingdom can determine whether or not to accept the sperm offerings. Human women have not yet evolved to be so discerning. Once entry is achieved, the womb is relatively defenseless.

The doctor pulls me back into the moment with the swabbing, done to test for cervical cancer—a possibility I had never considered before—which causes the pulse in my throat to tense momentarily. It happens with little fuss, identical to the strep test, the dry itch of Q-tip cotton against an ever-moistened area.

Later she presses her fingers into my stomach, another doctoral procedure I don’t quite understand but have never, until now, questioned. Maybe it’s to make sure I’m not missing any major organs. She issues a joke-type comment, bedside manner, at it again.

“Oh. See? I can tell you work out. You’ve got some good abs here. They’re just under a layer or two of fat.” Laughter.

“Um. Thank you.” I reply, and obligingly chuckle.

Her eyes close again and she launches into a discussion about weight maintenance and how important it is to time your eating at specific intervals throughout the day. Still lying half-naked in recline, I let my head roll back to neutral.

Between two massive fluorescent lights—the single most unflattering illumination ever invented—taped on the cheap drop ceiling tiles, is the ripped off top of a calendar complete with

a pin-hole for hanging and a frayed bottom edge from where the day part formerly dangled. It features a pretty standard beach scene, wave caught mid-crash with ocean spray spackling an azure sky. The lights are so big and that little taped calendar picture so small, it hurts my eyes to look at it.

I turn back into the doctor and catch the phrase “the intervals of meals are just as important as the meal itself.” My gaze flicks to her face. Her eyes are still closed. I narrow mine to temper the glare and glance back at the sad little calendar shoreline.

“All right then. We’re finished,” she says. I begin to sit up. Taking a hasty step backwards, she splays her hands out in a “stop” gesture. “I’ll leave you to dress.” She finishes, and scurries out.

I remain unmoving, rather stunned, for a beat or two. Have I breached the invisible code of acceptable pap smear behaviors? Seeing my nudity from under the blanket was okay, but the prospect of me standing, half-nude, is not?

Propelled into sudden desperate motion, I dress in an adrenalized flurry. All my pent up reactions bubble up in a rush, but I smooth my hair, zip my boots decisively, and settle firmly on the sensible plastic chair furthest from the examination table. Legs resolutely crossed, I get out my phone. This is normal. I am normal. Everything is fine. *Fine*. I feel like crying.

The doctor comes back in and we talk for a while about birth control and hormones. But I’m at my doctor-patient pleasantries limit. My body and I are exhausted, so I abruptly change the subject.

Instead I tell her about the wing I found on my way over that morning. A raven’s wing, fully intact, just lying on the sidewalk. Bone, gristle, and tendons still glistening wetly as the end as if dismemberment had happened only moments before. After that, I put on my coat and leave.

To Sleep Perchance to Dream

Sleep: we all succumb. The temptation is irresistible. I crave it each day. Like a junky craving a fix, we can only last so many hours without its sweet oblivion. Health and wellness professionals tout the effects: slumber is restorative, enriching, age-defying, important. Yet for all the simplicity of sleep = good, the functions of the subconscious evade scientific clarity.

Although we are “dead to the world,” we manage to move around in our beds without, for the most part, falling out. Fighter jets may roar overhead, a garbage truck may thunder near the window, a train may moan in the distance, and yet we slumber on, unperturbed. But the cry of a friend or child, or the sound of our name, and instantly we are awake, primed with adrenaline. Even while the waking mind is at rest, the brain is keeping track of the body. It filters and classifies noises, deciding which ones are worthy of reaction and which are not.

I was prone to nightmares as a child. A “vivid imagination” is the expression adults used to discuss it with me. My mind’s eye could so graphically recreate scenes from movies, TV shows, even books, that their momentary dramatic tension, or their split-second startle, lived in scorched clarity on continuous loop in my brain. This is not so with all children. This was not so with all my siblings, though we were a sensitive lot in general. This certainly wasn’t the case with our cousins or friends.

Science has been shining flashlights into the bedroom, illuminating some of the long considered “mysterious” aspects of slumber. Electroencephalograms, EEGs, which record the waves of electrical activity that sweep across the brain’s surface, have shown that the listening part of our

brain acts as a high-end receptionist. It responds to sounds for us while we slumber unaware, deciding which interruptions warrant our attention and which do not.

Our proprioception or the sense of our own body's placement, also works through the night. If the body tilts in any direction, the head will level with the horizon. Position bypasses the dozing cerebrum, travelling instead straight from the dorsal spinocerebellar tract to the cerebellum. This further explains why occasionally hyper-realistic dreams will feature the individual sleeping in the exact position they happen to wake up in.

We know that the average human has a sleep cycle of about ninety minutes. Our bodies have a biological clock, a circadian rhythm—from the Latin roots, *circa* (about) and *diem* (day). The alertness trajectory is light-sensitive. Wakefulness is prompted by sun-seeking retinal proteins, which begin decreasing their production of the sleep-inducing hormone, melatonin. Artificial light will produce these results with the same effect as natural light. And with the onset of darkness, natural or constructed, slumber creeps closer.

The communications of the brain's cortex slow, then stop. Consciousness fades and breath deepens. We begin to sleep, to enter our reversible unconscious, which involves a rather elaborate five-stage succession. The fifth stage is sometimes called “paradoxical” sleep, which is characterized by REM or rapid eye movement sleeping. This sleep stage is referred to as paradoxical because the body becomes internally roused—increased heart rate, faster breathing, flickering eyes—but remains externally calm. All mammals experience REM sleep and it is here that we dream our most vividly hallucinatory, emotional, and story-like dreams.

In middle school I began to realize that my experience of dreaming wasn't the same as everyone else's. In the cafeteria, we sat with those cratered PJ&J sandwiches, marked from where the apple sat, and shared our dreams. Most people's memories of their dreams were brief at best, perhaps a single scene, lacking any real plot or tension. Mine were elaborate, complex, with full characters and costumes, long-lasting plots that played out over various settings. There were stakes involved, various real-life cameos, and always a dramatic driving force. Sharing my dreams always took much longer than everyone else, and I got the sense this was unwelcome. As a collector of beautiful notebooks, I went home that night and I split one open. It was decided. I was going to keep a dream journal.

Dream: a sleeping vision. In Old English, around the 1200s, to "dream" also meant to rejoice, play music, or to emit noisy merriment. The average person spends about 600 hours a year in the dream state, during which he or she experiences approximately 1500 dreams. This, calculated out, becomes more than 100,000 dreams in a typical lifetime, or about six years of dreaming. For both men and women, roughly 80% of dreams are characterized by a negative event or emotion. Dreams of attack, pursuit, rejection, and failure are remarkably common. Yet 37 % of people report that they never or almost never, remember a dream.

For whatever reason I've always recalled mine. Always. And because of this, and the routine anxiety they contain, I like to refer to them as "stress dreams," rather than "nightmares." Nightmares refers to the phenomenon when people who don't normally remember their dreams, recall a particularly unsettling one. But if this "unsettling recall" happens six to seven nights a week, then very the commonplace nature of the experience demands a new term.

The discovery of the connection between REM sleep and dreaming was a breakthrough in dream-related studies. Scientists can now wake a dreaming individual either during his or her REM sleep stage, or within a three-minute window immediately following, and receive a detailed, rich account of the dreams that occurred.

Is a dream created? Or does it randomly occur? Several different explanations have been proposed by dream theorists for why we dream in the first place. Some psychologists argue that a dream is always a creation, an imaginative product similar to a work of art. Freud considered the process of dreaming the mind's way to outlet otherwise threatening unconscious drives and wishes. He also believed all women wanted penises. So we'll leave it at that. Dream researcher William Domhoff claimed, "there is no reason to believe any of Freud's specific claims about dreams and their purposes." Freud's assertions often lack any scientific support, like much of dream interpretation.

Other psychologists posit that dreams are simply the brain processing information. Dreaming does increase memory retention, help people sift through the day's experiences, and store them in long-term recall. People who are interrupted repeatedly upon reaching REM sleep have more difficulty remembering an unusual image or phrase than people allowed to dream continuously. Yet memory consolidation can occur independently of dreaming and this idea, while logical and appealing, doesn't account for dreams about un-experienced events or emotions, which wouldn't need to be stored in long-term memory.

But if dreams solidify long term memory, why do my dreams often center around events, places, and experiences I've never had? And yet, if my brain is merely processing images, why these storylines, these feelings, the incredible tension? My stress dreams often feature an

apocalyptic scenario and a family member in danger. Responsibility falls to me: secure safety, through whatever means necessary. I infiltrate war ships. I dig protective burrows out of arctic tundras while gunfire rains down from a ridge above. I escape dystopian jungle societies where young people are made to fight to the death. I have murdered in self-defense at least five times. Sometimes they're creatures that I must kill repeatedly. They rise over and over as my exhaustion and desperation mount, threats I cannot vanquish. These Sisyphean struggles for survival linger in my mind for days afterwards. A guilt, a repulsion. Surely, this is not why we dream.

Some researchers speculate that we dream because it benefits us physiologically. Sleep is known to be good for us, maybe dreams are too. Children and infants need greater hours of slumber, perhaps because they're in a phase of rapid cognitive development. Dreams then, arguably further brain maturation as well as preserve and create neural pathways.

This may well be true. It is certainly difficult to dispute. But it again fails to explain why we experience meaningful dreams, or why some people's brains script different stories than others. Then again, what proves any dream is "meaningful"? Any dream-prompted emotional reaction could be accidental, related to whatever neural pathways happen to be working on at the time.

Some theories view dreaming simply as an eruption of random neural activity. This line of thought, referred to as the "activation-synthesis theory," claims that the brain function evident in the sleeping brain occurs arbitrarily. The dream is viewed simply as the result of the mind's attempt to make sense of the neural static. The individual is still an important factor in this theory, because each brain weaves different stories, revealing something about the dreamer.

The theory could explain my dream habits, but not fully. Which aspects of dreams then are randomly fired and which are created? What does it then say about the way the mind constructs meaning? How much of the dream is constructed by the mind and what is the significance of what is constructed?

Dreaming—how it works, why it happens, and what that means—remains one of the fascinating mysteries of human existence. Perhaps my nightly stress dreams are laden with indecipherable meaning, rich as any unlocked Rosetta stone. But more than likely, there is no point to dreams at all. Many scientists are skeptical that dreaming serves any function whatsoever. But regardless of these differences, all sleep researchers and all dream theorists agree on one thing: a night of REM sleep, and dreaming, is important.

Given the choice, would I sacrifice the rich, if terrifying, tapestry of my sleeping mind for nights of deep uninterrupted slumber? No. It's certainly never dull, and I've tried to stay asleep more than once to see a heart-pounding narrative reach completion. It often feels as if I could fix it—control the narrative, save us all—had I just a little more time. Perhaps Virginia Woolf explains it best: "Life is a dream. 'Tis the waking that kills us. He who robs us of our dreams robs us of our life."

The End of Things

My tongue sits thick and dry, chafing against my worn black mouth guard. I suck it against the hard roof of my palate until I feel the urge to gag. But I don't retch. I'm too tired. The air hangs still and heavy. It hovers over the Bermuda grass. From my crouch I heave to drag breath deep into my lungs. I can feel the sear of the sun along my hair's zig-zag part. Today I have three intersecting French braids—nothing will slip. My foot taunts the white paint line—leg tensed. Inside my turf shoe one toenail blackens with dull throbs. I clench my stick in my right hand—sprinting position.

It's double overtime in our field hockey semi-finals game against Virginia Wesleyan during my senior year of college. Losing this game would mean immediate elimination. I haven't been subbed out all match and we're defending our third penalty corner in a row. I'm lined up in the goal cage with two other players and the goalie. It's overtime, so there are less of us on the field than normal: sudden death. It means if they make this, they win. If they make this, my time as a collegiate athlete is over. Forever. Lost. Field hockey will disappear from my life—the hours, the sweat, the blood, the injuries, the time commitment—all will vanish, shrink, to a blip on my undergraduate radar, not even worth mentioning in a resume.

I'm panting out things like, "Let's go ladies!" and "We've got this! Heart and pain!" I'm one of the captains, servant and leader. My legs feel like rain barrels, but my heart leaps at the gate of my chest. My personhood has been boiled down, sharpened and honed, and I am just this will, just this love, for these girls, *these girls*, this family. Everything we have been trying to build together seems laid out before me, all factors culminating in this singular moment.

At the last time-out, girls on the sidelines ran to bring us our water bottles. Our coach, Katie, brought us in, gestures snapping with emphasis. She said something like, *stay focused* and

we need to be passing up our strong side, but time-out was a blur of chugging water and shaking my thigh muscles to keep the muscles fluid, warm. In our huddle I glanced around and noticed that Maria's eyes had gone vacant in the heat. I clacked our sticks together, bringing her gaze to mine. *We got this*, I mouthed. We all had to believe it, or it wouldn't work. Rachel, my fellow captain, gasped beside me, grimacing as she folded her toes against the ground to stretch. Coach spoke again, *first two minutes*, she told us, *let's finish this in the first two minutes*. Then she crossed her arms and headed back to the bench. It was up to me to sound the final rallying cry.

Field hockey balls are solid, hard plastic—and can be hit in the 80 mph range. I've broken two fingers and have permanent calcifications on several of my metacarpals that ache cripplingly when hit the wrong way. I've gotten a concussion, broken a toe, and lost at least 4 toenails. Then there are the countless scrapes, twinged muscles, blisters. Preseason is plagued with diarrhea and ice baths, lactic acid build-ups, and heat stroke.

Then there are the bruises. Field hockey really makes art of the bruise. They bloom like tropic flowers on shins and thighs. The tender center is a dot of stark white—the shock of the ball's initial contact. A perfect ring of red surrounds it, a teacup of pain. From here, color fans out in a nebula of purple and green like black marker chromatography. Upon contact, the smacked flesh immediately goose-pimples, despite the body's overall heat. Lightly textured, richly colored, bruise art.

I take another quick gulp of water: “Alright ladies, we're going to go out there and give everything we have. It's going to take a lot of heart and a lot of pain. We are going to play *hard*. But most importantly we're going to have fun and we'll do it together. Hawks on three: One,

Two, Three, HAWKS!” I yell like this was the most important message I’ll ever deliver. And in that moment, it is. These words, these familiar well-worn chants, have to be enough, have to ignite the final push, have to give us all the strength to carry on. All twenty-three of us press our sticks together, shoulders in, body to body. We chorus on “HAWKS!” and part ways. The seven of us overtime players jog back out to our positions on the field, while the rest disperse to stand in a tense-edged row on the sideline.

Years before that moment, my speech would have seemed silly to me, just as it feels distant from me now. But at the time, those phrases were everything. They have to become chant and creed, salvation and conviction. Our success or our failure hung on those words, and the ability to get every single one of us just as invested in them.

Our fans are their customary mix of rowdy, often drunk, soccer players who yell and holler from camping chairs and blankets along the edge of the field, and the committed family members who come regularly with cameras and signs. Today however, all sit quiet. I’m praying that we get the ball out of the penalty circle—that it’ll make it to one of our forwards who will be racing in from midfield. I can’t do many more of these. And I know at least one of the penalty corners is my fault: foot-foul. I am so tired. I have reached the edge. The goalie thumps her stick against the wooden back of the cage. It’s nearly time. Through her mask, her gaze remained fixed on the inserter of the other team: watching, waiting. I glance at Rachel, whose fingers grip the coarse black weave of the net beside my head. We make eye contact and breathe. I know her shin splints are killing her. She has a small, delicate body, and sports have been a strain—muscles and tendons unraveling.

“GO!” The ball is passed; the goalie gives the signal; I take off.

Burn in legs, in lungs, in arms. I'm sprinting, sprinting, sprinting—straight at their main striker who's going to receive the insert and slam the ball right back in my direction. I've been up against her all game. She's thick, the largest player in our conference, with a full sleeve of tattoos on each meaty arm. I've never been anything but sturdy, but it's been a struggle not to be pushed around by her. I dig deeper, heading straight at her. Go. Gogogo. I race forward, stick outstretched. My hip flexor strains—the muscle still tight from when I ripped it last season. She has the pass. Body twists as she winds up for the swing, stick high in the air behind her head. I'm closer, but not close enough. *Shit*. She'll get off a full shot—and I just have to hope I stop it somehow.

Please. I'm praying in that tiny private voice—so small it goes nearly unnoticed. *Please, don't let this shot hit me in the throat*. As always—in a speed nearly too rapid-fire to gauge or recall—that possibility flashes through my mind as I charge forward: me on my back, suffocating under crushed voice box, eyes darting across the ocean-bright sky until it darkens above me.

Sheer willpower and I lunge the last few steps. *Thwack!-Thwock!* She shot; I made contact. I deflected the main shot! This is good. This means I could have stopped the—Wesleyan erupts into cheers.

It went in. I was the last to touch it. I deflected the shot. And it went in.

My stick thuds from my grip. And I'm on my knees in the grass, head in hands, wracked with sobs. Everything that has held me together dissolves. It's a reaction I would never have had publicly if I could help it. It'll be commented on later, when I'm out that weekend and run into those who were watching. It takes my team a bit to find me because I'm near the Wesleyan players who have mobbed together, screaming and jumping. Then my team arrives and the girls

are everywhere. Hands are in my hair, gripping my arms, dozens of voices soothe and weep. We're all pressed together and I'm up off my feet. Someone has grabbed my stick and together we make our way to the sideline. I find Rachel and we hug mutely—sweat and tears mingling. Katie tells us to bring it in. She talks for a long time. She's pregnant with her first child. She's proud of us. She's crying. *We made it far*. She tells us, *We played well*. I can't remember much else of what she says, but it goes on and on while we peel off socks and shin guards from throbbing feet. By the time we finally gather our equipment and head toward the locker room, most of the crowd is gone.

But my boyfriend Christian is still there, lanky-tallness hitched to the side against a crutch. He waited, although I didn't expect him to. My family lives seven hours away, so he's all I have here today. He hugs me briefly, an arm rubbing up and down my soaked back. His kiss brushes dried salt crystals off my forehead. He says nothing. Blue eyes dart within their thick-lashed frame. I want more from him, but I know he can't give it. He's still in a brace for his torn ACL—an injury that cut his soccer season short early. He was a captain too. We both grieve. There aren't words for either of us. Our relationship will end that winter.

I can't remember the locker room. Next thing I recall I'm in the bathroom of my townhouse alone, stripping off tape and blister guards and spandex. Then I'm in the shower. And I have music blasting. And I'm letting myself feel it. The end of things.

Over, all over. A whole part of my life shorn. I'd been fired from a job I'll never be able to get back. Everything I'd spent years working for, finished. The entire portion of my self, captain and field hockey player, the whole heart of my effort and love and devotion, all taken, all gone.

My dad calls later. He watched the game online. The main shot was a direct bullet at the lower left corner, open, he says. Almost guaranteed to go in, but I deflected it upper center. I

gave the goalie a chance. It just happened too fast. We couldn't have anticipated it. So it's not my fault, he tells me. *My fault.*

People will say they're not "into sports." And neither am I. What do I care for track and field? For the strategies of baseball? Or the hype of football? This was never about "sports."

Field hockey was first introduced to my family the summer before my freshman year of high school. My mother heard about it through the grapevine: a new fall sport option for girls. I had played soccer in middle school, but tryouts were always a matter of which Cup and Travel teams you had been on, what coaches you knew, what indoor league you paid for, etc. My parents watched my brother struggle because of these politics, and weren't interested in the expenses or exclusivity they required.

Not particularly passionate about soccer, I didn't have a problem giving a new game a try. Preseason felt hard, but in retrospect was the easiest of my life. Each girl trying out was given her own old-fashioned all wood stick and our uniform consisted of a pleated kilt. Those several weeks of preseason were just spent learning how to hold the stick, how to hit, how to stand, how to play. We practiced in the grass of the old football field near Richland Elementary—we left divots everywhere.

When I graduated high school, my year was the first group of girls for whom the field hockey program had been available all four years. I was the crest of the wave. People used to ask us if we were playing "floor lacrosse," which isn't a thing, and fathers had to hand-make us banking boards out of stacked two-by-fours for practice during the winter indoor league.

It wasn't until I went to college in Eastern Maryland that I realized just how much of a joke my high school field hockey experience was. My roommate began playing field hockey when

she was seven and she had played almost exclusively on AstroTurf that had been watered down to make it extra slick. I learned that everyone uses composite sticks with fiberglass, carbon, Kevlar, and aramid—not wood. And that kilts are a thing of the past.

Most of the teams we played in high school were terrible and far away. Many of them had boys who wanted to work on their stick skills for ice hockey. But, for whatever reason, I took to it. I liked the rules. Soccer involved elbows and jersey tugging. It involved pretending to be shoved so hard you flew through the air, in order make sure the referee called penalties in your favor. Field hockey felt more honorable to me. While it has its fair share of contact, none of it was used to try and garner penalties from gullible referees. The general consensus is: using your body to get the ball is the mark of someone not skilled enough to out-maneuver with their stick-work alone.

One night in high school after a bitter field hockey loss in the final minutes, my dad drove me home. It was an unexpectedly cold September evening. Our team had turned on itself, girls blaming one another, teamwork fracturing, and our tenuous leading score had slipped. It was near ten o'clock already. I was exhausted and frustrated, with myself, and with my team. In the car I began critiquing my performance, running through a list of all the things I'd done wrong: I didn't give more, I didn't keep us together. My father remained quiet, eyes on the twisting road. By the time we got home I was near tears. Inside my two younger sisters were on the couch watching TV. Not wanting them to see me upset, I turned to rush upstairs.

“Claire.” My father's voice caught me, deep and firm. He took me by the arm and pulled me into the black of the unheated sunroom, sliding the heavy glass door behind us. I blinked in the sudden gloom, only able to see the pale cloud of my breath.

He spoke softly, hand still on my arm, “You are my best athlete.” My throat clenched. “You are strong and fast. A natural. You have the best hand-eye coordination of all your siblings.” His voice roughened. My cheeks grew hot, wet. He hugged me tight against him, my head fitting as it always did, square against the center of his chest. Then he left. I remained in the dark for a while longer, until I was certain I could walk calmly upstairs. I went to shower, fan on full roar and sat down in the bottom, water all around me. I was there a long time.

I didn’t anticipate a competitive collegiate career, but my parents wanted me to try, even if only at a Division III level. My dad made a recruiting tape with a catchy soundtrack and sent it to all the schools I applied to. It featured highlights of me dodging players left and right down the field, weaving in and out of cones at practice and a highlight reel of the goals I’d scored that he happened to have on camera. During our high school senior night, we played a team that was too easy and I happened to score a hat-trick. He spliced it together so it was nothing but the announcers repeatedly shouting my name with increasing excitement, followed by footage of all the parents throwing their hats out onto the field. It looked impressive. It really wasn’t.

Regardless, thanks to my father and the wonders of film editing, each school I was interested in gently recruited me. In Division III there are not any athletic scholarships, so coaches simply try to get incoming freshmen to commit “Early Decision” by selling the prospect of a built-in team of friends

When I first got out of the car at St. Mary’s College of Maryland, a public honors college, I had a feeling, a home sort of feeling. Pittsburgh was still in the throes of ice rain and stiff winter winds. But although I had a feeling about St. Mary’s, my acceptance into their Leadership Scholar’s

Program sealed the deal. It came with a sizeable scholarship, required leadership seminars, a maintained 3.5 minimum GPA, and culminated in a paid-for study trip to an as-of-yet undecided country that embodied the leadership we studied. I hadn't particularly considered myself that much of a leader before college, but quickly realized it was a role I felt comfortable in. The problem, it seems, was that I hadn't found anything I cared about enough.

My sophomore year I itched to be on the field constantly and my coach could see it. I had the skills...I lacked endurance.

"You get tired, Claire. I can see it." She told me during the post-season conference. "You need to be someone I can count on to hold up all game. If you get your fitness up, I can see you being center midfield. I can see you leading this team." And then, for the first time I could remember, I recognized myself as my only obstacle, and a conquerable one at that. That year I got my mile time down to 6.23 and moved permanently into the upper center midfield position. It's my favorite spot, the center that holds, the giver—the one where the main job is to be the hub, to navigate and distribute amid the spokes of the team wheel.

Sophomore and junior year the team leadership was fractured and divisive. Upper-classmen formed cliques, Samantha and Bailey were an inseparable comedic duo, a chorus of inside jokes who only did their drills side-by-side, excluding younger players like myself. Laura and Ali, captains the next year, decided their age made them superior, assigned away all work and cleanup, but never lent a hand. Small separations like these chafed like grit against glass, and the team cohesion suffered. Running suicides was harder, overtime was harder, and although I am ashamed to admit it, sometimes I just wanted games to be over. There were petty disputes and

quarrels. On the field, mistakes were met with criticism and blame, rather than support and encouragement.

But the year Rachel and I were captains, Katie told us we were the first team she had ever coached where there was no animosity between any of its members. On the field, the team is only as strong as the person who tries the least. A unified supportive front is essential for the overall success and this includes both members who may go the entire season without seeing any playing time and those who play all game, every game. It's a commitment to a cause that manifests both physically and mentally.

Captains have to be both friend and leader. Rachel and I loved it. And we loved our team. We attended weekly captain's meetings to discuss readings from Jeff Janssen's *The Team Captain's Leadership Manual*. But when thinking of leadership styles, I most often turned to readings from Lao-Tzu's *Tao Te Ching* that we had touched on in one of my required leadership seminars. *Imagine that you are a midwife; Lao-Tzu dictates, you are assisting at someone else's birth. Do good without show or fuss.*

The captain must be at both times a mentor and an enforcer. Of course I was hardly midwifing. I was at the locker room setting up for practice. I was accounting for all the players before we walked out to the field. I was calling for huddles during practice to get us refocused when I could tell Katie was pissed. It was an unceasing litany of group texts and charity organizing and carpool problems—it was not birth. *The leader works in any setting without complaint, with any person or issue that comes on the floor; the leader acts so that all will benefit.* I was needed. I was helpful. I was a leader and honored to be one.

Despite being a Division III team, our conference is called the “Southern Conference of Death” because we play three nationally ranked teams. All the more reason team unity is so

essential. The deeper the love for the people you play with, and the greater respect you have for them, the faster, the harder, and the longer you are willing to push yourself for their sake.

Field hockey, other than some key differences, is still rather similar to soccer. Similar positions, similar field, similar rules that require teamwork in order to get the ball up the field, rather than protect the ball-carrier. Despite these similarities, it's probably incidental that the St. Mary's field hockey team pairs up with the men's soccer team for all rivalries and mixed party functions. Women's soccer pairs with men's baseball—I can't make sense of it; it's just how it goes. Our yearly rivalry involves playing a game of field hockey against the men's soccer team. Drunk, of course.

Until my senior year, the women's field hockey team had never won this match. The referees were often biased toward the men or got too drunk and wandered off. We had a real problem with guys attempting to kick the field hockey ball, which is a foul. Girls lost motivation quickly and returned to the sidelines where there was more beer and plenty of soccer guys to flirt with.

But my senior year, I needed that win. This would be the last field hockey game I'd ever play with these young women. Our last time sweating side by side, working together, moving in anticipated harmony, like perfectly cadenced arpeggios up and down the field. Last time playing alongside my comrades, my friends, with all the months and hours of shared bruises and sweat-soaked days and laughter between us.

Several shots of liquor in, running made my chest feel at once tight and torn, but all other aches and pains were dulled. Guys slammed me in the shins with their sticks but I kept going. I felt faster, stronger than them all. I would have this win. When they tried to body-check me, I

purposefully nailed them in the feet with the ball so they were hopping and howling and out of my way.

There, on the field that where I had spent four years of practices and preseasons, I scored a hat trick, in an oddly full-circle moment. But this time I felt like I earned it. This was my moment. This was my goodbye. We barely won, 4-3, because at one point our goalie wandered into the woods to relieve herself. Christian refereed that year and, despite several biased calls in favor of the soccer boys, declared me “Ultimate Champion”—then we made out in the kick-off circle until we got jeered off the field.

I cannot even think about field hockey without aching to feel so powerful and strong again. To feel the wind scouring through my lungs as I make the curves of the earth bend to my will. Pain and loss and the yawning future ahead dimmed by the intense clarity of the present.

It’s all over now of course, though I still bring my sticks with me everywhere. They went with me to Iowa for graduate school, despite the fact that there was absolutely nowhere to play. The grass on the student fields is too long and tacky. The rec-courts in the gym are lined with wooden benches that prohibit any wall-ball. I reeled, am still reeling, from the absence.

It seems that as I grow I have to abandon huge parts of how I used to define myself. And although new roles come to replace them, I’m still adjusting and it’s not the same. I spent thirteen years playing the piano and now rarely touch the keys. I spent eight years playing field hockey and am now afraid I never will again. I spent four years being trained to be leader and the only leading I do is teaching English-Comp to unwilling engineers.

I have nightmares about field hockey now. I dream there’s a game or a practice, and I am so ready, so eager, so *desperate* to join. But something’s always wrong, I don’t have my mouth

guard, or I'm lost deep in the locker room, or I'm told I'm not fit enough to join. But sometimes, sometimes I dream that I *can* play. And when I rise in the morning my whole body feels taut, muscles twitching in memory of that wild joy. It haunts me—that shadow self, darting down the field, strong and fast.

During my second year in Iowa I decided to get my gear out again. Rummaging in the back of my closet I dragged the long bag forward. Dust clung to the bottom. I sat on the floor and unzipped the outer pockets, ran my fingers over the blocky cubes of my shin guards. Pulling forth my chartreuse turf shoes, I noted the worn holes on the inner heel where my foot had rubbed. Then I brought them closer to my face, sniffed faintly at locker-room recollections. I hefted the un-giving weight of a practice ball then dropped it to the hardwood floor where it thunked dully and rolled away.

Then I reached the upper most pocket, unzipped rounded hole and I drew forth my stick. It slid free like a sword from a scabbard, familiar weight settling into my hands: 37", Gray's GX 7000, electrical tape fraying on the grip. And I was undone anew, facing again, the end of things. There, in the afternoon sunlight, on the floor.

A Certain Child

One winter while washing raspberries over the sink I remembered a conversation I'd had with my mother months before. We had been on our way home from Costco again and were caught at a notoriously long red light.

"I'm worried I ruined your brother and you." She said, turning toward me.

"Ruined? How so?" I kept my gaze on the road ahead of us. We communicate best when distraction diffuses tension.

"I just don't think I raised you to appreciate the simple things in life. I didn't raise you to be content." I told her that this wasn't the case, that there was nothing for her to worry about. But then again, I am not sure.

In the kitchen, as I ate my first damp berry, I thought about contentment and how the only time I feel close to the idea of a God anymore is when I'm eating raspberries. Their flavor, their existence, seems miraculous. There's something *designed* about the raspberry. An impossibly delicate construction, perfectly stacked globules of juice that aggregate lightly but firmly around a protected core. The flavor itself is sweet in a way so subtle and passive it tastes divinely crafted. It tastes like the relief of a cool breeze, swept over the hot summer.

But all spiritualism aside, I cannot divorce my consumption of a raspberry from what I have learned about the treachery of migrant labor. Each bite, divine or otherwise, also floods my mind with images of the crouched berry pickers, pesticide poisoned lungs, ripped ACL tendons, and sardine stuffed barracks. Heaven and hell with every mouthful. Maybe we can't appreciate the "simple" anymore. Maybe we shouldn't. Maybe simple doesn't exist and never has. Everything comes pre-complicated, with a price tag most likely paid in suffering.

I was a very certain child. It burdened my parents, that self-possession. It was hard to tell me I was wrong. I knew what I knew, and wasn't yet troubled by that growing realization of just how much I didn't know. I stood bolstered by my font of amassed knowledge, rather than cowed by the expanse of my ignorance. One of these positions is the tiniest bit closer to wisdom. And it's not the easy one.

I had it all figured out. I knew the steps I needed to take to get the kind of life I wanted. I was not distracted by the siren calls of social success or romantic experience. I was confident in my own abilities and not yet fogged by comparison or doubt. I had decided: I would write books, teach for a while, get married, have children. I more confidently defined myself as a writer when I was in middle school than I ever have since. My path lay broad and clear before me, as evident as Dorothy's yellow brick road. All I had to do was follow.

But of course, with each year that passed, the clarity of that path shrunk and several others sprang up around it. The future grew dense around me like a bamboo forest and the road I had seen so clearly before lingered, wire-thin. I've kept my fingers clenched tight around it and the line embeds bone-deep. But I am not certain I have managed to hold on to the right thread, or that I should have. The horizon seems to have multiplied along new impossible axes, defying logic. Even progress no longer seems linear. I am rarely certain any more. I am never sure.

I heard about a bobcat that frequented backyard lawns in the Southwest. Bounding over garden walls, it slept on beds of curated grass under the sweet-tree smells of juniper and lemon. On the patio it washed itself. Rough tongue combed thick pelt. It paused only to glance at anyone who came near, at once indifferent and threatening. Koi fish were its easy prey. Artifice of the natural, like the raspberries I get to eat in January. It's an easy place for the bobcat, a known place, a

made place. It is safe because it has walls—but then, it has walls. The bobcat can be comfortable with the idea that this sanctuary, this cage, can be entered and left at will. But if the bobcat grows lazy or injured or old, which would it mourn: the inability to re-enter or the inability to leave?

Around the same time I heard that story I saw a picture circling the Internet of another bobcat. This one was in Florida and had wrestled a shark from the sea for its dinner. It takes something special to become like that, to prowl the slope of the unending shore and swipe out with curved claw—to hook yourself a fish that fights back.

At the end of elementary school my adult incisors began to grow in before I lost my baby ones. In classic tooth replacement progression, the adult teeth move steadily down through the gums until they nudge out the baby teeth. My “dagger teeth” as I called them, weren’t playing by the rules. Instead they started to poke their little white points out through the front of my gums high above the canines they were supposed to be ousting. I was developing a double set of incisors: shark-smiled. I quickly learned to stop my lips at the crest of my second set. The dentist said he would have to pull out my baby teeth to make room for the adult teeth to move down. My reaction as an eleven year old hearing the news: horror. I had seen enough cartoons of dentists and sketches of teeth-pulling scenarios to know that this was a fate to be avoided: AT ALL COSTS.

I took a few days to gather my courage. Then one evening in the shower after I had finished washing, I knelt down near the drain. You can imagine the rest: fingernails scraping for purchase on smooth gums, blood stark against the white floor of the tub, mouth awash with the tang of iron, two stubborn baby teeth in the hands of an even more stubborn child.

It seemed like, as I progressed through my twenties, I began to lose that resolute child. At first I felt like I was aging backwards, growing more impulsive, more silly, which was fine, exciting even, to get to let go. But then it also began to feel as though that clenched-fist determination was being shaved away, slivered down to a single, fragile shard.

Deep in an unprecedented crisis of self-doubt and insecurity during the dark mid-winter days of my twenty-fourth year, I tried to figure out how I got to where I was: loathe to wake up each morning, mired in an emotionally manipulative relationship, and ashamed that I couldn't just pull myself out of this one. But search though I might, I couldn't find a singular moment where it all began and perhaps there isn't one. The literal weft and warp of the brain has flexed and coiled too many times. Memory cannot recapture the extremities of emotions: those highs, those crushing lows. The turbulence echoes the dramatics of puberty, but with much higher stakes, much greater risk.

A person's twenties are the decade when most Americans get their first career position, their first degree, their second degree, their first house, even their first child. These years are typified by emotional and physical change. The brain finishes growing, fertility hits its peak, personalities bend, stretch, then settle in at last. In a segment on NPR Meg Jay, a clinical psychologist from the University of Virginia, explained that 80 percent of the defining moments in an individual's life will happen to them by the time they are 35. Studies have even proven that 70 percent of lifetime wage growth happens within the initial decade of a career. Needless to say, it felt like a lot of pressure.

Frisbee golf or "frolf" was very popular at my college. Our sprawling bayside campus had two well-known courses: a front nine and a back nine. "Frolfing" involves trying to hit a number of

targets or “holes” with a frisbee, in the least possible number of throws. The holes ranges from the simple, a far off lamppost behind a dumpster, to the difficult, a tree over the bridge of the pond. I didn’t get into frisbee golf until my senior year. My female roommates and I decided we wanted to join our guy friends when they played, so we started practicing in the evenings. We ran around barefoot on the springy lawn across the footbridge from our townhouse, throwing terrible off-target throws to one another until the sun set so deep over the water the disc was indistinguishable from the twilight sky and only appeared when it was about to smack us in the face

The week before we graduated we all played together, the full 18 holes. We carried beer along the way and called out the occasional “fore!” when our throws got too close to unsuspecting students wearing headphones. As we neared the end, the guys began to rib one another about trying for the “Playoff Hole.” Andrew, our friend who had taught me the forehand flick, explained that this was a “Hail Mary of a hole.” If made in a single throw, you automatically won. He was going for it and so were a handful of other guys. It was a risky shot. It involved arcing the frisbee down through a pine-tree studded hill, over the edge of the pond that lead out into the bay, then curving over the side to hit a tree.

I felt reckless and competitive. I was going to do it. I can’t remember the reaction, but I know Andrew was apprehensive because I was playing with one of his discs. I stepped up, fingers curled tight under the rim. I whipped my arm, released. The frisbee soared, cleared part of the pond, then banked sharply and plummeted to a stop in the marsh.

“Goddamnit Claire! You’d better buy me a new frisbee! You hear me?” Andrew reacted poorly. Everyone else was laughing.

“I’ll get it. I’ll get it.” I waved a hand of dismissal as I slide-stepped my way down the needle-slick hillside until I reached the edge of the pond.

It was low tide. This was problematic. Had the water been higher I could have waded in, or even swam over from the deeper section. But this, the black damp amid the reeds, it made me hesitate. I looked behind me. Andrew was still upset. I was wearing white shorts, white sandals, and a navy blue shirt that was just the tiniest bit too small, so occasionally small flashes of my midriff showed when I moved. I wasn’t in marsh-foraging attire.

Regardless, I forged in. And at first it was fine. They chuckled as I squelched and waddled deeper, holding onto the occasional branch for balance as each foot slurped free of the muck. But then—then my next step didn’t stop where the others had. I was suddenly up to my knee. I had stepped, but never hit bottom. My leg sank and sank in a way that made fear uncurl in my belly. Thrown off balance I moved my other foot too and the same thing happened. There was no bottom. I froze, suspended. I tried to wiggle my toes free and I sank deeper. Sudden visions of peat bog corpses found in the highlands of Scotland flooded my mind. I arched my torso back.

“Guys, I’m stuck.” I called over my shoulder. They were laughing so hard. I tried again to wrench one foot up. I couldn’t.

“Guys! Haha, I really can’t move.” I started laughing too. I was laughing so hard I almost couldn’t breathe. Hysterical. I wrapped my arms around my thigh and yanked. My sandal was ripped free. I yanked again; leg emerged. I stretched it as far toward the shore as I could go. Then sunk in again. The shift in my balance wrenched my other leg forward.

“Help. Someone has to help me.” I said, laughter distorting my words. My arms shook as I raised them in supplication toward the shore. Laughing so hard I nearly cried. I dragged myself

forward closer to my friends, who were now staggering with the hilarity, barely standing. I tugged on whatever I could grasp. Thorns and paper thin reeds left jagged red slices in my skin. The straps of my remaining sandal cut into my foot.

I was still smiling, but my heart felt too big for my chest. It pumped too fast, too fast.

“Please.” The scene was surreal. So close, I was so close and I was so far. My roommate was taking a video of my “epic struggle” for her snapchat story. Finally Daniel grabbed a tree branch and held it out to me. He had to lean all of his weight in the opposite direction to tug me up. The marsh groaned in thwarted belches as my legs ripped free at last. My knees smacked the bank and I crawled upwards, clutching grass in desperate fistfuls. I gasped for air, as if my face too, had somehow been submerged. I lay on my back and tried to breathe. My hands shook. And everyone was laughing, still laughing. It was all I could hear. It filled my mind. The pitch black of the marsh coated to my skin from high on my inner thighs downward. It clung to the small spaces under my toenails. I needed to wash off. I needed to go to the docks and wash my legs off. *I needed to wash off.* Everyone immediately turned for home. I looked to Daniel. He caught my eye and turned toward the group.

“I’ll go with Claire,” he told them. The sun was already set but its glow still lit the sky a quiet blue. We sat down on the edge of the boat dock and I put my legs in the water. Relief. It felt so cold, so clean. I scrubbed and scrubbed. I tried to explain why I was shaking, to put into words that aching nothingness that had yawned beneath my feet.

On the walk home the moon was above us, still pale against the loaming.

We never saw that frisbee again, and I didn’t buy a replacement either.

The freedom and confidence of being a young adult are mixed with the belittling terror of the rest of my life, tampered by the ever-oppressive weight of looming responsibility. This overlap of irresponsibility and burden is untenable—things fall through the cracks. *The center cannot hold*. Sometimes it's the work. Oftentimes it's the work. And many of the people I meet and love and sacrifice for will disappear within a few years, scattered like so many beer cans across the lawn.

Then I will be alone with my work, the same work I sometimes let slip for the people I thought mattered. And that work will be all I have, the toll I'll have to pay the boatman who will take me to maturity and success. And I'll gaze over the edge at the swirl below me as if it were the waters of the River Styx. I may imagine myself there, head soaked in river waters, letting forgetfulness sweeten the fall. *Try the fall. Try the fall.*

I used to be afraid of leaving, of how far I might have to wander into the unknown. But I realize now there's a greater horror at hand. This deeper fear rises to the surface of my consciousness, falling across my mind like a shadow that cannot be outrun. It's the fear of *not* leaving. Of stasis. Of failure. Of no progress at all. To fear where I'm headed implies a confidence in successfully departing. But what if I can't even manage that? What if *nothing* happens?

But obligation keeps me from the edge, stronger than any anchor. I am pulled onward by the distant calls of that fragmented inner-strength, of that stubborn foot-stamping little girl who could wrest teeth from her own mouth. She knows what she wants, even I can no longer remember. She prowls the shore, waiting, waiting.

During my first year in graduate school at Iowa State University I lived in a small rental house west of campus and biked my way through the residential neighborhoods to and from my office. On one of these back roads, between the barbershop and the West Street Deli, was a water access cover. This grapefruit-sized metal circle sat low in the asphalt bed, about five inches or so deep, instead of flush with the pavement. Throughout autumn, with its showers of seedpods and rivulets of dirt, a fine layer of sediment formed over the sunken metal cover. And in that tiny patch of earth, a small plant grew. That hole had accrued sediment, leaves, road debris, and at some point, a seed.

I looked for it every time I passed, taking note of its growth. From a barely visible speck of green it rose to a rather solid-looking plant. But it never grew higher than the concave arc of its hole. As trucks and cars and motorcycles rumbled over top their wheels sometimes briefly sealed that small hole, but they never squashed the plant. It knew better than to grow too high. That clever little sprig seized its life out of its hostile environment. I would smile to myself as I saw that brave green amid the gray. It boldly grasped at life in an indifferent landscape.

Then the first snow fell. Early. It filled the little hole. All spring I watched, looking for signs of resurgence. I tried to forget how I'd watched all the dirty ice and salt get packed down by passing wheels. I waited, but nothing bloomed there that spring.

Now, in my new apartment, I walk to the office and I don't take those back roads any more. But I still think about that brave little plant, because in that plant I saw again, the beauty and starkness of survival. The reminder that simply carrying on is its own kind of bravery.

Maybe there is no way to put the fears and joys of any period of a person's life into words. And maybe it's always like this, not just in your twenties—laughing with your friends while no one

can tell how terrified you are, how close to disappearing forever, a thorn-scrabble climb toward the promise of a solid shore. Maybe that's how we all feel: neither above nor beneath, neither at the beginning nor the end, just suspended in that gaping unknown—held only by precarious molecular tension from slipping beneath the mire, to be discovered millennia from now, perfectly preserved, clothes rotted away. Maybe the key is to just keep moving forward, to be discontent, to settle into the uncertainty, and hope that one day we'll find solid footing again at last.

SECTION IV

And I Darken

The city stretches, cold and empty before me, as eerily absent of life as any Atlantis. All humanity vanished from the dim, sinking shell. The only sound is the quiet tongue of water, lapping ever higher up weathered stone. It's late, but not unreasonably so, somewhere around 10pm, but the spring night air already bites through my jacket and I clutch a single map in frigid fingers. I've finally reached Venice and I'm utterly miserable.

Several hours delayed and re-routed, I arrived with my three female traveling companions, battered by the exhaustion of translation errors, of train tickets we purchased for rides that ceased to exist, of cramped crawling hours waiting for the last night bus that got us close enough to walk the rest of the way along roads and stretching bridges until we entered at last. We are not yet twenty and beyond weary. We face the waiting labyrinth ahead.

The map, given to us by the hotel staff at our train's last stop several hours ago, is printed dark gray with thin paler gray and navy blue lines, almost impossible to make out in the blank darkness of the Venetian streets. We huddle at a water taxi station under the meager glow of its single street lamp. Nearby a homeless man, wrapped in a dense carpet for warmth, stirs at the sound of our intrusion on the bench he's chosen for the night. I ache for the familiar buzz of a gas station convenience store, long for that crass, brazen brightness of an all-night McDonalds. But Venice doesn't have these things and that's part of why we came.

Cobblestone corridors await us that can only be crossed at certain locations to reach the next area. Nameless and undifferentiated in the gloom, we wend our way along narrowing paths, travelling, it seems, back in time. Pigeons coo with unceasing madness from the rafters of

abandoned buildings and the wind sends shivers up from the crushing cold of those black, ancient waters.

We will reach our hostel eventually, sometime after midnight, we aren't sure when. There is no moonlight. Time will have felt unmoving, after having stumbled along, winding back and forth, re-tracing and re-crossing. We'll creep through darkened alleys and strange small courtyards with bucket drawn water wells. We'll be desperate for the sign of another person, another light, another sound. And when we get there, at last, we will be turned away. We will be homeless, locked out. And together we'll huddle in the archway of an abandoned warehouse, wrapping scraps of old newspaper around our shoes to warm our toes. And I'll stay awake in the emptiness, hissing in a *tsht! tsht!* at the rats who scurry too close. And I'll still be awake at dawn, when the first workers begin to pass us by, and I'll long for a smile, a glance, anything to prove that the silent void has ended. But all who pass will avert their eyes; they'll walk faster when I try to say good morning. As if we are still shadow-marked, imbued with darkness, as if they can't bear to acknowledge that we exist.

Many Moons

The moon is a rightly melancholy sight as well as a beautiful one. It is a sphere of death—a picture of the state of a planet which air and water have left: it revolves, the skeleton of a world.

—Frank Sherwood Taylor, *The World of Science*

It appears on the edge of the earth, massive, dwarfing the black fringe of trees. Its light hums across the earth, citronella yellow, casting heavy shadows over the rough clumps of unshorn grass. We stand together, alone, in an empty field on the outer edges of the wood.

“Look,” I whisper, hushed breath trilling with excitement, “The full moon is rising.” Christian steps up behind me and I feel his nearness with my entire body. He bends down and kisses the side of my neck. “Isn’t it beautiful?” I ask. Christian says nothing. I settle my weight lightly against the slouched tallness of him that makes his walk seem more like a lope.

I slide my hand into his. It hurts my fingers; the width of his hand stretching mine a bit more than is comfortable. I pretend not to notice as I gaze at glory of the dawning moon.

An optical illusion makes the moon appear larger when it rises and sets, double or even triple its normal size. This happens because our brain sees the horizon as farther away than the sky.

Attempting to reconcile this confusion, French astronomer Frederic Petit made the claim in 1846 that there were two moons: a large moon that circled the width of the earth and a smaller one that traveled around it vertically.

Lunar-related studies remained popular until the advent of a more advanced telescope at the end of the nineteenth century. Research shifted to the newly visible stars and lunar studies were abandoned to amateurs. It wasn’t until American geologist Eugene Shoemaker led the

development of an astrogeological branch of the U.S. Geological survey that interest in the moon rekindled. He gathered the base of geological information for lunar exploration, such as soil consistency and composition. Despite being considered an astronaut candidate, health complications held him back. A year after his death, his cremated remains were brought to the moon and left there. So far he is the only true man in the moon.

Were I to travel into space and behold that barren landscape before me, coated in harsh grating dust and heavily marked by the scars of time, I feel that I would lose the moon even as I beheld it. That clinical observation would wrest my imaginative grasp of the moon from me, forcing a new, more technically accurate perception.

Would I still be able to look at it then and see more than rock and rubble, crater and crevice? Would I still see the talisman of my evening moments? Would I still feel wonder of it all? Constancy and change, isolation and connection, tight and knotted under my breastbone as I beheld the same moon all humans have seen since we first straightened our spines and gazed skyward.

The moon waxed gibbous the night Christian kissed me for the first time. We had snuck into the attic of the science building, tightrope walking along plywood boards suspended above insulation. In the absolute darkness he grabbed my hand to show me the ladder and my face burned at his contact. We climbed, pushed upward, scrambled on slate shingles. Then we were on top. We perched on the flat between two chimneys, closer to the moon, stars all around us, the river a distant, eddying blackness. The stiff breeze was too cold for comfort, but I scarcely noticed. I felt electric up there, each nerve sparking. I laughed, giddy with it.

Then he was close, a blue gaze burred thick with lashes. He kissed me. And when I shut my eyes I could still see the moon, brilliant white, against my lids. And later as I washed my face, the sink swirled black as dark smudges drained from the crest of my cheekbone, the curve of my jaw. Soot, from where he had held me.

Maximilian Hell, a Hungarian astrologer who lived in the 1700s, believed that the light of the moon could impart special properties. Sometimes the moon slants through the gaps in my cheap vinyl blinds and bathes my bed in silvery light. Surely, if there's magic in the world, it's there—in that otherworldly glow. That bright contrasting light seems so incredibly valiant against the infinite emptiness, braver than any sun.

The moon is the only celestial object whose features we can see with our naked and weak human eyes. Across many cultures the moon is associated with love, longing, and romance. Its silent witness sets the scene for clandestine meetings, watching with a Mona Lisa smile. In Arabic, a common compliment is, "You are as beautiful as the moon." During the Italian Renaissance, romantic personifications of the moon were widespread. The remnants of that custom are evident in aspects of contemporary Italian-American culture such as the 1987 film *Moonstruck*, starring Cher and Nicolas Cage. One of the main songs from the film's soundtrack, "That's Amore," contains the lyrics, "When the moon hits your eye like a big pizza pie... That's amore." The moon is love.

Christian is the one who took me to the party. He wanted me to meet his friends. I found him irresistible when eager: chiclet-sized teeth winking in a crooked grin, a single dimple playing hide-and-seek on his left cheek. Somehow, later that evening, I ended up in a graveyard, grabbing the nearest headstone for support as I vomited hard into the grass.

It was late, around midnight or so. The night had a summery freshness to it and the moon shone harshly bright. But I was grateful for the deep darkneses it created across the graveyard. I crouched in one of them, attempting to shelter myself from shaming eyes. Love was in the air.

The vomiting was my fault, I let one of his friends make a drink for me, a stupid decision borne out of social anxiety and attempted politeness. The price I paid was the expulsion of every bodily fluid I possessed. It's moments like those when you find yourself quickly converting to paganism, worshipping natural things like the holy coolness of the night air, suddenly more sacred than any Bible. I tried to straighten, but nausea swamped me and I doubled over again retching in the graveyard across the street, cursing his stupid friends and my stupid decision with all the remaining strength in my stupid body.

Apparently this was a popular retreat and Christian eventually found me. Despite the location's convenience however, it takes a certain level of desperation to allow yourself to vomit while using a lovingly chosen headstone to bolster your rum-poisoned body. But I like to think that neither the moon nor the dead minded, understanding that certain measures were necessary to keep me where I was, aboveground and agonizingly alive.

The stars, which seem ever-fixed, change with the season, but the moon is the same, no matter where you are. Although we consider ourselves inhabitants of a single planet, we live in a two-world system. Without the moon, Earth would not function.

It's a paradoxical feature. It changes, yet it stays the same. And there's an assurance there. The moon must leave the night sky, but invariably the darkness will end. Once terrifying changes become manageable and the cycle continues. The moon is our own contradictory transience and stability shining above us.

We live so much of our social lives at night, especially during the winter when darkness settles in before dinner. The pent-up emotions of the day and the thrill of work coming to an end make a potent cocktail of encounters, pursued under the unjudging face of the moon. We feel freer in that forgiving light. We love and we lose at night. We know that it watches, but its gaze is gentle. The moon sees each of us as we are.

By the time Christian found me I was lucid enough to be afraid I had damaged his opinion of me or embarrassed myself in front of his friends. My sides ached and my palms were skinned from slipping drunkenly over the rough granite. He stroked my back.

“Hey there. Hey, our ride home is here, okay?” Christian murmured as he tried to pull me along, “We need to go.” I flopped about unproductively like an over-cooked noodle.

“Wait. Please,” I gulped air. Attempting to regain composure, I wiped at my face and hair, ignoring my damp cheeks and the bits of grass I found stuck to my lips. Then, out of nowhere, I said it “I think, I think I love you.”

I can’t remember his face in that moment. The memory of the encounter is obscure, as if I’m looking at it through the bottom of a thick glass. He muttered more, soothing things, *yes, yes, that’s very nice, but seriously, we need to get out of here.* Then I was being helped over a fence I couldn’t recall approaching and he was the one taking a quick break to vomit.

We somehow made it to the car. As we approached I realized someone’s mother was driving a bunch of us home and reestablished control of myself with a snap: survival instinct, the show must go on. By the time she activated the automatic sliding van door to let us in my hair was twisted neatly back in its clip, my clothes straightened, and I entered with a smile, pleasantries armed on my lips.

In the second row Christian and I rode side by side, his hand lightly on my knee, mine stacked atop of that. Poised, we leaned into our performance, telling stories until the car filled with laughter. How responsible. How charming. And when the van pulled away, the scene ending, we rushed into the nearby woods, both of us heaving again within its sheltering arms.

Christian helped me up the stairs and into bed, moving my doll-like limbs into a passable sleeping position. I felt him tug the blankets up around me and lean in. He whispered my name twice. It caught my attention as I hovered at the edge of consciousness.

“Can you hear me?” There was insistence in the hushed question. His breath stirred the fine hairs next to my ear. Then, even softer, “I think I love you too.”

My mouth twitched a smile.

When the majority of humanity lived near the equator, the moon was considered just as powerful and important as the sun. But as people migrated to more temperate regions, they noticed the sun’s great influence on agriculture, which gave rise to a number of pre-Christian sun gods. The eventual arrival of Christianity permanently demoted the moon. But if God is like the sun, whose brilliance cannot be gazed upon and whose light burns our tender human skin, then I think the moon is the soothing balm, the kiss after the slap, the benevolent face upon which we can stare freely and not be damned.

With the arrival of scientific observation and later, the telescope, man’s view of the moon altered, both literally and figuratively. But despite this shift, the moon still functions as a benefic light in the world’s dark times, a screen on where people can project their hopes, dreams, and fears. It makes sense; this beacon is our nearest lighthouse amid the dark seas of the universe. The ideals of utopia can be placed in the sky, as well as the fears of apocalypse. On an ever-shrinking earth, the moon continues to capture human imagination, resonate with meaning.

Two years later, it's winter and the Internet won't stream. Christian and I are supposed to be watching a something together. We lay side-by-side. Our relationship is dissipating like wet paper. I feel the frigid night air seep through the thin windowpanes, although his body gives off waves of heat. The reality of the cold seeps into my skin and I shiver.

"I just want to be with you." Christian speaks into the space over our heads. "So why is this always so hard?" I can't answer. I couldn't put into words what I felt then: that I was always chasing him, bending and warping myself just to feel like he wanted me as much as I wanted him. That I couldn't keep it up. Resentment settled in like salt.

"I don't know." I make my voice calm and practical. "I don't know what we should do." The sentence ends in a whisper, shriveling up in my mouth, afraid to come out.

"I just don't want it to be over," he says. I turn away from the circle on his laptop, where it scrolls in a ceaseless loop. The smell of him still soothes me. My tears make a quiet damp on the pillow. Outside the moon is a brittle sliver in the sky, like a fingernail clipping.

Winter blows the color from the trees, leaving a skeletal landscape in its wake. The days are short and cold. The sun clarifies the world when it shines, illuminating light and color. But against the darkness of the night sky, the moon seems even whiter than the sun—yet the moon's light leeches all pigment from the world and leaves behind an earth that is both hauntingly similar and inextricably foreign, an expanse of grays. As Proust explains, who could resist being captivated by "the ancient unalterable splendor of a moon cruelly and mysteriously serene."

In American culture we see the face of a man in the moon. This phenomenon is called lunar pareidolia: creating illusory images from the surface features of the moon, such as those formed by ancient lava flows. The man in the moon has always appeared agonized to me, with

sorrowful downward tilted eyes and ragged gaping mouth. In traditional European lore they see a full man in the moon, old and hunched under the bundle of sticks he carries across his back. According to Christian lore he has been eternally condemned for violating the holiness of Sunday and now must live alone in the moon. In India, the moon features the two outward-reaching hands of Ashtangi Mata, the mother of all things. She had to send her twin, Chanda, into the sky to become the moon and the stars. The dark spots that mark the moon's surface are from when Ashtangi Mata gently brushed Chanda's cheeks in one final farewell.

Since the moon is without an atmosphere, footsteps left there by astronauts will be there forever. Millennia from now, even if there is no trace of humanity left on earth, aliens could find evidence of mankind on the moon.

A few weeks after our relationship ended we stood by the dresser, our bodies close but not touching. We kept smiling at one another, painfully happy. Being near again a delight, a despair. I relished anew the familiar fuzz of his earlobes, the dark mole nestled underneath, the pink one at the base of his throat. My fingers knew where all the moles on his back would be; I had learned the hidden braille of his body.

"Sometimes I worry that no one will love me as much as you do," Christian whispered as he picked up my chapstick and began taking off the lid and putting it back on. It cracked shut each time. He chuckled, "You probably don't feel that way, do you?" Crack. Crack.

I shrugged and reached for him. Fisted my fingers, then reached again. I wanted to comfort him—to tell him that it wasn't true. But I didn't know. Crack. I knew he was selfish, but it always felt so boyish to me, unintentional, immature. I never held him accountable, I couldn't. I reached again and ran my thumb across the top of his. Christian turtle-ed his thumb away into the shell of his fist. Crack.

I gave a small laugh and said, “I don’t know. I have to believe I will find someone who wants to be with me as much as I want to be with them.” We kept punctuating our conversation with laughter, as if the small sounds of amusement could mask the terrible weight of what we were saying.

“Come here.” He tugged me forward by the front corner of my shirt, his other arm curled around my waist and reached up to cup the nape of my neck—the way it always did. And then my fingers were tangled in his hair and my nose was tucked against his collarbone. And the smell of him, the aching smell of him, was all around me.

“You should go.” I said after some time. I plopped my heels back against the ground and forced distance between us.

“Okay.” Christian turned, then looked back at me, “Promise me you won’t cry when I leave?”

I swallowed and nodded, “I promise.” I added a smile.

There are no noises on the moon. Sound cannot travel through nothingness: it needs air or water. Astronauts who visited the moon were only able to communicate via radio using the air filling their helmets. The landing, the takeoff, the metal striking against metal, all of it happened silently. The moon keeps many secrets and not a whisper leaves its lips.

After Christian left, I stayed in one place until I heard the door downstairs rattle shut. On the dresser was the cap he’d left off my chapstick. I put it back on. Crack. Outside the sun set, the darkness rose. And there was no moon.

Luna Luna

*How much less in them that dwell in houses of clay,
whose foundation is in the dust,
which are crushed before the moth?*

—Job, 4:19

Roughly 480 million years ago, when the Earth was more temperamental, tectonic plates crashed together and sent rock shooting skyward. The Appalachian Mountains were born, stretching higher than any mountain range the world had seen before, or since. Today these mountains are crumbling. Their softened faces have wizened. They conceal the magic of old growth forests, where hemlocks grow unscathed, and coal tumbles freely from the hillsides, where great boulders lie abandoned by the swiftly retreating glaciers of the Ice Age: forgotten, turning green with lichen, rounding with age.

Every summer we visited my great aunt's mountain-house, high in the foothills of those once-great peaks. The name reflects the hyperbole of youth: in reality the "mountain-house" was merely a small cottage about an hour northwest of home that we were allowed to borrow from her for a week or so each year.

The television reception was terrible. There were no movies except for *Bye Bye Birdie* and something about a fat cat that was naughty but inadvertently solved a crime. There were no other children to play with, no toys, and no video games. We spent our days outside, hiking and swimming, and our evenings playing board games while the screen doors brought an ever-so-slightly different kind of summer breeze than the one we had at home—an older and yet fresher breeze, tempered by stone and shadow, filtered by the superior workings of mature trees, each leaf exhaling with the precision of age, the purest sighs of oxygen. I'd shiver with delight when

the night wind curled through our windows, tickling the small hairs on my arms or stirring the fringe of the tapestry that hung on the wall.

The house may not have had the customary fixtures of entertainment, but we were always excited to be there. My siblings and I hiked often with my mother and grandmother, who knew the names of the trees, the uses of the wildflowers. They pointed out song-bird melodies, mountain laurel blossoms, and orange spotted fungi. They showed us mushrooms and tree burls, swollen like tumors. We saw a mink once, passing along the creek bank, its sleek body rippling with movement, as fluid as the water nearby. I discovered the hidden silver of jewelweed, alive in the burbles of a stream; learned to smear the fleshy stems onto bug bites, anti-itch. My mother showed me the secret fruit of the may-apple, nestled shyly beneath an umbrella of green. It was as irresistible and delightful to me as Persephone surely found her pomegranate, a manifestation of temptation itself. After a rain we came across mountain lion tracks, which resulted in an early departure from the trails that day. One afternoon we picnicked beside a pond in a drowsy, sun-heated clearing, heavy with dragonflies and I dozed safely in the crook of my grandmother's thighs.

Then one evening, while we squabbled over a game called "Bethump'd with Words," I saw a luna moth. Here was a creature that would never be found on a sunlit hike. I wasn't alarmed, despite the fact that luna moths are abnormally large insects, with wings that span wider than my palm. It clung to the screen of our window, delicately faerie-like and shyly green. It seemed as if it longed to join us inside where we laughed and played. The moon hung buttery in the background, looking almost warm, but far too remote.

There's something about the luna moth that captures the imagination. There's its exceptional beauty, but also a sort of otherworldliness. Perhaps this comes from its association with the moon. Wide wings of citrus and chartreuse taper elegantly into water-drop tails, each one moon-marked with yellow crescents. We are moon-marked too, on the beds of our fingernails, in the blues under our eyes: moth and man.

The hill beside the mountain house was populated with sweet gum trees, which dropped prickly seedpod balls that gave our barefoot adventuring minefield risks. These leaves are a dietary staple for the caterpillar of the luna moth. Our visitor was most likely born and later transformed in one of those trees.

It would have happened in the early evening, so the luna, whose Latin name is *Actias luna*, could nurture its tender new body, pumping fluids into those velvety crumpled wings until they became wide, strong, and mint-green glorious—glowing almost, with a light of their own. Camouflage is not an evolutionary priority.

The *luna* portion of the name was chosen in reflection of the luna moth's late night habits. It flies later and longer than all other moths. In Roman mythology, Luna is the name of the moon goddess. There's a lovely tale about her, appropriated from the Greek myth of Selene and Endymion. One night while watching the earth with her gentle eyes, Luna saw a shepherd who was so breathtakingly handsome that his slumbering good looks stole her heart. She begged for him to be granted eternal life and unchanged beauty. He was cast into unending sleep and Luna visited him each moonlit evening. He dreamt that he held the moon in his arms and she bore him fifty daughters, who became stars. I think this name is fitting for the luna moth beyond reflecting late night habits. Moon and moth have more in common than Linnaeus realized. For

just as goddess was transfixed by the loveliness of the young shepherd, so too was the luna moth transfixed at our window, moved by who knows what passion, to linger.

I lingered as well, there on the other side of that screen, separated only by that thin web of wire. Here was this moth, aching to come inside while I always wanted to stay out. I itched with all the impatient ignorance of a child to fast-forward and grow up. My life felt languid to me, drifting sluggishly like a stick down a creek. Here was what I was missing, with its otherworldly beauty and strangeness, a hint of the undiscovered beyond.

Luna moths are linked to the heavens in more ways than one. Their family name is planetary, Saturniidae: moths known for their weighty bodies, hair-like scales, and wing spots surrounded by concentric rings. *Actias* is its genus of Saturniid moths, including the Asian-American moon moths: such as the luna. *Actias Luna*, family Saturniidae: it's certainly a celestial christening.

Actias moths have no mouths. They emerge from their cocoons like monks, silent and abstaining from sustenance. However, the luna's sole mission upon emergence is a rather less monastically inclined: to propagate the species. Unable to eat or drink, they can only live for only seven nights, that is, if the moth isn't eaten early on by bats, or owls, or lizards. Maybe this is what poet Andrew Towle meant in "Luna Moth" when he wrote, "You rise from the bed surprised / at what the body has taught you in sleep."

The story is compelling, a life that burns so brightly only to flame out early. Perhaps this is part of what made the night I saw the luna moth such a lasting memory for me. There's something so compelling and simultaneously tragic about moths. They achieve a brilliant new body, with wings no less, the skies is theirs to claim. Yet they have a scant week to live, *if* they're lucky, which makes that freedom even more dear. And moths seek the light in the

darkness, surely an optimistic endeavor. But the moth who visited us that evening seemed trapped, held captive by its lust for light, unable to enjoy the freedom of flight. And the moth who flies too close to the flame? It is consumed, quite literally, by its burning passion.

The science behind the mating explains that the females release a sex-attractant pheromone to lure males in from a distance. Sex typically occurs during the first couple hours after midnight. Afterwards the female departs to lay her dark oval eggs, anywhere from 100-300 of them, in groups of four to seven at a time. It will be a week to thirteen days before they hatch.

When my father came with us to the mountain-house he seemed to add noise: the deep *heh-heh-heh* of his laugh, the delighted scream of my younger sister Caroline at the pool when he erupted from the water with her braced against his head to toss, to splash, *again Daddy, again*. In the deep end he'd let me hold onto his neck as he glided along the pool floor like a catfish, me warbling out bubbles of mermaid songs. At the cracked tennis court near by there was the *bounce, bounce, smack! bounce, bounce smack!* And always, always the "Claire, watch the ball hit your racket. Watch the ball, hit your racket." He played for Pitt University in college and sometimes he'd return a shot in earnest. The impact would vibrate my whole arm, and unable to do more than keep ahold of my racket, I'd merely deflect poorly in response.

And in the woods, amid the many bird-calls my siblings and I hadn't yet learned to distinguish, there was my father and the mourning doves. *Woo-woo. Woo-weeeee-woo*. Then the trill ending, *wooweewooweewoo*. The doves cooed from their low branches, plump and docile, always easy to spot. And my father responded, large hands cupped, thumbs aligned with knuckles like a woodwind mouthpiece, which he blew across while his fingers fluttered in and

out, shifting up and down the notes. He taught us all how, turning our fists into flutes that called raucously out into the forest. But I am the one who practiced, who remembered.

Although luna moths have no mouths, they aren't always voiceless. As caterpillars they can make a clicking sound when threatened. Then they regurgitate distasteful fluids. I imagine this clicking paraphrased throughout the animal kingdom as, "if you try to eat me, I will vomit on you," which is apparently off-putting enough to ruin the appetites of ants and mice.

The caterpillars emerge into the world ravenous. Eating as they grow, luna moth caterpillars go through a staggering five separate instars, or developmental stages. After this, their color deepens from its camouflaging green and they spin a single-layered cocoon of dark reddish brown. The core glows amber, as if lit by the frenzy of alterations happening inside. The cocoon is lined with a silken pad for the luna moths' highly transformative snoozing. If disturbed while in this transient period, the moth will wriggle in its cocoon, once again issuing those warning clicks. They pupate for roughly two weeks, waiting inside until it's wise to come out, sensing, the way animals do, if the conditions are favorable or not for survival.

This incredible transformation echoes that of the moon. Both are born after nightfall. The luna moth alters its very shape and form, while the moon above cracks its own dark chrysalis, unfurling, with measured care, that bright new wing across the unending heavens.

I had heard a story once about a girl whose father was a scientist studying moth mating. He had a jar of moth pheromones delivered to his house. When it arrived his daughter opened it and accidentally spilled the pheromones all over herself. I was told that even now, years later, moths flock to her when she goes outside. I imagine her stepping into the evening air when the moon is

full and the moths are at their most active. I imagine the moths converging around her, until she's covered in fluttering and her skin seems to ripple. All of those amorously fanning wings would powder the air with a shimmering dust. The moths would begin to beat in unison, faster and faster until she's airborne, rising into the coolness of the night.

It is suggested that the luna moth inspired the origin of the faerie myth. Their flight isn't like that of other moths who dart around harried and frenetic. Lunas are known for dancing. They fly gracefully, pirouetting in swooping arcs. It was once believed that they were trying to fly to the moon, its brilliance calling to them from the sky. And the luna moth seems to glow, but like the moon, they produce no actual light of their own: moth and moon are both mirrors. Luna wings are covered in tiny reflective scales. So while the moon is gently beams reflected light upon the quiet earth, the luna moth, in turn, reflects the moon. A distant creature, glowing softly in the darkness while it frolics its way through the night air with grace: how wild, how magical, how mysterious. In European folklore luna moths carry the souls of dead children on their greenly gleaming wings.

But the luna moth that I saw wasn't flying. It was motionless, in a sort of frozen desperation against the screen of our window. The light over our kitchen table apparently beat out the moon in desirability. But where does this yearning come from? There are no answers, only theories.

Some scientists think that the moths head for artificial lights out of navigational confusion. Moths may use distant light from the moon and stars in a behavior called transverse orientation, to maintain a constant angle of flight. Accordingly, the luna moth at my window that summer's eve could have been flying along at the appropriately moon-distant altitude when our

selfish evening illumination threw everything off-course. We dazzled and seduced the poor thing, who abandoned its namesake in favor of modernity's more immediate glow.

There are, however, several problems with this theory. For one thing, there is no conclusive evidence that the luna moth even uses the moon to navigate. This kind of moonlit-orienting is commonly employed by animals that migrate large distances, day and night. The luna moth isn't known to migrate at all, especially considering it doesn't live long enough for migration to make sense.

Large fires have been used by mankind since the early stages of evolution about 400,000 years ago. Shouldn't natural selection have thinned the herd of those moths who feel the urge to kamikaze every time they encounter a blinding light source?

In the 1970s, Philip Callahan, a scientist for the U.S. Department of Agriculture, discovered that candle flame happens to share frequencies emitted in its infrared light spectrum with those produced by the female luna moths' sex-attracting pheromones. These pheromones, as it turns out, are luminescent and glow ever so faintly. Thus the luna's attraction to the flame could be driven by lust. But then, moths are more attracted to ultraviolet light than infrared light. And, UV light doesn't travel on the same wavelengths as pheromones.

So no one knows why the moth cannot resist the lure of light—and I can't imagine much research is being spent on finding the answer to this big-little mystery. But as the human population continues its unstoppable expansion, resulting in greater and greater amounts of nocturnal light pollution, it would follow that more and more moths will be dazzled away from their procreative duties—thus, fewer moths.

The morning after our visit from the luna moth we took a trip to the Alpine Slide. It was a special treat, since we didn't make it there every year. The slide is a concrete shuttle constructed over the grassy remnants of ski slopes from the nearby Seven Springs Mountain Resort. In pairs we were placed in hard blue-plastic toboggans at the top of the slope, reached only by ski lift. Our only control was a red handled brake lever that swiftly grew gummy from the many sweaty palms. Declan and I almost always went together, shifting our weight around the curves, crammed as far forward as possible to maximize our speed. Sometimes he let me sit in front. Heels pressed into the rippled foot grooves we tore down the slope with our brake lifted high for the least possible resistance. The wind dried out the inside of our mouths, stretched wide with victory whoops.

That year there was a young woman doing free face painting for the children waiting in line for the slide. Though I longed to be painted, I considered myself too big. But Caroline went, and she asked the girl to paint a luna moth on her cheek, proudly tripping out the syllables of the new creature she'd just learned.

We never knew when exactly the luna moth had left our window the night before. But it wasn't there all night. At some point it broke its hypnotic focus and flew away, as silently as it came. Maybe it returned to the enchantment of the evening, to dancing in that special mountain air, as magic as any faerie, under the light of the yellow moon.

The Creatures in the Dark

*the moon understands dark places.
the moon has secrets of her own.
she holds what light she can.*

—Lucille Clifton, “moonchild”

Something about the full moon tantalizes. I was often energized by it, compelled to go for a run with the moon as my lodestar. On quiet evenings I’d wind my way along the empty paths of Southern Maryland’s Historic St. Mary’s City. The cool night air burned deep in my lungs while the bay river rushed past below. A crisp breeze swirled through the shadowed boughs overhead and flickering moonlight checkered the darkness. All color leached from the world, leaving behind a terrain of empty silver, seemingly lifeless except for my laboring body. It’s a different kind of day under that anti-sun—a wildness and a freedom illuminated there. Just the darkness, the moon, and me: a creature to be feared.

Ghost frames of colonial homes stood stark upon the fields as I blurred past them. I pumped my arms and churned my legs, feeling as if I could kick a hole through time itself to where the landscape was rougher and the shadows were thicker—when the moon was the only true light in the darkness.

In 1985 a meta-analysis called “Much Ado About the Full Moon,” permanently debunked all remaining theories on the full-moon effect, or “lunacy.” Even today, people still claim that the full moon causes jumps in the number of murders, suicides, accidents, dog bites, and women going into labor. Psychologists James Rotton from Florida International University, and Ivan W. Kelly of the University of Saskatchewan, scoured through 37 different moon-effect studies and, as it turned out, nothing special happens when there’s a full moon. Nothing at all. It’s just a

regular night on good old Earth. But the mystery persists and the wonder lingers. Awe and superstition continue despite the hard facts of science and the ever-diminishing effect of moonlight due to light pollution that threatens to remove all pockets of true darkness from the world.

Although I love the nighttime now, as a child I was terrified of the darkness. At my bedside table the cheery little lamp with its yellow gingham shade stayed on so I could sleep. My room was soft lavender, and edged with a wallpaper border that depicted a pastoral scene: three teddy bears, all dressed in lace-edged pinafores, having a tea party on a warm summer day. In my bed I waited for slumber to claim me, staring hard into that endless afternoon.

We moved to Pennsylvania when I was eight and in our new home I began using a night-light instead. Eyes ever-fixed on that tiny filament, glowing gold, I would try to send myself to sleep by sheer force of will, while tears streaked sideways across my face. I knew I was too old to fear the dark. I knew it was irrational—lunacy.

“Lunacy” is an old word, one that can be traced back to the fourth and fifth centuries. Astrologers used the term to refer to diseases that they thought were linked to insanity caused by the light of the moon. For a long time, “lunatic” was the standard term for legal insanity—for a very long time actually. It wasn’t until December 5, 2012 that the US House of Representatives finally passed legislation removing the term from federal laws. With President Obama’s signature it became official later that month. The current phrase for referring to the mentally ill, which has been popularly used since the late 19th century is “of unsound mind,” and makes no reference to the moon whatsoever. “Lunacy” lingers only in colloquial usage.

Throughout evolution, humans have always feared the dark, but it's a night lit with a full moon that truly inspires horror. The shadows are what haunt the human mind. Blindness is preferred. Nights when the moon shines bright and unrepentant in the sky give face to a thousand previously unknown terrors. Surely it pulls at the brain, coaxing insanity. In the '60s, American murder expert Dr. E.A. Jannino suggested that "moon madness" was a possible explanation for the murder of five Boston women by an unknown strangler. He also theorized that Jack the Ripper, who killed five women in London in 1888, suffered from this malady as well. But we know the real cause of these horrors is not the moon, only man.

Not long after we arrived in Pennsylvania, I began to have nightmares—despite the nightlight, despite my clenched-fist determination to be *a big girl*. Or perhaps my dreams had always been fearful, but sleeping in that strange place meant that I often awoke in the middle of the night, interrupting my sleep cycles, and now the remnants of those dreams were left raw and exposed in my waking mind. Tossing and turning, I sought peace. But anxiety surrounded me—eyes open or eyes shut. With no other recourse I'd creep toward my parents' bedroom, hardly daring to breathe.

"*Mom*," I'd whisper, no louder than an exhale. The black remained unstirred. I couldn't bring myself to speak again. I knew I was too old for this—I *felt* too old. So I would lower myself to the carpet on the edge of their room and sit, knees pressed tight against my chest, listening to the hush-hush of her breathing until my eyes felt heavy and my lungs strained against my thighs for a deeper, more restful inhale. It was then that I would return to my room and wait for the haunting images to be defeated by exhaustion.

Both Aristotle and Roman historian, Pliny the Elder, wrote about the watery nature of the human brain in relation to the moon's ability to influence the tides. They imagined parallel pulls influenced the human body during the full moon. Given that people are 80% water, these ancient theories aren't that unreasonable. However, scientists now believe that the moon has such miniscule gravitational effects on the human body that it is certainly unable to cause any change in brain function. Tides only ever occur on open bodies of water because the moon doesn't affect closed-off liquids. Imagine seeing tidal shifts in a pitcher of tea. The proverbial nail in the coffin of these particular theories comes from the simple fact that even if gravitational forces could affect the brain, it would be just as potent during a new moon as a full one.

Even so, humans have long feared the monsters of the full moon. The chilling howls of wolves echoed across field and mountain, slipping with the wind through the tiny cracks in the wood and peat and stone dwellings of early humans and unsettling the subconscious. Sleep deprivation further twists and warps seemingly normal events. The werewolves that haunt human imagination may reflect our necessary wariness of actual wolves throughout evolution, given that nocturnal predators are more active on nights with a full moon.

The culture of belief in the "lunacy effect" continued throughout the Middle Ages and well into the 1700s. It seemed plausible that the full moon had the power to cause madness or transform seemingly ordinary people into werewolves, vampires, and other monsters.

The persistence of these superstitions most likely comes down to illusory correlation—the belief that two coinciding events are related when they aren't. People expect something odd to happen on nights of the full moon, so when something actually occurs the event is remembered and then associated with its timing, even though on another night this moment might not have even been remembered. Then the coincidence gets retold again and again,

“proving” to people that strange things occur on the nights of the full moon, even as countless uneventful full moons continue to pass by.

But while Rotton and Kelly’s work in “Much Ado About the Full Moon” successfully disproved all existing theories on the full moon’s ability to affect human behavior, they weren’t able to prove that the moon doesn’t affect us in *any* capacity. This is where Dr. Cajochen and his team of scientists from the University of Basel come in, using their sleep study conducted in windowless rooms to finally shed light on the mystery.

In fourth grade, I made a decision: I was going to stop being afraid of the dark, once and for all. One night I rose from my bed, where I hadn’t been anywhere near sleeping, and crept downstairs. The full moon outside cast pallid light on the darkened hardwood floors. I headed toward the piano room, where the shadows were the deepest. Each inky crevice held countless horrors. I was shaking, body taut and armed for panic. But I continued. I was ready. It was time.

The once familiar room had become foreign territory: silver-shaded and lunar. In sweating steps, I made my way toward the deepest shadow. Air refused to enter my lungs—short gasps hovered near the roof of my mouth. Dizziness made the room swirl.

As my pupils dilated, the looming shadows began to shrink. This place was familiar to me, full of things I knew well. No closets or beds where shadow creatures could hide themselves. There was only me. I had been terrified of the unknown, but nothing was there. I was the only creature in the dark and I had no need to fear. Into that wild darkness I had forayed, plumbed its depths, and emerged cured by the surety of reality and logic—a lunatic no longer.

It was a moonlit night when Dr. Cajochen, a scientist at the Centre for Chronobiology, realized that he possessed data that would reveal whether or not the full moon had any physiological effect on the human body. Over a decade ago, Cajochen had conducted experiments on human body clocks, including both menstruation and sleep patterns at the University of Basel. The results from his 33 volunteers could be re-examined for changes correlating to night of the full moon.

Volunteers in this experiment went for days on end without any sunlight—and thus also without any moonlight. Under these conditions, their sleep patterns could be studied without the interfering light a full moon might bring. The experiment was, by accident, double blind—neither the volunteers nor the scientists were looking for full moon effects, so they hadn't accidentally skewed their analysis or data toward any specific results.

One summer evening during a family weekend in a cabin alongside the Allegheny River, my youngest sister, twelve at the time, suddenly found herself afraid of the dark. I tried teasing her out of it while we finished playing cards. After all she hadn't ever been afraid of the dark *before*, I reasoned. Nothing had changed. She understood, knew it was irrational, but it didn't matter. She had read one too many popular young adult novels featuring post-apocalyptic scenarios. And now? She couldn't sleep. She couldn't even go upstairs to the bedroom we'd be sharing.

So we went up together. Getting ready for bed and dodging elbows as we navigated around the two twin mattresses that dominated the small slant-ceilinged loft. She lay rigid in her bed, wide-eyed as I turned off the light. I felt my way over and sat on the edge.

“Look,” I told her, gesturing to the shadow-cast room. “It's just you and me here. Only us. You know that. *We* are the creatures in the dark. See?” I made out the shifting glint of her

eyes as they scanned the tiny room. She nodded. I said it again: “It’s just you and me in here. We are the ones in the dark.” She seemed to relax so I travelled the scant two feet to my bed and shrugged under the quilt.

She turned toward me. Her face was a moon-blank roundness in the growing quiet of the house, freckles and features dulled to a blur.

“I am the creature in the dark,” she said with a small fierceness. “Other things should be afraid of *me*.”

“Exactly.” I grinned and together we drifted off.

After a few days of intense calculations, Cajochen’s study proved that the full moon actually *does* affect human sleep patterns, even when that human cannot see the moon. The brain-activity scans of the slumbering volunteers showed that on nights of the full moon, participants got about twenty minutes less sleep. Not only did they get less sleep, but it took them an extra 5 minutes to fall asleep and they slept 30% less deeply through the night. In the sleep logs written by participants, they mentioned not sleeping as well on those particular nights, while being completely unaware that their sleeplessness corresponded with the full moon. However, despite the cultural association of the moon with menstruation, there was no connection between the full moon and the female cycles of participating women.

Cajochen thinks he has found another facet of the human body’s clock, which operates on a daily cycle. This evidence that human slumber is affected by the full moon implies that humans also have an internal monthly cycle. Lunacy! Or is it? There are other species throughout the animal kingdom that are known for using internal lunar clocks, but many of them depend on tidal

knowledge for survival. Given that predators hunt more actively on nights of the full moon, sleeping lightly could have developed as an evolutionary survival tactic.

This new data might also help explain the association between nights of the full moon and madness, since sleep deprivation can elicit outbursts of abnormal behaviors in people susceptible to different psychological conditions, such as bipolar disorder. So, although nights of the full moon are no different from any other night, humans are internally attuned to them, pulled in our own way, to its alluring seat in the sky.

Late one night I walked down into the woods after finishing my evening run, the sharp smell of pine crushed from the needles beneath my feet. I approached the river, wind roaring through my hair, buffeting the shoreline. A full moon had only just begun to rise. I stalked crane-like into the inky black of the bay. The icy waters numbed my ankles. With each step infinitesimal sparks lit within the swirling waters. I kicked harder and the light magnified: bioluminescent algae. It flickered around me like a galaxy of stars.

I gloried in being alone there in the dark; the light was all around me. After that night all those years ago, I no longer fear the night. I welcome the dusk and the moon like a friend. Yes, there are creatures in the darkness, and I am grateful to be one of them.

Fragments

The riverbed is rife with glass. I stalk among rounded stones on the bank of the Allegheny River, brushing away flies. The heated air is dense with the smell of wild mint that I crush underfoot. My sister and I gather handfuls of the shattered sharpness. Much of it is new: vast amounts of clear pieces, thin and cheap, beer bottles in browns and greens.

When the ice comes each winter, it scours the shore. Scraping along, it piles up in house-sized heights. And this reveals the old things: a brick path that deepens into the water; a piece of intricate violet bottle, diamond-cut and swirled; an anchor, rusted into obscurity, wrenched from the earth with sucking squelch; a fragment of fine china, nearly translucent, glazed in cobalt swirls; thick curved bottlenecks in deep-river blue; a tiny tincture jar of milky white, no larger than my thumb, still sealed with tired cork, river water bobbing inside.

On the shore the past and present mingle, a heron stalks small fish and the lack of service renders cell phones useless. Down river is Bum's Hollow named for the vagrants used to squat near the old railroad tracks. In the other direction a waterfall flows past a crumbling Victorian mansion. Its creek rushes over fallen branches and ancient moraines left there by receding glaciers. We gather the shards only to throw most of them away. Broken glass cannot be recycled. The little we keep rests on our kitchen windowsill. Their nameless histories and ours now unspooling together, caught in the fragments of what is left behind.

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