

# VISIONS

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**VISIONS** is Elon's student-run sustainability journal. Its mission is to provide an opportunity for students to publish their works that deal with issues in environmental studies. Visions publishes a variety of Elon student and alumni works, including research articles, creative writing, poetry, media reviews, photography, and more. All submissions are reviewed by a team of student editors before publication. The ultimate goal of Visions is to raise awareness of environmental issues as well as prompt conversations about sustainability on this campus.

## CONTRIBUTING TO VISIONS:

Visions seeks compelling and well-written contributions on topics related to the environment or sustainability. Research articles must be grounded in scholarly literature, and creative pieces must be original work. All submissions must advance the goal of the publication.

Submissions for the Spring 2020 volume of Visions are being accepted! Please email your piece to [visions@elon.edu](mailto:visions@elon.edu) or go to our web page, through Elon's Office of Sustainability page, for more information about the criteria for submissions and information about our journal.

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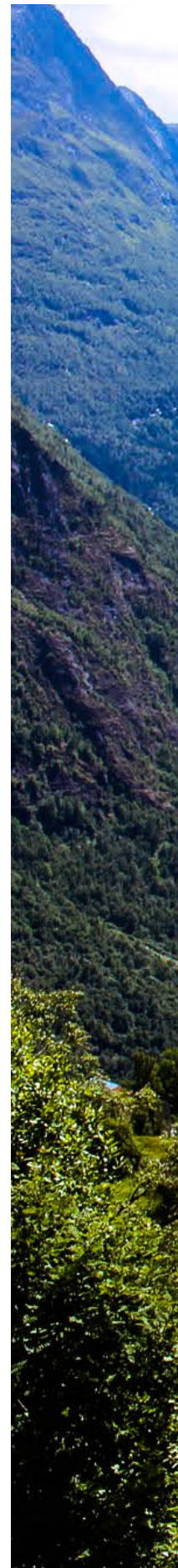
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PHOTO BY KRYSTIN KALVOY '21



# On Rocks

## BIRTH AND BEAUTY

BY NOAH CORBETT

*When I was a kid I spent ample time in the Cascades which birthed a fascination with the natural world, notably rocks, in part because I was always looking down; I found the world below me far more interesting than the blue sky above me. I was interested in space, but as a child the ground seemed more tangible. I was able to reach out and touch it. I could look for geodes, and also fall in love with plants and animals while hiking through the woods. Through my travels in life, I've been to places in which rocks no longer look like rocks. Some are red, hot, they flow and cool slowly on the surface, turning what used to light up the night sky with a dull glow to something black, glass-like and hard. Others look almost green and drip from the ceiling, little pieces at a time until it's one. Whole. When cut, it looks ringed like a tree as the rocks slowly retake caves year after year.*






## IGNEOUS

As a kid living on the Ring of Fire, it felt almost natural that my eye would be drawn to the ground and sides of mountains. To be able to see something emerge from the earth year after year, some of it black and smooth. Yet, other forms of stone leave the ground and the sky blanked with ash, like when the side of the mountain fell off itself and slid into lakes beyond, killing everything in its path. There was a story I heard when I went hiking on Mount St. Helens; a kid and his father were camping in May 1980, and the child felt unnerved where they had pitched their tent. Enough nagging led his father to pick up and leave, driving to the far side and re-pitching. The kid saved their lives because he felt like something was wrong. In the end, they lost some hearing, but in moving their campsite, they avoided a landslide. The day that I heard that story, we were on our way to the summit, likely on the path that that child and his father had walked on before. At the time of our visit the dome was significantly smaller than what it is

today; it is ever-growing and will erupt again someday. In the visitor's center, there were photos of Mount St. Helens when it was still picturesque, with its peak surrounded by green forests and lakes. It has changed since then. What can be seen from the summit is astonishing. The piece of the world that can be seen from the summit isn't quite dead, but it's not quite alive, either. Trees, or what's left of them, are white, stripped of bark still pointing away from where I stood even after nearly 30 years. But maybe that's what it means to be born? In a world in which babies usually come pink, hairless and developing, all things geographic came born molten or ashen but smooth in the end, waiting, rich, for new growth to survive and then thrive.



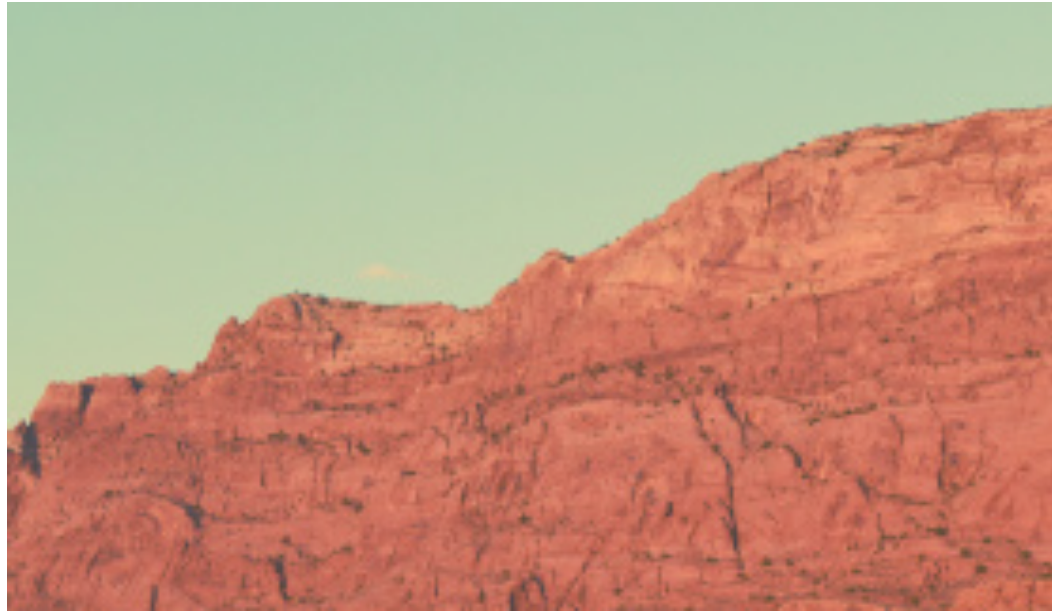
***“All things geographic came born molten, or ashen but both smooth in the end waiting, rich, for new growth to survive and then thrive.”***

## METAMORPHIC

Birth as a means of eruption flows readily, but it isn't the only type of birth in the world of rocks. The Rockies, Himalayas, Alps and Appalachian ranges all came about by the collision of plates. Some collapse and slide back into the earth while another rises above. Other times both rise, but the pressure and the heat of the action on both accounts create something new.

Adverse to its creation, perhaps, our exploitation of these kinds of rocks seems a paramount concern for the future. While I'm unaware of our resources running low, I'm acutely aware of the price for them. Marble, for example, is probably the most notable metamorphic rock which seems in boundless demand for counters and floors and walls or columns. I suppose we can thank the Romans for that. For whatever reason they were possessed to use marble as their stone of choice, (perhaps its gleaming bright properties), it is a relatively soft and impermanent stone. Feet depress, rain erodes, what then for this fallen empire?

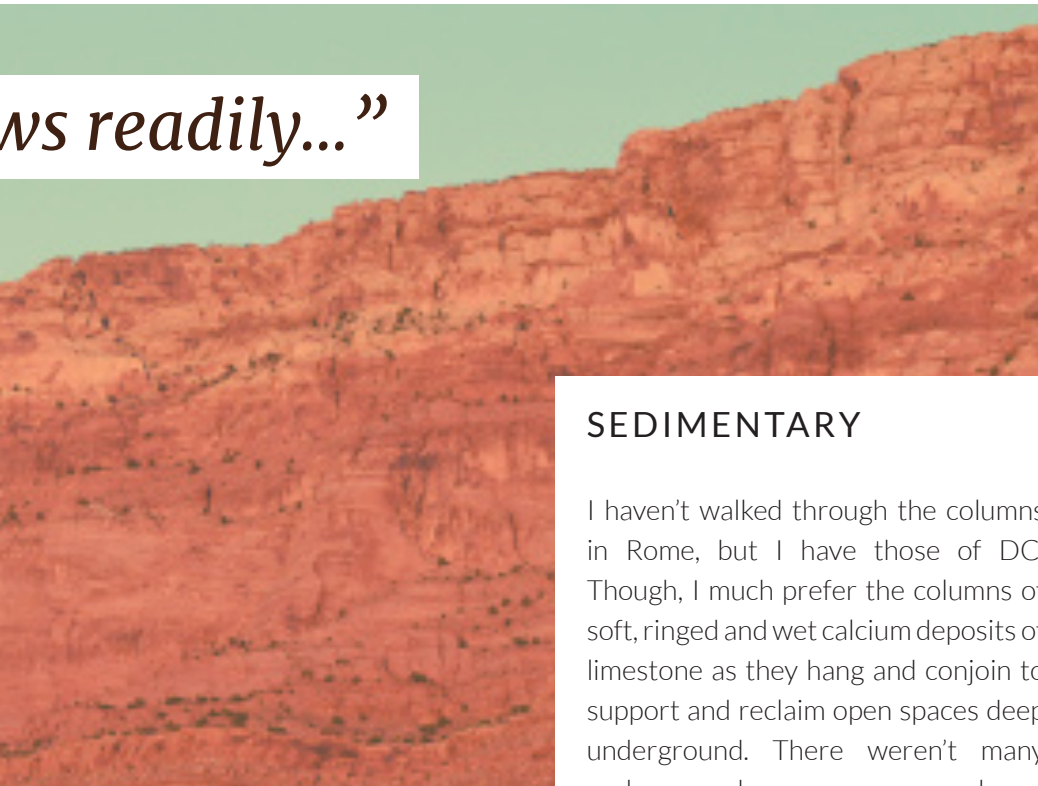
## *"Birth as a means of eruption flows"*



America, a burgeoning country which at one point was young and yearning to prove itself, used the same type of glistening white stone that the Romans chose to differentiate themselves as a means of prominence and significance: a jewel of our new wealth and power. The Romans got theirs from Greece, we got ours from Colorado, but the effect was still the same. What then will our capital look like in 2,000 years? Our shining beacon of prosperity, our new experiment. Will it sink back into the swamp it was built upon? I've often wondered if our columns will be wrapped in ivy and the stone be cracked with time. Or, perhaps, like the Coliseum, our capital will succumb to the nature of humans and be picked apart before nature can reclaim her as her own. Regardless, Lincoln (and Jefferson) will have good company.

It is true that the Romans also used cement where ours are whole. The marble was often just a façade for bricks and cement which were used for structure, the marble for its beauty. However, I could see that in the future, when buried underground, the concrete of Roman times could be confused as sedimentary stone for its similar properties to layers of sand, sediment, and shells.

*ws readily...”*

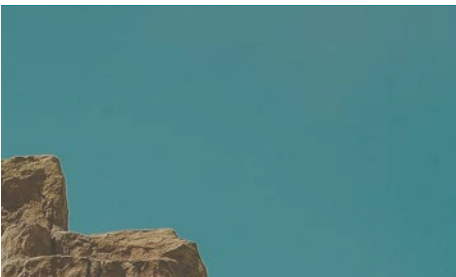


## SEDIMENTARY

I haven't walked through the columns in Rome, but I have those of DC. Though, I much prefer the columns of soft, ringed and wet calcium deposits of limestone as they hang and conjoin to support and reclaim open spaces deep underground. There weren't many underground spaces near our home in Oregon, but what we could find I would explore with my family. We loved caves and lava tubes and listening to bats at night. My mother tolerated these places because it was in large part her doing that my brother and I have explorative spirits, but the ever-enveloping darkness and closeness of tube and cave walls was something she never truly appreciated. Limestone, too, is soft; but unlike marble, the erosion is a means of creation rather than destruction, and it survives by means of water and pockets of sediment buildup. However, that doesn't always apply. Rivulets have cut

deep gouges into the Grand Canyon, showing us the immense beauty that can be seen from layers of rock over time, but maybe then that was the point all along. It creates something new by eroding what was. Both will be beautiful in the end.

Rocks theoretically last forever and are always changing, but at a very slow pace. They have no yearning for, but record the past. There's no rush for the future, or for a particular purpose or beauty, but they exist here nonetheless.



# Falling Twice

BY CIARA MEAGAN JACKSON

When deciduous trees shed their leaves  
And the cold starts to make it hard to breathe.

When shorter days lead to longer nights  
And the warmth of a fire feels just right.

When the foliage creates a colorful display  
And children frolic in the leaves all day.

When the hot apple cider burns your tongue  
That's when you know that fall has begun.

When pumpkins are put out on display  
Until they droop and rot and smell all day.

When the fire eats up the California trees  
And people from their homes must flee.

When children drop just like the leaves  
by shooters who take their lives like thieves.

That's when you know that fall has begun.





# So This Is Georgia

BY GRANT NICKEL  
WITH THANKS TO TED KOOSER

The old backroads slowly “w” along,  
Over hills, where trains once did the same,  
The towering trees become an emerald blur,  
A cave of leaves and bark,  
Along Silver Comet veins.

All around, verdant foliage,  
The rolling creeks whispering blue secrets  
Chattahoochee a fickle backbone,  
An orchestra of wildlife  
Both eruptive and unnoticeable.

At the edge of wilderness, the light of  
progress appears,  
The sky is torn asunder by the sharp  
monoliths of man  
A giant’s pencil sketching the sky  
Rivers of people flood concrete canyons  
Cars top the twining DNA of spaghetti  
highways.

So this is Georgia, a cacophony of ideas  
The state: a battlefield  
A glass king and queen strategize and  
celebrate,  
Nature, tamed; man, uncontrolled,  
The scars, nonetheless, its greatest charm.







# Lake Walk

BY ISABELLE REYNOLDS

I walked out onto the ice and my stomach fell. It was meant to be safe. My mother looked at me with a sideways smile, *Belle, it's okay, just keep walking*. The lake was frozen over and it felt as if we were testing it, seeing at what point the ice might break beneath us, but my mother was so confident. The ice was a wooden floor beneath her boots. She laughed and slid her way further onto the lake. I didn't trust it. I couldn't trust it. It hardly ever froze over completely, only in the off years when the water decided it would change its being.

I was sixteen and had never tried to walk over the frozen lake before. My mother was weathered and had padded over the ice many a time in her life. She believed in its sturdiness. I believed in its fragility. She had told me it was something I had to do. Something I would regret not doing, and I felt so small up against the deserted ice before me and the empty sky above me. So I wanted to be someone who could forget about falling beneath the surface; I wanted to glide with confidence.

I took a few steps and stopped. I was standing on uneven ice waiting for it to collapse under my weight. My mother kept going—further and further. But what about the fish? Did they survive this? What if I fell beneath

the surface and they didn't want me. What if they decided girls with red hair could not join their trout family. I wondered about how cold the water might be. I wondered if my body would float free, light in the water. I wondered about fish rejection and untethered bodies as my mother screamed my name to keep up. She was walking east now, taking a walk to a house she loved. Such high ceilings. My feet shuffled along the surface.

There is some otherly abyss about the lake. I think some people might know about it and others pretend it doesn't exist. I used to ignore it, the strange feeling of loneliness I felt when the water looked like glass and the view of sterile frozen landscape was all I could see. I didn't think it could haunt me in a tangible way; I didn't think the water could take up a part of me.

I think I find sadness in the melted ice that wanted so badly to form, to become something bigger and larger and to maybe even encompass the lake. But it failed and turned into water again. I wonder if there is a kind of embarrassment that comes with that, the failure of formation, but maybe the ice accepts defeat gracefully in a way we wish we could.

But sometimes I think about how the ice covers every inch of the water. How nothing was left behind to live. How even some ripples in the water seemed to be frozen in movement. It's like they were trying to wash ashore, trying to find a place to land but just before the clock stopped and time ceased to exist. Time did not favor these small inconsistencies of ripples; time told them they had no right to move, and their punishment was to not exist for a few months or so. The water had to wait with patience, patience we don't possess. I wish I had said some kind of apology when gliding over them trying to catch my mother on her walk.

We walked for a little but I couldn't trust the frozen tundra for long. I knew there was something inherently wrong in trusting a thing too long. Maybe it was because I knew it couldn't last. That its existence was temporary. I wondered how my mother could move with such ease, how she knew that if it collapsed the water would envelop her with a kind of welcoming. I don't think I would receive the same kind of reception. But my mother felt her trust was earned, she had trekked across the ice before and it would hold her. And if it didn't, she would join the fish, I'm sure of it.

My mother once said no one can exist in a place like this without being an alcoholic or reformed alcoholic. Maybe this is why we only stayed in Northern Michigan for two weeks at most in the winters. No one could survive looking at the water for too long, I thought, especially when frozen. Or maybe it's just the knowledge that it will freeze. That inevitably the air will turn so cold the water will shield itself with a protected layer. That the constant movement of the water will stop and forced stillness will take up the day. I think it's this stillness that would make a person feel trapped sometimes. Trapped in an inexplicable way; maybe it was the ice, maybe it was the sky, or maybe it was the people. I don't think

anyone knows. I think they just look out and think about the fish that won't accept them or the inevitable cracking of the sheet of ice. Maybe it was the cracking they couldn't take. I have never seen it myself. I don't think I could; seeing it all fall apart might be too much. Or maybe it's just too cold and the cold can't sustain sanity.

I was on firm ground. We had trekked to the house with high ceilings and walked onto the firm earth from there. We stood staring at the house my mother had loved since childhood and marveled at how the windows almost looked blue. We turned from the house to face the lake again. I am not sure how long we stood like this, but I am almost certain

my mother and I both knew in that moment there was something dangerous about the lake. Even if we could walk on it, even if it allowed us to, we understood the lack of soundness it offered. March would soon come and the frozen water would soon find its movement again and the ripples would find their place on the beach. No one would think about making their way out onto the water for quite some time; only in a few years when the earth decided it had been long enough and the water needed to be quieted once again.



*“...and the cold can't sustain sanity.”*



# The Truth About Sharks

BY CASSI WACIEGA

Sharks are my favorite animals. I tend to get funny looks when I confess this. I think it's because when other people think of sharks they think of ominous violins playing, legs dangling helplessly in the water, gaping mouths and big black eyes. When I think of sharks I think of something much different. I think of open water, and smooth skin pulled taut over lean muscle. Skin that feels like stroking a wet balloon; slippery, smooth, and fragile.

Sharks have always been a part of my life. When I was six years old, my older brothers made me watch *Jaws* with them. My half-baked mind saw sharks as monsters until I was seven and went to the aquarium for the first time on a class field trip. There are two categories of sharks that can be found at aquariums: not-quite sharks, and fun-sized sharks. Not quite sharks look more like fish than they do sharks — they're usually less than 12 inches long, and their dorsal, pectoral, and caudal fins are long, blunt, and flow elegantly in the water behind them. Aquariums only house one shark from this category, the dogfish<sup>1</sup>, but there are a dozen species in the wild that fit it: Pale Catsharks, Pygmy Sharks, and African Lantern Sharks, to name a few. Fun-sized sharks look slightly more like the scary beast from *Jaws*, but on a much smaller scale, like fun sized candy — they're usually less than 6 feet long, and have lithe, torpedo shaped bodies. Aquariums house a larger variety of fun-sized sharks, the

most common being: Dusky Sharks, Silky sharks, Sandbar sharks, and Reef Sharks.

At the aquarium, I met the not-quite sharks and some dogfish, where most kids do, in the pet tank with the rays. Dogfish come in all different colors — not the stormy grey we normally think of when we think of sharks. Some of them are brown, some of them are tan, some of them are a sort of tie-dye between the two, but most of them are black. All of them have bright, yellow-green cat eyes. I ran my two fingers down their boney backs (you're not allowed to use your whole hand in the pet tank or the staff will blow a loud whistle at you), and my fears surrounding sharks melted away. One shark's skin was cool, cooler than the shallow water of the tank. Another's was bumpy, coarse, and rough. I could feel another's spine bending fluidly as it swam by me, trying to avoid my fingertips. I left the pet tank before noticing that the not-quite sharks' and rays' fins were rubbed raw and bleeding from swimming around and around an overcrowded tank.

When I was twelve years old, I went back to the aquarium, and saw the fun-sized sharks. Fun-sized sharks are still not the grey most of us think of when we think of sharks; some have a dull silver look to them, but most brown from tanning at the water's surface for hours on end. In the wild, you can tell which sharks are older because they like to tan less.<sup>2</sup> Younger fun-

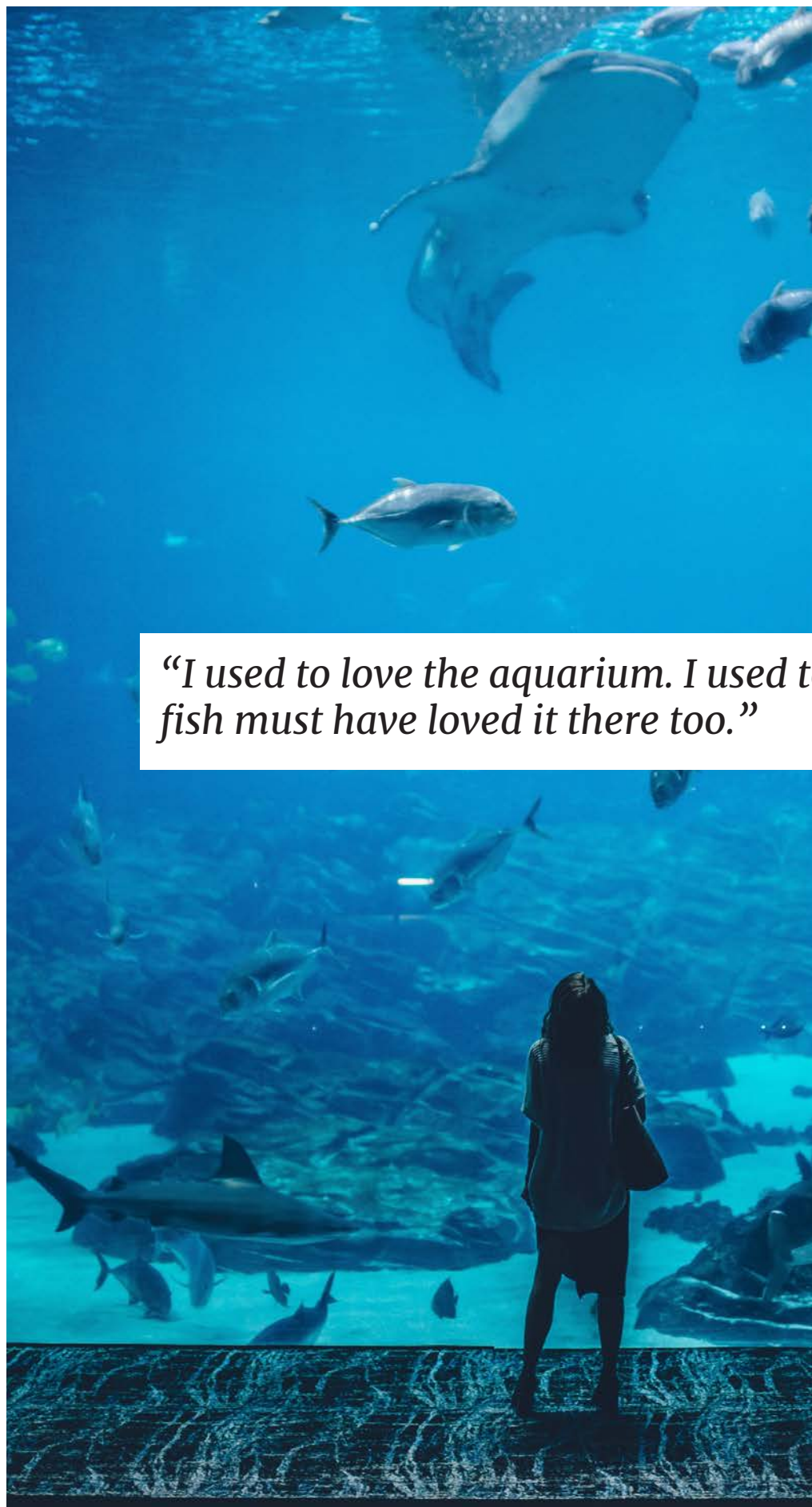
sized sharks, for example, can be found in all shades of brown, from light and sandy to rich and dark, whereas older compact sharks are a pale, silvery-brown. They all have small mouths and green eyes. They all tend to live close to shore, but are too frightened of the people splashing in the surf, the bodyboarders, boogie boarders, and boaters, to ever come all the way in. Instead they keep their distance and watch and tan. I couldn't tell which of the compact sharks in the aquarium were older; they had no sunlight to tan in.

I used to love the aquarium. I used to think that the fish must have loved it there too. They get regularly fed, they don't have to hunt, their water always looks clean enough, and there's a constant cycle of people passing by so they basically have their equivalent of TV on at all times. There is always a current flowing in the water to keep the sharks moving so they can breathe with no problem. It wasn't until the aquarium installed the "shark bridge" over the fun-sized sharks' tank that I learned the truth. The shark bridge was a flimsy rope bridge, only wide enough for one person at a time, with large rope nets on either side that stretched up into the ceiling, allowing you to lean over and look down into the shark tank below you without falling in. Everything looks much different from above. For one thing, you can see where the artificial current comes from — a big turbine. It looks like an old-timey mill, like the ones you see in quaint

stone houses along the river, but underwater and made of stainless steel instead of wood. It looks like a torture device. It is a torture device. Sharks don't have to keep moving to stay alive; I learned that from an expert on Shark Week when I was nine. As a matter of fact, you can find them napping on the ocean floor all the time. They just need a slow, calm current to keep water running through their gills. Nothing strong. Nothing so strong it keeps them in perpetual motion. From up on the rope bridge I can see heaps of fun-sized sharks trying to lie on the ground of their tank. They lie still for a moment. A split second. Then they start to move, the current starts to push them. It drags them along the bottom on the tank until they concede and start swimming again. I watched from the shark bridge, disillusion slowly settling into my stomach and sitting uncomfortably like bad milk. It happened again and again. Shark after shark. Never stopping.

The next thing you notice while up on the bridge are the sharks' fins. Everyone knows the iconic dorsal fin from *Jaws* rising out of the water before the shark attack: sharp, strong, straight. Movies and TV shows have been using this image over and over again for years; it's ingrained into our brains. Dorsal fins symbolize shark attacks. Dorsal fins symbolize a healthy, hungry shark. But these sharks' fins were deflated; they hung limply on their sides like some sort of broken limb. They looked like they were made of Jello that got left out in the sun for too long and lost its form.

The worst thing I ever saw atop the shark bridge was a dead shark. It had been forced up to the water's surface by its countless companions, and stayed there. Over years of aquarium visits I've noticed a pattern in how the sharks move through their tank. Usually, the captive sharks cycle



*“I used to love the aquarium. I used to think the fish must have loved it there too.”*





o think that the



through swimming at the surface and swimming at the bottom: starting at the bottom and slowly working their way towards the top as they swim around the perimeter, making room for their companions who are at the top to move towards the bottom. A simple system where everyone gets a chance to breathe. A simple system, but not a perfect one. The sharks can't always keep track of whose turn it is to take a breath at the bottom of the tank. Especially when there are so many of them. Sometimes they get lost, and can't get back into the cycle. The one I saw had been long dead. He was floating off in the corner, being jostled around by the other sharks swimming by. His green eyes were glossed over. His mouth hung open to reveal his tiny, not terribly threatening teeth. He had suffocated. He had gotten stuck on the surface, and couldn't swim back down to take a breath. When I alerted one of the staff members they told me not to worry about it. It happens all the time.

Sharks aren't indestructible killing machines. They don't target humans because they seem like "easy prey." They won't ram their heads into boats until they break the hull in half like in *Jaws*, or continue to hunt someone while getting shot multiple times in the face like in *The Shallows*. They're fragile. If they hear a loud noise, or if you move too quickly, they're as skittish as deer. In reality, if a shark gets too close for comfort, all it takes is a firm bop, or a confident, well placed push to the nose to scare them off. Not bullets or explosives.

Once I swam with a shark by accident. I was far off shore, ironically, looking for shark teeth to make a necklace out of, and suddenly there was a shark in front of me. He was brown like a fun-sized shark, but a little too big to truly be considered "fun

size." His mouth hung open, wider than a fun-sized shark's, and he had incredibly large teeth jutting out. He was kind of silly looking; he had a weird bulgy head that looked too small for his body. I later learned that he was a Sand Tiger shark; they're known for hanging just off shore and for looking mean but being one of the most docile sharks. Some strange impulse overtook me and I reached out to touch the goofy looking animal. His skin was warm from the sun, and felt silk. He flinched, the way a cat does when you accidentally shock it with static. He didn't swim away. I had heard hundreds of times that sharks don't hunt humans — they don't like the taste, we have no nutritional value, it's a matter of mistaken identity, et cetera — but I didn't quite believe it. I guess you don't believe it until you experience it. I never told my parents about my experience. They probably would have never let me go in the water again if I did. Too many news stories about shark "attacks," too many movies like *Jaws*, not enough education, and too much hysteria has shut their ears to the truth.

Sharks aren't cold blooded killers. But people are. We hunt, and kill sharks indiscriminately. Sharks kill less than twelve people per year. People kill more than one one hundred million sharks per year. That's 11,417 per hour. I've been told that the leading cause is the high demand for shark fin soup, but I believe the cause is really movies like *Jaws*. Shark fin soup has been a traditional Chinese dish for centuries. *Jaws* made people hate sharks. *Jaws* made people forget how vital they are to the health of our oceans by working as population control for their prey, which ensures that said prey doesn't overproduce and overexploit their finite food sources, and after its premiere in 1975, people were terrified of the ocean. Beaches across the nation were losing

money usually brought in by tourists, especially in states like New Jersey where the original inspiration for *Jaws* came from, and other shore states like Florida, the Carolinas and California. Something had to be done to help these states' economies, so, as a new tourist attraction and as a way to raise local morale, big-game sportfishing popularity skyrocketed, along with revenge killings. On the off chance a shark "attacked" someone, people would rally to their fishing boats, spear the first big monster shark they could find, and bring it back home and string it up for everyone to see and take pictures with. They would also cut it open to see if they could find any human limbs inside to prove it was the shark that had attacked. Recently, some states, like New Jersey, Florida, and the Carolinas have realized that these events are a major issue. The oceanic ecosystem is being destroyed, possibly beyond repair, because sharks of all categories, not-quite, fun-sized, and monsters, are being hunted and killed faster than they can reproduce, letting their prey populations go unchecked. In my state, New Jersey, it is now illegal to fish to kill sharks. You have to catch and release. But it's too little, too late. The damage has already been done. And this idea that sharks are infesting the waters that they live in has infested the minds of everyone; it is an integral part of our culture to hate sharks.

I once wrote a poem about the time I swam with my sand tiger shark. No one thought it was true. I think it's because I romanticized the experience and the shark, and that didn't fit the narrative in my classmates' heads about what should have happened. I knew this to be true the summer after I wrote my poem. I was sitting on the beach, and heard a sudden commotion. One of the men fishing a few yards away from me had pulled in a shark.

It was small, barely a foot long. It was a baby, probably a newborn. It was dark brown; it had been busy tanning. It had funny, pale green eyes. Its head looked too small for its body. The law required the man to release the shark, but there's really no way of enforcing this law, and the crowd he had attracted required the opposite; they all must have thought that if they let the shark go it would continue to live close to the shore (as if the trauma of being caught wouldn't scare it away), and continue to grow until it was as big as a boat, and would inevitably attack someone. I saw the shark just in time to watch his captor stab him in the head with a fishing knife.

## FOOTNOTES

<sup>1</sup> Dogfish are small sharks that can grow to be three feet long in the wild. They get their name from their pack mentality; they travel and hunt in large schools.

<sup>2</sup> No one knows why sharks like to tan. I like to think they tan for the same reasons people do; it makes them feel good, and they think it makes them look good.

<sup>3</sup> You can also find them in some of the larger tanks at some aquariums.

<sup>4</sup> Sharks tend to think we're sea turtles, or seals, depending on the shark.

<sup>5</sup> The third, and final category of shark. The sharks that fall under this category are the sharks that are most commonly demonized in film and television: great whites, great hammerheads, makos, and oceanic white tips to name a few.

<sup>6</sup> More often than not, no limbs are found inside sharks' bellies because they spit the limb out after biting it off.

<sup>7</sup> When an apex predator is removed from the food chain, the population of its prey booms and the prey quickly consumes all of its resources, and those resources cannot be replenished because there is too large a population of prey to sustain.



*"This idea that sharks infest the minds of everyone"*





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*Sharks are infesting the waters that they live in has infested  
me; it is an integral part of our culture to hate sharks."*

# Stargazer

BY MICHAEL PORTANOVA

I was 9 years old when I decided that I was going to grow my hair out like Jim from *The Office*, a show that a kid my age probably shouldn't have been watching, but up to that point I had tried my hardest to be older than I was. At the time, my sister Andrea (11 years old), brother Matt (14 years old) and I were watching Steve Carell on a portable DVD player in a crowded Volvo during hour one of our annual three hour car rides to the sunny end of the Earth in Montauk, New York. This end of summer trip always acted as a last hurrah for us kids before the school year started but was a much desired pause button on life for my mom and dad. At least, when we actually got there.

Hour one was almost always the same. After taking a break from the DVD player, I resorted to finding ways to entertain myself. As the youngest, I was always graced with the back seat. On the top of each seat in the car was a head cushion that at the literal pull of a string would free fall and collapse onto the person sitting in front of it. I'd get through a couple of alternating hits on Andrea and Matt before my mom would tell me to stop, like she was squeezing it out with the last breath she had. I'd survive a punch or two from Matt before throwing myself back into the tough leather seat. My eyes became drawn to the window as the rain droplets trickled down. My inner monologue acting like a hyped up hairpiece calling a sports game, personifying and cheering on

each droplet as it raced to the bottom. I contribute the first "Are we close?" as only the little brother could pesteringly do. "Not yet. Just sit back and we'll be there soon," my dad would say to me looking in the rearview mirror. I continued to watch the rain fall as traffic slowed us down.

Hour two gave us *The Stargazer*. In the middle of Long Island farmland lies a giant red sculpture of an antlered deer with a twig in its mouth staring up into the sky. I was mystified by it, maybe for its sheer size and stature, but even more for the way it seemed so alone and out of place, yet so content. Is he scared or is he just happy to take in the view?

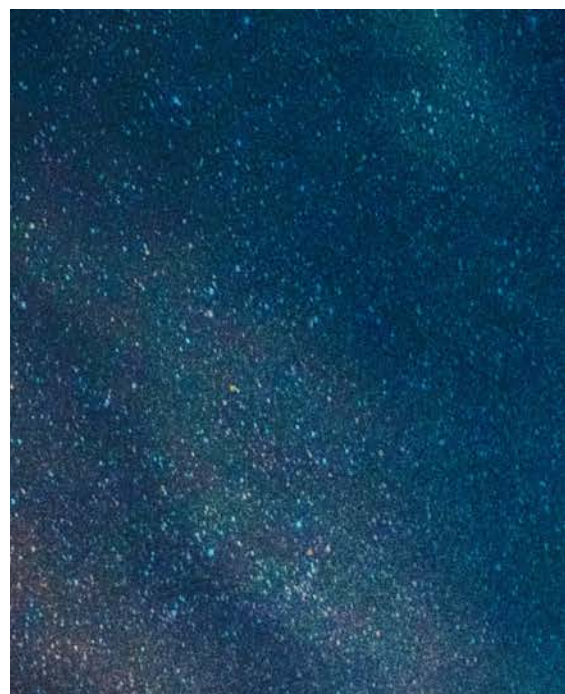
"Why do they call it Stargazer, mom?"

"Because the deer is looking at constellations."

"Hmm... And what is he thinking about?"

"Hard to say Mic. It's art. You'll get it when you're older."

The feeling of being labeled too young to understand what adults were talking about was something that always bothered me. It always felt like missing out on some big secret. That's why I was always jealous of my brother. For my whole childhood I had wanted to be as old as him and I had attached myself to his side like he was Yoda and I was Luke Skywalker. He hated that I wanted to grow my hair long, but he was smart. He knew my attempts to be Jim Halpert and say things like "crap" and "what the







hell” were my attempts to be a “grown-up.” Needless to say, my brother was as angry about the age gap as I was—made evident by a stern “shut up” when my relentless questions became too much.

Hour three saw us reach our destination at long last. Fittingly, the skies cleared and gave way to a beautiful coastline. Serenading sunshine. It always seemed that Montauk greeted us with a smile. My sister had fallen asleep on my shoulder and I nudged her off once the smell of Montauk’s flowers floated into the car like wafts of a freshly baked pie. Cinnamon and lavender. It perked everyone up. The misery and drudge of traffic faded. The rolling hills of the dunes acting like a rollercoaster for our bundled-up bumper car Volvo. Even my dad could crack a smile speeding over each bump and listening to my sister and me laugh as the weightlessness gave us the ebb-and-flow feeling of driftwood at sea. I planted my nose on the window again. Music filled my ears as the foamy white made landfall. I could see myself in the reflection. It all felt like a movie. Like the director had made a point to catch that brief moment in time when there was peace in the car, when the monotony of traffic no longer lingered and a smile could be shown, like the camera was planted over my shoulder looking out at an endless blue.

We pulled into our little cottage, unloaded the car, and assumed our positions. Peering through the rusted screen door, I saw mom chewing her nails to the rhythm of soft jazz, swaying with a crossword puzzle and a glass of white wine. Andrea was sitting on her bed reading her summer book, taking a break each time her best friends buzzed her Blackberry.

Matt sat with my Dad as he yelled watching the Mets play the Phillies on TV. Dusk was starting to settle and I ventured on my own down to the beach. I went through the branch-canopied path down the winding staircase. The criss crossing limbs scattered the sunset like stained glass on the ground. The sound of the ocean became stronger with each step. I finally reached the bottom and flung off my flip flops. On the beach was a giant white log. The log had braved the sea and reached its destination nestled in the dunes with a view. I sat on the log and continually dug my toes deeper into the sand which got cooler with each squeeze. It felt so good just to be grounded. It made me think about the Stargazer again. The wisping purple clouds dissolved into the horizon at the end of the Atlantic giving way to a cobalt blue sky. I picked up my feet and watched the sand spill like an hourglass between my toes. I took a deep breath and let the salty air into my lungs as it kicked out the staleness of the car ride. The Big Dipper slowly made its grand entrance and I stargazed as the ocean roared.

# Waiting For A Miracle

BY KIRA BARSTOW

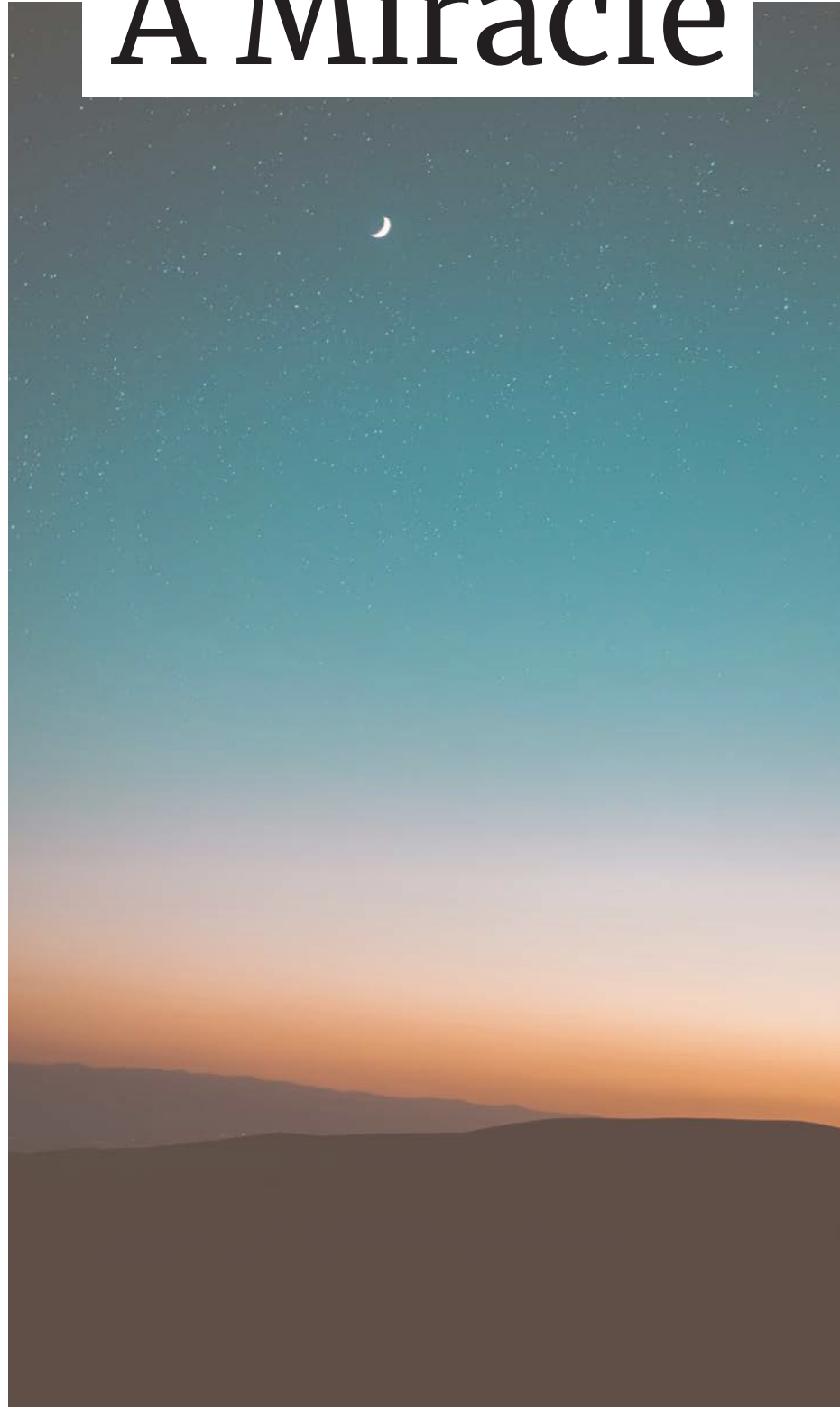
One night, I sat outside waiting for a miracle.  
The sky was navy blue, speckled with light;  
The stars were still, a blinking plane passed by.  
Suddenly, streaks of light poured down like rain.

The rain lit the sky to erase midnight,  
Leaving a chalky haze over every  
Tumbleweed, cactus, and prickly pear  
Despite its efforts to sneak back in

And spread like ink through the sky.  
The meteors conquered the night without  
Hesitation, keeping it at bay for  
A little longer.

But without the sun,  
The sky is meant to be the night's alone.  
And the sun had sunk long ago, leaving  
A shiver in the midnight desert.

The tiny streams of light flickered and fell,  
Becoming few and far apart. I watched  
Until the sky turned red and orange-hued  
And broke the power of the night again.





# Sustainability in Developing Countries

BY KRISTIANA RINGER



## INTRODUCTION

Climate change is the most pressing issue facing our world in the 21st century. After decades of reliance on nonrenewable resources and rapid industrialization around the world, the consequences of these unsustainable practices are becoming more visible. Renowned environmental scientist Jayant A. Sathaye defines climate change as an anthropogenic temperature “increase [that] is expected to have severe impacts on the global hydrological system, ecosystems, sea level, crop production and related processes” (Sathaye, 2005, p. 314). The effects of climate change are not evenly distributed around the world and developing nations are impacted the most (Maikasuwa, 2013, p. 15). The United Nations does not have an explicit definition for developing countries but classifies them by income levels, human assets and economic vulnerability (LDC). This increased strain placed on the finite amount of resources greatly impacts their availability both today and in the future. Sustainable development means “concentrating on sustainable livelihoods and well-being rather than well-having, and long-term

environmental sustainability” (Hopwood, 2005, p. 38). Developing countries often critique this model by arguing industrialized countries were not confined to the same limitations as they are today with limited fossil fuel usage and restricted land development.

Brazil and India are examples of countries confronting the challenge of sustainable development without compromising their economic growth. Brazil is home to the Amazon Rainforest, a diverse and fragile ecosystem that is also extremely profitable for the mining and logging industries. Recently, political leaders chose to slash conservation regulations in order to grow the economy and increase their role in the international community. India took an opposite development course by implementing strategies such as the National Plan on Climate Change to ensure resource availability and mitigate extreme weather events for its large population. Developing countries are often pressured to choose between prioritizing short-term economic growth and environmental protection as they industrialize. Brazil curtailed environmental regulations in order to promote agribusiness and economic

growth, while India serves as an exemplar of sustainable development with a booming economy supported by environmentally friendly policies to ensure long-term survival. Sustainability does not always have to come at the cost of economic growth, as seen with the successful balance of environmentally friendly policies that also encourage economic development in India.

## LITERATURE REVIEW

One of the greatest challenges of creating effective climate change mitigation policies is determining which countries should be held responsible. Developing countries have contributed little to the problem and believe they should not have to limit their economic growth in order to reduce the effects of climate change (Maikasuwa, 2013, p. 15). Despite this, while 80 percent of anthropogenic climate change causes are attributed to industrial nations, 85 percent of the consequences, which include severe droughts, catastrophic storms and water shortages, are felt by developing countries (Maikasuwa, 2013, p. 15).

After decades of heavy exploitation, developed countries have depleted most

of their natural resource base and turn to developing nations that are resource-rich and in need of markets to sell their raw materials. The private sector is at the forefront of development because it symbolizes economic prosperity, improved quality of life and better opportunities for citizens, and a more influential role in the international community for the government. Neoliberalism, or free market capitalism, that promotes limitless growth and production and is supported by the West is unsustainable by nature but remains the dominant model for economic success in the world. Basing an economy off of nonrenewable resources also guarantees that the economy will not be able to perpetually flourish since those resources will eventually be depleted.

Another challenge is the double standard placed on developing nations when they industrialize. Western nations, such as the United States, were able to develop naturally over the course of several centuries with unregulated dependence on fossil fuels. These nations will most likely continue to maintain “high levels of consumption of scarce resources” and “remain substantial emitters in years to come” (Priya, 2013, p. 266). With the looming

imminence of environmental catastrophe, the attention is put on developing nations to be more sustainable despite their limited responsibility for the current state of the planet. The delicate balance between economic development and permanent, irreversible environmental degradation is a challenge for any country to manage, but in developing countries in particular because they “lack the financial, and other logistics capacity to mitigate the effects of global warming” (Maikasuwa, 2013, p. 21). As developing countries continue to enter the industrialized world and growing populations place greater demands on scarce resources, the need for sustainable energy and infrastructure will be extremely important for climate change mitigation strategies.

## BRAZIL

Brazil’s most renowned landmark, the Amazon Rainforest, is the largest rainforest in the world – responsible for 20 percent of the world’s oxygen and home to 10 percent of the planet’s biodiversity (Amazon Watch, 2018, p.3). This ecosystem is invaluable in removing carbon dioxide from the air, filtering water, and providing





habitats for millions of species and home to many indigenous people. The majority of Brazil's emissions are a result of deforestation, not industry, which means protecting the rainforest is imperative for carbon level control. From 2003 to 2011, deforestation decreased by 80 percent under the progressive administration of Luiz Inácio Lula da Silva, which implemented many environmental protection policies (Hochstetler, 2018). Since he left office, deforestation and emissions levels have steadily increased, undoing many of the positive advances Brazil made.

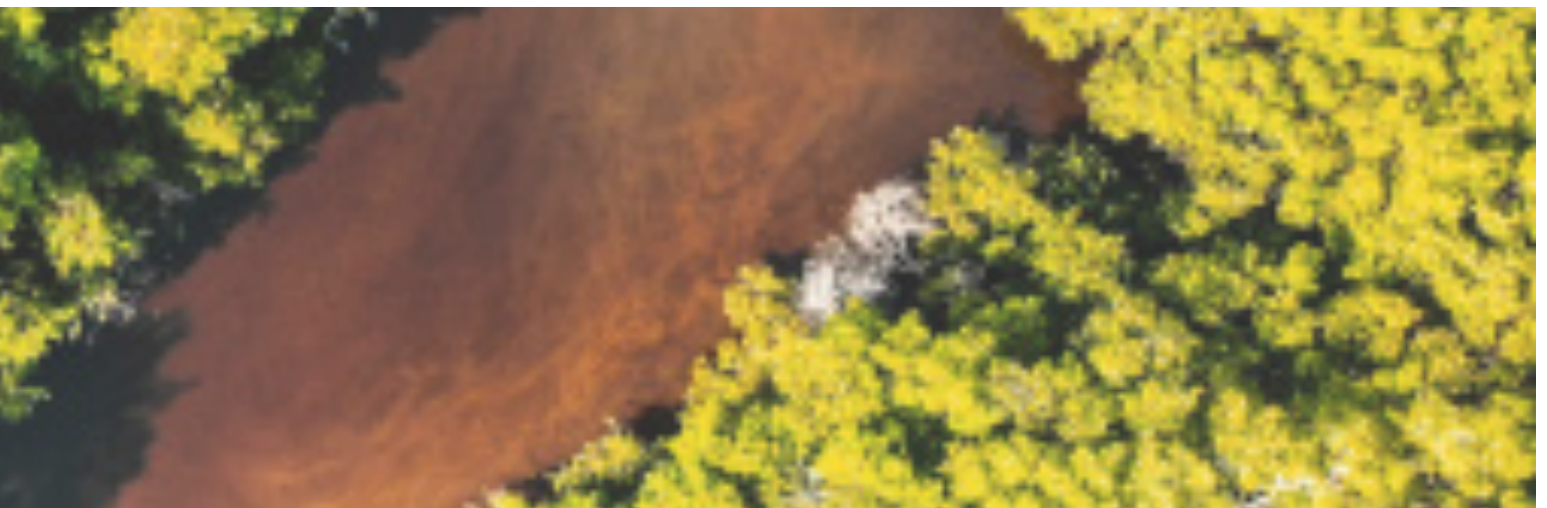
Brazil's recent turn to far-right nationalism with the election of Jair Bolsonaro signifies a shift away from environmentalism and towards a focus on economic development and internal prosperity. Bolsonaro's policies will make it challenging for Brazil to meet the goals of limiting carbon emissions that they agreed to as part of the Paris Agreement in 2016. These policies include rolling back existing environmental protection regulations, significantly defunding and possibly eliminating the Institute for Biodiversity and the Institute

of the Environment and Renewable Natural Resources, promoting mining in the Amazon and merging the Ministry of the Environment with the Ministry of Agriculture (Hochstetler, 2018). The Ministry of the Environment's budget was cut in half and the deforestation monitoring authority's budget decreased by 70 percent, limiting their ability to stop illegal deforestation and protect natural resources (Climate Action Tracker, 2018). The merging of the Ministry of the Environment with the Ministry of Agriculture is particularly damaging because clearing land for agribusiness is the greatest cause of deforestation. Agribusiness, however, represents "22% of Brazil's GDP, 1/3 of all employment and almost 40% of exports" (Agribusiness in Brazil, 2013).

Many of the governors in the Amazon region are staunch supporters of Bolsonaro and will ensure that his "agenda will be advanced at the state level" (Hochstetler, 2018). They are members of the ruralista congressional bloc, a conservative group that has gained momentum in Brazil's politics over the past decade and has close ties with the mining and agribusiness

industries. They support policies that "exacerbate rising Amazon deforestation, slash environmental protections, and profoundly undermine the land rights of Brazil's indigenous peoples, all while benefiting their families' businesses" (Amazon Watch, 2018, p. 3). Their conflict of interest is profoundly impacting the Amazon, which will negatively affect water quality, air temperature, and biodiversity levels for years to come at a time when these changes may be irreversible. Their presence in the government and support from President Bolsonaro leads many political experts to believe the proposed policies will go into effect.

Furthermore, the nationalistic administration does not recognize protected indigenous lands and encourages mining and deforestation in those regions particularly. President Bolsonaro stated in 2018 that he will "refuse to designate 'even a centimeter' more of land as indigenous" (Hochstetler, 2018), which shows his lack of empathy towards the often-ignored plight of native people. An indigenous leader, Alessandra Korap Munduruku, responded to this saying "They see the trees and water as



and have a responsibility to defend it” (Amazon Watch, 2018). The actions of a handful of individuals under a government that promotes economic development can have devastating international impacts on the health, culture and climate of the entire world. These impacts, such as the extinction of species that live in the Amazon, are often irreversible, and some consequences threaten human survival on Earth.

## INDIA

India followed a unique path in its development and made significant strides in its goal to develop sustainably. Leaders of the world’s second most populated country realized they needed to “support technological ‘leapfrogging’” and encourage citizens to learn ecologically friendly behaviors as they joined the industrialized world so that the population would be able to continue to use their natural resources for years to come (Shukla, 2011). India hoped to reduce its ecological footprint by

skipping the phase of industrialization that requires heavy reliance on fossil fuels. Their strategy for this goal was outlined in India’s National Plan on Climate Change which was introduced in 2008 and reaffirmed India’s desire to commit to an emissions intensity target rather than an absolute target. This means they will reduce emissions only “if this is compatible with increasing economic prosperity and well-being” of citizens (Shukla, 2011). Directly linking emissions limits and economic growth shows India still prioritizes development but recognizes the seriousness of climate change and its potential to compromise future living conditions in the country.

India benefited both environmentally and economically from this initiative with major growth in renewable energy markets, improved energy efficiency standards and the promotion of culturally appropriate sustainable habits. The country has also been able to maintain per-capita carbon emissions at two percent as compared

to the United States with 15.5 percent. Many developing countries argue per-capita emissions are more representative than total emissions since countries with larger populations will obviously emit more (Shukla, 2011). This plan had tangible results for citizens who enjoyed improvements in local air quality and energy security, which improve human health and quality of life (Shukla, 2011). These health improvements are not widespread, though, and India still has a significant way to go with improving air quality and standards.

By developing infrastructure and committing to a path of sustainability early in the development process, it is easier for India to maintain its relatively low per-capita emissions since they don’t need to backtrack and redesign economic and social policies as many industrialized nations must now do. By voluntarily pledging to reduce emissions more than is required under the Kyoto Protocol, India is seen as a global leader and role model for other developing countries with



*“The consequences of climate change are too imminent and detrimental to waste any more time and produce unnecessary emissions.”*



similar priorities (Shukla, 2011). India realizes every step taken to reduce emissions will mitigate the consequences of climate change consequences they are already experiencing. Its monsoon season is becoming less predictable and causing droughts, floods, heavy rainstorms, cyclones and other extreme weather events. This drastically impacts the water supply and food production in an impoverished country and increases the vulnerability of marginalized people. India has made significant gains in its goal to develop sustainably but still faces criticism from developed countries for having the fastest growth rate for greenhouse gas emissions (Johnson, 2016).

## CONCLUSION

As I have argued in this paper, economic development does not have to come at the cost of environmental degradation. Greenhouse gases drive climate change, which is predicted to drastically increase extreme weather events, change typical climate patterns and raise sea levels. Though developing countries are often criticized for environmentally degrading practices, industrialized nations contribute disproportionately to carbon emissions and harmful practices. The debate of who should carry the burden of environmental protection is complicated and neither developed or developing countries believe they should be held entirely accountable.

In Brazil, the nationalistic government prioritizes economic development with agribusiness and mining, which directly contributes to deforestation in the Amazon Rainforest. This rainforest is priceless in providing ecosystem services humans benefit from and reducing carbon levels in the

atmosphere. India has chosen to develop sustainably without compromising its economic strength and can serve as a model for other countries with similar aspirations.

The consequences of climate change are too imminent and detrimental to waste any more time and produce unnecessary emissions. Developed countries, especially the United States, must take a leadership role in mitigating causes and reducing consumption habits. Developing nations must also realize, though, that despite what happened in the past, they need to be ready to confront the challenges of today. Without proper infrastructure and renewable energy sources, developing countries will collapse in the world system. All countries can follow the framework of sustainability no matter their stage of development, and in order to ensure long-term survival on planet Earth, we must use our limited resources wisely.

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# Water and What We Know

## BOOK REVIEW

BY BAILEY NUMBERS

*What does it mean to live in this place on this day?*

It's hard to answer this question without considering the nature that surrounds a place. No matter how industrialized our society becomes, the impacts of the natural environment cannot be overlooked. In her book *Water and What We Know*, nature writer Karen Babine examines this concept of place and what that meant for her rural Minnesota upbringing in forming her character. Babine shared her story at a reading on Elon University's campus on March 13, 2019.

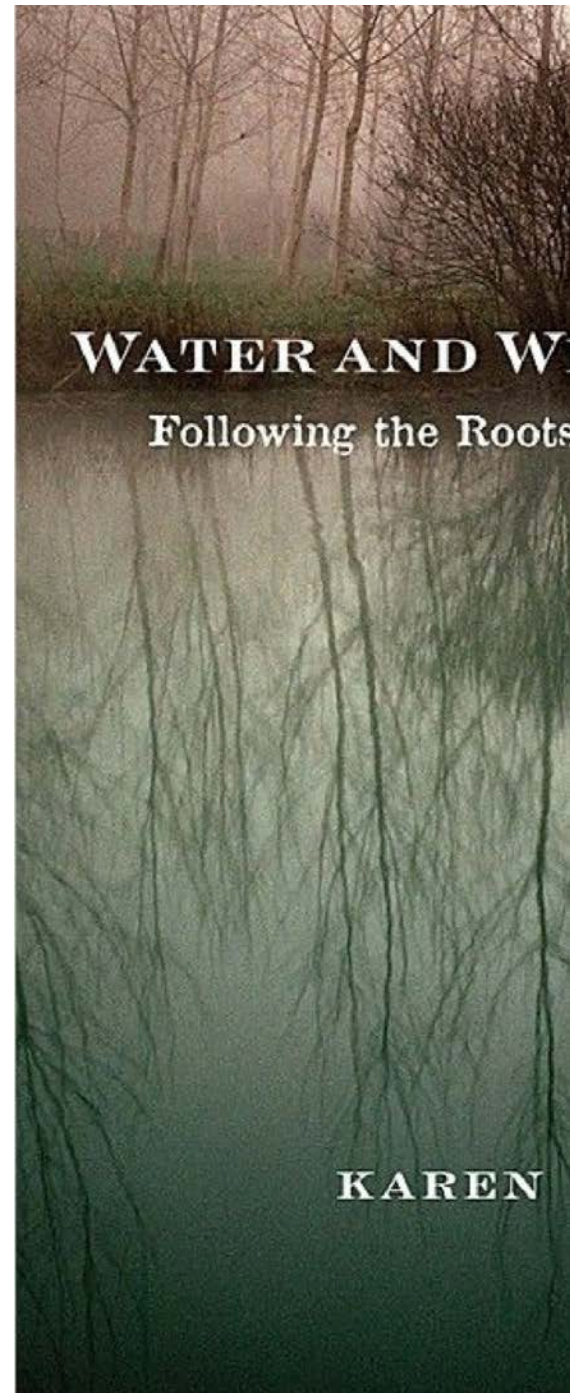
Throughout the personal essays that comprise her book, she recounts how she developed a strong connection to nature through her upbringing. She romanticizes the bitter winter storms that plague her state for months out of the year. She details fond memories of apple picking and pie making with her grandmother. She stresses the smallest lessons — like always planting a new tree

in place of those that are cut down or withered — that still reverberate into her adulthood.

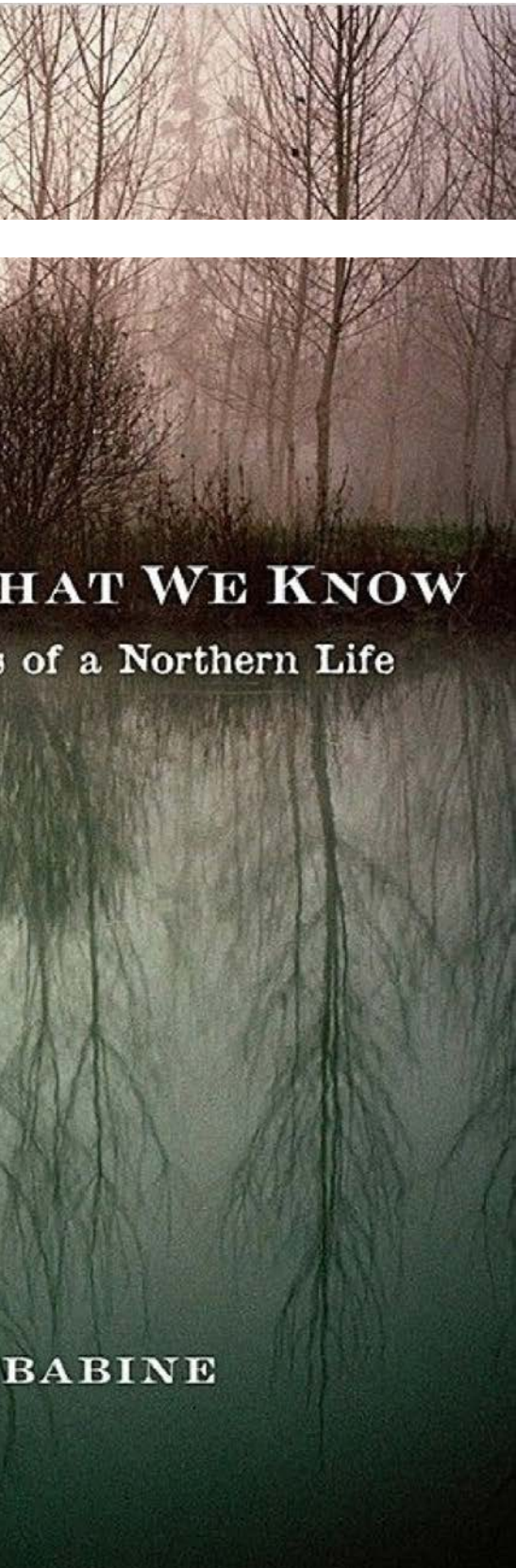
These stories collectively show how the author came to be who she is today. Babine argues that everyone is molded by their surroundings in this way, whether they grew up in rural Minnesota or New York City.

"It doesn't matter if we live in a rural environment or an urban environment—we're still shaped by what surrounds us," she said.

And what surrounds us can have a major impact on our lives. Living in a place that is prone to flooding, tornados, hurricanes, earthquakes, or other natural disasters alters the lens through which we see the world. Perhaps it causes people to grow cynical, cautious, or mobilized to help.







What does it mean for someone to grow up in their natural environment? Karen Babine details what it meant for her to be raised in the beautiful, untouched northern Minnesota. She describes the influence of the trees, the lakes, the endless snowstorms, the apple orchards. But how does place affect someone who grew up on a farm? In the desert? On the beach, in a suburb, in a city where nature is limited to parks the size of city blocks?

"The story of what it means to belong to a place, to be influenced by it, would be different in Arizona than it would be in the bayous of Louisiana—and that means there's a lot of place essays yet to be written," Babine said.

This genre of "place essays" brings about a whole new appreciation for nature as an essential element that shapes our whole lives. This appreciation led Karen Babine to write a book from this perspective in the first place.

"It also comes back to thinking that my life is not particularly interesting, but the world is a very cool place—and I'd rather write about that," she said.

Babine marvels at how the observable world is a fount for endless literary inspiration. She says her sentiments can be summed up in a quote by poet and essayist Alexander Smith: "Everything I

see or hear is an essay in bud. The world is everywhere whispering essays, and one need only be the world's amanuensis." Or as she puts it, "I'm always writing—but I'm not always typing."

As natural as it may seem to draw inspiration from the environment, it's more of a rare practice in today's society. As advanced as we've become, we don't all grow up with this inherent appreciation for nature. Some people go their whole lives avoiding it — trading grass and fresh air for concrete and air conditioning. But Karen Babine was taught a sense of mindfulness from a young age.

"My grandparents taught us that you need to look at what's around you and see who you are in relationship to it. They simply taught us to pay attention," she said.

Simply paying attention. Listening to the birds in the trees or the crashing waves on the beach; noticing a squirrel scuttle up into a canopy of trees or a strong wind blowing through a field.

Babine wants her readers to see how much there is to discover when we pay attention—not only about the world, but about ourselves. Our identity is rooted in our place in the world.

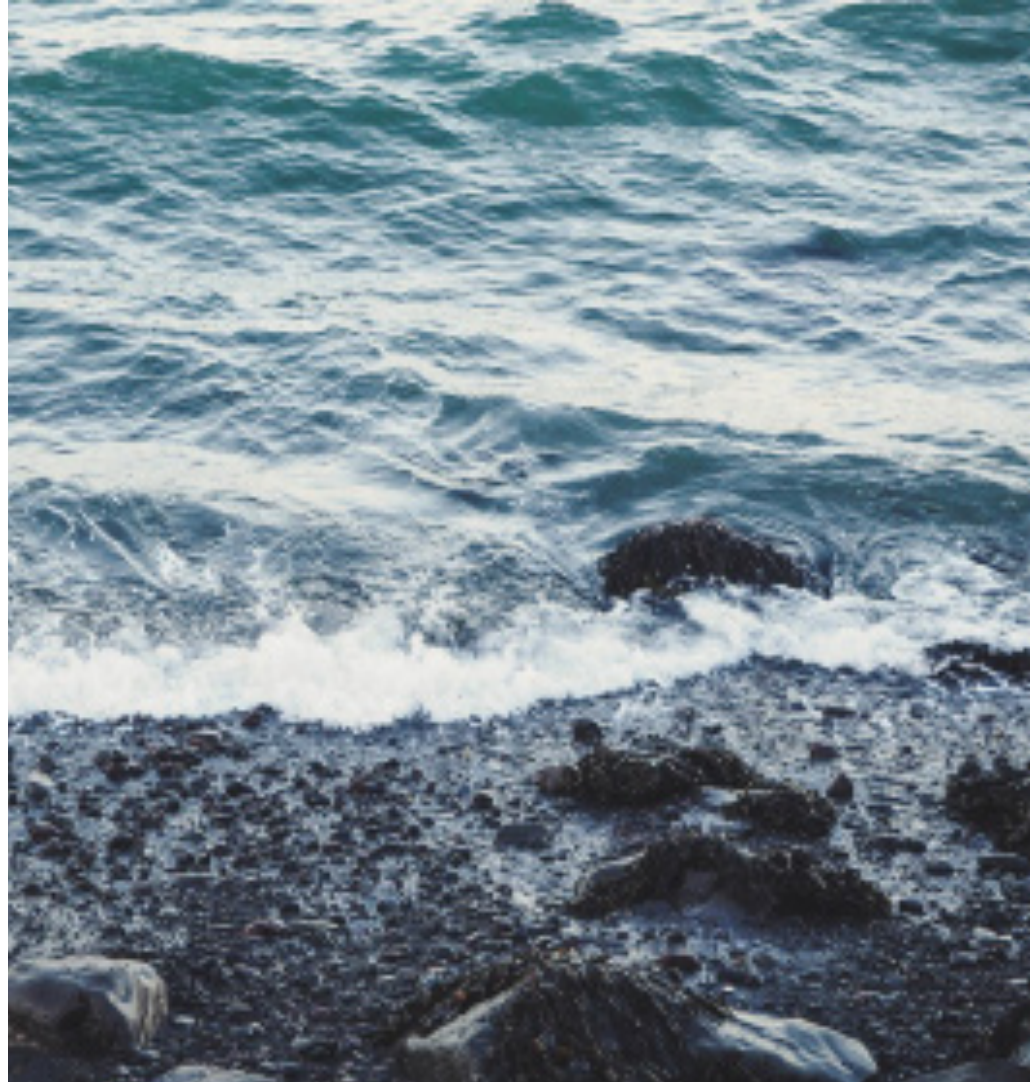
And knowing, or just recognizing, these details can make all the difference.

# Nature's Lessons

BY HANNAH GREENFADER

One of my earliest memories of connecting with nature is a family camping trip to Yellowstone National Park when I was eight years old. I was immediately at ease hiking in the rugged terrain, and I remember wanting to always be in front where I could catch the “best views” of the plants and animals. The guides would try to hold me back, but, eventually, my determination was rewarded when I was the first to discover a 450-pound wild bison with a beautiful brown coat. I felt an overwhelming amount of joy seeing this gigantic beast. It was the first time in my life I had seen a wild mammal (larger than a squirrel) in nature. The bison was about 200 feet away from me, sitting peacefully with no intention of moving. This thrilling experience instilled in me a deep respect for animals and the natural world.

The place I have my deepest connection with is Ocean Park Beach in Puerto Rico. This is the place I will forever call home, as I lived there for 18 years of my life. During the winter months, the ocean water is cold, at least for the locals, and the ocean air is turbulent yet peaceful. During the spring, the ocean warms up a few degrees. In these months, a couple of female leatherback sea turtles come to lay their eggs in the sand. By the time the incubation period is over, it's summer. During the summer, the water is so calm and clear that I can hear only the softest crashes of the waves on the



*“...once they mad*



shore. I was very fortunate to grow up a block away from the beach where I observed the day-to-day changes in the waves, the tides, and the wind, which continually change the coastline.

I saw the Ocean Park Beach landscape undergo many changes while I lived there, specifically after a hurricane about 10 years ago. I walked to the beach with my mom and saw the biggest waves I had ever seen. I remember calling these waves “mini-tsunamis.” Usually, this part of the beach has relatively small waves, so it was shocking to witness these powerful ones. Another time, after wind and rainstorms passed through the island, a short river about three feet deep and 300 feet wide was formed at the shore. I remember running up and down the river with my brother and neighbors. We spent hours on that river; it was pure joy and excitement. After a few days, the little river disappeared and the beach went back to normal. Observing changes like these at the beach are amazing, as you see Mother Nature at work.

When the leatherback turtles come up to the shore and start laying their eggs in the sand, a local organization puts up a fence to protect them from people

and pets. The summer of 2013 was the first time I volunteered with the Leatherback Protection Organization to help guard the nests during the days the baby turtles were going to hatch. One summer night, I was waiting with the other volunteer members, and we noticed a small hole in the sand. The hole continued to grow as the hours went by, until suddenly, hundreds of tiny fins started to frantically scratch at the surface. The hatchlings seemed to be competing with one another as they emerged from the nest. It was like watching a very intense triathlon. Once they made it out, there was no stopping them. They raced to the water, some going in the wrong direction. For tiny six-inch turtles, they were moving quite fast. Their flippers were constantly moving like oars of rowboats going at full speed. Once they reached the edge of the water, they let the tide take them in as if they were being drawn into a black hole. In the blink of an eye, all the turtles disappeared from our sight and started the journey to their new lives. Watching these hatchlings struggle out of the nest and make their way to the water was an emotional experience. It was the moment I was sure of what I wanted to do in my life: protect the natural environment and all its inhabitants.

A few years after my first leatherback turtle experience, I began studying environmental studies at Elon University. This led me to my internship at the Office of Sustainability this past summer. After finishing work on a warm summer night at Elon, I sat on a balcony looking at the beautiful pink and yellow sunset. I noticed to the left of me a small spider on the railing of the balcony. Ever since I was little, I have been surprisingly always afraid of spiders of all shapes and sizes. I will admit I still do not like spiders when they come into my space. However, I stayed calm and just observed as the little spider made its web. It started with the border and worked its way to the middle. I watched intently as the spider worked tirelessly for the next half hour until its web was complete. The pattern was absolute symmetrical perfection. When the sun went down, it was time to hunt. The spider rested in the middle of its web waiting patiently for its prey to get stuck in its masterpiece. After about fifteen minutes, a fly got caught. The spider immediately jumped into action and secured its catch with its silk. The spider continued catching and wrapping its prey for a while. After an hour of observing the spider, I found a new love and respect for this little creature. I believe animals teach us lessons, and that this little spider taught me a bit about patience. I am grateful that I've experienced many life-changing moments with nature big and small, and I can't wait for more to come my way.

*le it out, there was no stopping them.”*

PHOTO BY ELIZA SINGLETON '19

# Unforgettable

BY CIARA MEAGAN JACKSON

*It is said that if you threaten crows, they have the ability to recognize and remember specific faces and will get revenge.*

A murder  
of crows  
Soars down from the heavens  
Their bodies but small specks in the sky growing  
Closer

I watch planted on the ground  
As these feathered creatures  
Weave in and out  
Between the sunshine and clouds  
Their shadows projecting onto the world

Animals around me scutter for cover  
Careful to not be caught in the eye  
Of the predators

They near me  
I watch as their thirsty crimson eyes  
Scan the abyss  
For any sign of life

They see me  
They're coming  
Talons ready  
Oily black feathers spiked  
I can't outrun them

They attack  
Ripping my flesh  
Off the bone  
Turning me into a puddle of red

A crow sits outside my window  
Red eyes  
zoned in on my face

I am untouched.



# Contributors

**KIRA BARSTOW '19** is a

Communication Design major and Creative Writing minor from New Jersey. She hopes to travel the world and write a book someday.



**NOAH CORBETT '19** is a Creative Writing major. His experiences in national parks and hiking near his hometown of Portland imbued an appreciation for nature throughout his life.



**HANNAH GREENFADER '19** is an Environmental Studies major with a minor in Environmental Education and Geography. She enjoys playing basketball, hiking, and bike riding.



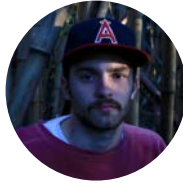
**GRANT NICKELL '21** is a Computer Science major with a double minor in Mathematics and Data Science. He would love to write a book one day and is also a self taught pianist of six years.



**BAILEY NUMBERS '21** is student editor-in-chief of Vision Magazine. She is majoring in policy studies and minoring in professional writing and history.



**MICHAEL PORTANOVA '18** was a Cinema and Television Arts major and Creative Writing minor. With age, he's developed an increasing appreciation for the beauty of nature.



**ISABELLE REYNOLDS '18** was an English major with a concentration in Literature and Creative Writing. She is currently is teaching English in Madrid.



**KRISTIANA RINGER '21** is an Environmental and Sustainability Studies major. She loves hiking and spending time at the beach and is passionate about protecting the planet.



**CASSI WACIEGA '19** is a Cinema and Television Arts major. She hopes to one day, retire someplace near the beach where she can live peacefully with her cats.





COVER PHOTO BY KRYSTIN KALVOY '21