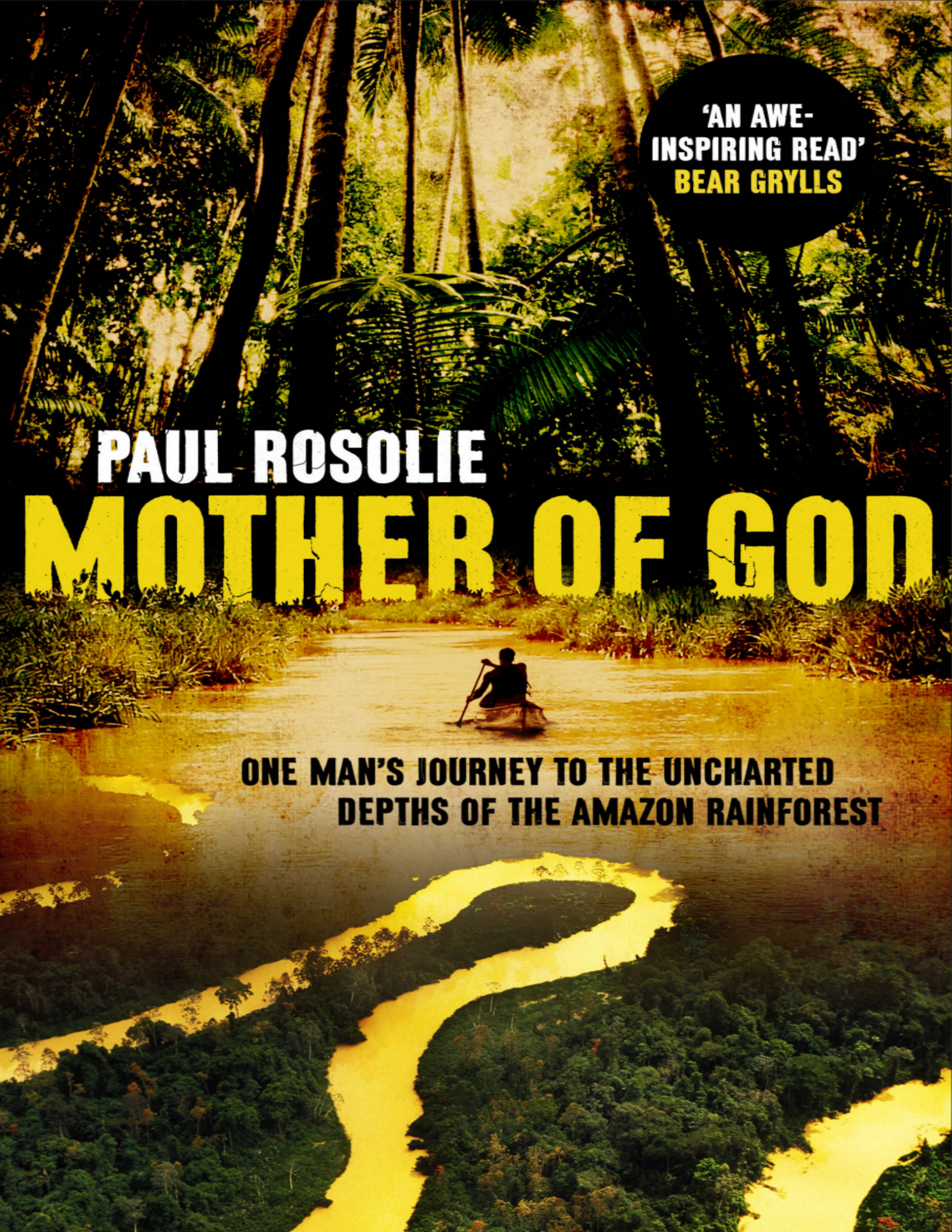
'AN AWE-INSPIRING READ'
BEAR GRYLLS
PAUL ROSOLIE
MOTHER OF GOD
ONE MAN'S JOURNEY TO THE UNCHARTED DEPTHS OF THE AMAZON RAINFOREST

ABOUT THE BOOK

Madre de Dios – 'Mother of God' – is a place where the Andean Cloud Forest intermingles with the steaming tropical jungle at the head of the Amazon River. Here can be found the greatest proliferation of living species that has ever existed on Earth. And it is a place that is now under grave threat.

Paul Rosolie has travelled to the very heart of this wilderness in search of rare flora and fauna. His adventures – with giant anacondas, huge caiman, the mighty jaguar and one very small anteater – are by turn thrilling, terrifying and revelatory. Paul crosses some of the world's harshest terrain and encounters some of its most extreme weather conditions. He battles with life-threatening tropical diseases and the extreme mental challenges presented by being alone in the heart of the jungle.

Mother of God is an astonishing tale of adventure and survival, set in one of the world's few remaining truly wild places. It is a story of nature, red in tooth and claw, and of how we must both respect its awesome power and protect its fragile glory.

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MOTHER OF GOD

PAUL ROSOLIE

To my parents, Ed and Lenore—
you have given me everything.

INTRODUCTION

IN JANUARY 2006, just eighteen years old, restless, and hungry for adventure, I fled New York and traveled to the west Amazon. With a satellite phone that my worried parents had insisted on renting, and a camera I had borrowed from a friend, I was indistinguishable from any of the scientists and tourists aboard that first flight. In all likelihood, like them, I would spend my three weeks in the jungle, and then return forever to my life back home. There was no way to know I was beginning a journey that would span a decade and take me to some of the most inaccessible reaches of the Amazon River at the most crucial moment in its history.

It has been a journey filled with unfathomable beauty and brutality that sounds more like fiction than fact: lost tribes, floating forests, murdering bandit-loggers killed by arrows, insectivorous slashing giants, and a secret Eden. There would be fistfights, stickups, and beheadings; new species discovered, fossils unearthed, and people riding on giant snakes. I would see places that no one had seen before, and cultivate a unique relationship with the secret things of the Amazonian wild.

I wrote this book careful to avoid it becoming a scientific text, or historical summary of the Amazon—other authors have written such volumes far better than I ever could. Instead, I chose to focus on the extremes of adventure, and the beauty of wildlife and natural systems. The events in the pages ahead are written as I experienced them. Aside from changing a few names, dates, and geographic details to protect people and places, everything that follows is true.

BOOK ONE
THE AGE OF INNOCENCE

1

The Jaguar

The few remaining unknown places of the world exact a price for their secrets.

—Colonel Percy Fawcett

BEFORE HE DIED, Santiago Durand told me a secret. It was late at night in a palm-thatched hut on the bank of the Tambopata River, deep in the southwestern corner of the Amazon Basin. Beside a mud oven, two wild boar heads sizzled in a cradle of embers, their protruding tusks curling in static agony as they cooked. The smell of burning cecropia wood and singed flesh filled the air. Woven baskets containing monkey skulls hung from the rafters, where stars peeked through gaps in the thatching. A pair of chickens huddled in the corner, conversing softly. We sat facing each other on sturdy benches, across a table hewn from a single cross section of some massive tree, now nearly consumed by termites. The songs of a million insects and frogs filled the night. Santiago's cigarette trembled in his aged fingers as he leaned close over the candlelight to describe a place hidden in the jungle.

He said it was a place where humans had never been. Between rivers and isolated by a quirk of geography, it had remained forgotten through the centuries. The only tribes who knew of the land had regarded it as sacred and never entered, and so it had remained untouched for millennia. Decades earlier, after weeks of travel up some nameless tributary, Santiago had come to its border. There, he said,

you could watch jaguars sunning themselves on open beaches in the morning; harpy eagles haunted the canopy and flocks of macaws filled the sky like flying rainbows. The river was so thick with fish that you could scoop up dinner with your bare hands. What he described was a lost world. He told me that it was the wildest place left on earth.

Don Santiago, as I knew him, even at the age of eighty-seven, would often spend months out in the jungle alone. He knew the medicinal properties of every herb, orchid, and sap in the jungle that surrounded the small indigenous community where he lived, in the lowlands of southeast Peru. He possessed an insight to the secrets of the forest greater than anyone I have met. He had lived in the jungle before boat motors or chain saws were available, before Spanish extinguished the native dialect of his people. Over the course of a long life in Amazonia he'd seen tribes that most people didn't know existed and species yet to be described to science. As he spoke of the jungle's secrets, lore of an age nearly ended, candlelight reflected from within shrouded sockets, the map of tributaries in his weathered face as cryptic as the landscape in which it was wrought.

I knew from experience that Don Santiago was never wrong, and in the years to come what he said had a profound effect on my life. As a naturalist, I knew that finding and sampling a truly isolated area of rainforest could redefine the baselines scientists use to study wildlife, and help me to protect habitat. As an explorer, it was the ultimate mission, and planning an expedition to find the lost world Don Santiago described became an obsession for years to come. But what kept me awake at night was something deeper than academic discovery or adventure. It was the realization that we could be the last generation to live in a world where such places exist.

I knew that it was a journey I had to make, and I knew I had to make it alone. If the place Santiago had described

really did exist, as pristine and hidden as he had said, there was no chance I was going to foul the silence with the pollution and din of an entire expedition team: motors, voices, fuel. For a long time I struggled to work up the nerve. Even after having worked years in Amazonia when living in the bush had become second nature, the thought of going it alone made me shiver. There were too many stories, too many hundreds of would-be explorers, lost tourists, and even locals, who were swallowed by the jungle each year never to be seen again. In the most savage and dizzyingly vast wilderness on earth, the rule is simple: *never* go out alone. Yet there are those among us who have difficulty accepting what we have not found out for ourselves, who pass a WET PAINT sign and cannot help touching the wall. We simply have to *know*.

Only months after Don Santiago told me his secret, there I was: a hundred miles from the most remote human outpost, in utterly untouched, untrailed jungle. I was completely lost and terrified. I looked up hoping to see blue, but the entire sky had been eclipsed for days. From beneath 150 feet of canopy, the view above was a churning mess of understory vegetation, vines, bromeliads, and towering pillars of ancient trees swaying menacingly in the hot wind. In the Amazon less than 5 percent of sunlight reaches the forest floor on a clear day, which this was not. Black storm clouds lay pregnant across the canopy so low that vapor and branches intermingled.

I walked fast, machete in one hand and compass in the other, praying to glimpse a gap in the foliage that would signal the salvation of the open river. Earth, forest, and sky were all fiercely animated and moving in concert. Twigs and leaves, Brazil nuts, and even small animals rained from above. Trees as thick as school buses buckled and groaned, shaking the earth as the wind tore at their branches. I felt trapped. I longed to see open space. I'd been lost for days.

The storm was gathering force and my heart was pounding. One hundred feet to my right a branch the size of a mature oak snapped and hit the earth with the force of a car crash. More than once a cannon blast sounded as an entire tree split and fell. In the Amazon large trees are meant to topple, opening gaps for light, which allows new vegetation to flourish, while the carcasses of the fallen giants are digested by legions of insects, fungi, and proteins. It's how the jungle works; it's a giant meat grinder. When you are in it, you're part of that system, part of the food chain.

If the storm intensified, there was little chance I'd survive the resulting carpet bombing of shed tree limbs. Some of the great explorers have claimed that snakes or piranhas or jaguars present the gravest threat in the Amazon, but these declarations betray inexperience. The trees themselves, in their dizzying innumerability, isolate and disorient you, and in a storm prove the most deadly. Some of the true giants are so interlaced with vines and strangler tentacles that when they fall, their weight tears down almost an acre of jungle. There is no way to escape.

Please let me find the river, I whispered through clenched teeth as I hiked on. My route, had things gone as planned, ought to have led me out of the jungle and onto the open tributary yesterday morning. But as the weak light began to fade, it grew clearer that I would be spending another night lost in the Amazon.

Even as I employed every ounce of my consciousness and skill to finding some sign of the river, of open space and salvation, I could see the headline: "Twenty-One-Year-Old New Yorker Vanishes in the Amazon." Nothing would be worse than being picked apart by the armchair analyzers who surely would categorize me as just another yahoo kid who went out into the *wild* to find "nothing but mosquitoes and a lonely death." Or the way they criticized the guy who lived with wild grizzlies until being eaten. There is a

difference between knowing what you are getting into and doing it well, and just flying out there and obligating others to clean up the mess. There are simply too many of them: people who court disaster in the name of adventure, getting themselves into trouble and then calling for help, or dying. No, I'd be quite happy to deny Jon Krakauer or Werner Herzog another project. True, I was young and the risk was moronically high; but this was something I had to do.

There were blisters on my hands from twelve hours of hiking and slashing, and my backpack straps had worn through the shirt and skin on my shoulders, but I pushed on a for a bit longer. I threw a handful of nuts into my mouth but was too dehydrated to chew and spat them out, even though I needed to eat. After twenty-three days in the jungle, three of them lost and alone, I had lost more than a pound per day. In the last few hours I was certain I'd lost a few more.

I needed water, but because of the rains, every water source was a turgid mess of sediment and detritus. Even small streams that should normally be clear were roiled and murky. For hours I had kept an eye out for the species of bamboo that fills its segments with water. You can spot it easily, leaning over from its own weight. When I found a patch of bamboo that looked right, I cut the stalk of one and water burst out. Hefting the pole I felt that all its segments were heavy with water, like a dozen tallboy beer cans stacked atop one another. I cut segments one at a time, guzzling down the contents. Just two bamboo poles supplied me with a belly full of water and enough to fill my bottle. Then I pushed on. It was getting dark.

After another twenty minutes of desperate slashing and hiking, another surge of panic and rage came as the realization broke that I wasn't getting out tonight. I slung my hammock, removed my shoes, and used a shirt to towel off my soaked body. It was impossible to tell if the storm

would turn on full blast or if it would continue to simmer and growl the whole night. The image of my hammock being smashed into the earth by a falling branch played on loop in my mind. There was nothing I could do about it. I needed sleep.

Inside my hammock I zipped the mosquito net and spent several minutes killing the bloodsuckers that had made it inside. I went over a mental checklist. My machete was beside me on the ground, my headlamp was on my head, my backpack and shoes were hung off the ground to reduce the likelihood of them being shredded by ants. I opened my journal out of habit but abruptly closed it, too ashamed to admit to the page how miserably scared I felt. In entries from previous days, only forty-eight hours before, I was living my dream, on a mission, soaking in every sensation of being immersed in the gut of the jungle. But confronted with the cosmic force of the coming storm and the reality of being truly lost, my courage stores were waning.

Anyone who has seen, or even read about, what the Amazon is capable of during the rainy months would know that attempting even the most mundane travel is virtually pointless. Cities and towns flood, dirt roads become muddy rivers, and actual rivers can swell more than fifty feet in places, exploding far onto land. Larger tributaries can burst their banks and flood miles of forest, ripping thousands of trees from the earth in the all-encompassing current. The result is a river of giant timber that would turn a boat to splinters. Before starting the expedition, the one now veering dangerously off course, I had known these dangers but saw no other option. Time was running out.

For months the sound of heavy machinery and chain saws had grown louder; smoke could be seen on the horizon. After thirty years of dormancy the trans-Amazon highway was under renewed construction; the final link was being constructed over the Madre de Dios River. For the first time in history the heart of the Amazon would be connected by a

land trade route to the Asian market. Offshoots of the highway were rapidly metastasizing throughout the lowlands as colonists cut their way into the frontier. Towns were filled with indigenous protesters, police in riot gear, and people were dying. Don Santiago would soon be gone and it seemed that an age had ended. The western Amazon was under siege.

With a light pack made up of ten days' worth of food, matches, machete, bowl, camera, and hammock, I had hitchhiked as far into the jungle as poachers would take me, and then plunged into the trackless green. Maybe I'd been born a century too late? What if my destiny was not to protect the west Amazon but to bear witness to its annihilation? Tucked into my journal was a hand-drawn map with a circle drawn at the place I had come to call the Western Gate, the boundary of the nameless Eden. I was twenty-one years old, young enough and dumb enough to voluntarily trek into the Amazon, old enough to know that what I sought was worth the risk.

I lay in my hammock looking up as darkness consumed the jungle. Lightning in the low clouds flashed emerald green through the leaves, turning the canopy to a ceiling of stained glass. As downdrafts gusted hot and then cold air through the subcanopy, the light show made the savage landscape all the more surreal. I closed my eyes and told myself that everything would be fine. After four years of living and working in the jungle under the tutelage of the Ese-Eja Indians, I knew what I needed to survive. But even so I could hear my mother's voice from years earlier warning that even the best swimmers can drown.

I don't know how or when, but eventually long, torturous hours of blackness morphed into unconsciousness. For a time there was peacefully nothing. But then, prompted by some dread instinct, I awoke to a nightmare. My eyes were open, but nothing was visible in the inky void. For a moment I wasn't sure where I was or why I wasn't

sleeping. I wanted to call out, “Where the hell am I?” Then, as my mind slowly booted up, I remembered. Oh yeah, in the Amazon, alone … except I wasn’t alone.

The Madre de Dios, or Mother of God, is a living anachronism. Like a world made from Joseph Conrad’s nightmares, it is the edge of nowhere, a vast region choked in snarling ancient jungle. Nestled in southern Peru under the shadow of the Andes to the west, with Bolivia to the south and the Brazilian state of Acre to the east, it is remote, pristine, and like nowhere else on earth.

Some say the southeasternmost region of Peru got its name because an apparition of the Virgin Mary appeared to a Spanish conquistador in the late 1500s. Others maintain that the isolated no-man’s-land was simply given a “God’s country” designation for being wild and unexplored. Still others say that the name was given out of reverence, that even the conquering Spanish were overwhelmed by the raw wilderness and unfathomable bounty of the jungle there. One thing is certain: in today’s context the profound name remains worthy, for the region is the womb of the Amazon.

To properly appreciate the scope of topographic magnificence of the Madre de Dios you’d need to imagine cramming the varied temperature range contained within the latitudes between Peru and Alaska into a dozen miles: from frozen peaks to steaming jungle. In the western Amazon, glaciers in the high Andes send mineral-rich runoff in torrents toward the land below. These streams and rivers rush through mossy cloud forests and down into the flat lowlands, where they converge to create the Madre de Dios River and begin the slow march 1,400 miles across the continent, bursting into the Amazon’s main channel roughly twenty miles downstream of Manaus, Brazil.

The tropical Andes and the lowland Amazon are considered two separate, mega-biodiverse biomes; entirely different ecosystems. It is the intermingling of these two

systems in a tropical climate, with abundant moisture and in drastically varying elevation, that makes the perfect storm for speciation. On a clear day from the Los Amigos River, a tributary of the Madre de Dios, it is possible to look west over the boiling lowland jungle and see the snowcapped Andes looming divinely far in the distance. Contained in that single view is the greatest array of living organisms to have ever existed.

Amid the foliage of the Andes/Amazon interface, which constitutes more than 15 percent of the global variety of plants, is a land of faunal giants. In the canopy harpy eagles hunt for sloth and red howler monkeys, the latter the size of small children that the eagles skewer and lift into the air en route to be dismembered in the nest. Toucans greet the mornings, and stunning blue-and-yellow and scarlet macaws are like flames in the sky. Each rainy season frogs descend from the canopy to breed in stagnant forest pools, and in the dry season butterflies flock in clouds of thousands on the riverbanks in color variations that would stun a rainbow.

Most ecosystems have a single, indisputable apex predator, but the western Amazon is more like a cage fight in murderers' row. With so much muscle around, they've had to split up the terrain. The harpy eagle takes the canopy, while jaguars cover the ground. Anacondas and black caiman crocodiles, which can reach eighteen feet in length, battle in the rivers and lakes, which are also haunted by giant otters, a formidable hunter whose Spanish name translates to *river wolves*. Probing the deepest parts of the river are 150-pound black catfish. And yet this list of killers is far from complete: several other species of cat, croc, mammal, and large snake back up the hulking lead characters. The list of smaller hunters is virtually infinite.

The rough tallies for the entire Andes/Amazon region: 1,666 birds, 414 mammals, 479 reptiles, 834 amphibians,

and a large portion of the Amazon's 9,000 fish species. In the Madre de Dios alone there are more than 1,400 butterfly species. The numbers on everything from bats to beetles are constantly changing as scientists learn more. In early 2012 researchers from Conservation International announced that they had documented 365 previously unrecorded species in a single study area, just a pinprick of the landscape.

Within the impenetrable assemblage of giant hardwoods and bamboo are palms with ten-inch thorns that can run a man through, and others that walk from place to place beneath the canopy on their roots, like Tolkien's Ents. Flowing in the cambium of some trees are poisons that can kill you in minutes and other compounds that can drop your mind into hallucinogenic pandemonium, but there are also medicines that can control fertility and cure the most horrendous diseases. The west Amazon was where the first cure for malaria was discovered and where rubber was first tapped on a large scale. Amid the diversity grows one tree that produces sap almost completely made of hydrocarbons, producing 1,500 gallons of sap each year that can be poured directly into a diesel motor as fuel.

While the food chain can be mapped in web format for most ecosystems, the west Amazon defies human explanation. If it were possible to trace the elaborate interspecies relationships unfolding within the jungles there the result would most likely resemble a Jackson Pollock painting the size of Rhode Island. Even today we know little about the system. It is for this reason the region has been described as the "largest terrestrial battlefield" on earth. Every last organism is eaten. Life here is a countdown, a temporary stasis as the jungle waits, inevitably adding all things into the rapid cycle.

The Mother of God is a region of extremes, polarizing all elements within it, including humanity. In a world where rivers are highways, there remain infrequent indigenous

settlements. It is not uncommon to come across a cluster of palm-thatched villages among the green. In the early morning you can see women washing clothes in the river, while children play and splash. Men hunt and fish and grow crops like bananas and yucca, or collect Brazil nuts. Much of the sparsely inhabited backcountry is like this, peaceful, and made up of simple, warm, friendly people.

At the other end of the spectrum are the extractors. Prowling the backcountry is a host of loggers, drug traffickers, poachers, and gold miners. The latter use motor pumps to tear up the riverbed sand in search of their prize, dumping mercury into the water and polluting the otherwise pristine world. *Narcos* also make strategic use of the geography. It is rumored that the cocaine trail comes up from Bolivia and that the runners use a small airstrip hidden in the jungle. They apparently maneuver the plane into a gap in the canopy and land on a runway obscured by the branches above, remaining invisible to aerial surveillance. But it is the loggers who are the most blatantly nefarious. There are numerous accounts of loggers clashing with local people and even isolated tribes, native arrows little match for loggers' modern guns.

The collision of human worlds is comparable to the westward expansion of European settlers across North America in its components, but the situation in Madre de Dios is wilder by several degrees of magnitude. Copy and paste the players from the American West into the insane context of the Amazon, change a few names, sprinkle in some anacondas and several million other species, and the similarities are eerie. Loggers versus Indians, gold miners versus helicopter commandoes; oil companies, pipelines, new roads, secret genocide, corruption, greed, missionaries, bandits, politicians, and massive paradigm shifts unfolding at a dizzying pace.

At a time in history when scientists are recording unprecedented extinction rates and many people feel that

the loss of biological diversity and deteriorating natural systems is the defining issue of our time, the west Amazon is ground zero. Nowhere are the stakes higher.

It was within the depths of this world that I slept on that torturous night. All hope of finding Santiago's wild land had faded. Now the great adventure had become a survival situation, a question of direction and luck. I remember waking into darkness like the belly of a black hole. Alone in my hammock, I listened desperately. Something was nearby, something big. I could hear breathing. I shut my eyes. Heartbeats shook my chest, and my blood rushed audibly. I had no thoughts, only blind terror. The volume of air drawn with each sniff told me this was something massive. My nostrils filled with a pungent odor as my hand instinctively went toward my headlamp, making a small noise against the hammock's fabric.

A growl erupted from the darkness. A god's voice. Warm breath fell on my neck in savage staccato like thunder, cosmic and overwhelming. Every fiber of my body understood the command of that growl: don't move. I closed my eyes and lay still, too terrified to move. Cradled in blind purgatory, grasping at lucidity, I was helpless and prayed that whatever happened next would be over quickly.

In the context of their rainforest environment, jaguars are ghosts. Masters of the shadows, they employ a skill for stealth that is leagues beyond human ability. Scientists who study jaguars their entire lives can go years without a sighting and instead have to rely on tracks and scat, and on camera traps and radio collars to collect data. The cats are thick-bodied and powerful, the pit bulls of the big cats. They move silently over land and through water. They can drag a deer up a tree and, at 250 pounds, can overpower anything in their environment. To a jaguar, dispatching a human wrapped in his hammock would translate roughly to you or me peeling a banana.

I could feel her breath as she drew my scent into the labyrinthine reaches of her nasal cavity, her face only inches from my right ear. Is this how it ends? She sniffed and drew nearer, exhaling another furnace draft onto my neck. For a small eternity she was silent, standing invisibly beside me, incredibly close.

Lost and alone beneath the storm and the canopy, on the dark side of the planet, it was a pivotal moment of a story that began when I was very young and would shape my entire future. Despite the jaguar at my side, a remarkable calm ebbed through me. She hadn’t come for blood.

2

Restless

Earth and sky, woods and fields, lakes and rivers, the mountain and the sea, are excellent schoolmasters, and teach some of us more than we can ever learn from books.

—JOHN LUBBOCK

WHEN YOU TRAVEL east from Lima by air, floating over the snowcapped steeples of the Andes, the clouds are numerous and blinding. Jagged parapets draped in glaciers fall to immense valleys that seem to yawn into eternity. The land between the great peaks is stoic and barren, treeless and empty for thousands of miles at a time; an alien landscape interrupted only rarely by a long and lonesome dirt road.

The FASTEN SEAT BELTS sign came on as the pilot threaded between mountains that seemed too massive to be real. I was vaguely aware that the guy in the seat next to mine was pale green and burping bile from the turbulence. Behind me a woman was praying the rosary in Spanish. The plane's wings were flapping as we were jerked up and down. But I was mesmerized and barely noticed. I had waited my whole life for this moment.

The empty valleys below were gradually shading green. The barren emptiness began to turn to lush foliage and then riotous cloud forest as we lost altitude and the mountains dropped off. Vision came in glimpses through the clouds as glacial rivers cascaded through a world of moss and mist. Then came more clouds, torturous moments

of whiteout when I could feel my heart pounding with anticipation. Then it happened.

Shuddering through turbulence, the plane dropped below the ceiling, revealing an unbroken immensity of green jungle from horizon to horizon. For the first time in my life the breath was sucked from my chest. Rivers lay across the range in great sweeping arcs like bronze serpents reflecting light skyward. Mist sat like puddles scattered in the omnipresent foliage, rising and curling in places. It was like looking into the vault of the universe to where all the greatest secrets were kept, the library of life.

How could there be so much jungle? Since childhood I had dreamed of this, wondering what the Amazon would look like, smell like, and feel like; imagining, hoping, waiting but never once gaining any preparation for the mind-blowing reality of setting eyes on it for the first time.

People always ask me how I came to work in the Amazon at such a young age. It is a difficult question to answer, because the trajectory that sent me into the jungle started when I was very young, and had something to do with a dismal cloudy day in high school, when a teacher threw me up against a cinder block wall. No one else was around, just him and me. His hands were around my neck and for a moment I paused in disbelief, watching his ugly gray eyes, so revoltingly close to mine, bulge in anger. In that moment I was terrified, but not for me. I was scared because I could feel the cerebral rage dispatching through my limbs, and the imminent reaction that I knew would be out of my control.

But I hadn’t always been violent. I started out as a gentle, nature-loving dyslexic kid from New Jersey. Actually, I was physically born in Manhattan, back when my parents were living in Brooklyn, and I have always identified the latter as where I’m from. Even after we moved to Wyckoff, a town in the New Jersey suburbs, we’d still make it to Sunday dinner

every other week at Grandma’s house in Brooklyn, under the shadow of the Verrazano-Narrows Bridge, with all the aunts, uncles, and cousins, for the best food in the universe.

Both of my parents were teachers, but my mother became a full-time mom after my sister and I came into the picture. My dad kept his job in Brooklyn and made the hour-and-a-half commute each way for almost twenty years. When he got home from work each day my mom would be in the kitchen, filling the entire house with the scents of garlic and marinara. We’d all play and laugh and eat together, every night. My dad and I were always wrestling and playing ball. We built snowmen together, hiked, and sometimes he’d make us all laugh until it hurt by quoting dramatic passages by Dostoyevsky.

Though I wasn’t diagnosed until high school, I am dyslexic, which disability caused me to struggle throughout my school life. It took me far longer than everyone else to learn to read, and math was like Sanskrit. School was always a nightmare for me. I just wanted to be outside, and as a kid I’d look out the window until the teacher yelled at me. So then I’d draw, which also wouldn’t end well. That’s how I ended up doing first grade twice, in three different schools.

While I bounced around the education system, my parents took teaching into their own hands. I remember weekend hikes with my parents and sister, along with our golden retriever, Sam. I was always in search of bugs, frogs, salamanders, and snakes. For me, exploring the forest, overturning rocks and stones, and being in the woods was freedom. As I grew, my delight in the natural world intensified. I continued to develop a keen eye for things other people didn’t see, and a gentle touch needed to handle small forest life.

My parents encouraged my love of the natural world, and I can remember my mom spending hours explaining the

difference between African and Asian elephants, black bears and grizzlies, and other basics to a captivated five-year-old me. She used to blindfold me and have me identify the trees in our backyard by the texture of their bark. The big old oak that leaned over our house, the maple that my sister and I liked to climb. I was good at that.

I cried when she read me an article about Lonesome George, a Pinto Island Galapagos tortoise. The article explained that he was the last of his kind and that when he died his species would be extinct. I was well under ten years old, and the thought kept me awake for weeks. That a species could be removed from existence by humans, or that an ecosystem could vanish before I had the chance to see it, horrified me. I grew up with a sense of urgency. I wanted to see the world's wild places and creatures before they disappeared. Thankfully, at that age there were many things I didn't know.

While still in grade school I'd spend months each summer caring for and raising praying mantises, the *T. rex* of the insect world. Threatened by pesticides and habitat loss, they were the first endangered carnivores I worked to protect. Each spring I'd hatch mantis nymphs and release several hundred of them into the wild and keep twenty. Over the summer I'd feed them insects, and they'd brutally cannibalize each other; by the fall I'd be left with one or two giant, brilliant green, four-inch-long carnivores that were eating butterflies, katydids, and steak. One time after they had been mating for days, I watched a female rip a male mantis in half, and then eat him. I drew and studied my mantises and learned everything about them. I bred them, wanting to help boost their numbers in the wild. I spent time rehabilitating injured or orphaned animals. One time in my early teens I found a six-foot-long black rat snake (*Pantherophis alleghaniensis*) that had been attacked by a dog and gravely wounded, and kept him on a shelf in my room for two months while he convalesced.

Even as a child I considered myself the keeper of things meek and wild. On summer vacations buying two eels from a bait shop and releasing them in the ocean became a tradition. Hopping out of the car to help turtles cross roads before they were run over was a must, as was, later on, secretly freeing birds and monkeys from the snares of poachers. Throughout my life I would too frequently find myself holding tiny lives in my hands. It was as if they were drawn to me, and I to them. Regardless that the creature would most often have no concept of my help, in whatever crossroads of fate and luck that exist in this world, I felt a deep responsibility to protect. Most often, of course, it was my own species that was the reason for the imminent tragedy to the small life that so desperately needed an ally.

Once I encountered a fisherman unloading his catch, and beside him was a magnificent guitarfish, a graceful kite-shaped type of ray with a spike-ridged back, gasping in the sand. The ray was of no use to him, but instead of returning it to the ocean, he had been callous or lazy enough to simply and needlessly let it die. I spent a half hour ducking and gasping beneath the breakers while holding the beautiful alien in my arms, oxygenating its gills until it regained the strength to swim. *You'll be all right*, I whispered. *There is at least one human who is not a savage. You'll be all right.* And at last it was.

The older I grew, the more I was drawn to nature. I was mystified by how sharp my own senses could become beneath the towering tulips, oaks, and sycamores of New York and New Jersey. As a kid I spent an inordinate amount of time chewing on big questions, wondering, exploring. Watching sunlight refract, or a doe nurse her fawn; I was deeply fascinated, illuminated, by the world I saw around me. Though my mom dragged me to church every so often, the woods were where I felt close to whatever energy pulses through life. Turn-of-the-century naturalist John Burroughs wrote, "We now use the word Nature very much

as our fathers used the word God," a sentiment that developed organically in young me.

Somewhere from the childhood haze that is both vivid and fleeting emerges one day that I remember in almost perfect detail: visiting the Bronx Zoo for the first time—specifically, the Jungle World exhibit. I had dragged my parents around for hours, talking nonstop, fascinated by everything I saw. But Jungle World shut me up. I couldn't have been more than eight years old but I can still feel my own spooked awe as I walked into the rainforest house through dark curtains, hearing the calls of hidden primates, thunder, and insects. There were giant kapok trees and hanging vines; brilliant arrow frogs and other creatures I'd never heard of, all presented in a world crafted by experts to mirror jungle habitat. It was pure magic. How is it that places and creatures we have never seen can resound in our innermost depths?

I remember struggling to imagine that such a place could truly exist. The world as I knew it was pedestrian, manicured, and predictable, not wild and mysterious. But my skepticism dissipated in the face of abundant proof: photos of scientists working the field, dirty and dedicated in distant countries. In particular, the photograph of a half-dozen men holding a twenty-foot-plus reticulated python burned onto my mind. For those people life was an adventurous and purposeful quest, out in the jungles at the ends of the earth, saving species. Moving through the shadows from one exhibit to the next, I experienced something I had never felt before: belonging. It was perplexing at my young age to experience such powerful gravity toward a world I had never seen and barely believed existed. There were no words, only an innate recognition of coded bearing, as powerful as the instinct that guides a hatchling sea turtle into the throbbing counsel of the poles. It was a unique moment of orientation in an obtuse childhood, which I held on to like a treasure,

through many dark winter months sitting at a desk, and over many years.

As I got older my ambition began to boil and my fight with the education system intensified. I wasn't the only one who suffered. I would look around the classroom—in the dismal stillness of a teacher's droned lecture, or worse, as the scratch of pencils made the only sound—to see dozens of kids in slow atrophy. Of course, there were those who didn't mind it, or were too young to question the system, as well as those who seemed to actually thrive in the structure—watching them made me feel all the more dysfunctional. What was it they had that I lacked? However, I wasn't alone in my struggles, and over the years saw many brilliant and creative young minds bound by walls, rules, conformity, and endless boredom. Artists, musicians, athletes, farmers, and free spirits of every kind have been hammered into submission by an archaic, outdated system. Even today it kills me to watch kids drag through school during the years when they should be out in the world, experiencing and learning. What does education do? As Thoreau famously answered: "It makes a straight-cut ditch out of a free, meandering brook."

Thankfully, though, there was relief. In my early teens I'd spend entire weekends in the forests and rolling hills of Ramapo Reservation and Harriman State Park with my friend Noel. We'd been friends since my third stint in first grade and by age thirteen were heading out into the woods with nothing more than hunting knives, a few steaks, sleeping bags, and my dog, with the intention of getting as lost as possible. Those adventures sustained me. I needed adventure: not vacation, not distraction, but true, meaningful adventure. We had some good ones. After getting lost in the woods together, we'd build a place to sleep out of sticks, sit up by the fire at nights, and scramble over mountains sometimes for days to find our way out. Through the glowing green summers, the oranges and

yellows of autumn, and through the bare frozen mountains in the lonesome winters we forged our navigational skills, resourcefulness, grit, and a powerful friendship.

Through middle school and freshman year of high school I broke all kinds of records for detentions and suspensions and made my way to each June feeling I had barely survived. By tenth grade I couldn't do it anymore. To keep my brain from atrophying I read books during class. I took refuge in historical figures who had also felt trapped or alienated by early education, especially the ones who were passionate naturalists like Teddy Roosevelt, Albert Einstein, and Ben Franklin. I read about people like Winston Churchill, Varian Fry, Jane Goodall, Alan Rabinowitz, and Steve Irwin; people who had sought adventure and purpose in life and had really *lived*. In the Shire of my world people went to the grocery store, discussed cell phone plans, golfed, and watched sitcoms. It was comfortable, clean, organized, and safe. Though I understood the privilege it was to live in a stable place so far away from the world's troubles, I wanted out. I didn't want to be safe; I wanted to have the shit scared out of me.

Around sophomore year of high school my grades deteriorated to the F range. I was failing. Things with my parents, whom I'd always been so close with, started to fall apart. They knew me well enough to know that if I failed, there was no way I was going to summer school, and then I'd just be a dropout. I was furious, depressed, and losing the only anchor I had ever had. The dinnertime laughter and warmth of childhood had been replaced by fights that rocked the walls each night. I remember wondering if things would ever go back to the way they were.

Being thrown against the wall by my science teacher was the end result of a yearlong battle of wills. I had been reading inconspicuously in the back of the room. Dr. Sherk had been droning on for the second period in a row when he stopped his lecture, walked toward me, and grabbed the

book from my hands. He returned to the front of the room and into an office space to stow the book. I followed. Inside the office, with the door closed, he held it behind him like a child playing keep-away. “I wasn’t disturbing the class, or affecting you in any way; give it back,” I said. He pointed his finger at me.

“Get out of my office.”

“Give it back.”

“Get out now or I’m calling security.”

“Fuck you, just give me the book!” I never expected all five feet and two inches of him to come King Kong across the room and grab me by the neck, but he did. I launched back and sent him across the room to the opposite wall, where I watched his face turn colors as I choked him. I wanted to bury my fist in his face. I was furious but on some level liked the feeling of excitement. What would happen if I did it? What if I just smashed his face with everything I had? Surely the cops would be involved, maybe I’d be expelled, but surely the monotony would be broken for once. That was all that mattered. I almost did it. But instead I released him and let him fall coughing onto the floor. Later he was fired for throwing a metal scale at some kid, I heard. But the incident scared me. I was losing my patience with life.

Not long after, I was wandering around the hallways and stopped by to see friends in shop class. There were wood and tools on every surface and sawdust on the floor. It smelled like my basement at home, where my dad did his woodwork. It was then that an offhand joke made by one of the nerdy-looking juniors halted me in my tracks. One guy botched cutting a smooth heavy piece of wood, and the junior started laughing, saying, “It’s a good thing we’re mowing down the Amazon rainforest so that we can dick around with wood in class.” Several of them laughed.

Those three syllables hit my ears like a flood: *Amazon*. I knelt and delicately lifted the piece of wood as though it

were some hallowed treasure and inspected it. As ridiculous as my fascination for the block must have looked to anyone watching, imagining that it may have *actually* come from the *Amazon* hastened the beat of my heart. An image of mist-shrouded jungle choked in vines and endless rivers, and a kinetic tingle of a long-forgotten dream, surged over me. *The Amazon.*

For the first time in years I remembered the photo of the scientists at the Bronx Zoo, and the sensation of walking through Jungle World. I remembered the hikes on rainy days with Noel when the forests were so dark and green I could pretend they were jungle. It was a piece of me that had been pushed aside amid the turmoil of teenage life, and was suddenly called back.

Whatever riches it is possible to possess in life, having parents who are behind you and who understand whatever it is that makes *you* is among the most valuable assets a child can have. As my grades dropped below the point of no return, and my total suspensions for the year hit double digits, my parents suggested I drop out and go to college. “Why not just take your GED and go to college?” my mom asked.

When classes finished in June it was the last time I’d set foot in high school. I never went back. I didn’t even tell the few friends I had. I just left. My mom and I would laugh together when at the start of what would have been my junior year, my high school was calling each day to report that I hadn’t shown up. By that time I had taken my GED and enrolled part-time in college.

No longer confined to a desk for eight hours a day, I felt free. I started working as a lifeguard at a YMCA in my town. I saved every penny I could and spent my free time contacting scientists and conservation organizations and combing the Internet for anyone who might need a researcher. But most researchers weren’t interested in an untrained high school dropout, and everything else was