

Peñas Blancas: A Chapter Book

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WRITER'S COMMENT: When Katie assigned our UWP 102G (environmental writing) class a feature article, I knew I wanted to write about my study abroad experience in Costa Rica. I wasn't sure of the exact story I needed to tell, but I sat down at my computer and typed, and luckily the story spun its own web. I ended up reflecting a great deal on nature's resilience and fragility—one of the most important lessons I learned on my trip. I would like to thank Katie for her encouragement and patience. Without you, "Peñas Blancas: A Chapter Book" would have never reared its tropical head. Also muchas gracias to Frank, Eladio, and others for sharing your beautiful country with me.

READER, I offer you this tale of a faraway land in hopes that it might instill in you the courage to jump up out of your chair, run out the door, and experience the natural wonders of the world. Go be crazy, go be free, go touch, taste, and learn! Pura vida.

INSTRUCTOR'S COMMENT: Madeline was one of the exceptional students in my Environmental Writing course in the spring quarter. The class was, in many ways, an experiment for me, as I sought to integrate the students' own research interests with various creative and professional genres of writing. The students were receptive to the often off-the-cuff tone of some of our discussions and in-class activities, and I was grateful for the humor and enthusiasm they brought to the course. When it came time for students to propose their topics for the final assignment—a feature article written specifically for a magazine or journal of their choosing—many students were immediately certain about what they would write about and for which publication. When Madeline, who had produced excellent work all quarter, told me she wanted to write about her experiences in Peñas Blancas, I knew she had a great subject. One of the pleasures of working with gifted students is watching them work through their brainstorming and drafting process. Madeline visited my office a few times to talk about her article; she didn't seek proofreading, but instead wanted to discuss her ideas. She struggled a bit to bring all of the pieces of

her story together, and I remember clearly a moment in which her face lit up, having figured out how she would organize the piece. Reading the final draft of Madeline's article was one of the high points of the quarter for me—and seeing how she incorporated her experience in Peñas Blancas with her knowledge of conservation was truly rewarding.

—Katie Rodger, University Writing Program

It was Spring 2011, in the middle of the Costa Rican dry season. Which struck me as slightly odd because it seemed to be raining more than I had ever seen in my life. But for the tropics, it was dry—a mere 15 inches poured down that June—and rain or shine, our group of fifteen students was forest bound. We were headed on a weeklong expedition into the dense jungle to Peñas Blancas to study tropical biology and were accompanied by none other than our own Ms. Frizzle, our charismatic teacher and friend, Dr. Frank Joyce, and our native guide, Eladio Cruz.

According to Enterostarica.com, Peñas Blancas is a 5,900 acre tropical reserve preserved on the southeastern slopes of the Tilarán mountain range, a new addition to the National Wildlife Refuge System. A disturbed site that is “not necessarily known for its biodiversity” with “less than superlative” wildlife viewing opportunities, this tropical reserve is still recovering, 30 years later, from massive deforestation and exploitation by logging companies (Anywherestarica.com).

The First Chapter

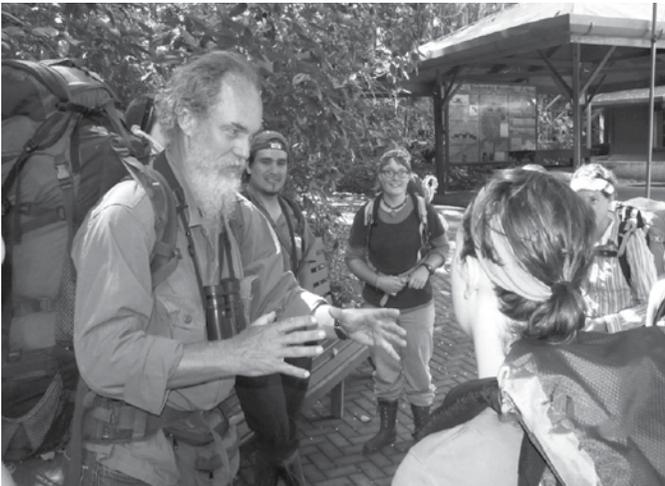
A long time ago, Peñas Blancas was a place where the wild things roamed. The big and the small, the two-toed and the eight-eyed, the odd and the outright bizarre all called Peñas their home. They nestled into the warm crevices of tree trunks, burrowed into soft soils, and swung delicately from the branches. They screeched, buzzed, and silently stalked prey. This jungle, teeming with life, was the epitome of wild—an untamable lush and dripping island of biodiversity, an opulent and ridiculously overgrown garden.

One day all that changed. Tempted by the forest's beauty and productivity, man sniffed out an opportunity to make money in Peñas Blancas, by taking the fragile ecosystem that belonged to no one. With surprising speed and determination, much of the forest was cleared for

logging and cattle grazing. The trees fought a losing battle with chainsaws and machines, their wooden stumps sticking out of the ground like severed thumbs. They eventually were sold for timber, and the land was trampled by cows.

Deforestation

The adverse effects of deforestation have been studied extensively in many tropical forests, including systems similar to Peñas Blancas in Costa Rica. Scientists have found time and time again that when deforestation occurs, we “gamble with consistency of climate and local weather, increase the carbon dioxide input into the atmosphere, threaten biodiversity, cause extinction, and undermine the value of critical ecosystem services like erosion protection, flood control, and pollination” (Butler). Once forests are completely logged, recovery is a long and slow process that in some areas takes hundreds of years. Peñas, only thirty years into recovery, is nowhere close to being the land that once nourished a complex ecosystem, housing endemic and rare species. A haunting admonition likens the deforestation situation to an airplane with bolts being removed as it hurtles across the sky. A fall is inevitable, but how long the plane will fly before it crashes to the ground, and which bolt will be the last, is uncertain. The same applies to deforestation: continue the removal of species from the ecosystem, and the entire stability of the food web is compromised. The collapse (in both cases) won't leave many survivors.



Above: Frank gives the students a prehike briefing.

The Journey Begins

We began our trek early in the morning and, after the normal prehike orientation from Frank, set off into the reserve. At first, we walked along a tired and well-travelled path, irreparably trespassed and compacted by the tires of logging vehicles. This forest felt more like a public park than an elite reserve. Like stray dog hosting a pack of fleas, the paths were infested with groups of tourists on birding expeditions looking through expensive telescopes and studded with bird feeders hanging on bushes to attract hummingbirds. Occasionally the path ran next to an obsolete metal pulley contraption, originally used for transporting logging supplies into the forest. Its rusting metal lines still snaked their way unsteadily through the forest, bobbing in and out of sight of the path.

We continued our trek, and, after half an hour, the rocks lining the path disappeared (along with the tourists), and we were no longer following trail markers. There was a collective feeling of relief and excitement, and I think we all knew we were entering the outskirts of the untamed forest.

The farther we went into the jungle, the more dense the forest became, and the more closed in we were by vegetation, the darker it grew. For hours, we walked in a dream-like state, through the heavy perfumed air and semidarkness of light filtered through the leaves, the forest alive with sounds. Eyes widened and cameras clicking, we attempted to capture the forest, to ingrain into our memories and sear into the back of our eyelids the gigantic leaves the size of car doors, the grounds blanketed with small white flowers from the trees above, the glittering bugs, and the camouflaged lizards.

When it seemed we were the farthest from other humans than we had ever been in our life, the jungle path spat us out into a cleared field, and we reached a very obviously human impacted spot—Alemn. We stopped in the cleared area and ate lunch in the grass by the river, welcoming a break. After our meal, the reserve guides bid their farewell and headed back to the trailhead. We still had a long way to go.

From here on out we were left with our teacher, Frank, and Eladio Cruz, master of the forest and tamer of the beasts, the quiet 60-year conservationist and entomology enthusiast.

Eladio is a spritely and nimble Costa Rican, whom even the mosquitoes respect too much to bite. He treks through the forest in flip-flops, bringing only binoculars and plastic baggies for insect collection.



Above: Giant leaves of a strange plant made us feel like tiny ants.

Never winded, he easily led our group, and next to him, we looked like a bunch of panting packrats in rubber boots, full-length pants and shirts, with bulky backpacks sticking out of us like oversized tumors.

Eight hours, one river crossing, two serious hills, and ten kilometers later, caked in mud and dripping in sweat, we made it to camp, a green abandoned refuge, raised above ground level, and bragging amenities like running drinkable water and mosquito nets, though no electricity. We

clambered up onto the raised platform and collapsed. The forest really had a way of tiring us out.

For the next week during our jungle residence, we hiked and studied the life around us. The majority of the time, the jungle was extremely moody and volatile, like a child throwing a tantrum. Our clothes were never dry (it was too humid for water to evaporate), we picked ticks from our bodies in all sorts of unmentionable places, horseflies were always squirming around in our food, and it always rained the one time we decided against bringing a jacket. But, despite all the grunge and lack of comforts, we loved the forest. With the mosquitoes came the birds with the most outlandish plumage, with the rains came the chirping frogs and toads, and out of the steep terrain and slippery mud came the oddest of plants. We were scientists, and it is hard not to wonder at the marvels of a tropical forest with jaws unhinged as you hold your first poison dart frog. We were enchanted every moment; we hiked, identified plant species, caught insects, and shared stories. We forgot that the forest was broken.

Fer-de-Lance

One night, over candlelight in the dining room (doubling as a study area, hang out room, classroom, and kitchen), face thrown into contrast by the flickering light, Eladio told a story that seemed too insane to be true. He was a young man, hiking through the forest with a group of friends, when he came upon a brown and mottled snake—a snake he thought was the non-poisonous mimic of the deadly Fer-de-Lance. He knelt down, ready to catch it, and it suddenly struck him in the hand. Eladio had been bitten by snakes before, and wasn't hurt, so he continued along the trail. Later, however, his friends noticed that Eladio looked weak and pale. He insisted that he was fine and continued hiking, but unbeknownst to the group, Eladio had been struck by a poisonous Fer-de-lance, and the venom was starting to work its way into his blood stream. Soon, Eladio started to demonstrate symptoms of the bite. He was having trouble walking, and blood was slowly oozing from the bite wound. Crimson droplets of blood were also starting to form on his nostrils and lips. He blinked, and something hot and sticky streaked down his face from his eye. Eladio had made a fatal mistake, and now his body was deteriorating. His friends recognized his condition and took immediate action—they knew Eladio had only a few hours to get to a hospital before his fate was sealed. One of his friends sprinted ahead to get help. Deep in the forest,



Above: Our home in the forest for the week.

Eladio had no choice but to hike back as far as he could make it, racing against time while his body slowly shut down. Eventually he passed out, and his friends carried him through the forest.

The Hike

On our last day Peñas Blancas, a small group of us geared up for an intense day hike to Laguna Escondida—the hidden lake—with Eladio. This hike took us farther into the jungle than we had ever gone before. We waded across a river, macheted our way through the forest, and got rained on—the icy precipitation dripping down our necks—and now and then were sucked into tenacious mud puddles. After two hours of hiking, we were pretty tired of scrambling up crumbling hillsides, tripping over roots, and following invisible paths. We pleaded with Eladio, how much longer? Just a little bit further, he coaxed.

Everyone was grumbling and had minds elsewhere to avoid thinking about the massive blisters forming on their Achilles, and I was following

along blindly too, when all of a sudden Eladio stopped and the hikers bumped into each other like a folding accordion. We all peered ahead, peeping over Eladio's shoulder like little ducklings. Our animal senses heightened and muscles tensed, not knowing what we were about to see. Eladio slowly raised a finger and pointed to the middle of the ground two feet away, right where he had been about to step. Like an invisibility cloak had been lifted, I suddenly saw it, coiled on the ground, as thick around as a man's arm, watching us. It was evil and majestic, a powerful predator, a master at camouflage, and king of the forest. It was a Fer-de-Lance. The four-foot snake considered us with its beady eyes. Its tongue flicked out of its mouth, tasting the air. Mesmerized, we backed away silently and, with hearts pumping, looped through the forest, giving the pit viper a much wider berth than it actually needed.

The Fer-de-Lance, French for "metal spear," is among the most



Above: The most venomous snake in Costa Rica, the Fer-de-Lance, camouflaged in the leaf litter.

venomous snakes in the world. It belongs to the family Viperidae, along with rattlesnakes, eyelash vipers, copperheads, cottonmouths, and other fanged snakes that strike their prey and inject venom to kill. These snakes have been known to spit venom up to six feet. People who are unlucky enough to get bitten bleed profusely from their eyes, nose, and mouth, and die if they do not seek medical attention within the next few hours. Despite its status as a common species in intact forests, it shocked us all to see a snake this big in Peñas Blancas. The recovering forest had surprised us once again, and we realized the forest had to hold an abundance of prey to support a top predator like this. Although decimated by logging, time and conservation continued to work their experienced hands in Peñas, and the human induced scars that once were deemed indelible were beginning to fade.

The Great Destroyer

Eladio had been wandering the forests of Costa Rica for most of his life, but had not always been a conservationist. As a young boy, Eladio would help his father clear the trees on their land for livestock. When the chainsaw was introduced, he said, “it was even easier, what would take a week to chop down a forest, could be done in a day. Without a doubt, I was a great destroyer of nature” (Monteverdenow).

Turning a Page

Eladio may once have been a great destroyer, but our Eladio was a healer. He irrefutably was a man who had dedicated his life to conservation. A man made up of bits of moss and forest vines and earth who plucked insects easily out of the air with his net, who knew all about the medicinal properties of plants, who told us stories about the magic of the forest, who had been brave enough to defeat death. Our Eladio was the shy Spanish speaking man who cooked us gallo pinto for breakfast every morning.

While we chose to push Eladio’s past out of our minds, I kept wondering why Frank had picked Eladio as our guide. Always trying to teach us subtle and not so subtle life lessons (when it’s yellow, let it mellow), perhaps Frank had picked Eladio because he was the next chapter in the forest’s story. Eladio represented the human impact, and at the same time the human restoration attempts on Peñas Blancas. He was a man shaped by what he had seen in the forest, and a lens for us to look through.

It was only through Eladio that the students could see the forest's whole story: the past, the present, and the future. Because he had seen more of the jungle than just about any other human, understood its fragility and its durability, had seen species become wiped off the earth completely because of human induced changes, traversed its mountains and valleys, discovered its new species of damselflies, Eladio was the one most intimate with the forest. Clearly, he was the perfect man to be our guide.

The Golden Toad

Another story shed light on why Eladio was such a ferocious conservationist. "When biologists came," he said, "I took them to see these golden toads (there were always these golden toads all over the place). I had been working in the [Monteverde] Reserve for many years, and every year I saw them, sometimes a lot, like three hundred or more" (Monteverdenow). The famous Golden Toad, endemic to Costa Rica, was first discovered in 1964 and was of immediate interest to herpetologists because of its unique mating rituals and because it is the only vividly colored toad in the world. Then, for reasons still speculated about, the toads began to disappear. Where a few years before there had been hundreds in a mating pool, there were only ten, and the next year, only one. The decline was sudden and startling. Eladio continued, "One time a friend and I were on a hike to collect plants, and it was the last sighting of the Monteverde Golden Toad. It hasn't been seen since" (Monteverdenow). A mere 20 years after its discovery, the Golden Toad, once used as a symbol of Costa Rican biodiversity, an endemic and important species, had been wiped off the earth completely. Eladio was the last one to see them.

The Golden Revelation

What's funny about conservation is the particular moment that defines your understanding. Eladio's moment may have been between him and that last Golden Toad. Perhaps it had spoken to him in its final little chirps. Maybe it was then he realized that, like so many others, he had contributed to the vanishing of the toad. Whatever the reason, he now dedicated his life to the forest's conservation and repair.

My moment (when we came across the pit viper in the middle of the jungle) may not have even been entirely mine—it was between Eladio and a snake—but in that second I, too, understood how profound and

resilient the forest was. For that second, all there was in the world was Eladio and the viper, the viper and Eladio, spinning round and round. There in my head they danced in the hot flames of irony, the same snake that had bitten Eladio as a youth, and had nearly caused his death, was again face-to-face with the man that embodied the duality of human impacts on Peñas Blancas. The destroyer and the conservationist. And this time, it chose not to bite him.

Like face planting suddenly into the mud, I was caught off guard by my new understanding of nature and conservation. Although we had seen snakes before in the forest, and even more beautiful and unusual things (like bioluminescent fungi) this moment really grabbed me. Why? Because this snake symbolized nature's resilience. Nature was not frail and fragile like I had once thought. It didn't want to wallow in misfortunes of the past. It was not a puppet controlled entirely by humanity, nor a falling golden empire past its prime—it could rebound in the most surprising ways. Nature was not something to pity, but rather a power to marvel and respect.

The snake demonstrated that when nature is respected—when one consciously decides not to pick up that viper and considers first why it would be horrible to chop down the forest—nature in turn respects you, and supplies you with unparalleled riches like spiritual wellbeing, resources, and ecosystem services.

But what about the Golden Toad? That creature seemed frail, easily picked off by global warming. And what about all the other endangered and extinct species?

Combining these opposing notions results in some sort of a truth: nature cannot be something entirely resilient (because it is affected by us), nor can it be something entirely vulnerable (because it wouldn't have persisted this long). It is a mixture in between, a dynamic turbulent force, both resilient and vulnerable, following no rules except simply to persevere.

Reforestation may have varying success rates, take decades, time, money, and people power, but it is a cause worth fighting for because it is possible. I have witnessed its successes in even my lifetime—a period infamous for global climate change, pollution, and habitat degradation. Although seeing a common snake is a small success, it was a milestone in proving that nature can prevail over obstacles if we only allow it to have the opportunity. Conservation really does work, and rainforests are worth protecting.

The Last Chapter

Although Costa Rica may be pint-sized and lack an army, in the last chapter of this story its people and government do a wonderful job defending their most precious resources. Using legislation instead of guns, dry forests, rainforests, and premontane forests are among the protected lands. Twenty five percent of Costa Rica has been given armor against human disturbances in the form of respected titles like “National Reserve,” “National Park,” and “protected area.” Many disturbed sites like Peñas Blancas are in various stages of recovery. And in this case, nature prevails.

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