



THE UNFORTUNATE TRUTH OF SUNSCREEN IN THE CLOUD FOREST

ISABELLE SEASE

“Hey look! I think I can finally see the sky!” my sister, Margot, laughed as we trudged through dense Costa Rican cloud forest. That meant we were close to the top. Finally, I thought. My feet burned and my entire body was drenched in sweat. Despite being completely sheltered from the sun by the thick rainforest canopy for the majority of our hike, the heat was suffocating. As we made our final ascent, the canopy thinned, and we were blasted by the sweltering mid-day sun.

“Gosh! What a beautiful day!” my mom exclaimed. “Not a cloud in sight!” She was right; the sky was a bright shade of vibrant blue and despite the heat, I was happy to have escaped the rain.

As I peered out over the ridge at the top of the mountain, my heart began to pound. A vast network of trees and dense vegetation spanned my vision. I stood there quietly, listening. A soft breeze brushed against my face, comfortable and warm. Sounds of life saturated my ears. The air seemed to vibrate with the buzzing of insects; frogs croaked, birds screeched, and even the trees seemed to tremble with sound. Yet, the earth remained still. The forest below me felt infinite, untouched by the human hand. It reminded me of the images I had seen in textbooks of the Jurassic era: a world filled with abundant life and imminent danger. A time when reptiles ruled the land, and the idea of humankind was merely a fantasy. As my mind wandered to the unknown, a feeling of uneasiness crept over me. What exists within the impenetrable forest below? I looked for signs of human activity. None. Aside from the few trails that lie within the forest, the rest was virtually undiscovered. The forest seemed endless; one misstep and you’d be lost forever. Even so, I was unquestionably drawn to the boundless greenery in front of my eyes.

The cloud forest made me feel small, weak even. Standing atop the mountain, I was completely vulnerable. I had little control of the earth below me, a feeling somewhat unfamiliar in days of technology and suburbia. For my whole life, I felt as though I had power over my surroundings. But here, in the middle of the cloud forest, I was defenseless, and while daunting, it was also peaceful. I found comfort in



the idea of my own insignificance, realizing that my problems were trivial in a world so vast. The blisters on my feet and the smell of sweat permeating from my t-shirt did not matter, at least not here, in the face of the majestic cloud forest. Although I didn't know it at the time, I had just experienced a glimpse into the sublime.

Alain de Botton, British philosopher and founder of the "School of Life," describes the general consensus of the sublime to be "by virtue of their size, emptiness or danger, a variety of hitherto unconnected landscapes [...] such places that provoke an identifiable feeling that [is] both pleasurable and morally good."¹ In other words, the sublime consists of vast landscapes that arouse the mind to feelings above human comprehension, a pleasant mix of fear, wonder, and peace. However, the definition of the sublime is, as most things are, complex. De Botton explains how in the eyes of eighteenth-century Irish philosopher, Edmund Burke, "sublimity had to do with a feeling of weakness [...] a landscape could arouse the sublime only when it suggested power—a power greater than that of humans, and threatening to them."² Meaning, that in order for a landscape to evoke feelings of the sublime, it has to make the person feel small and insignificant in the process. Not in a humiliating way, but in a way that demands awe and respect. Sublime locations have the power to show us how our creation was at the hands of something greater than us, a higher power, a force that continuously reminds us of our own fragility and insignificance.³

In the case of the cloud forests, the vast network of trees reminded me of my own insignificance, not in a malicious way, but rather it returned my ego to a humble state. It helped me to understand my place on this earth, allowing me to accept the things that I cannot control, and find peace within the frenzy of life.

"Honey, do you want any sunscreen?" my mom called from below, jolting me out of my stupor. While annoyed, I was also grateful. My back was already the color of a ravishing sunset due to my own ignorance on a hike the day prior.

"For being in a cloud forest, there aren't many clouds," a

1. Botton, De Alain. *The Art of Travel*. (Pantheon Books, 2002), p. 163.

2. Ibid.

3. Ibid.

man standing behind us joked. We awkwardly laughed, but unfortunately, it was the sad truth.

Cloud forests portray very unique geographical and climatic features. They exist within higher elevations of tropical regions and are sometimes called montane forests. Their distinct weather patterns are a result of moisture-laden air currents from lowland oceans that move up the mountains, cooling and condensing as they rise, due to colder temperatures as elevation increases. Subsequently, areas become enveloped in consistent cloud cover and high rates of precipitation.⁴ The unique weather patterns in the cloud forests yields an abundance of fascinating biodiversity ranging from epiphytes to venomous snakes. Although these cloud forests make up a small percentage of Earth's landmass, they generate a significant portion of the world's biodiversity.⁵

Unfortunately, due to the planet's warming temperatures, we are seeing a significant decrease in the cloud cover. Species that previously occupied lower elevations are beginning to migrate up to areas that have a more temperate climate, and species that relied on the previously cooler environments in the cloud forests are beginning to die off as temperature rises and precipitation decreases.⁶

Although we often hear about the bleak futures of our cherished natural landscapes, we rarely see the sad truth. Artist Hannah Rothstein creates a visual depiction of the future of our national parks through her collection National Parks, 2050. These pieces illustrate our national parks as toxic wastelands, juxtaposing our current lush and vibrant parks with images of stark and desolate landscapes. In the posters for Yellowstone National Park, Rothstein illustrates one poster with a robust geyser and bright colors, including the words "Nature Walks, Field Trips, and Campfire talks," shedding light on the aspects of national parks that we are so accustomed to.⁷ In the other Yellowstone National Park poster, Rothstein il-

4. Helmer, E.H., et al. *Neotropical Cloud Forests and Paramo to Contract and Dry from Declines in Cloud Immersion and Frost*. (PLOS ONE, 2019).

5. Oliveira, Rafael S., et al. *The Hydroclimatic and Ecophysiological Basis of Cloud Forest Distributions under Current and Projected Climates*. (Annals of Botany 113, 2014), pp. 909-20.

6. Oliveira, Rafael S., et al. *The Hydroclimatic and Ecophysiological Basis of Cloud Forest Distributions under Current and Projected Climates*. (Annals of Botany 113, 2014), pp. 909-20.

7. Rothstein, Hannah. "National Parks 2050." Hannah Rothstein n.d, <https://www.hrothstein.com/national-parks-2050>.



illustrates the remnants of a geyser and a grizzly bear whom you can see virtually all of its ribs. The coloring in this poster is darker as well, using more greys and muted colors to depict the overall mood of the environment. The words in this poster are “disappearing geysers, dying trout, and starving grizzlies,” providing a rather grim feeling to the piece.⁸ By placing both depictions of Yellowstone side-by-side, Rothstein illustrates humanity’s effects on the environment as we enter a new era of life through climate change. She instills a sense of horror and fear into the viewer through the sheer vastness of the environments, which could fall into the category of the sublime—yet through a different understanding of it. Rather than depicting the sublime through the more common definitions, Rothstein can create visualizations for a new understanding of the sublime: the toxic sublime.⁹

Jennifer Peeples, an associate professor in the department of Languages Philosophy and Speech Communication at Utah State University, describes how the toxic sublime refers to “the tensions that arise from recognizing the toxicity of a place, object, or situation, while simultaneously appreciating its mystery magnificence and ability to inspire awe.”¹⁰ In other words, the toxic sublime is a result of the intense emotions inflicted by beautiful places that have been altered due to toxicity and pain, leading to the similar feelings of wonder and fear that the typical sublime invokes. The idea of the toxic sublime is fairly new, however that doesn’t undermine its relevance. As climate change rapidly alters the planet, the toxic sublime is inevitable for the most fragile and cherished locations, such as the montane cloud forests.

I thought back to our nature tour the day prior. The guide explained how climate change is driving the clouds away because the temperatures on the mountains are too warm for the water to condense, leading to a much drier rainy season. Even more so, these changes are happening rapidly. He told us that the rainy season shortens by about one week every year. “When I was a kid, we rarely saw the sun during the summertime, now, the sun is out every day,” he said somberly, “I fear that even my own children will never experience the cloud forest in its full beauty during their



lifetimes.” It seemed as if he were going to cry. “They are saying that these forests may not even be around in fifteen years or so.” I looked around, trying to grasp what he just said. The forest surrounding me was teeming with life. Moss wrapped almost

every surface and the buzzing of the cicadas was deafening. Fifteen years. That is shorter than my own lifetime. In fact, I was starting school fifteen years ago. In the grand scheme of our planet, fifteen years is nothing, and for forests that have existed since before humankind, the loss is devastating. Climate change is occurring at an exponential rate in virtually every ecosystem around the world, and we are running out of time to stop it.

The World Meteorological Organization released staggering results in their most recent climate report. WMO researchers explained how “there is about a 40% chance of the annual average global temperature temporarily reaching 1.5°C above the pre-industrial level in at least one of the next five years—and these odds only are increasing with time.”¹¹ Given that global temperature increases are happening at an exponential rate, we are headed down a very grim, potentially catastrophic path.¹² In fact, scientists from the United Nations explain how the accumulation of heat in our atmosphere has “propelled the planet into uncharted territory, with far-reaching repercussions for current and future generations,” a terrifying fact for humankind, especially for us young college students.¹³ For the last 11,700 years, our planet existed in the Holocene, an era characterized by abundant growth and relatively stable temperatures. However, as human activity has ravaged the earth, we have moved into the Anthropocene: the era of the unknown.¹⁴ WMO Secretary-General Petteri Taalas describes how “increasing temperatures mean more melting ice, higher sea levels, more heatwaves and other extreme weather, and greater impacts on food security, health, the environment and sustainable development,” illustrating the interconnectedness of the systems on our planet and how our actions will ultimately affect every aspect of life.¹⁵ Unless

humankind significantly changes our actions immediately, the fate of the earth and

8. Ibid.

9. Bergman, Nicolas T., and Briwa, Robert M. *Re-envisioning the Toxic Sublime: National Park Wilderness Landscapes at the Anthropocene*. (Annals of the American Association of Geographers 111, 2020), pp. 889-99.

10. Peeples, Jennifer. *Toxic Sublime: Imaging Contaminated Landscapes*. (Environmental Communication 5, 2011), pp. 373-92.

11. *New Climate Predictions Increase Likelihood of Temporarily Reaching 1.5 C in next 5 Years*. (World Meteorological Organization, 2021).

12. Ibid.

13. Ibid.

14. *Anthropocene*. (National Geographic Society, 2019).

15. *New Climate Predictions Increase Likelihood of Temporarily Reaching 1.5 C in next 5 Years*. (World Meteorological Organization, 2021).



its inhabitants will cease to exist as we know it.

The acceleration of climate change is sort of like running down a hill. At first, you gain momentum. This period is great, you're moving fast, but still totally in control—such as the time when humans first discovered the magic of fossil fuels. But, with every step, that momentum builds. Factories are assembled and the air becomes polluted. As you begin to run faster and faster, you begin to lose control, which is exactly where humanity stands right now. Species are dying, the climate is changing, but we still have a chance. However, if you don't begin to slow down, face planting is inevitable, and there is no telling what the damage will be from there. Humankind stands on the threshold between control and destruction. Former General Assembly President of the United Nations, María Fernanda Espinosa Garcés, describes how “we are the last generation that can prevent irreparable damage to our planet,” warning that we only have 11 years to prevent catastrophe.¹⁶ Humanity is losing control, and if we do not act immediately, the survival of our species is extremely uncertain.

The sublime is often related to ideas of control, or rather, the lack thereof. De Botton explains how the sublime calls us to recognize that “the universe is mightier than we are, that we are frail and temporary and have no alternative but to accept limitations on our will,” meaning that in the face of the universe, we are utterly powerless.¹⁷ However, as humanity builds more cities, cuts down more forests, and pollutes more oceans, we begin to harness the landscapes that were once considered to be completely out of our control.

When the original theories of the sublime emerged, philosophers categorized powerful landscapes as sublime because they elicited senses of wonder and fear due to their sheer size and magnificence; a fear that often resided within the lack of power. They never would have predicted that one day, humanity would have the ability to destroy these vast expanses at such an abominable rate.

However, due to the powers of extensive capitalism and modern-day technology, the places that were once regarded as sublime are now becoming toxic wastelands. Although the idea of the sublime will continue to live on through centuries, it may only exist within its toxic version. In an attempt to control what was once out of our control, we lost control of something even greater: ourselves.

Humans have tirelessly manipulated the environment to fit our needs, harnessing the resources of the natural world and leaving destruction in our footsteps. As climate change hurdles towards us at an astonishing rate, we are losing what made us: mother earth. As time moves on, the nature that gave us the resources to prosper will cease to exist, and humankind will be left with somewhat of a shell of what once was.

—Our planet has provided us with the food to nourish our bodies, the mystery

16. “Only 11 Years Left to Prevent Irreversible Damage from Climate Change, Speakers Warn during General Assembly High-Level Meeting” *UN Press*, 2019.

17. Botton, De Alain. *The Art of Travel*. (Pantheon Books, 2002), p. 163.

to nourish our minds, and the beauty to nourish our souls; and without that, we are nothing. The sublime reminds us of our own humanity, but as we destroy the planet and lose our understanding of the beauty within the sublime, we begin to lose ourselves.

On my last day in Monteverde, I finally got to experience the cloud forest in its true glory. Standing atop a lookout, fifty feet above the lush greenery, I truly felt alive. The air was fresh and cool, smelling slightly of moss and fruit. The far reaches of the forest were hidden, veiled by the dense, opaque clouds that consumed us. They encircled my body, moving in and out with the natural flow of the air. The swollen, incandescent beasts produced a fierce howl, unlike anything I had ever heard before. The wind pierced through my thin jacket, sending shivers down my spine. Its menacing cry echoed through my ears, dominating every conversation; I had to scream to be heard. The wind, similar to climate change, is powerful, invisible, and remains unnoticed until the damage is already done. I close my eyes. Listen. Feel. Breathe. The earth below me dances to the song of life, but slowly but surely, gets drowned out by the cry of the wind. ☁

