

A DEDICATED MECHANISM FOR FORGETTING:

Fiction and the Ghosts of the Plantationocene

By

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Submitted to the
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in partial fulfillment of the requirements for the degree of

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Abstract:

A Dedicated Mechanism for Forgetting, narrates the process and research behind the films *Botanical Ghosts* and *The Density of Breath*, expanding on two years of my artistic research and practice. Part fiction, part epistolary exchange, *A Dedicated Mechanism for Forgetting* is a meditation on conceptions of vision and sensitivity to light beyond anthropocentric views. Narrating the story of Dorothy Hughes Popenoe and her encounter with the fruit of the Ackee Tree (*Blihia Sapida*) at Lancetilla Botanical Gardens, the project retells histories of plant transportation and botanical exchange in the north coast of Honduras through the lens of plant agency, filmmaking, critical plant studies, and magic. Utilizing this approach, this thesis locates itself within recent botanical and speculative turns and points towards the potential of a vegetal configuration for art practice and fictioning.

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See you on the other side my Tajijis, Bucetinhas and Goth Freaks.

PRELUDE

What comes after this page is both fiction and autobiography. It's a love letter, and a manifesto. It's a coalescence of human and more-than human desires, to propagate, to memorialize, to see, to not forget and be forgotten.



Fig 1. Stills from the introduction to *Botanical Ghosts*, 2020.

A FICTION ON WHAT WAS ONCE DOROTHY

I was buried beneath the cemetery at Lancetilla Botanical Experimental Station in Tela, Honduras in 1932. I'm writing to you, so you can remember, so you can build worlds and tomorrows by not committing my same mistakes. I can only tell you what I know, and what I have learned after centuries of communing with the soil and the critters beneath.

I was buried near the palmariums. The valley of Lancetilla had been cultivated and engineered for hundreds of years before we arrived, before the people who lived there had settled. Let me tell you about the worlds within worlds that came from Lancetilla. This has always been a place of death, where bodies were fed to the soil and then proceeded to becoming and transforming. In order to ensure the formation of the acres upon acres of plantations in the coast of Honduras, we chose to accept the death of many things.

In the soggy marsh of the plantation, everything makes love. Everything consumes everything, then it returns and releases. To summon the specters that are buried in the marshlands and the jungle requires an act of necromancy and magic. A specter is that which leaves behind an imprint whose frequency cannot be sensed with tools for quantification. Rather, it requires a sensibility to speak to the inanimate and the dead, and the living things that are considered dead but aren't, and the persons whose animacy has been obscured and undermined by structures of power and dispossession.¹

¹Influenced by John Akomfrah's interview on Hauntologies, where he discusses his process and thinking behind his films, in particular "Peripeteia." Barbara Rodriguez Muñoz and John Akomfrah, "Interview with John Akomfrah on Hauntologies," *Carroll Fletcher, Psyche Series*, 2012, https://www.carrollfletcher.com/usr/library/documents/john-akomfrah/cf_brm_ja_in_conversation_hauntologies_publication_2012.pdf.

To accommodate for the world we were about to build, we burned a billion graves, leveled, razed to the ground, cemeteries within cemeteries of microbial subjectivities and vegetal life, ecological networks that must now must parlay an imbalance in the systems that have been disrupted. Things that once slept, now have awakened. Whose life do we choose to mourn? Whose deaths do we then memorialize?

All of these things are the ghosts of the Plantationocene.²

² Donna Haraway and Anna Tsing, *Reflections on the Plantationocene* (Madison, WI: Edge Effects Magazine, 2019), https://edgeeffects.net/wp-content/uploads/2019/06/PlantationoceneReflections_Haraway_Tsing.pdf.

Dear Dorothy,

I don't know how to begin. Perhaps I should begin by telling you that I'm deeply puzzled by my own reasoning behind writing to you. I've been meaning to write for a while. You will never be able to respond, and yet I find myself imagining your reaction to my letters, and how perhaps you might have composed a reply, lyrical writer as you were. You never knew me, but I became familiar with you through your writing, through the letters you wrote to your sister, your husband, and your kids. I read your essay on the Theory of Life, found your photo albums, and also own a copy of your book.

It's a bit far fetched, isn't it? To write to someone who is no longer living. No one really teaches you how to introduce yourself to a ghost. I'm writing to you nearly a century after your death, during a period of deep isolation and global upheaval.

You were a brilliant archaeologist and botanist, and from what I gathered from your loved ones, a gallant and colorful character. I'll admit I'm not sure of the purpose behind these letters, but I hoped to share an account of what I learned from you.

Until next time, Dorothy.

N

Fig 2. First Letter, From Letters to Dorothy, 2019-2020.

A FICTION ON BURIALS

August 1924

Tela had grown on her, a bit like the surrounding jungle seemed to grow at alarming speeds around the perimeter of the property. She had expected her discomfort to extend to the rest of her time in Honduras, but she had quickly adapted. She seemed to have a knack for the Spanish language and had made quick friends with her neighbors and some of the workers at Lancetilla.

She had spent the last few weeks knee-deep in the excavation of the new site where the experimental station was to be founded. During the beginning stages of the levelling of the site for the main laboratory buildings, some of the workers had found what looked like remains and shards of pottery. They immediately ceased digging and had called for the local priest to come and bless the site as well as the laborers who had found the artifacts.

There seemed to be an unspoken understanding between them that these things were best left untouched and remain buried. To her scientific mind it was their only opportunity to study the history of the site that this project would occupy. Being able to contribute to these histories that often were left unwritten didn't come along often. She was determined to prove herself. Tela was like a tabula rasa for her, what she perceived to be a land untouched.

SPECIES (INTRODUCTION)

How do I introduce myself to a ghost? How does a plant greet its new host after traveling a thousand miles on a ship? This thesis is largely an epistolary exchange and small biographical fictions written over the course of two years. I decided to write letters to Dorothy Hughes Popenoe, the character I've been studying for the last year of my Masters studies at Massachusetts Institute of Technology. I admit I became somewhat obsessed with her and her story. I think of this work as a collage, each section feeding into another, but not following a linear order. Throughout the text, my letters to Dorothy and the narratives from her life are the driving mechanisms through which this story will be told.

This thesis is not an attempt to monumentalize histories, but rather an unapologetically undisciplined meditation that grapples with both fiction and practice. *A Dedicated Mechanism for Forgetting* is an offering for botanical imaginaries, and a meditation on my art practice as a metabolism through which stories produced an internal becoming.^{3 4} I spent my time in the program in Art, Culture and Technology at MIT attempting to articulate a practice around searching, uncovering and speaking with these specters. This thesis reconfigures histories of plant transportation and botanical exchange in the north coast of Honduras. I'm locating this work within recent botanical and speculative turns in contemporary art that point towards the potential for a vegetal configuration for practice and fictioning.

My practice is an amalgam of filmmaking, installation, writing, and photography. Primarily image-based, my curiosity is less about images themselves and more so about the desires that lay behind seeing, memorializing, fixing, and preserving. However, engaging with botanical representations, archival material, and non-traditional photographic practices provided a useful departure point for the narratives I was encountering. I found a modality of working with representations (images, film, archive material) that allowed for other perspectives and modes of thinking to complicate the historical narratives I was grappling with. Beyond the

³ This title emerged from reading the following article after one semester my colleague Hsurae Ping and I shared custody of a fruit fly colony. After reading on the theory of fruit flies and forgetfulness, I was drawn to the metaphors of parasites and pests in fruit as part of the beings that accompany plants in their migrations. Robert Urbanczik and Walter Senn, "A Normative Theory of Forgetting: Lessons from the Fruit Fly," *PLOS Computational Biology*, June 5, 2014,

⁴ Metabolic here refers to both the chlorophyllic relationship between plants and light and also the notion of a "reaction" or "transformation" that can be physical, relational, or chemical in an unfixed or transforming image.

purely technical operations of the images, I was able to situate myself within a lineage of work that draws from poetry, lyrical texts, history, memory, and spectrality.

My engagement began in 2018 with my first visit to Lancetilla Botanical Gardens, an early twentieth-century botanical experimental station whose legacy involves the import of various plants from all over the globe into Latin American ecologies. Nested in the valley of Lancetilla, it contains hundreds of species of fruit trees, palms, herbs, and spices from all over the world. It's now a visitor center where people can tour the extensive grounds. While nowhere near as active as it was in its heyday, research is still being done in the site through the National University of Forest Sciences (UNACIFOR).

In many ways, my position has been that of an in-between observer gazing through a kaleidoscope at fragments that refuse to be untangled. I was introduced to the site, as many of the beings planted there once were. Another life form who passed through the microclimates of Lancetilla Valley and was forever altered cognitively, neuronally, relationally.

For my work, I turned to notions of the spectral and ghostly, toward fictioning and critical plant studies.⁵ This thesis largely centers the story of the migration of the Ackee fruit, and how it arrived at Lancetilla Botanical Experimental Station in Honduras. The migration of the ackee fruit makes contacts across multiple geographies and temporalities, revealing the processes behind various ethnic and cultural frictions in Honduras. From the transatlantic slave trade to the establishment of plantation regimes, it seeks to expand the histories of agriculture that have become dominant narratives of the region. Among the specimens are various species native to West Africa, including the Ackee tree (*Blighia Sapida*), whose stories of global movement have been obscured by the networks of economic botany that will unfold in a later chapter.⁶

Part I of this thesis tells a short account of Dorothy Popenoe and her husband Wilson Popenoe as they helped establish Lancetilla , an overview of United Fruit Company and semi-autobiographical notes on my experience in the region. Part II is a dissection of my practice and various projects, their theoretical frameworks and a proposal for an expansion of the photographic lineage to include photosynthesis.

⁵ The term *fictioning* as a verb refers to the central theme in Simon O'Sullivan and David Burrows' latest work, which points to the writing, imaging, or creation of worlds that exist outside of dominant modes of thought. Simon O'Sullivan and David Burrows, *Fictioning: The Myth-Functions of Contemporary Art and Philosophy* (U.K.: Edinburgh Univ. Press, 2018). p1.

⁶ John Rashford, "Those That Do Not Smile Will Kill Me: The Ethnobotany of the Ackee in Jamaica," *Economic Botany* 55, no. 2 (2001): 190–211.

Collaged between chapters in no particular order are a series of fictions and letters that were written over a year as I finished my time at MIT.

I'm locating this work within Donna Haraway and Anna Tsing's framing of the Plantationocene, a term that has been crucial in formulating the locus from where my practice deperated. A question for me was, who gets to experience which "-cene" and why? Who experiences the Chthulucene, the Capitalocene, the Anthropocene?⁷ I chose to begin a dialogue with the worlding that surrounds Honduran plantation worlds as the site from where my conversations are taking place, which will be discussed in Part I of this thesis.

Throughout this paper I will be deploying Macarena Gómez-Barris's term "submerged perspectives," referring to the different social and biological arrangements in the plantations of Honduras, whose vibrant perspectives continue to be obscured behind extractive capitalism. I'm connecting these infra narratives to both human and more-than-human relations as a way to expand the existing epistemic framings of Honduran plantation histories.⁸ In addition, Achille Mbembe provides the framing for the politics of death in the plantation through necropolitics, while Elizabeth Povinelli's geontopolitical framework provides a site to re-negotiate our conceptions of the living.

⁷ Donna Haraway, "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin," *Environmental Humanities* 6, no. 1 (2015): 159–65,

⁸ Macarena Gómez-Barris, *The Extractive Zone: Social Ecologies and Decolonial Perspectives* (Duke University Press, 2017), 1.

PART I: UNDISCIPLINARY HISTORICITIES

Dear Dorothy,

It's strange to be writing to you in 2020, to express wonder at the various interests and desires we share despite being cultivated under different worlds. I recently visited Peabody Museum which houses the collection of your photographs and artifacts excavated from Lancetilla. As I finish my time as a student in Cambridge, Massachusetts, I think of the places you frequented here and the institutions that across time, marked both our lives. What is the likelihood I would find you here as well?

I wanted to share with you a bit of my family history and my motivations behind writing to a ghost. As a child, mornings in my house were marked by rituals of death, although no one ever explicitly told me they were so. The cracking open of windows, the rituals around the cutting of hair, the portents of the animals, and the blooming of rare flowers that were marked with a pencil on the kitchen calendar.

When it rained, we remembered. The smell of petrichor served as both balm and wound—a reminder of the circumstances which brought us to other shores and other seas. It's hard sometimes, to imagine ourselves young as we were, living in that house; the one that is no longer home. We still remember the cliffs and hideouts; memories of a childhood's worth of mapping the proximate and the familiar. Tiny taxonomies of rocks, shells, leaves.

Here is our favorite tree, these are the best branches to pick mango, and that is the best time to hear the song of the luminous bird. We learned from our grandmother to read the paths of the insects, and the white moss that isn't moss on the guava tree. We knew that April rain brings a blanket of insects that crawl inside our ear, and the migrant ants whose yearly visits invited the winds.

The moth, my grandmother's favorite prophet, would often visit with the same missive - to announce the coming of an ending. Our family, cursed with the gift of long lifespans, was deeply intimate with a kind of mourning that has nothing to do with burials.

Fig 3. Second Letter. From Letters to Dorothy, 2019-2020.

Only now do I realize how so many of our daily rituals were colored by the remnants of the non-living. It's here, at the crossing of these thresholds, that the world of the dead folds into my own. So you see dear Dorothy, at certain times of day we're not so far from each other. Sometimes, I feel as if you're sitting next to me.

Until next time,
N

Fig 4. From Letters to Dorothy, 2019-2020.

HARBINGERS

Wilson and Dorothy Popenoe were the key figures in the establishment of Lancetilla Experimental Agricultural Station in 1925 during the peak of “banana republics.” This is where I began tracing the route of the entry of the Ackee and other species into the region. Financed by the United Fruit Company, plantation economies expanded to various other sites in Latin America, and opened the doors for the expansion of Bananeras and agroindustries in the northern triangle.⁹ Lancetilla exemplifies the very American tradition of utilizing Latin American and Caribbean territories as laboratories for developmentalist and capitalist projects of the twentieth century.¹⁰

Initially, my intention was to study and document the remnants of a once formidable laboratory, one of the largest in the hemisphere at the time of its foundation.¹¹ I realized much later that this is a place that unfolds slowly, at a time scale that I still do not fully understand years later.

I was interested in Dorothy and Wilson Popenoe as figures in the botanical histories of Central America. In their attempt to emulate the botanical ecologies of Southeast Asia, mostly in the service of the United Fruit Company, the Popenoes facilitated the entry of various plant species from Southeast Asia and Africa.¹² Coming from Sri Lanka, Philippines, Indonesia and Ghana several of these new introductions became crucial for the production and extraction of materials like tinder, rubber and palm oil when trade routes and supply lines were cut off during times of conflict.

When I visited Lancetilla, no longer operating as the experimental station it once was, I realized how little I knew about these plant species whose origins I had taken for granted. They had traversed oceans and rivers and mountains, adapted to new climates, new seasons. Surrounded by trees with neurotoxic properties and fronds whose roots can make poison if brewed a certain way, I was struck by these strange yet familiar beings whose rhythms and movements seemed so different from my own.

⁹Mario Bucheli and Ian Read, “United Fruit Company - Chronology.”

¹⁰ Santiago Muñoz Arbelaez, “BANANA CULTURES: AGRICULTURE, CONSUMPTION, AND ENVIRONMENTAL CHANGE IN HONDURAS AND THE UNITED STATES,” *Historia Crítica*, 2009, 208–14.

¹¹ Frederic Rosengarten JR, *Wilson Popenoe: Agricultural Explorer, Educator, and Friend of Latin America* (Lawai, Kauai, Hawaii: National Tropical Botanical Garden, 1991), 101.

¹² Rosengarten, *Wilson Popenoe*, 102.

It never occurred to me to ask why I ate fruit like lychee and longan, picked from olive trees for soap making, and scouted for the pomegranates in the tallest branches of my neighbor's orchard. None of those things seemed out of place, since the cultural imaginary of Honduras and its mythology of the banana republic glorifies biodiversity and agricultural potential.¹³ I had the opportunity to speak to someone whose uncle worked there, and it was clear from what he had shared with his family that his experience in Lancetilla had been one of wonder.

The territory is seen as ripe, fertile—a perfect site for the production and expansion of extractive agriculture. This imaginary that constructs the Honduran landscape as fertile allowed several generations to live comfortably with the ideologies that allowed extractive agriculture to flourish. The race for land expropriation and large-scale agricultural production set the stage for what would become the decline of Honduras' agricultural economy decades later.

¹³ *Emergency in Honduras*, Digital Transfer from Black and White Film, Newsreel (U.S. Office of the Coordinator of Inter-American Affairs, 1945)



Fig 5.

Still from a newsreel by the U.S. Office of the Coordinator of Inter-American Affairs titled *Emergency in Honduras*, ca. 1945.¹⁴

¹⁴ This newsreel was an interesting piece of historical propaganda, released around 1945 at the height of United Fruit Company's activity in the region. Post World-War II it attempted to paint Honduras as an ally whose natural resources the U.S. depended on for success in the war. It documented the creation of the infrastructure that connected the ports to the Banana plantations. The development of this railroad was the result of one of several concessions made by the Honduran government to a foreign/transnational entity at the time. *Emergency in Honduras* (1945).

Dear Dorothy,

Perhaps you'll be happy to hear I recently found your photo album in an archive at Hunt Institute. I was deeply moved to look at your pictures with friends and loved ones, especially the ones with your young children.

I feel like I know you and yet... I still do not know whose ghost you hoped to become, but you became mine. Not a poltergeist, but a shadow, as you wrote. "*A murmur among the creepers, though there be no breath of wind.*"

I spent some time with your correspondence. In your letters to your sister, you wrote about all the things you did for love, and out of love. I read them and re-read them until the meaning of words dissolved and your handwriting became a cipher for recovering all the things I had forgotten. In my roundabout pursuit of you, I found myself haunted by your words, by the things that were never recorded or documented, but whose absence I clearly felt.

Here's how I imagined one of our conversations if you were to one day answer my call: I would ask you if you thought that soil contained memories. You then answered if it could remember, then we would eat all the lifetimes it had consumed. I asked what was your favorite food and you would give me a cheeky response.

The underlying message would be the same—you could tell the entire history of the world in a single tree at the orchard of Lancetilla. So you see dear Dorothy, I must confess I've made up a whole version of you in my head. One that keeps growing and expanding as I learn more about you. I hope you'll forgive my little fictions, as you yourself were fond of telling your own.

With admiration,

N

Fig 6. Third Letter. From *Letters to Dorothy*, 2019-2020.

DEPARTURES / ARRIVALS / FLUX

Honduras is a territory that relies on chaos, political contradictions and precarity for its survival. It's a country of immense biological diversity, of hybridity, and liveliness, but simultaneously marked by loss, corruption, and an extractive dependence on itself.

These paradoxical relations are the conditions under which the state was formed, and under which it now precariously lives. I often ask myself, what constitutes a motherland, a home, a place of birth once its contradictions have been uncovered? Beneath the veil of Honduran cultural identity lies a state that handed over the administration of its arable land to transnational companies, a site of enormous botanical experiments that would affect global agricultural practices, create a nexus of transportation, and build a bridge of impossibilities and hybridizations.¹⁵

I haven't lived in Honduras for a long time, although I visited as often as I could. I left to continue my studies in the United States at 16 and spent the following decade in and out of both countries. The changes that occurred over the decade I spent abroad were visible to me only in fragments. Every encounter with this landscape held a new mystery, a new projection, a part of a puzzle with no images that for years has eluded a solution. As I wrapped up life as a student at the onset of the COVID-19 crisis, I was able to gain clarity about the purpose and urgency behind uncovering submerged histories of Honduras, even if the fragments of the story remained as such.

I returned the summers of 2018 and 2019 to do field research and documenting sites in the Ulua Valley and Lancetilla in order to trace the botanical histories that drove the establishment of the plantation regimes in the region. Despite being such a small territory, Honduras has functioned as a port for various agents and travelers, acting as a nexus through which vegetal matter would pass through to other destinations.¹⁶ Some would remain and transform the landscape, some would continue on to thrive in other soils, all through the networks that constitute a planetary flow of matter and energy.¹⁷

¹⁵ Marcelo Bucheli and Ian Read, "United Fruit Company - Chronology," United Fruit Historical Society, accessed January 27, 2020, <http://www.unitedfruit.org/chron.htm>.

¹⁶ Arturo Wallace, "¿Cómo se convirtió Honduras en la 'república bananera' por excelencia?," *BBC Mundo*, accessed July 9, 2019, <https://www.bbc.com/mundo/noticias-america-latina-39693332>.

¹⁷ I credit my colleague Casey Tang for introducing me to various concepts that will be deployed throughout. His meditations on scales and networks contextualized my studies of botanical exchanges as part of a larger evolutionary flux of matter and energy that is constantly ongoing.

One of my most vivid memories of Honduras is driving up to the north coast during Easter week, where a massive exodus of domestic tourism would flood the beaches of Honduras from the larger cities. The single road that precariously connects the northern and southern hemispheres, created a bridge between north and south hemispheres. My notion of environment and geography was purely sensorial, relying on the painful popping of ears and cracking of jaws to determine an altitudinal change as the car traversed the mountainous landscape. The humidity that would accumulate in my forehead and nose signaled a shift in microclimates, and the distinct smells that characterized each region that operated as beacons for location.

During long trips to the north certain markers always remained clear to me; all of them derived from the different ecologies whose specters I witnessed only from the frame of the car window. Pine Forest, Valley, Pine Forest, Mountain, Mountain, Lake, Pineapple Plantation, Pine Forest, Sugar Cane, African Palm, Hill, African Palm, Mountain, Sugar Cane, Beach. Once we reached the perfectly gridded expanses of sugar cane, I knew we were close to our destination and would crane my neck from the back of a rusty Toyota pickup truck to get a glimpse of the Atlantic Ocean's horizon line.

As I made my way through that long road, I recognized that the landscape of my memories had changed significantly, and perhaps never existed. The plantations had crawled up the verdant mountains and hills that had previously housed jungles and forests; they were now occupied by smaller-scale farms that surrounded homes in the road-side communities but which are nonetheless necessary for their survival.

The vast majority of the common and seemingly open spaces in Honduras have become privatized and are now inaccessible to the average citizen. The lands next to this single road, Carretera al Norte, are mostly enclosed and primarily belong to the agricultural sector.¹⁸ The particular region I am focusing on, the swathes of arable land on the northern coast of Honduras and nearby Ulua Valley, currently house thousands upon thousands of acres of plantations.

I heard from my grandfather, who worked as a miner near the capital city, as a mason for the railroad construction, and in other infrastructure projects during the '30s and '40s, about the American investors and the travails of working as a laborer. An entire generation of young workers was defined and displaced by transnational companies and agribusinesses, largely controlled by American interests and

¹⁸ Tyler Shipley, "Enclosing the Commons in Honduras," *The American Journal of Economics and Sociology* 75, no. 2 (March 2016): 456–87.

international policy. The relationship between plantation economies and interventionist politics are part of my familial history, but also belong to a larger cultural consciousness and economic backdrop of this region.

The stories that I'm interested in telling are stories that take into account the bacterial, vegetal, mineral and chemical worlds that sustain plantation economies. The swathes of jungle and marshland that over time turned into places of sterility and quantification, are also homes to families, communities, and socialities. Through this alienation of jungle and marsh subjectivities, transnational companies were able to achieve almost total hegemony over Honduras by the mid twentieth century. Within a more personal realm, these works are also a biography of my family, whose stories of displacement and relationship to labor, loss, and trauma I constantly keep in mind. As an underlying theme in my practice, the language I use to work with movement and migration is changing even as I write this thesis.

My own story of migration is the result of the vibrancy of these infrastructures affecting my body, and those of my family. To echo my colleagues Hsurae Ping and Casey Tang's work on the multiplicity of beings and scales of thought, for a second I tried to reframe this movement: I am a legion of beings that has the privilege of participating in the planetary flux of matter. I see my diasporic condition as part of this flux. My animal body is built up from a scaffolding of cellular organisms, bacteria, flesh, hair, fluids.¹⁹ What I once considered to be a purely human experience, that of a migrating body that translates from one territory to another, shifted for me entirely. Migration is a pluriversal experience with political and ontological implications — as I move, so do the beings within me, outside of me, the remnants of touch in the form of soil, skin, sweat, and breath.

But not all bodies experience the same mobilities. I did not experience the violence that many Hondurans do as they attempt to cross borders north. I did not experience the rejection of refugee status, the denial of my humanity, or the violent theft of my agency. It's exactly here, at the epistemic gap between scalar thought and a multitudinous self, that the logics of migration, borders, and suppression of agency become quite muggy. In later chapters, I will address the crossing of migration between different scales of living, as it relates to soil and its co-travelers.

¹⁹ My colleague Hsurae Ping refers to this framework as the *multitudinous body* in her work on speculative empathy and I am deeply influenced by her thinking on new configurations of the self.

A FICTION ON HERBARIUMS

May 1925

One of Dorothy's greatest pleasures was sketching in the gardens. She had a select few spots overlooking the valley where she would sit and draw the jungle-covered hills, the matted vines and squirreling animals of Lancetilla. She had picked it up during her time at Kew, where there was no lack of inspiration. Tracing the work of botanists and naturalists of the eighteenth and nineteenth centuries, she had spent a great deal of time at the herbariums studying the plates and plant specimens from the tropics.

She found a way to make this her own, in her corner of the world, where no one could force her to conform to a certain style or form as everyone seemed to want to do these days. It was through these informal studies that she began to notice patterns and repetitions that would emerge among specimens. The persistence of these forms and their extraordinary qualities had changed something within her. Even as she pursued her own path, she sometimes thought that her life was a bit like a dream or a play that would repeat in front of her as she lay in her bed on the nights she couldn't sleep.

Those sleepless nights seemed to become more and more frequent. She was restless and would toss and turn in her sheets, damp with sweat that had simply become a staple of her reality since arriving at Tela. Late at night, if she thought about it too much, she thought she heard singing and whistling at night. She told herself she wasn't one to believe in spirits, especially not the ones that she heard about among the workers of Lancetilla. Instead, she tried to listen to the different frequencies of the crickets and the never ending cacophony of bugs at Popenoe house. Wilson, oblivious to her discomfort in his deep sleep, simply snored away.

PLEIN AIR LABORATORIES

In Lancetilla Botanical Gardens, there is a section at the back of the compound where a melange of palm trees of all shapes and sizes sway back and forth in the humid breeze of Tela. The Palmarium is easy to miss as there are various species of palm native to Lancetilla's microclimates; however, beneath the swaying leaves is the migration history of *Elaeis Guineensis*, or better known as the African Palm. In Wilson Popenoe's biography, it's made clear that possibly the biggest contribution of Lancetilla Botanical Experimental Station was the introduction of the African palm into the Americas.²⁰ Lancetilla was both the port of entry and laboratory through which various species were introduced into the region from all over the world.

Lancetilla Botanical Experimental Station was born at the peak of U.S. interventionist policies in 1926.²¹ The Popenoes would not see the scope or consequences of these botanical introductions and migrations that occurred at Lancetilla. What the era of the plantation did to the ecology of the Northern Triangle has reached a level of incommensurability that is difficult to articulate.

The control of political power, land use, and the creation of terrestrial and maritime infrastructure ensured the United Fruit Company's control over the region and, therefore, American interests. After acquiring several independently operating fruit companies in Honduras in 1899, a newly incorporated United Fruit Company began to import bananas from the Honduran north coast into New Orleans.²² Following a successful relationship between Central American governments and officials, transnational companies begin to receive land concessions and tax exemptions for local governments in Guatemala, Honduras, and Panama in exchange for the control of building transportation infrastructure and management of arable land.

After various interventions by U.S. troops in Honduras during the first two decades of the twentieth century, several coup d'états were orchestrated by fruit company magnates, organizing and financing military operations that replaced political leaders and presidents for land concessions, and the creation of company subsidiaries or tax havens for bananeras.²³

²⁰ Rosengarten JR, *Wilson Popenoe: Agricultural Explorer, Educator, and Friend of Latin America*, 102.

²¹ Rosengarten JR, *Wilson Popenoe*, 100.

²² Bucheli and Read, "United Fruit Company - Chronology"

²³ Bucheli and Read.

This would go on for several decades, as the fruit companies and their ever-expanding projects made their way across various territories in Latin America. It's a common phrasing to hear about political realms in the region where "nothing occurred without the approval of the United Fruit Company." In addition to the violence which operates at both a state level and biological scales, violence was also enacted upon the bodies of the laborers that worked under these plantation regimes. Bananeras defined several generations of young Honduran workers, including my own family members, who moved to Tela from all over the country from small mining towns and subsistence farming communities to work in the plantations.

Despite the fluctuating and often unprofitable nature of large scale agricultural projects, industry stakeholders continue to produce and extract nutrients, minerals, and microbial life from the plantation in order to sustain the state's frail economic infrastructure, which for a century has become dependent on the feeding of nations in the north.²⁴ It's through this reliance that any possible threat to the hierarchies of governance under neo-liberal capital are effectively nullified. In order for the plantation regimes to be established in Central America, there was an infrastructure for extraction in place beforehand which drove the economic and geographical growth of Honduras for many decades.²⁵ Its current infrastructure and urban planning were the result of the establishment of American transnational companies, such as Rosario Mining Corporation, Tela Railroad Co., and the United Fruit Company, and the subsequent establishment of "banana republics."

While Lancetilla's contributions to botanical experimentation and the development of agricultural processes is not to be undermined, the historical significance of this site lies largely with the creation of bananera imaginaries in the early twentieth century. The significance of the United Fruit Company as a force of American interventionism in the region cannot be underscored. As a vehicle for American power projection in the region, the United Fruit Company and its subsidiaries were satellite operations for American economic interest for at least half a century.²⁶ The massive ecological genocide that has taken place in Honduras in order to accommodate plantations is immeasurable. While the state continues to encourage and incentivize extractive agricultural practices, the forest and protected biosphere continue to shrink at an alarming pace.

²⁴ Sophie Sapp Moore et al., "The Plantationocene and Plantation Legacies Today - Edge Effects," *Edge Effects*, January 22, 2019, <https://edgeeffects.net/plantation-legacies-plantationocene/>.

²⁵ Muñoz Arbelaez, "BANANA CULTURES: AGRICULTURE, CONSUMPTION, AND ENVIRONMENTAL CHANGE IN HONDURAS AND THE UNITED STATES."

²⁶ Rosengarten JR, *Wilson Popenoe*.

NECROPOLITICS AND PLANTATION IMAGINARIES

Plantation worlds are the lifeblood of extractive capitalist projects, one of the streams of biological matter from the regions of high biodiversity in the tropics towards global nodes of control and consumption.²⁷ In Honduras, the largest node remains the United States. In this nexus, along with the forces of capital, various other desires become muddled. Who cultivates whom? I cannot tell if Hondurans cultivated plantations or if the plantations themselves created a force of laborers who care for them and ensure their survival. From my limited human perspective, I can only speculate on the plantation's desires; but if its will is propagation, then it has succeeded immensely. And yet, It's crucial to acknowledge the role of plantation paradigms that have been established and propagated through extractive practices.

In an essay part of the Plantationocene series published by *Edge Effects Magazine* at the University of Wisconsin Madison, plantations are described as a system "integral to the rise and growth of capitalism" produced through processes of racialized violence, alienation of land, and the extraction of resources and labor.²⁸ Within this structure, labor, capital, and violence coalesce to determine who profits from plantation regimes and whose lives are imperiled by it. Modern systems of plantations derive their structures of power and modalities of social and labor organization from legacies of forced migratory labor, including indentured servants and enslaved African people.²⁹ From the very beginning, these plantation logics have enshrined extraction of labor, resources, and the consumption of soil as relational models between the laborers of capital and the site from which living and non-living matter is extracted. Achille Mbembe's articulations of modern forms of terror and the state of exception through the lens of *necropolitics*, becomes a useful tool to analyze the structural forces behind modern plantation labor and the historical moments that produced them. Necropower as the driving mechanism beneath the necropolitical structures is what administrates the capacity to define who matters and who does not, who is disposable and who is not.³⁰

As necropower operates at various scales in Honduran plantations, the state seeks to decide whose lives will be tied to plantation structures, which species will be sacrificed so another can flourish, whose death becomes an acceptable loss to the state. It's undeniable that the people whose livelihoods have been forced into precarity are

²⁷ Sophie Sapp Moore et al., "The Plantationocene and Plantation Legacies Today - Edge Effects," *Edge Effects*, January 22, 2019, <https://edgeeffects.net/plantation-legacies-plantationocene/>.

²⁸ Moore et al.

²⁹ Moore et al.

³⁰ Achille Mbembe and Libby Meintjes, "Necropolitics," *Public Culture* 15, no. 1 (n.d.): 26.

disproportionately Honduras's ethnic minorities: the afro-descendent Garifuna people, and the Indigeonus populations like the Lenca, Maya Pech, Miskitu, and Tawakas.

In the United States, plantation narratives are inextricable from the legacy of Slavery. Mbembe writes that slavery “could be considered one of the first instances of biopolitical experimentation. In many ways, the very structure of the plantation system and its aftermath manifests the emblematic and paradoxical figure of the state of exception.”³¹ This legacy cannot be ignored as having effects that ripple in Honduran history and today, even though in many ways it remains obscured in history books. While it was not a large stronghold for instituted slavery, Honduras nonetheless was a port of contact between countries that enshrined it.

Today, as state and paramilitary operations in Honduras align with the economic interests of the oligarchy and economic elite, the default necropolitical operation is to normalize a state of emergency, granting the state permission to negotiate with impunity who or what lives or dies. This in particular has affected Garifuna communities in the north coast, who have been consistently displaced by both agribusiness and tourism industries.³²

Thus, interrogating the plantationocene “entails the recognition of plantation structures and their characteristic organizations of life and labor—particularly of racialized persons—in sites where they’ve been forgotten or remain hidden, yet are still very much present.”³³ Plantation logics, in addition to control of vermicular life, produced matrices and geometries of living things; plantation logics seek with voracious hunger increased knowledge of mineral compositions of the soil and search for new sites for continuous agricultural experimentation. It's through an assembly line (survey, voyage, collection, extraction, exchange, nomenclature, introduction, distribution) of extractive relationalies that allowed hierarchies of being to take root in the so-called New World.

Critical theorist and filmmaker Elizabeth Povinelli introduced the term geontopolitics, to speak about a crossing of alterities and negotiations between life and non-life, as well as the role that political governance serves to sustain hierarchies of life and death. Through this lens I examine several dimensions of plantation subjectivities as they cross between the agricultural and extractive sector.

³¹ Mbembe and Meintjes, “Necropolitics: 21.

³² Chris Lewis, “Honduras’ Five-Century War,” *Jacobin Magazine*, February 11, 2015, <https://www.jacobinmag.com/2015/02/honduras-oligarchs-imperialism-land/>.

³³ Moore et al., “The Plantationocene and Plantation Legacies Today - Edge Effects.”

Povinelli writes about life and death within the imaginaries of extractive capital and how the so-called partnerships between extractive industries and Indigenous communities are forged in such a way that the benefits geared towards companies are long-term enrichment, while Indigenous communities receive short-term cash flows. They often become the extractive labor for said industries. Under neoliberal extractive logic, Indigenous communities have to negotiate then between welfare, landholding, and sovereignty. It's not uncommon for the state judicial apparatus to demand from Indigenous groups a kind of performed alterity through which they preserve their status as a living "cultural heritage," an incredibly dehumanizing and objectifying practice of governance, which is used as a tactic to absorb the struggle for self-determination and sovereignty into geontopower.³⁴ This tactic serves to historicize and then freeze advocacy and self-determination projects in the community. These operations of neoliberal extractive industries operate similarly under industrial agricultural paradigms.³⁵

Povinelli writes, "what makes it work, are the presuppositions of Geontopower. While human advocates for animal rights may well be slowly disturbing the consensus of what counts as a legally recognizable person and the new animism is extending Life into all entities and assemblages, Nonlife has remained fairly firmly sealed in its opposition to life within extractive capital and its state allies."³⁶ Despite advocacy efforts from Indigenous and environmental groups to reach towards a shift in juridical language to include non-human persons as entities towards which violence can be enacted, the juridical apparatus remains inextricably linked to the economic and familial interests of Honduran oligarchs.

There's a saying common in the northern coast of Honduras "*vas a acabar en un cañal*," which literally translates to "your body will be found in a sugar cane field." This phrase encompasses a few different layered meanings, pointing to the multiple violences that are often enacted or performed in the plantations. The people whose job is to perform the unthinkable violence of murdering another, are often extra-military bodies and camouflaged entities operating within and outside of the boundaries of state sanctioned violence.

Operationally, the processes of agriculture involve a give and take of nutrients, water, soil, and other organic compounds, in such a way that the earth can simultaneously produce and aid in the growth of crops, while regenerating its own microbiome, living networks and bioinfrastructure. However, this balance of taking

³⁴ Elizabeth Povinelli, *Geontologies: A Requiem To Late Liberalism* (Duke University Press, n.d.).

³⁵ Povinelli.

³⁶ Povinelli, *Geontologies*, 56.

from the soil and then returning its nutrients has long since been disturbed, as the colonial project, industrialization, tourism, and large-scale transnational projects have relied on extractive paradigms to produce value, thus contributing to the marginalization and disappearance of native agricultural practices.

Embodied knowledge of the land and its biological cycles has been disrupted by the continuous dislocation and genocide of Indigenous communities in Honduras, which historically have been forced to assimilate into the ethnic majority of ‘mestizo’ by the state. This mixed category erased Indigenous identity from the cultural imaginary of Honduran population, and served the double purpose of permitting the state to claim protected Indigenous lands for private, national, and transnational enterprise.³⁷ Simultaneously, it created the legal infrastructure and precedents that would allow transnationals such as United Fruit Company to flourish and completely transform the Honduran landscape and economy.³⁸ The exploitative labor practices employed to maintain these plantations disproportionately affect the rural population of Honduras--largely Indigenous and Afro descendent groups that must perform the labor of extractive agriculture in order to survive.³⁹

The communities surrounding the region of Ulua Valley have been subject to systematic dispossession and removal from ancestral territories, followed by severance to connections to land, language, and culture. A violence that has been supported and in many cases enacted by state forces, camouflages the underlying political and economic interests of the Honduran oligarchy along with their transnational investments. Agricultural waste and poison from industrial pesticides remain in the soil and environment of the dispossessed people of Honduras, while other nations enjoy the many harvests of death. The life of human and non-human laborers was negotiated and deemed necessary in order to sustain the global networks of capitalist distribution and neoliberal plantation economies, the result of decades of exploitation camouflaged as developmentalist world-building in Latin America.

³⁷ Marvin Barahona, *Rompiendo el espejo: Visiones sobre los pueblos indígenas y negros en Honduras*, (Tegucigalpa, Honduras: Editorial Guaymuras, 1998).

³⁸ Bucheli and Read, “United Fruit Company - Chronology.”

³⁹ Macarena Gomez-Barris, professor and cultural critic at Pratt Institute defines *extractivism* as “ an economic system that engages in thefts, borrowings, and forced removals, violently reorganizing social life as well as the land by stealing resources from Indigenous and Afro-descendent territories,” revealing the latent colonial legacies of structural and racialized exploitation. Gómez-Barris, Macarena. *The Extractive Zone: Social Ecologies and Decolonial Perspectives*. Durham: Duke University Press, 2017.

BOTANY AND ITS COLONIAL ORDERINGS

Botany as a science, of which its primal operations are the in-depth study and classification of plant beings, has undoubtedly informed the ideologies that are embedded into contemporary agricultural systems. Thousands of years before the introduction of Linnaean taxonomies, relations between humans and non-humans in various cultural contexts were likely informed by early states' socio-cultural approaches to domestication and agrarianism, as anthropologist James C. Scott suggests.⁴⁰ Domestication, as a complex multi-generational process, is one of the pillars of understanding the proto-narratives of civilization, classification, and control.

Evidence suggests alternative histories to the singular Western civilizational narrative, by exhuming from archaeology and genetics evidence that favors coevolution, such as Lynn Margulis' theory of endosymbiosis.⁴¹ However, the effects of this early landscape engineering cannot be denied as tools that have allowed humans to concentrate their environments in favor of subsistence. Through technologies of irrigation, accumulation, and storage of food, humans began a descent towards certain kinds of orderings that intensified civilizational strategies.⁴² From Plato to Aristotle, the scalar views of the hierarchies of life separated beings into different levels of animacy and locomotion, of which the top-most tier was reserved for humans. Plants often occupied the middle tiers, not quite as inanimate as rocks and minerals, but not nearly as lively as insects and animals.⁴³ This concept was further developed in depth by Middle Age thinkers and early naturalists into notions of the *Scala Naturae*, or the tree of life that similarly organized living and non-living things, as well as spiritual and celestial beings.⁴⁴

After the first Columbian exchange and the explosion of new botanical and agricultural imports from the New World spread across Europe, explorers and colonial officers scrambled to find mechanisms to organize and classify the exploits of conquest. When Carolus Linnaeus published *Systema Naturae* in which he explicated

⁴⁰ James C. Scott, *Against the Grain: A Deep History of the Earliest States* (New Haven, Conn.: Yale University Press, 2017). 6-7.

⁴¹ Lynn Margulis et al., "The Last Eukaryotic Common Ancestor (LECA): Acquisition of Cytoskeletal Motility from Aerotolerant Spirochetes in the Proterozoic Eon," *Proceedings of the National Academy of Sciences* 103, no. 35 (August 29, 2006): 13080,

⁴² Scott, *Against the Grain*, 46.

⁴³ James Lennox, "Aristotle's Biology," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Winter 2019 (Metaphysics Research Lab, Stanford University, 2019),

⁴⁴ Ulrich Kutschera, "From the *Scala Naturae* to the Symbiogenetic and Dynamic Tree of Life," *Biology Direct* 6, no. 1 (2011): 2

his taxonomic systems of classification, he was drawing from existing divisions and hierarchies that were, in many cases, culturally and geographically specific.⁴⁵

It's crucial to note how these relationships to land, labor, and hierarchies of being moved and transposed themselves along with the spread of colonialism. Looking at the large networks of survey, exchange, and classification that were formed in part to the centralized nodes of European colonial power, there was a necessity to classify the incoming information and transform the vegetal world into something legible to the empire. Zaheer Baber, professor of sociology at the University of Toronto writes about the impetus behind "rational" systems of administration and surveying as "massive trigonometrical, topographic, cartographic, botanical and statistical surveys, constituting one of the largest techno-scientific projects in the colonial era, that were designed to measure, map and acquire rational estimates of revenues that could be expected with a degree of predictability after every harvest."⁴⁶ Thus, colonial offices attempted to reduce contingencies in order to yield the highest possible profit. However, these Linnaean systems were fraught with analogies that tried to map human social relations onto the vegetal world.

From these colonial orderings and systems of classification emerged a series of invisibilities and injustices that classified beings in terms of their utility and subsequently announced their potential for exploitation and capital. In the hands of the state, this information became incredibly useful as it created a system in which the projects of abstraction could thrive. This abstraction could then become numbers, material, fuel, food and lumber.⁴⁷ Invisibility here refers to the negotiation between the state apparatus of vision and the ecosystems it is attempting to abstract. The invisible worlds are often at the microbial and vermicular level, the workers of the soil as described by Maria Puig de la Bellacasa,⁴⁸ the animals and insects whose lives are tied to these territories, and the humans whose labor is tied to agriculture of subsistence.

Not only was this a network of knowledge exchange for the building of statehood and imperial projects, but also propelled the development of a new intelligentsia and emerging fields of knowledge, of whose elite members "were in touch with each other at home and abroad, making and implementing decisions of

⁴⁵ "Taxonomy - The Linnaean System," *Encyclopedia Britannica*, accessed January 28, 2020, <https://www.britannica.com/science/taxonomy>.

⁴⁶ Zaheer Baber, "The Plants of Empire: Botanical Gardens, Colonial Power and Botanical Knowledge," *Journal of Contemporary Asia* 46, no. 4 (2016): 662.

⁴⁷ Scott, *Seeing like a State*, 13.

⁴⁸ María Puig de la Bellacasa, "Encountering Bioinfrastructure: Ecological Struggles and the Sciences of Soil," *Social Epistemology* 28, no. 1 (January 2, 2014): 26–40,

worldwide implications with the wholehearted support of their government and the commercial establishment.”⁴⁹

These invisibilities and submerged perspectives are the cornerstone of the devastating effects that modern forms of intensive agriculture have wrought, as they render the intricate ecological relations of their sites of extraction essentially invisible. James C. Scott writes about the failure of agricultural research in representing the relationships between farming, community and “the space in which farmers plant crops—its microclimates, its moisture and water movement, its microrelief, and its local biotic history.”⁵⁰ Here Scott points to a crucial concern—the relationship between the simplification of the complex negotiations that occur during farming, or an exchange between the land, the soil, and its critters that has become abstracted and simplified in an effort to further control agricultural output and increase profits.

At the time of Lancetilla’s foundation and the United Fruit Company’s initial surveys, very little was known about Honduran ecosystems and there hadn’t been any in-depth surveys by botanists or biologists. The United Fruit Company opened a gateway for research into the marshlands of the Ulua Valley. From the written accounts of the first botanists in the region, a familiar picture emerges from the tropics - the unexplored, darkened jungle and marsh with unlimited potential for bioprospecting. American botanist Paul C. Standley wrote in his accounts of the *Flora of the Lancetilla Valley*, an in-depth survey of the species found in the surrounding region of Lancetilla. The survey included all of the species that were collected in the Tela division of the United Fruit Company.

His accounts of the geography and climatic conditions provide an important picture at the beginning of the banana republic years and the establishment of plantation regimes. In the imagination of the fruit empires, the flora and fauna eagerly awaited its explorers, which would no doubt “yield a profitable return for the effort expended in exploring them.”⁵¹ I found particular relish in reading Standley’s accounts and notes on the surrounding areas of Lancetilla, curious whether it matched my own and if there were clues as to the life the ecologies of the Ulua Valley may have had almost a century ago.

⁴⁹ Late anthropologist Lucille H. Brockway describes the role of botanists in aiding legibility of plant species from hybridization to cultivation, where and how to process it through colonial labor. Lucille H. Brockway, “Science and Colonial Expansion: The Role of the British Royal Botanic Gardens,” *American Ethnologist* 6, no. 3 (1979): 451.

⁵⁰ Scott, . *Seeing Like a State*. 262.

⁵¹ Paul C. Standley, *Flora and Fauna of Lancetilla Valley Honduras* (Chicago: Field Museum of Natural History, 1931), 8,

Practically all the land within this area that is fit for the purpose [of cultivating] is covered with banana plants which, however beautiful when standing alone or in moderate quantities, become exceedingly monotonous when massed in plantations many miles in extent. Between the banana plantations, however, are large areas unsuited for their cultivation. These consist, near the coast, of wide marshes and of densely wooded swamps which can not, or at least have not, been drained. Much swamp land has been ditched and planted.⁵²

His notes reveal that not much has changed, except for which species dominate the plantation monoculture. Today, it's sugar cane, oil palm, bananas, and pineapples whose geometries create a kaleidoscopic reel on the highways of the Ulua Valley. For more than a century, despite the ravaging consequences of the slow plantation ecocides, there still remain areas of protected rainforest and mountains with incredible biodiversity, whose survival depends on their defense against agribusiness and bioprospecting. The history of land expropriation for the purposes of agricultural exploitation in Honduras has been told through sugar cane, coffee, bananeras, and African palm. The question is, through intensive agricultural practices that also extract minerals, moisture, and other forms of life from the soil at different scales, can we then begin to think of the potential for an expansion of juridical protections towards plantation soils?

The abstractions that must occur to transform minerals, soil, water, and oil into profit and numbers thrive with the erasure of that which cannot be turned into resources. In this way, taxonomic systems necessitate erasure in order to produce knowledge, while hybridizations, symbioses, and co-evolutionary histories are further obscured by these systems. In intensive monocultural practices, for example, this isolation of species to increase the yield and intensity of crops is not unlike the segregation of species in taxonomic practices. Wilson and Dorothy Popenoe's work at Lancetilla operated within these paradigms of invisibility, separation, and order, which then work in tandem to become gateways for an extractive relationship to the land.

⁵² Standley, 12.

PART II: PHOTO / SYNTHETIC

A FICTION ON INFECTIONS

August 1931

It was increasingly clear to her, the longer she spent at the experimental station, the more unsettled she became. It wasn't what was changing within her, but the how. She wasn't sure when it began, or if it would stop. She was afraid to tell Wilson about the newfound sense of thereness she had acquired. It felt a bit like her bones and her skin were slightly off, like a blanket of flesh was refracting off her frame at a wrong angle. But in that slow, thin tearing up of her skin, other spectrums of something had been opened.

Mrs. Popenoe, are you awake?

Smells had suddenly become overwhelming. She had become accustomed to the various scents of wet soil and clay at the dig site but in the gardens, whenever she entered the grove of newly planted fruit trees, she felt like she was being swallowed into the root systems beneath.

Mrs. Popenoe, can you hear us?

Perhaps she shouldn't have come?

Or maybe she had been bitten by something that had made her delirious as she was. It wasn't uncommon for people to go mad in a place like this, with the kaleidoscope of fevers and illnesses she could be infected with. She would wait for a bit. It hadn't manifested into something physical yet, not that she had noticed. She would ask Maria to check the following days if she noticed anything off after she bathed.

Dorothy?



Fig 7. Still from *Botanical Ghosts*, 2020. Scan of a portrait of Dorothy Hughes Popenoe.

SPECULATIVE PLANTS AND BOTANICAL TURNS

I'm locating my practice under an extensive and well-documented lineage of works that deal with botanical and vegetal worlds. As an undergraduate student at the School of the Art Institute of Chicago (SAIC), I was deeply influenced by the work of my professors Heidi Norton and Claire Pentecost, whose tutelage sparked my interest in plant life and its representation.

I look towards the potential of destabilizing perspectives, whether it be through perspective or the misuse of apparatuses of vision, cameras, and other materials. Similarly, cultural shifts in perspective have emerged recently through the work of various writers and thinkers, such as Emanuele Coccia's *The Life of Plants: A Metaphysics of Mixture*, whose proposal aided in changing the language I utilized forward and reframing my conceptions of the agency of plants and their evolutionary path as a new metaphysical configuration.⁵³ Similarly, Teresa Castro's *e-flux* essay on "The Mediated Plant" pointed towards the appearance of a new botanical turn and the early engagements between plants and technologies of sensing and computing.⁵⁴

Finally, I credit the scholarship coming from critical plant studies, such as the compendium of essays edited by Prudence Gibson and Baylee Brits titled *Covert Plants: Vegetal Consciousness and Agency in an Anthropocentric World*, where artists, philosophers, and thinkers address the environmental and botanical aesthetics of the last few decades.⁵⁵

In the introduction to *Why Look At Plants: The Botanical Emergence in Contemporary Art*, Giovanni Alloj describes the phenomenon of plant blindness, where culture is unable to perceive plants beyond the established cultural paradigms of vegetal life. Plants are then reduced either to resources or aesthetic objects whose agency is suppressed by the ongoing inability to "see" or "perceive" them beyond this schema.⁵⁶ I think of plant blindness as analogous to the ongoing processes of abstracting of nature for the sake of legibility and therefore extraction.⁵⁷

⁵³ Emanuele Coccia, *The Life of Plants: A Metaphysics of Mixture* (Medford, MA: Polity Press, 2018).

⁵⁴ Teresa Castro, "The Mediated Plant," *E-Flux Journal*, no. 102 (September 2019),

⁵⁵ Prudence Gibson and Baylee Brits, *Covert Plants: Vegetal Consciousness and Agency in an Anthropocentric World* (Santa Barbara, California: Brainstorm Books, 2018)

⁵⁶ Giovanni Alloj, "Introduction: Why Look at Plants?," in *Why Look at Plants? The Botanical Emergence in Contemporary Art*, vol. 5, Critical Plant Studies (Brill | Rodopi, 2019), 1-35.

⁵⁷ James C. Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, Conn.: Yale University Press, 1999), 13.

A turning point for me was encountering critical plant studies, an emerging field that seeks to create new metaphysics and critical descriptions for vegetal life. In relation to the emerging critical dialogues around the vegetal world, this emergent field provides a very interesting space for dialogue with contemporary art practice. Its appearance signals a simultaneous turn towards the vegetal and botanical not only in contemporary art practices but also in literature, music and film.

I thought then, about the inextricable relationship between plant matter, light, and photographic technologies. This triangulation of relationships is brought together by synthesizing light, vision, and the alchemical legacies left to us by cyanobacteria millions of years ago in what is called the great oxidation.

Natasha Myers, professor of anthropology at York University writes on photosynthesis:

Textbook diagrams familiar from high-school biology class are simplistic renderings of that utterly magical, totally cosmic alchemical process that tethers earthly plant life in reverent, rhythmic attention to the earth's solar source. Plants are sun worshippers and worldly conjurers. They draw on the energy of the sun to rearrange the elements: they compose with hydrogen, water, oxygen, carbon dioxide, nitrogen, phosphorus, potassium, calcium, magnesium, zinc, sulfur, chlorine, boron, iron, copper.⁵⁸

The inhalations and exhalations brought about by plant and algae photosynthesis are part of what Myers terms photosynthetic mattering. All cultures, economic systems and societies, Myers writes, “turn around plants' metabolic rhythms.”⁵⁹ Could it be, through this chemical worlding, that plants spread from the first colonial contact zones, through the Columbian exchange, and then made their way to the shores of Honduras? The biological densities of the equatorial regions were the result of a blooming rush towards the rays of the sun in search of energy to metabolize, food to consume, matter to compost and recycle.

What we know about images, imaging, and imagining of the world has arguably been a matter of synthesis. Chlorophyll is the ultimate light-sensitive material, the original synthesizer before the phylogenetic code that would evolve into what we know as eyes had even been written. Cyanobacteria were the first cameras whose spherical bodies acted as optical beings. Plants “studied” and adapted to light, harnessed the

⁵⁸ Natasha Myers, “Photosynthetic Mattering: Rooting into the Planthropocene,” in *Moving Plants* (Denmark: Rønnebæksholm, 2017), 124.

⁵⁹ Myers, 125.

camera obscura, invented filtering systems, reflectors, and absorbent materials before the first animals ever walked the earth.

This thesis reframes the history of visibility as being driven not through technoscientific frameworks of optics and vision but rather through a much longer timeline of evolutionary and biotic processes begs the question:⁶⁰

Did plants invent photography?

As an artist trained in photography and filmmaking, my primary mode of engagement with Lancetilla and its surroundings were primarily image-based. Before I arrived at any speculative thoughts on the photographic history of botanical worlds, I had been mediating my experience through cameras of various kinds. As Alloi suggests, I was blinded to plants even as I photographed them. I unconsciously perceived them as subjects of photographic study, even as I tried to grapple with the forces embedded into photographic history and its apparatuses.



Fig 8. Contact sheet from one of my first visits to Lancetilla, 2019.

⁶⁰ Visuality refers to the phenomenon or pictorial turn that took place among various fields, including literature, art history, and philosophy. Embedded into the term are various other usages, including Scottish transcendentalist Thomas Carlyle's definition of it as an internal phenomenon of visibility to the mind, who first coined the term in 1930. Alexa Sand, "VISUALITY," *Studies in Iconography* 33 (2012): 89-95.

So what changed?

In the process of making *Botanical Ghosts*, I was knee deep in archival and photographic material collected over the course of two years. I made cyanotypes and photograms of plants at Lancelilla, shot video and photographs, collected soil samples, attempted to smuggle seeds from the Ackee and was caught by the USDA and USCBP. All of these were gestures and experiments necessary for my current arrival: towards internal becoming that destabilized what I perceived as the legacies of photography onto the photosynthetic inheritance of plants. Ariella Azoulay proposes a relocation of the historical origins of photography beyond optics of technological advancements and instead consider a set of practices and spatio-temporal operations within the larger colonial project that allowed “the photographic” to emerge.⁶¹

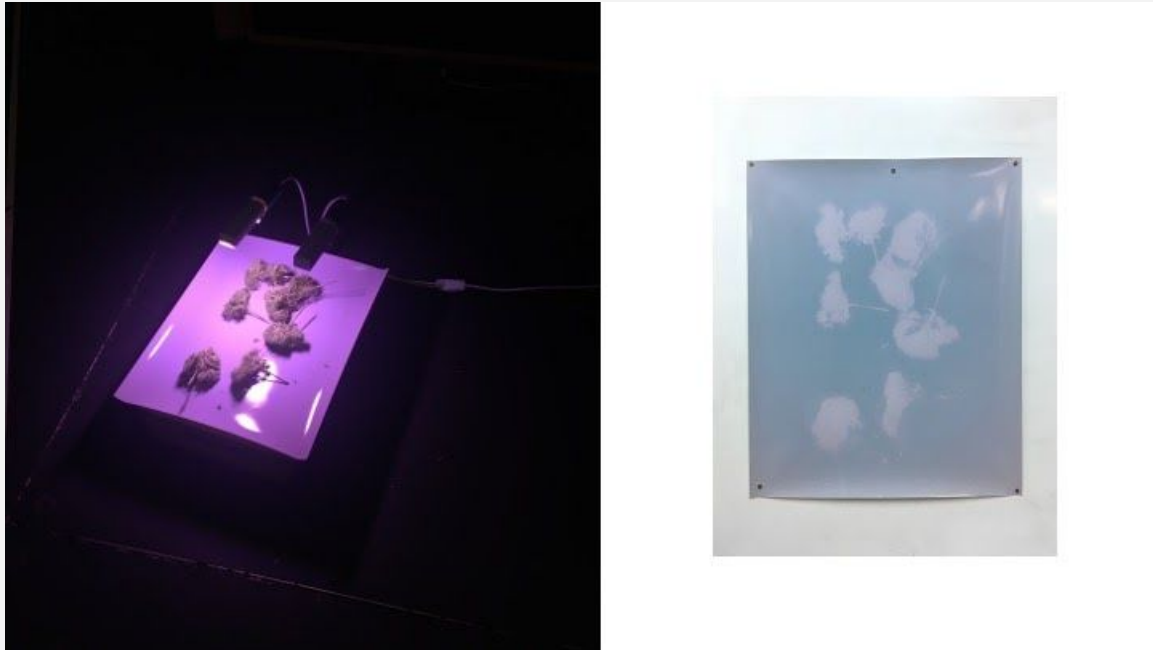


Fig 9. Process shot from *Photosynthetic*, 2020. UV Light, unfixed photographic paper, moss.

The photography and botanical representations have held hands from the very beginnings. Most notably, I reference Anna Atkins’ collection of cyanotypes and prints of plant matter. Her 1843 book on British algae is considered to be the first book of photographs. Atkins was also an avid plant collector and donated various specimens to Kew Gardens, while her herbarium of British plants was donated to the British

⁶¹ Ariella Azoulay, “Unlearning the Origins of Photography,” Versobooks.com, September 7, 2018, <https://www.versobooks.com/blogs/4013-unlearning-the-origins-of-photography>.

Museum. Atkins's approach to the photographic process combined with her knowledge of natural history and botany greatly informed her practice. Before her book, botanical representations would have appeared as engravings or other traditional printing processes.⁶² It's here that one of the first syntheses between photography and vegetal imaginaries occur.

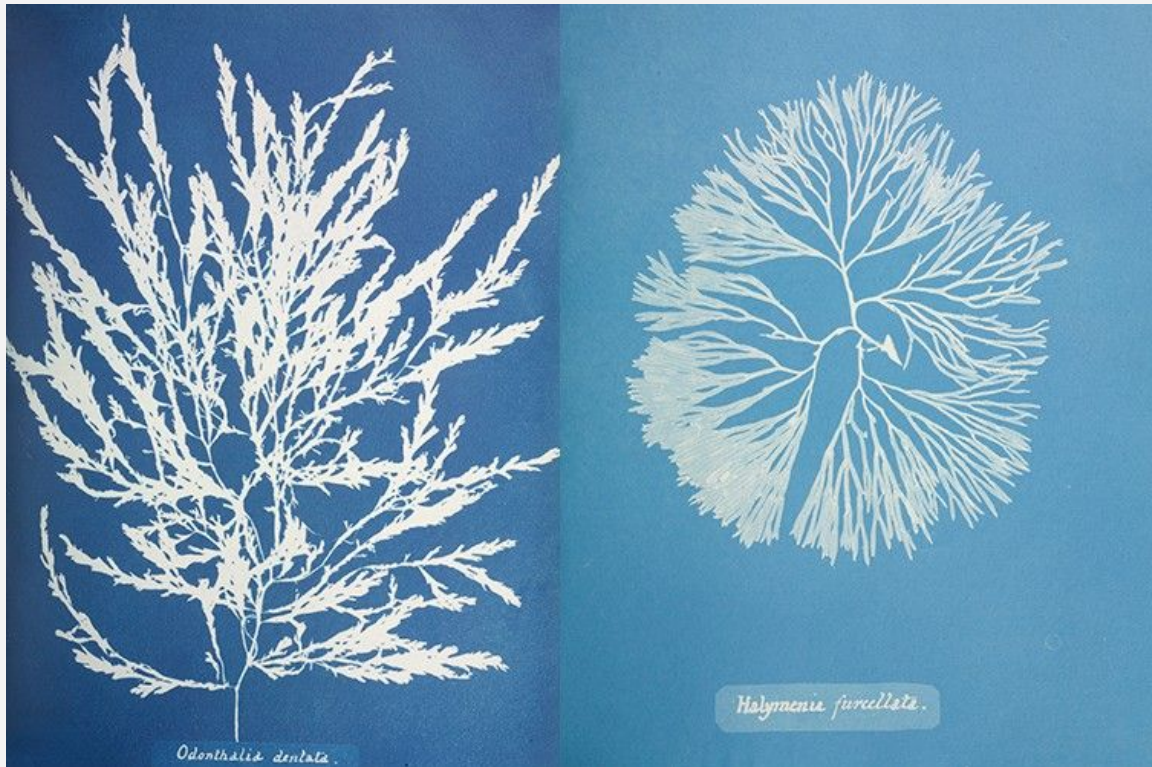


Fig 10. Anna Atkins, *Photographs of British Algae: Cyanotype Impressions*, 1843.

From this, I began to develop an internal glossary of terms whose definitions had been expanded by photosynthetic configurations: *invisibility* suddenly included the impossibility of perceiving plant ecosystems in all its microbial, vermicular, or planetary scales; implicit in *abstraction* was a socio-cultural modality for reading and rendering biological matter legible for extractive projects; *light sensitivity* suddenly contained a spectrum of possibilities beyond photographic chemistry; *photography* was much closer to its etymological rooting of *writing with light* but beyond the limited language frameworks of human communication. For me these shifts occurred not only within that of photographic language, but the language of governance, administration, and transportation of life, as seen through the lens of agencies like the USDA.

⁶² Kerry Lotzhoft, "Anna Atkins's Cyanotypes: The First Book of Photographs," Natural History Museum, accessed August 6, 2020, <https://www.nhm.ac.uk/discover/anna-atkins-cyanotypes-the-first-book-of-photographs.html>.

U.S. DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE PLANT PROTECTION AND QUARANTINE		1. PORT OF ENTRY PR San Juan Air CBP
MAIL INTERCEPTION NOTICE		2. DATE ISSUED 11/08/2019
The material described below was found to be moving in the mail in violation of the agriculture quarantine regulation pertaining to the entry and movement of plants, plant products, animal products, soil, and plant pests. These violations may result in criminal or civil penalties. Disposition was taken under authority of laws administered by the U.S. Postal Service, U.S. Customs and Border Protection, and U.S. Department of Agriculture. All inquiries concerning condition, delays, shortages, or breakage should be addressed to the postmaster at the above port (Item 1). Information concerning the quarantine referred to in Item 12 may be secured on application to U.S. Department of Agriculture, APHIS, P.P.Q., 4700 River Road, Unit 60, Riverdale, Maryland 20737.		3. REFERENCE 859287-MIN
4. TO (Addressee) NANCY D VALLADARES		5. FROM (Addressor) STX SOUL
CAMBRIDGE	MA 02139	US Virgin Islands KINGSHILL VI 00851
6. INTERCEPTED MATERIAL: Blighia sapida (Propagative Material) 16 Each, Hog-Plum (Fruits Vegetables) 8 Each		
7. POSTMARK US Virgin Islands	8. POSTMARK DATE 11/08/2019	9. MAIL REGISTRY NO. 9405509206094061454081
10. BREAKAGE None	11. RECONDITIONING REQUIRED No	12. QUARANTINE OR REGULATION IN VIOLATION 7 CFR 319.37, 7 CFR 351, 7 CFR 318.58
13. DISPOSITION Prohibited Material Removed and Destroyed		
14. REASON FOR DISPOSITION		
1. <input type="checkbox"/> Addressee, after due notice, failed to apply for permit required by law.		
2. <input type="checkbox"/> Contains meat not admitted by U.S. Department of Agriculture. Meat may carry animal diseases that do not occur in the United States. For Follow-up cases fill out the section below:		
a. Type of animal product :		
b. Country of origin:		
c. Certificates/Permits :		
d. Meat product is :		
e. Other animal products :		
3. <input type="checkbox"/> Material infested or infected and treatment not feasible. Insect pests and plant diseases in fruits, vegetables, or other plant material could become established and threaten U.S. agriculture.		
4. <input checked="" type="checkbox"/> Material not authorized entry.		
5. <input type="checkbox"/> Material is in or contaminated with soil. Soil can carry many plant pests and diseases.		
6. <input type="checkbox"/> Phyto-sanitary certificate is missing.		
7. <input checked="" type="checkbox"/> Other comments: NO USDA PERMIT PRESENT		
15. REMARKS (Include any pertinent information, i.e., condition of material, condition of cans which indicates not shelf stable, etc.) C#15 9405509206094061454081 SEE USDA information in the package. BE ALERT OF YOUR LIABILITY.		
16. INSPECTING OFFICER		Badge Number

Fig 11. Untitled, 2020. Scan of a Mail Interception Notice from the USDA, Coffee Stain on Copy Paper.

My exposure to the critical dialogues from plant studies and the deeply influential co-creation I experienced with my cohort have pushed me to reconsider some of my gestures, but I was also looking at various strategies deployed by artists to think with plants. Of particular interest to me were practices that delved into the perception and construction of vegetal worlds through visual apparatuses and at various scales. If, as a culture, we suffer from an ongoing crisis of plant blindness (arguably a multispecies blindness), then the way that images are represented, imaged, and reproduced is a good point of departure to begin this search.

I'm interested in the tensions between "plant blindness" and gestures that expand the spectrum of human vision. It's crucial to point out that surveillance technologies are constantly being pointed towards the vegetal worlds, whether it be through other spectrums of light, scanners, satellite images, aerial surveys, etc. In many ways, these technologies were designed to look at nature from as many spectrums, perspectives, and distances as possible. It's therefore crucial to ask: what are the ethical implications behind photographing and representing plant life?

Giovanni Alloi writes,

As previously seen, the flattening of animals and plants operated by natural history illustration bears practical as well as metaphorical implications—the optical flattening of plant bodies corresponded to a contextual flattening of the individual plant or animal into a specimen—silenced, immobilized, objectified, and extrapolated from its interconnectedness with biosystems for the consumption of the scientific gaze. The materiality of the book page, the flatness of the paper upon which the object is made to materialize, defines the power/knowledge relations specific to the epistemic modality.⁶³

Here, Alloi points towards the implicit hierarchies embedded into the technoscientific gaze whose simplifications are the main modalities for the creation of botanical knowledge and discipline, as was described in the chapter *BOTANY AND ITS COLONIAL ORDERINGS*.

I'm interested in these kinds of practices and how they grapple (or don't) with the visual worlds created by the botanical projects of the eighteenth century, where the simplification of nature became the primary tool for control of the vegetal world. Here abstraction is inextricable from representation, both quantitative and qualitative. What could not be administered through numbers and log books could be represented and

⁶³ Alloi, "Introduction: Why Look at Plants?," 32.

taxonomized through “copies” or illustrations of the natural world. Looking at the ways visual worlds of Honduras were constructed through representations, images, or writing one is able to trace the cultural lineage of the erasure of botanical agency and how the transmission of such legacies ripples to this day. I was interested in this notion of zooming into the past through these illustrations, looking at the nooks and crannies of drawings as lacunae where other knowledge can be excavated.

My most recent piece *The Density of Breath*, which is a meditation on the early botanical representations of the so-called new world, looks to re-animate the surface of the illustrated works. It’s a layered mediation shot with an electronic microscope: a video that is recording a plate on a book whose original image was photographed and reproduced in various cycles. Such is the nature of many early representations of humans and the natural world; the euro-western visual histories and hierarchies of knowledge remain deeply embedded in the materiality of these eighteenth-century paintings and drawings. From the perspective of botanical representation, I was looking at the plant specimens who were uprooted and seeded, only to be dispersed as vectors along ports and through networks of distribution, forever changing the ecologies of nations under colonial and imperial rule. Many of these botanical exchanges occurred during the transatlantic slave trade, and, indeed, were spurred by the violent dislocation of human beings who had to be fed across ocean journeys and upon their arrival in the “New World.” These histories are not equivalent by any means but, rather, operations that occurred in tandem.

Seedlings traversing in houses made of glass, humidities and densities invisible to the naked eye were necessary for their survival. It was a peculiar moment when the density of breath was opaque for a brief moment in history. Producing the technologies of transportation of plant matter, the biological agents that, in conjunction with human colonizing counterparts, transformed the landscapes that they touched. The species that accompanied these colonizing forces: grains, wheat, their bacterial agents, and their colonies would ferment in the antipode.

The opaque accounts of domesticated ships and glass produced an order, one of static genetics and disembodied botanics. Colonies and relatives, cessated, buried, but emerging travels produced gardens, their exchanges, unmoving histories.

Hunters of the Opaque.
Collectors of light.

Perhaps these seed hunters were the ones seduced. Plants are creatures of seduction, an art they have perfected over thousands of generations.

The arts of mimicry are games that have been played in the biotic arena, which only now are we scratching the surface. What are the olfactory and pheromonal worlds that are completely invisible to us? Languages can build worlds, but so can scent, heat, the dispersal of chemistry and signaling.

Seeds learned to move in the currents of the ocean and the wind, to float on water and air, to become the first stowaways and hitchhikers. I can only surmise as to their motives if phylogenesis is still occurring.

Plants desire to propagate, to move, to transport, to fly.⁶⁴

A crucial part of *The Density of Breath* is a script for a voice-over or sound piece. It is an introduction to other ways of thinking, which seek to examine plant agency, and perhaps a consideration for other forces that drove the propagation and dispersal of seeds as not exclusively anthropogenic. The images, drawn from a collection of Alexander Von Humboldt's travels through the Americas, are examined closely with a microscope. The text above, printed in strips of paper, appears on the screen, rendered almost illegible by its scale. Ink dots and halftone patterns reveal the processes of reproduction, and the fibrous paper is a testament to the material being examined.

A huge spectrum of approaches towards the representation of nature and plant life exists, but a few of them stand out to me as moments where paradigms shift. The first one I encountered was Richard Mosse's work *Infra*, where he photographed the ongoing conflict in the Democratic Republic of the Congo using a type of infrared film called Kodak Aerochrome.⁶⁵ I saw some of his images in person at the Museum of Contemporary Photography in Chicago and was struck by the scale and enormity of the shocking pink landscapes of the DRC. In the same way that film had coded racial biases built into the very materiality and chemistry it was composed of,⁶⁶ Kodak Aerochrome was designed for aerial surveillance and "infrared discrimination." According to a Kodak datasheet, its applications include forest surveying, camouflage

⁶⁴ Excerpt from *The Density of Breath* by the author.

⁶⁵ Richard Mosse, "Infra: Images from Eastern Congo," Pulitzer Center, November 10, 2011, <https://pulitzercenter.org/projects/richard-mosse-congo-infrared-photography>.

⁶⁶ Sarah Lewis, "The Racial Bias Built Into Photography," *The New York Times*, April 25, 2019, sec. Lens, <https://www.nytimes.com/2019/04/25/lens/sarah-lewis-racial-bias-photography.html>.

detection, pollution monitoring, and archaeology.⁶⁷ Built into Aerochrome is precisely a kind of abstraction that creates a shift or separation in the color spectrum so that human eyes can increase their understanding of a landscape. Mosse's strategy has earlier counterparts, such as Mikhail Kalatozov's film *Soy Cuba (I Am Cuba)* from 1964. Shot on black and white infrared film made for the Soviet military on Cuban sugar plantations, it creates an eerie and surreal landscape of extreme whites and the infrared light reflected from the landscape.⁶⁸



Fig 12. Richard Mosse, *Men Of Good Fortune, North Kivu, Eastern Congo*, 2011. © Richard Mosse

Mosse's deployment of the material was, in some ways, quite straightforward—the film was doing what it was meant to do. And yet the reframing of the photographic and material aspects of the images, compounded by the biases and embedded nature of the film, was a powerful moment of realization to me. While the

⁶⁷ "KODAK AEROCHROME III Infrared Film 1443" (Kodak, 2005), https://www.kodak.com/uploadedFiles/Corporate/Industrial_Materials_Group/ti2562.pdf.

⁶⁸ George E. Turner, "The Astonishing Images of *I Am Cuba*," *American Cinematographer Magazine*, May 17, 2019, <https://ascmag.com/articles/flashback-soy-cuba>.

extent that Mosse grappled with the political implications of his presence in the racialized landscape in the DRC can be debated, one thing is certain to me: he is directly complicit in reproducing the structures of power between himself, the camera, and his (human and non-human) subjects.

More recently, a computational turn has emerged in botanical representations whose scope somewhat exceeds the scope of this paper but I wanted to briefly touch on. I've been following the work of Studio Formafantasma (Andrea Trimarchi and Simone Farresin) in the Netherlands, and their recent show at Serpentine Galleries called *CAMBIO*. The ongoing research-based project is an investigation into the timber trade and global distribution of wood products.⁶⁹



Fig 13. Studio Formafantasma, Still from *Seeing the Wood for the Trees*, 2020. © Formafantasma

One of the components of the work is a series of short films that utilize various technologies of vision, using for example satellite imaging, chroma keying, and photogrammetry to create moving images. Both of these technologies rely on abstracting or simplification of the subject to produce new images or realities, whether through the substitution or keying of the color green or through the computation of millions of data points that create a wireform model of reality. Through this collaging of media, they address phenomena such as plant blindness and the various scales of

⁶⁹ Formafantasma, “CAMBIO,” *Cambio*, 2020, <http://www.cambio.website/>.

invisibility that occur during the extraction and distribution of wood. I find Formafantasma's forensic and multidisciplinary approach to research under a similar trajectory as Forensic Architecture's media-based investigations that deploy architectural, spatial, political, and legal processes in tandem.

Within the production of a satellite image and its surveillance at the scale of the planetary lies an incredible occlusion of knowledge and epistemologies. The expansive flatnesses and topographies of satellite imagery grant human vision with a certain density that both obscures and marks beings and plants at certain resolutions and scales. My interest in these representations has to do with the effects of scalar and spatial distance on the subconscious.

The complex ecologies and networks that exist beneath the surface of the soil, the microbes, the critters and their subjectivities are rendered invisible in these satellite images, existing beyond what Eyal Weizman calls the threshold of detectability.⁷⁰ From these images, specific epistemes of orientation and spatiality are produced in addition to the dissemination of taxonomies, separations, and delineations inscribed into satellite imagery. This altitudinal point of view, which has historical and ideological parallels with the colonial gaze, provides new forms for the reorganization of territories and the beings found within and beyond the frame. By mapping the optically invisible, extractive relationships to nature have proliferated to new levels where what had previously been unseen can be absorbed into the rapidly diminishing pool of extractive potential.

In a different vein, Sarah Meyohas' work *Cloud of Petals*, 2017 marks a turning point from the computational to the generative. Utilizing machine learning algorithms, a massive data set compiled from 100,000 individual rose petals is the pool from where unique petals are being constantly generated. Sixteen workers were asked to choose the most beautiful flower petals to create the dataset that would map the generative algorithm.

⁷⁰ Eyal Weizman, *Forensic Architecture: Violence at the Threshold of Detectability* (Zone Books, 2017).

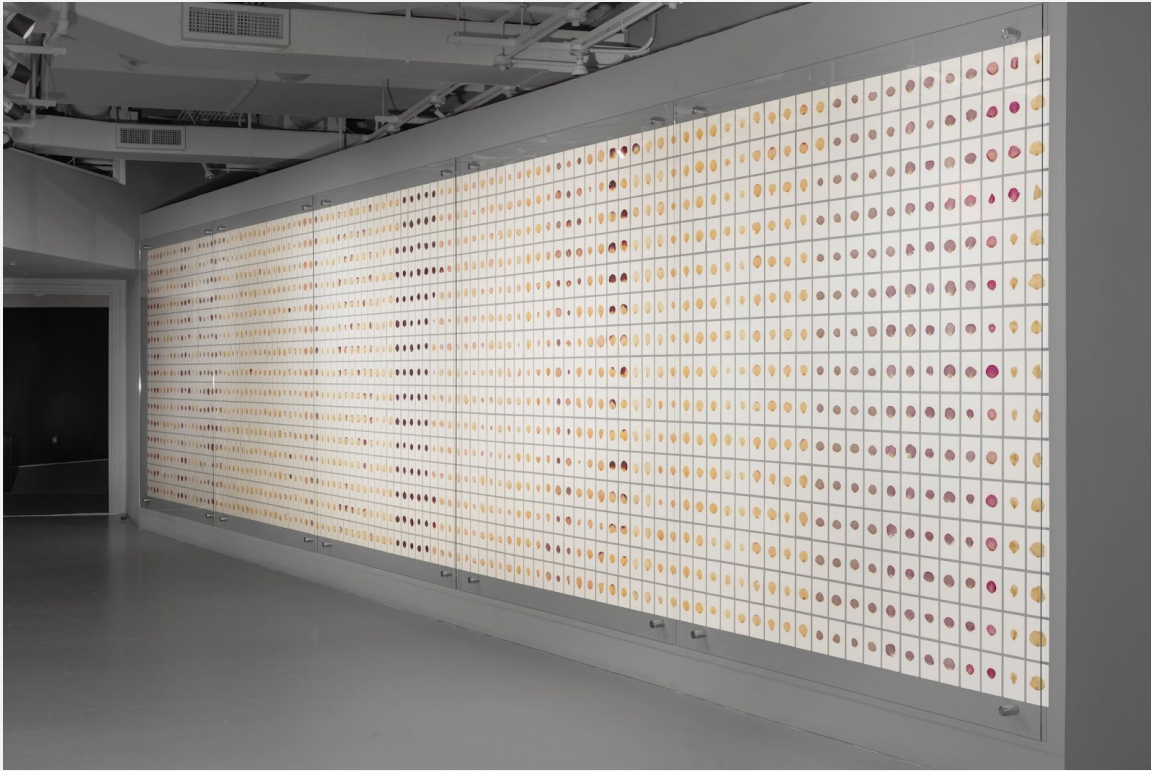


Fig 14. Sarah Meyohas, Installation shot of *Cloud of Petals*, 2017. © Sarah Meyohas

For me, various implications and legacies cross in this work. The wall of perfectly aligned grids of generated petals is a nod to the legacy of taxonomy, classification, and indexing in botanical representations, which appears latently built into the algorithmic structures that often camouflage as objective or detached from human bias. *Cloud of Petals* reveals the layers of labor that are hidden by computational processes, pointing towards the invisibilities that occur not only in plantation worlds but also the computational realms, which often still require human labor for the performance of extraction or, in this case, automation. I think of computing as the next step of botanical imaginaries and representations — beyond being purely a technology of surveillance and abstraction, computation simultaneously holds the potential for speculating new vegetal worlds and realms.

Nonetheless, this begs the question: as dialogues surrounding algorithmic racial bias have made headlines and opened inquiries into the disparities embedded into computing, how will this affect non-human counterparts?⁷¹ Attempts at

⁷¹ Karen Hao, “This Is How AI Bias Really Happens—and Why It’s so Hard to Fix,” *MIT Technology Review*, February 4, 2019, <https://www.technologyreview.com/2019/02/04/137602/this-is-how-ai-bias-really-happensand-why-its-so-hard-to-fix/>.

computing nature are nothing new. In fact one could argue that, historically, computing owes its emergence to observations and analyses of patterns in nature.⁷²

While this is beyond the scope of this section, I wanted to address the computational as intricately tied to the histories of botanical representation and constructions of the natural world. The very biases that have been built into the technoscientific frameworks of botany, horticulture, and agriculture are transposed and amplified in the computational realms. It's crucial to point out that these computational images of nature can also have effects on the physical world. Who and what do we choose to make visible, whose presence and livelihood are we discriminating against in data sets, what are we obscuring from computational models and from what purpose?

⁷² Gianfranco Basti, "Intelligence and Reference: Formal Ontology of the Natural Computation," *Computing Nature: Turing Centenary Perspective*, Studies in Applied Philosophy, Epistemology and Rational Ethics (Springer), 139–59.

Dear Dorothy

I realized both you and I share a practice in more ways than one. As I looked through your album and the archive of your images, I was struck by our shared interest in photography. I'm not surprised at yet another crossing between us. Landscapes, portraits, images of the objects disinterred from the Ulua Valley, where Lancetilla is located, painted a picture of Honduras that I both cherish and resent. After all, what can you, an outsider, see beyond your colonial lens? I ask myself that every time I click on my camera's shutter.

Photography has changed a lot since you were alive. I've sat in many lectures and classes on photographic history for the past decade. One of the first things students are introduced to is the timeline of photographic history, one that shows the inventions and technologies that contribute to the creation of apparatuses of vision, recording, and preservation of light. It's usually presented as a triumph--the idea that human animals were able to harness and administer this thing known as light, through a combination of optics, chemistry, and ingenuity.

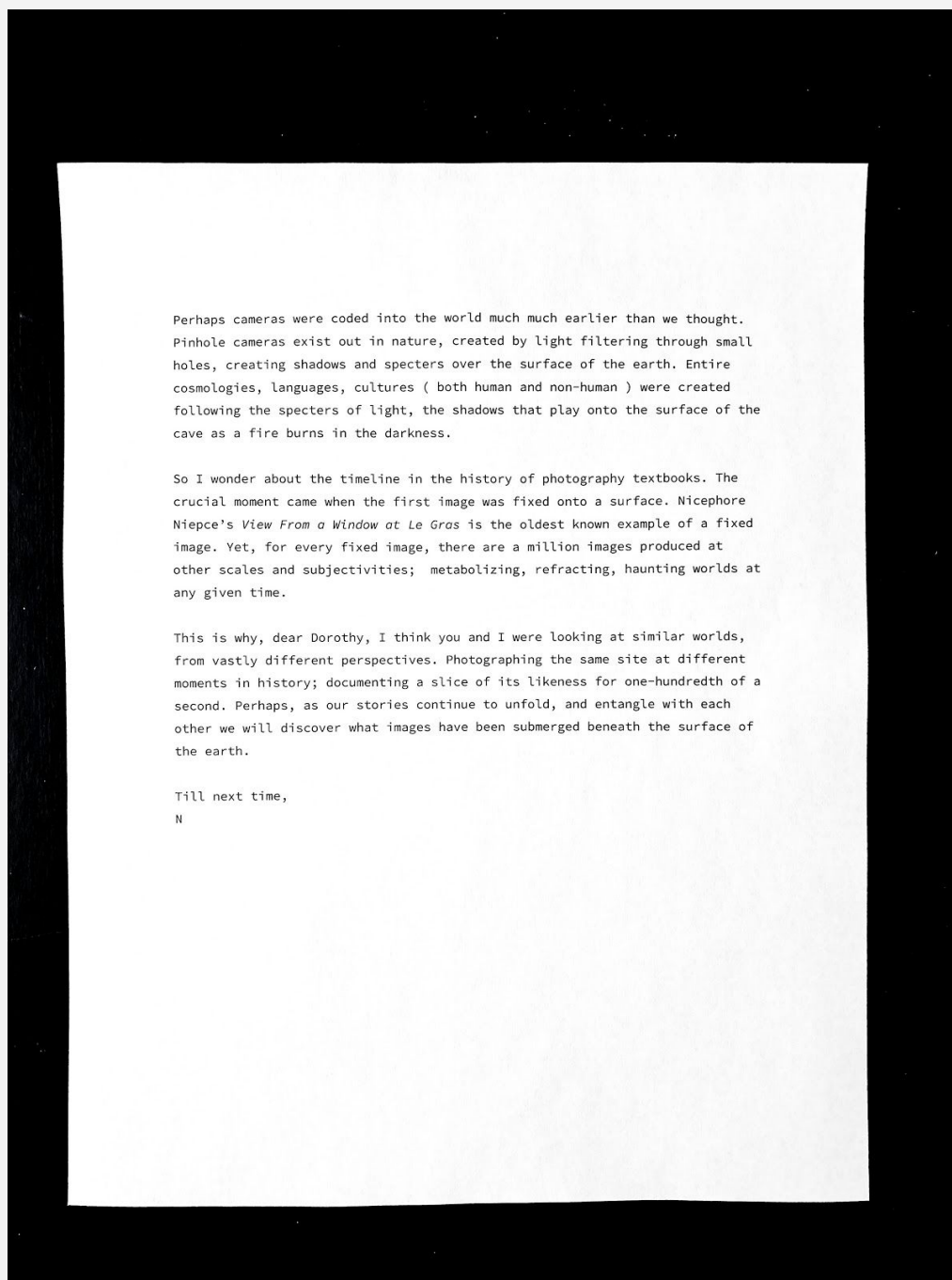
I read somewhere that the first example of a camera eye is actually cyanobacteria.¹ They have the ability to use their entire bodies as a lens. They co-evolved a sensibility and sensitivity to light, and as the earth greened in the Precambrian period, this phylogenetic information was forever coded into the biotic realm. As you know, plants developed photosynthesis as a way to metabolize energy from the sun into food, some animals developed vision within multiple spectra. But not everything "sees". There are worlds beyond lightness; beings that evolved to thrive in its absence, under different evolutionary pressures, who developed other sensory apparatuses.² The world of light is only one of many, that aggregate on top and within each other. What can we know about the realms of the visible, if we only tell the story of the human eye?

¹ Carol Dieckmann and Tesla Mittelmeier, "Phototaxis: Life in Focus," *Elife Sciences*, February 9, 2016,

<https://doi.org/10.7554/eLife.14169>.

² Emanuele Coccia's reanimation of the vegetal world deeply influenced my thinking on plant agency and the formation of new metaphysical framing for plant consciousness and agency. Emanuele Coccia, *The Life of Plants: A Metaphysics of Mixture* (Medford, MA: Polity Press, 2018).

Fig 15. Fourth Letter. From *Letters to Dorothy*, 2019-2020.



Perhaps cameras were coded into the world much much earlier than we thought. Pinhole cameras exist out in nature, created by light filtering through small holes, creating shadows and specters over the surface of the earth. Entire cosmologies, languages, cultures (both human and non-human) were created following the specters of light, the shadows that play onto the surface of the cave as a fire burns in the darkness.

So I wonder about the timeline in the history of photography textbooks. The crucial moment came when the first image was fixed onto a surface. Nicephore Niepce's *View From a Window at Le Gras* is the oldest known example of a fixed image. Yet, for every fixed image, there are a million images produced at other scales and subjectivities; metabolizing, refracting, haunting worlds at any given time.

This is why, dear Dorothy, I think you and I were looking at similar worlds, from vastly different perspectives. Photographing the same site at different moments in history; documenting a slice of its likeness for one-hundredth of a second. Perhaps, as our stories continue to unfold, and entangle with each other we will discover what images have been submerged beneath the surface of the earth.

Till next time,
N

Fig 16. Fourth Letter Cont. From *Letters to Dorothy*, 2019-2020. ⁷³ ⁷⁴

⁷³ Carol Dieckmann and Tesla Mittelmeier, "Phototaxis: Life in Focus," *Elife Sciences*, February 9, 2016,

⁷⁴ Emanuele Coccia's reanimation of the vegetal world deeply influenced my thinking on plant agency and the formation of new metaphysical framing for plant consciousness and agency. Emanuele Coccia, *The Life of Plants: A Metaphysics of Mixture* (Medford, MA: Polity Press, 2018).

Dear Dorothy,

If we had shared temporalities, I like to imagine perhaps we could have been friends, but instinct tells me perhaps not. My grandmother, only 6 years old at the time of your arrival to Lancetilla, was already trained in most of the household chores that would let her become a domestic worker by the time she was ten.

She ran away, you see, when she was very young. Still a child, and yet already burdened with the memory of three lifetimes. She left behind everything she knew. The only things she dared call hers were the clothes on her back, even if they had once belonged to someone else. She ran and ran until she used up her shoes; she would have kept running, until the floor beneath her met bone. The violence that she knew was complex and layered but I don't dare attribute it only to a historical moment, a single social phenomenon.

My grandparents and their grandparents were all farmers—*campesinos*. This is a common background story in Honduras, whose economy had been one of subsistence and agriculture for centuries. Honduras was one of the many territories that were used as laboratories for anthropogenic world-building; as sites for experimentation for an agricultural machine that spread through the rest of the world.

I've come to the realization that these worlds, specifically the one that you and Wilson helped birth, have peaked at a moment of ecological and climatic collapse. The ecosystems of the Ulua valley have been imbalanced for years, shaped by the intensive agricultural projects that have been eating away at the jungle and into the mountains for centuries. If you could only see for yourself, you would understand. I think you sensed this coming, but the words to articulate it didn't yet exist. A part of me resents you deeply, but the other acknowledges the complexity of your situation. I'm not a historian or an anthropologist, but I digress. I only wish to unearth a story that deserves to be re-told.

Yours truly,

N

Fig 17. Fifth Letter. From *Letters to Dorothy*, 2019-2020.

THE ACKEE'S GHOST

“At such a time ghosts move in their haunts. Though there be no breath of wind, you may hear an occasional rustle, a *murmur* among the creepers. Shadows flit through the crumbling arches; a great carved door creaks on a rusty hinge.”⁷⁵

DHP

The above passage is from Dorothy Popenoe's book, published 3 years after her death. I like to think she had been ruminating on this for a while and sat on the porch of the Popenoe House in Lancetilla to write what would become her last, and perhaps most poignant, contribution to the history of this botanical experimental station. I wrestled with the title of the film *Botanical Ghosts* for two years. Metaphors of ghostliness and spectrality have a long lineage to the point of being almost trite. And yet, Dorothy's writing kept pointing me in this direction.

Shortly after beginning the writing process for this project, a professor pointed me towards Avery F. Gordon's book *Ghostly Matters*, whose premise grapples with understanding forms of dispossession, violence, and racialized capitalism through the ghostly realm. Gordon writes on hauntings and ghosts:

I used the term haunting to describe those singular yet repetitive instances when home becomes unfamiliar, when your bearings on the world lose direction, when the over-and-done-with comes alive, when what's been in your blind spot comes into view. Haunting raises specters, and it alters the experience of being in time, the way we separate the past, the present, and the future. These specters or ghosts appear when the trouble they represent and symptomize is no longer being contained or repressed or blocked from view. The ghost, as I understand it, is not the invisible or some ineffable excess. The whole essence, if you can use that word, of a ghost is that it has a real presence and demands its due, your attention. Haunting and the appearance of specters or ghosts is one way, I tried to suggest, we are notified that what's been concealed is very much alive and present, interfering precisely with those always incomplete forms of containment and repression ceaselessly directed toward us.⁷⁶

⁷⁵ Foreword from Dorothy's book on Guatemalan history. Dorothy Hughes Popenoe, *Santiago de Los Caballeros de Guatemala*, (Cambridge, Massachusetts: Harvard University Press, 1935), 14.

⁷⁶ Avery F. Gordon, *Ghostly Matters: Haunting and the Sociological Imagination*, (Minneapolis: University of Minnesota Press, 2008), 16.

For me, the ghosts that called my attention came in multiple forms: That of Dorothy Popenoe and her legacy, the ackee tree and its story, my ancestors and the living spirits of the jungles that were razed to create plantation worlds. My role as a filmmaker was to act as a medium, to listen to the ghosts of economic botany, to the specters submerged in plantation worlds and to the people whose lives entangled with the living (and non-living) matter above and beneath plantation soils.

The notion of the ghost is complicated by the question of who do we consider the living and why? Who profits from these distinctions? Who gets to haunt? I always refer back to the animated film *Princess Mononoke* and the little kodama forest spirits whose presence becomes the cypher through which the main characters are able to estimate the health of the forest ecology.⁷⁷ These beings parallel the vibrant entities from Ulua Valley, whose animate status is constantly in flux.⁷⁸ If state and governing entities can enact necropower through the administration of life/death, it led me to believe this state is in perpetual flux, that the definitions of life cannot be static. For the state, what is considered dead is more a condition of legibility than ethics: the demarcations between living bodies and ghosts is inscribed into extractive capitalism and its monocultural paradigms.

⁷⁷ Hayao Miyazaki, *Princess Mononoke*, Animation (Toho, 1997).

⁷⁸ Mel Y Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect*, *Perverse Modernities: A Series* Edited by Jack Halberstam and Lisa Lowe (Duke University Press, 2012).

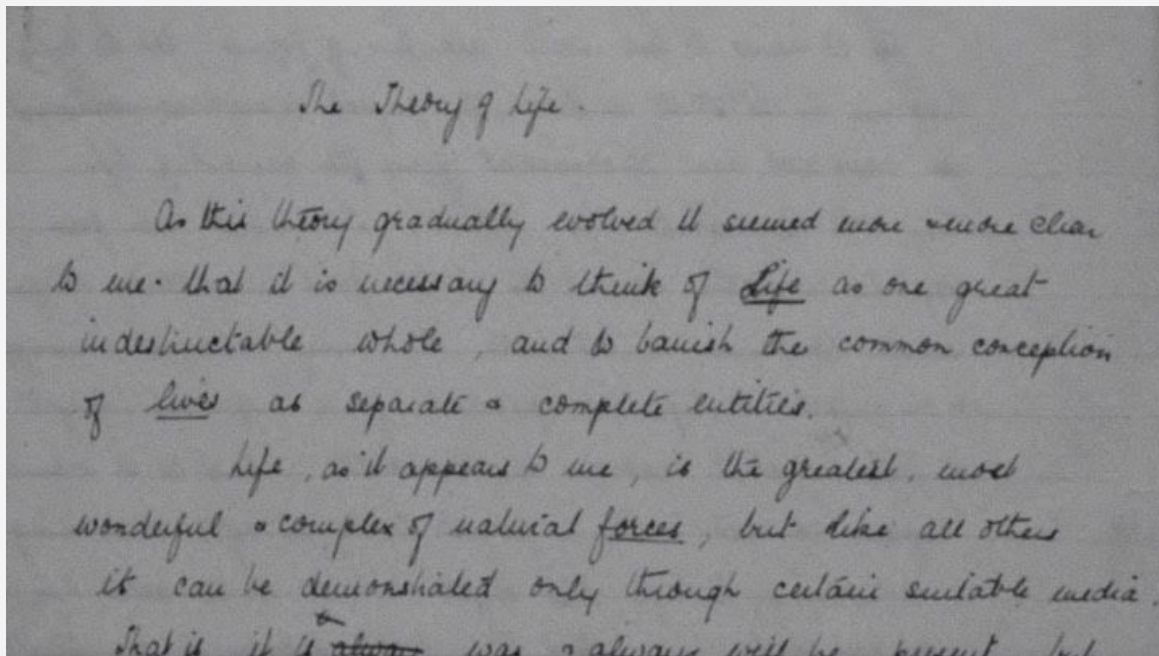


Fig 18. Still from *Botanical Ghosts*, 2020. A scan of Dorothy's Theory of Life, the last entry in her journal from Popenoe papers from the Hunt Institute Archives. I imagine this might have been the last thing she wrote before she passed.

Botanical Ghosts, follows an epistolary exchange between Dorothy, the ackee fruit and myself, as we pull on a thread that unravels the historical forces behind the encounters at Lancetilla. Dorothy's presence is a specter of various forces and disciplines: botany, archaeology, anthropology among others. The erasure of her character struck me deeply, as someone whose thinking was years ahead of her time.⁷⁹ I was seduced by the potential here for a fiction that unfolds, and opens up like the arils of the Ackee fruit.

⁷⁹ Drawing from the ongoing conversations I had in the course Cinematic Migrations with Renée Green, I was deeply influenced by the breadth of work in the syllabus. I felt a deep affinity with Apichatpong Weerasethakul's films *Uncle Boonmee Who Can Recall His Past Lives* and *The Cemetery of Splendor*. Apichatpong has a way of weaving magic into his films in such a subtle yet powerful manner, as well as dealing with the spirit world that in many ways is ever-present, parallel, or perhaps transversal to our world. To me they were an incredibly clever device to speak about the unspeakable; a perhaps less obvious ways of addressing trauma and memory.



Fig 19. Still from *Botanical Ghosts*, 2020. The ackee tree specimen at Lancetilla.

This story haunts the visitors of Lancetilla to this day. The innocuous looking tree specimen is surrounded by a fence of wire, where affixed a black plaque reads: “Be careful...you are in a high danger zone”. Our guide revealed that Dorothy perished by consuming an unripe fruit of the Ackee tree in 1932. This particular specimen had been planted years after Dorothy’s death, although whether it was propagated from the same tree that she ate from is unknown. I had my own brief but phantom-like encounter with the Ackee tree (*Blighia Sapida*), and the questions that followed were the seeds that would become the foundation for this text and the rest of my practice.

In the long standing tradition (or more like a cinematic trope) of attempting to speak with non-human beings, the Ackee’s character’s “voice” appears to the audience as subtitles on a black screen. This gesture has become a more and more common strategy to attempt shifts in subjectivities and perspectives. I’m thinking of Cauleen Smith’s gesture in *Songs for Earth and Folk*, 2013, where the Earth speaks to humankind through textual narratives.⁸⁰ As well as Allora and Calzadilla’s 2017 piece *The Great Silence*, where subtitles embody a parrot’s heartbreaking musings as it approaches its moment of extinction.⁸¹

⁸⁰ Cauleen Smith, *Songs for Earth and Folk* (Chicago Film Archives, 2013), <https://vimeo.com/71024774>.

⁸¹ Allora & Calzadilla in collaboration with Ted Chiang, *The Great Silence*, 2016, <https://www.youtube.com/watch?v=U8yytY7eXDc>.

Blighia Sapida originates from tropical west Africa. It is sometimes known as Ankye or Akye Fufuo, the common names used to describe the tree in Ghana. It has migrated across the Atlantic Ocean several times, and has carved a niche for itself in the Caribbean, in particular Jamaica and Haiti.⁸² The voyage of the *Ackee* is entwined to the geographical and economic landscape of slavery and colonization of the Caribbean. It's not entirely clear what the impetus was behind the introduction of the *Ackee* Fruit to the Caribbean from west African territories, but it's suggested that it provided a food source for the people captive in the sugar plantations. Some historical accounts claim that it was brought to Jamaica by Dr. Thomas Clarke in 1778, the island's first known botanist, who obtained the seed of the *Ackee* from a ship carrying enslaved African people.⁸³

The *Ackee* eventually made its way to Kew Gardens, where Dorothy Popenoe worked as an assistant to botanist Otto Knapf, through another botanical exchange that took place during the Breadfruit Voyages. William Bligh, captain of the infamous ship *The Bounty*, set off on these expeditions at the behest of King George III and under the advisement of Joseph Banks, the English naturalist and botanist who helped establish Kew Gardens.⁸⁴ This expedition's mission was to search for plants such as breadfruit into Jamaica as a food source for the enslaved people working in the sugar plantations, after famine had shortened food supplies and thousands died of starvation.⁸⁵ Upon Bligh's return to England from Jamaica and St. Vincent in the second voyage, he returned to Kew Gardens with various specimens to be introduced to the collection. Among them is a specimen of the *Ackee*, which is given the binomen *Blighia Sapida* in honor of Captain Bligh.⁸⁶

The relations and structures that upheld the institution of slavery during these voyages and botanical exchanges would affect Afro-descendant people in the American continent for centuries, including the Garifuna people of Honduras, whose livelihoods have been affected by the plantation regimes that emerged from Lancetilla. Afro Diasporic and Indigenous histories of the northern coast of Honduras are crucial to understanding these legacies as they manifest in the establishment of plantation

⁸² M. A. Emanuel and N. Benkeblia, "Ackee Fruit (*Blighia Sapida* König)," in *Postharvest Biology and Technology of Tropical and Subtropical Fruits*, ed. Elhadi M. Yahia, Woodhead Publishing Series in Food Science, Technology and Nutrition (Woodhead Publishing, 2011), 54–66

⁸³ John Rashford, "Those That Do Not Smile Will Kill Me: The Ethnobotany of the *Ackee* in Jamaica," *Economic Botany* 55, no. 2 (2001): 190–211.

⁸⁴ Caroline Alexander, "Captain Bligh's Cursed Breadfruit: The Biographer of William Bligh—He of the Infamous Mutiny on the *Bounty*—Tracks Him to Jamaica, Still Home to the Versatile Plant," *Smithsonian Magazine*, September 2009,

⁸⁵ J.H. Parry, "SaltFish and *Ackee*: An Historical Sketch of the Introduction of Food Crops Into Jamaica," *Caribbean Quarterly* 8, no. 4 (December 1962): 34–35.

⁸⁶ Emanuel and Benkeblia, "Ackee Fruit (*Blighia Sapida* König)," 1

regimes of the north coast, specifically Garifuna history.⁸⁷ The intermingling of Native and African populations in the West Indies produced a complex layering of racialized relations and colonial violence that would be enacted upon these territories and affect both its human and nonhuman inhabitants for centuries.

The Ackee is consumed in several countries of the Caribbean in sweet and savory combinations, but the most well known is Ackee and saltfish which is the national dish of Jamaica. Commonly eaten as a breakfast food and served with breadfruit, another species that made its way into the Caribbean through the middle passage via Tahiti, it has become an iconic piece of Jamaican cuisine. This dish and its ingredients are coded with centuries of colonial exchanges, maritime histories and legacies of plantation slavery. The Ackee fruit did not have the same social and economic impact in Honduras, but other starchy fruit and vegetables from the provision system of the Caribbean certainly did. Breadfruit, cassava, plantain, and malanga all make appearances in traditional northern cuisine, undoubtedly making its way to the Central American isthmus and its mainland through the Garifuna from Roatan.

The voyage of the Ackee then becomes a temporal device through which to interrogate biotic histories that accompany the colonial project. African palm, breadfruit, sugar cane, plantains, cassava are all species whose crossings with plantation logics and slave legacies reveal the multiple violences that uphold the structures of colonial rule. For me, the Ackee represents the potency of these legacies in the present: who experiences the rippling forces of colonial and imperial violence 400 years in the future?

I learned a lot in the process of making this work. Though the anthropomorphic strategy of subtitled non-human voices has to be acknowledged, there is something to be said about it becoming a gateway for attempts at shifting subjectivities in cinema without making a claim for totalizing perspectives. It might not be a necessary move or even a particularly effective one, but in grappling through my own anthropocentric views of language and modalities of sensing, I entered into a new space for thinking that I had never considered before. It's hubris to think I could ever represent a being with a deep history such as the Ackee. There is no frame or human language who can "speak for" other (and othered) living beings, without acknowledging imparities in our apparatuses of representation. Perhaps "attempts" are not enough, not without a shifting of relations between the biopolitical, juridical and ecological realms.

⁸⁷ "Honduras' Garifuna Communities Resist Eviction and Theft of Land," accessed November 5, 2018, <https://wagingnonviolence.org/feature/honduras-garifuna-communities-resist-eviction-theft-land/>.

Dear Dorothy

This letter is about my grandfather Victor. He was a great storyteller, hard worker, stubborn as a mule, and had a great sense of humor. He recently passed at 105. He worked on the north coast for a decade, building the railroad tracks that connected all of the northern Honduran coasts to the main ports. The trains transported United Fruit Company workers and shipments from plantations. This railroad was the price paid for a large swathe of arable land given to transnational companies as a concession. Perhaps you crossed paths with grandpa Victor at some point, dear Dorothy.

One summer, not too far from Lancetilla, he had an accident during construction that no one thought he would survive. But stubborn as he was, he held on and eventually recovered. He continued to work even while convalescing, a dozen screws in his knee, and his leg still shattered into many pieces.

Although he said he didn't fear death, I know his life, his body, was part of a political transaction. A body whose labor became necessary for the expansion of plantation worlds and extractive capital. However, he was one of the lucky ones.

I ask myself why this is the case. Why were Hondurans seen as disposable? Why was their soil seen as inexhaustible, their territory ripe for ravaging with the voracious hunger of the plantation?

Did you ever see this coming dear Dorothy?

Yours,
N

Fig 20. Sixth Letter. From Letters to Dorothy, 2019-2020.

ON SOIL AND VERMICULAR LIFE

Soil as matter composed of living and mineral matter becomes a critical entity through which I address not only the questions of animacy and submerged ontologies of the plantation, but also the political and juridical dimension of these previously amphibious territories. I have been working on a series of objects that are part of a larger constellation of artworks that address these histories. Breaking down these engagements that I called exercises, I tell a story through these departures and how soil as a material has become the lens through which I understand my practice. Not only in regards to the liveliness of soil itself, but what emerges from it, how we extract it and then consume it. It's an attempt to find presences of perspectives that have been obscured, through the absences and fissures in historical narratives. I'm interested in obscurities as they appear in systems of knowledge, taxonomy, and display. This legacy has been addressed by both artists and historians in various nuanced ways, and whose work I greatly admire and continue to be inspired by, in particular I reference the work of Claire Pentecost and Maria Puig de la Bellacasa's writings.



*Fig 21. Soil Fieldnotes, 2018.*⁸⁸

A crucial realization was that of the cyclical nature of the consumption of what comes from the earth, and what we deposit in it, which includes human and nonhuman flesh, blood, and bone. When the umbilical cord dissolves and becomes food for

⁸⁸ Samples of Honduran Soil collected from Lancetilla and around the Ulua Valley during my first visit.

maggots and mycelium, and the guava tree I become part of the cycle of soil's biological infrastructure.⁸⁹ When we eat what comes from the soil, we are also consuming its memory. In retrospect, the notions of soil and earth, and consuming what comes from it, are only a small part of an incredibly complex and layered ecosystem that we have the privilege of participating in. The notion of eating soil has various connotations in different regions of the world. I first came across this idea through archaeologist Uzma Z. Rizvi who describes the practice of tasting soil in archaeology and the intimacy of a sensual act that seeks to recognize a landscape through a different sensory apparatus.⁹⁰ These cannibalisms have been explored under other contexts, referring to Brazilian poet Oswald de Andrade's *Anthropophagic Manifesto*⁹¹ and more recently anthropologist Eduardo Viveiro de Castro's *Cannibal Metaphysics*.⁹² This idea became crucial for me as a way to expand my notions of liveliness, animacy, and hierarchies as they exist within agricultural and botanical practices.

Maria Puig de la Bellacasa, feminist science and technology scholar at Warwick University, writes about worms, fungi, and microbes as relatives, decoupling their liveliness from a utilitarian-ness, rather re-imagining the workers of the soil and the processors of decay, and recognizing the invisible labor that must occur beneath before plants can grow, all of these existing outside of human cycles of time.⁹³ Rather they exist within their own subjectivities of timeliness and biorhythms. So the question becomes, can we learn to nourish and care for soil, as part of the larger ecologies of beings, as kindred with whom we cohabit, co-survive and co-build? Soil is a prolific migrant that is then also bound to bacterial co-travelers, living within their own subjectivities of movement—contamination, biological agents, risk, a hazard to human life and property. This is the language used to speak about the movement of soil. I'm interested in the beings that co-travel with us. The grey areas - where the illusions crafted by territorialization begin to break down. Soil is a highly regulated and controlled substance and attempts are made by state agencies and travel infrastructure to monitor its movement as much as animal and human bodies. Nonetheless, it's crucial to recognize how movements across borders are constantly in flux at different scales - from human to animal to vegetal, to bacterial and geological. At microbial scales, cartographic divisions and notions of territory or nationality disappear.

⁸⁹ María Puig de la Bellacasa, "Encountering Bioinfrastructure: Ecological Struggles and the Sciences of Soil," *Social Epistemology* 28, no. 1 (January 2, 2014): 26–40

⁹⁰ Rizvi, Uzma Z. "The Taste of Earth." *The New Inquiry*, April 18, 2017. <https://thenewinquiry.com/the-taste-of-earth/>.

⁹¹ Oswald de Andrade, "The Cannibalist Manifesto," *Third Text* 13, no. 46 (March 1, 1999): 92–95, h

⁹² E.V. de Castro and P. Skafish, *Cannibal Metaphysics*, Univocal (University of Minnesota Press, 2015), h

⁹³ Puig De la Bellacasa, "Encountering Bioinfrastructure: Ecological Struggles and the Sciences of Soil," 53.

Soil exists outside of the designation of the animate, despite its potential for incredibly rich and varied microbial ecosystems, and is treated as pure substrate for other operations to exist. Puig de la Bellacasa writes: “Soil is the final home to most residues. In that sense, it carries Earth’s material memory and that of its creatures. In cultures marked by horror of decay, the status of this massive memory storage easily oscillates between treasure beholder and trash dump.”⁹⁴ She proposes that in reconsidering the relationships to soil, its animacy and potential as a co-creator of matter, we may find powerful alternatives for world-being. In decay, residue, compost, as well as within the webs of mycelium and vermicular relations, exist incredible examples of symbiotic relationships that resist taxonomies and separation.

In addition, the mobility and regulatory aspects of soil migration are vectors through which we can analyze the suppression of non-human agency. Deeply ingrained into the infrastructure of the carceral state, these agencies of regulation and control of species introduction reveal how the expansion of state vision at a microbial scale can operate to support oppressive structures. The constant exchange of matter that occurs between borderlands ensures the perpetual mingling of soils of various kinds, in the nooks and crannies of crossing bodies. As we wash and repeat, dust, sand, and grit mingle to become something at the surface of our skins, the hems of our clothes, the cracks in our shoes.



Fig 22. Extracting palestinian soil from Gary’s shoe upon our return from a trip to Sakiya, during Nida Sinnokrot’s class Common Grounds in Spring 2019.

⁹⁴ Puig de la Bellacasa, 28.

Bodies constantly facilitate the passage of microbial migrants that cross through checkpoints and borders in plain sight. Tucked in between clothing, skin and hair, beings constantly exchange matter through contact residues. Caked in the soles of muddy shoes, remnants of root systems and seeds traverse and cross, a constant exchange of matter that occurs in tandem with the movement of bodies. As these soil beings experience their own migrations and exiles, what kind of relationalities are being obscured? What sorts of absorptions, secretions, exchanges, occur between species during these processes of global movement?

Though the production of territories, the migratory routes and passages of non-humans have also been affected. The passage of non-human migrants and itinerant beings is also regulated and subject to the scrutiny of state entities, like the U.S. Department of Agriculture and the Foreign Agricultural Service. It's increasingly urgent to recognize how the displacement of human persons is intimately tied to the subjugation of other beings, as well as domination over land, territory, and soil. How do we recognize the ecological injustices that disproportionately affect the Indigenous and Garifuna inhabitants of Valle de Ulua and implicate the structures that enabled the severing of relations between human and nonhuman worlds as operating in tandem to sustain these injustices? How have these contributed to the exodus of migrants from the northern triangle in a north-bound search for other ways of living? This work grapples with the knowledge hierarchies that seek to dictate relations between life and nonlife, who and what remains invisible and why.

Dear Dorothy,

One evening, as my aunt and I, prepared food to bring to our family in the solarium, we sat eating a bowl of fruit. That morning we spent a few hours picking fruit in the orchard, digging between the branches for the fleshiest guavas and mangoes, and the fragrant limes she so preciously guarded against outsiders.

The flapping of the white bedsheets drying in the sun against the wind echoed the arrival of other histories or the so-called birth of new worlds. Call it a seance, a fiction or cartography—they're all similar kinds of falsehoods.

There is a theory that suggests that embedded in the fruit fly's set of behaviors is a dedicated mechanism for forgetting.³ What would be a maladaptive trait in any other species, allows it to thrive in its search for rot and sweetness. I wonder about such mechanism in myself: a decay-driven forgetting, that allows you to come back over and over again to the same fruit that poisons you, little by little, yet not enough to call it suicide.

When I was very young, one of my biggest fears was the end of time. The beginning of the world as told by the ending of another. Of worlds engendered by other worlds, under the recognition that they never truly exist apart from each other. Adjacent, overlapping, parallel, transversal. You see, when I stepped in front of the ackee tree and touched its fruit, you and I, along with thousands of generations of *Blighia Sapida*, met for the first time.

Yours truly,
N

³ Robert Urbanczik and Walter Senn, "A Normative Theory of Forgetting: Lessons from the Fruit Fly," *PLOS Computational Biology*, June 5, 2014, <https://doi.org/10.1371/journal.pcbi.1003640>.

A FICTION ON NOCTURNAL HABITS December 1932

Another sleepless night. Even one story above, she could hear the heartbeat of the grandfather clock beating a tempo against her chest from the living room.

We met at the gardens. Do you remember?

There were nights when the air at Lancetilla was so sticky and humid that she felt like she couldn't breathe. Her sheets, limp with sweat, stuck to her body like a cocoon but she kept them to ward herself from the mosquitoes. The slightly sour smell of things that never fully dry caressed her nose every so often, along with the Atlantic ocean brine that came and went with the tides.

Sometimes she woke to sounds of the ocean and lapping waves, as if she had fallen asleep on the beach. The things that kept her awake, she couldn't name, or perhaps was afraid to.

What do you know about love Dorothy?

In moments like these she would write. The gas lamp created a kaleidoscope of shadows over the shelves in the study. The artifacts on her desk, the books, and the specimens became her nightly companions. All the things she could not articulate during the day bloomed at night.

She enjoyed the coherence that came with the dimming of the sun and the orchestra of tropical insects that never slept. Her thoughts turned inward, more balmy than she wanted to admit.

We want to know how you choose who you love.

⁹⁵ Robert Urbanczik and Walter Senn, "A Normative Theory of Forgetting: Lessons from the Fruit Fly," *PLOS Computational Biology*, June 5, 2014,

There was hardly anyone around at the station other than the few resident scientists. She wasn't afraid of wandering alone. Not really. It was starting to wear on her, the lack of sleep and the strange nightly habits she had begun to acquire.

We want you to do something with us.

Will you do it, Dorothy? For Love?

A FICTION ON BITING INTO THE FLESH OF A CANNIBAL

I will tell you about my encounter with the fruit.

There were no strange dreams, no slow descent into madness, except perhaps a restlessness that came when one is on the verge of a new idea, a new thought that would unravel within me a whole new path. It was a moment of clarity, as if beneath a microscope things finally fell into focus; where my thoughts lacked the friction of everyday life and finally slithered their way onto the surface.

First, I saw a kind of romance.

It wasn't love as I understood it, but something like it. It wanted to show me a version of what it could be. The trees simply perceived that they were part of a constant unfurling and flow of energy and matter. When the tree is tasked to sprout, to flower, its body senses in unison what may perhaps constitute a desire. It wasn't joy, but rather a sense of things as they are, as they always and yet never have been.

Whenever new nodes emerged from the body of the tree, those branches were tasked with its care. The body pushed and pulled as needed to distribute food through the little roads, and filaments; wiggling alive, breathing, pulsating with animacy. Through these nodes, things were encoded, secrets from where new things would unfurl.

I asked it about pain and the fear of death. It said nothing about fear, but I had a sense that what I understood as pain, was simply a kind of information, necessary for the body and its flows. The thing I understood as pain, the agony of being eaten and consumed, simply was. I was never offered any explanations, and my mind wanted to ascribe morality to it, but couldn't. For where I was, there was none.

There was the vestige of a shell that anchored my mind to language, to keep me moored before I was swept away into a stream of everything and nothing. I asked it about endings, but there was no conception of such. I understood then, that my fear of endings, of death, was merely to reject the inevitable. It was the feeling that my world was more important than the one that would come after.

I had no words for the realization that preservation was the antithesis of the Great Composting, that the recycling of matter is necessary for the continuation of life. Extinction is only the word for lacking imagination for what comes after one world consumes another.

Dear Dorothy,

This is my last letter to you.

I don't think you could have known, but that remains unclear to me. You wrote of a recurring dream of being called, but by what you wouldn't say. It happened so fast, and there was hardly anything anyone could do except waiting. On the day of your death, you were bathed and covered in a cotton muslin shroud, on your chest was a bouquet of your favorite flower. You were buried in the cemetery at Lancetilla, where a few of your other colleagues and their children were interred.

Would you have answers after such a long time after your passing? What things should be unearthed, what should be allowed to rest beneath the ground? What do we preserve? I could tell from the letters you loved being knee-deep in the layers of the excavation, brushing away at a shard of history, reconstructing in the theatre of your eye the many lives that must have lived and died here. Maybe you would say that history was a heavy burden but that an even heavier burden to shoulder was silence.

You died at Lancetilla in December 1932, of a condition called hypoglycemia. Caused by consuming the unripe fruit of the ackee tree; also known as Jamaican vomiting sickness. I found this out two years ago when I met the ackee tree that is still planted at Lancetilla Botanical Gardens. It sits in an orchard of subtropical fruit about 100 meters to the east of Popenoe house. You were buried nearby on top of a hill surrounded by a palmarium, along with some of your colleagues and their children.

You wrote one last essay that you called Theory of Life. In it, you wrote about life's many states of suspension, about organic and living worlds, and their expression through various media. I always wondered if you had a revelation before all of this happened, and tragedy struck your family. Before Wilson became a widower, did you become a prophet? Your silhouette is written into the history of plant travel, botanical exchange, magic, and other things. I only wish you had lived to see your work become.

Fig 24. Last Letter. From Letters to Dorothy, 2019-2020.

I wrote these letters, maybe because by speaking to you, I imagined you were reanimated. You came back to me, through a seance, where your essence was no longer hidden behind Wilson's shadow. I imagined you reconstituted as the complex character that you were. As neither a heroine nor a villain, nor as a martyr; but as a perfectly normal and ordinary woman, whose extraordinary life I've had the privilege to witness. I think, perhaps you answered my call decades before I was born. Years before I would be able to speak, to answer the questions I am only beginning to ask. After this, I can finally let you go.

All my love and affection,
N

Fig 25. Cont. Last Letter. From Letters to Dorothy, 2019-2020.

COMPOSTING (CONCLUSION)

To conclude this thesis, I'm invoking the character of the Ackee in *Botanical Ghosts*. The question it posed— “ how do you choose who you love”—is the underlying question behind all of my work. Love not as conceived by heteronormative and anthropocentric narratives, but against them: a queer, deadly, sympoietic, cannibalist multi-species composting kind of love. Perhaps love is not the word that is needed. Perhaps the word does not exist in a human language.

At a panel discussion with Macarena Gómez-Barris and Eben Kirksey titled “Submerged Perspectives, Extinction and Decolonial Futures” as part of *Futurity Island*'s programming, Eben Kirksey asked this very same question. Which species do we choose to love in order to save another? ⁹⁶

It gave me pause as my own turmoil about what it means to continue living under the threat of ecological collapse continues to brew. Can plantation worlds be loving ones? Admittedly, I conclude this thesis with more questions than answers, but I turn towards the possibility of other relations and socialities that have been imagined through the vegetal and vermicular turns mentioned in previous chapters.

Did the Ackee call Dorothy out of love? Do I love Dorothy? Did she love me?

For myself, the act of writing to the dead is perhaps less esoteric and more so a resistance to the so-called objective accounts that emerged from this period in Honduran history. It's from Lancetilla's horticultural technologies and paradigms of agriculture that plantation economies reach their apex, ushering into Honduras the era that Anna Tsing and Donna Haraway termed Plantationocene. Within the plantation structure labor, capital, and violence coalesce to determine who profits from plantation regimes, and whose lives are imperiled by it. Plantation logics have enshrined extraction of labor, resources and the consumption of soil as relational models between the laborers of capital and the site from which living and non-living matter is extracted. Negotiations and transactions with the dead are happening all the time, at a microbial, political, and personal level: such is the necropolitical implication of composting.

⁹⁶ This talk was part of *Futurity Island*'s programming Nomedá & Gediminas Urbonas' collaboration with Indrė Umbrasaitė, Nicole L'Huillier, Tobias Putrih, *Futurity Island*, 2018. Commissioned by Blackwood Gallery for *The Work of Wind: Air, Land, Sea*.

Eben Kirksey, “Submerged Perspectives, Extinction and Decolonial Futures” *Futurity Island: amphibian pedagogies and submerged perspectives*, curated by Nomedá & Gediminas Urbonas at MIT's Program in Art, Culture and Technology at MIT, September 6, 2019).

I wanted to close with this passage written by Dorothy, who I now consider a friend and co-author of this document :

THE THEORY OF LIFE

From Dorothy's Last Journal Entry
December 1932

“As this theory gradually evolved, It seemed more and more clear to me that it is necessary to think of Life as one great indestructible whole, and to banish the common conception of lives as separate and complete entities. Life, as it appears to me, is the greatest, most wonderful and complex of natural forces, but like all others it can be demonstrated only through certain suitable media...

So it seems to me with all living forms. While they remain in a state sufficiently perfect and have not been disconnected from the current of life, they will demonstrate life, i.e. live. The current was first applied, or rather carried on in the first unicellular state, and will continue until either the body becomes damaged and imperfect, or life is suspended for a sufficient length of time so that it becomes disconnected...

Hence, so-called souls are not so larger or smaller than others. Ourselves merely demonstrate life less or more perfectly according to the adequacy of our bodies, the suitability of our surroundings. According to the degree of development and perfection of the living organism, is the demonstration of life. The Human body is the greatest of the organisms, with its highly developed brain, demonstrates life more brightly and deeply, and shows a higher attribute — consciousness. But the life demonstrated is not merely part of, but is the same as that demonstrated by monkeys, animals and all living things, including the insects and plants. That is no special creation separated from other animals by possessing that thing which is the conception of his own mind — a soul...

So the story of evolution unfolds, life shines more clearly and brightly in these forms which more clearly approach the perfect and whose existence is maintained at the expense of the less perfect forms.”

—Dorothy Hughes Popenoe

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