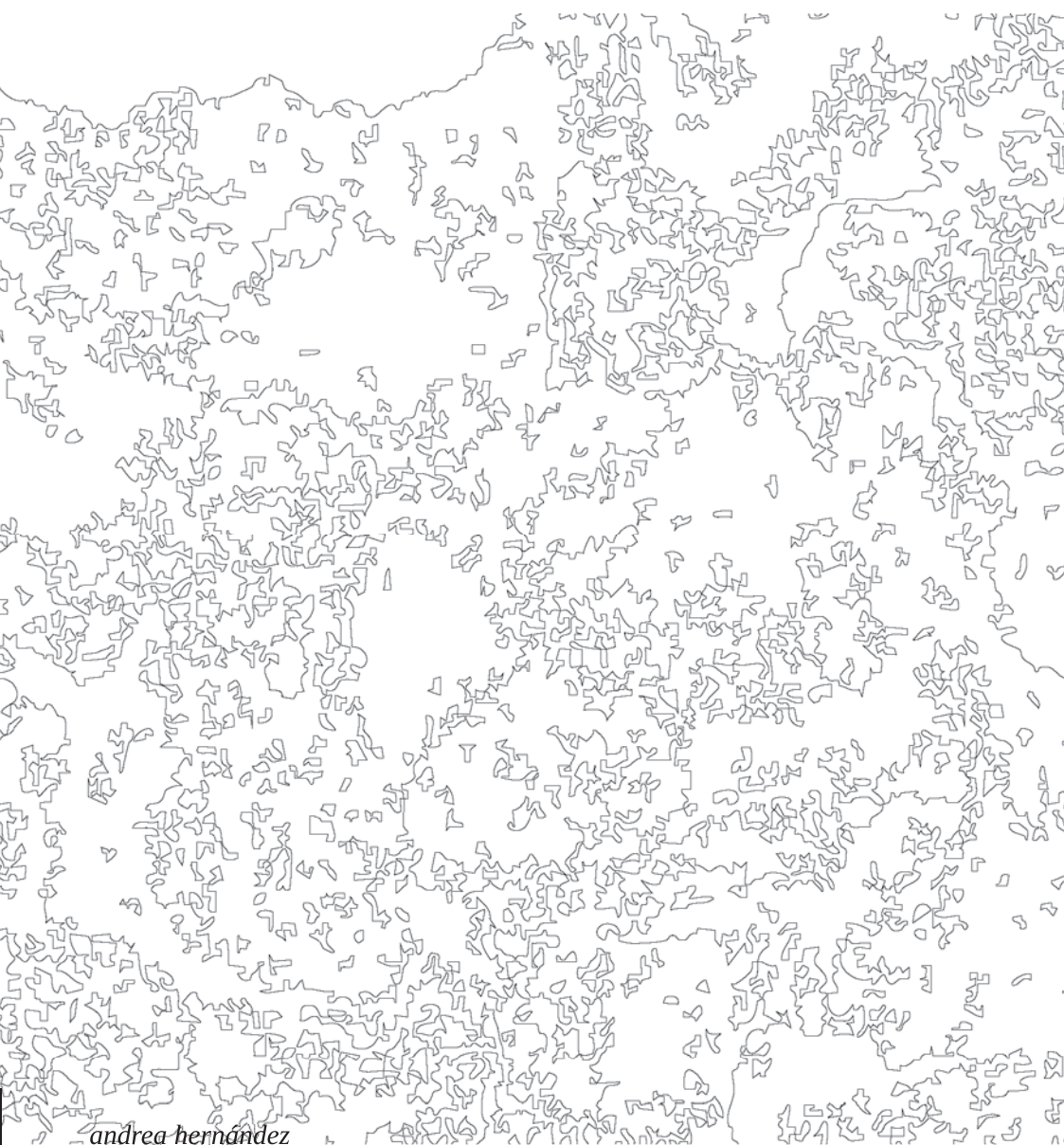


GSAPP MSAAD Portfolio

2025-2026

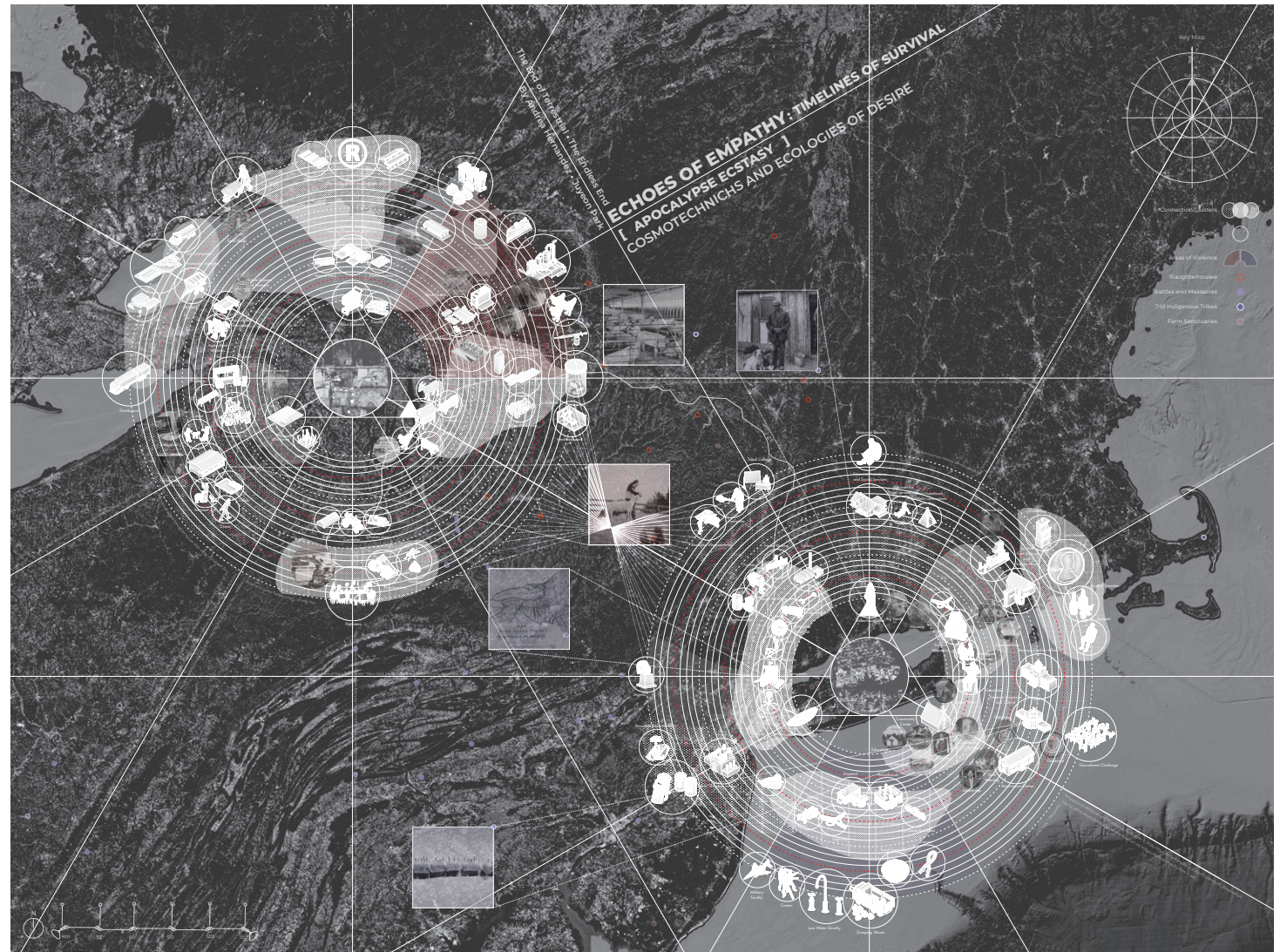


andrea hernández

Echoes Of Empathy: Timelines Of Survival

with Lotus Park
Professor: Uriel Fogué

Echoes of Empathy explores survival and resilience through two spaces shaped by ecological, ethical, and cultural collapse: the Poospatuck Reservation on Long Island and Farm Sanctuary in Watkins Glen, New York. Founded in 1986 by Gene Baur, Farm Sanctuary shelters animals rescued from industrial farming, offering spaces of healing, care, and autonomy. The sanctuary challenges systems of extraction and human exceptionalism while encouraging ethical coexistence through education and community engagement. The Poospatuck Reservation, home to the Unkechaug Nation, represents Indigenous endurance despite centuries of colonial displacement and ongoing struggles over sovereignty, housing, and cultural preservation. Together, these sites reveal survival itself as a form of resistance.



Colonial Toxicities: Wildlife Preservations as Archives

Professor: Mark Wasiuta



uxo disposal, culebra, puerto rico

The last thing you imagine when going to a beach for a break or vacation is seeing an air-detonation of a UXO. Especially when you had no idea that the location had an issue with UXOs in the first place. Small islands that are part of Puerto Rico have experienced this phenomenon and continue to live its repercussions due to years of US military activity. These actions are not only remembered socially and politically, but they are also stored materially in the environment, as traces of this toxicity are embedded within the natural sites of Vieques, Culebra and Desecheo.

The choice of establishing these military occupations began after the Spanish-American War, when Puerto Rico became a U.S. territory.

Its location gave way for the U.S. to be present in the Caribbean, which they saw as a strategic location. The Caribbean protected U.S. shipping lanes and served as a buffer against European powers.

Culebra was used by the Navy and Marine Corps for bombing and naval gunfire from roughly 1903 to 1975. The island has deep waters for battleships and was sparsely populated. While it was close to the main island, it was isolated enough to fire live ammunition. In 1941, the U.S. feared attacks on its shipping routes and threats to the Panama Canal due to WWII. This led to the military occupation of Vieques. The island is long and narrow, which served well for bombing and amphibious training. It also sits near deep-water naval routes. The Navy expropriated about two-thirds of the island and turned it into a bombing range, an amphibious assault training ground, and a munitions storage area. Desecheo was used primarily during WWII and the beginning of the Cold War. The fact that it was isolated and uninhabited allowed the U.S. to conduct bombing and gunnery practice. It was also closely tied to nearby U.S. installations on the West Coast, such as the Ramey Air Force Base in Aguadilla.

All of these occupations were the first acts of colonial toxicity. The limited political power of locals permitted the U.S. to use these lands as a sacrifice, for their

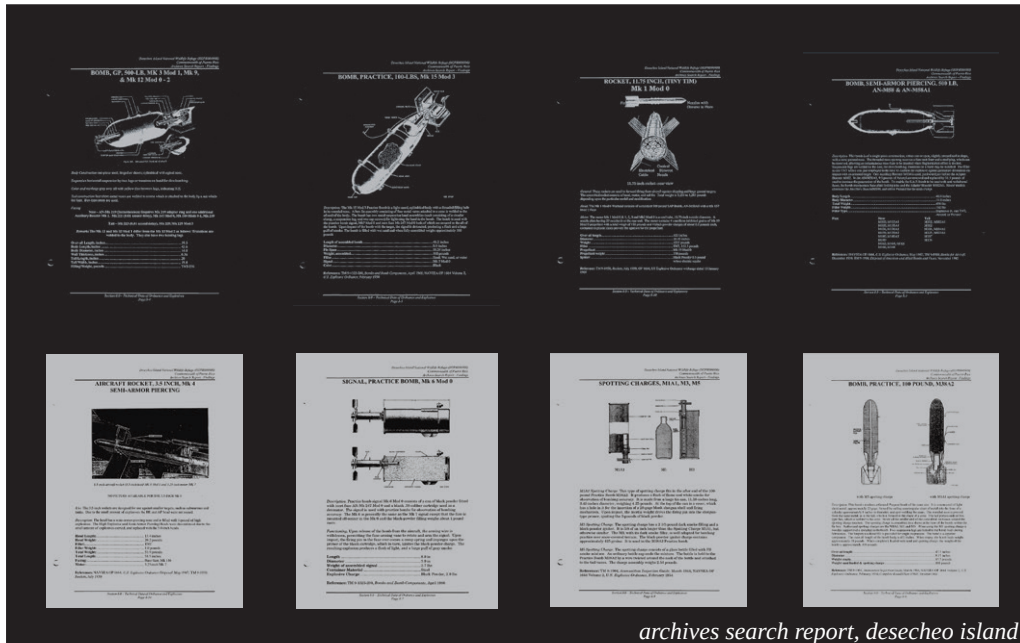
own advantages, while displacing the people that lived in Culebra and Vieques and expropriating resources. The earliest to be unoccupied by the military was Desecheo in 1964. The island transitioned into protected status but remains contaminated with UXOs. Military departure in Culebra was completed in the 1970s after many community led protests. Vieques was the longest battle; after many protests and incidents, the military finally ceased its control in 2003.



A fisherman uses a slingshot against a U.S. Navy speed boat on the south shore of Vieques, Puerto Rico in 1979

Military bombardment is a slow violence. Its residues, including chemicals, metals, craters, and disrupted ecologies, persist quietly and unevenly in bodies and landscapes. These islands function as toxic archives, where militarization becomes visible in chemistry, biology, and geomorphology. It is notable chemically, stored in soils and sediments. Biologically, accumulated in coral tissues, fish, and human bodies. And even geomorphologically, etched into craters, fractured reefs, and altered coastlines.

Understanding the types of munitions and military training activities helps explain the traces they left behind. High explosive bombs and practice bombs ranging from 50 to 500 lb were used. These explosives included TNT, RDX, and HMX and were utilized in air-to ground bombing practice. There are also remains of naval artillery shells, used during ship-to shore shelling and naval gunfire training. Mortars, rockets and grenades were also present. To add on, underwater explosives were employed, mostly near Vieques and Culebra.

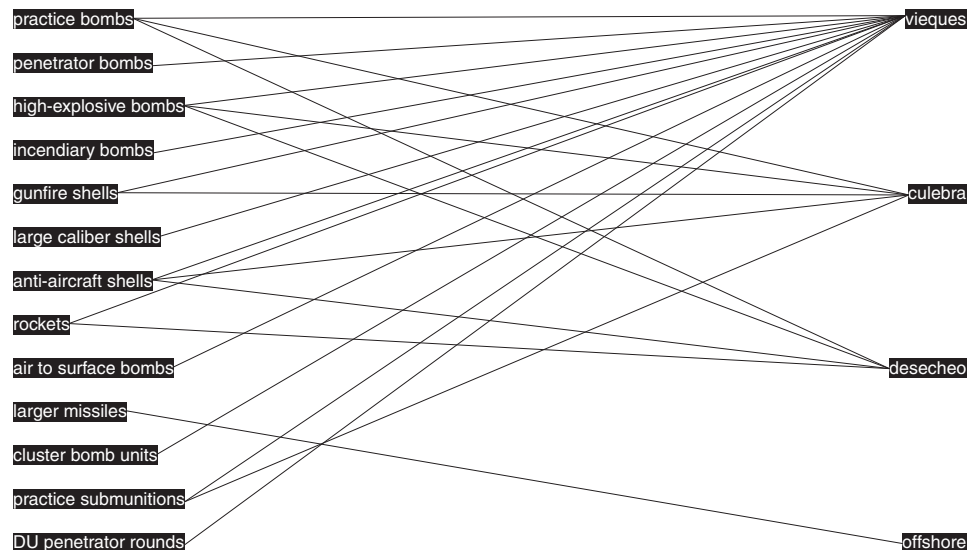


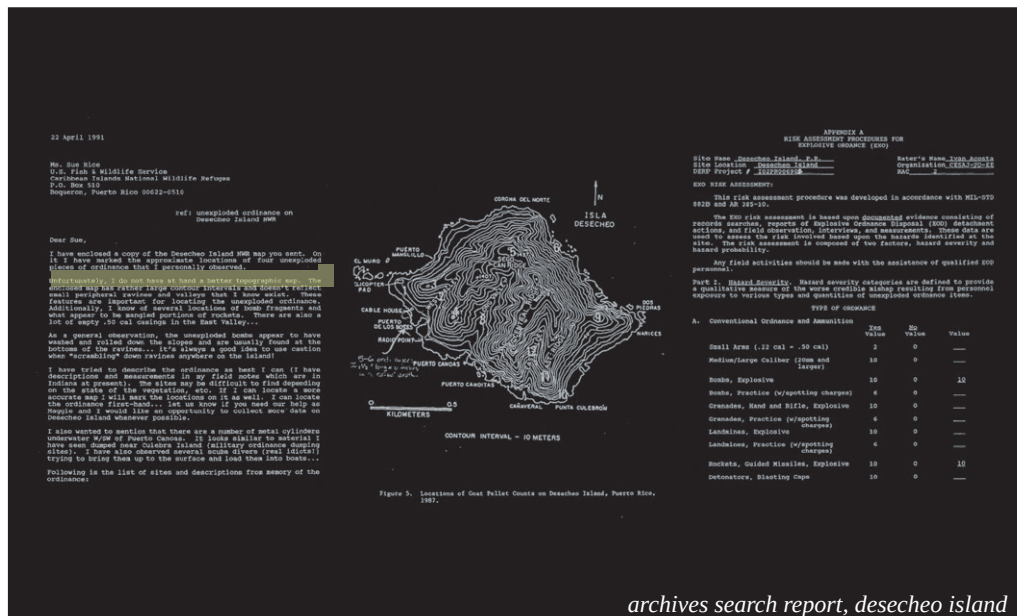
These actions and events were divided and even shared among the three islands. Activities in Culebra included naval gunfire, air-to-ground bombing, amphibious landings, and the establishment of restricted live-fire zones near residential areas. Desecheo witnessed aerial bombing, gunnery practice and explosive testing. Vieques hosted one of the largest live-fire training complexes in the Atlantic. Bombing practice, artillery training, ship-to-shore shelling, weapons testing, and amphibious assault exercises took place almost continuously. It has the largest quantity of ordnance overall among the three.

After these events and the migration of the military, how were these remains addressed? Cleanup efforts determine how the toxic legacy will be perceived. In Culebra's case, cleanup after military departure in the 1970s was minimal. Many underwater munitions remain, and some areas are still restricted. To add on, UXOs that are found are detonated on the spot with open-air detonation methods, re-releasing contaminants. Vieques faces a similar fate. Cleanup began in 2003 under EPA Superfund designation. Plans for the island included surface UXO removal, detonations, soil removal, and limited underwater clearance. In both cases, reports have claimed that remediation will extend into the 2030's. Since many bombs are destroyed in situ, releasing new explosive residues, community organizations argue that federal agencies

have failed to conduct adequate sampling, especially in marine environments, and that the burden of contamination remains an example of colonial environmental violence. Cleanup in Desecheo has been the most limited and restricted. It is supposedly ongoing, but constrained by terrain and reefs. The island remains closed to the public because of the presence of UXO across the terrain. Authorities consider it unsafe for landing. The fact that the island was uninhabited after the military left meant they were in no rush to remediate what was left behind. However, cleanup reduces immediate danger but cannot erase the environmental memory embedded in soils, water, and biological systems.

typologies



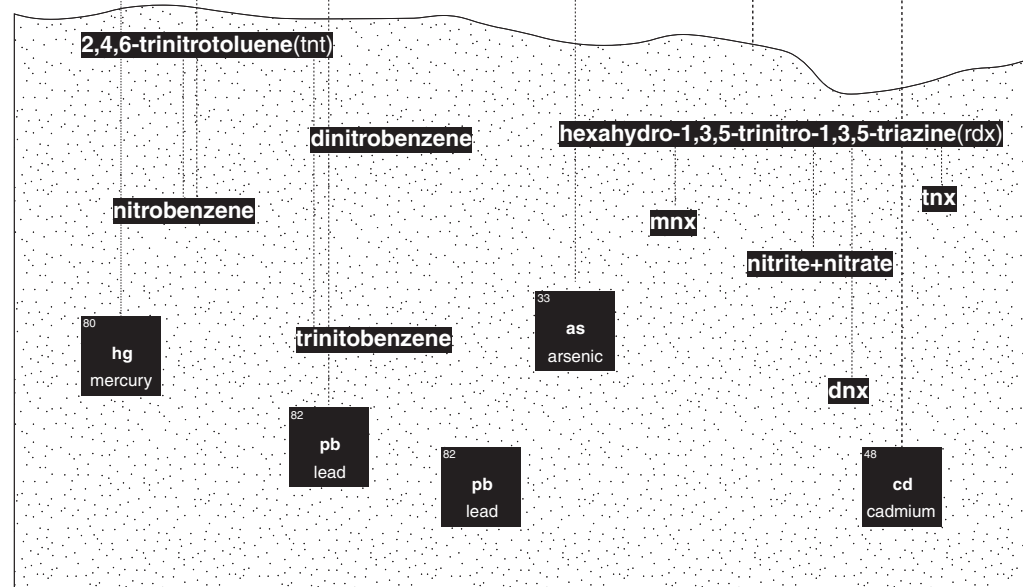


So, what do these munitions leave behind? The most straightforward “archival” layer is what remains chemically. Research shows that plants and soils near former bombing ranges contain elevated levels of lead (Pb), copper (Cu), zinc (Zn), cadmium (Cd), mercury (Hg), aluminum (Al), and even arsenic (As). These metals come from bomb casings, naval shell fragments, and propellants. Heavy metals are persistent, they accumulate over time in sediment layers like geological memory. Explosive residues also remain. Nearshore sediments contain traces of TNT and RDX, explosive compounds used in thousands of bombs. Studies also detected these residues using passive samplers placed in marine waters, showing that the chemical signatures of bombing continue to move through coastal systems. Taken together, soil and sediment function like geological hard

drives. Every bombing run leaves material traces that become layered into the earth, encoding a chemical history of militarization.

This then brings us to living records of contamination: the biological layer. The biological archive is even more powerful because it is alive, continually recording, circulating, and transforming contaminants. If we begin by evaluating human bodies, there are still some traces of these events. Studies have found that residents of Vieques had significantly elevated urinary concentrations of metals, compared to the main island, such as: aluminum, arsenic, cadmium, lead, and uranium. Cancer incidence in Vieques is also 27% higher than Puerto Rico's average.

Other organisms also have traces of the past. Vieques, Culebra, and Desecheo all host coral reefs marked by bomb craters, rubble fields, fractures and shock injuries, reduced coral cover, and slower recruitment and regrowth. Desecheo's reefs, in particular, contain numerous underwater UXOs that continue to leach metals. Decades of bombing in Vieques left enormous craters in coral reefs. Marine ecologist Edwin Hernández-Delgado has shown that many of these scars remain visible today. They transform reef architecture, reduce coral cover, and slow recovery for decades. These reefs essentially function as biological seismographs of military disturbance. Other marine animals across all three islands, such as fish, lobster, conch, sea urchins, and benthic organisms have been found with elevated lead, copper, cadmium, arsenic, and even TNT



derivatives. Marine organisms turn contamination into circulating biological memory, moving it up food webs. Because many residents of Vieques and Culebra rely on fishing, this creates a direct link between environmental archives and human exposure. Military presence also affected flora and fauna development. Before military use, Desecheo had large seabird colonies. The bombing, combined with later invasive species (goats, rats) and human disturbance, decimated those populations.

The last archival layer is geomorphological, the physical shape of the land and seabed. Bomb craters remain visible on both land and underwater. Aerial and satellite imagery still shows clusters of round depressions where bombs and naval shells struck the ground. The shape of these islands is itself an archive. Vieques contains thousands of bomb craters visible

in aerial imagery. Culebra’s hills and beaches still hold UXOs and crater depressions. And Desecheo’s steep slopes contain shell fragments and munitions embedded in cliffs and soils. This alters hydrology, erosion patterns, drainage, and soil formation. Geomorphology becomes a physical memory system, preserving the topographic scars of bombing. Many UXOs that remain buried in soil or resting on the seafloor create new craters when cleanup teams detonate them in place, creating new craters, meaning the archive is actively being rewritten through contemporary remediation.

The natural environment of Vieques, Culebra, and Desecheo holds a complex, multi-layered memory of militarized colonialism. Together, these layers form a living environmental archive that shows persistence and circulation. Toxic traces outlast military presence and

remain under our paradise-like landscapes.



vieques bombing range

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Feather														
duster														
worm														
Rocas	23.9	41	9.52	41	40,200	1			95.5	14				
Alcatraz	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			mg/kg	mg/kg				
Sabellastarte														
emarginata														
Daisy														
daisyfish														
Rocas	4.6	41												
Alcatraz	mg/kg	mg/kg												
Stegastes														
adustus														
Coral														
Montastrea														
a. frondosa														
Rocas	250	41	250	41	600	1	250	mg/kg	14-27	N/A	N/A	N/A		
Alcatraz	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
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Coral														
Diploria	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D

chemical analyses, vieques, puerto rico

Fiber Migrations

with Latifa Alfala & Fion Li
Professor: Amelyn Ng

Fiber Migrations is a textile-based magazine that documents the global realities of textile waste and the sites where discarded garments accumulate. Combining writing and visual material, the project examines the environmental pollution caused by textile disposal alongside questions of care, consumption, and responsibility toward clothing. It frames textile waste as part of a larger, often invisible network—one embedded in local economies while also prompting new forms of reuse, repair, and material circulation.

MADE IN WASTE/WORKS
DESIGNED BY LATIFA ALFALAH, FIONE LI, ANDREA HERNANDEZ



(EN)
TEXTILE WASTE EXPLORATIONS

FIBER MIGRATIONS





Donating a shirt or buying secondhand often feels like a simple, responsible choice. It suggests a closed loop, clothes passed on, reused, and kept out of landfills. But the reality is more complex. Many donated garments are collected by organizations such as The Salvation Army and Goodwill Industries. While these groups do fund social programs and resell a portion of donations locally, a large share of clothing enters a global resale system. Items that cannot be sold in local thrift stores are often sold in bulk to textile graders, packed into bales, and exported. From there, clothing travels across the world to markets in places like Accra, as well as to countries like Chile and India. These systems do create jobs and make clothing more affordable, but they also shift the burden of excess.

Not everything donated is usable. A significant portion arrives damaged, low-quality, or unsellable. Once these bales are opened, local traders, not the original donors or organizations, absorb the loss and must manage the waste. Organizations like The Salvation Army do contribute positively through charity and reuse. But they are also part of a much larger global network driven by supply and demand.

What feels like a simple donation is the beginning of a long and uncertain journey, one where clothing does not always end up where it is most needed.

Following the Korte Lagoon

Step 1: Clean out your closet.
Pick a shirt you no longer wear. Maybe it shrunk. Maybe you just don't like it anymore.

Step 2: Say goodbye.
Drop it into a donation pile and imagine it heading somewhere new, perhaps even across the ocean.

Step 3: Ship it out.
Follow it as it travels to places like Kontomoto Market, packed tightly with thousands of other garments.

Step 4: Put it to the test.
Picture vendors opening the bale and sorting quickly. Does your shirt make the cut?

Step 5: Miss the mark.
If it's stained, torn, or simply unwanted, watch it get tossed aside.

Step 6: Loss its place.
With nowhere formal to go, let it linger in a growing pile of textile waste.

Step 7: Add a little rain.
Now imagine a heavy downpour. Your shirt is lifted, carried, and pulled into nearby drains.

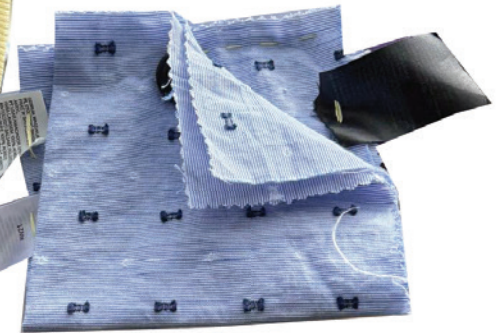
Step 8: Go with the flow.
Follow it as it twists through the city's waterways, picking up more debris along the way.

Step 9: Reach the final stop.
Watch it settle into the Korte Lagoon, where layers of waste collect.

Step 10: Sink it down (slowly).
Over time, your shirt doesn't disappear, it breaks down into tiny plastic fibers, seeping into the water.

Step 11: See the ripple effect.
Fish struggle, water quality drops, and nearby communities deal with flooding and pollution.

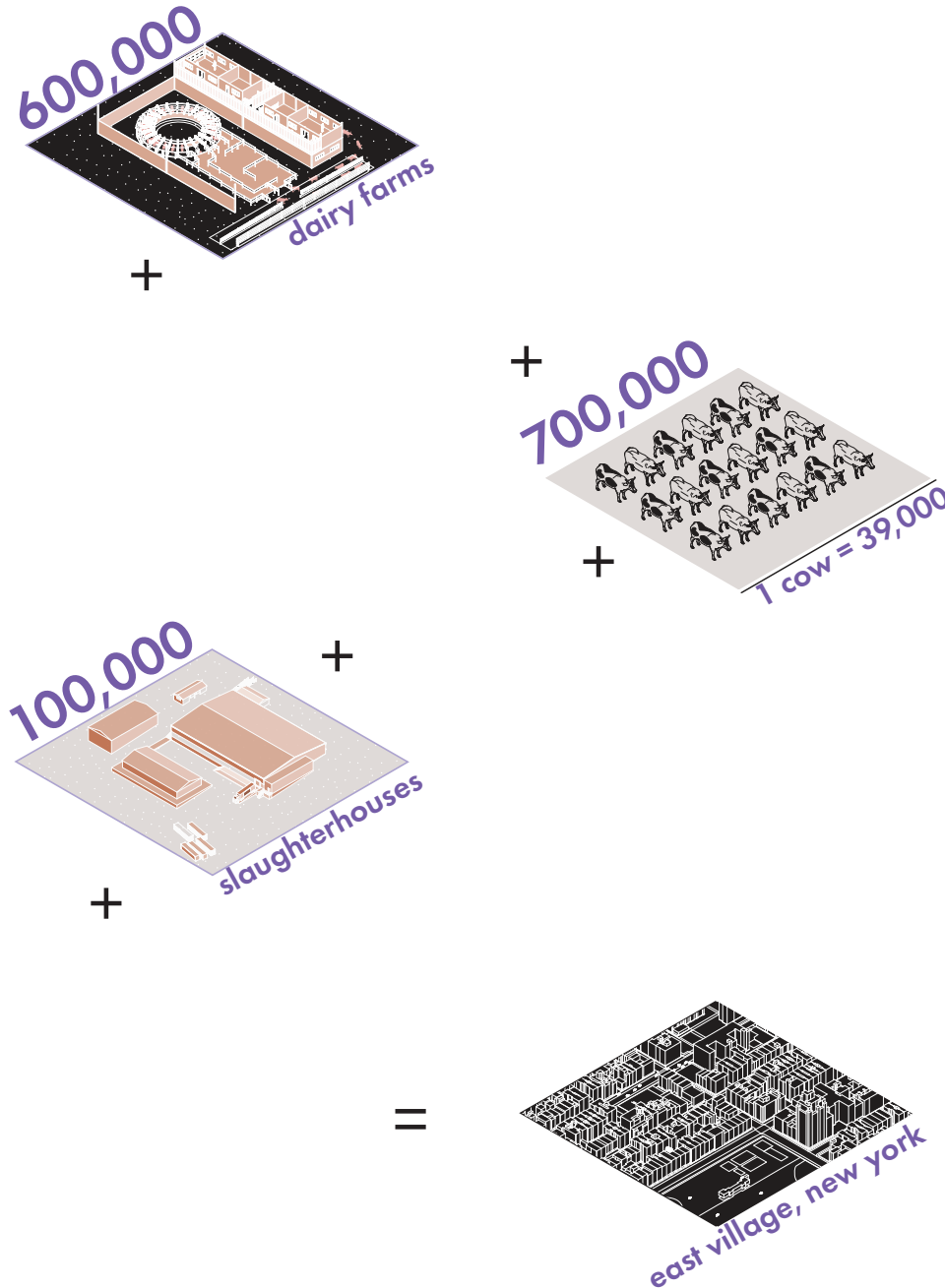
Step 12: Connect the dots.
That one shirt it didn't just vanish. It completed a journey, one that links your closet to the world.



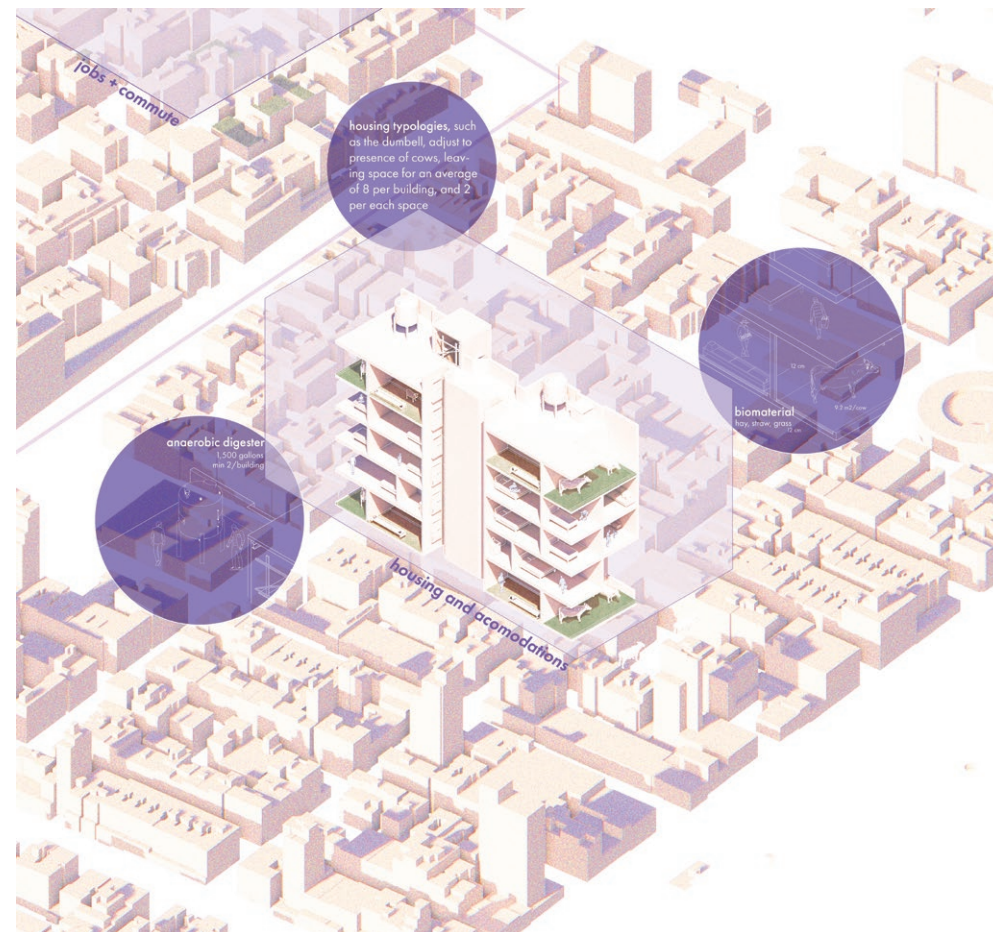
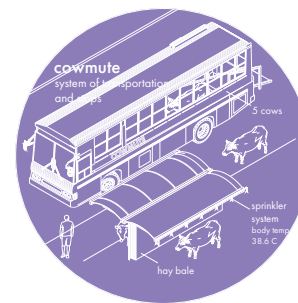
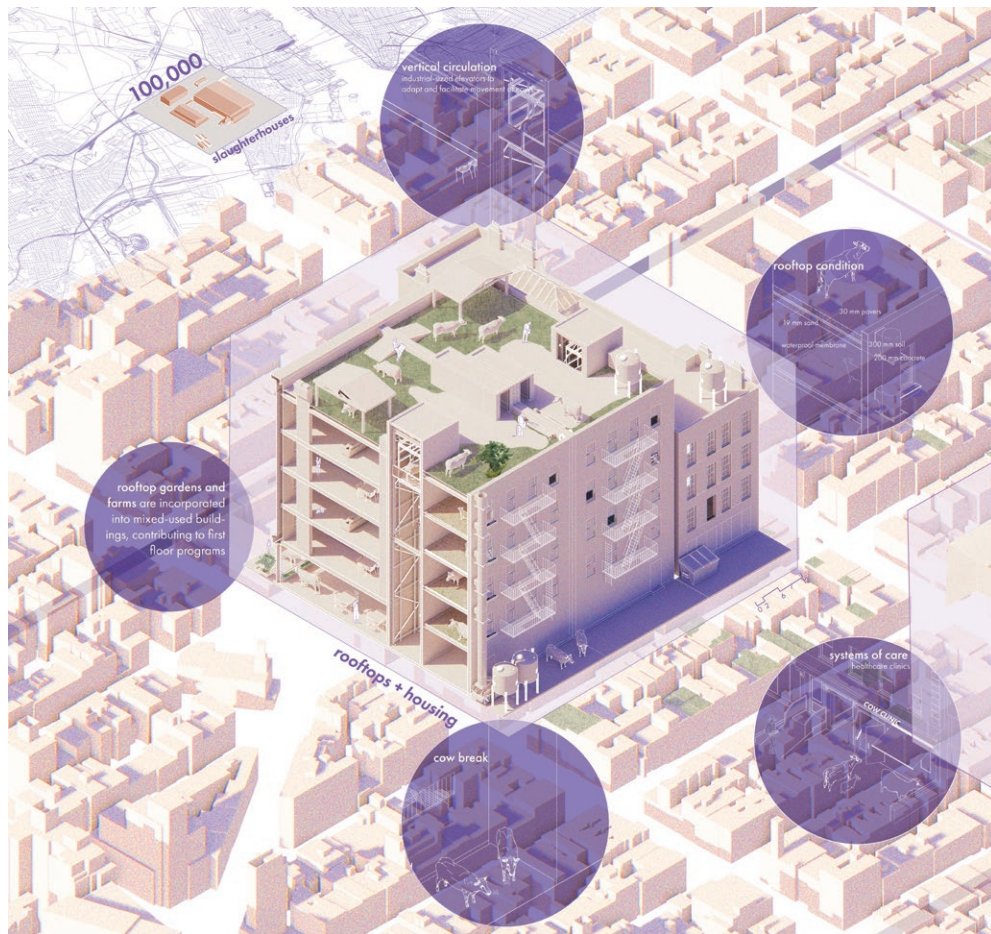
Cowlture Shock

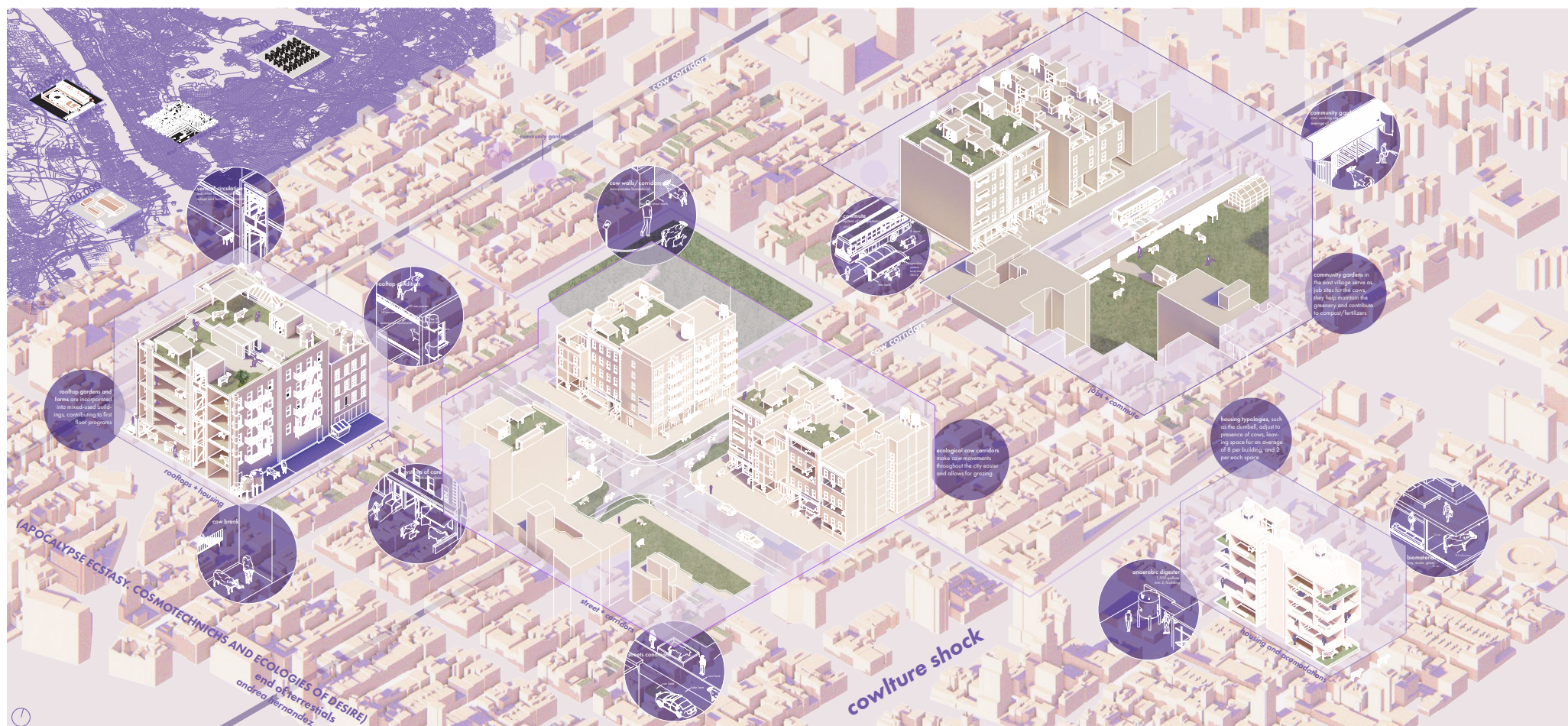
Professor: Uriel Fogué

The concept of a farm sanctuary arises from *empathy*, a response to the industrialized cruelty of factory farming. But what if we extended that empathy even further? What if, instead of isolating sanctuaries, we dismantled factory farms entirely and reimagined our cities to accommodate *displaced livestock*? In New York State alone, nearly 700,000 cows are currently confined within slaughterhouses and dairy farms. Cowlture Shock proposes an urban prototype that relocates and integrates these cows into the fabric of New York City, specifically, the East Village. This neighborhood is an ideal testing ground, historically tied to the meatpacking industry, home to diverse immigrant communities displaced by gentrification (or in this case, *gentrificowtion*), and now one of the city's most vegan-friendly areas.



The project repositions *architecture as a mediator between species*, reshaping the built environment to allow for human-cow coexistence. Rooftop gardens and farms would be installed on commercial and mixed-use buildings, enabling cows to participate in the local economy and ecological cycles, while also expanding grazing space. Vertical circulation systems, such as industrial elevators, would be reimagined to support *cow mobility*. Street-level infrastructure would adapt as well. Designated cow lanes and ecological corridors would replace car traffic in certain areas, creating a slower, shared urban rhythm. As new citizens, cows would require *dedicated systems of care, labor, and transportation*. Community gardens would serve as employment hubs. Special buses and bus stops would be introduced for cow transit. Housing typologies would evolve to reflect cow needs, accommodating herd dynamics and spatial requirements. Waste management becomes a key consideration. Anaerobic digesters installed within buildings would process manure. The objective is not to force cows into a human lifestyle, but to merge our systems with theirs, *to meet their needs as fully as we meet our own*. It may not be neat or perfect, it is simply *integration*. This prototype adjusts to these conditions, demonstrating that the *extension of empathy leads to radicality*.







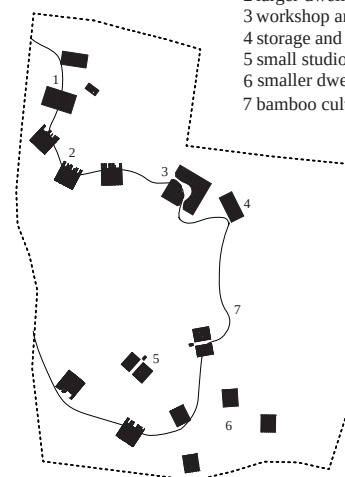
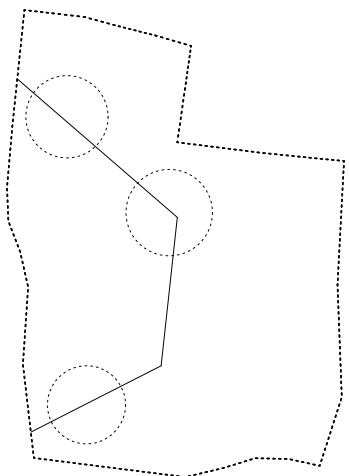
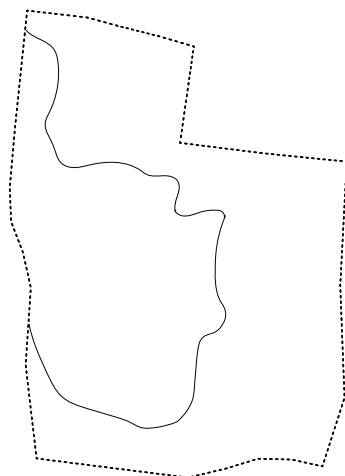
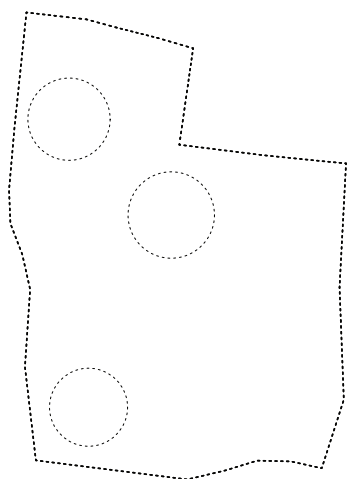
Open Site Studio: A Commons for Architectural Practice

*Professors: Jing Liu and Alessandra
Cianchetta*

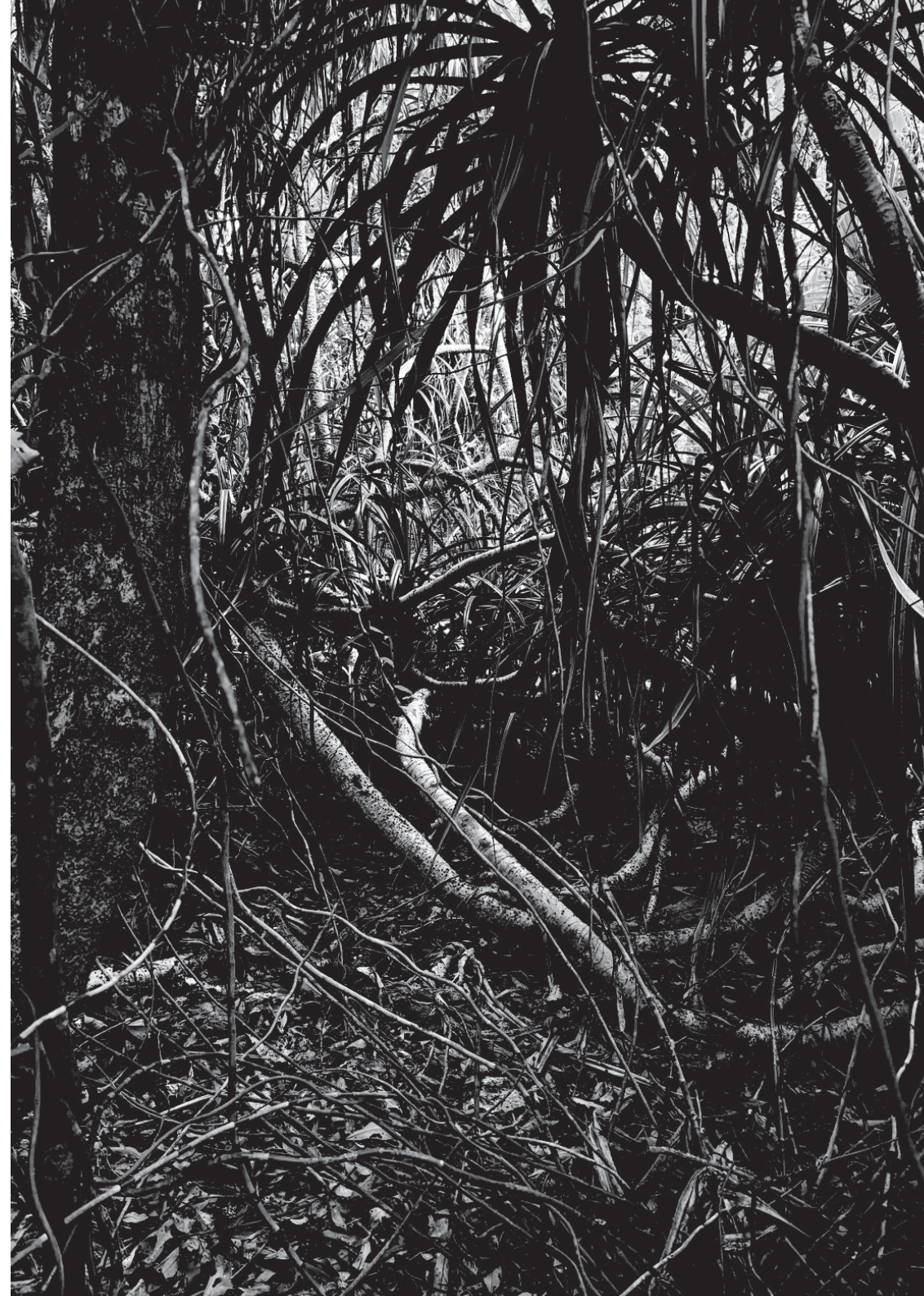
Open Site Studio emerges from the subtropical landscape of Ishigaki, Japan, as a masterplan for architects and designers to live, learn, and work in close dialogue with their environment. Rather than occupying the site, the architecture is threaded through it, linked by a continuous path that cuts across and through each structure. This path acts as a mediator between built and natural systems, framing moments where vegetation, structure, and occupation align. Material choices reinforce this relationship: wood is introduced where the architecture meets rocky terrain, while concrete anchors spaces within the island's red soil, creating a deliberate dialogue between ground and structure. The program is organized as a network of communal and individual spaces, including a shared kitchen, a range of dwellings, collaborative workshops, smaller studios for focused work, and areas dedicated to bamboo cultivation.







- 1 kitchen
- 2 larger dwellings
- 3 workshop area
- 4 storage and machines
- 5 small studio spaces
- 6 smaller dwellings
- 7 bamboo cultivation





The jungle is hard to represent, color is introduced to demonstrate its complex and beautiful network. The masterplan adapts to the site. Buildings follow the land, clearings emerge within the forest, paths trace natural contours, and architecture and nature exist in dialogue.

Architecture is not an object to endure untouched. It is a living system in dialogue with nature, capable of adaptation, renewal, and growth.

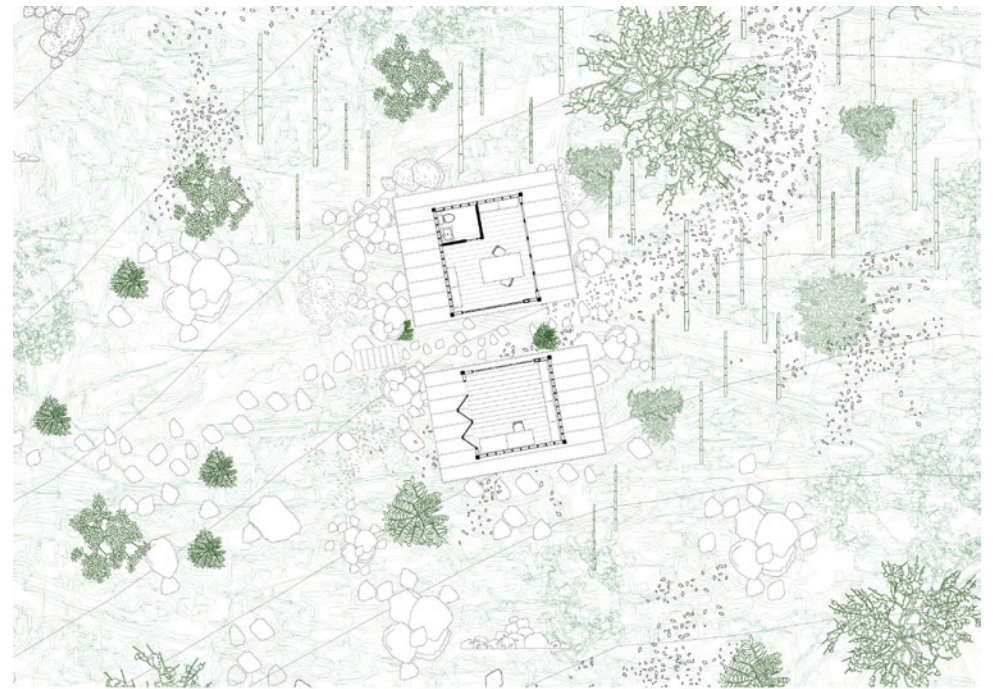
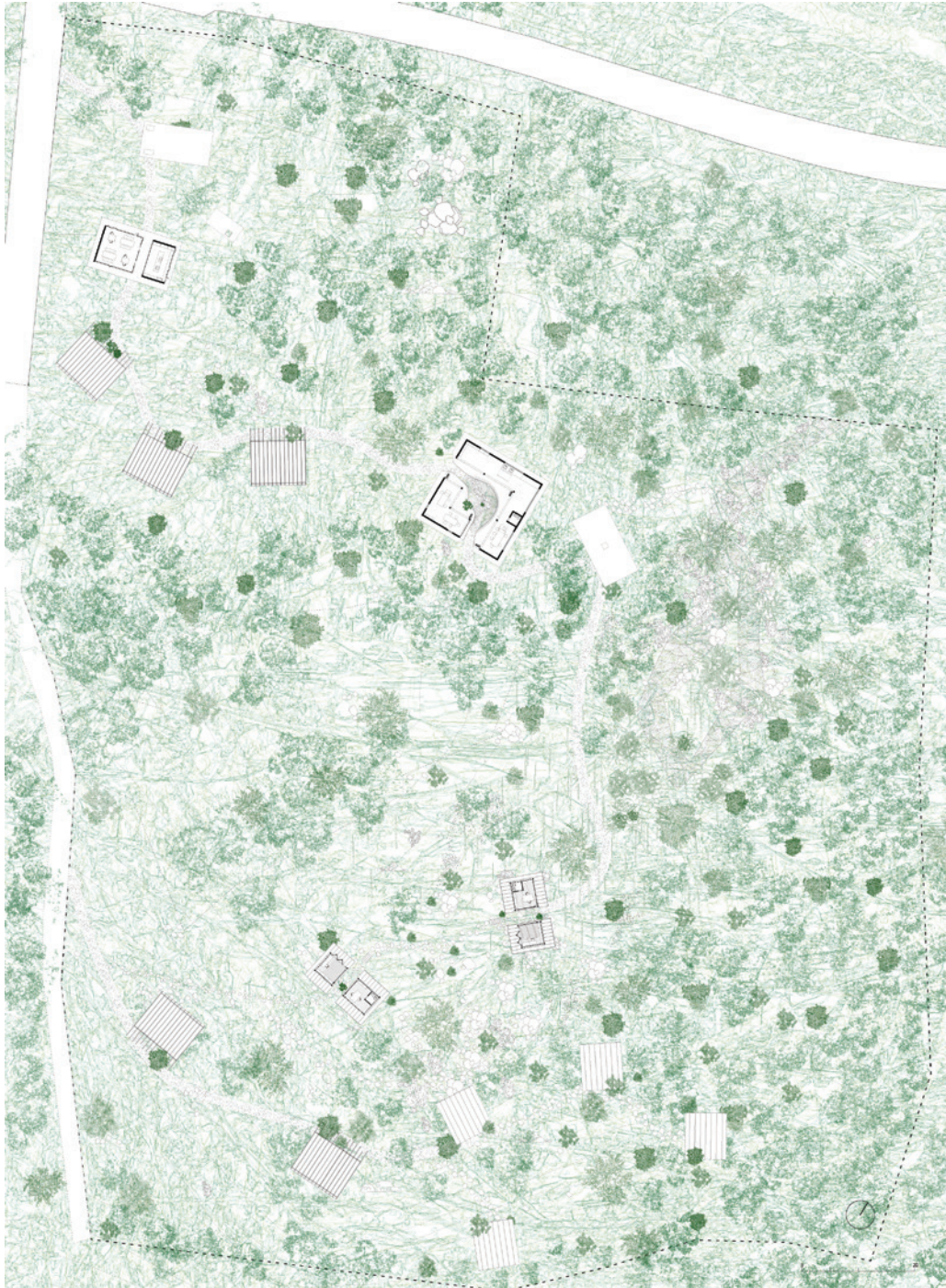
Materials are grown and tested on site. Bamboo is cultivated before it becomes structure. Prototypes weather, fail, and are rebuilt. Living, making, cultivating, gathering, and ritual are continuous, inseparable cycles.

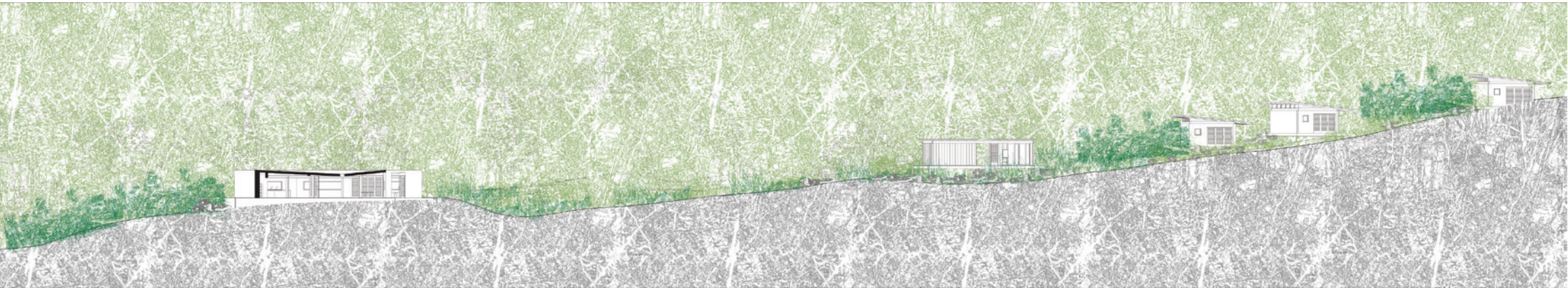
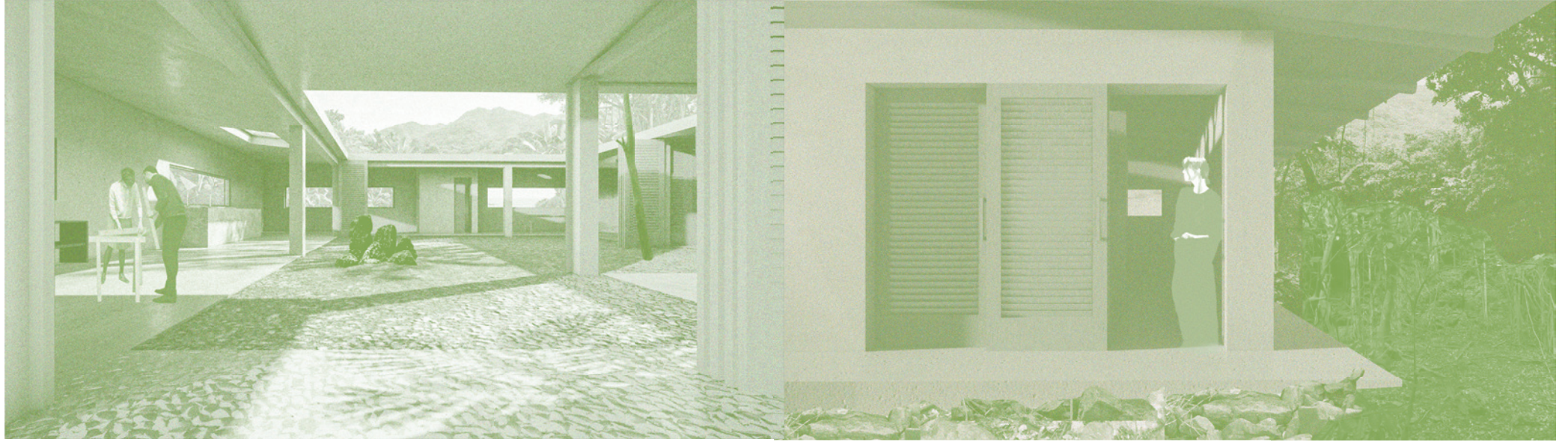
The studio is not a room, it is a landscape. The prototype stands among trees. The clearing becomes both ritual ground and testing ground.

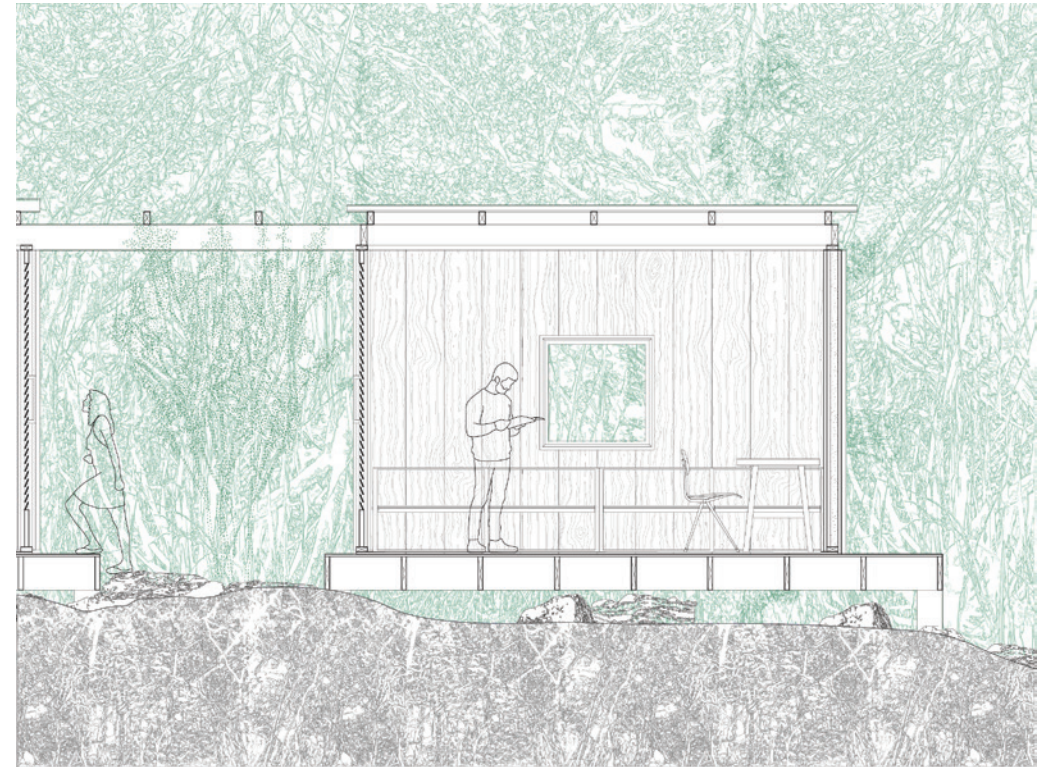
Architecture is not imposed on the forest.

It is grown within it.

Open Site Studio is a commons for architects to practice differently, to learn from climate, cultivate their materials, test their ideas in the open air, and build in conversation with place.



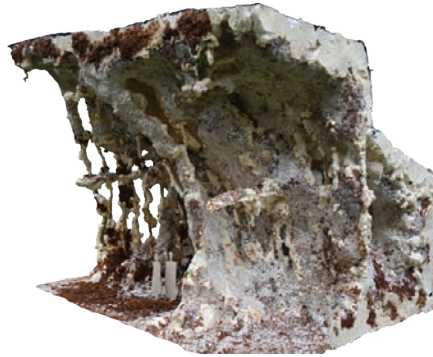


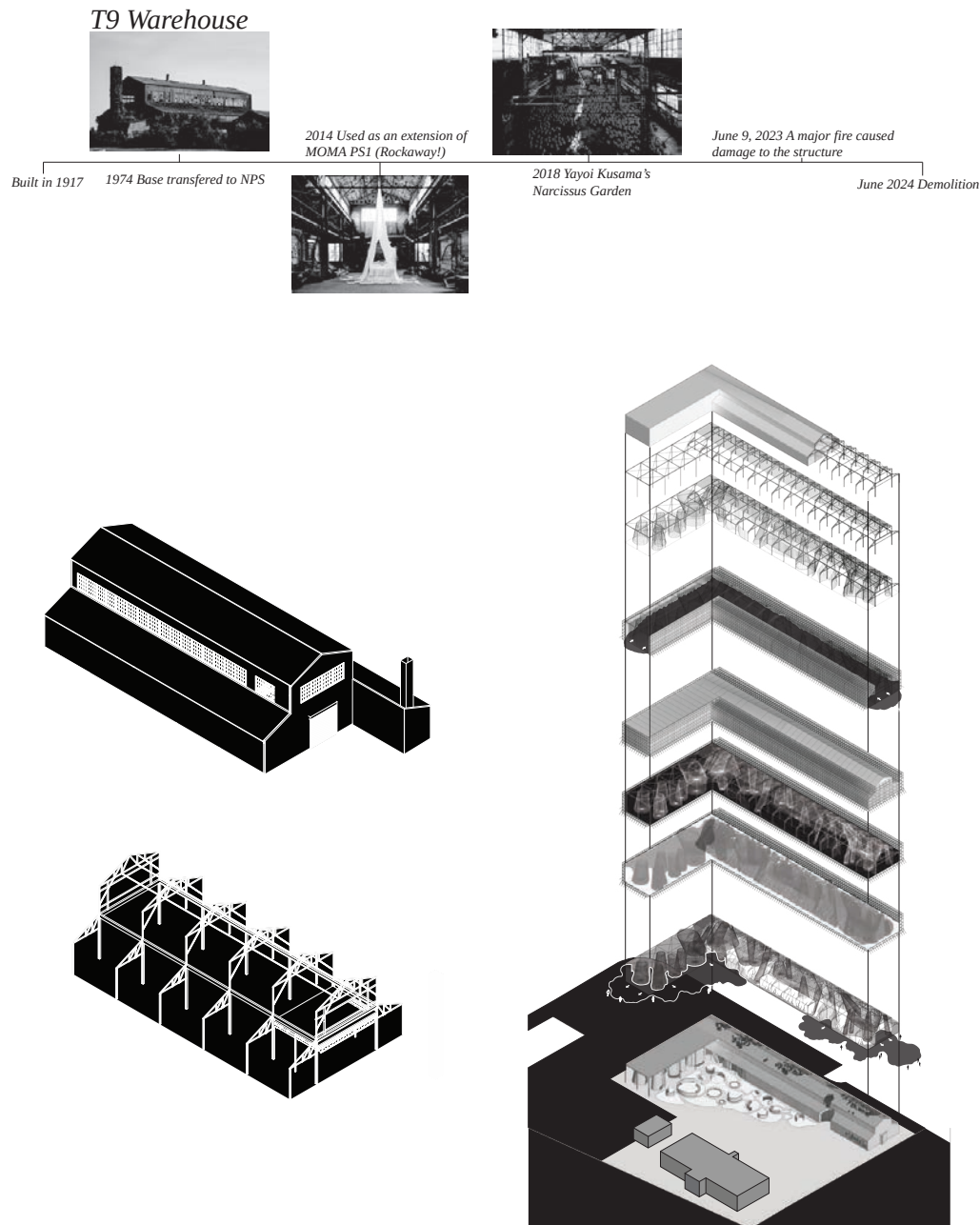


Mycoentropy

with Hyoju Kim
Professor: Mark Tsurumaki

Mycoentropy is a temporary artistic space proposed for the T9 Warehouse site in Fort Tilden, New York. The project challenges architecture's reliance on permanence by exploring impermanence as a structural and ecological strategy. The project frames growth, transformation, and decomposition as integral phases of architectural life. The design reinterprets the warehouse by retaining its steel frame and extending it with a wooden structure. A tensile network of steel cables wrapped in rope made from local plants (straw and cattail) establishes a new structural system. As mycelium colonizes this rope substrate, it reinforces the cable assemblies, transforming them into living columns. They expand and adapt to spatial needs, carving out niches, paths, and cavities that define areas for exhibition, performance, and gathering. The interior is shaped through a molding and excavation process that allows mycelium growth to determine spatial geometry. Over time, the same organism that generates structure initiates its breakdown, aligning the building's lifespan with ecological cycles.





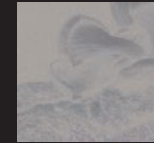
mycelium composition *pleurotus ostreatus*

common species:

pearl oyster
pink oyster
king oyster

habitat:

native to new york
mostly found in decaying wood



saprophytic

breaks down lignin and cellulose
turns waste into soil



carbon cycle

accelerates decomposition
and soil enrichment



challenges

standardization
slow mass scale
production
building codes
structure*

uses

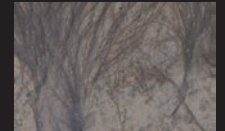
bricks
acoustic tiles
partition panels
furniture

properties

lightweight
fire-resistant
good insulation
compressive strength
biodegradable

growth:

rapid colonization
very aggressive mycelium



food for:

fungus caterpillars
fungus beetles
gnats
crows

compatible with:

ferns
maple trees
oak trees
trilliums
jack in the pulpit
serviceberry
viburnum

mycelium:

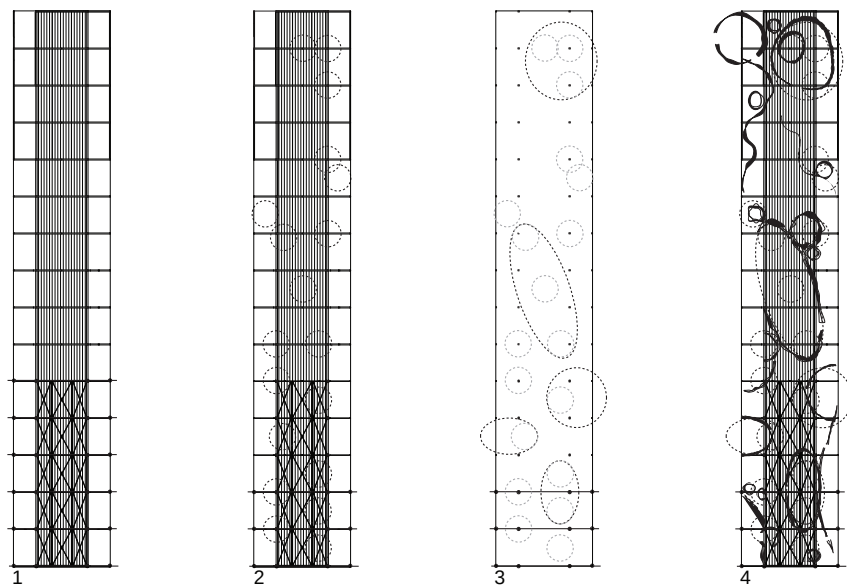
binds fast
adaptable to many
substrates



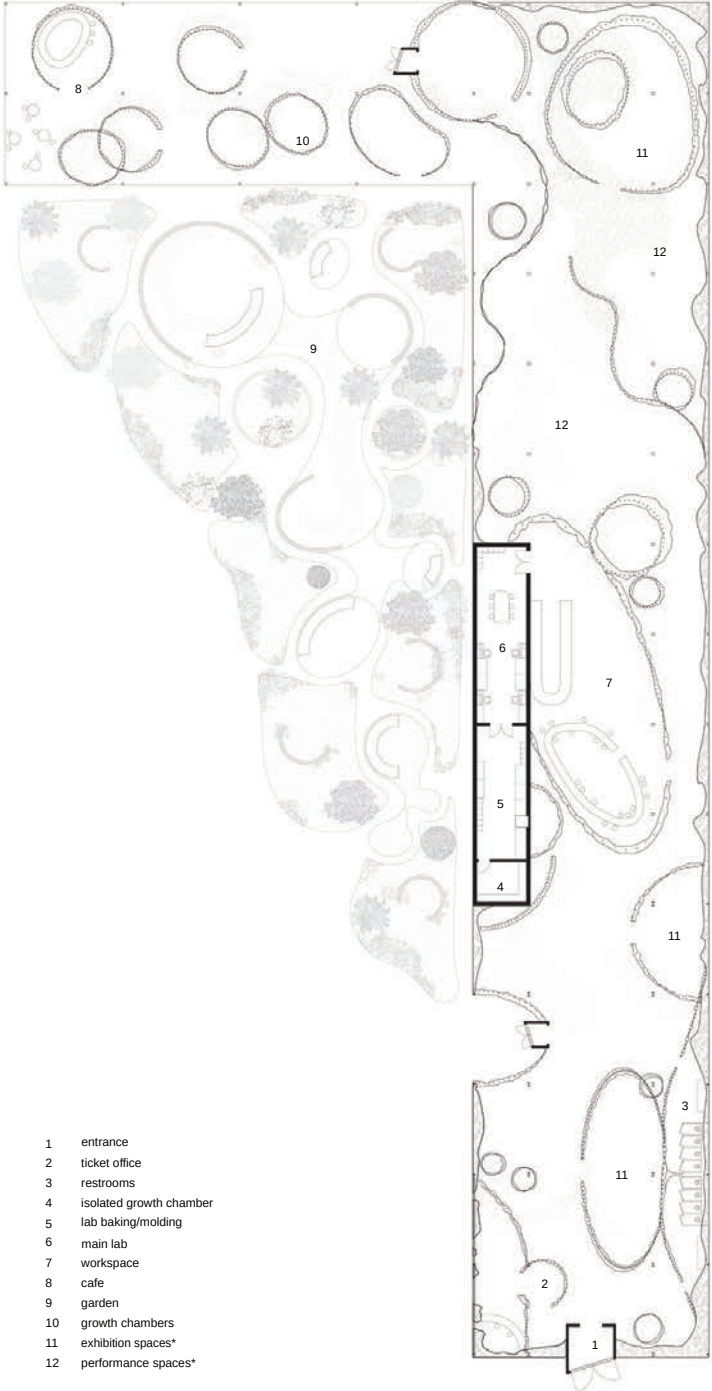
substrates

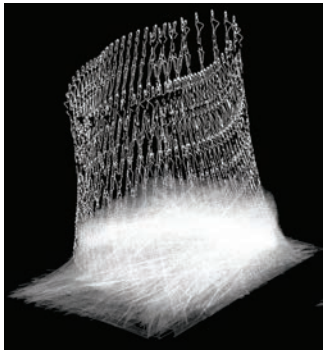
straw*
cattail*
sawdust
coffee grounds
paper
agricultural waste

plan development

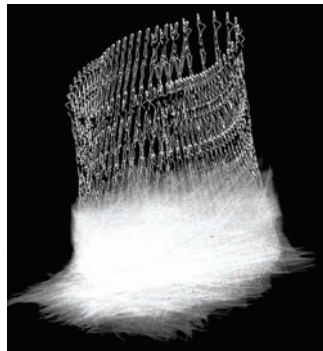
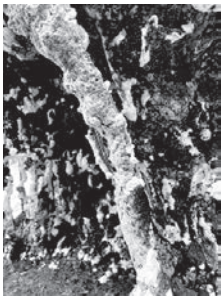
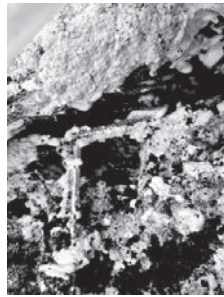


floor plan

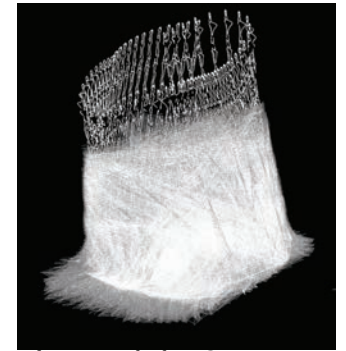
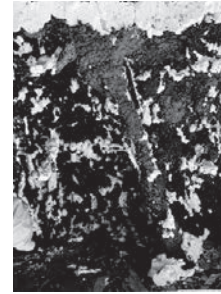




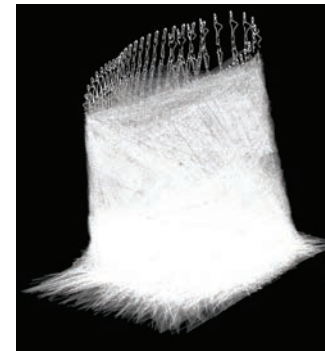
column growth phase 1



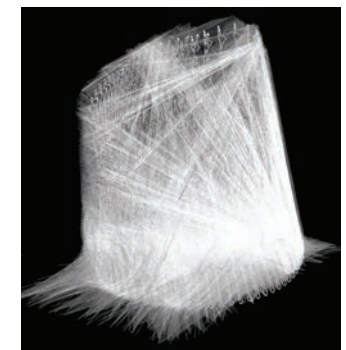
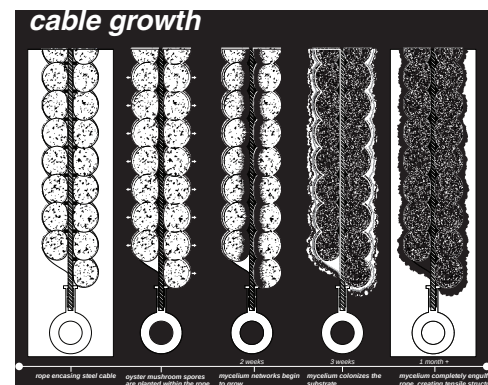
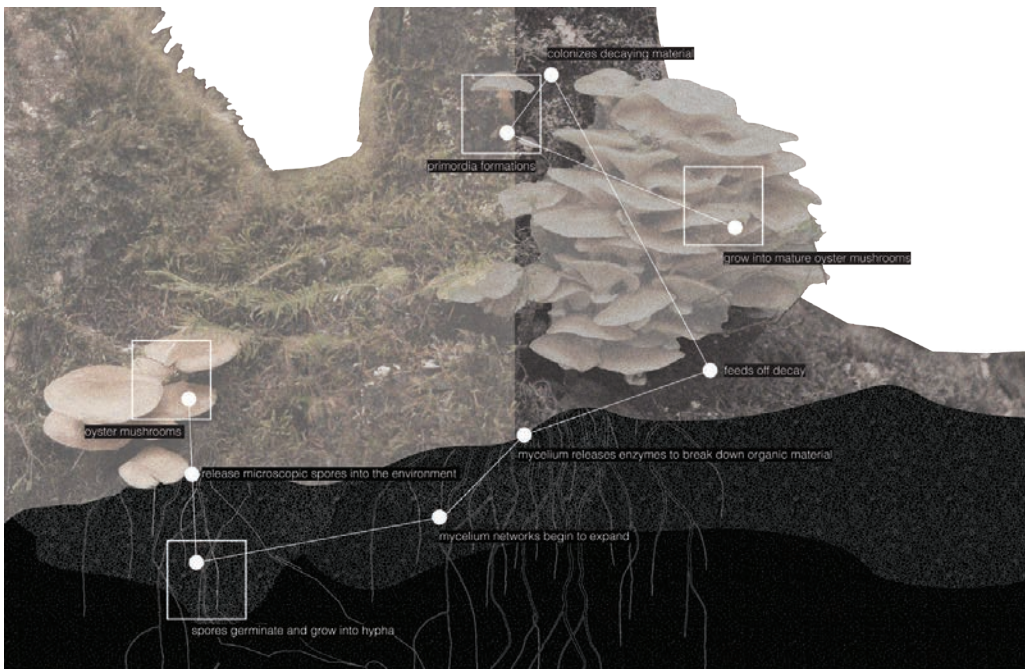
column growth phase 2



column growth phase 3



column growth phase 4



column growth phase 5

