Minhan Lin

The (Un)perceivable Lands

Columbia GSAPP Master of Advanced Architecture 2024-2025 Academic Portfolio

Preface

Architecture, as I have come to understand it, is not solely a means of constructing space. It is a lens through which I see and make sense of the world. This portfolio reflects a series of explorations into how I've learned to perceive land, matter, and life through other beings and materials, and how design can emerge through acts of perspective-shifting.

Over the past year, my work has moved through diverse vantage points: inhabiting the world as a terrapin navigating coastal infrastructures, a tree tracing memory through weather and gesture, a grain of sand obscured by extraction, a bacterium shaping food systems, a crocodile in an engineered ecosystem, and even as a rock shaped by geological time. These experiments are not merely exercises in empathy or speculation; they are methodological tools that have helped me reframe land, agency, and ecological complexities.

While these projects may appear to align with the 'more-than-human' discourse, I have come to realize that the distinction itself is limiting. I do not see myself as separate from these beings or forces. In choosing to design from these alternative perspectives, I am also acknowledging that I, too, am composed of many ecologies, shaped by environments, histories, and materials beyond myself. This portfolio is an argument for expanding what it means to perceive, design, and relate, and how I hope to carry that sensibility into the next chapter beyond GSAPP.

Content

01

Invisible Sands

Landscapes of Sand Extraction in the Mekong Delta

Summer 2024 Advanced Studio IV
Climates_Models_Images
Instructors / Marco Ferrari, Elise Hunchuck
Teaching Associate / Vaishnavi Chandra Kumar
Team / Minhan Lin, Amy Suzuki
Location: Vietnam

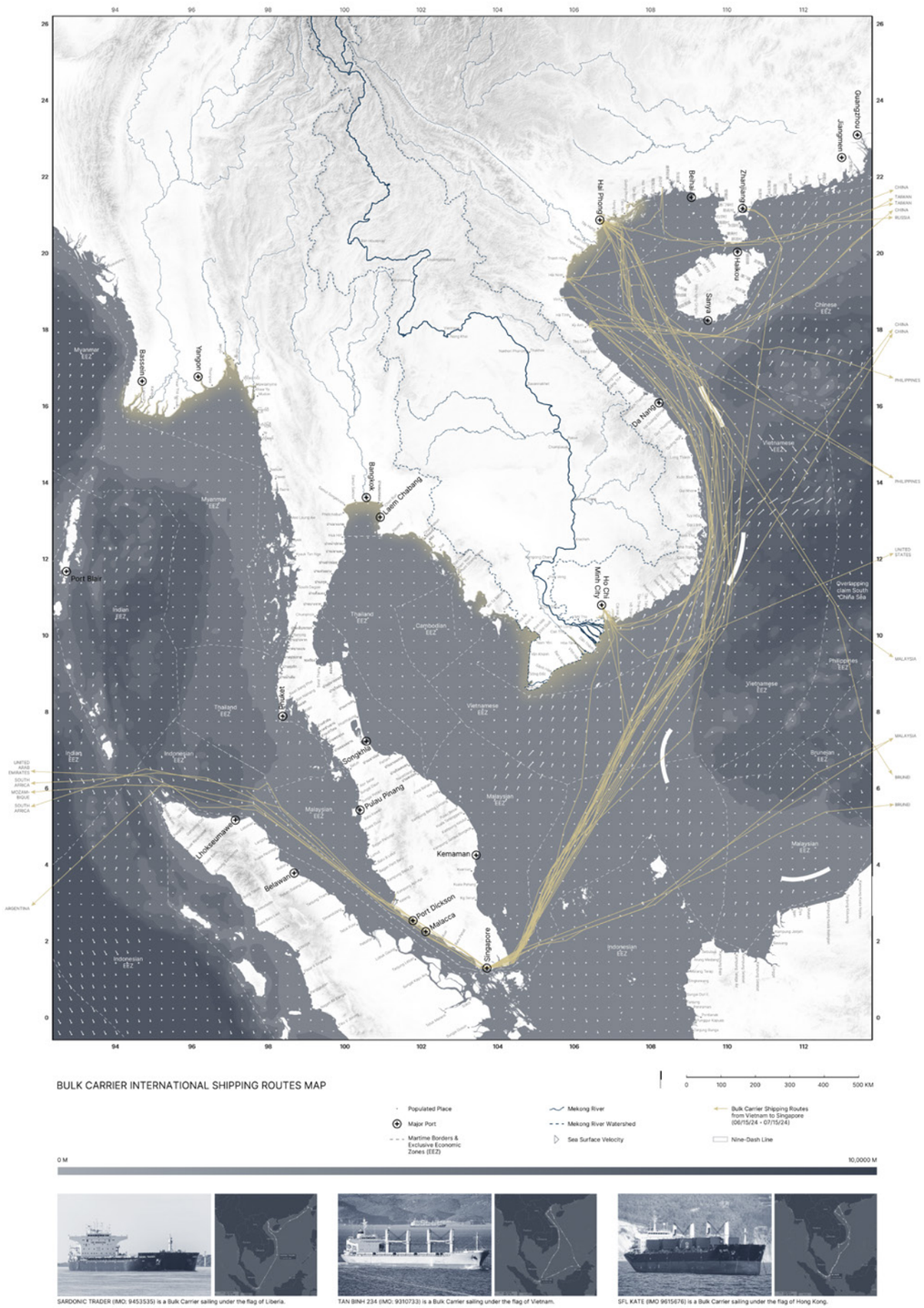
Despite its granular size, river sand is integral to creating the world around us. Its chemical composition and geometry make it ideal for structural concrete, rendering it a desirable material commodity. The very processes that make river sand so particularly desirable to the global sand trade are also what complicate the efforts to monitor its distribution and regulate the illegal activities that surround the trade itself.

The scale and gravity of the issue are difficult to document and comprehend—even river currents tamper with the evidence left behind by illegal mining operations. Invisible Sands examines the dynamic landscapes of extraction that render the material displacement of sand invisible. Obscured by international shipping routes, complex legal frameworks, and seasonal dredging activity, its journey through space and time reveals the transient nature of sand.

Large piles of sand are prepared for extraction in the Lanzhou New Area. Image by photographer Sim Chi Yin (2013).

Film Essay, Singapore's Growth and the Erosion of Vietnam's Mekong Delta

Bulk Carrier International Shipping Routes



BULK CARRIER INTERNATIONAL SHIPPING ROUTES MAP

0 100 200 300 400 500 KM

Populated Place
Major Port
Maritime Borders & Exclusive Economic Zones (EEZ)
Mekong River
Mekong River Watershed
Sea Surface Velocity
Bulk Carrier Shipping Routes from Vietnam to Singapore (06/15/24 - 07/15/24)
Nine-Dash Line

0 M 10,0000 M

SARDONIC TRADER (IMO: 9453535) is a Bulk Carrier sailing under the flag of Liberia.

TAN BINH 234 (IMO: 9310733) is a Bulk Carrier sailing under the flag of Vietnam.

SFL KATE (IMO 9615676) is a Bulk Carrier sailing under the flag of Hong Kong.

Legal Landscape: Sand Mining Units in Dong Thao and An Giang Province

LEGAL LANDSCAPE: SAND MINING UNITS IN DONG THAP AND AN JIANG PROVINCE

0 5 10 15 20 25

administrative boundary
- country boundary
- province boundary
- district boundary
- commune boundary
- city
- town

soil moisture percentage
- 100 / wet
- 0 / dry
- populated area
- road

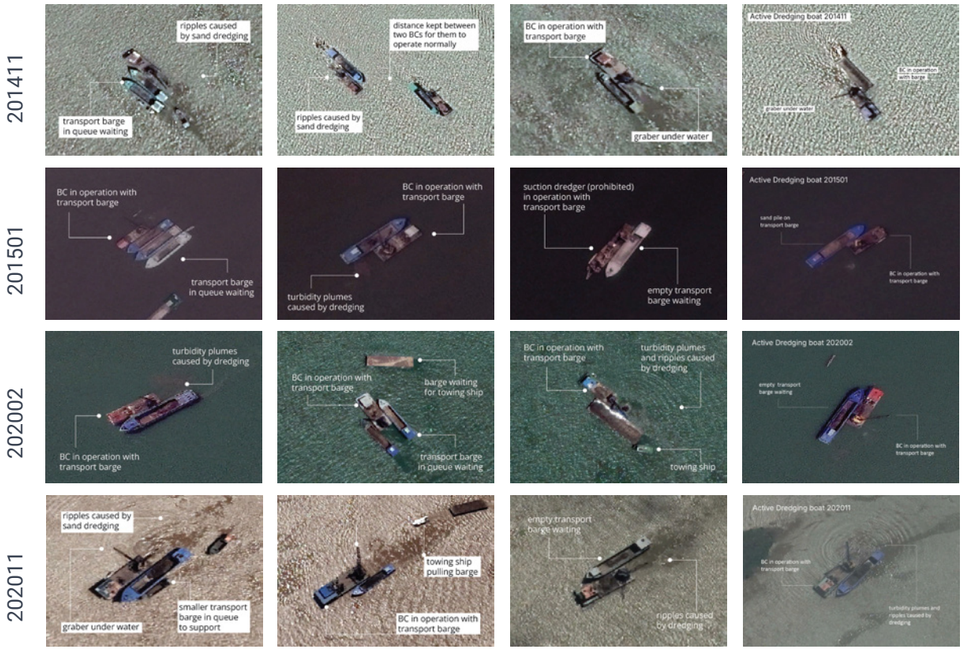
legal sand mining area (ha)
- 0- 100
- 100 - 200
- 300 - 400
- connect sites that belong to the same license

legal sand mining capacity (m^3 x 1000000)
- 10 - 12
- 8 - 10
- 6 - 8
- 4 - 6
- 2 - 4
- 0 - 2

actual sand mining reserve (m^3 x 1000000)
- 20 - 24
- 16 - 20
- 12 - 16
- 8 - 12
- 4 - 8
- 0 - 4

Boat Catalog: Identifying Dredging Activity

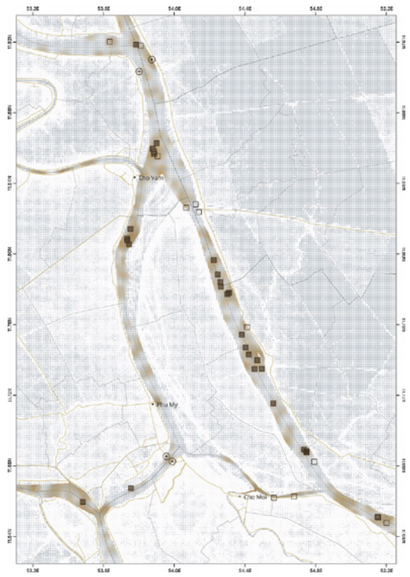
Active Dredging Boats



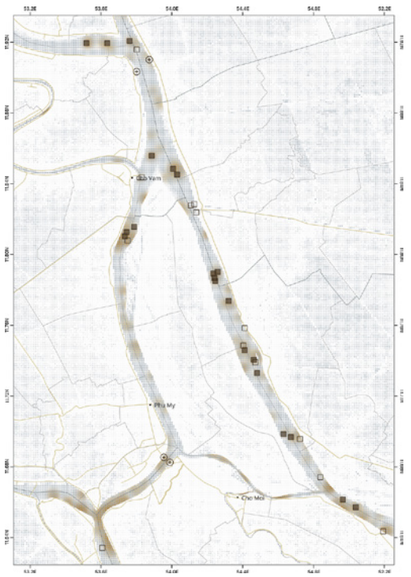
Inactive Dredging Boats

Seasonal Dredging in Thanh Binh District, Dong Thap Province

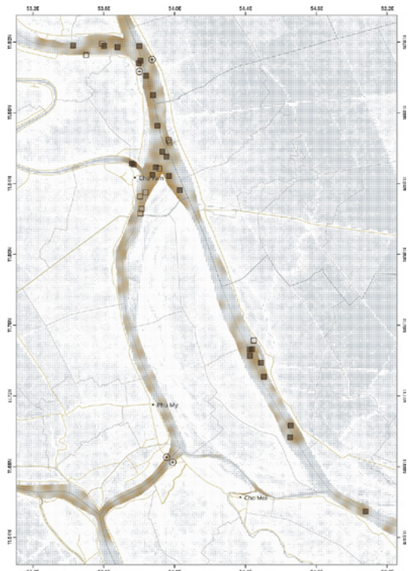
201411 Wet Season



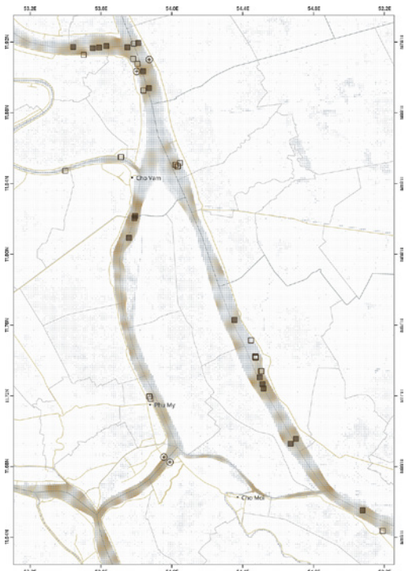
201501 Dry Season



202011 Wet Season



202002 Dry Season



port

road

primary

secondary

administrative boundary

district boundary

commune boundary

land moisture percentage (%)

0 - 20

20 - 40

40 - 60

60 - 80

80 - 100

transport bagre quantity distribution

10 barges

0

active dredging boats

inactive dredging boats

Making the invisible visible:

A visual representation of the voids left behind by sand mining in the Mekong River Delta

1

2

3

4

1 Study models, shaped with sand and casted with concrete.

2 Texture details of the model, indicating the materiality of sand.

3 Model dimension: 11x21x21 inches. The surface of the model is imprinted with the map of Mekong River Delta.

4 The model's elevation illustrates variations in sand dredging intensity across different areas. Larger downward protrusions represent higher frequencies of dredging activities. In general, sand dredging tends to be more frequent closer to the downstream areas.

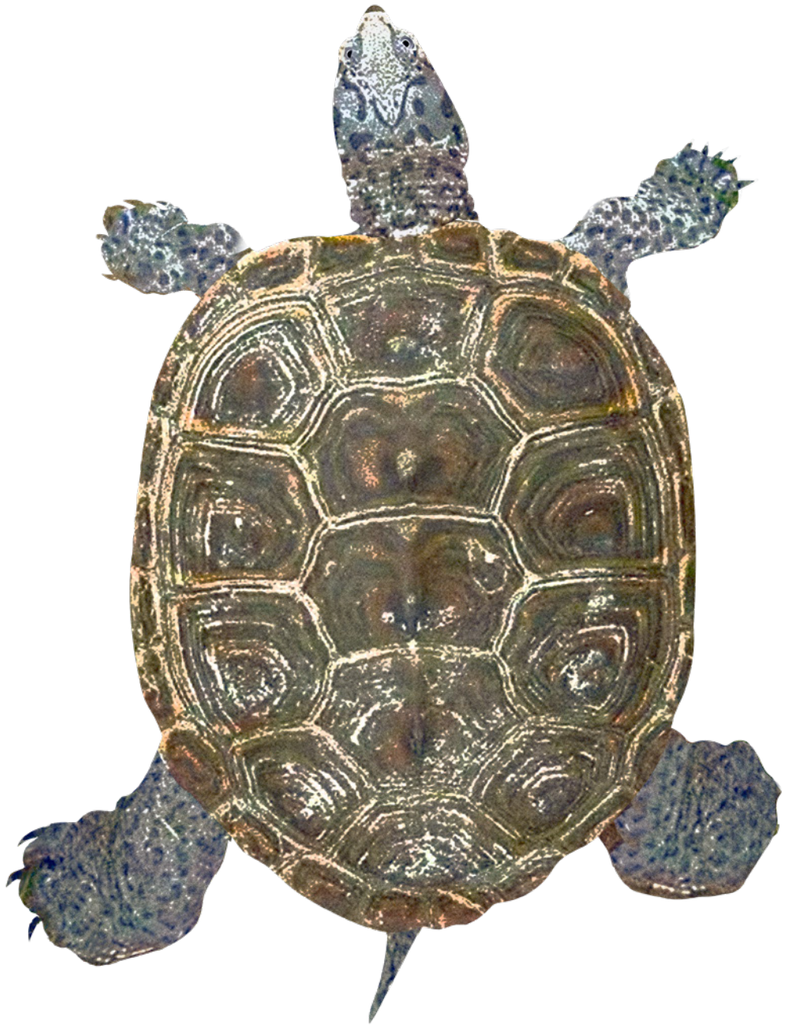
02

Terrapin Bay

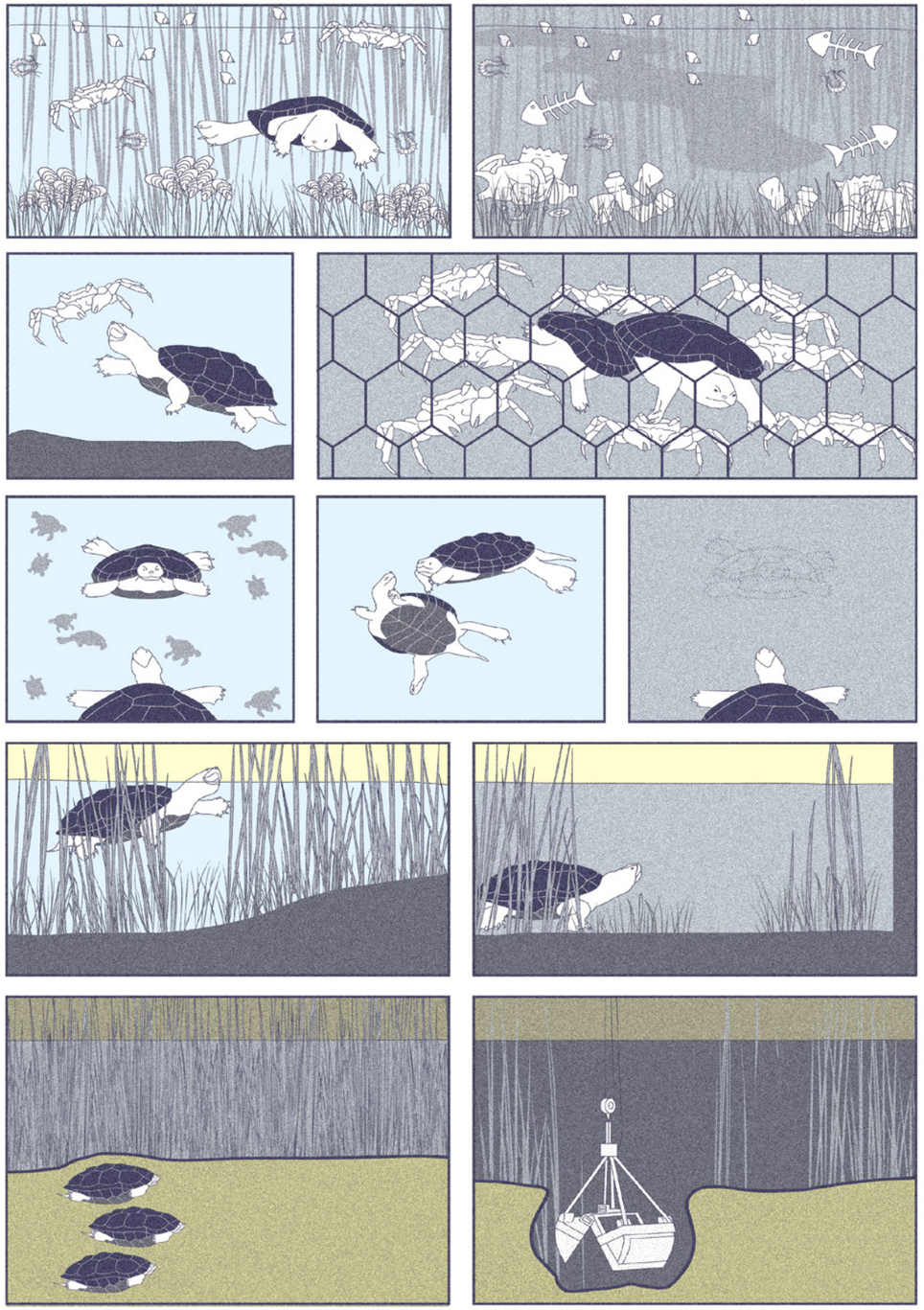
Terrapin is a wetland

Fall 2024 Advanced Studio V
WetLand
Instructors / Michael Wang
Teaching Associate / Aishwarya Garg
Individual Design
Location: Jamaica Bay, New York

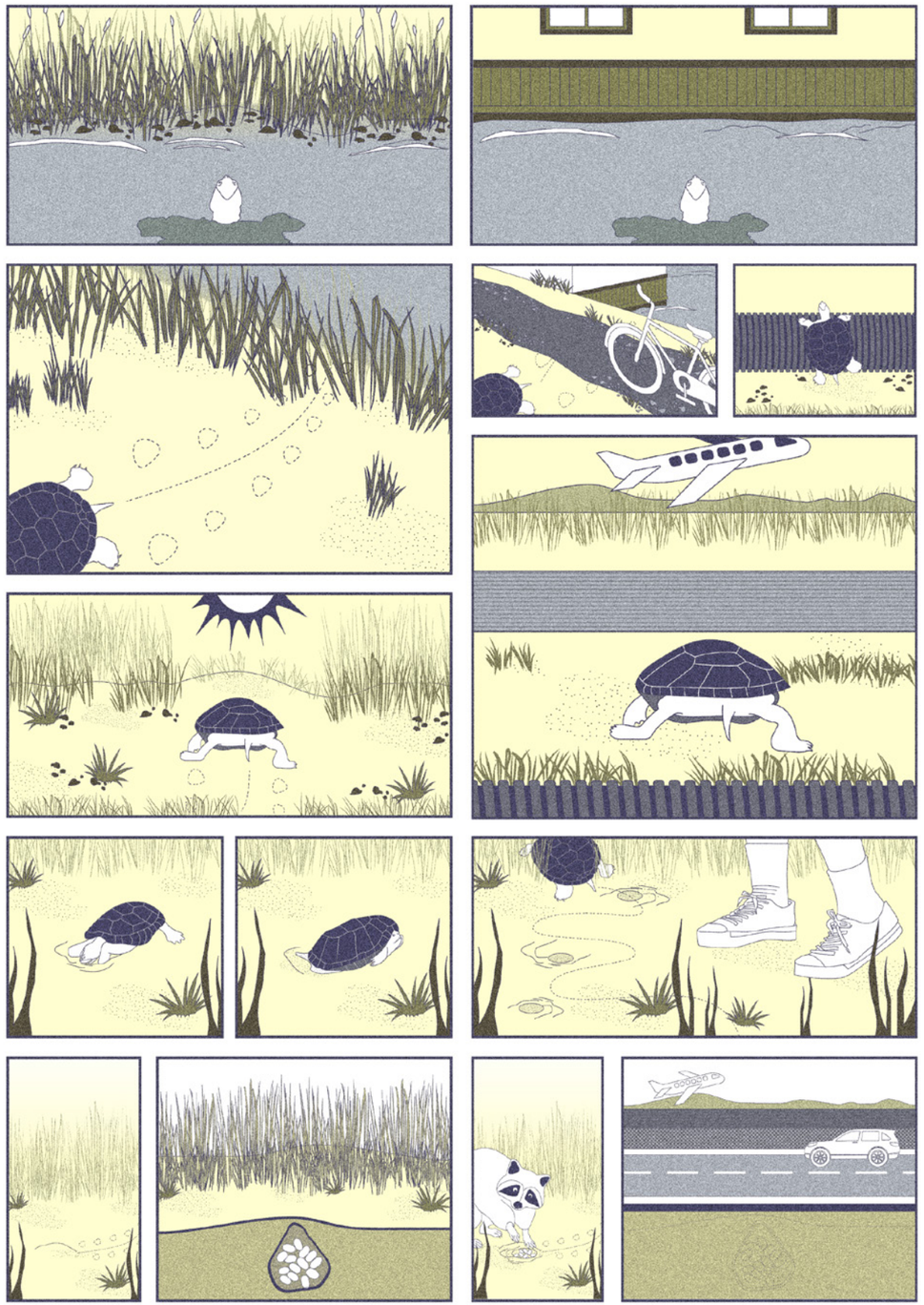
Viewing Jamaica Bay from the perspective of diamondback terrapins underscores the need to rethink how we use land and coexist with other species. The terrapins' dual reliance on land and water reveals the critical importance of preserving natural transitions and addressing human-made barriers, such as hard shorelines and habitat fragmentation. By tackling these challenges, including the threat of poaching, we can protect the terrapins' nesting grounds and contribute to the long-term health and balance of Jamaica Bay's ecosystem.



Diamondback Terrapin in Water



Diamondback Terrapin on Land



Diamondback Terrapin Land Use Map:

Eat, Mate, Nest, and Barriers

0 0.5 1 2 km

feeding area

salt and brackish water marshes

mating area

open shallow water

nesting area

sandy ground

sandy ground within the terrapin's 180m travel range

hard shoreline

bulkhead or seawall

riprap

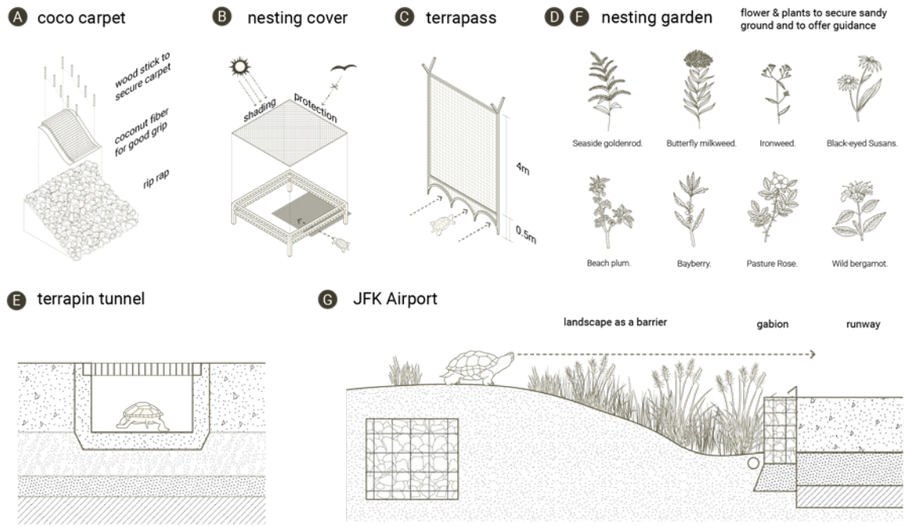
ramp

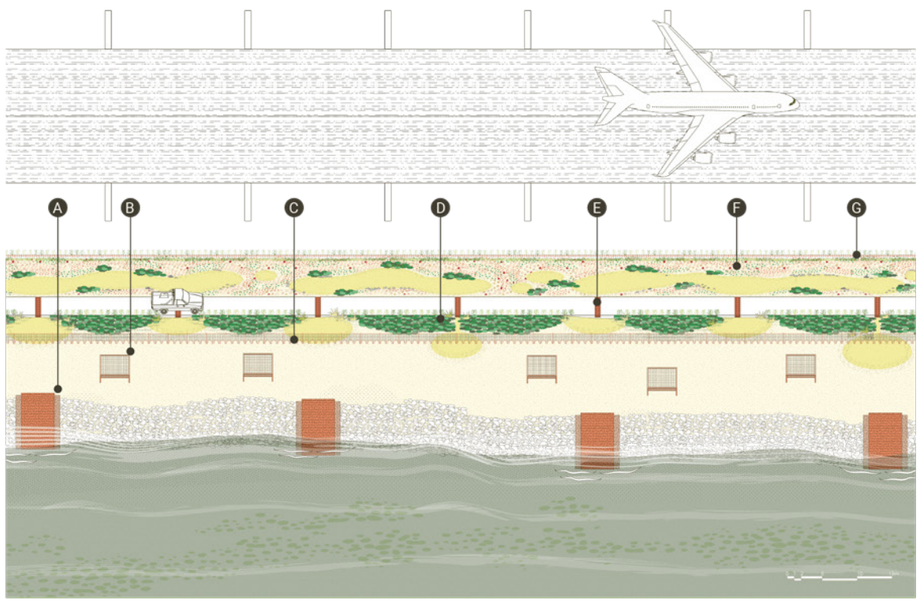
inaccessible area

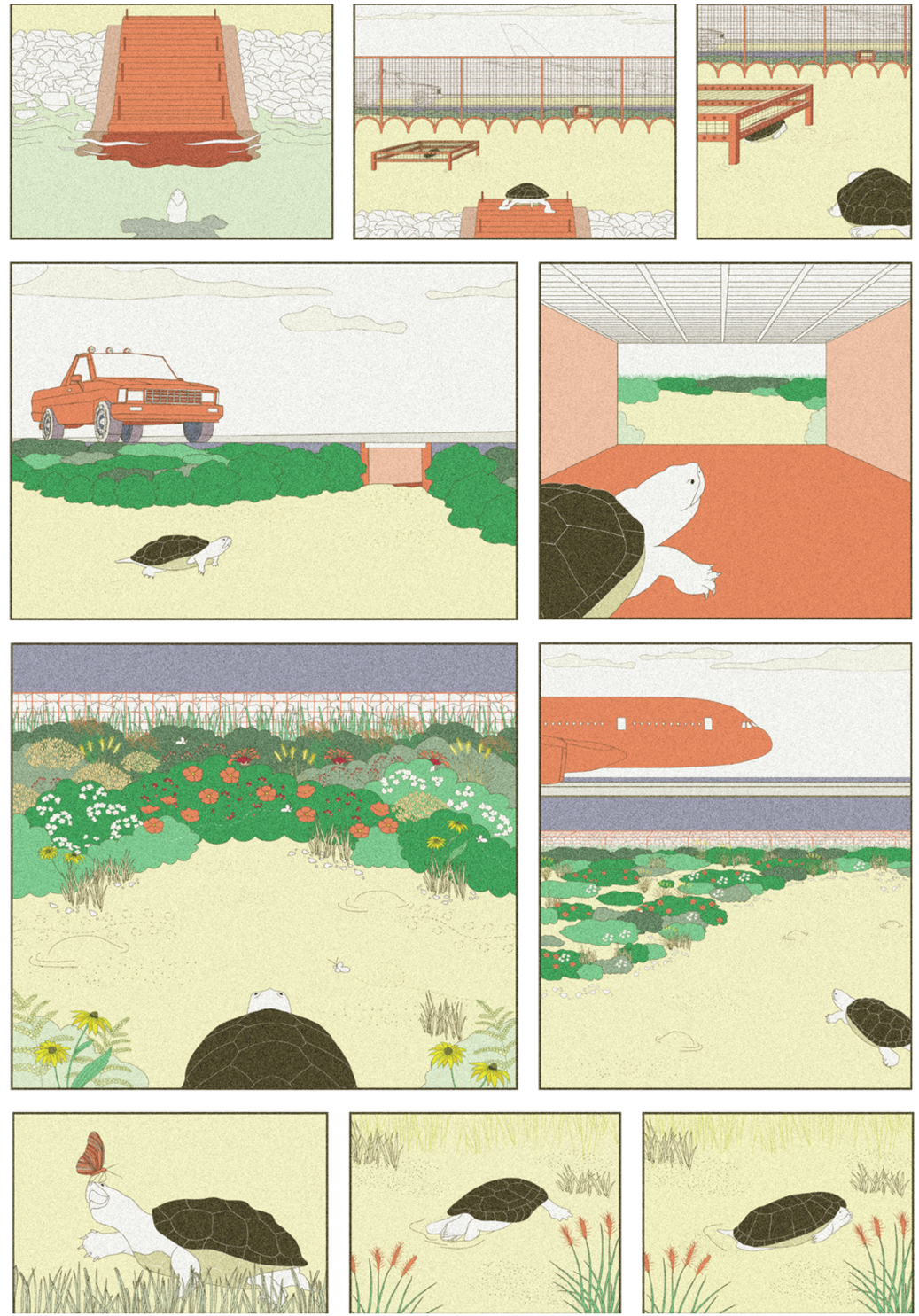
Inaccessible areas within the terrapin's 180m travel range

JFK Airport

JFK Airport was created with transported sand fills which makes it the perfect place to nest and frequently having terrapin incursions on the runway. Istead of using fences to keep the terrapins away, this project argues to return the nesting grounds to the terrapins and ahcieve coexistence between human transportation and animal reproduction.



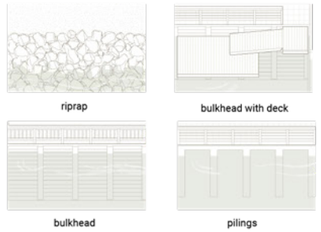




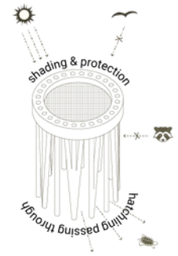
Cross Bay Blvd.

Residential with bulkheads created vertical barriers for the terrapins to climb ashore. Here I imagine a future where the backyards of those housing become new nesting sites. The designs while offering the terrapins access to the land and protection for reproduction can also be objects for the use of humans.

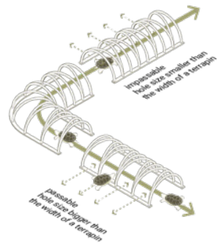
Ⓐ Ⓑ Ⓒ Ⓓ accessibility for different types of shoreline



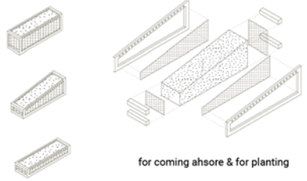
Ⓕ hatchling stool



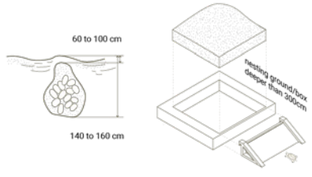
Ⓔ terrapin guidance



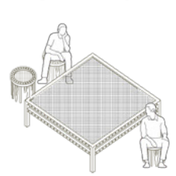
Ⓖ ramp root box

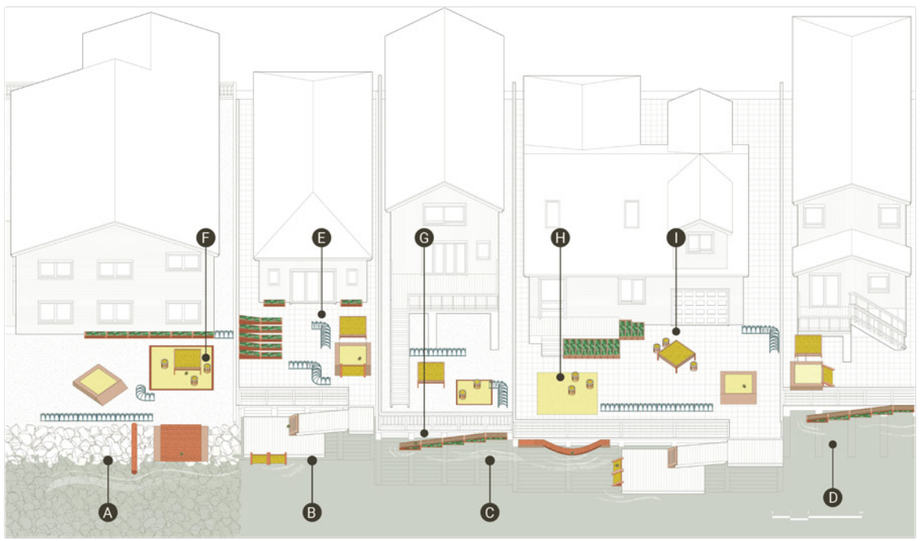


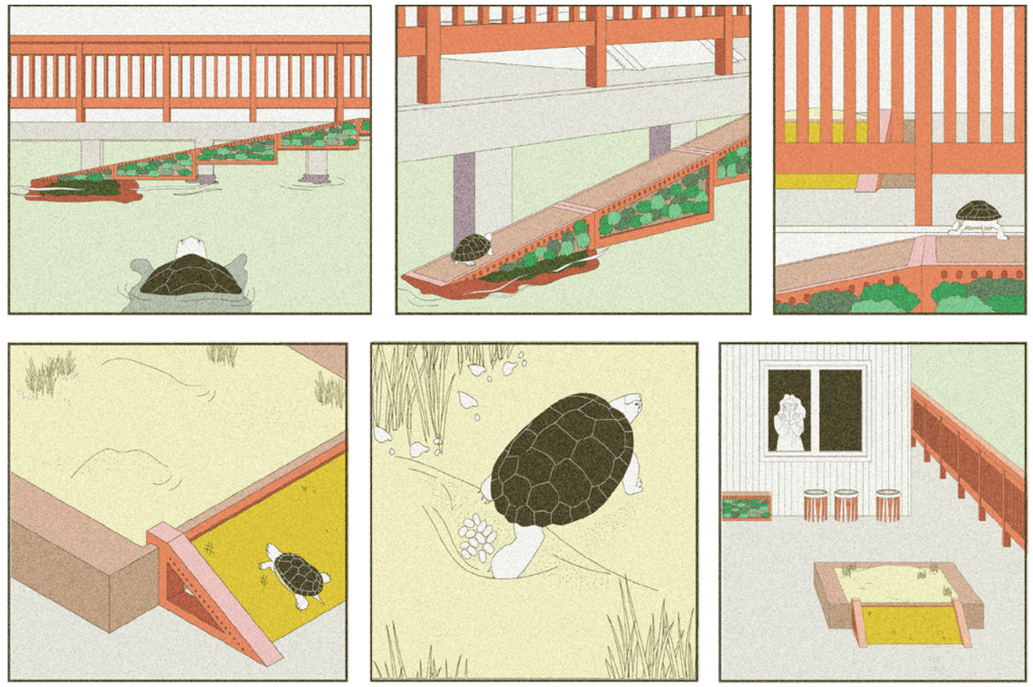
Ⓗ nesting ground nesting box



Ⓘ furniture for humans during off nesting season

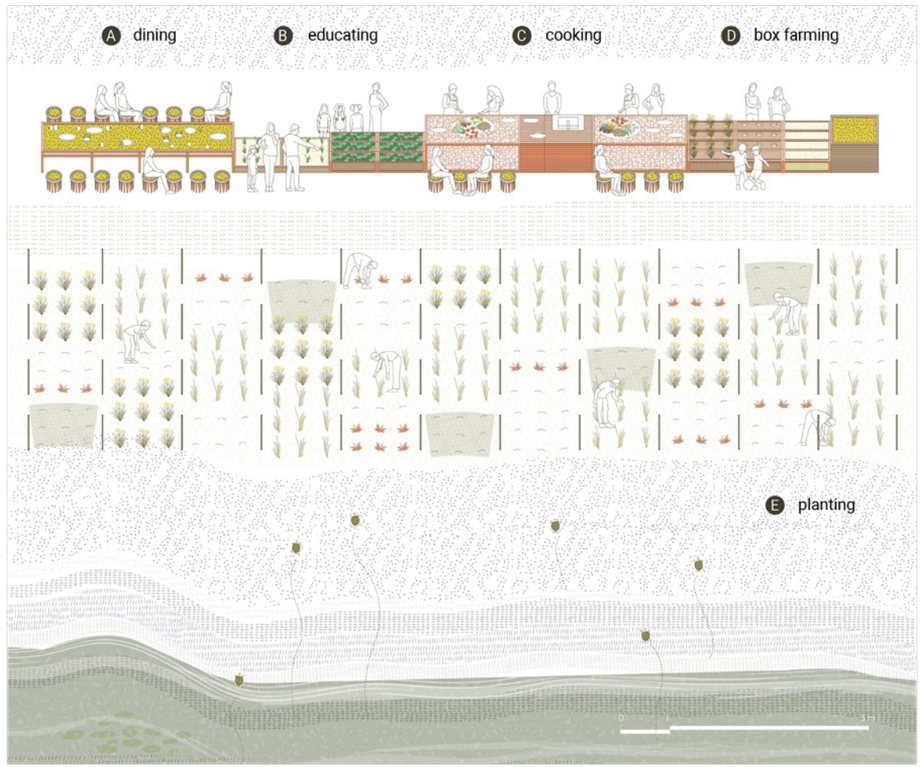


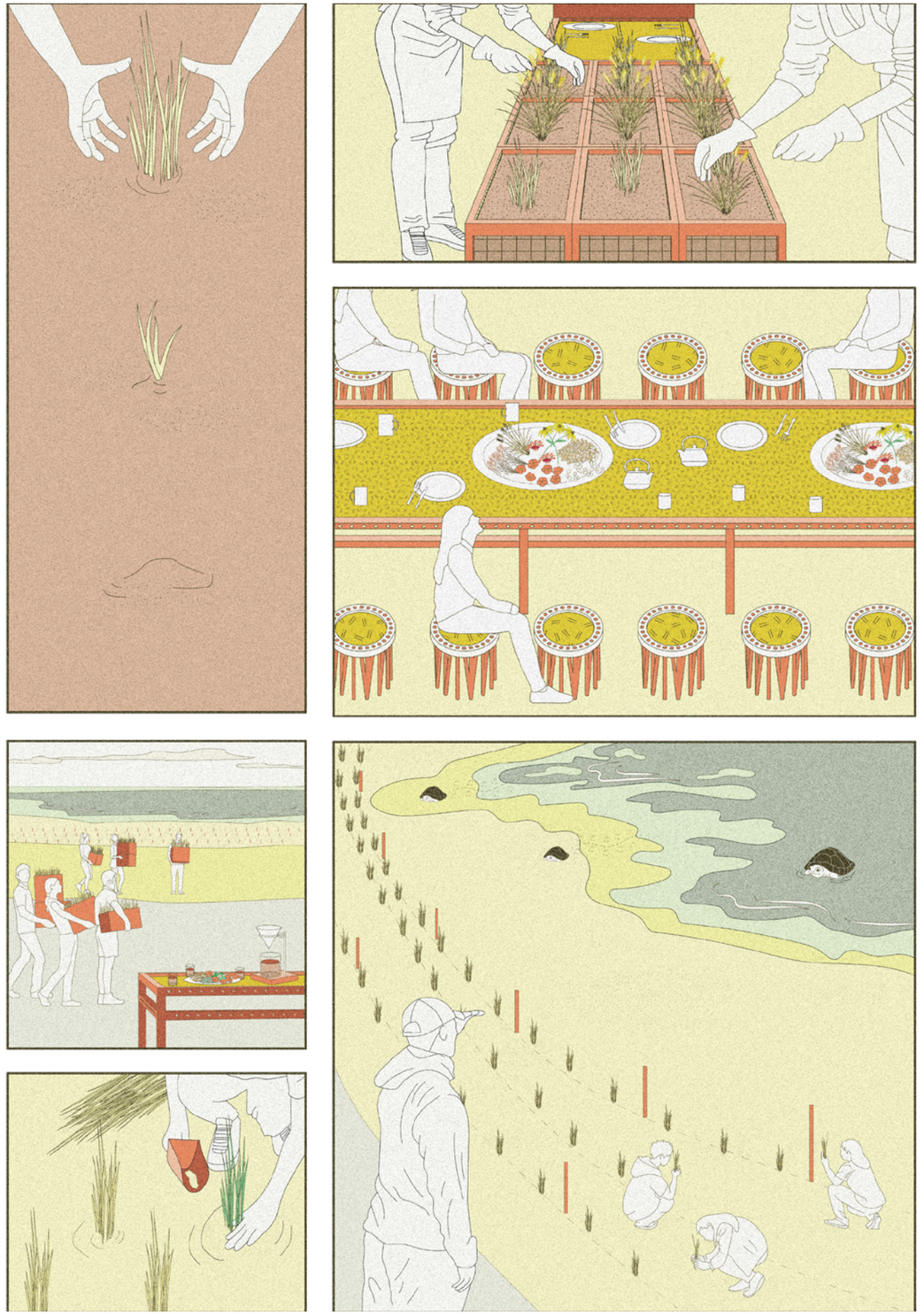




Jamaica Bay Wildlife Refuge, West Pond

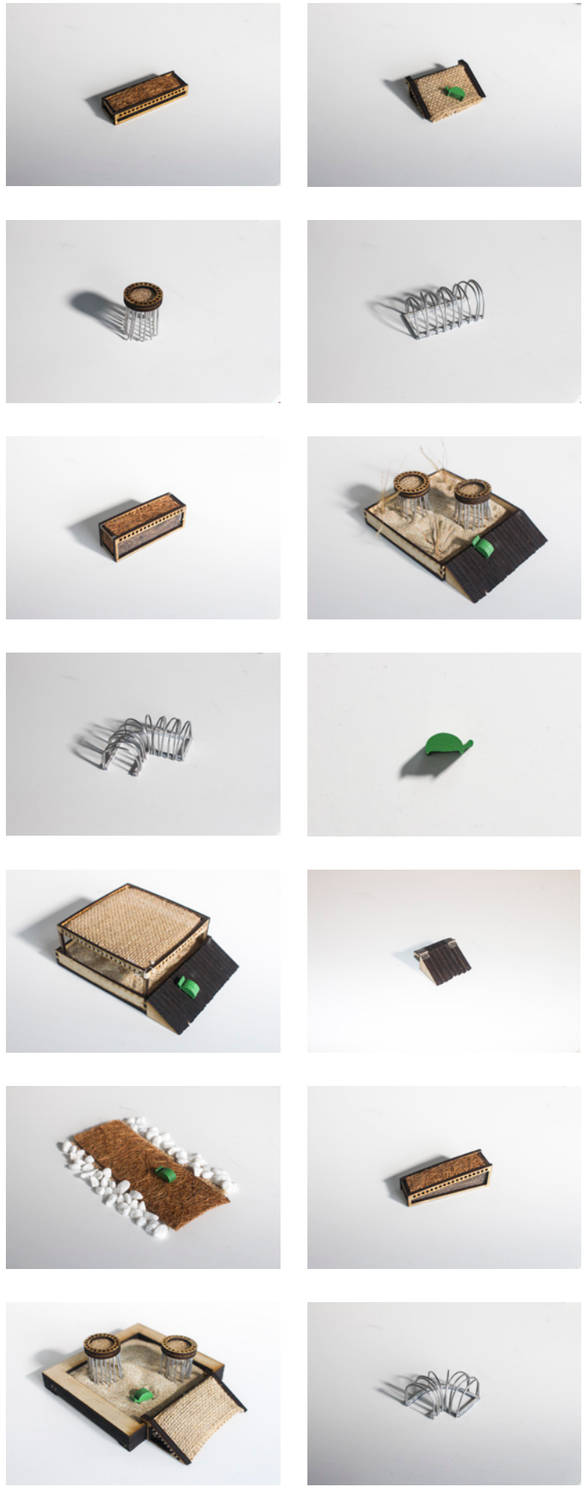
At an area free from human development, a different threat emerges. The absence of human presence creates opportunities for illegal poaching, which is caused by food insecurity of the marginalzed community. The plants for sand stabilization can be the key to solve the problem and bring all the animals and humans together.





This is not a human land:

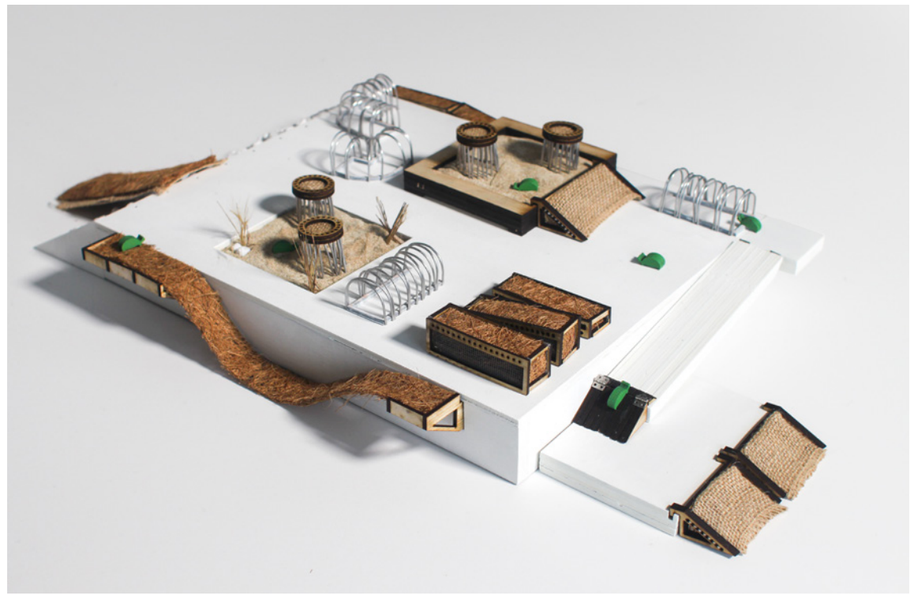
Coexistence between the diamond-back terrapins and the humans



1

1 Objects and designs to help the terrapin climb ashore and to guide them to nest.

2 The model is a visual representation of a scenario where the diamondback terrapins and the humans coexist. Each side of the model depicts a distinct shoreline type alongside designs aimed at helping the terrapins climb ashore. The model's surface reimagines a backyard as a shared nesting ground through a constellation of thoughtfully designed objects and interventions.



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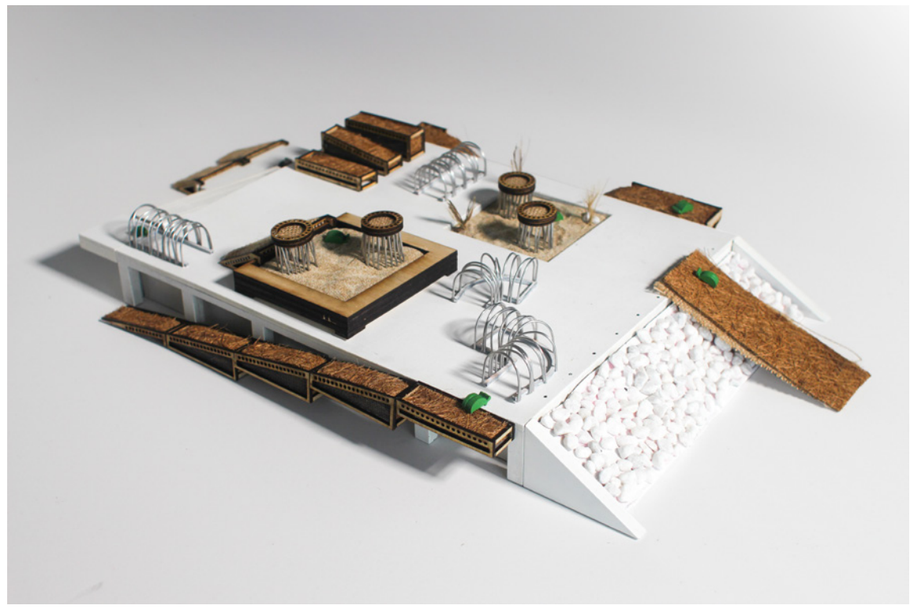


2

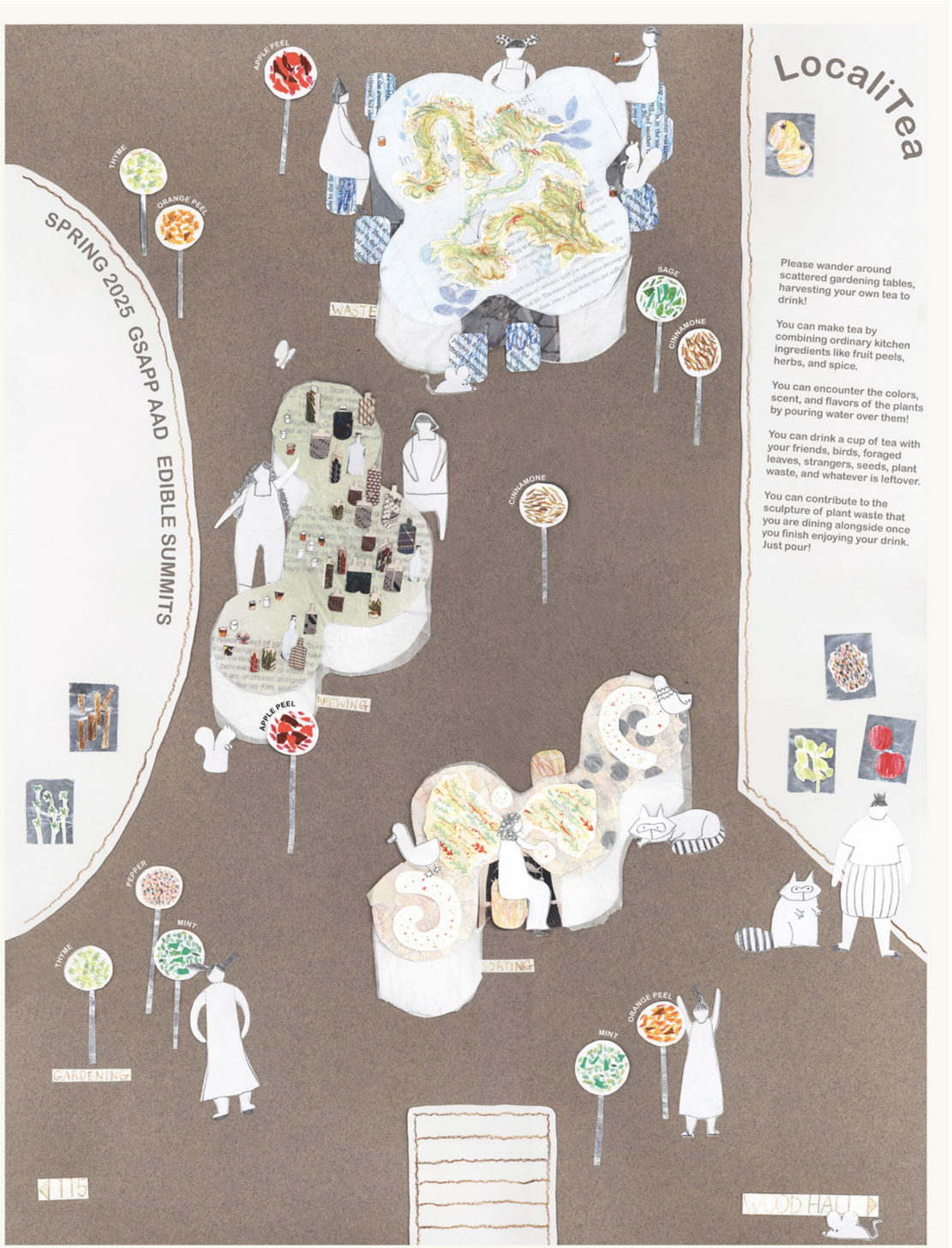
05

LocaliTea

Reimagining Food Cycles Through Tablescapes of Foraging, Brewing, and Decay

Spring 2025 Student Organized Event
Edible Summits
Curator / Lydia Kallipoliti
Team / Rudain Almulla, Yeonjin Kim, Minhan Lin, Sewon Min, Amy Suzuki
Location: Columbia University

LocaliTea transforms the act of tea drinking into a participatory journey through food's life cycle—where tables become active agents in foraging, sorting, brewing, and decomposing. Through locally foraged plants in Columbia University and dynamic tablecloths that record both use and waste, the project redefines locality as an entanglement of environment, body, and time. Drinking tea here is not a singular moment of consumption, but a shared, evolving ritual of care, transformation, and return.



What does it truly mean to eat locally? LocaliTea reimagines locality not just as a matter of geography but as an intimate entanglement of bodies, environments, and food cycles. It challenges the conventional experience around tea drinking by integrating food production directly into consumption and transforming the table from a passive surface into an active participant in the local food cycle.

The design features four repurposed tables from our local space, each representing a phase of the food process: foraging, sorting, brewing, and decomposing. Tablecloths serve as architectural devices to transform ordinary tables into elements that explore food locality. There is no dedicated dining table; instead, dining spaces are embedded within these stations, blurring the boundary between consumption, production, and decomposition.

The foraging table introduces a new way to define local food—focusing not on native species but on plants that have adapted to New York City's urban landscape, especially the ones on campus. It invites diners to forage, fostering an awareness of shared microbiomes between humans and their environment. The sorting table exposes the labor behind food preparation while recognizing interspecies alliances—what we discard still holds value for others. The brewing table highlights the often-overlooked transformation of food through time. Brewing is not just preparation but an act of mediation—water extracts flavors, nutrients, and histories from plants. Here, diners witness the invisible process of metabolism, the way water dissolves, infuses, and transforms ingredients. The result is a brew whose flavor not only reflects its material origins but impacts our bodies physiologically. Finally, the decomposing table makes food waste visible, allowing discarded matter to imprint itself on tablecloths, leaving ever-changing patterns that reframe waste as an aesthetic and conceptual force.

By moving between these tables, the act of eating becomes communal, participatory, and forward-looking. Locality is no longer just about proximity—it is a shared, evolving practice sustained by the relationships we cultivate.

1

2

3

4

5

6

Waste Tablecloth

The Waste Table reveals the overlooked presence of tea waste, allowing discarded leaves to stain and imprint themselves onto the tablecloth over time. As tea is poured and shared, the cloth becomes a living surface—marked by traces of conversation, gesture, and residue. Following the Edible Summits event, these imprints accumulate into a tapestry of waste and collective action, reframing what is discarded as both aesthetic and meaningful. The tablecloth, once utilitarian, transforms into a record of shared experience and quiet transformation.

06

Move Like Water Still like Rock

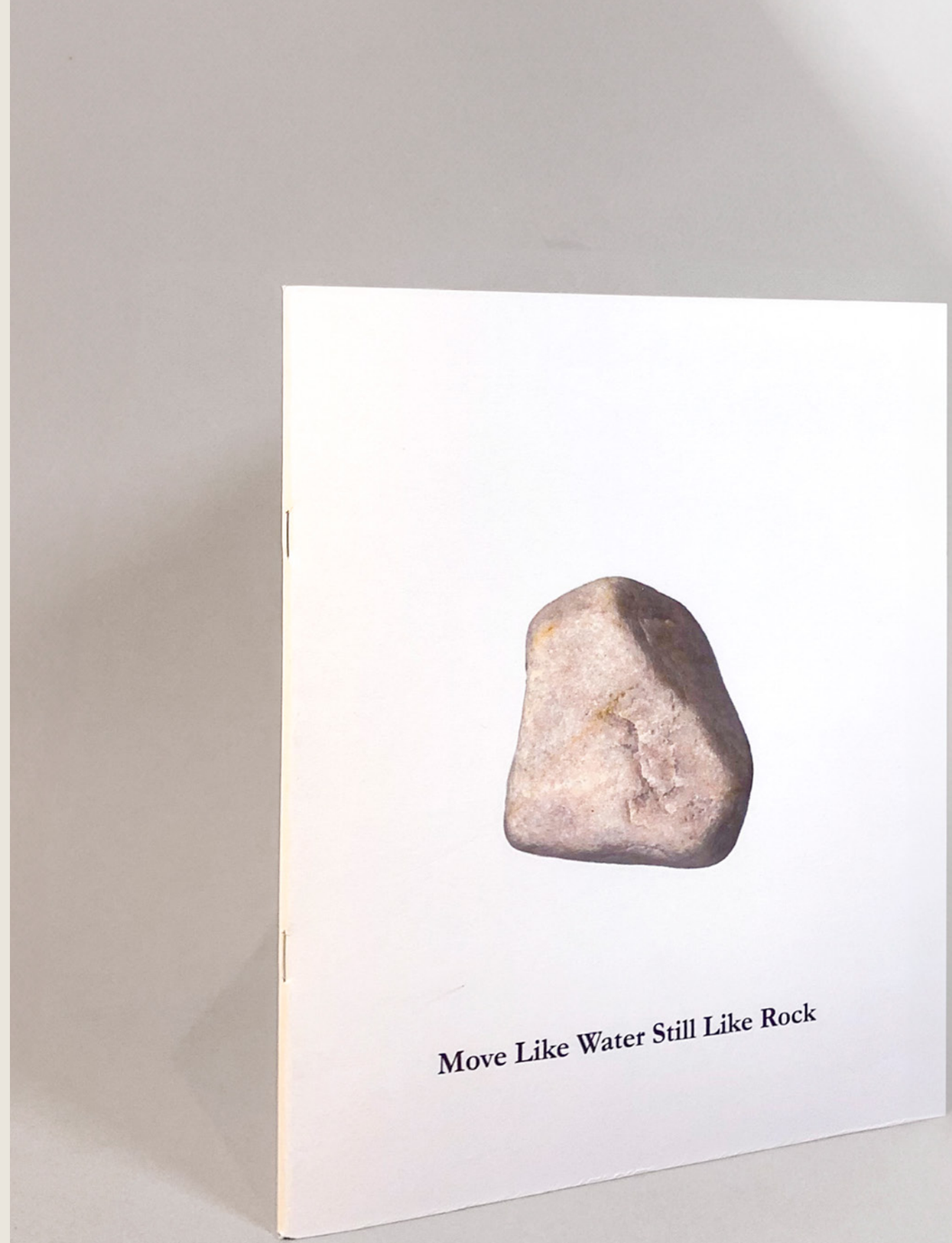
A Geological Journey Through Landscapes, Forces, and Self

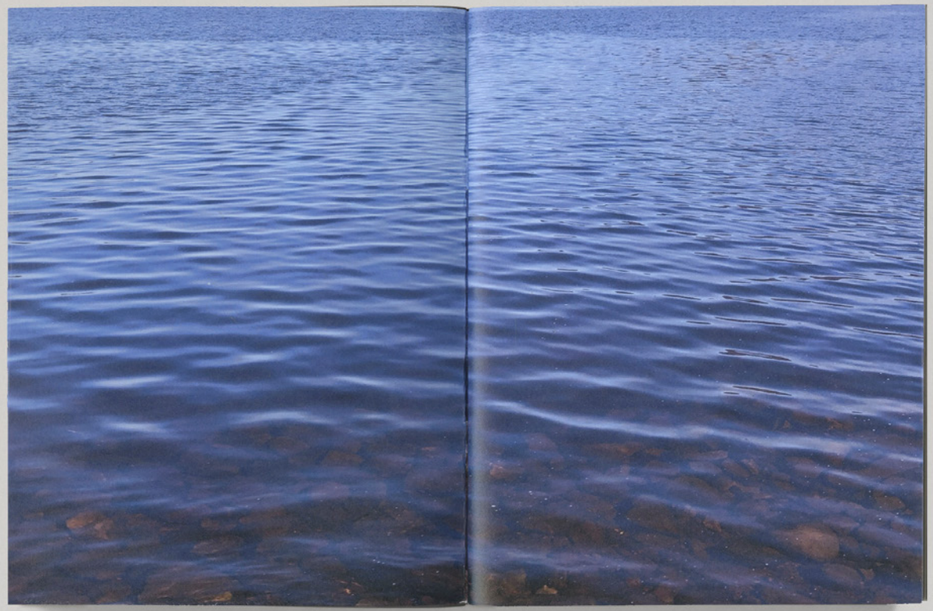
Spring 2025
GAP I: Design & Typography
Location / All over the world
Instructor / Yoonjai Choi
Individual Work

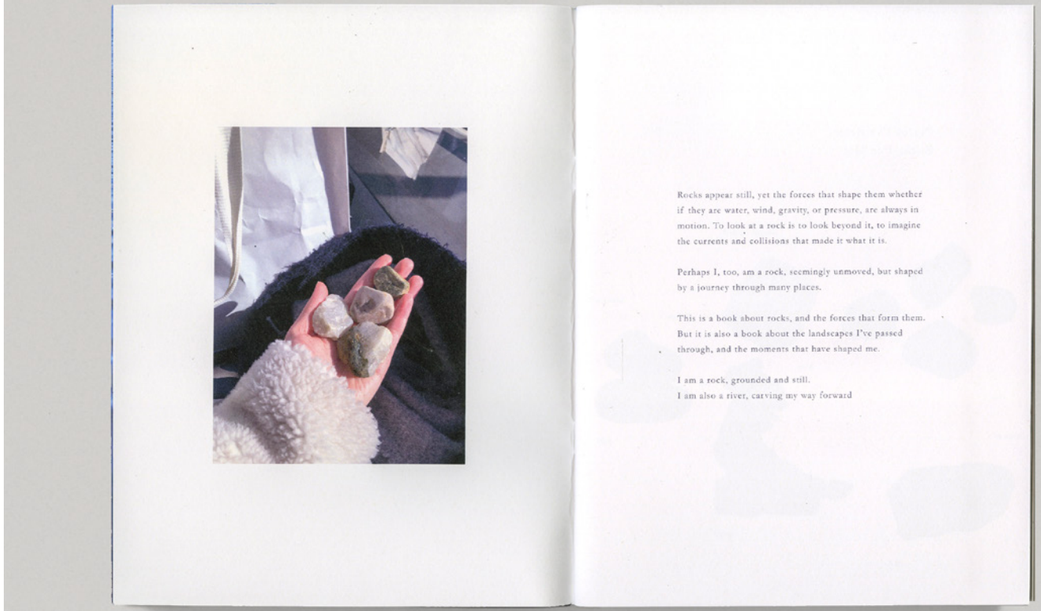
Rocks appear still, yet the forces that shape them whether if they are water, wind, gravity, or pressure, are always in motion. To look at a rock is to look beyond it, to imagine the currents and collisions that made it what it is.

This is a book about rocks, and the forces that form them. But it is also a book about the landscapes I've passed through, and the moments that have shaped me.

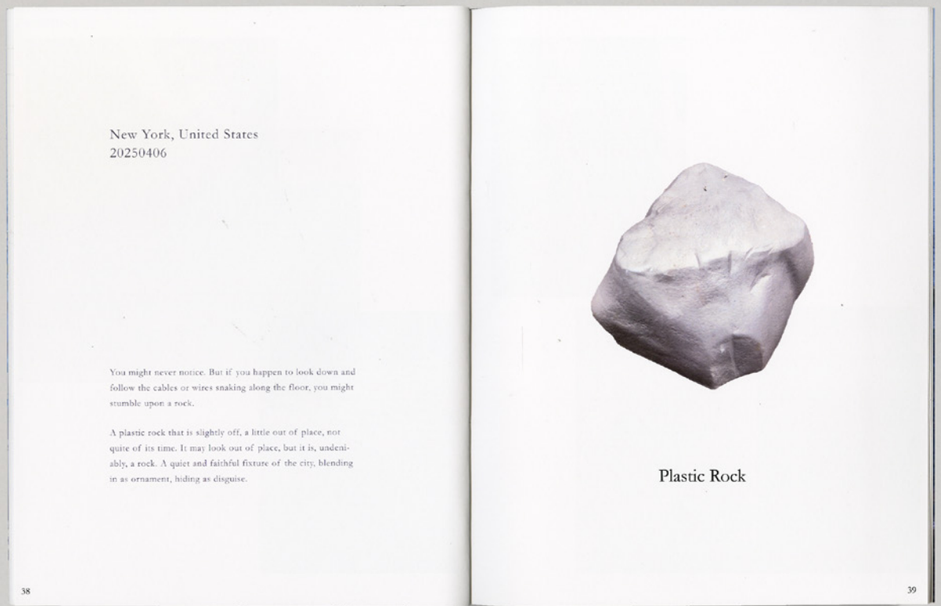
Perhaps I, too, am a rock, seemingly unmoved, but shaped by a journey through many places.






Rocks appear still, yet the forces that shape them whether
if they are water, wind, gravity, or pressure, are always in
motion. To look at a rock is to look beyond it, to imagine
the currents and collisions that made it what it is.
Perhaps I, too, am a rock, seemingly unmoved, but shaped
by a journey through many places.
This is a book about rocks, and the forces that form them.
But it is also a book about the landscapes I've passed
through, and the moments that have shaped me.
I am a rock, grounded and still.
I am also a river, carving my way forward


Places I've Been
Rocks I've Met
Taiwan
p.8
China
p.16
Korea
p.24
Scotland
p.30
United States
p.38
p.43


New York, United States
20250406
You might never notice. But if you happen to look down and follow the cables or wires snaking along the floor, you might stumble upon a rock.
A plastic rock that is slightly off, a little out of place, not quite of its time. It may look out of place, but it is, undeniably, a rock. A quiet and faithful fixture of the city, blending in as ornament, hiding as disguise.
38
Plastic Rock
39


40.482920
73.574295
10.775 m
40
41

Keelung, Taiwan
20180720

Over twenty million years ago, Taiwan lay beneath the sea. Later he layer, silt and coral gathered, quietly sculpting an island-to-be. Then suddenly a monumental collision thrust Taiwan above the waves. The northeast monsoon has carved and the ocean has chiseled, shaping stones into creatures and sweeteries, still forming, still transforming.

Among all the strange, honeycomb-like rocks, there is one large golden-yellow stone. Brown patterns, like brushstrokes, formed as it absorbed iron-rich groundwater that oxidized into earthy golden stains.

Look closely, and you might see a small mountain within the big rock. It is a universe telling a story from thousands of years ago.

Sandstone

8

9

25.127307

10

121.301686

568.375 m

11

Scottish Highlands, Scotland
20250316

Ina is a small stone, just the size of a palm. But once, she belonged to a vast, ancient, fractured highland. From snow-covered peaks, she began her journey, carved by glaciers and flowing water into valleys and lakes.

Tumbling down from above, the ice etched deep scars into her surface. At each cut, she broke, and slowly grew smaller, so small that even the shortest river was enough to carry her far, far away.

At last, she came to rest on the surface of a lake, quiet, silver-bright, still. I picked up the highland and slipped it into my pocket. This is where the next journey begins.

Pocket Highland Rock

30

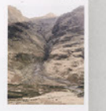
31

56.16358

32

6.421827

650.875 m



33

25.127734

12

121.837373

0.775 m

13

25.127734

14

121.837373

0.275 m

15

56.115659

34

6.426656

650.875 m

35

56.931289

36

6.285976

667.265 m

37

Suzhou, China
20190720

Beneath Lake Tai, for centuries upon centuries, they slept. Shaped by the passage of time and the flow of water, they took on forms ever changing.

They woke up and traveled through the Suzhou creek. Along the way, they passed whitewashed walls, dark tiled roofs, and homes by small bridges.

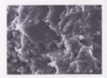
Eventually, she arrived at the garden of a residence. Through hidden paths and little doors, she wandered, until finally she settled in a quiet corner, falling asleep once more like a painting. How many centuries will it be this time?

Taihu Stone

16

17

31.233176



18

120.140978

3.393 m

19

New York, United States
20250426

Before it became Bryant Park, the site was once an potter's field, a reservoir, an exhibition ground, and a Civil War encampment. Yet few recognize its past, for everything now lies buried beneath the ground.

There sat she, the stones, heavy with history, emerged from the layers of soil. They ascended the library steps, one rock after on rock, and compelled the world to confront the history buried beneath their feet.

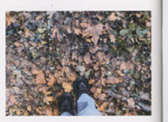
Today, people stop to notice. They bend down to look, to read, to remember. The rocks have fulfilled their mission and history is known.

The Timekeeper Rock

42

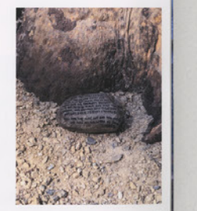
43

60.807812



44

75.563398



45

31.309544

20

120.630856

21

31.324259

22

130.629259

5.275 m

23

60.807812

46

75.563398

55.585 m

47

60.807812

48

75.563398

55.585 m

49

07

When the Tree Speaks

An Exploration of Language, Migration, and Ecological memory

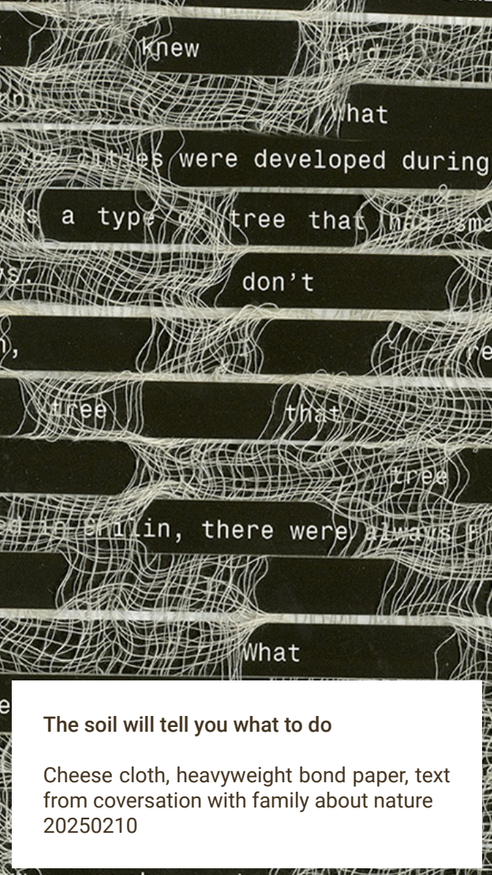
Spring 2025 Advanced Studio VI
Moments to Cross
Instructors / Jayden Ali, Chloe Munkenbeck
Teaching Associate / Devansh Shah
Individual Work
Location: New York

“When the Tree Speaks” is a personal exploration of language, migration, and ecological memory. It centers on the my evolving communication with my family, three generations shaped by different geographies and accents, yet connected through a shared sensitivity to place, plants, and care. In this project, trees become mediators of dialogue. The artist collects stories of specific species, London Plane, Ginkgo, Sweetgum, Zelkova, and Goldenrain,that have grown across the various cities my family has lived in, using them as common ground for intergenerational conversations.

Through a series of drawings made not by hand but by wind-guided tree branches, I captures the silent gestures of trees as they respond to weather, time, and presence. These natural marks are paired with transcribed conversations about plants, forming a long scroll where human language and botanical movement coexist. In this hybrid visual-textual field, the failure of spoken clarity gives way to a deeper form of understanding, one rooted in gesture, ecology, and care.

Image of a tree trunk merging with the metal fence

Weaving with cotton strings and plastic net to represent the merging tree



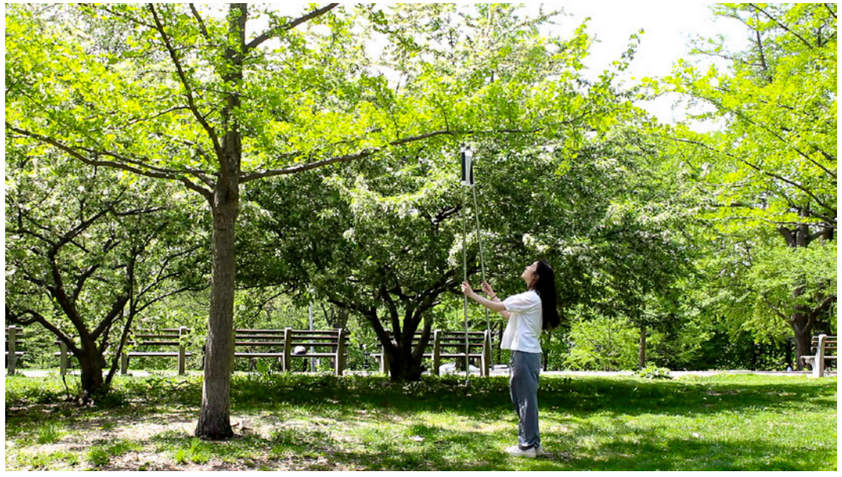
The soil will tell you what to do

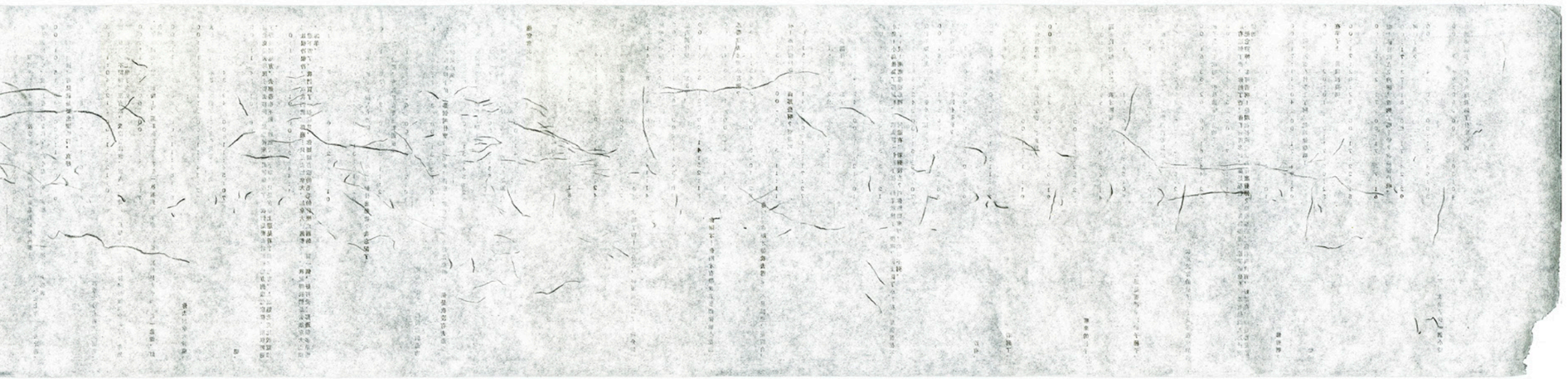
Cheese cloth, heavyweight bond paper, text from coversation with family about nature
20250210

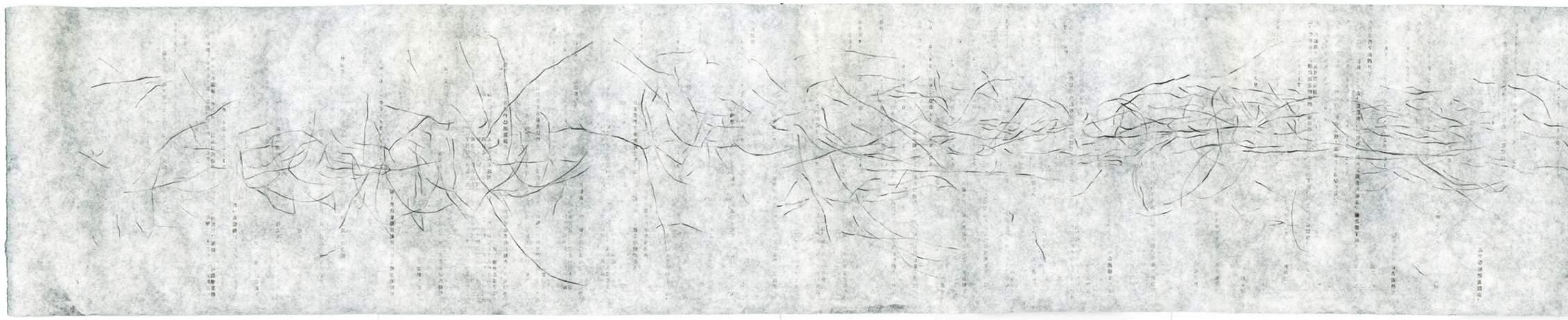

Goldenrain tree
Ginkgo biloba
Sweetgum

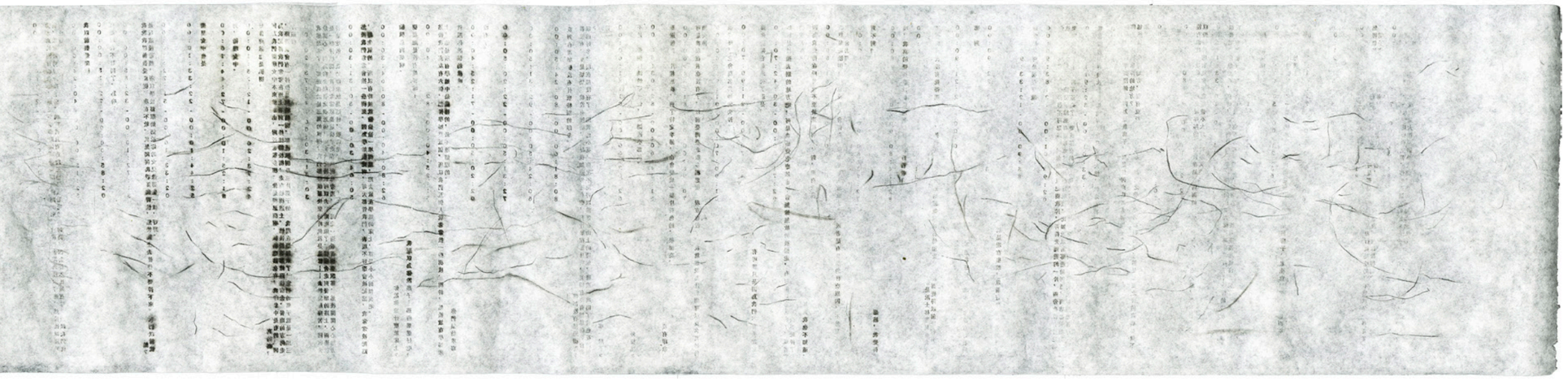
When Tree Speaks in Wind

A film of the tree drawing process
20250501









When Tree Speaks in Wind

Rice paper, Carbon transper paper
20250501

The long, scroll-like drawing, one side marked by the movement of tree branches, the other inscribed with conversations shared between me and my family about those very trees. Through this dual surface, human language and ecological gesture intertwine, revealing how memory, displacement, and belonging are carried in both speech and wind. The trees, reacting to air and weather, become co-authors in a dialogue that bridges distance and difference. Their movements translate into marks and their presence into connection.

The (Un)perceivable Lands

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The (Un)perceivable Lands