

One Forest

Landscape Foundation Studio

LA4015

Monsoon 2024 Semester



Credits: Author

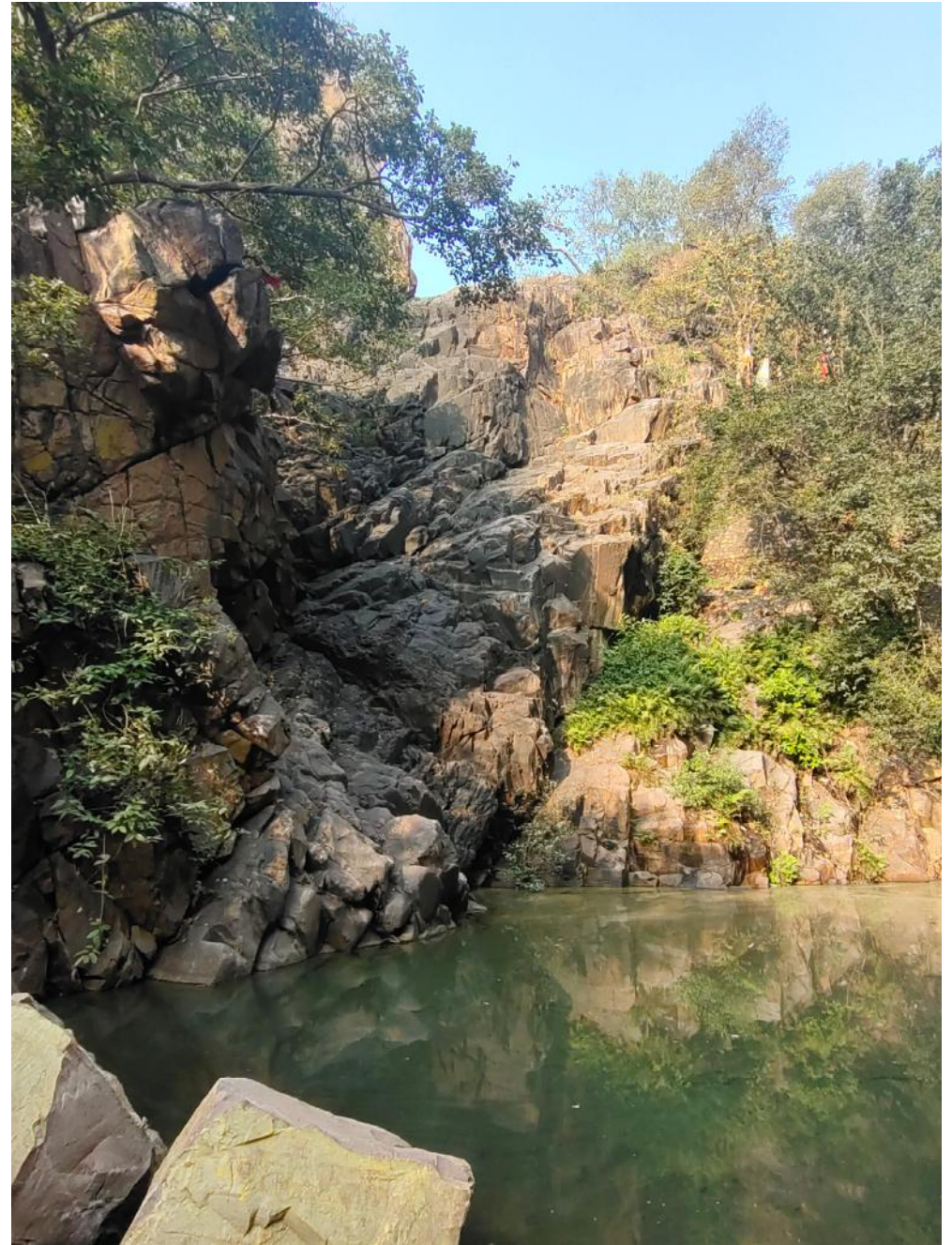
Jay Malani

PLA24146



View of Waterfall in gorge at Sitamata Wildlife Sanctuary, **August (Monsoon Season)**
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



View of Waterfall in gorge at Sitamata Wildlife Sanctuary, **November (Winter Season)**
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

Landscape Foundation Studio: One Forest

Monsoon Semester 2024

In the landscape foundation studio, we investigated this primeval landscape entity and attempt to look at it from a multidimensional perspective. We observed, recorded and developed ways of understanding this complex unit. Based on these, we attempted to re-present an imaginative response for creating a journey through its many natures, and engaging with it meaningfully.

Tutors: Priyal Shah, Meen Desai, Sankalpa Patel

Teaching Associates: Richa Shah, Hitanshree Panchal, Siddharth Jain

One Forest

The forest/ the jungle/ the woods

A place that we sense as archaic, primeval; and a space that is deep and dense

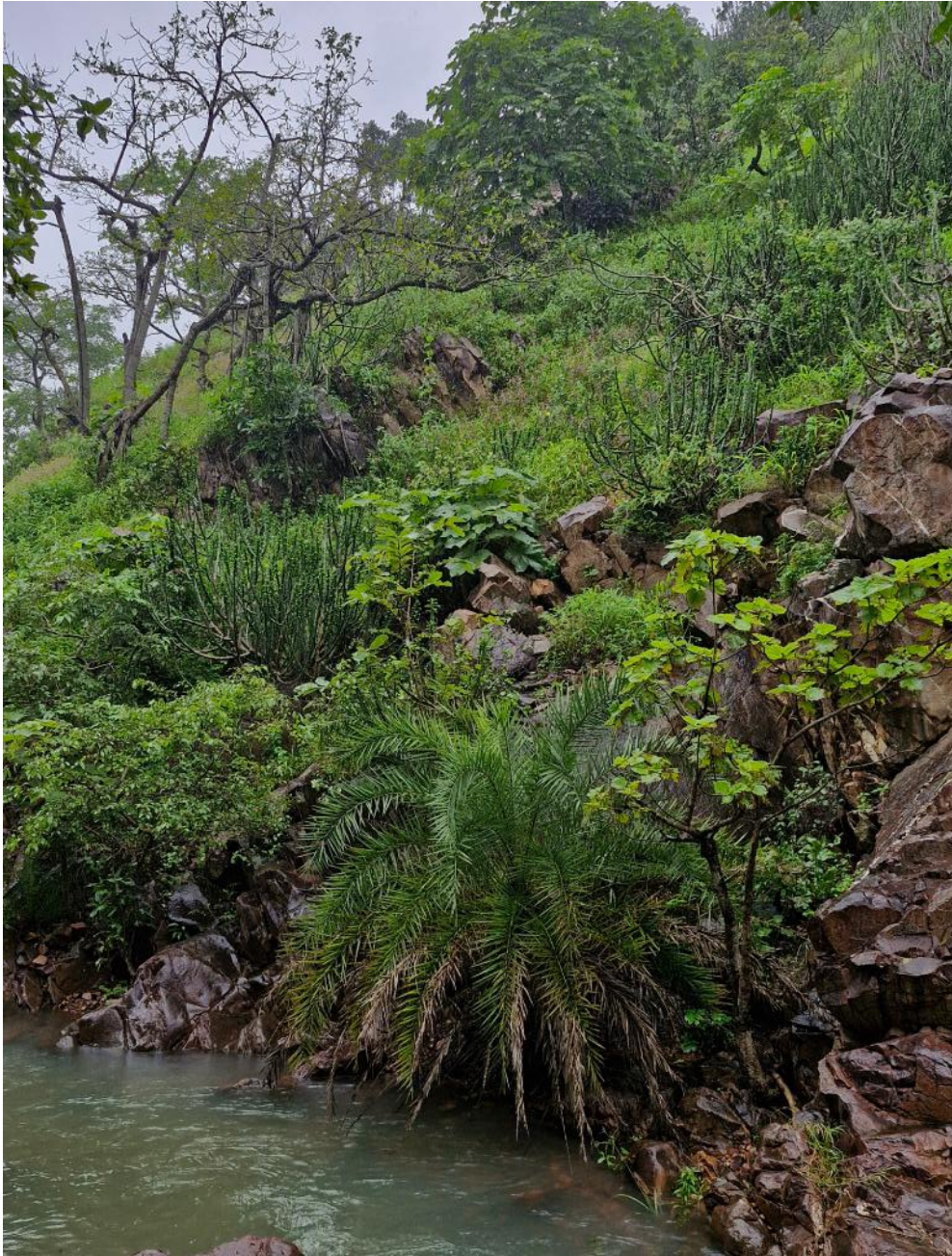
*Forests are complex, layered and varied in terms of ecology, chronology and
the human narratives that describe them.*

*While on one hand, they can be understood as rational relationships of geog-
raphy, soil, climate and vegetation, on the other hand they are more than the
sum of these parts and have their place deep in the human imagination- as
places with value.*

*In the landscape foundation studio, we will investigate this primeval landscape
entity and attempt to look at it from a multidimensional perspective.*

*We will be looking at multiple sites to observe, investigate and develop ways of
understanding this complex unit.*

*Based on these, we will 're-present' it to form a basis for creating a journey
through its many 'natures' and engaging with it meaningfully.*



View of South Facing valley in gorge at Sitamata Wildlife Sanctuary,
August (Monsoon Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



View of South Facing valley in gorge at Sitamata Wildlife Sanctuary,
November (Winter Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

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*Dry deciduous scrub and thorny forest (Thol wetlands)
North western Ahmedabad, Gujarat*

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Sections

Co-relating Systems

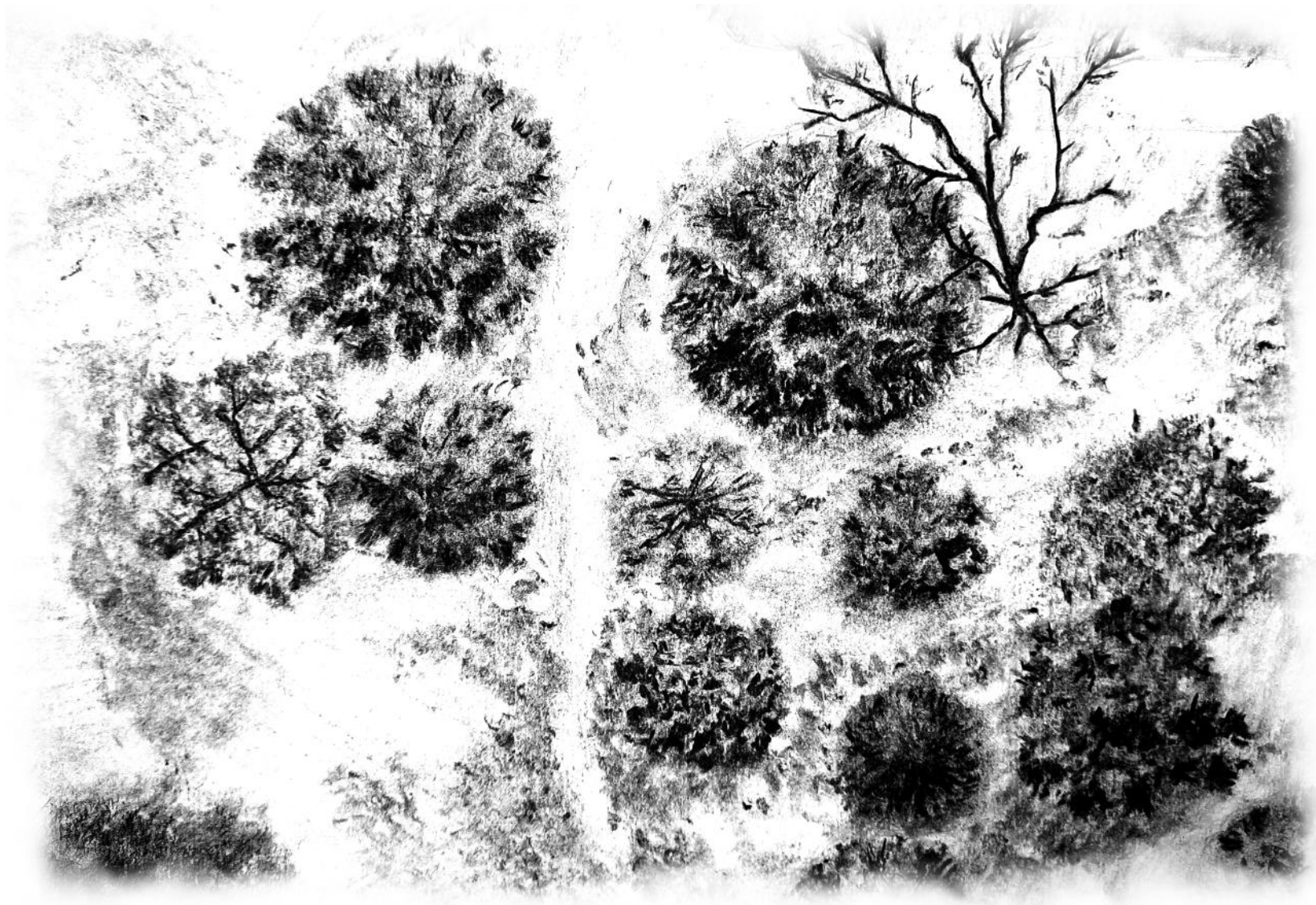
*Understanding the various attributes of the system
through forest sections*

Decoding the Forest

Identifying and developing the lens

Re-imagining the Landscape

Developing games based in the lens research



Grain Plan
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

Drawing the Landscape

We began the studio by recording the landscape through the most primary medium- sketching. The exercise was to observe and record a natural setting, the dry deciduous scrub and thorny forest of the Thol wetlands, in north-western Ahmedabad, Gujarat. The sketches were meant to express the characteristics of the flora, the quality of light, scale, proportion, and a sense of perspective as accurately as possible.

The process of representing the physical characteristics of various parts of a forest through quick free-hand drawings helped to primarily identify the multiple spaces and experiences within this wilderness patch.

Media: Charcoal, Graphite & Mixed-Media

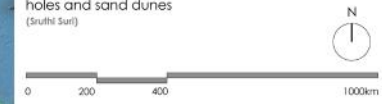
Understanding the foundational skill to draw a landscape of a native ecosystem through the medium of charcoal graphite sketches and mixed media representation has been a transformative journey of understanding and observing the intricate layers of the Landscape. While recording the landscape through charcoal as a medium, one can perceive and visualize the variation in different types of landscapes layers from geological features, vegetation character, vegetation type, planting enclosure formed during particular season. Understanding of the grain in terms of texture, patterns, light and shadow through drawing the grain plan helps to understand the scale and proportion as well as the type of space is formed through density of tree.

ONE FOREST

- DHAULADHAR WILDLIFE SANCTUARY**
Alpine & Sub Alpine Forest
Mountains, valley, rivers, rocky hills
(Iqbalimath Hanna Harris)
- MANGARBANI**
Dry deciduous forest
Mountain, grove hills, lake
(Nisha)
- ABU FOREST**
Subtropical thorn forest and Subtropical evergreen forest
mountains, rivers, lakes
(Shambhavi)
- VIJAYNAGAR FOREST**
Dry Deciduous Forest
hills, river, lake
(Manushi Patel)
- GIR NATIONAL PARK**
Mixed deciduous Forest
Rugged ridges, isolated hills, plateaus, valleys, rivers
(Yugma Barad, Malhi Shah, Jay Malani, Neha and Charmy)
- MITHAPUR BIODIVERSITY RESERVE**
Open scrub forest
Coastal plains
(Nandhini Menon)
- PURNA WILDLIFE SANCTUARY**
Tropical Deciduous Forest
Waterfalls, Purna river, small Valley, Hills, Plateau
(Dinal Mehta)
- MATHERAN**
Evergreen Forest
Mountain
(Estelina Pinto)
- SANJAY GANDHI NATIONAL PARK**
Mixed Deciduous Forest
Mountain, Lakes, Rivers
(Vidhi B. Kareena K)
- KALSUBAI HARISHCHANDRAGAD WILDLIFE SANCTUARY**
Tropical evergreen forests and moist deciduous forests
Mountain
(Anuja Dalir, Durva Kamat)
- VARNASHI FARMS**
Moist Deciduous And Evergreen Forest
coastal flat lands, undulating hills and valleys
(Raja Provin)
- MAHABALESHWAR**
Subtropical Evergreen Forest
Hills, plateau, valleys, rivers, waterfalls
(Shrutika Gurav)
- MARAYOOR FOREST**
Tropical Deciduous Forest
Mountains, Brooks, Rivers, Waterfalls, Rocky Hills, Sholas and Hamlets
(Jayesh Rajebhosale)
- VAGAMON PINE FOREST**
Coniferous Forest
Hills, ravines and meandering rivulets
(Drashli)



- MANALI WILDLIFE SANCTUARY**
Alpine & Sub Alpine Forest
Mountain
(Jay Nakrani)
- BIR BILLING FOREST**
Broad leaved and Coniferous Forest
Mountain
(Pranika Patil)
- CHAKRATA FOREST**
Deciduous Forest
Mountain, plateau, river, waterfalls
(Hilani Shah)
- JIM CORBETT NATIONAL PARK**
Deciduous Forest
Mountain, Grasslands, Wetlands
(Jemy Patel)
- DEHRADUN FOREST RANGE**
Forest Research Institute
Tropical moist, tropical dry deciduous forest, sissou forest, scrub and degraded forest
(Keerthana)
- MAWPHLANG SACRED FOREST**
Subtropical rainforest
Mountain
(Harshika)
- RALAMANDAL WILDLIFE SANCTUARY**
Dry Deciduous Forest
Mountains, Valleys
(Anuj Singh Rajput)
- THE SUNDARBANS**
Mangrove Forests
Estuaries, tidal rivers, creeks, numerous channels, flat, Mangrove forest, marshy islands
(Prachal Ghosh)
- PENCH TIGER RESERVE**
Mixed Dry Deciduous Forest
Hills, valleys, dense teak vegetation, Perennial and seasonal rivers,
(Mayuresh)
- KANGER VALLEY NATIONAL PARK**
Moist peninsular
Deccan peninsula bio-geographical zone
(Bhumika Tejwani)
- TADOBA TIGER RESERVE**
Dry deciduous Forest
Farms, Wetlands, Hills, Valleys
(Mrunmayi)
- PICHAVARAM MANGROVE FOREST**
Mangrove forest
Backwaters, uppanaru river, mudflats, sandy saline soils
(Monistree)
- YALA NATIONAL PARK**
Semi - Deciduous Forest
Grasslands and shrubs, tanks and lagoons, water holes and sand dunes
(Sruthi Suri)



Physiographic Map Of India

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Studio Group Work

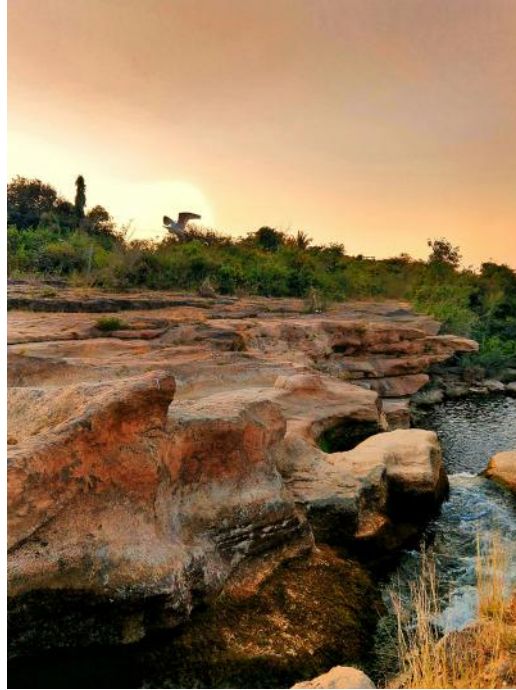
GIR NATIONAL PARK

Gir, Gujarat

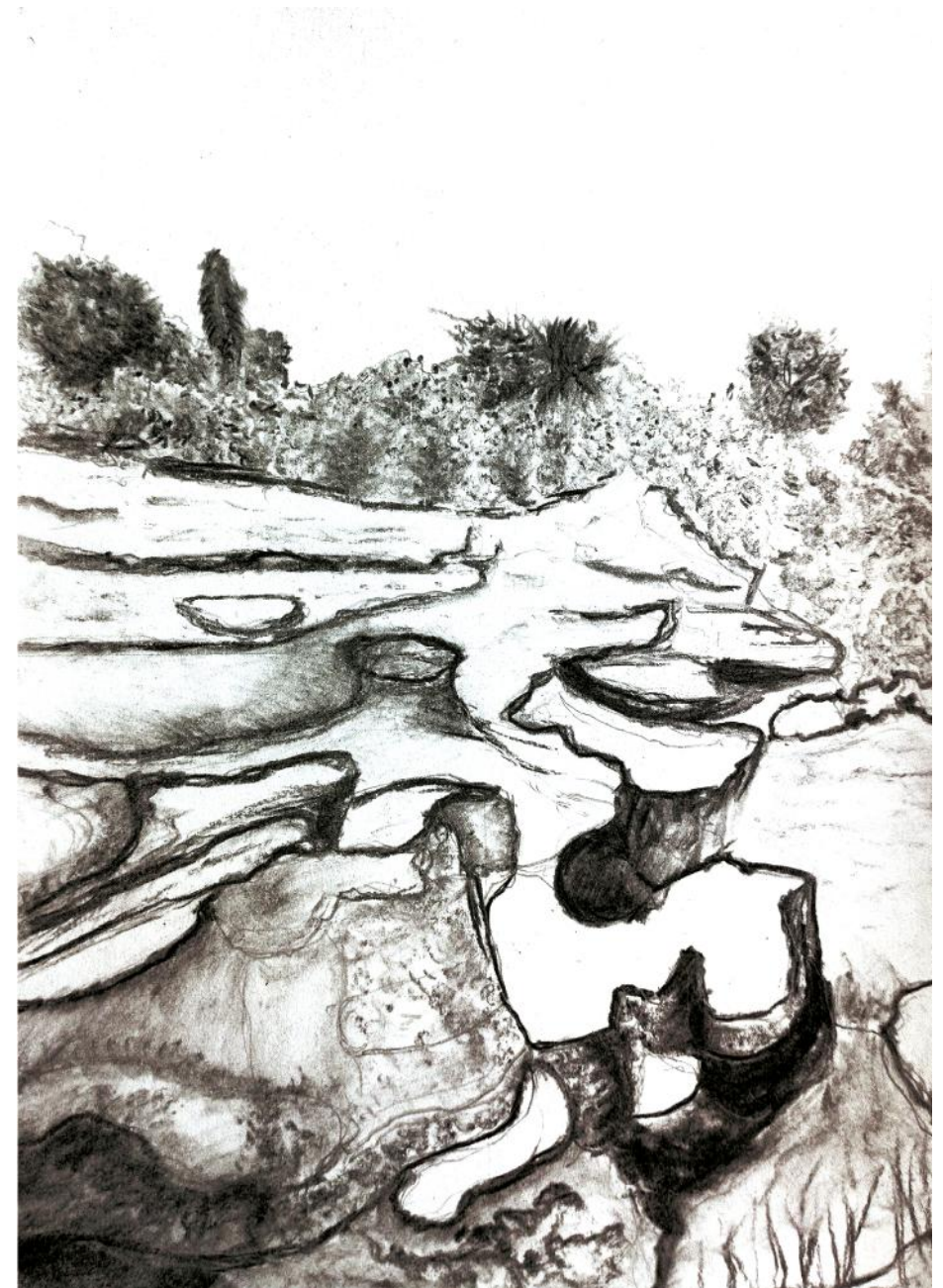
The first sketching exercise is about reobserving a forest, wildlife sanctuary or a national park we have visited previously and recording the landscape through the medium of charcoal and begin our understanding of different characters of the landscape. Drawing a landscape using charcoal as a medium trains one's eye to observe the intricacies while reading a forest. Charcoal being soft and sumdgeable allows quick and expressive medium of capturing the essence of a landscape.



Different view of Gir Forest
One Forest: Landscape Foundation Studio, Monsoon Semester 2024



Credits: Google Images



A series of large exposed rock along with the river
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



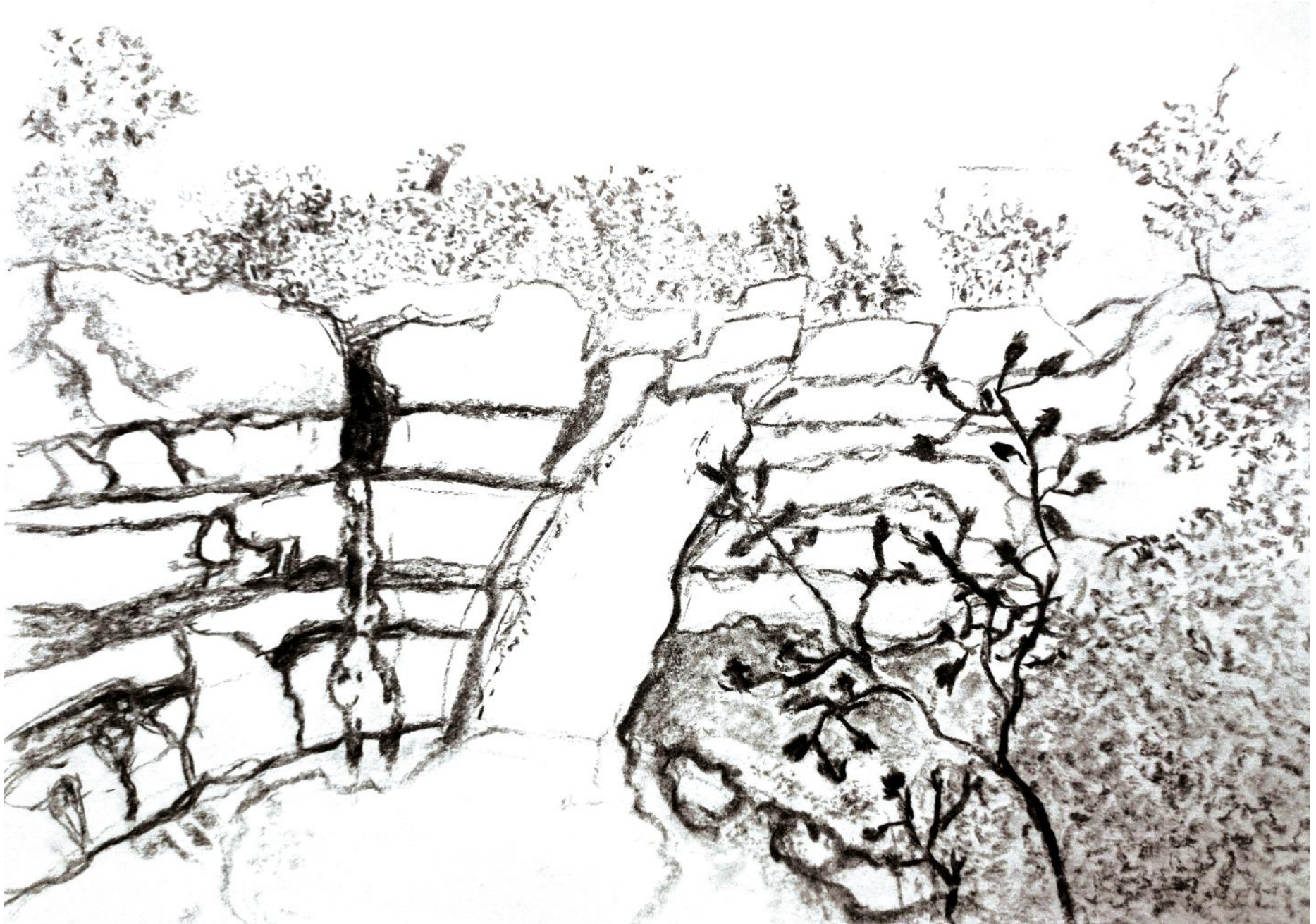
Dry Deciduous forest in Dry Season
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Dry Deciduous forest in Dry Season
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Waterfall cascading down a rocky cliff, surrounded by vegetation
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

AHMEDABAD TEXTILE INDUSTRY'S RESEARCH ASSOCIATION (ATIRA)

Ahmedabad, Gujarat

The visit to ATIRA was one of our first live sketching exercise that focused on understanding the scale, proportion and depth of a landscape. In addition to these factors, we also focused on representing characteristics of different vegetation types through the charcoal medium.



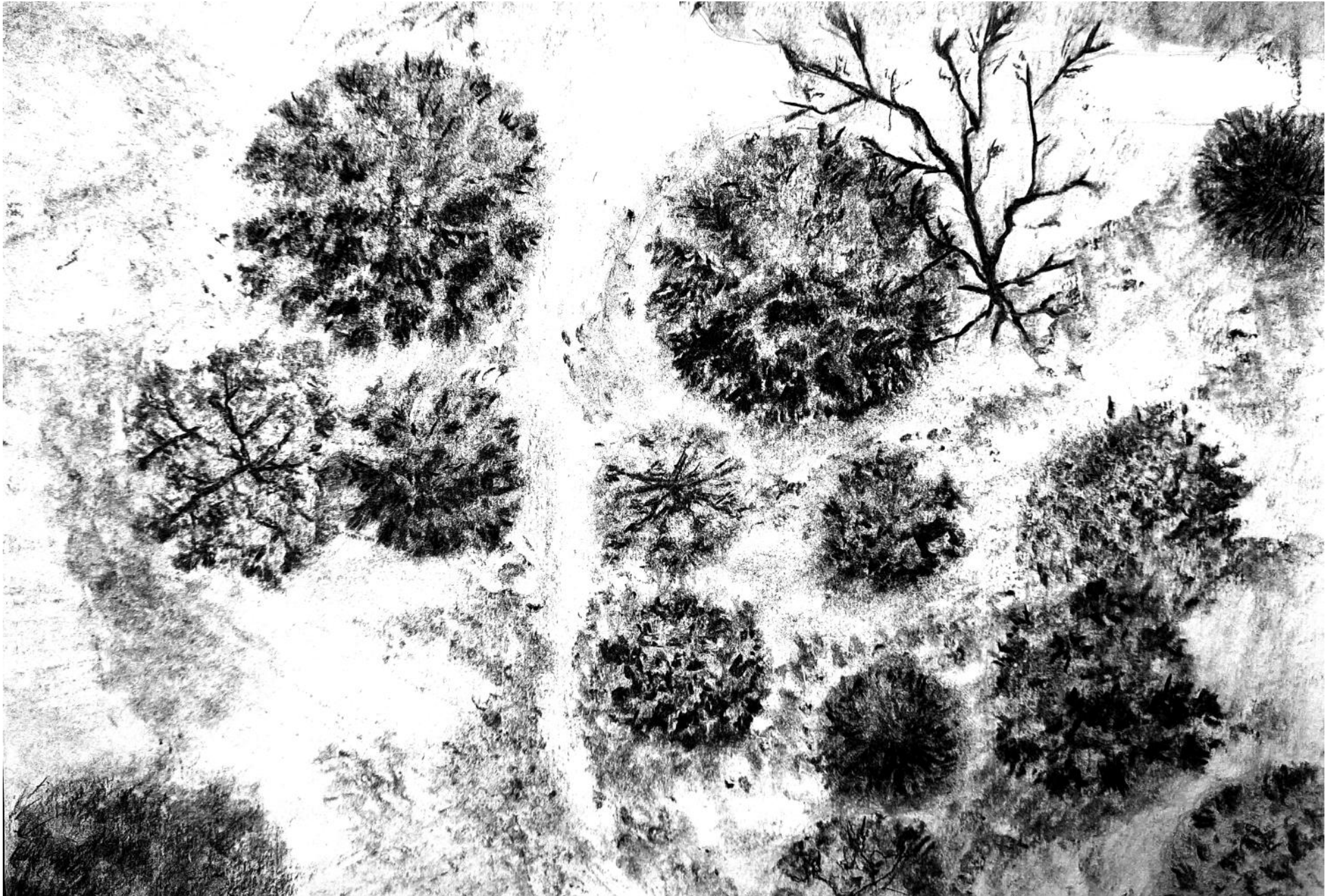
Different view from ATIRA Campus
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



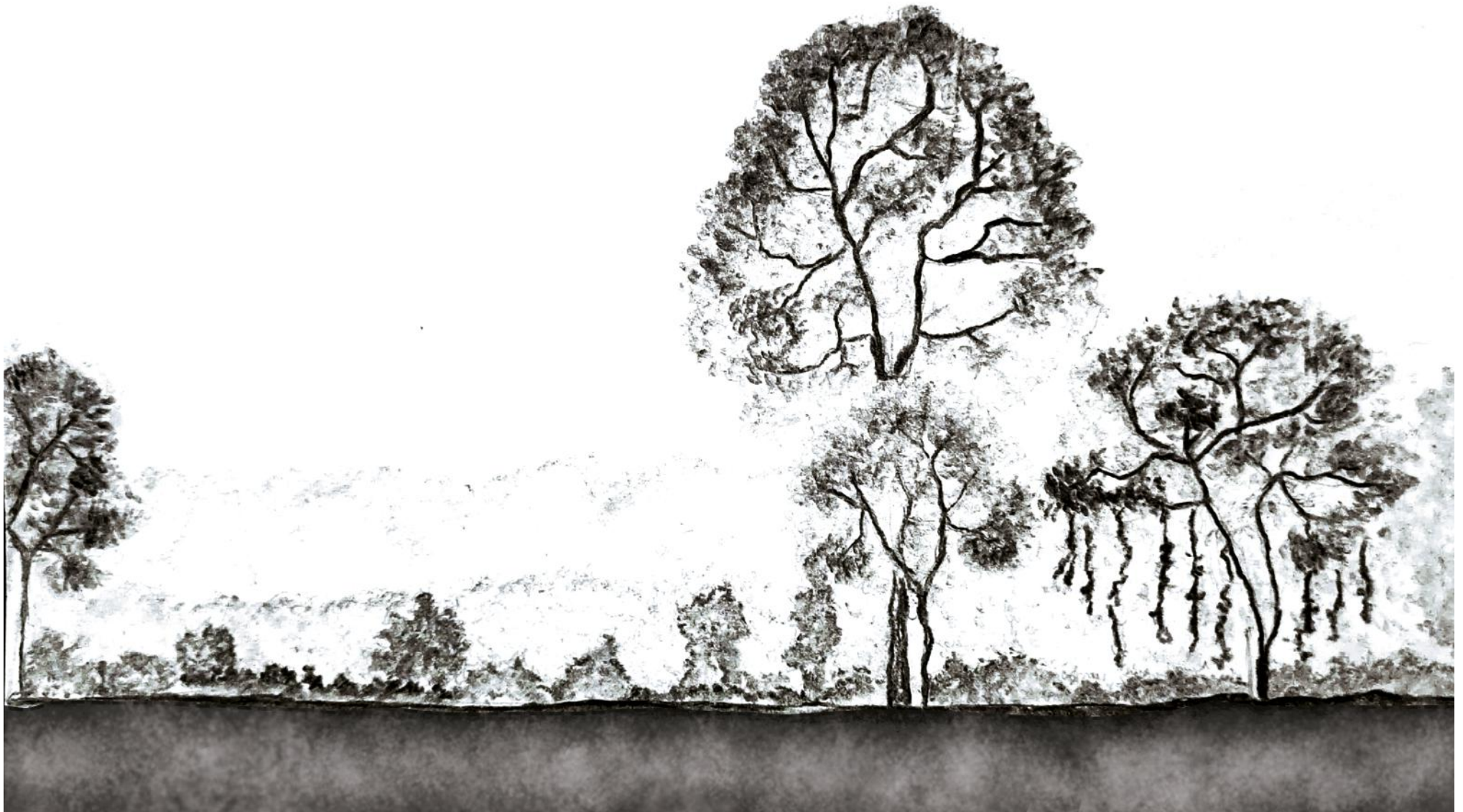
Dense vegetation with creepers climbing (ATIRA Campus)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Grain Plan (ATIRA Campus)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Section A-A' (ATIRA Campus)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Section B-B' (ATIRA Campus)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Section C-C' (ATIRA Campus)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

WETLAND NEAR THOL BIRD SANCTUARY

Ahmedabad, Gujarat

The visit to wetland near thol bird sanctuary was our second live sketching exercise. It focused on understanding and representing the various characteristics of a wetland landscape encompassing acacia nilotica trees, prosopis juliflora and the water edges.



Different view from Wetland
One Forest: Landscape Foundation Studio, Monsoon Semester 2024



Credits: Author
Acacia nilotica at water edge
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

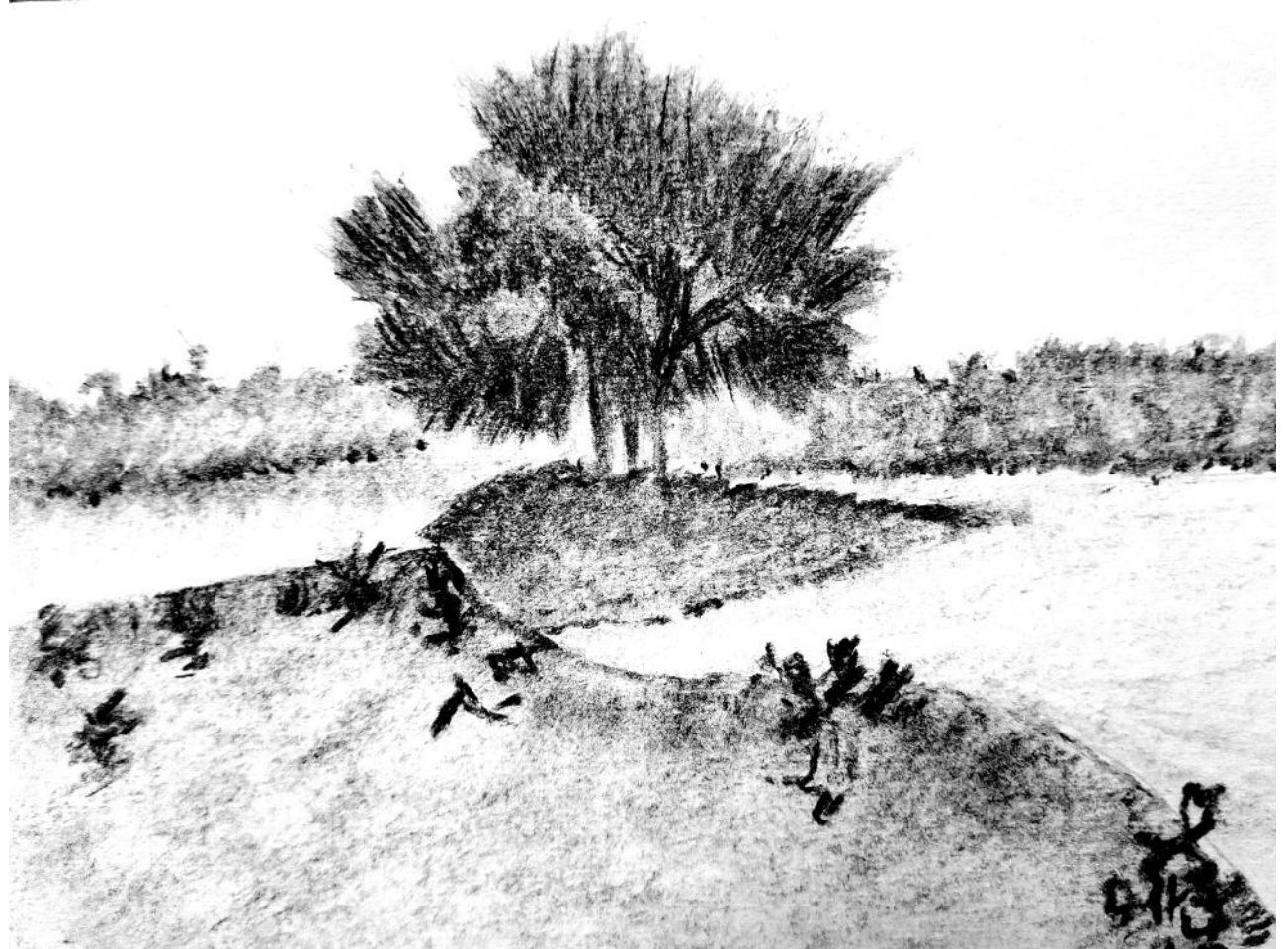
THOL SKETCHES AT 3 DIFFERENT SCALE

The exercise involved us representing the landscape at three different scales at three different paper sizes: A5, A4 and A3. The purpose of the exercise was to understand the level of depth and detail required at different scales while maintaining the character of the wetland.



A5 Sketch

Credits: Author



A4 Sketch

Credits: Author

Credits: Author



A3 Sketch

Credits: Author



Acacia nilotica at water edge
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

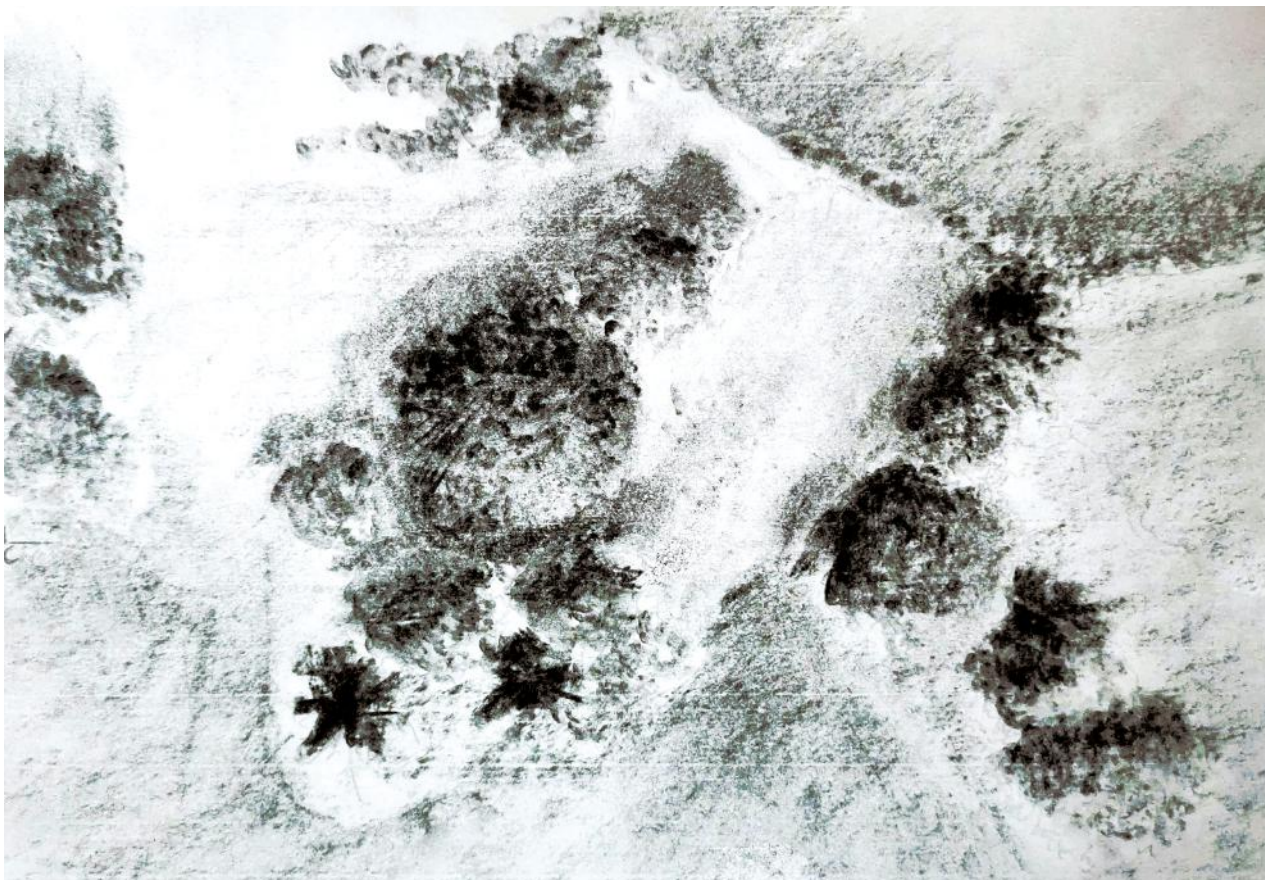
Credits: Author



Section of Wetland

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Grain Plan of Wetland

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



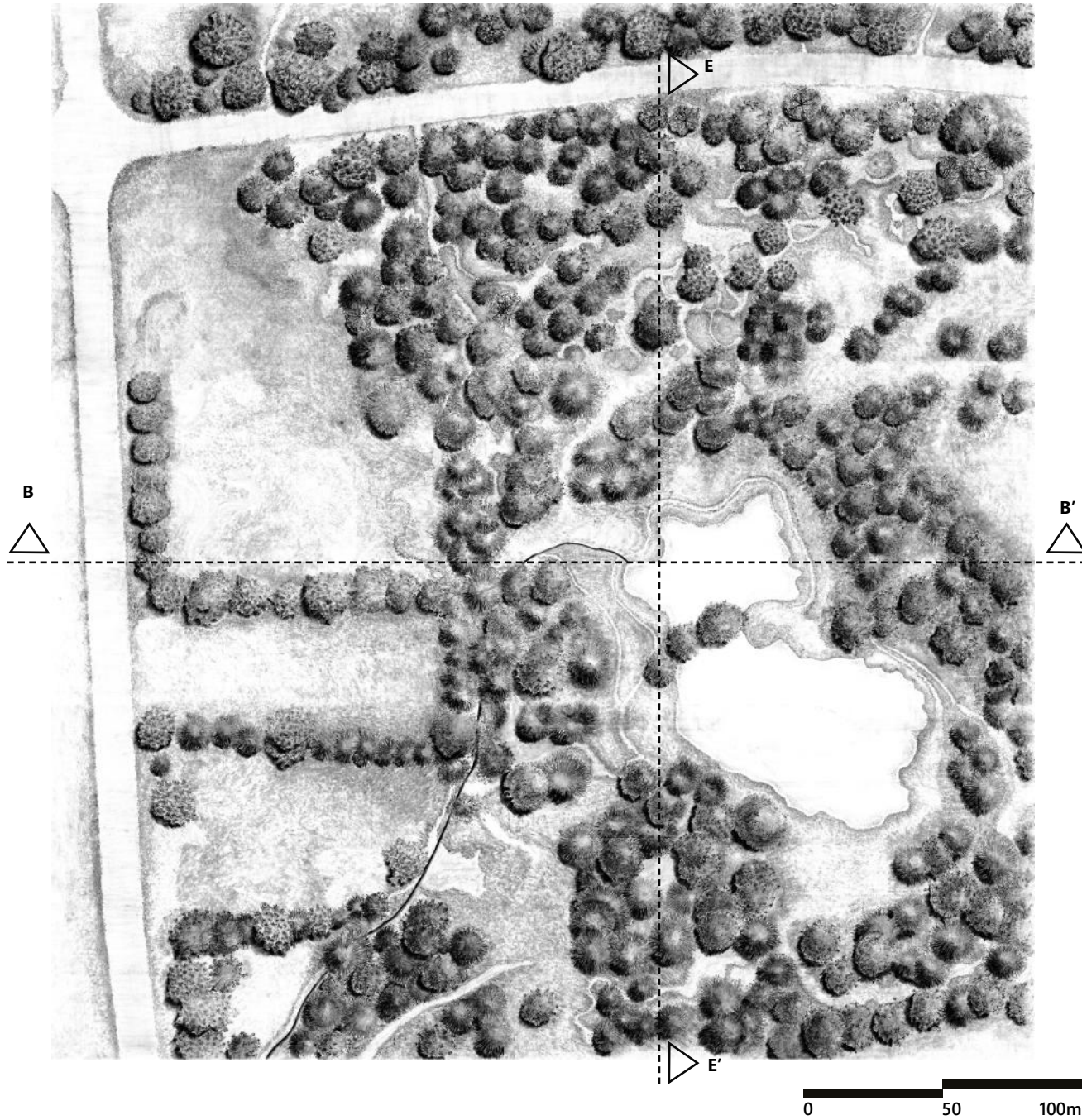
Google Grain Plan
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

0 100 200m



Source: Google Earth
Credits: Studio Group Work

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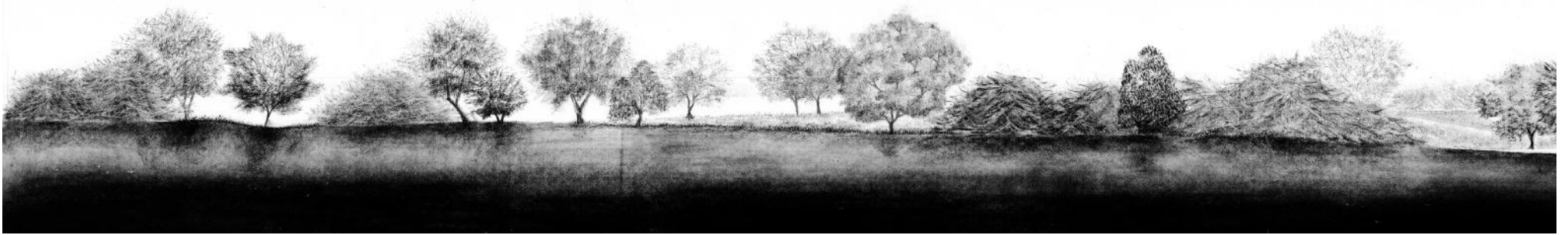


Charcoal Grain Plan

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

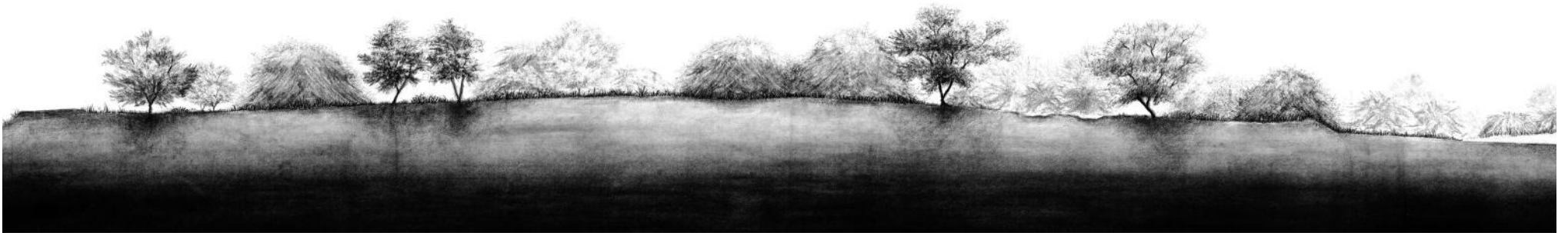
IA | Drawing the Landscape

Credits: Studio Group Work



Section BB'

Credits: Studio Group Work



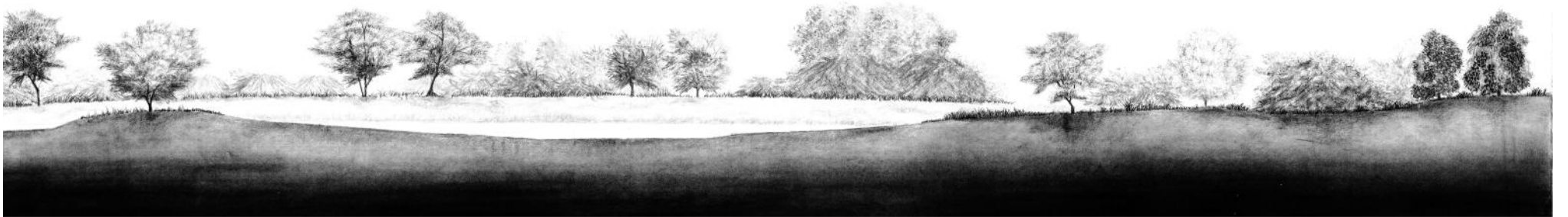
Section EE'

Credits: Studio Group Work



Section BB'

Credits: Studio Group Work



Section EE'

Credits: Studio Group Work



Re-imagining the Wetland

In this part, the studio looks at different ways of understanding and interpreting the wetland through further inquiry into the observed layers of landscape through a systemic lens.

Students attempt to decipher the site's material, spatial, and temporal qualities – its natural layers, and the systematic connection to larger networks on the basis of observation in the documentation done at the previous stage. The phenomenon then identified by individual students is applied as lens to look at the wetland. This systemic understanding and its unique individual interpretation is then represented through various mediums - storyboarding, comics, model making, and game designing.

As we delved into the complexities of the wetland and its multifaceted nature, we embarked on an exercise to develop a lens—a unique perspective that encompasses our observations and interests. Our focus shifted towards crafting interpretations through our studies, aiming to reimagine the wetland in an engaging and distinctive way, utilizing the medium of comic books. These diverse forms of representation enhanced our understanding of the site and its character, potentially leading to new insights along the way.

LENS DEVELOPMENT



Acacia nilotica at water edge

Credits: Author

Faunal movement within and around the wetland is crucial for maintaining ecological balance. Migration, disperse, and interact, contributing to nutrient cycling, gene flow, and predator-prey dynamics.

Thol wetlands being fresh water ecosystem are dominated by birds. Birds are often referred as an ideal indicator to monitor the ecological condition of any wetlands as they impact on all the tropic levels of an aquatic ecosystem. They help regulate populations of smaller animals they prey upon, disperse plant seeds, and pollinate flowering plants.

Certain species are highly sensitive to environmental changes. These indicator species can provide early warning signs of pollution, habitat degradation, or climate change impacts. By monitoring these species, one can assess the overall health of the wetland ecosystem.



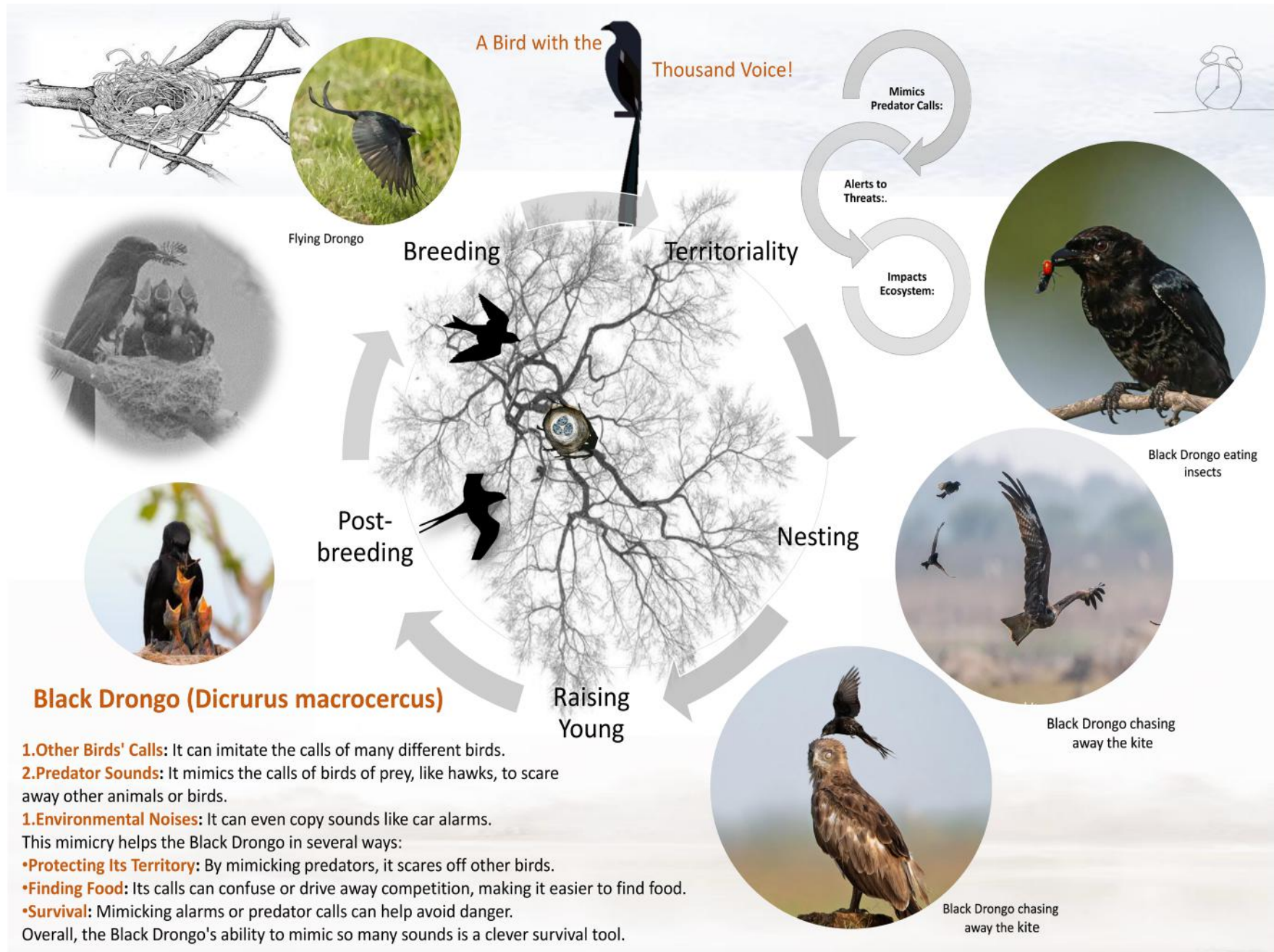
Nest Of Baya Weaver Bird, nest covered with spider web on Acacia nilotica



Credits: Author

Acacia nilotica, which comes up well in this area which is suitable for the wetland bird Baya Weaver, scientifically known as *Ploceus philippinus*, is a common sight in Thol Wetland. Renowned for its extraordinary nest-building abilities. Their pendulous nests woven with exceptional craftsmanship from grass and twigs. Males meticulously building nests while females evaluated these structures, presumably in search of suitable partners for the breeding season. Breeding during the monsoon season aligns with increased food availability.

The primary observation during monsoon season includes the nest of Baya Weaver Bird at various location in wetland on Acacia nilotica. The breeding season of the baya weaver bird is in monsoon season. The observation includes the nest being covered by a spider web and being monsoon season none of the nest were in better condition. This observation is further transformed into the lens to look at the native bird species and their role in a wetland Ecosystem.



Black Drongo (*Dicrurus macrocercus*)

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Building Nest Stage 01
Primary Stage Nest Building
Male Display

Building Nest Stage 02
Nesting Material using grass
and twigs



Building Nest Stage 03
Partially built nest and
Waiting for female to inspect
the nest for breeding.

Building Nest Stage 04
Female builds interior
Male builds exterior



Building Nest Stage 05
Male keep wet mud pellets to
balance the nest from wind



Building Nest Stage 06
Long Vertical Tubular side
entrance to the chamber



Building Nest Stage 07
Males build many partial
nests at same time and
begin courting with other
females at other partially
constructed nests as both
male and female birds are
polygamous.



Female Baya Weaver Bird
stout conical bill, short square cut tail,
dark streaked fulvous brown above
and plain whitish fulvous below
streaked with yellow and blackish
brown bill



Male Baya Weaver Bird
Cream buff below, Bright yellow
crown, upper parts dark brown

Nesting Site

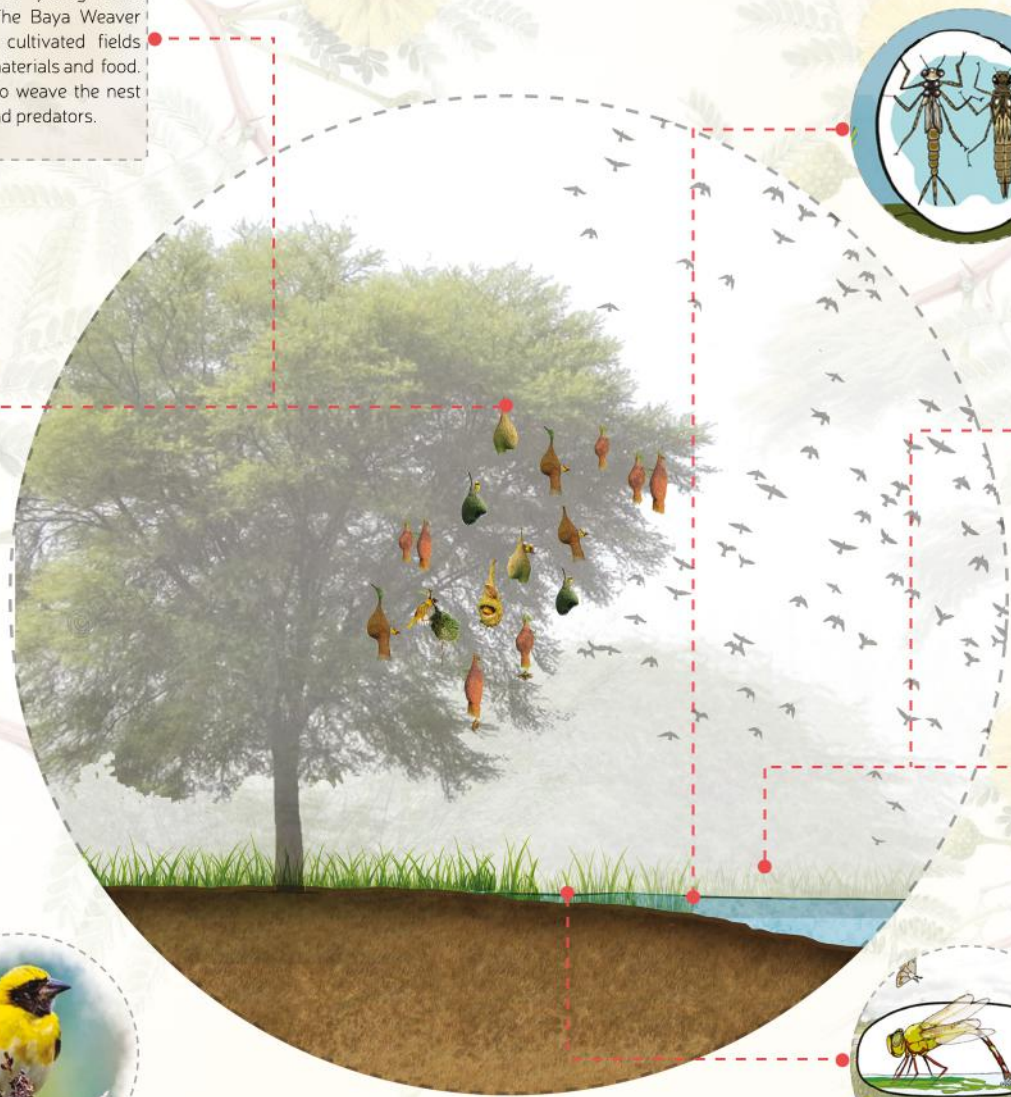
The Baya Weaver's breeding season starts during the monsoon. They start building their nests in colonies and few young males build the experimental nests between reeds. The Baya Weaver prefers the nesting sites near water bodies, cultivated fields because of the easy availability of nest building materials and food. Thorny trees and shrubs provide the great grip to weave the nest at beginning and also safeguard from the ground predators.

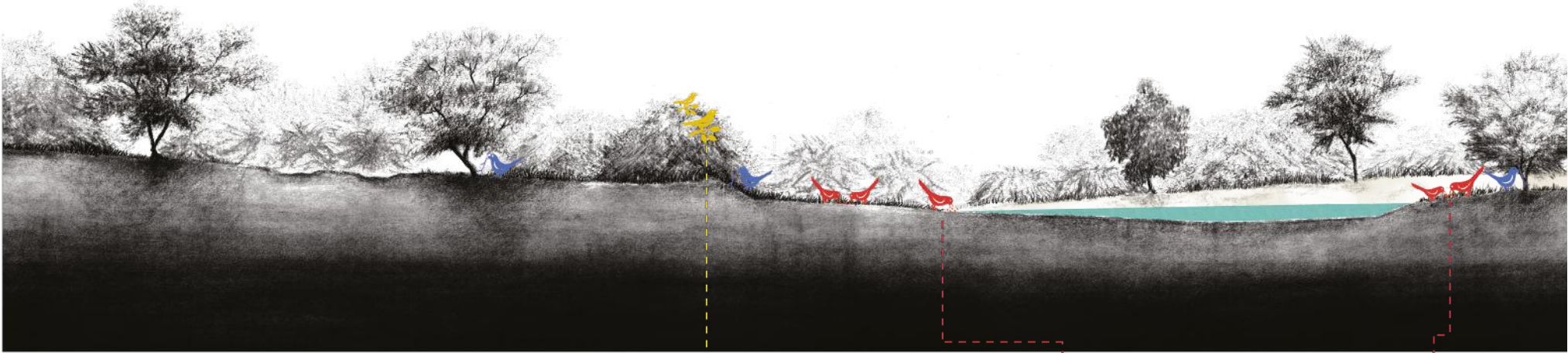
Nesting Condition

Acacia nilotica are the most preferred thorny trees for Baya Weaver to build the nest as they get more insects and larvae to feed their chick in the monsoon. The nests are woven with long strips of bulrush or cattail, grasses, rushes, sedges and long torn strips of palm fronds. Position of the nest on the trees also plays an imperative role to keep the nest stable from the wind and avoid the threats from the predators. Generally, the Baya Weaver selects the branches which are on the opposite side of the wind flow.

Pollination Baya Weavers forage in flocks for grains at cultivated fields and sometimes this bird is considered as an agriculture pest but, in contrast, they also feed on different insects which are causing the damage to the cultivated crops

Pollination (they greatly contribute to pollination by transferring the seed of the flowers when they feed for nectar and insects)

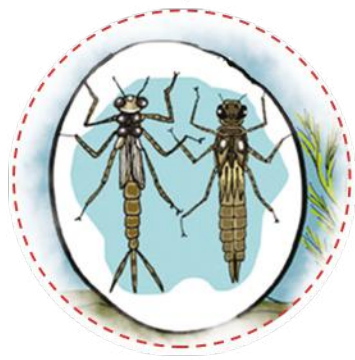
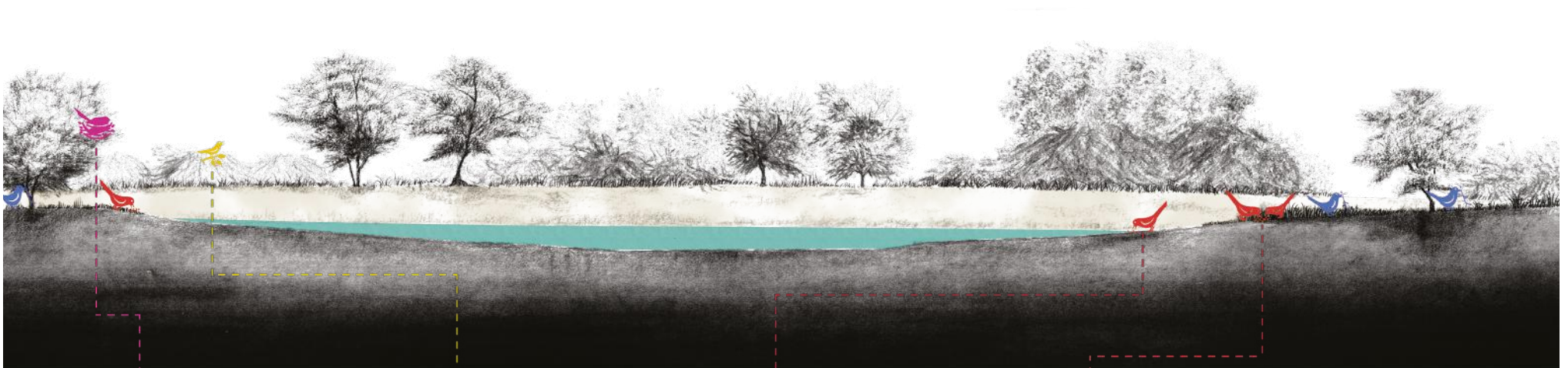




Baya Weaver Bird

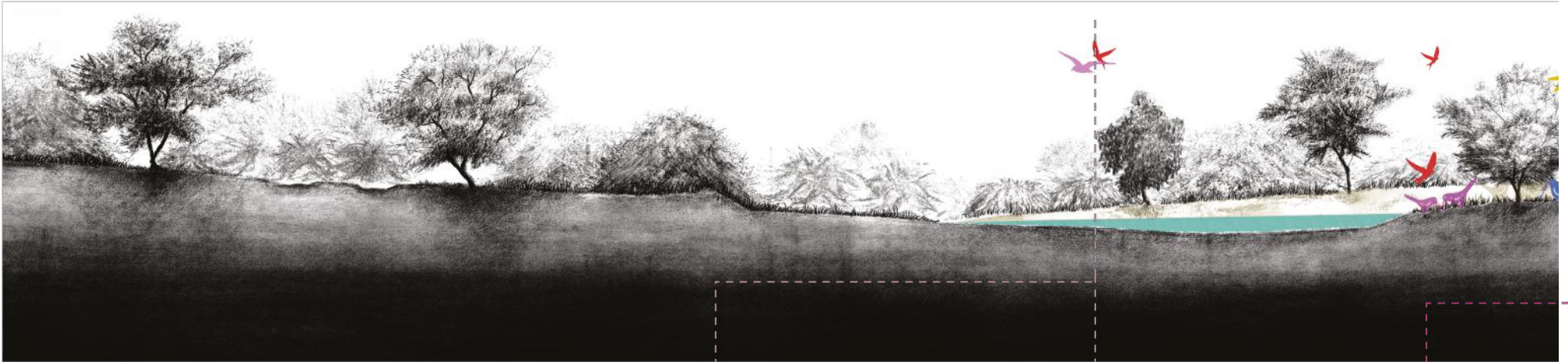


Credits: Author



-  Nest Building Material
-  Nesting
-  Foraging
-  Perching

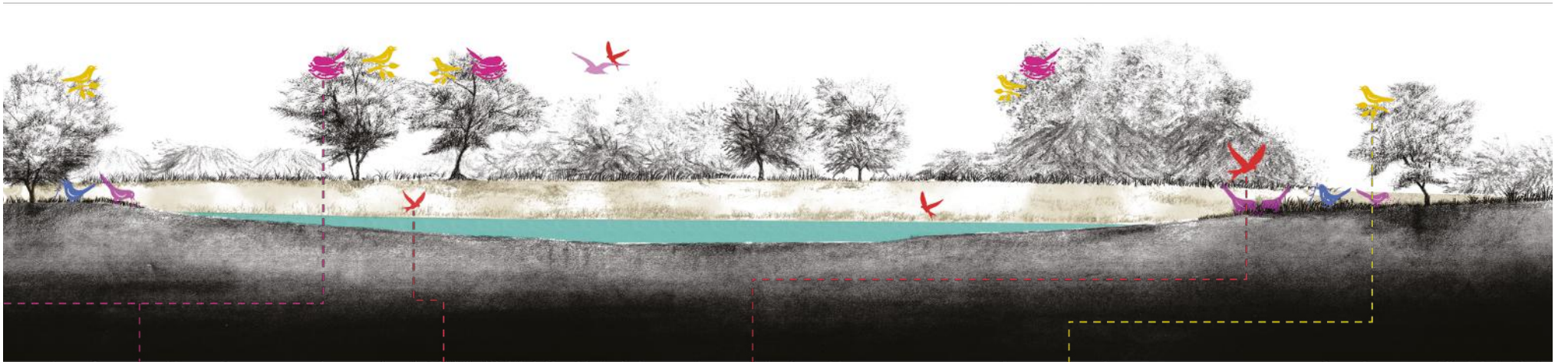
Credits: Author



Black Drongo Bird

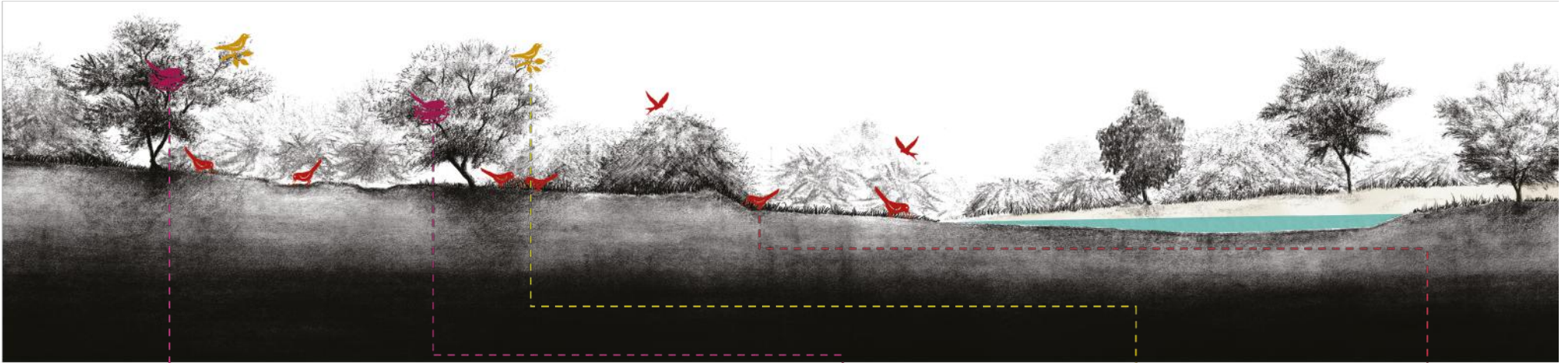


Credits: Author



-  Nest Building Material
-  Nesting
-  Foraging
-  Perching

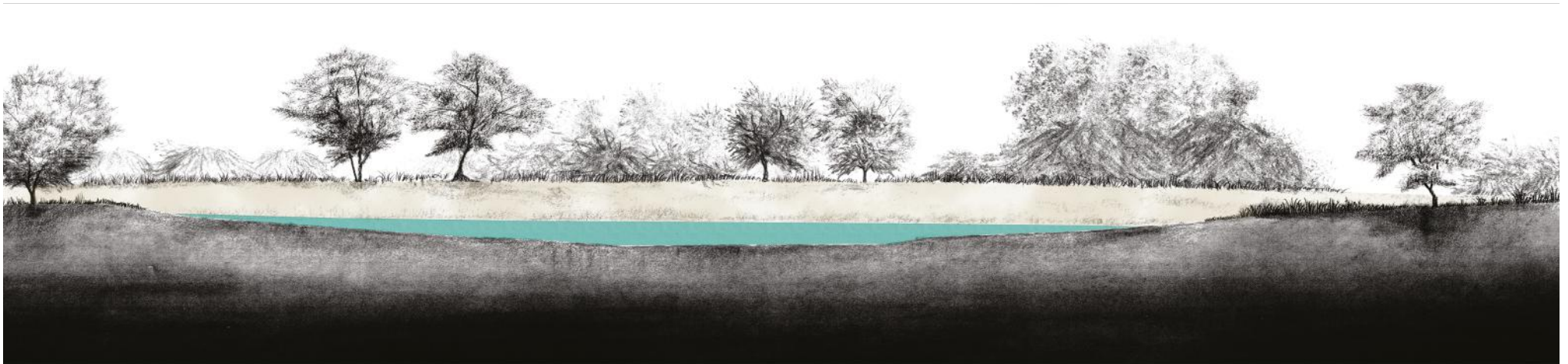
Credits: Author



Spotted Owl Bird



Credits: Author



Nest Building Material



Nesting



Foraging



Perching

Conclusion

Faunal movement within and around the wetland is crucial for maintaining ecological balance. Migration, disperse, and interact, contributing to nutrient cycling, gene flow, and predator-prey dynamics.

Thol wetlands being fresh water ecosystem are dominated by birds. Birds are often referred as an ideal indicator to monitor the ecological condition of any wetlands as they impact on all the tropic levels of an aquatic ecosystem. They help regulate populations of smaller animals they prey upon, disperse plant seeds, and pollinate flowering plants. Certain species are highly sensitive to environmental changes. These indicator species can provide early warning signs of pollution, habitat degradation, or climate change impacts. By monitoring these species, one can assess the overall health of the wetland ecosystem. **Pollination** (they greatly contribute to pollination by transferring the seed of the flowers when they feed for nectar and insects), **Insect control** (These birds are voracious insectivores, feeding on a wide array of insects, such as caterpillars, beetles, and grasshoppers), **Ecological indicators** (Their presence can be an indicator of the overall health of the wetland ecosystem), **Soil Fertility Enhancement** (Their feces contain nitrogen and other nutrients that serve as fertilizers, making the soil fertile), **Cultural Significance** (they are known for their nest-weaving abilities and sweet chirping, these birds often play a crucial role in local folklore and traditions).

In conclusion, Avifaunal interaction is another facet of faunal movement that shapethe wetland ecosystem and thus by studying, observing will help to understand naturalecosystem.



View of *Sterculia urens* at West Facing valley in MixForest at Sitamata Wildlife Sanctuary,
August (Monsoon Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



View of *Sterculia urens* at West Facing valley in MixForest at Sitamata Wildlife Sanctuary,
November (Winter Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

Reading and Recording the Landscape

The next stage of the studio began with the secondary research of the tropical dry deciduous forest of Sita-Mata wildlife sanctuary, located at the confluence of Aravallis*, Vindhya* and Malwa plateau*.

At a larger context, to understand multiple systemic layers forming the forest, a thorough secondary research is conducted by the students to decipher various layers like geology, geomorphology, elevation, hydrology etc. through mapping.

After understanding the larger context, a meticulous documentation of the many settings within the forest, supported via continual on-site guidance by experts is conducted. Using the extensive site documentation, the students compiled the data to identify and process the various layers of the forest, along with multiple systems, spaces and experiences within the forest.

Media: Charcoal, Graphite & Mixed-Media

Exploring Sitamata Wildlife Sanctuary nestled within Aravalli Range with an Ecologist has completely changed the perspective of forest landscape. Developing the understanding of tree species, how to identify tree species and its interrelation with different system has started journey of landscape beyond the limitation of my way of looking at landscape architecture. We documented the forest through photograph, sketches, sections and being part of herbarium group we collected and identified samples along the trail. Documentation also included the quadret study, soil samples along the trail.

**Aravallis-The Aravalli Range (also spelled Aravali) is a mountain range in Northern-Western India, running approximately 670 km in a south-west direction, starting near Delhi, passing through southern Haryana, Rajasthan, and ending in Ahmedabad Gujarat.*

**Vindhya-Vindhya Range, a broken range of hills forms the southern escarpment of the central upland of India. From Gujarat state on the west, it extends about 675 miles (1,086 km) across Madhya Pradesh state to abut on the Ganges (Ganga) River valley near Varanasi, Uttar Pradesh. This mountain range forms the southern edge of the Malwa Plateau.*

** Malwa plateau- Malwa Plateau, plateau region in north-central India. It is bounded by the Madhya Bharat Plateau and Bundelkhand Upland to the north, the Vindhya Range to the east and south, and the Gujarat Plains to the west. Of volcanic origin, the plateau comprises central Madhya Pradesh state and southeastern Rajasthan state.*



View of Different streams at Sitamata Wildlife Sanctuary,
August (Monsoon Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

SITAMATA TEMPLE TRAIL

Sitamata Wildlife Sanctuary, Rajasthan

The most unique character of Sitemata Temple Trail in terms of experience is that it has a variation of Forest typologies transition commencing from Grassland, Tectona Grandis dominant, various mixed forest typologies to ending in a Gorge with changing Topography and Landforms with multiple stream crossing.



View of Tectona grandis dominant Forest Typology at Sitamata Wildlife Sanctuary, August (Monsoon Season)

Credits: Author

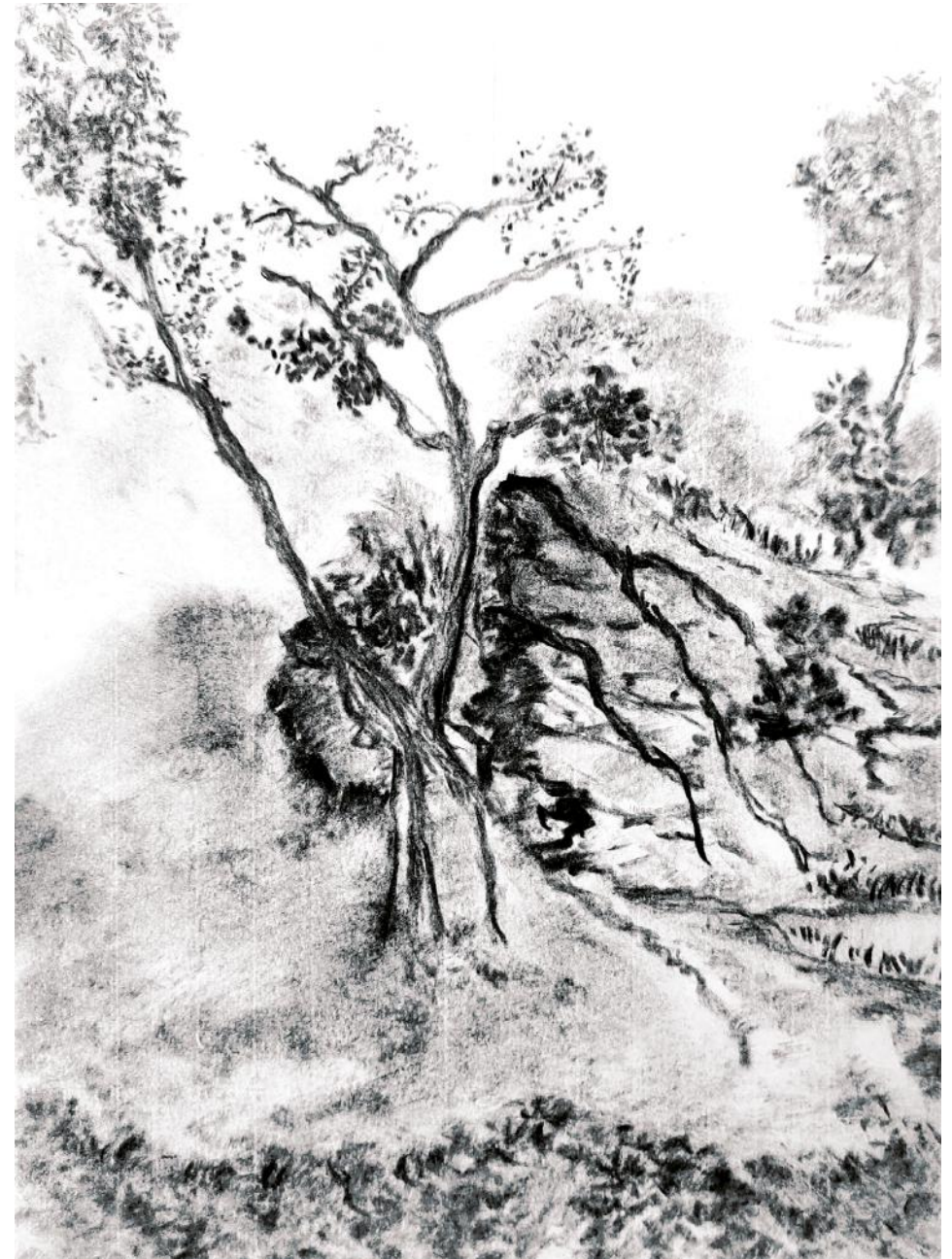
One Forest: Landscape Foundation Studio, Monsoon Semester 2024



View of Grassland at Sitamata Wildlife Sanctuary, August (Monsoon Season)

Credits: Author

One Forest: Landscape Foundation Studio, Monsoon Semester 2024



Ficus Viren growing on rock crevices at Sitamata Wildlife Sanctuary, August (Monsoon Season)

Credits: Author

One Forest: Landscape Foundation Studio, Monsoon Semester 2024



Dense canopy at Mahua Dominant Forest at Sitamata Wildlife Sanctuary
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Stream at Mixed Forest Typology at Sitamata Wildlife Sanctuary
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Jakham Dam Trail at Sitamata Wildlife Sanctuary,
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Jakham Dam Trail at Sitamata Wildlife Sanctuary,
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

JAKHAM TRAIL

Sitamata Wildlife Sanctuary, Rajasthan

The Jakham Dam Trail is North-East facing valley of the Aravalli Range. The most unique character of the trail is that the valley does not receive sunlight as compared to other valleys thus making it evergreen throughout the season. The vegetation type includes dense bamboo brakes due to more moisture content in the soil. It includes various lithophytes and chasmophytes.



View of Grassland at Sitamata Wildlife Sanctuary,
August (Monsoon Season)

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

IC | Reading and Recording the Landscape



View of Aravalli range from Jakham Dam in Sitamata Wildlife Sanctuary,
August (Monsoon Season)

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



View of *Tectona grandis* dominant Forest Typology at Sitamata Wildlife Sanctuary,
August (Monsoon Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



View of *Tectona grandis* dominant Forest Typology at Sitamata Wildlife Sanctuary,
November (Winter Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

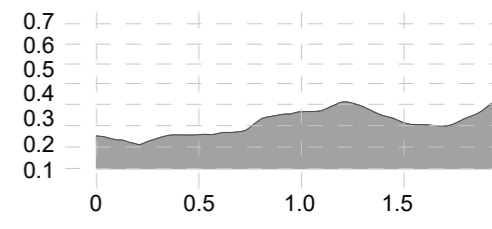
Credits: Author

Co-relating Systems

Using the 're-presentation' as an anchor acquired from the previous segment of the studio, the idea of acknowledging and engaging with the forest speculatively will be explored. This will enable the students to understand the systemic layers of the forest, and how they connect with each other.

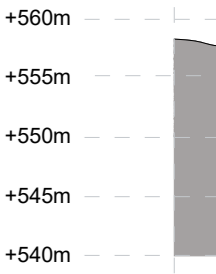
At this stage, each student selected and sketched a 250 m long forest transect as a section at 1:100 scale. This was hypothetical section which relied on various sets of data like Forest ecology by G.S. Puri, data provided by Dr. Sharma (field ecologist). To help in building appropriate information for the section, students attempted to identify specific attributes of the systems of the forest deciphered within the section. This information is based on maps, plans, profile sections and documentation of flora and fauna conducted during the 'Reading and recording the forest' stage in the studio. The making of the sections helped students correlate continuity of morphological systems horizontally and vertically. It helped them understand various components of landscape - terrain, soils, plants, vegetation types, and habitat system.

Revisiting the forest documentation work we identified different forest typologies through out the trail. Through thorough exploration of forest typologies interms of geology formation, topography, vegetation type, Soil type, micro-climate, hydrology for a stretch that was explored in forest visit along the trail. With this comprehensive data an understanding of forest typology is developed.

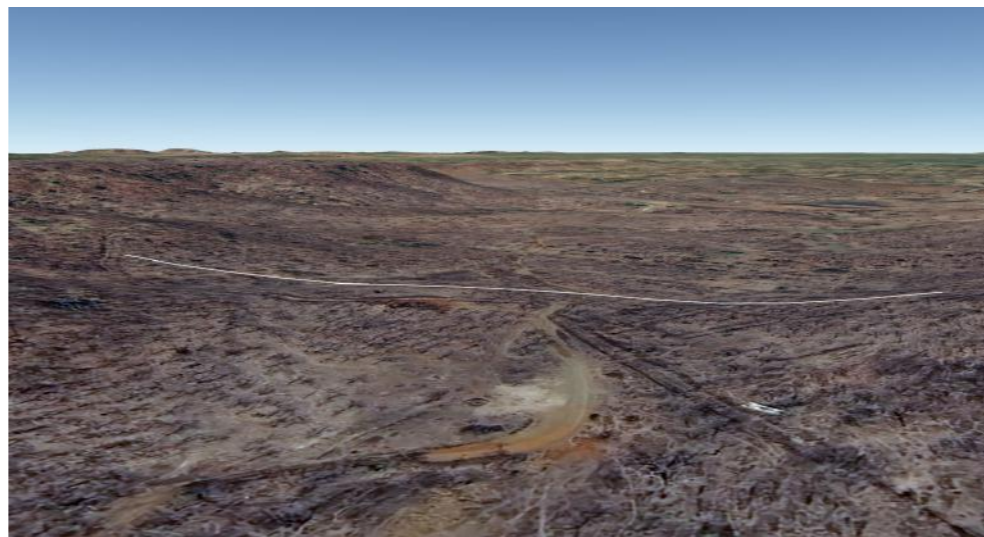


SECTION - Tropical Dry Deciduous Forest

-
 SHRUB WOODLAND
 BAMBOO B...



GRAIN PLAN



3D VIEW



View of Tectona grandis dominant Forest Typology at Sitamata Wildlife Sanctuary, August (Monsoon Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

LA4015 | One-Forest

GEOLOGICAL FORMATIONS

GEOMORPHOLOGY

SOIL

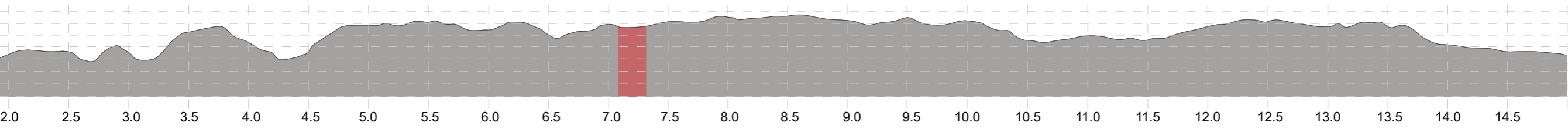
MICROCLIMATE

HYDROLOGY

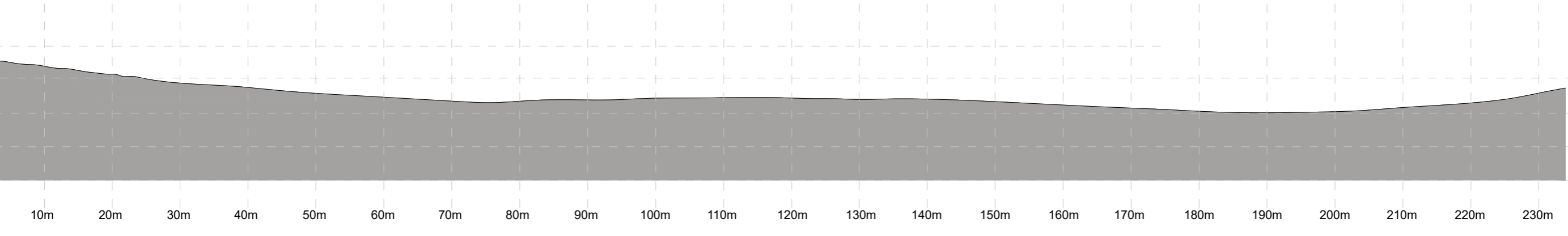
FLORA

FAUNA

Section Description - The teak-dominant forest has a thick, protective layer of leaf litter and ongoing ecological processes.



RAKE DEGRADED FOREST TREE SAVANNA MIXED FOREST MIXED OPEN FOREST ROCKY OUTCROPS AGRICULTURAL LANDS SHRUB SAVANNA SCRUB WOODLAND



SECTION

HYPOLOGY SECTION

GENEOUS

rsalt
 nderate Density, Rocky, Weathered
 vered with vegetation

DOTHILL

ED BROWN SOIL

xture - Gravel, silt, moderately sandy loam
 edium depth
 eathered
 6.2 Acidic

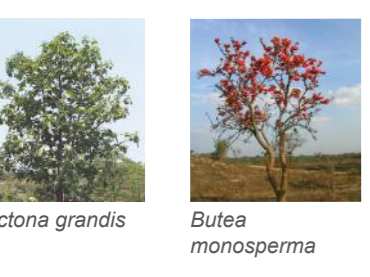
OT AND HUMID

arm, Moist, Filtered sunlight, Partly shaded

URFACE RUNOFF

w moisture retention
 w water infiltration

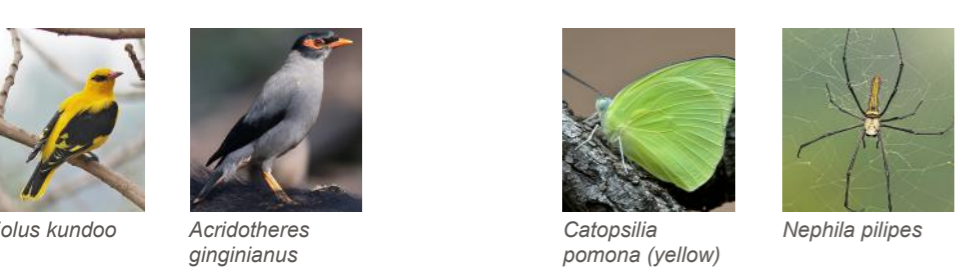
ECTONA GRANDIS DOMINANT



Tectona grandis
Butea monosperma

VIFAUNA

ARTHROPODS



Polus kundoo
Acridotheres ginginianus
Catopsilia pomona (yellow)
Nephila pilipes

dominant forest, characterized by a canopy primarily composed of *Tectona grandis*, exhibits a dense upper layer that moderates light levels and temperature promoting soil fertility through an exten-
 ological succession.



8 feet Section of Tectona Grandis dominant Forest Typology, Section No.4 Typology T3 at Sitamata Wildlife Sanctuary,
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



8 feet Section of *Tectona Grandis* dominant Forest Typology, Section No.4 Typology T3 at Sitamata Wildlife Sanctuary,
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author



Experience Light at Sitamata Wildlife Sanctuary
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

Decoding the forest

Can morphological understanding of physical systems of the forest, and the methods of classification be combined with a 'direct' and 'felt' experience or observations, to arrive at a specific / individual way of understanding the forest?

How do we investigate the experiences and specificities, and create a body of knowledge about the forest for us?

What do we learn about the many lives of the forest and the many forests that live within 'One Forest'?

How does it inform the way we imagine the forest?

Each student explored these inquiries through their own unique lens.

Medium - Maps, sections, diagrams, Sectional montages, view montages, literature references.

The Light's Touch

Seasonal effects of light in the interplay of Flora and Fauna

The forest is a living canvas, constantly evolving—each breeze, each season, and each moment brings change, the nature's only constant is its dynamic transformation. The forest study visit at Sitamata Wildlife Sanctuary has significantly changed the perspective on forest landscape from clusters of green patches to complex and dynamic layers of ecosystem that are harmoniously blended. The visit to the forest during the monsoon was uneventful for most of the day, but on the final day, for just a few minutes, the weather shifted. In that brief moment, the light in the forest transformed the entire atmosphere. Butterflies began to flutter, birds started singing, and it became an enchanting sight that I found truly fascinating.

Light being an intangible aspect is the key factor of forest dynamics, influencing everything from species composition and successional processes to faunal behavior. It not only governs growth and competition among plants but also orchestrates the temporal and spatial behavior of fauna, creating a tapestry of interactions that define the forest's character.

Role of light in forest succession and species composition

Light play an essential role in influencing the growth pattern, species composition and successional processes which is related to the amount of light penetrating the forest canopy. Light is the main factor of the transition of dominant species of trees in tropical dry deciduous forests.



Mixed Forest Typology at Sitamata Wildlife Sanctuary,
November(Winter Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

Vertical Stratification and Light Filtering

The vertical stratification i.e. upper story species are largely regulated by the light, these are the ones achieving maximum sunlight and mostly have smaller leaves to avoid excessive transpiration whereas the lower story species tend to have bigger leaves to gain more light. The lower-story species gradually replaced the dominant species over time.



Mixed Forest Typology at Sitamata Wildlife Sanctuary,
November(Winter Season)
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

Seasonal Variations in Light Availability

The seasonal shedding of leaves in tropical dry deciduous forests creates another layer of complexity in the role of light. During summer most of trees shed their leaves to conserve water and during this time availability of light at ground story increases which can stimulate the growth of the dominant gets a window to germinate and establish themselves before the canopy closes in the wet season.



Sterculia urens at West Facing valley in MixForest at Sitamata Wildlife Sanctuary, November(Winter Season)

One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Adaptive Responses and Light in Dry Deciduous Forests

Trees in tropical dry deciduous forests display various adaptations to cope with light and water stress, with leaf shedding being a prominent one.

Leaf shedding is not only an adaptation to conserve water but also a strategy to minimize respiration under high light conditions when water is not available.

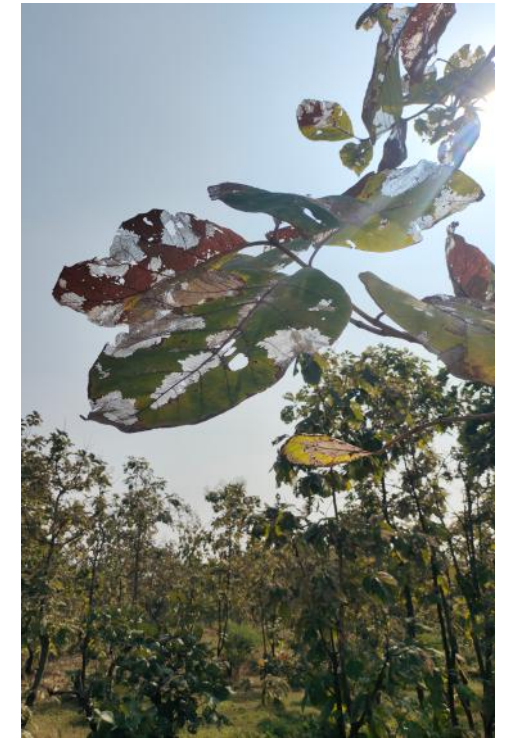
During the dry season, trees conserve resources by reducing leaf biomass, which in turn reduces the overall metabolic demand for oxygen and energy. This interaction between light, water, and respiration demonstrates how tightly linked these processes are in determining tree survival and species composition in tropical dry deciduous forests



Credits: Author

Tectona Grandis Dominant Forest Typology at Sitamata Wildlife Sanctuary, November(Winter Season)

One Forest: Landscape Foundation Studio, Monsoon Semester 2024



Credits: Author

Light's Impact on Fauna Behavior and Movement

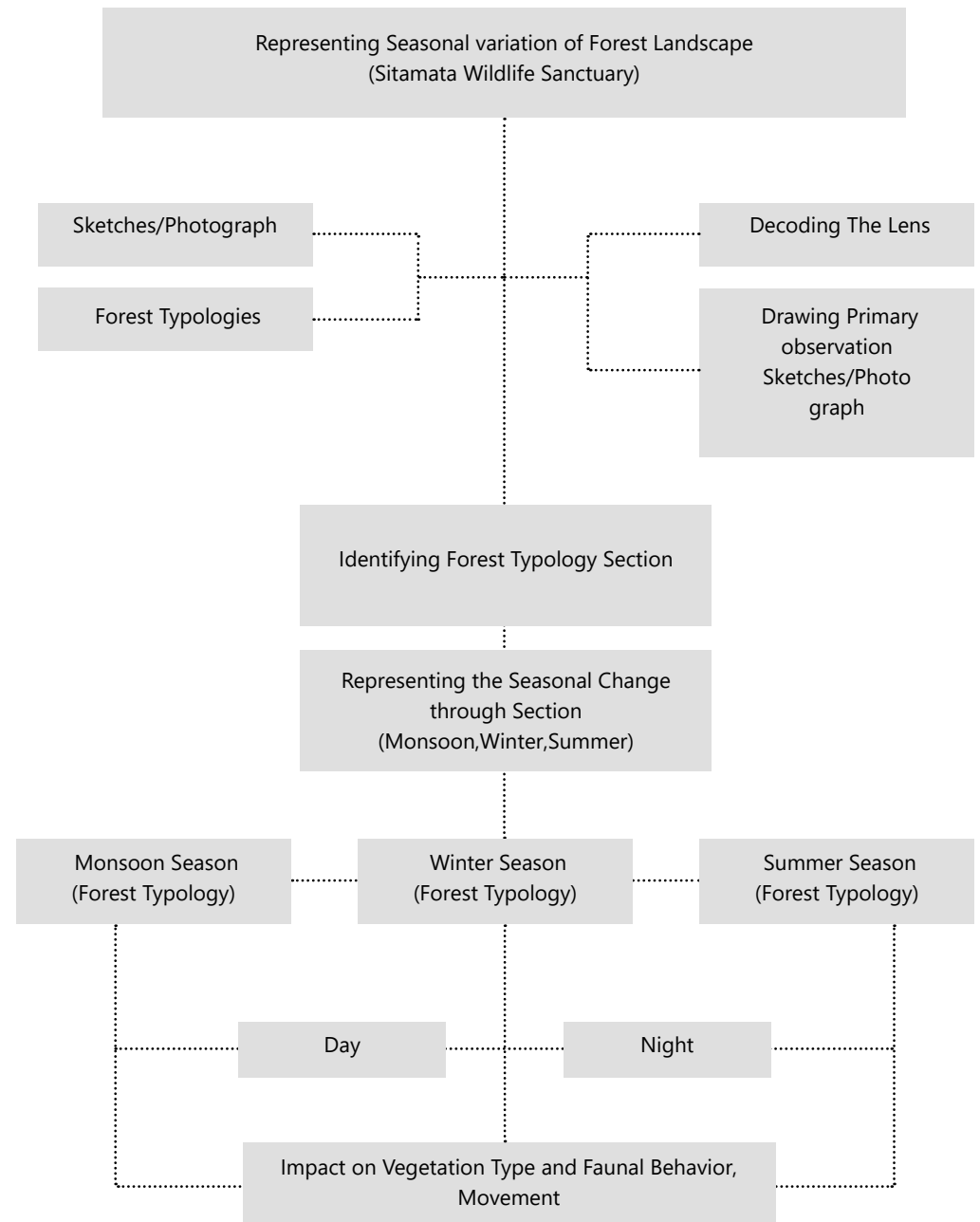
The light determines the behavior pattern, activity, and habitat use of the fauna. Many species have evolved their ability with light. Diurnal species are mostly active on the morning and evening with low light for foraging and chirping. However many predators like leopards and owl become more active during night with very low light. This diurnal-nocturnal division of activity is a direct response to light levels and influences the spatial distribution and habitat use of various species.



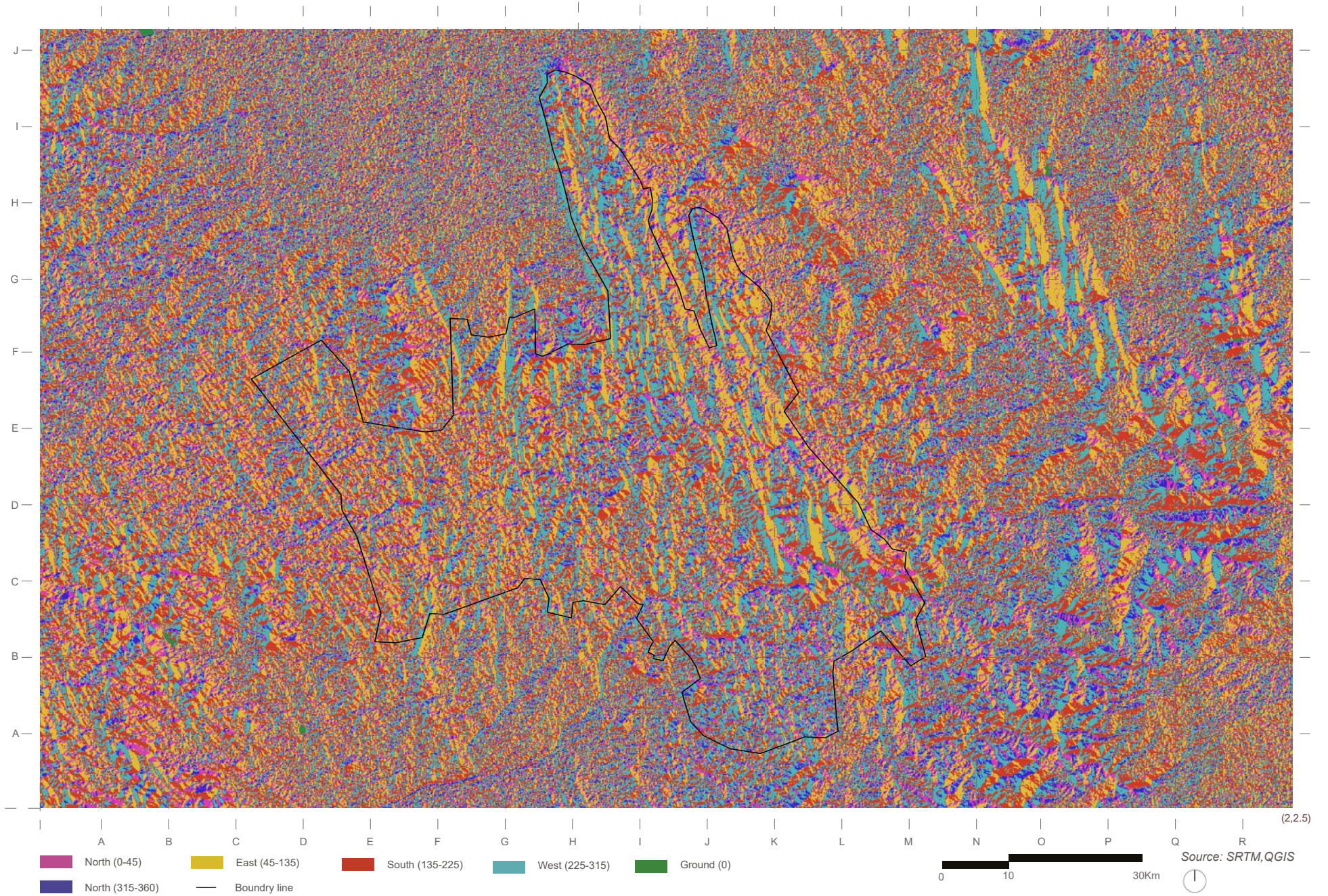
Diurnal-Nocturnal division of activity in response to light
 One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

Methodology



Aspect Map



Section 01 - Tectona Grandis Dominant

Flora

Upper Storey

Tectona Grandis (Stunted Growth)

Butea monosperma (Less Grown Comparatively)

Lower Storey

Tectona Grandis (Stunted Growth)

Fauna

Pollinator

Apis mellifera (Tectona Grandis Pollinator)

Ceratina hieroglyphica (Tectona Grandis Pollinator)

Heriades parvula (Tectona Grandis Pollinator)

Purple sunbird (Butea Monosperma Pollinator)

Red-vented bulbul (Butea Monosperma Pollinator)

Plum-headed parakeet (Butea Monosperma Pollinator)

Grey-breasted prinia (Butea Monosperma Pollinator)

Herbivorous

Bluebull (Boselaphus tragocamelus) - Monsoon Season

Four-Horned Antelope - Winter Season

Spotted Deer (CHITAL) (Axis Axis) - Summer Season

Carnivora

Leopard (Panthera pardus)

Striped hyena (Hyaena hyaena)



Section 01 - Tectona Grandis Dominant

Monsoon -Day

Tectona grandis is an insect pollinated Tree species in which the pollen is transported by insects. Nectar is the chief attractant of insect pollinator in teak. Nectar is produced in large volumes and available in maximum in the day of anthesis.

Nectar appears in the lower half of the corolla where the floral tube is formed.

Apis mellifera, Ceratina hieroglyphica and Heriades parvula are the most frequent visitors and as important teak pollinators

Peak visit of insects and pollen import take place between 9-00 am to 1-00 pm. Insects forage throughout the day, except during heavy winds and rains

Light play one the major role in for the formation Tectona Grandis dominant forest as the seeds start growing during monsoon. The stunted growth allows light to easily penetrate through upper Storey.

Tectona Grandis being a fast growing tree starts growing quickly resulting into stunted growing of lowerstorey with bigger leaf size same as mature tree leaf.

The teak-dominant forest continues with tighter tree clusters resulting in a growth competition. The the soil act as a limiting factor for other tree species to grow as well as the growth scale of Tectona Grandis.



Bluebull (*Boselaphus tragocamelus*)

Monsoon -Day

Nilgai antelopes are usually found in herds of about 10 animals, but larger groups of 20 to 70 have been seen.

They are diurnal with most activity in the early morning and late afternoon.

Thin bush with scattered low trees or alterations of scrub and open grassy plains with either level or undulating topography, rarely in thick forest.

Dietary selection varies seasonally and includes grasses

Food plants of nilgai consists of diverse species of plants On an average, grass formed major proportion (41.66%), followed by fallen leaves, flowers and fruits (36.00%), browse (16.66%) and herbs, shrubs etc (5.66%).



Four-Horned Antelope

Winter -Day

The Four-horned antelope are rarely found in tall medium and tall grasses.

Four-horned antelope is not gregarious and rarely are more than two individuals found together.

Four-horned antelopes have a distinct anti-predatory strategy where they freeze and keep an eye at the threat rather than taking to evasive action and use vegetation cover to hide from potential predators.

If grasses that are too tall, it will be difficult for the Four-horned antelope to keep an eye at the threat. It is possibly because of these reasons that the Four-horned antelopes thrive well in areas of moderate grass height.



Leopard (*Panthera pardus*)

Winter -Day

The change in season creates a suitable condition for blending seamlessly with the surrounding vegetation.

Resting and Sleeping: They spend a significant portion of their day resting on trees, away from potential threats and to conserve energy.

Hunting: They can use trees to ambush prey, especially those that are grazing below.



Leopard (*Panthera pardus*)
Winter -Night



Striped hyena (*Hyaena hyaena*)
Summer -Night



Striped hyena (*Hyaena hyaena*)
Summer -Day



Leopard (*Panthera pardus*)
Monsoon -Night



Striped hyena (*Hyaena hyaena*)
Summer -Night

Striped hyenas are highly adaptable and have a diverse diet. They prey on various wild animals, including deer, wild boars, and smaller mammals like rodents and hares. They are efficient scavengers and often feed on the carcasses of large animals.

Striped hyenas are primarily nocturnal, becoming active during the night.

The behavior, often referred to as kleptoparasitism, is a common strategy among hyenas to acquire food.



Plum-headed parakeet (Butea monosperma pollinator) Summer -Day



Purple sunbird (Butea monosperma pollinator) Summer - Day

Pollination of Butea monosperma

Attraction: The bright orange-red color and sweet nectar of the flowers attract pollinators.

Landing: The pollinator lands on the flower, often perching on the standard petal.

Nectar Foraging: The pollinator probes its beak or tongue into the flower to reach the nectar.

Pollen Transfer: In the process of foraging, pollen grains stick to the pollinator's body, especially its head and beak.

Cross-Pollination: As the pollinator visits another flower, the pollen is transferred to the stigma, leading to fertilization.

This bird are the most effective pollinator, attracted to the abundant nectar in the flowers. Their long, curved beak is perfectly adapted to reach the nectar deep within the flower.

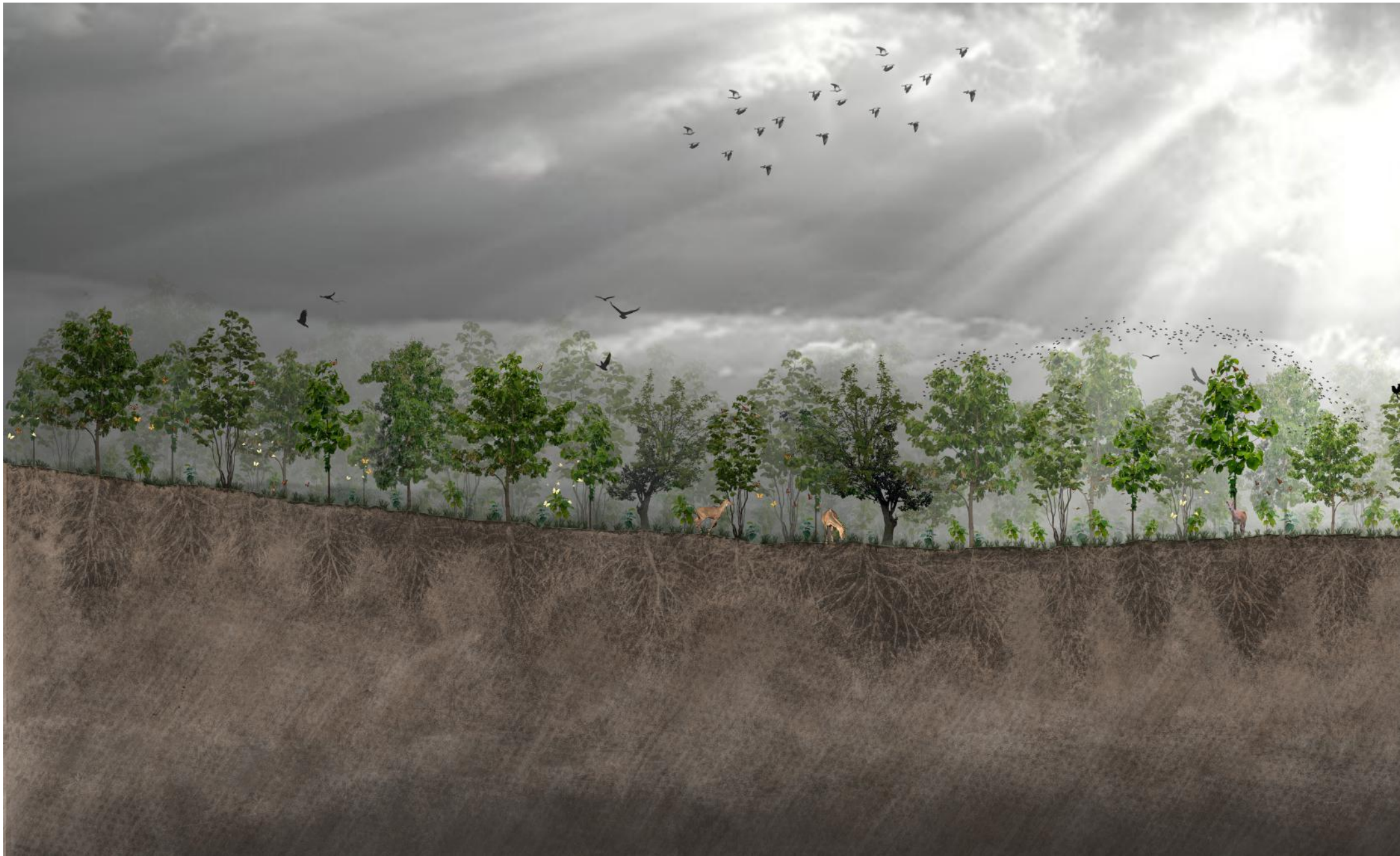


Spotted Deer (Chital) Summer -Day

Chitals are found in open grasslands as well as sparse woodland also. They usually don't venture into forest where the canopy height is low to avoid the risk of entanglement of the antler. In case of dry deciduous forest, this particular barrier diminishes during summer. Sometimes, because of foraging, browsing purposes, and to hide from the predators they get inside dense thickets and woodlands.

Chital's habitat preference usually have trees with canopy height more than 3'

The diet consisting of grasses, forbs, and leaves of woody plants. chital is a grazer as long as green grasses were available (monsoon and post-monsoon seasons) and switch over to fallen leaves, flowers and fruits during dry season.



Section 01 - Tectona Grandis Dominant
Monsoon -Day



Section 01 - Tectona Grandis Dominant
Monsoon -Day



Section 01 - Tectona Grandis Dominant
Monsoon -Night



Section 01 - Tectona Grandis Dominant
Monsoon -Night



Section 01 - Tectona Grandis Dominant
Winter - Day



Section 01 - Tectona Grandis Dominant
Winter - Day



Section 01 - Tectona Grandis Dominant
Winter - Night



Section 01 - Tectona Grandis Dominant
Winter - Night



Section 01 - Tectona Grandis Dominant
Summer - Day



Section 01 - *Tectona Grandis* Dominant
Summer - Day



Section 01 - Tectona Grandis Dominant
Summer - Night



Section 01 - Tectona Grandis Dominant
Summer - Night

Section 02 - Tectona Grandis Dominant

Flora

Upper Storey

Tectona grandis
Butea monosperma
Diospyros melanoxylon
Boswellia serrata
Madhuca indica

Middle Storey

Tectona grandis
Bamboo

Lower Storey

Adiantum philippense
Impatiens balsamina
Borreria stricta
Dioscorea bulbifera

Fauna

Pollinator

Apis mellifera (Tectona Grandis Pollinator)
Ceratina hieroglyphica (Tectona Grandis Pollinator)
Heriades parvula (Tectona Grandis Pollinator)

Purple sunbird (Butea Monosperma Pollinator)
Red-vented bulbul (Butea Monosperma Pollinator)
Plum-headed parakeet (Butea Monosperma Pollinator)
Grey-breasted prinia (Butea Monosperma Pollinator)

Indian Flying Fox (Madhuca longifolia Pollinator)
Hanuman Langur (Madhuca longifolia Pollinator)
Indian giant Flying Squirrel (Madhuca longifolia Pollinator)
Plum-headed parakeet (Madhuca longifolia Pollinator)
Yellow-throated sparrow (Madhuca longifolia Pollinator)

Herbivorous

Bluebull (Boselaphus tragocamelus) - Monsoon Season
Four-Horned Antelope (Tetracerus quadricomis) - Winter Season
Spotted Deer (CHITAL) (Axis Axis) - Summer Season
Hanuman Langur

Carnivora

Leopard (Panthera pardus)



Section 02 - Tectona Grandis Dominant

Monsoon -Day

The Landform at Section 01 is Malwa plateau and being acidic soil with 6.2 pH the vegetation includes only Tectona Grandis and Butea monosperma where as at Section 02 the Aravalli Mountain range starts thus resulting with diversified vegetation type. However Tectona Grandis is more than 30% which makes it Tectona Grandis Dominant Forest Typology.



Impatiens balsamina grows in moist, shaded, or partially shaded area. Require moisture content to grow thus found growing in valley facing east resulting into less sunlight allowing the soil to hold moisture content.

Impatiens balsamina flowering season is during monsoon season rewarding nector to butterflies, moth and other insects. Also it becomes habitat for many insects.

Section 02 - Tectona Grandis Dominant
Monsoon -Day



Section 02 - Tectona Grandis Dominant
Summer -Day



Chinkaras can thrive at an elevation of 5000 ft, they generally do not prefer any slope, i.e beyond 40-50 degrees unless the food is real scarce. Rocky surfaces with very gradual undulations do not pose any difficulty for the animals.

Chital and Langur were observed to respond to each other's alarm calls for early detection of predators

Seasonal changes influenced the feeding pattern effectively. During monsoon Chital preferred to graze variety of available grasses. Feeding on fallen leaves was the main mode of feeding during winter and summer but browsing percentage increased from winter to summer season hence grazing percentage decreased from winter to summer season.

Chital were seen in a mutual relationship with Langurs as were observed together in many observations. Langurs were used to drop fruits and leaves to the ground.



Section 02 - Tectona Grandis Dominant

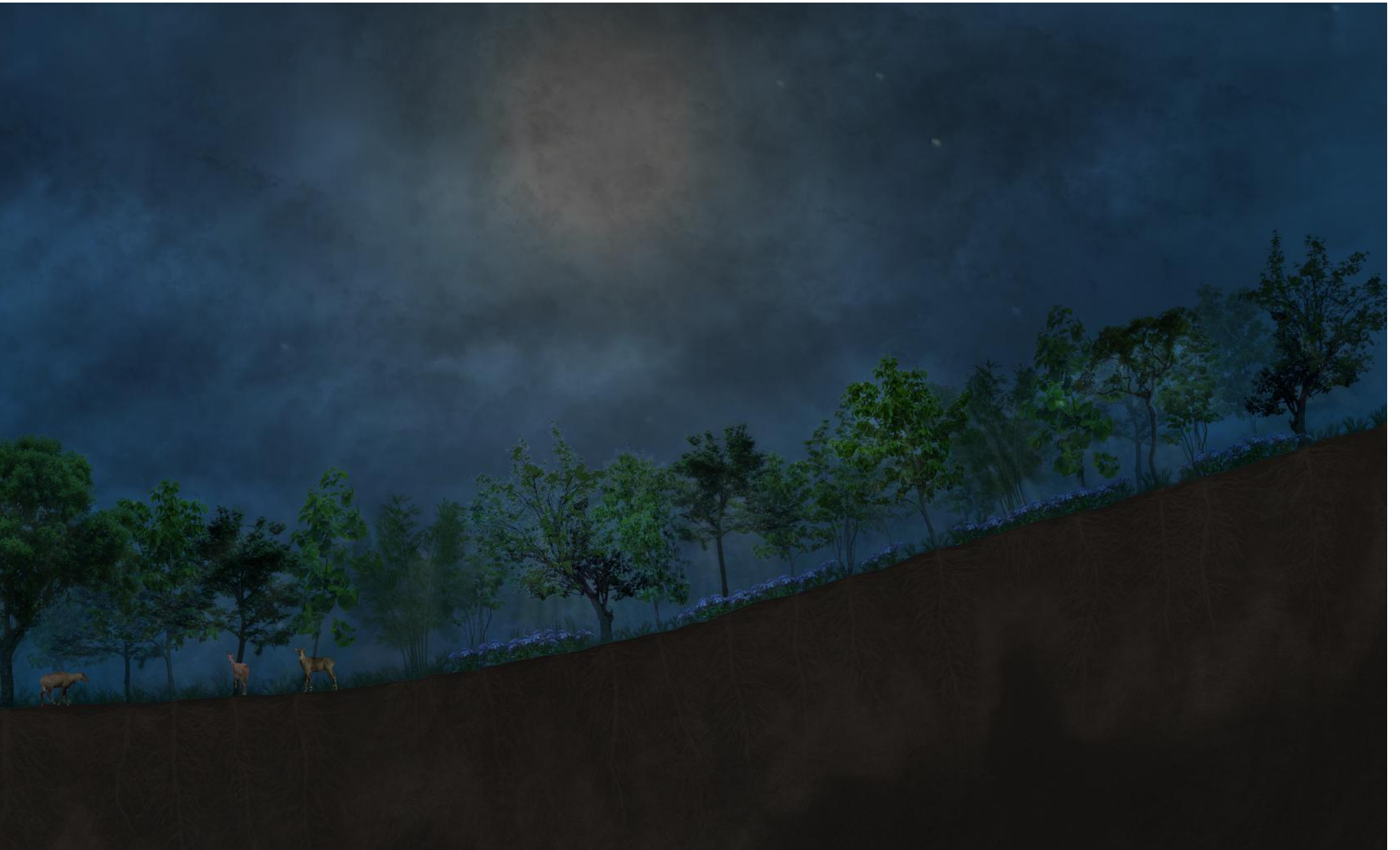
Monsoon -Day





Section 02 - Tectona Grandis Dominant

Monsoon -Night





Section 02 - Tectona Grandis Dominant

Winter -Day





Section 02 - Tectona Grandis Dominant
Winter -Night





Section 02 - Tectona Grandis Domin

Summer - Day





Section 02 - Tectona Grandis Domin

Summer - Night



BUTEA MONOSPERMA
MONSOON



Monsoon (June - October)
Tree with full foliage and it has trifoliate leaf

BUTEA MONOSPERMA
WINTER



Winter (November - January)
Tree without leaf



Apis mellifera
(Tectona Grandis Pollinator)



Ceratina hieroglyphica
(Tectona Grandis Pollinator)



Heriades parvula
(Tectona Grandis Pollinator)

TECTONA GRANDIS
MONSOON



Monsoon (June - September)
Tree with full foliage and flowering



Monsoon (June - September)
Flowering occurs during monsoon.
Pollination is mostly done by
Entomophilous Species (Insect
Pollination).



Apis mellifera, Ceratina
hieroglyphica and Heriades parvula
are the most frequent visitors

TECTONA GRANDIS
WINTER



Early Winter
Yellowing of Leaf and drying of fruits



Winter (December)
Initiation of defoliation

**BUTEA MONOSPERMA
SUMMER**



Summer (March - April)
Tree with new budding and flowering



Summer (March - April)
Pollen grains are transferred from the stamens (male reproductive organs) of one flower to the stigma (female reproductive organ) of another.



Following successful fertilization, the ovary develops into a legume-like fruit containing seeds.



Early Monsoon
Tree with new trifoliate leaves



Purple sunbird
(Butea monosperma pollinator)



Red-vented bulbul
(Butea monosperma pollinator)



Plum-headed parakeet
(Butea monosperma pollinator)



Grey-breasted prinia
(Butea monosperma pollinator)



Winter (February)
Partial defoliation



Summer
Complete defoliation

**TECTONA GRANDIS
SUMMER**

MADHUCA LONGIFOLIA
MONSOON



Monsoon (July - October)
Tree with full foliage and growth phase.

MADHUCA LONGIFOLIA
WINTER



Winter (November - December)
Yellowing of Leaf with beginning of leaf fall.



Winter (January - February)
Completion of leaf fall. The leaf fall at this time is related to water stress as this period is rainless and dry and leaf fall to day length light intensity or mineral.

BOSWELLIA SERRATA
MONSOON



Monsoon (July - October)
Initiation of new leaves starts in the month of June and tree fully covered with leaves upto end of october

BOSWELLIA SERRATA
WINTER



Winter (November - December)
In mid of November tree leaf shedding initiated and tree becomes leafless in December.



Winter (January - February)
Flowering period starts in January which ends in March and flowering peak observed in February.



Boswellia serrata is self-incompatible and the self-crossed pollen tubes are inhibited soon after their entry into the stigma.



Pteropus giganteus
Indian Flying Fox
(Madhuca longifolia Pollinator)



Semnopithecus
Hanuman langur
(Madhuca longifolia Pollinator)



Petaurista philippensis
Indian giant flying squirrel
(Madhuca longifolia Pollinator)



Psittacula cyanocephala
Plum-headed parakeet
(Madhuca longifolia Pollinator)



Petronia xanthocollis
Yellow-throated sparrow
(Madhuca longifolia Pollinator)

**MADHUCA LONGIFOLIA
SUMMER**



Early Summer (March - April)
Commencement of new leaf.
Duration of flowering, The maximum flowering period with high temperature and low rainfall.



Early Summer (March - April)
The synchronization of flowering during leaf less period in the species is important as adaptive feature for the plant which enhance the visibility of flower and increase the conditions favourable for pollination.



Summer (May - June)
Maximum leaf growth commencement.
Beginning of Fruiting, greenish in colour but they turn reddish-yellow or orange when ripe

**BOSWELLIA SERRATA
SUMMER**



Summer (March - May)
Fruiting period starts in month of March and end in mid of May. The Seed dispersal from plant appears in May.



Summer (June)
Initiation of new leaves starts in the month of June

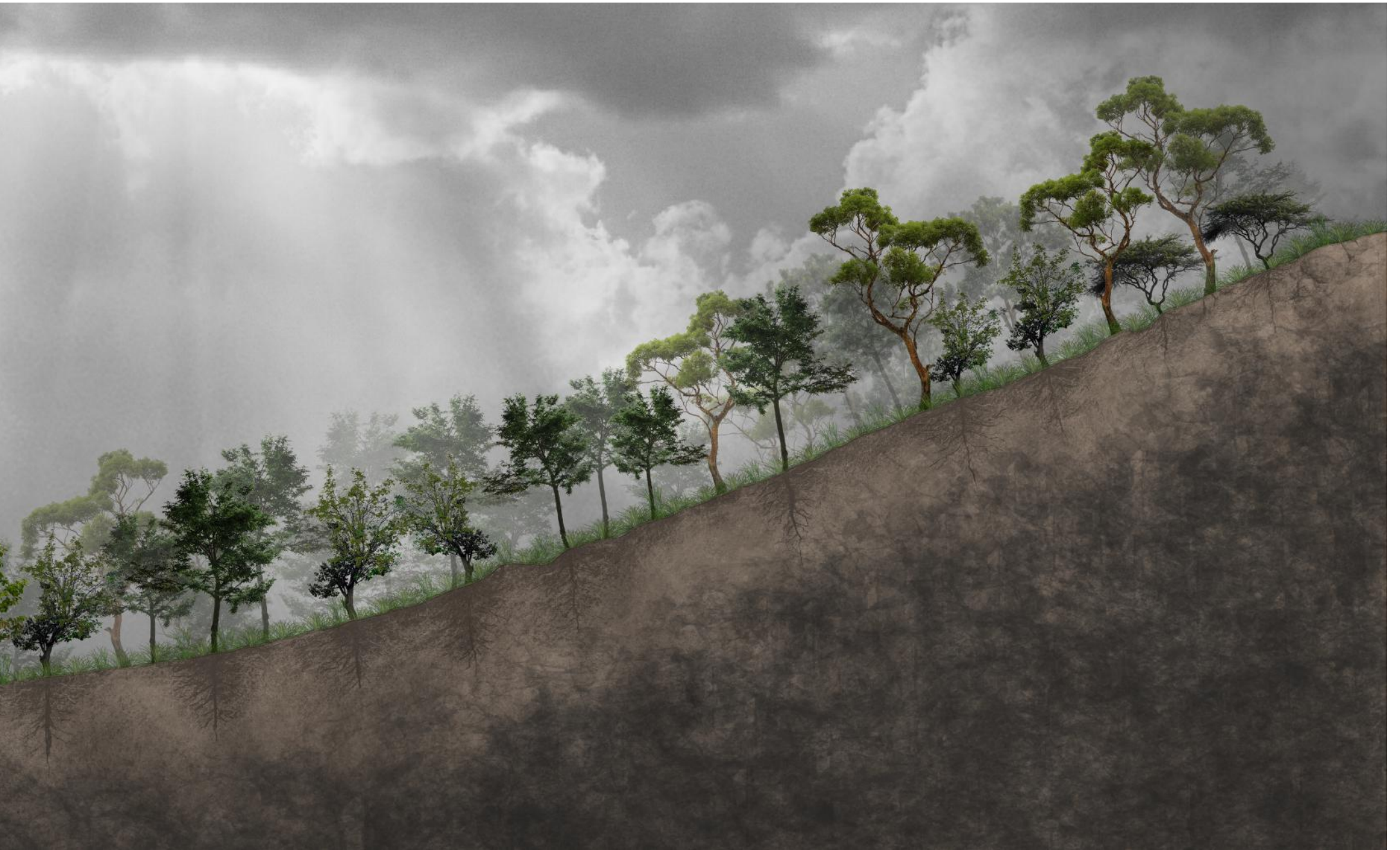


Apis mellifera
(Boswellia Serrata Pollinator)



Section 03 - MIX FOREST

Monsoon - Day



Section 03 - MIX FOREST
Monsoon - Day



Section 03 - MIX FOREST

Winter - Day



Section 03 - MIX FOREST

Winter - Day

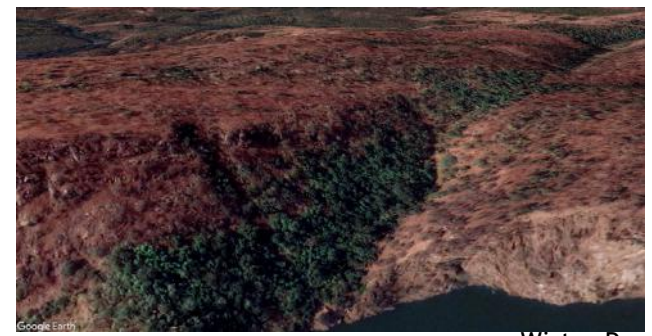


Section 03 - MIX FOREST

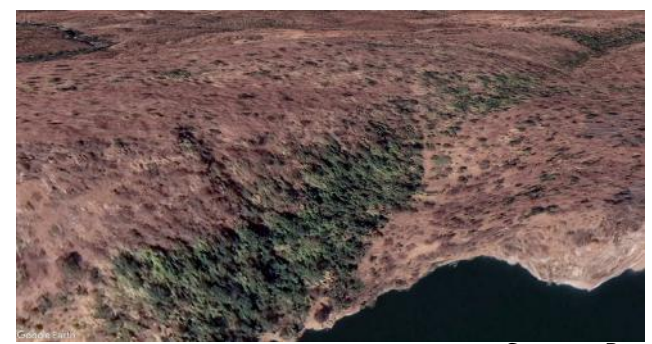
Winter - Day



Monsoon -Day



Winter -Day



Summer -Day

To understand the change in vegetation in tropical dry deciduous forest Topography play vital role as there valleys which are East Facing and do not receive the sun light thus the soil has more moisture comparing to valley which are south and west. The change in vegetation starts during winter season as trees start responding to the dry condition where as the East Facing Valley does not change.



Seasonal effect of light on Flora
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Google Image

Re-imagining the Landscape

In this part, the students will derive a layered understanding related to the landscape investigated by the means of synthesizing multiple lens as one narrative. Based on their vision, narrative and 're- presentation' of the landscape studied, they will attempt to imagine a response through development of game play.

The process of arriving at a game play can introduce goals, interaction, feedback, problem solving, competition, narrative, and elements that can increase learner engagement and sustain motivation. Ultimately, this tool helps in filling the knowledge gaps in previous investigation, and develop skills for thoroughly investigating and successfully conveying the learnings from individual and collaborative lens of the many systems, attributes, layers, and experiences of the forest.

RUTU RANG

The game aims to engage individuals in forest growth, various factors associated with and against forest succession, and how one tree species can overcome and become a dominant species. The graphics are designed to develop an understanding of tree species, their pollinators, and the season of pollination. The rules are created such that every game play has a dynamic and random outcome making it more interesting to play. The aim is to develop an understanding of forest tree species and its association through out various seasonal changes while offering a fun, engaging, and educational experience.

DISCOVER

Further Implementatin of the lens



Seasonal effects of light on Flora,
One Forest: Landscape Foundation Studio, Monsoon Semester 2024

Credits: Author

The Light's Touch

Seasonal effects of light in the interplay of Flora and Fauna

Trees compete for sunlight, which influences their height and canopy spread. Taller trees with wide canopies capture the most light, shaping the forest's vertical structure. The light determines the behavior pattern, activity, and habitat use of the fauna. The diurnal-nocturnal division of activity is a direct response to light levels and influences the spatial distribution and habitat use of various species.



Source- (Dookia, Myth and Reality in Rajasthan's Sitamata Wildlife Sanctuary, Jul 23, 2020)



Credits: Charmy Fefar

Colours in Motion

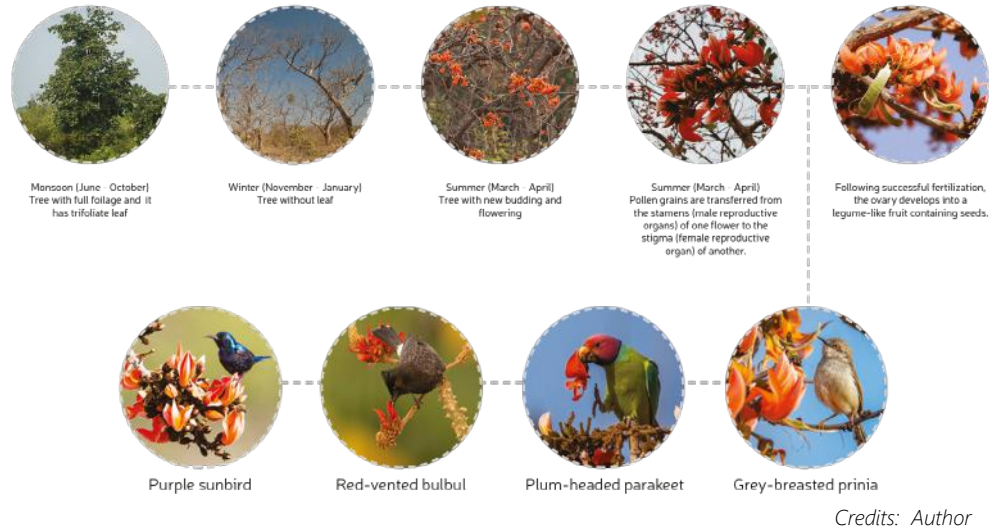
Sita Mata Wildlife Sanctuary is a remarkable display of natural color changes across the seasons, showcasing the unique dynamics of a tropical dry deciduous forest. During the monsoon season, the forest comes alive with deep green canopies as trees rejuvenate with fresh growth, creating highlights the richness of the ecosystem. The period of green abundance supports various species, as the moisture and dense foliage offer ideal conditions for many birds, insects, and other wildlife.

As the dry season arrives, green canopies gradually shift to tones of yellow, brown, and sometimes even orange. The transformation reflects the trees' adaptations to the drier climate, conserving water by shedding leaves or slowing down growth. These seasonal color shifts are directly tied to the life cycles of the trees, which follow a rhythm of growth, flowering, and fruiting that in turn attracts and sustains wildlife activity.

Credits: Charmy Fefar

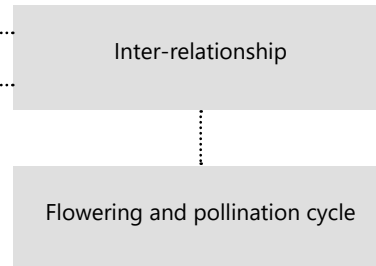
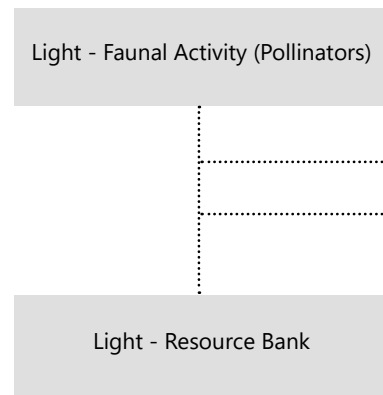
DEVICE

Establishing inter-relationship of lens and deriving basis of the game



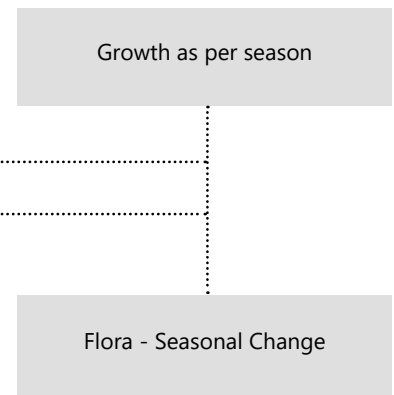
Instagible Aspect of Light

All Season to understand the change in flora

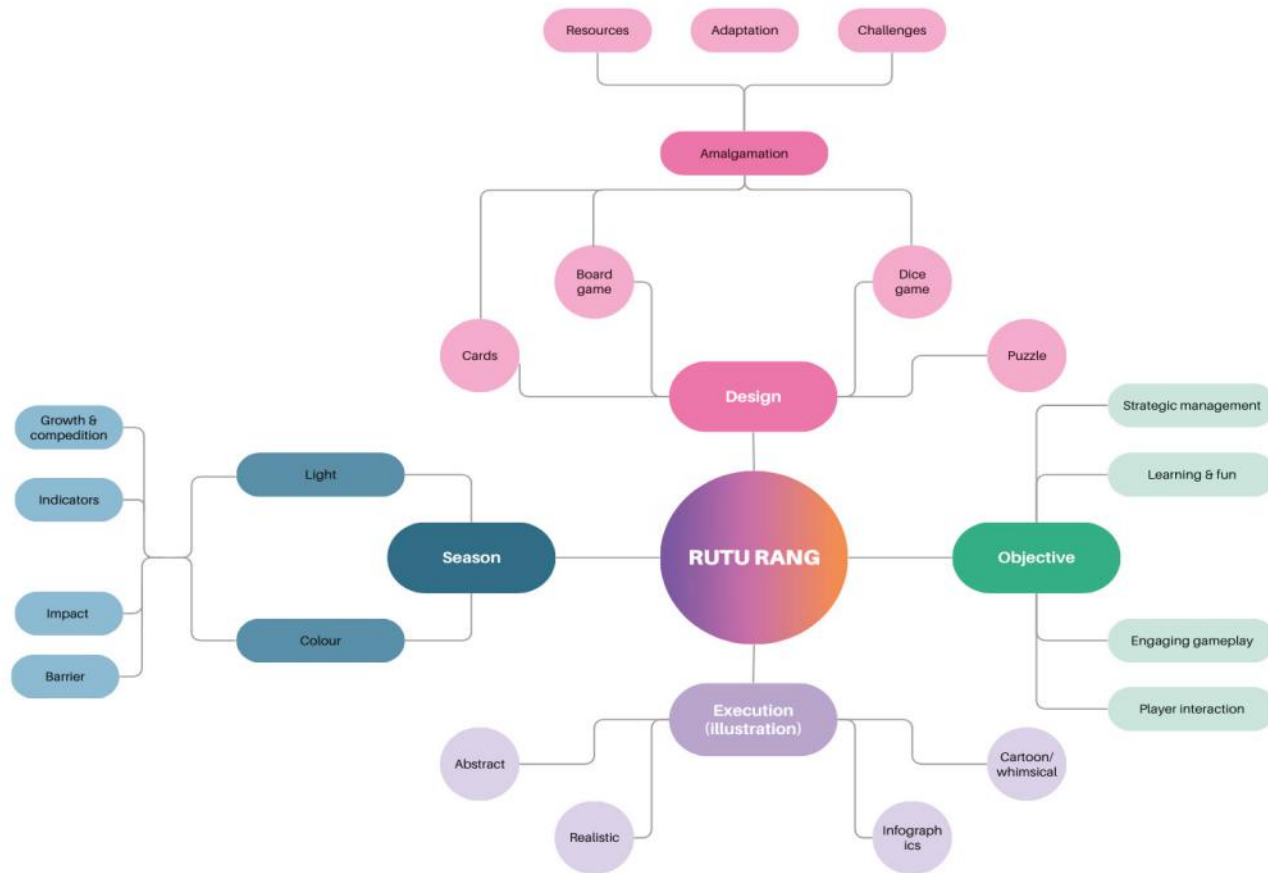


Visual Perspective

To understand the blooming season



The process explored essential themes, such as color variations, light shifts, and seasonal changes, to translate these into playable elements that balance content with enjoyable gameplay for the creation of a game that reflects the ecosystem. Where players can interact with the forest's distinctive attributes, using strategic decisions and visuals that reflect Sitamata's rich natural environment.



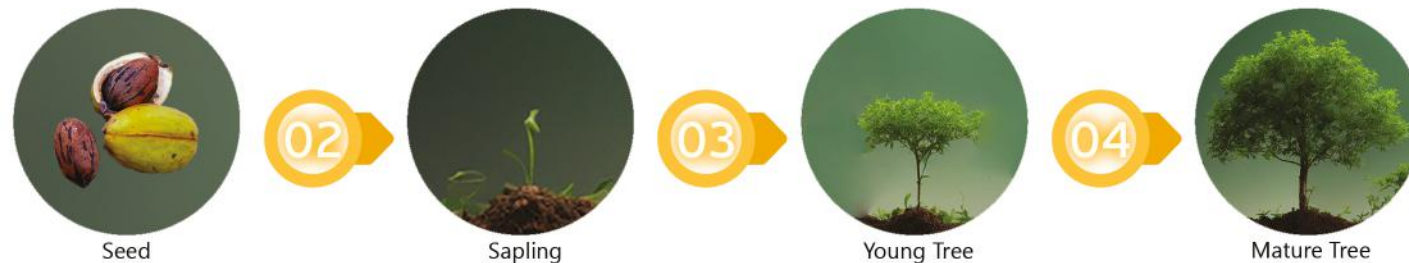
Disturbance Card

Each disturbance card will limit the oppent player tree growth at various stages of tree growth.



Stages of tree growth

Each season on the board brings a distinct color palette, symbolizing natural shifts. For example, during the monsoon season, the board turns a vibrant green, indicating plentiful resources like water and sunlight. In contrast, summer is represented with warm, earthy browns, signaling drier conditions and a scarcity of resources. Winter brings cool, muted tones, showing a balanced period with moderate light and growth.



Pollinator Card

Each pollinator card will limit allow player to pollinate seed for further tree growth as per the direction mentioned on the card. Each pollinator card has four different direction to pollinate the seed and pollination occurs on random picking of card by player for constant dynamic in game play.



Tree

Each Tree designed that it gets fix on the board and the character of the tree will make the player understand the variation in tree species and its distinctive flowering and fruit through visual on tree.



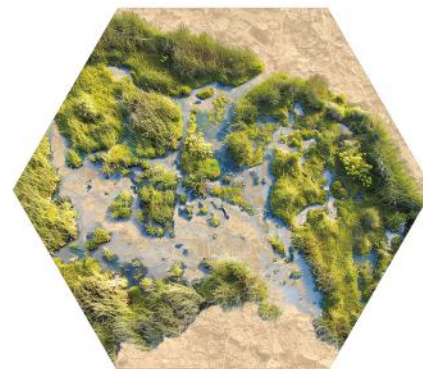
Socre Borad (Light Point)

Each Player has unique score board depicting the forest typology of the tree used for playing. Light points to are scored through mature tree and one has to spend light points for further tree growth



Board Design

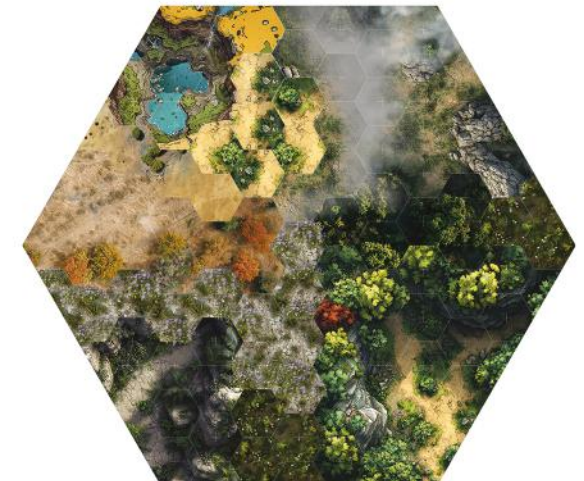
The Game board has floor tiles reflecting the the character of the forest and one tree will be place on one tile and game play begin by covering more floor tile by the Tree Growth Process by spending light point one has earned by matured tree.



Game Board Stage 01



Game Board Stage 02



Final Game Board



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