SUMMER SETTLERS
the lapwing story

WRITTEN AND ILLUSTRATED BY
Mariya Madraswala
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The scientists from Agumbe Rainforest Research Station (ARRS) have collected large volumes of information on the biodiversity of the rainforest. The impact of the data/information may not be fully understood because of the way in which scientific information is communicated (through studies, documents and technical language) and may not necessarily communicate the complexity and importance of the ecosystem and the biodiversity that inhabits them. In collaboration with ARRS, what is needed is to imagine new ways of documentation or representation. And this documentation/representation can be done in a creative manner that communicates the importance of providing protection for grasslands and the biodiversity that inhabits them.

The researchers have collected five years worth of data on the Yellow-Wattled Lapwing. The goal was to represent the data collected and convert the information for more accessible and easier understanding. And also to communicate the importance of the grasslands habitat, and the biodiversity that resides within it as this habitat is perceived as 'wastelands' (ie grasslands are open grounds with less flora and is not considered as biodiversity habitat) and to remove the assumption of 'wastelands' and evoke empathy to the user in the form of an illustrated book.

The data sheet, provided by the scientists, consists of information on the behavioral aspects and survival ratio of the Yellow-Wattled Lapwing, in the year 2014. The story line and events that occur are greatly inspired by the information provided, along with images and videos which helped in developing the visual language.

Dedicated to the creatures of the wild.
Enveloped by the lush, flourishing rainforest of the Western Ghats, Agumbe is a small village in Karnataka, known to be home to countless variety of species.

The winds carry the constant croaking of crickets, clinking of vessels, and most occasionally the whistle of the cooker, along with the endless grumbling of frogs that rise during the night.
This blazing afternoon, the boys from the village have decided to go to the open grounds nearby to play cricket. As time passes, the laughter fades and the sun begins to set. In the twilight, out of the blue after a triumphant sixer, the ball flies too far, and a search is launched.

In the diminishing light... what's this? A nest on the ground with very odd looking eggs in it! Aren't nests usually supposed to be on trees?
As they look around the vast grounds, it seems quite desolate with no animals around. Who do these eggs belong to? Suddenly there's a sharp sound coming from a distance. It comes again and again, echoing across the grounds.
So there it is... the one who's built this nest. A bird! A small clumsy looking bird, with a black crown on its head and funny yellow legs that bend backwards. The feathers of the bird are brownish grey, just an ordinary looking bird, nothing special. Except for the strange yellow droopy mask on the beak, known as the wattle. This is one of the few ground nesting birds in India; no wonder the eggs were on the ground.
The yellow-wattled lapwing is usually spotted in habitats like these open and dry lands, during the summers, when this vast land turns into an ocean of burnt yellow, ankle deep grass.

The brownish grey lapwings get hidden beneath, and become invisible to the untrained eye; they are masters of camouflage, and use this advantage to hide from their predators.
It is unknown from where these ground nesting creatures came, and where they go afterwards most of their lives still remains unknown. They fly into Agumbe, into the dark mysterious rainforest and instead decide to reside in this grassland.
Scattered amidst these ancient rainforests are these unique grasslands. Here, the ground is laced with black porous laterite... and only allows a shallow spread of grass, an impeccable nesting for the lapwings. Apart from being airborne, when nesting, they are creatures of the ground.
A mere walk away from these grasslands, at the edge of the rainforest, is a well-known research base, the Agumbe Rainforest Research Station. These grasslands and the lapwings have been keeping the scientists intrigued and curious for the last five years.

Unlike the dark secretive rainforest, the grasslands are wide open and transparent... but both need a trained eye to see what really goes on.
As summer sets in, in January, the lapwings arrive in small flocks. They settle in the grasslands’ dominating high points, feeding on termites and other insects. The lapwings preen and ruffle their feathers, ducking and bobbing their heads, always watchful.
It is unimaginable how communal the lapwings are like one massive family, they feed in groups, protect together, and warn each other of danger. "TEECHEE-IT TOU-H! TEE-CHEE-IT TOU-H!" they call out to voice their attraction to their partners, or at times, to intimidate a predator.
The tale of the lapwings is one of earnest love, noble yet unscrupulous. They come to the grasslands to breed, and it begins with a simple act of love—courting, the art of finding a partner. Like all relationships, we look for the right person to be with and raise a family... the yellow-wattled lapwing is no different.
Courting moves into acting very quickly and lapwings are spontaneous and noble, having only one partner through the season. In this grassland, unexpected interruptions sometimes, sadly, disturb these vulnerable moments.
These stunning grasslands are usually known as wastelands. The vast open space and scarcity of trees lead you to believe so. This particular grassland is also designated as revenue land. It is open and accessible not only to the lapwings but also to the village nearby. Recently there has been some construction activity, which brings many unwelcome visitors into the lapwing’s transitory home.
Also, the residents of the village are part of this complex ecosystem. Apart from bringing their cattle to graze, they remove the laterite rock from the ground, and at times timber from the forest.
Domestic dogs are not a natural predator to the bird, nor are cows. Dogs have a knack for sniffing out the eggs, and can be quite a loathsome intruder. On the other hand, the cattle are friendly folks; however, they sometimes do step on nests while grazing, unknowingly.

In this risky atmosphere, the lapwings protect themselves and their loved ones; they may be smaller creatures, but mighty brave ones! They gang up and begin to cull relentlessly until their intruders are frightened away.
Soon, the lapwings mark out their territories amongst each other across the grassland. They fashion their nests according to the ground beneath, in an attempt to make them invisible.

On a quiet afternoon, one can see a moment of stillness, when all the lapwings are sitting on their nests... almost as if in a synchronised trance.
One of the most fascinating abilities of the lapwing is the art of camouflage. Their efforts taken to do so are exceptional. The eggs have almost the same patterns as the ground around the nest; it uses the beak to turn the eggs so that they appear to match the ground.

And sometimes... sadly when the eggs do get preyed upon, the lapwing moves away the shells, to mislead other predators.
Protecting and nurturing are ritualistic behaviours, and the parent lapwings both share these roles. The blistering summer heat takes a toll on them, so they take turns to sit on the nest while the other rests in the shade, close by.
Like all relationships, there are forces that test the strengths of a couple, and if the efforts already taken are not enough, the universe brings in the natural predators.

Other deadly creatures reside in the grassland and the rainforest around, like venomous snakes and powerful eagles, eye the nests for a quick meal.
And so, the lapwing turns into a trickster... it hops around in spots away from the eggs, confusing the predator before they get too close, fooling them into believing that the nest is elsewhere, and hopefully luring them away. This brilliant strategy is known as fake nesting... Plan A.
They follow a very similar strategy when one or two human beings enter the grasslands. The lapwing walks away from the nest, as if neither a nest nor eggs are in the vicinity.

Imagine the panic amongst the lapwings when several boys come with a swinging cricket bat and a flying ball!
If the predator is dangerously close and if Plan A doesn't work, the lapwings move to attack. They spread their wings as wide as they can, appearing much larger than themselves, to intimidate the enemy and scare them off. Sometimes the eggs do get hunted. And many a time, the lapwing is seen assembling a second nest to try again. But now, time is no longer their friend as the summer starts to fade...
The grassland is incredibly versatile, going through dramatic shifts across seasons. In summers, the palette is more yellow, dusted with grey-brown with the scorching heat waves and annoying teeming ticks.

In monsoons it is draped by all shades and tones of green, the air heavy with mist and rain, the ground covered with persistent leeches. And then, the post monsoon winter, brings a burst of tiny flowers pecking out from the bed of grass.
And at last! The eggs begin to crack and the hatchlings peck themselves out of their protective shells, exposing their soft and gooey selves to the wonderful but unpredictable world outside. Young lapwings are brown and furry, the prominent yellow wattle above their beaks growing over time.
The parents are protective and nurturing, alert and observant all the time. The hatchlings are rather independent while roaming the grassland. They scuttle behind their parents, feeding and preening by themselves, and at the end of the day, tuck themselves under their parent’s wings.
Hatchlings surprisingly seem to know what to do during an emergency... the mother makes a sharp call... "TEECHEE-IT TOUU-IT! TEECHEE-IT TOUU-IT!" And they all crouch close to the ground in unison, blending instantly and disappearing into the landscape. When older, they scurry into the nearest bush and wait till all is clear.
The air begins to thicken, and wetness of pre-monsoon starts to set in. The vibrant yellow of the grass begins to magically transform into a deep olive green and then into a rich forest green as the monsoons creep in. Summer is at its end now and it is almost time for the lapwings to leave. So the hatchlings start to spring from the ground in their attempts to fly.
Soon, they all begin to leave, in small flocks. Where they go after, is a mystery; what they do later, is unknown. But one thing is for sure, next year they will be back to their summer homes, the grasslands, to continue their cycle, only to leave and come back again and again.
It is something to wonder about... what will become of the grasslands in the coming years, if it remains revenue land, and then where will the lapwings go?
This story book was designed by the Law + Environment + Design Laboratory at Srishti School of Art Design and Technology. Set up in 2012, the LED Laboratory is a collaborative lab that challenges existing legal, environment, social, economic and cultural frameworks through interdisciplinary thinking and creativity, to catalyze social change towards greater socio-ecological resilience.

Agumbe is a small village located in the Shimoga district, Karnataka. The village is surrounded by the majestic rainforest of the Western Ghats, they are known for the conservation attempts and the study of medical plants. Agumbe is located in a hilly wet region, it has tropical climate and it’s known to be one of the bio diversity hotspots of India. Romulus Whitaker a herpetologist had created a wildlife research centre known as the Agumbe Rainforest Research Station (ARRS), it is now a field based conservational and research organization in attempt to create a biodiversity database and conserve the rainforest of Western Ghats. What’s more fascinating about these guys is their methodology of conducting these researches, they believe that as researchers; it’s vital to observe a specie without disturbing them, as they carry out their mundane activities in their own natural habitat. It is only then you can make an accurate assumption of their behavioural aspect compared to putting them in a glass jar, where they must and only be on ‘survival mode’ as you have extracted them from their homes.

Acknowledgement

This book is a culmination of the efforts of many people.

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Peepa Sateesh and Arpitha Kodiveri, our directors, for introducing me to the Law+Environment+Design Laboratory, which gave me an opportunity to use my strengths in design for my passion, which is animal conservation. To create a book that not only educates about a specific species but also addresses the alarming issue of habitat loss.

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Thank you.
This project is located in the rainforest of Agumbe, a small village in the Western Ghats. It holds an incredible, but unique habitat much unlike the green, lush rainforest, with pockets of open spaces, abundant grasses and small trees sprouting from the ground. The grasslands are easily misunderstood for wastelands but are home to one of India’s unseen birds. The yellow wattled lapwing... a small, funny little creature that come during the summer and occupy the grasslands. They make some of the most remarkable tricksters the world has seen and are experts at camouflage. So take a walk into the world of the lapwings, uncover the activities that occur in this unique habitat, and discover what lies hidden in these misty forest lands of Agumbe.