



YOUTH FOR NATURE

Issue 7

Culture and Creativity in Conservation

Motion In-Tuition – PAGE

Planting Life – PAGE

An Artist on a Mission – PAGE

JANUARY 2022

Editor's Note

A new year once again, and another wave of an ongoing pandemic. Life as we know it has changed, but there are small joys to be found even as we stay indoors and isolated. Take birding, for example, which can be done with a pair of binoculars from the comfort of our homes! Or even just looking outside our windows and sitting in our balconies, a surprising array of wildlife has made itself known. Birds, butterflies, bees, monkeys, mongooses...the list goes on!

Even as the world ground to a halt, environmentalists have ploughed forward, determined to restore our ever-changing, delicate planet. From urban to rural India, we have seen extraordinary people step up to battle climate change, biodiversity loss and other environmental issues through their creative brilliance. Some have the wisdom of old age, while others are fuelled by the passion of youth. At the end of the day, everyone everyone can make a difference and a positive change in this beautiful, wild world of ours.

This issue is dedicated to the conservationist in all of us - from those who create terrace gardens, to those who hike the Himalayas, to those who live in harmony with the forests, to those who use art as a way to bring us all together. This January, we celebrate the creativity that fuels conservation, and the people working at the grassroots to save our wilderness.



- Priya Ranganathan & Nikita Bhat,
Co-Editors

Happy Reading!

YOUTH FOR NATURE

JANUARY 2022

LEARNING CORNER

1

Cartoons for conservation, sustainable use of forest products, sacred groves and urban birding!

EXPERIENCES IN THE WILD

2

Rooftops and butterflies, theatre and nature, exploring the Himalayas!

TALES OF GRASSROOTS CONSERVATION

3

Two women conservationists from Karnataka, Thicket Tales, and an artist with a mission!

TALES & TRAILS | ACTIVITY CORNER

4

Fun stories and activities for our youngest readers. 5-10 year olds will love this section!

1 | Cartooning for Conservation

**Text by Kshiti Mishra
Cartoonists as referenced**

These days we often come across news about biodiversity destruction that humanity is collectively causing. Sometimes it is ominous headlines telling us how a decline in vulture numbers is causing an increased spread of diseases like rabies and anthrax in South Asia. At other times there are horrifying reports such as how recently in the Faroe Islands, more than 1400 dolphins were killed in a single day! Reading about such incidents can make us feel helpless and disturbed. Thankfully there are some people across the world that are not only helping us deal with such news with a bit of light-heartedness but are also sensitizing many more people to these issues through the power of humour! For instance, take a look at these witty cartoons about these issues by Rob Lang and Rohan Chakravarty, both of whom draw comics about wildlife and conservation. (Psst, do you remember Rohan from the October 2020 issue of YFN?!)

Did the comics make you smile a bit? And maybe made it a tiny bit easier to deal with the sad reality? Rob and Rohan are among a few creative minds masterfully handling the huge responsibility of serving serious news and educational facts about biodiversity with a dollop of humour. Yet another person among their ranks is the science communicator, Rosemary Mosco. According to Rosemary (1) "The humour helps make the messages more relatable.

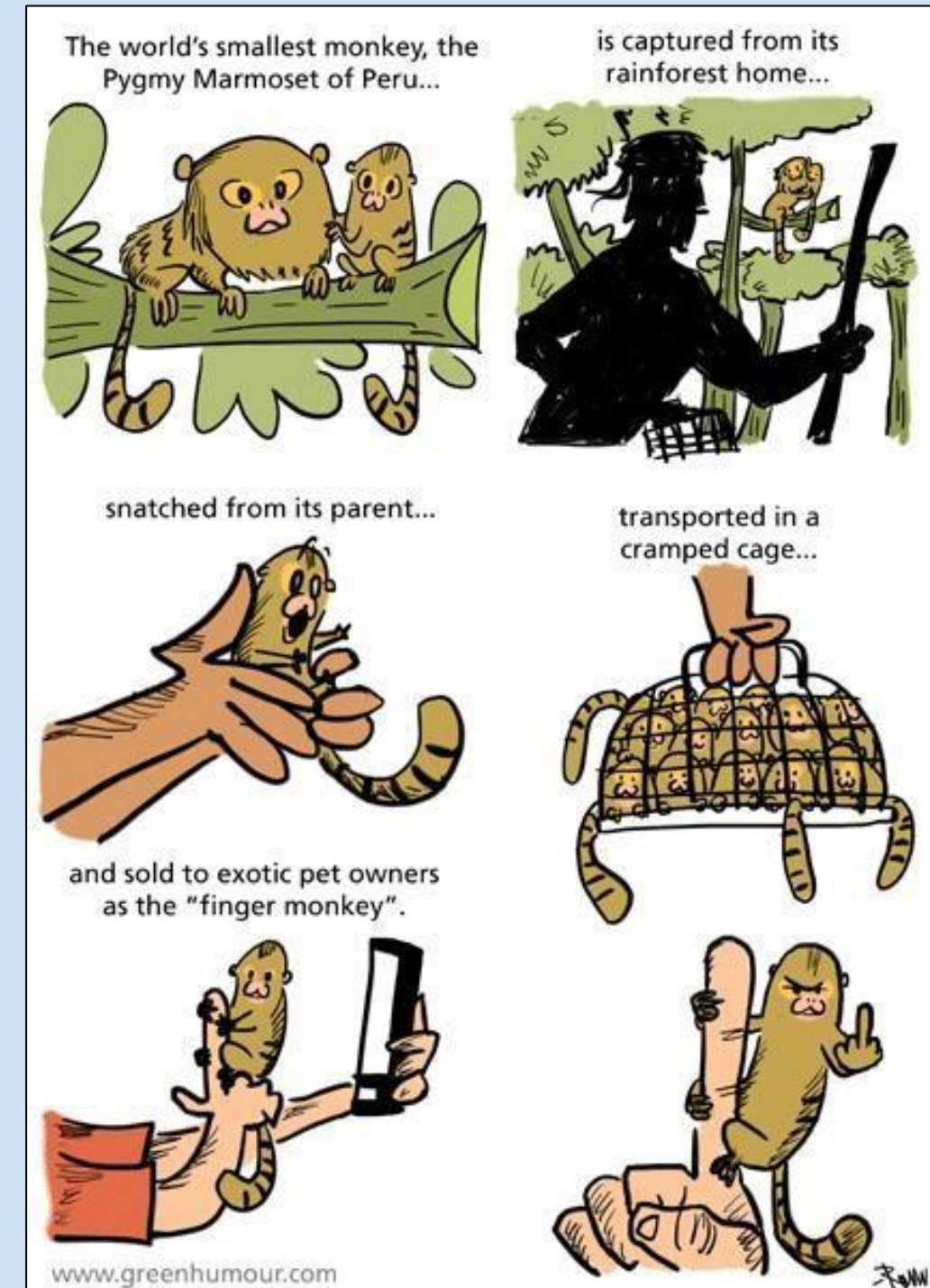


When I attach a joke to a fact, people share it around because everyone loves to laugh. The fact spreads to new places and reaches more people." Rohan also shared something similar in a previous interview (2): "If an animal makes you laugh in a cartoon or a comic, you're more likely to remember it, befriend it and identify with its cause. It does mask some of the gruesomeness and gore, but I see my cartoons as a friendly, virtual hug that wildlife can offer to a layman." Rob talks about how cartoons can effectively inspire compassion to their subject: "Putting words in the mouth of illustrations is easier than making photographs look like the subject is expressing itself." He believes: "No matter how hopeless a situation might be, I will always have a glimmer of humour mixed in, which for me, is like a drop of hope in a soupy storm of despair. I like to think that in some small way, I'm inspiring people to care just a bit more about what's under their feet when they step on the grass in their front yard, what's flying above their heads or what's swimming around in the depths of the vast oceans. This, in turn, will naturally help people believe it's all worth saving."

And the messages from these artists definitely reach and affect a lot of people. For instance, Rohan has shared in previous interviews how his comic about the exploitation of



the world's smallest monkeys – Pygmy marmosets – for the pet-trade, changed the mind of a reader from Peru, who decided to not buy it as a pet! The same goes for Rosemary who has also mentioned in interviews about a chart she created on what to do if you find a baby bird out of its nest, which was useful to a lot of people.

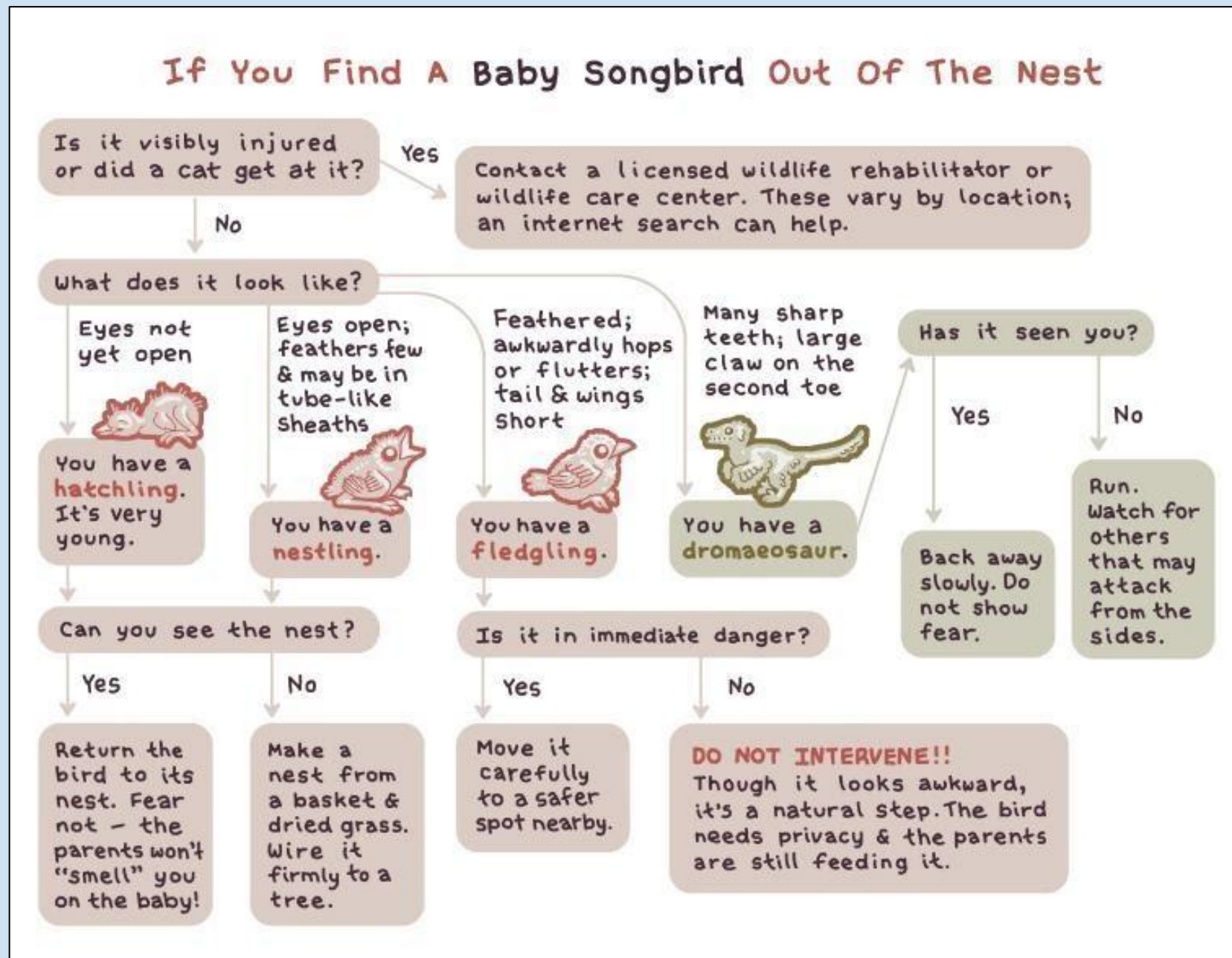


Not just readers, but also important conservation organizations recognize the impact of their cartoons - for example, Rohan Chakravarty's work has been recognized with the WWF International President's Award and Sanctuary Asia Young Naturalist Award, while Rosemary Mosco's comics have also won the National Cartoonists Society's award for Best Online Short Form Comic, among others.

The critters in their comics might be playful, but these artists take their art very seriously, doing extensive research for each comic. They attend lectures, read scientific papers and field guides,

communicate with researchers, watch videos, and study animals before drawing their cartoons. That helps with the facts, but where do they find humorous inspiration? According to Rosemary (3) "Nature is really funny. You can go into the woods and find 20 or 30 hilarious potential comic prompts anywhere you go." Rohan has attributed his sense of humour to his pet dog, Natwar Prakash, who would make him laugh heartily (4). So, if you keep an attentive eye out for animals or plants acting funny around you, you might just find inspiration for your own cartoons!

Yet another artist using his skills to make a difference is Rohit Shukla. By profession, he is an Indian forest guard in the Madhya Pradesh Forest Division, but he also paints simple and beautiful cartoons on a variety of issues about wildlife, drawing from his experiences. His cartoons have been widely shared across various social media platforms and are used to educate field staff and the masses alike.



Let's be thankful to these amazing artists doing such a great job of making us think twice about the biodiversity around us and keeping up the spirits of those that care deeply about its conservation. Hope you check out their work, share it widely, and find inspiration to come up with your own unique perspective on nature. After all, for the tough challenges that lie ahead of us, we are going to need all the laughs we can get! On that note, let's start 2022 with a laugh, with this hilarious cartoon created by Rob Lang.



If you would like to learn more about any of the aforementioned cartoonists, check out these links!

- 1) [Rosemary Mosco](#)
- 2) [Rohan Chakravarty](#)



2 | A Culture that Nurtures Nature

Text and Images by Tithi Kagathara

I recently finished my stint with the Youth for India Fellowship, a collaborative program between the SBI Foundation and M.S. Swaminathan Research Foundation. My field location was Koraput, one of the southernmost districts of Odisha. The relationship between the tribal communities (Kondha, Paroja) and the forest of Koraput taught me that culture and nature evolve side to side. I was amazed at watching all the forest products they used in their daily life.

When I joined the Fellowship, I thought tribal communities were normal rural people who live in small hamlets. Unity amongst individuals in the tribal village was no joke. The way we eat food, sleep and live our lives in cities is similar to how tribal people have their culture, festivals, gatherings, work and life. My project was based on the sustainable use of NTFPs (Non-Timber Forest Produces) and along the way, I discovered three unique NTFPs and their uses by tribal hamlets that have never been documented in this area before.

Honey for Households:

The concept of a kitchen garden in the house is familiar to city dwellers, but a small beehive that produces enough honey for a household was a new concept to me. The villagers in Koraput made the hive structure from dried

bottle gourd and black clay that was available at the riverside. This type of oval-shaped hive could be seen hanging outside the houses in the village. It has one opening at the top. Bees use the same hole to enter or exit the hive. This type of honey production is totally sustainable and mutual between people and honey bees as the bees get a substrate/base to build their comb and the people get honey in return. The bee species here is an Indian stingless bee (*Tetragonula iridipennis*) which is a very small bee. It usually collects nectar from Jackfruit trees, coco palm trees, and other medicinal plants that naturally grow in the area. According to the local people, this honey tastes a little sour and sweet at the same time. However, studies show that this type of honey has the highest amount of flavonoids and flavonol in it (Journal of Medicinal Herb and Ethnomedicine). The relationship that tribal communities have with these bees is an excellent example of sustainable use of nature without any harm.



Left: A beehive in the village
Above: A tribal house at Koraput

Not an Asian Paint:

Here is one more way to use natural resources sustainably to make life colourful. Asian Paints is never heard of in this part of Odisha as locals have their own way of painting their houses. It is their age-old tradition. Villages in Koraput make paint from natural ingredients that are available in the nearby forests. The ingredients vary according to the hamlet and tribe. However, common colours used to paint walls are white, black, cream, and red.

The black color is usually made from *Terminalia bellerica* fruit, burned mango bark, and water. Boil these items for an hour and then keep the mixture aside for a night to cool. The next day, villagers use this black color to paint the walls and floors



of their homes. White paint can be made from white soil that is available by the river or stream. Brown and grey colours are made by changing the water quantity in a mixture of white and black colours respectively. Red paint is made from *Bixa orellana* seeds, locally known as “Japhra” and it used to produce brown shade to make design on walls. The local tribes use the red colour to paint their Devi (Goddess) idol, which is carved from a huge stone. The whole process of making these colours is sustainable and traditional. The women play an important role in the process, from collecting essential material from the nearby forests to making the paints to applying it on the walls of their houses.

Beautiful Bamboo:

The Eastern Ghats of Odisha have teak and mixed deciduous forests. Bamboos are a major component of this landscape. Tribal people have given a special place to bamboo in their daily lives. Bamboo utensils are common in tribal households. These utensils are used to store grain, carry food items, and dry the collected forest produce in the summer. A *taakala* is a fine square structure with a curved edge that is used to dry finger millets and rice, while a *tippani* is used to store small amounts of rice or other grains. A *koola* is a typical bamboo vessel that separates seeds from their outer covers. Another vessel, called a *kalki*, is used to store huge amounts of rice for up to three to five years! Each household uses a different size of *Kalki* depending on the amount of rice they want to store. Using the handmade bamboo vessels in their households is a traditional practice in these communities - they learned to make these vessels from their ancestors and the tradition continues even today.

The aforementioned forest products stay for a very long time after being made and do not harm the environment. Other seasonal NTFPs that are used by tribal people have fixed collection areas and collection time frames that are decided by the tribal chief and healers. Their traditions were designed in a way that does not harm nature but instead nurtures it. Here's another fun fact for you - the *Paroja* tribe has a *Gurmai*, a lady who has been chosen to serve the Forest Goddess Vana Debi, in every hamlet!

These traditions have nurtured nature for ages in Koraput. Local tribes developed these traditions over many years and still practice them today. I hope these tribes keep protecting their beautiful traditions through the years so that the forests stay protected for centuries to come.

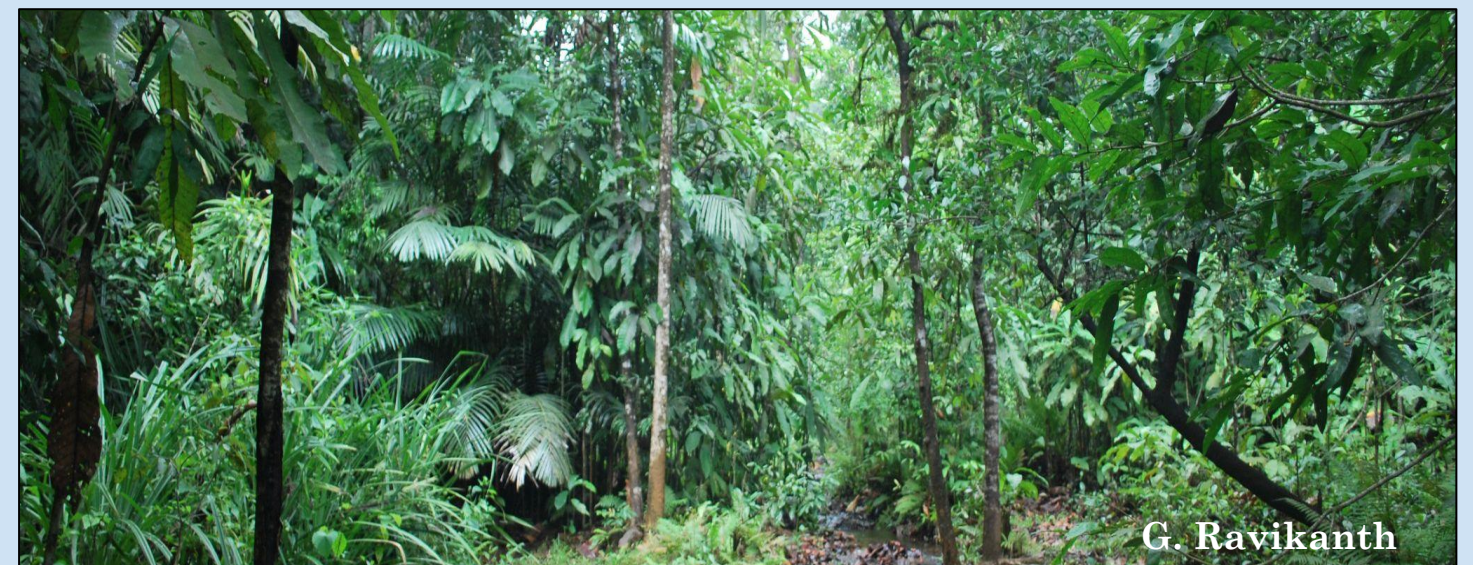


3 | Forest of the Gods

By Priya Ranganathan

Many people go to temples, mosques, churches, and gurudwaras to pray to their gods for blessings and good health. In India, we have yet another type of temple - the forest. Yes, you heard correctly - India is home to many sacred groves, which are small forests where local communities come to pray to the forest gods. A grove is a small patch of trees.

The gods in these sacred groves are not well known by people outside of the villages. They are as old as time, even older than Hinduism, one of the oldest religions in the world. Some of these gods are the water goddess *Chowdi*, the tiger god *Dakshin Ray*, the protector of the forests *Vanadevi*, and the protector of those who enter the forest *Bonbibi*. All across India, sacred groves used to exist in large pieces of forest, filled with wildlife and rare plants, but today, they are tiny pieces of forested land, surrounded by agricultural fields and villages.



G. Ravikanth

Let us visit the ancient swamp forests of the Western Ghats, where you can spot sacred groves. One such grove is Kathalekan, "the dark forest," where *Chowdi* is the most popular goddess. Another mischievous spirit, *Bhoota*, causes trouble for local villagers. People pray to *Vanadevi*, the mother goddess, before starting a new job, school, or entering the forest, even in today's modern world. These sacred groves are slices of tradition in the chaos of the 21st century! In Kerala, groves known as serpent groves are left to praise the snake gods, or *Nagas*.

On the other side of the country, in the vast Sundarbans mangrove forest, sacred groves are common. The local villagers worship Bonbibi, the protector of those who go into the tiger-infested jungle every day to cultivate honey and collect forest produce. They also pray to Dakshin Ray, the tiger god, to give them safe passage and forgive them for trespassing on the tiger's territory. In the Sundarbans, tigers attack people very often, and the swamp is considered treacherous for those who do not know its secrets. Prayers and faith keep the people alive as much as paying attention to what is prowling among the trees.



Dincy Mariyam

In traditional Hinduism, forests were classified into three categories - *Tapovan*, *Mahavan*, and *Sreevan*. *Tapovan* forests were those where sages went to meditate and had their ashrams to teach students. *Mahavan* forests are the great, ancient forests of India, where wildlife is plentiful. Both *Tapovan* and *Mahavan* forests are full of birds and animals, as well as tall, powerful trees, and wildlife here is protected as ordinary humans were not allowed to enter these forests. *Sreevan* forests were dense groves, where people were allowed to enter and collect berries, fruits, branches, leaves, and herbs, as long as they did not disturb the natural ecosystem. *Sreevan* means "forest of the goddess of wealth," and these forests became the sacred groves of today.

Villages across India worship nature in many forms, whether by praying at sacred groves or by nurturing wildlife. The Bishnois and many other tribes across Rajasthan care deeply for wildlife and do not allow harm to befall them. Bishnoi women are even known to look after orphaned deer, gazelles (chinkara), and antelope like their own children. Most villages across the country have small groves of at least five trees - representing the five elements of air, water, fire, earth, and ether. The northern and southern states of Himachal Pradesh and Kerala are known to have many sacred groves.

Travel across India and keep your eyes and ears peeled for tales of forest gods and temples in the deep, dark woods. You will definitely find many of them as you visit different parts of our country. From the Myristica swamps of Karnataka to the deodar forests of Himachal Pradesh and Uttarakhand to the mangrove forests of West Bengal to the serpent groves in Kerala, India is full of forest gods - if you know where to look, that is!

4 | Rooftop Butterflying

**By Ashika Talreja
Art by Maneesha
Warkade**

During the lockdown, I realised even our cities are teeming with wildlife that we have grown to take for granted. You don't have to be a regular at a tiger reserve or a bird sanctuary to experience the beauty of nature. Start observing your surroundings which usually go unnoticed. While sitting in your backyard, a garden or even a small pond or lake in your city, you can nurture your skills and your knowledge.

In the year 2021, we were all confined in our habitats (isn't your house your habitat as much as a forest belongs to the deer and tigers?) due to COVID-19 pandemic. Some people, including myself, turned to their balconies and windows as a gateway to observe the biodiversity around us. Let me take you along on my rooftop butterflying adventure!

Why not explore my own terrace, I reasoned? I spent time in my modest terrace garden full of potted plants and I started sowing more seeds. I started planting in the monsoon season, which is a prime time for plants to grow larger as well as a time when insect populations begin to increase. I started cultivating a garden to bring nature right to my doorstep. First and foremost, I planted two to three butterfly host plants in the hopes of spending time with

butterflies and other insects. My small garden began to look heavenly.

The wait was finally over! My heart brimmed with joy when I strolled into my garden and saw two small-striking, polka-dotted Red Pierrot (*Talida nyseus*) butterflies fluttering around, chasing each other up and down. The following day, I noticed one of the Red Pierrot's twisting her abdomen towards the underside of my thickly-leaved, flowerless *Patarchatta* (*Kalanchoe pinnata*), which is a host plant for this species. The butterfly's ovipositor (the organ from which the eggs emerge) touched the leaf, an egg came out and stuck to the leaf. It was magical!

While butterflies generally drink nectar from a variety of flowers, they lay their eggs on specific plants that their caterpillars feed on which are known as larval host plants. The butterflies prefer to lay their tiny eggs on the underside of the leaf to avoid being eaten by predators, but they do occasionally lay their eggs on the upper side as well. Since I didn't want to destroy any insect safe haven, I investigated every leaf with extreme caution. There were about five of them, each of which resembled a pearl.

I was spending hours in my garden, sometimes turning an upside down pot into a lunch table so as not to miss an important transformation. The egg of the Red Pierrot is light green when laid and turns white in colour within two seconds. I watched with interest to see what they would do next.

After hatching from the pearly egg, munching on the leaf is the only business the caterpillars do. The Red Pierrot larva mines the leaf and spends time growing as a caterpillar in between the layers of the leaf, pooping inside continuously (this poop resembles

a black train running in a zig-zag pattern). Here, they execute a very smart defence mechanism - they spend their life inside the layer of leaf, hopping from one leaf to next when they are finished eating one, just to protect themselves from predators.

After about ten days, a fully grown caterpillar came out from the leaf layer and stayed on the same leaf for about a day. I eagerly waited and watched it non-stop. It shed its skin one last time later that day, wrapped a thin thread around and pupated under the leaf. During its pupation period, I discovered that the pupa's colour changes as the butterfly develops within it and could see the black colour pupa just before a butterfly emerged. I was surprised to find that its colours were completely different from its previous avatar as a caterpillar. The cream-coloured caterpillar had transformed into a vibrant colourful butterfly, patterned with white, black and orange.

The Red Pierrot butterfly is a year-round resident. You can watch this transformation unfold right in front of you in your very own garden! If you want to set up a butterfly garden in your apartment balcony or rooftop, all you need to do is plant larval host plants such as lime, curry leaf (*Murraya koenigii*), giant milkweed, cycad (*Cycas revoluta*). Plant native flowering plants *sadabahar* (*Caranthus roseus*), rangoon creeper, jatropha, hibiscus on which butterflies can feed nectar. Butterflies do need both nectar-rich plants as food sources as well as host plants to survive. It's delightful to see them flutter about! Take a moment to look around for these fluttering creatures, admire their mating dance, and range of colors, and they'll bring you pure joy. Keeping our cityspaces green and accessible is

the only way to prevent and control the decline of these delicate, beautiful creatures.



5 Motion In-tuition

By Yamini Srikanth
Art by Meera Phadnis

“Draw your body!” I said, excited and warm. I waited in front of my laptop where four videos were switched on, staring blankly at me, and one black tile stared even more blankly. Nobody said anything, and one person gave me a confused smile, mouth twitching.

“This activity is pretty simple.” I paused, drawing in a breath. “Close your eyes - you don’t even need to see the drawing - and sketch what your body feels like to you, what, and who you are. Put it on the paper.”

This activity was part of a five week workshop, conducted entirely online, focused on the question of “What is Environmental Justice in India?” I facilitated each session with the help of Shalini Pathi, a PhD student at the University of Hyderabad. We wanted the participants to really look at environmentalism, highlighting the threads of caste discrimination and the role of corporations and how they have helped make the tangled web we see before us.



When conceptualising the workshop, we wanted the participants to really connect with their lived experiences. Too often, we pretend that our work, our interests, hopes and dreams - even what we perhaps perceive as solutions to the climate and ecological crises are somehow separate from who we are. For example, someone from an agrarian family may see the necessity of cultivating land (albeit sustainably) on the fringes of protected areas, whereas someone from an urban, upper class family whose income comes from non-manual labour, probably subscribes to the idea of a “pristine” environment, where humans should be excluded from protected areas as they are somehow destined to ruin it. In short, there is the environmentalism where your livelihood and life are still connected to living ecosystems, and the environmentalism that stems from a certain disconnect with this.

These are all difficult realisations to make, and dots you only feel able to connect when there is a safe space to be vulnerable.

Habitat loss, rising sea levels, loss of lives and livelihoods, floods - hearing about all of these catastrophic events, along with the media reporting on them either sensitively or not, can churn a whole sea of emotions in us, ranging from grief to rage to sadness. Terms, such as “eco-grief” and “eco-anxiety” have even been used to describe them.

How could we voluntarily ask participants to dredge up these emotions, online, isolated and alone, just for the purposes of a discussion? Could we then soothe with just words? As much as we believe we are creatures of our consciousness rather than flesh and blood, emotions are very physical things.

The answer to both questions of connecting to lived experiences as well as dealing with the emotions raised lie in the body. Often, our bodies do tell us when we need something. “Stimming”, or “self-stimulatory behaviours” are repetitive movements or sounds which can be body focused, or sometimes involve an object. These movements, or “stims” are most often associated with neurodevelopmental disorders such as Autism Spectrum Disorder and Attention Deficit Hyperactive Disorder. Truthfully, everybody stims, but people who are neurodivergent often have more obvious ones, emphasised by the desire to control them to appear “normal.”

We also carry within our bodies real, physical manifestations of the events that take place in our life, particularly trauma. Moving in specific ways, hugging the self, tapping and body focused meditation can unlock these memories by activating specific pathways in the nervous system, and help us process and release them.

We turned to Augusto Boal's *Theatre of the Oppressed* for a whole host of exercises designed to both awaken and soothe, to live other lives and our own.

The Demon - To shake intensely every muscle, limb and joint in the body, violently, as if exorcising all the demons we carry within us.

The Pressure Cooker - To draw in as much air as we can hold, in and in, on and on and to release it in a violent gust, like the whistle going off a pressure cooker.

Difficulties- to perform an every day, routine action with a certain difficulty, such as imagining a missing limb.

These, and a whole host of exercises were like a “theatre sandwich” to each online session. We began with it, to engage the whole body and prepare people to discuss, and ended with it, so that nobody felt broken open and not yet healed.

Drawing our bodies was an exercise we used to begin the session. People drew themselves in the most realistic, grounded ways - such as a simple outline, or with wings, their images carrying with them their dreams and hopes for the coming years. We all uploaded our drawings anonymously to our google drives, and spent a quiet, joyous few minutes admiring and appreciating the small pieces of our souls we put onto the paper.

6 | Birding in the Big City

By Prakhar Rawal
Art by Rohan Sharma

I am a wildlife researcher. What did you think I do when you read that? Did you think of tigers, elephants, bears or other enigmatic creatures, which I follow around with a camera like on Discovery Channel? What if I told you for the past 18 months, I have been observing wildlife in Delhi? Yes, you read that right! Right in the hustle-bustle of one of the most crowded cities in the world, wildlife abounds.

City and wildlife may seem like opposite terms, but if you live in a city, there is much more life around you than you might notice. Over the past hundred years or so, humans have transformed natural areas into concrete jungles for their needs. This has forced wildlife to move out of these places to make room for the human population. Despite this, some creatures have managed to adapt to city life, and live all around us! I am sure we all have observed butterflies sitting on flowers, snails crawling out after a rainfall, birds sitting on wires and even an occasional mongoose if we are lucky!

I study birds in cities. When I say ‘birds in cities,’ I am guessing you thought of pigeons, crows and *cheel* (black kites). But you will be surprised to know over 400 species of birds have been seen in Delhi alone! This is one-third of all birds found in India!

Surprised, right? This isn't just true for Delhi; most cities in India record many bird species. Next time you go on the Internet, open ebird.com/explore and enter the city where you live. You can find the number of bird species that have been seen in your city, and you will be happily surprised!

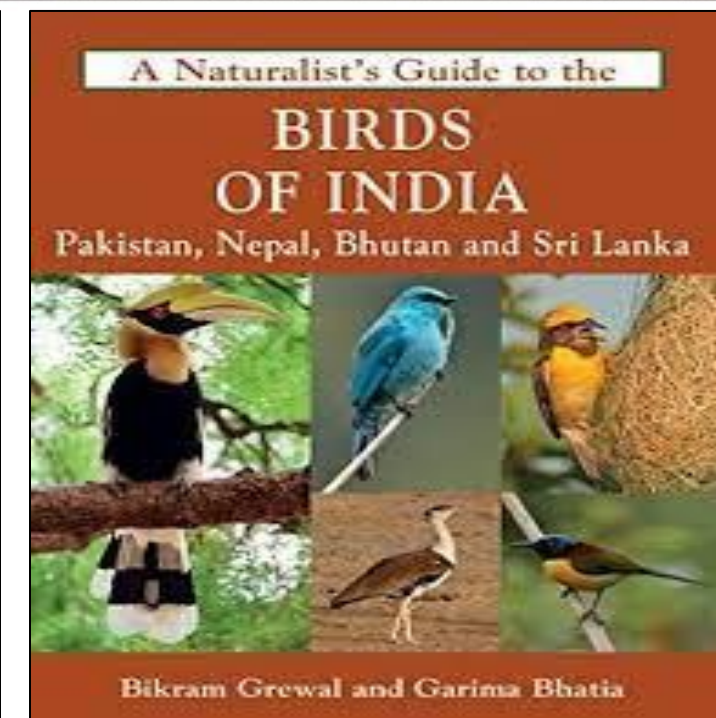
But why don't you see all these birds if they are all around you? Well, there are three reasons – you don't know where to look, you don't know when to look and you don't really look!

For those of you who have never seen anything other than crows and pigeons in a city, I have an activity for you. Next time you go to your nearest park or ground where you play or spend time, count the number of different types of birds you see. Observe the trees, the bushes, the ground and even electric wires. I can assure you that you will count much more than three species! Just by keeping an open eye and really observing nature around you in your local park, you should be able to see bulbuls, doves, koels, tailorbirds, prinias, parakeets, sunbirds, mynas and starlings! These birds are known as urban adapters, as they are able to adjust to city life and find necessary food and shelter in cities. I suggest everyone really interested in birds to ask your parents for a bird identification book for your next birthday (I recommend *A Naturalist's Guide to the Birds of India* by Bikram Grewal for beginners)! So, the first step to finding birds in a city is to actually start looking for them!

Now you are really motivated to go out and find new interesting birds, and maybe you even have a book with you, but you don't really know where or how to begin.



Todd Pepper/eBird



Birds are most active in the early morning (between 7 am – 10 am) and evenings (between 3 pm – 6 pm). During these times, you have the best chance of finding them. To find birds, we need to think like birds. Just like we humans do, what are the two things all life on earth needs? Food and shelter. Apart from grains that birds like pigeons and sparrows enjoy, birds also love to eat fruits and insects. Since many insects live under the ground, you have a good chance of finding interesting birds in open fields and parks. Apart from common birds like mynas, you might even see birds like starlings, lapwings, hoopoes, pipits and also migratory wagtails during winters!

When it comes to fruits, fig fruits (fruits on fig trees like *peepal* and *banyan*) are favoured by many Indian birds. If you have one of these trees with fruits near your house, observe them at sunrise. You might have seen many common pigeons, but these trees are visited by much rarer Green Pigeons as well! You might also catch a glimpse of bulbuls, barbets and hornbills eating these fruits. Sunbirds (the Indian version of hummingbirds) can be often seen sucking nectar from the flowers of certain trees. To see waterbirds, find the nearest waterbody around you, big or small, and go spend some time there early in the morning. You might notice some interesting visitors! Most cities also conserve some natural places – Central Ridge in Delhi, Cubbon Park in Bangalore, KBR park in Hyderabad and so on. These can be good places to observe rare birds within cities. Using the *ebird* website mentioned earlier, you can also find locations in your cities where people have observed birds.

So don't wait till you get the chance to visit a jungle, but open your eyes to nature around you instead! Like charity, birdwatching starts at home too!



Above: Purple-rumped sunbird (Garima Bhatia/eBird)

Left: Green imperial pigeon (Abhijith A.P.C./eBird))

7 | Becoming a Botanical Illustrator

in conversation with Nirupa Rao



What do you do? What would you say your job entails?

I am primarily a botanical illustrator, though I also occasionally illustrate animals, depending on the project. I like working on a project-basis. For instance, I worked with ecologists Divya Mudappa and TR Shankar Raman of the Nature Conservation Foundation on a book titled *Pillars of Life: Magnificent Trees of the Western Ghats*. Such projects involve some field work, to view and sketch these species in their habitat. It involves a lot of liasoning with the ecologists as well, who (in this instance) selected appropriate species,

and gave me detailed feedback on my paintings, to ensure accuracy. In the case of PoL, Divya and Sridhar wrote the text, and I compiled it all together into a book using InDesign. So overall, my job entails field work, research, painting and design.

What was your educational journey, if any, to establish yourself in this field?

My educational journey hasn't been directly related to my field at all. I am a botanical artist who has studied neither botany nor art. When I started out in this field, I did a short online course with artist Elaine Searle. The rest has been learned on the job.

What attracted you to create botanical illustrations? Were you always passionate about it or did you develop interest in it over time?

Although I grew up in the city (Bangalore), nature played a big role in my childhood. Being only a few hours drive from the Western Ghats, I spent most of my childhood holidays in the jungles and grasslands. I've always thought plants were infinitely fascinating—even as a child, I gravitated toward drawing plants without realising that botanical art existed as a genre in its own right. I have quite a few botanists, horticulturalists and gardeners in my family, so I became interested in botanical art as a medium through which I could translate and share these experiences with others.

What advice would you give to someone considering biological illustration as a field?

It isn't a very structured profession, so you have to make your own way. There is a lot of freedom in designing your own projects and being your own boss, but the downside is that you spend a lot of time working alone, and sometimes in a bit of a vacuum.

Of course you also have to find ways to fund your work, so I'd suggest looking up grant programmes, getting freelance work with nature/conservation magazines/organisations, and also taking on other part-time projects to supplement your income, if necessary.

For me, it's been very important to learn as many skills as possible. For instance, using Photoshop and InDesign (in addition to hand-painting) allows me to edit and lay out my projects myself. That way I can take responsibility for a project from start to finish.

Are there any courses, books, resources or practices you recommend, to help budding illustrators make a career in this field?

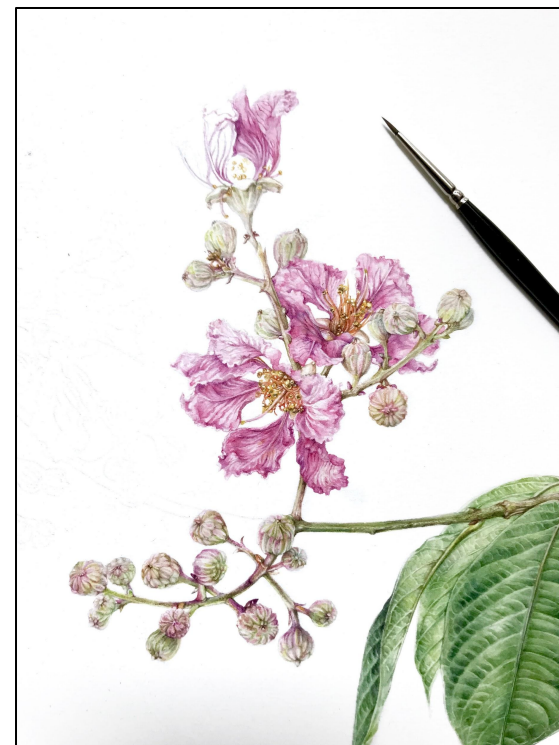
There are a lot of online courses you can take up from around the world, depending on whose style you are most attracted to. In India, I know of Sangeetha Kadur and Hemalatha Pradhan, who take workshops/courses in person. For books, I like Sarah Simblet.

Where can our readers find your illustrations and learn more about you?

Website: <https://www.nirupa-rao.com/profile>

Instagram: <https://www.instagram.com/niruparao/>

All artwork featured on this page belongs to Nirupa Rao.



8 | Planting Life

By Avik Banerjee
Art by Adyasha Nayak

What will you try to find if I ask you to find me the “Encyclopedia of the Forest?”

Maybe an encyclopedia book or a website on forest trees, right? You are right to do that, and frankly, anyone would do the same. But if you ask the same question to the people of Honnali village in Karnataka, they will take you to a 77-year-old woman living in their town. The locals call her the ‘tree goddess’ because of her immense knowledge of forest plants and the forest itself.

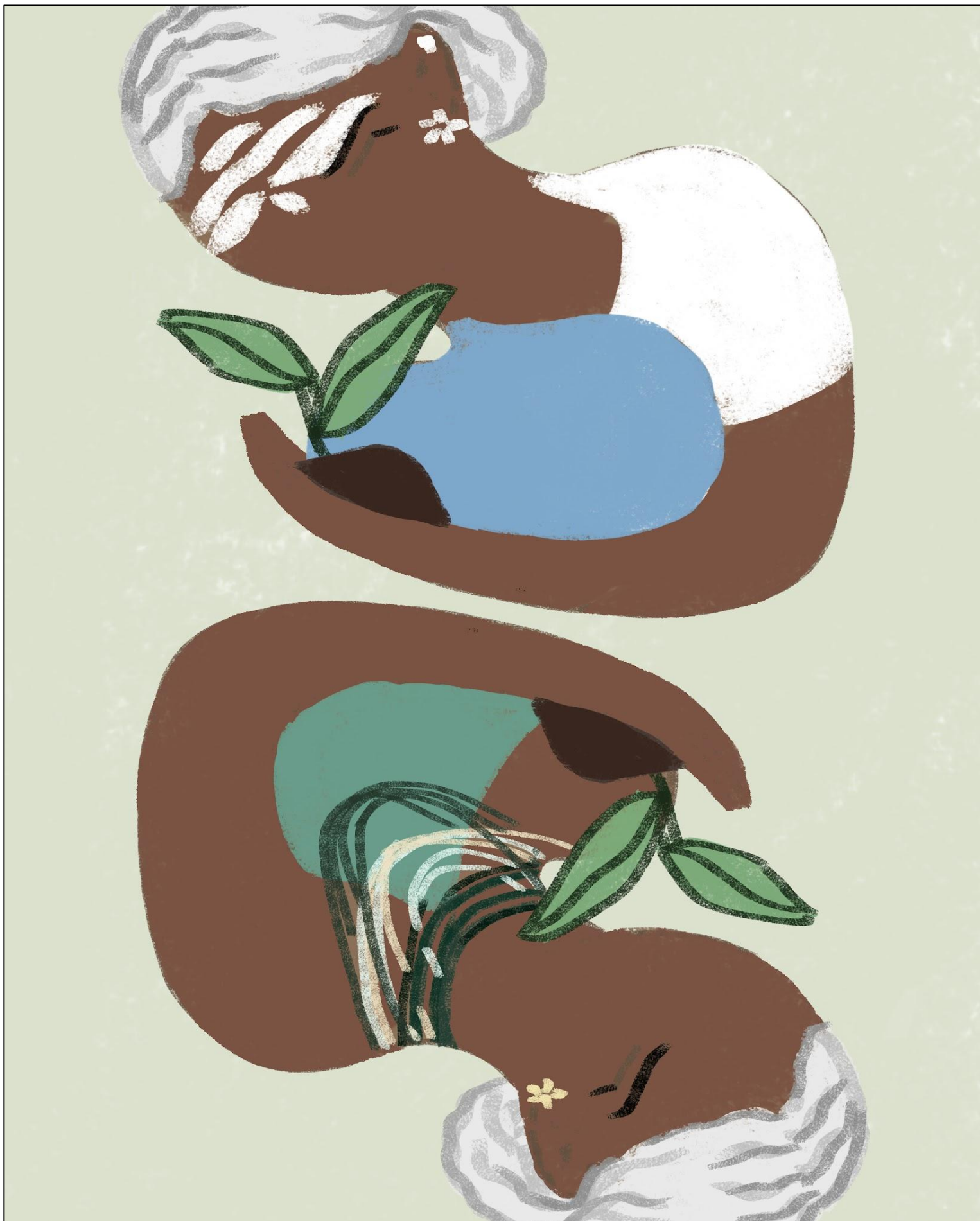
Her name is Tulsi Gowda.

Tulsi was born in 1944 to a poor Halakki tribal family living in Honnali village. She lost her father when she was only two years old. To support her family, she started to work with her mother as a daily wage labourer at a local plant nursery from a very early age. She never went to school and remained illiterate, unable to read or write. She was even married off at the young age of 12. Despite these hardships, she continued to work at the plant nursery. Halakki tribe people care for their land and stay connected to nature, and Tulsi was no different. In the nursery, she took care of plant seeds. She helped the Karnataka Forest Department to plant, grow, and maintain saplings and trees for more than 50 years. Around the age of 70, she finally retired.

Tulsi has planted more than 30,000 saplings in the state of Karnataka all by herself. Through years of work in the nursery, she gained extensive knowledge about the forest. She can identify every tree species and its mother tree in the forest. She is also an expert in collecting seeds of different trees which could be later used to grow entire trees in other places. Tulsi has identified and planted many medicinal plants of the forest which are in use to treat local people. She is also involved in teaching village children about the value of forests and how to take care of nature. Tulsi Gowda received several awards for her contributions towards conserving the forest, trees and nature, including the prestigious Padma Shri, awarded by the Government of India in 2020. Tulsi overcame poverty and illiteracy to take care of herself and our forests through her dedication and constant hard work. Such an inspiration!

Now that we know about the ‘Encyclopedia of the Forest,’ how can we forget the “Mother of Trees?” Let me introduce you to another inspirational woman from Karnataka. She, too, overcame poverty and illiteracy to devote her life to planting and protecting trees and conserving nature. She is credited for growing more than 380 banyan trees, among many others, which is why people call her the “Mother of Trees.” She is 109-year-old Saalummarada Thimmakka.

Born to a poor family in Gubbi Taluk of Karnataka, Saalummarada did not receive any formal education as a child. She was married off at the young age of 12 to a man called Chikkaiah from the Hulikal village. Saalummarada started working there as a daily wage labourer at a stone quarry. The couple could not bear children of their own and finally decided to plant banyan trees and raise them as their own children. Since then, Saalummarada planted and maintained a few banyan trees each year along a 4 km stretch of



highway between Hulikal and the next village, Kudur. She and her husband used to walk this distance barefoot and water the trees every day. They also protected the trees from cattle by building fences around them. Thus, Saalumarada started on a slow but steady journey of determination, hard work and selfless love for planting trees and maintaining them until they grow and bear fruits.

Saalumarada has planted and maintained more than 380 banyan trees and over 8000 other trees in her lifetime. You can still find her banyan trees along the Hulikal-Kudur Highway. The British Broadcasting Corporation (BBC) recognised her efforts for caring for nature, which listed her as 'one of the most influential and inspirational women of the world'. She was presented with the name 'Saalumarada' by the local people for her work. It means 'row of trees' in Kannada, and indeed she grew many such rows of trees. Saalumarada Thimmakka received many awards for her work, including the prestigious Padma Shri in 2019.

Tulsi and Saalumarada were able to fight through hardships and commit their lives to follow their passion of planting trees and protecting the environment. Their determination and hard work have made them living inspirations for all of us. They are still planting life as they live even today, maybe not as trees, but as 'motivation' for many across the nation to care for nature.

9 | Learning Around Nature

Text and Images by Sai Devi

It was just a typical weekend event - 10 families arrived at Cubbon Park, Bengaluru with only a vague idea of what was going to happen next. The poster mentioned a treasure hunt. Each clue led the group to do an activity and one of them was to find the widest tree in the park and measure the width of the trunk (known as the girth). After going around the tree with tape, then with a thread and after a few failed attempts, long discussion, additions and converting units to centimeters, the kids arrived at an answer.

At first sight, she was just a big fig tree with hanging roots. Going around her, hugging her, and measuring her had the little ones awestruck by her enormity. Next, they had to observe the tree and discover who called it home.

The little detectives were in full form. "There seems to be a burrow! Could a snake be living inside?" shouted a girl with a pigtail.

"Probably a rat," observed another girl.

"Several chirping birds call it home," pointed out an oily-haired boy. Webs with spiders, squirrels, ants, bugs, pigeons - the list went on!

The tree they chose wasn't just a giant, but a beautiful home.

Suddenly Sai Ma'am shouted, "I have a question. So all of you went around the tree and took her measurements. What shape is it?"

A girl sighed. "That's your question? It is a circle."

"So, what did you measure?" asked Sai.

"The circumference?" replied a boy.

Sai smiled. "Oh right, so what is the diameter?"

Everyone chanted, "The line that passes through the center!"

"I want to know the diameter of the tree then"

Everyone was horrified. "You want us to chop the tree? We thought you loved the tree!"

"Of course I love her; she is my best friend," laughed Sai. "Can we do it without chopping her?"

A boy raised his hand. "We could take the thread and climb over the tree?" he asked hesitantly.

"But it has branches," a girl pointed out. "How will we get the diameter?"

"Wait a second!" the boy exclaimed. "Isn't the circumference



approximately 3 times the diameter?"

"Hey, didn't we learn $C = \pi d$?" another girl replied excitedly.

"There you go," said Sai proudly. "Miss Tree is teaching us math today! Solve the mystery of the circumference and you will get your treasure."

Thicket Tales host programs where children apply science and mathematics to real life scenarios. But why, you may ask. Well, because it is a lot more fun to solve clues while learning through the process. A lot of subjects are losing their relevance today in the real world. Learning from nature is holistic. It allows children not just to connect with Mother Nature, but also provides some fun science lessons, if one pays attention!

Another group of kids and another weekend. This time, we met at Lalbagh, Bengaluru. The poster announced "A Day in the Jungle," but most families were not entirely sure of what to expect.

This was a creative session and the team at Thicket Tales was less prepared to be blown away by the young naturalists. The activity involved clues, rules and jumbled sentence exercises, games, and everything had to do with exploring the prey-predator relationship.

Once again, Sai Ma'am went: "I have a question."

"Again?!" chanted the audience.

Sai smiled. "I know you are dholes, langurs and deer. But you don't look like them..."

The children looked around at each other, giggling. "So what?"

"Why don't you all use the materials around you and become your animal?" asked Sai.

"What do you mean?" called out a few children.

After a few minutes of chaos, kids scattered.

One boy picked up a long strip of grass. "This is my tail," he announced.

Two girls found big leaves and made them into deer ears.

Another girl made a band with two leaves pointing upwards, just like dhole ears.

The twins took out paint and started coloring their faces to look like the perfect Hanuman langurs.

In no time, the parents had joined the fun as well. The whole group was painting each other with spots and whiskers.

Then began the real game of chasing each other and in the end, the children ended up challenging the Thicket Tale team to a push-up contest (don't ask us who won! We are keeping our mouths shut).

Do you now see how nature learning facilitates an easy flow of creativity? This lost form of education engages the mind, body and soul of not just children but the entire family!





10 | An Artist on a Mission

In conversation with Abhisheka Krishnagopal | By Team YFN

Abhisheka was always passionate about nature and wildlife. While doing her Bachelors in Fine Arts in Painting, she lived at an Urban Wildlife Rescue and Rehabilitation Centre on the outskirts of Bangalore. There, she found herself completing her class projects in a unique way - by sketching the animals in the rehabilitation centre and the many wild plants found on campus. Her paintings captured the distress and pain that wildlife in cities went through because of rapid development and the destruction of natural landscapes. Suddenly, Abhisheka found herself interested in nature conservation and the intersection between the arts and science.

Later, Abhisheka moved to the beautiful foothills of the Agasthyamalai Hills in Tamil Nadu, where she planned to do her master's project research. Her very first ecological research project was on wetland birds. Here, she learned not only about local wildlife and threats to nature, but also met many villagers, engaged rural children in nature education programmes, took part in local festivals, learnt about local art forms, and absorbed the local culture. These diverse experiences influenced her to apply her knowledge and skills from the arts to conservation work.

Why do we suggest that children go outside? Nature always quenches curiosity, builds patience, and connects youngsters to their surroundings. More importantly, children end up having real fun. What is better than making memories together?

Thicket Tales is a Bengaluru-based start-up. We facilitate programs where children can explore and learn from their surroundings through games, experiments and projects. Our programs are curriculum-integrated and through them, children apply the knowledge of science and social studies in their day-to-day lives. Interested young explorers can visit our website or instagram to learn more and join us!

A trained classical dancer, Abhisheka is also keen to blend movement with conservation. "I most often collaborate with folk dance performers or contemporary dancers to use dance to spread the message of conservation," she says during an interview with Team YFN. "During my engagement with school students, I explain to the dancer or choreographer which aspect of ecology I would like to teach children, and the dancer gets children to observe the natural elements and come up with movements based on them." The children are taught to pay attention to how leaves dance in the breeze, or how a praying mantis cleans itself. These motions of nature are then converted into dance moves and sequences. Through observing the world around them in preparation for the dance, children also learn to observe nature and its little nuances.

One of the most exciting projects Abhisheka took on was a movement-based performance on the ecological importance of fig trees. The project was a collaboration between artists and scientists, and the participants did not need to have any prior dance training. "The performers became the flowers, fruits, insects, birds, and the fig tree itself to showcase pollination, seed dispersal and other functions of the ecosystem," Abhisheka explained. It was a wonderful experience, and the performers loved it too!

Dance is not her only means of communicating conservation, however. Abhisheka regularly does nature illustrations to create educational materials and conduct nature workshops involving (you guessed it!) sketching and crafts. She encourages participants to work with natural materials and even waste to create creative works of art.



Now that's a real-world application of "reduce, reuse, and recycle," isn't it? Apart from workshops, Abhisheka enjoys working on community murals where groups of people get together to paint a nature-themed wall mural (a large piece of art) and engage in interesting discussions about nature. "My goal is to get people to connect to nature as well as do art, therefore I try to simplify both the arts as well as the sciences," says Abhisheka.

Collaboration is critical when it comes to combining the arts and sciences. According to Abhisheka, "Artists can collaborate with



scientists to convey complex scientific information in a creative, comprehensible manner to the larger public." Indeed, in India, it is rare to find individuals specializing in these two diverse fields, but increasing numbers of passionate people are finding ways of bridging the gap. Abhisheka also suggests ways for artists to contribute to conservation. Creating illustrations for nature-related storybooks, contributing to nature education materials, holding programmes for local schools and colleges, and joining environmental campaigns are some of these ways. "By including nature related themes in their own arts practice artists can influence people in their network," she adds.

Abhisheka also spoke about her love for street theatre, which has been used for decades to discuss social and political messages and has succeeded in mobilising communities. She remembered one of her favourite street theatre performances, "Malegalalli Madumagalu" ("Bride of the Hills"). This night-long Kannada play was staged at the Kalagrama campus of the National School of Drama, Bengaluru. When asked about her favourite part of the play, Abhisheka said, "Apart from the splendid performance and music, what I found extremely creative was the way life-size sets were designed outdoors using the natural elements. The sets made the audience feel like they were sitting right in the middle of a village in the Western Ghats of Karnataka!"

What was extremely interesting was how the art director, Shashidhara Adapa, used nature on campus as settings for the play! He used the water body on campus as a setting for scenes on the banks of the Tunga River, while the campus bamboo grove became the rainforests of the Western Ghats.



The audience moved from location to location as the play progressed. It felt just like village life. Thousands of people from across the state attended the play, immersed in the natural setting and captivating story.

Abhisheka leaves us with a positive message. "This is the kind of performance that is required to spread conservation messages - performances that can attract thousands of people from all kinds of backgrounds and age groups!" After all, conservation, like raising children, takes a village!





The following section has been curated especially for our youngest readers and includes short stories and colourful anecdotes that will take you on a wild and wonderful journey!

Turn the page to read about little Maithli's adventure to save her friend in the forest, about a magical land in the lap of the mighty Himalayas, about gigantic birds that resemble dragons flying high in the sky and many more exciting tales!

TALES & TRAILS

11 | Return to the Forest

By Ananya Rao

Art by Asmita Sapre Ranganathan

Mangli tugged her shawl tighter around her shoulders, stepping gingerly over the loose stones that were scattered across the path. Januarys in Bastar were cold, and her breath formed soft clouds as she huffed and puffed out into the chilly morning air. Since today was a Sunday, she had agreed to accompany her grandmother into the forest to collect herbs and fruits. They trekked steadily up a slope that led into a grove of *Mahua* trees that lined the edge of the jungle, their broad leaves glinting in the winter sunlight. Mangli skipped and skittered around her grandmother, bombarding with her a barrage of questions about what they would be bringing back from the forest.

“Will we need to climb tall trees to reach it?”

“Will we be able to eat any of the fruits before taking them to the *haat* to sell them?”

Her grandmother answered each query slowly, with the unending patience that comes with having raised three children and eight grandchildren. Suddenly, she stopped and pulled Mangli to her side. “Look!” She said, pointing at a small plant, almost hidden within a dense undergrowth of shrubs. “It is a *Kalmegh* plant. Help me look behind these bushes, I am sure there must be more.”



Delighted to have found something so early in the day, compared to the hours she has had to walk on other days before they stumbled on anything, Mangli scampered over to the plant and peered between the shrubbery. The pearly white buds of dozens of *Kalmegh* waved back at her, glistening in the morning dew. "There are many more behind the bushes!" she exclaimed.

Jubilant with her discovery, Mangli squatted down to the ground and began ripping the plant from the mud.

"Mangli! Stop!" Her grandmother's voice was firm, stopping Mangli in her tracks. "You must never pull out the entire plant! All we need is the leaf. If you pull it out at the roots, the plant can never grow back. But if we just take the leaves and let the plant live, when we come back in a few months, or years, the same plant can give us so many leaves again."

Her grandmother's words ran around in Mangli's head as she painstakingly picked out the individual leaves from the dainty plant. Soon, their baskets were filled, and they began the long walk back home.

A few days passed. Mangli busied herself with schoolwork. Exams were coming up in a few weeks, and the Hindi exam always made her anxious. Although she was fluent in spoken Hindi (after all, everyone in school spoke in Hindi!), the grammar tests made her feel like tearing her hair out in frustration because she simply could not get it right. To make matters worse, there was no one who could help her at home because her parents and grandparents only spoke in the local language - Dhurwi. So, every evening after

school, she would trudge desolately to her friend Jamuna's house, where Jamuna's aunt, who had gone to school in her childhood, would help all the children in the neighbourhood muster the courage to tackle the terrifying world of Hindi grammar.

Today, as Mangli chewed on the back of her pencil, which was already covered in bite marks, searching desperately for any conversation that could save her from changing past tense to present tense, her grandmother's words suddenly reoccurred to her.

"Kamla Didi..." She began tentatively, afraid of angering the strict young teacher. "Have you ever harvested *Kalmegh*? Do you pull out the entire plant or just the leaves?"

Kamla wrinkled her nose, thrown off by the sudden change in subject from tenses to *Kalmegh*. "I haven't gone very often so I don't really remember, but I think I just pulled out the entire plant. Why do you ask?"

By now, Hindi grammar had completely escaped Mangli's attention and her mind was abuzz. How was it that even Kamla did not know the right way to harvest a plant? She was an adult!

Throwing her books into her bag, Mangli thanked Kamla for her help and left. Determined to find out how much the other adults knew about the forest, Mangli wandered into the nearby fields. One month ago, the fields were an endless ocean of bright yellow, mustard flowers swaying back and forth in the breeze. Now, as the time to harvest them had arrived, the flowers had withered to a dull brown. Mangli trotted from one field to the other, deftly evading the piles of seeds that were being

harvested, inquiring of every person she met about what they harvested, and how.

She walked back home with her brows furrowed in concentration. What she had learned today was far more interesting than Hindi grammar, but far more worrying as well. Upon reaching home, she went straight to her grandmother. “Why do so many grown-ups also pull out the entire plant when they are collecting things from the forest? Don’t they know it will kill the plant?”

Her grandmother looked up from the pile of leaves that she was sowing into the plates that they would use for dinner tonight. “It’s not so easy, Mangli. Some plants need to be pulled out by the root, like onions, because it is the root that has all the nutrition. In some plants, we humans like to eat the fruits, while sometimes we need only the leaves, and sometimes we need the roots. What is important is to learn how each plant can be harvested in a way that causes the least damage and, if possible, allows the plant to live as long as possible.”

“Do you know how to do that?” Mangli asked, sincerely.

“I know, because my parents taught me,” her grandmother replied. “But it is not your parents’ fault that they do not know, or that they did not teach you, because they were busy growing rice and maize and mustard in our fields. That is what they were taught, and that is what they are teaching you. Many in their generation have forgotten the ways of the forest.”

Mangli’s eyes widened with concern. “But it is important that they are reminded about the forest too, right?”

Her grandmother sighed. “Of course, but it is not an easy task. How will you remind an entire generation of a knowledge that has been forgotten?”

Mangli ran her fingers through her hair, thinking intently. Her head snapped up a few moments later, eyes shining with the delight of a newly forming idea. “How about... I make a painting? I can do it on one of the walls of the Panchayat Bhavan, everyone will see it that way! I’m sure *Sarpanch-ji* will be okay with it!”

“What will you put in the painting, Mangli?” Her grandmother asked, uncertain.

“I will paint the forest! I can paint all the different plants and trees! I can even add people collecting all the fruits and seeds we bring back, and some animals eating it too!” With each passing sentence, Mangli’s excitement grew and soon she was hopping from one foot to another.

Her grandmother smiled. “I think that’s a great idea. To make it even better, why don’t you ask other people to help you? Everyone can be part of it, they will surely learn and remember even better that way.”

Mangli nodded along in agreement. “In order to know what to paint and how to paint it, we will all need to visit the forest! You can come with us, and teach us what is what. This will definitely work, just wait and see!”

The next few days passed by in a blur. The harvest was finally completed, giving everyone a few days to rest. Now that everyone did not have to rush out to the fields every

morning, a blanket of leisure settled upon the village. People flocked out of their homes every morning, greeting each other and spending hours together finishing small tasks that they did not have the time for during the last few months. This is when Mangli began her project.

Every morning, she would approach a few new people, assailing them with a flurry of explanations on the importance of the forest. Her earnest pleading would convince them to join her in an expedition to the jungle. Her grandmother accompanied them every day, carefully identifying all the different herbs, plants, and trees that their ancestors always depended on. Mangli brought all kinds of people; young women who had newly entered the village after marriage; mothers with toddlers trailing behind them, clutching onto their sarees; men and women who had finally finished a hard season of harvest; young boys and girls who joined them in the afternoons once school ended; and even the elderly, who slowly began adding their own knowledge and memories to the fast growing mural.

And the mural really did grow fast. It began with a grove of trees: tamarind, *mahua*, *sal*, bamboo and mango, with the leaves and branches of each one sketched out in excruciating detail. Next came the medicinal herbs: *Harra*, *Behra*, *Kalmegh*, *Giloy*, and *Amla*. Slowly, more and more species were added. *Tendu* shrubs, mushrooms like *Chati* and *Boda*, and even other creatures such as fish in the stream and the cocoons of the silkworm. Entire families were drawn in, fascinated by the enormous masterpiece that was emerging in the centre of their village. Even those who walked by the building without batting an eyelid every day were eventually drawn in by the energy and excitement that filled the project.

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The end of the month brought an end to the project, and the start of the village *mela* (fair). Hundreds of families from the nearby villages poured into the village and each and every one of them were transfixed by the mural. Mangli welcomed them proudly, repeating the same introduction to every person who stopped by to see the painting: "This is our forest, this is how we use it, and each and every one of the trees in this painting will be present in the forest for all our children and grandchildren to see."

Below: Kalmegh (Image by India Med)



12 | Wild Holidays

By Amisha Rathore
Art by Asmita Sapre Ranganathan

In a small village near Kukru Khamla, in the middle of a forest in Madhya Pradesh, there was a small wooden house where an old woman used to live alone. Her granddaughter, Maithli, came to visit her during her holidays. Maithli was a very jolly and kind hearted girl. She loved to explore places. Maithli spent her time eating lots of delicious food and playing outside throughout the day. One night, before going to bed, she asked her grandmother why she was not allowed to go out at night. Her grandmother told her that it was because of dangerous wild animals around the forest.

Maithili wondered, "Are they not dangerous during the day?"

Her grandmother replied, "They are, but many animals sleep during the day and are active at night."

And with this answer she instructed Maithli to go to bed. She kissed her goodnight and told her to sleep well.

While little Maithli was lying in bed, she looked outside the window. She noticed a nearby cottonwood tree where there was an owl. It was the first time she had seen an owl and she was amazed. Out of curiosity, she got out of bed quietly and went out near the tree. She walked right up to the owl and looked in its eyes.

She said "Owl?"

"MR. OWL" replied the owl.

She was shocked and asked "You can speak?"

"No, it's just you who can understand me" replied Mr Owl.

She asked, "What are you doing here in this tree? It's late, my grandmother told me it's not safe to be out at night. If you want, you can come and rest at my place."

The Owl laughed and said "I belong to this place, this is my home."

"Why didn't you sleep during the day? My grandma told me that many animals are active at night and rest during the day."

The Owl looked sad.

"What happened?" asked Maithli.

The Owl replied, "For the past 2 days some humans have been trying to find me every night. They come with a gun to try to kill me. I don't know why, maybe it's a sport for them or they are superstitious.. a week ago they even killed my neighbor. They say we are symbols of bad luck."

"Where is your family?" asked Maithli

"Ohh! I am protecting them, they are inside the tree, I love them so I don't want them to get hurt. Now you go inside your house, it is late."

He asked Maithli to keep their meeting a secret and Maithli promised that she would. She went back home and laid in bed while watching the old cottonwood tree and she

decided to save the Owl and his family. She came up with a master plan!

The next morning, she told her grandmother, "Grandma, you said animals are dangerous to humans, but I think humans are just as dangerous to animals."

"Why do you say that?" Asked her grandmother.

Maithli made up a story and told her grandmother that the previous night, from her window, she saw some men carrying guns and she saw them kill some wild birds. She asked her grandmother if they could do anything for the wild birds. Her grandmother smiled and asked her why she wanted to save those birds. Maithli said she wanted to save the forest and all its wonderful creatures. Grandmother told her that they could call the forest department and tell them and catch the illegal hunters.

A guard from the forest department later came to their house and asked Maithli for more details. She told the same story to the guard, and asked him to catch the hunters that night.

At night, Maithli kept peeking from the window and the moment that the hunters arrived with a gun near the cottonwood tree, the guard rushed to them and asked them what they were doing. The two hunters were shocked, and beads of sweat rolled down from their foreheads.

One of those hunters lied and said that a giant owl had attacked them the previous day, so they carried guns to protect themselves.

The guard said, "No animal, whether an owl, wild bird, or any



wild animal will never hurt you unless you hurt them first or you frighten them.”

“You guys roam in the forest, hunt animals and birds, smuggle them and destroy the forest and nature. According to the Wildlife Protection Act {WPA 1972}, it's illegal to catch, keep, kill or sell wild birds.”

The hunters sank to the ground crying, “We are sorry, we realize our mistake, please don't send us to jail, we will accept any punishment, we will do whatever you say, just don't send us to jail.”

Maithli thought a little and said, “Mr guard, please don't send them to jail, after a week some other man will come with a gun to kill these animals. I want them to educate their community to not hunt animals or birds. They should explain how to make harmony between humans and animals. If you will not harm nature, nature will never harm you. Mr guard, can you hire these men to take care of this forest?”

The guard replied, “Oh little girl, yes. I would love to take on this responsibility.”

The hunters apologized and the guard thanked grandmother and Maithli and assured them he will continue to take care of the forest.

Maithli and grandmother went inside the house and little Maithli was so happy, she peeked once again outside her window and looked at the old cottonwood tree and fell asleep peacefully.

13 | Magical Daandu

By Diksha Nautiyal

Standing in the front yard of my Nani's (grandmother's) house in Mukhwa, I have always wondered what lies beyond the mountains that I see behind the house. Mukhwa is a village that lies in the lap of the mighty Himalayas near Gangotri. I got the opportunity to explore the mountains when I was visiting Nani one summer.

We started out early in the morning around seven. Our group had a total of ten people including my mom, uncle, aunt Nani and a few other people from the village. As we started to move up the mountain the scenery began to change. There were more deodar and pine trees, we could see the snow covered mountains more clearly and the air was filled with the scent of evergreens. We walked for about an hour and half before we stopped to rest and refresh at a place named Thui. Here we had a magical view of the mountains ahead and the criss crossing road below. We started to walk again and the path became less steep as we were now walking over to another mountain. We walked for about an hour and reached a place called Naagni.

At Naagni, there were beautiful green pastures and pitched right in the middle of one of the pastures, was a small white tent. As soon as we neared the tent, two black coloured 'bhotia' dogs (guard dogs) came running towards me!

I was frozen with terror but to my surprise, they started to lick my feet. I relaxed and bent down to pet the furry creatures.

There were two shepherds sitting by the tent, a small stream of water was flowing nearby and at a distance, a herd of sheep and goat were grazing. Most of them were white in colour and together looked like tiny white rocks from a distance. There was a roaring fire with a kettle on it and the shepherds invited us to use their kettles to make chai. They even offered their goat milk to us. We all settled down and started eating the lunch that we had brought with us and drank the chai that we made by the fire. The dogs sat by our feet expecting small bits of food, but as soon as the shepherds whistled, the dogs sat up on alert and ran towards the herd. The sheep and goats, sensing the activity, turned towards the tent and the bhotias eventually gathered the herd and took them back to the shelter. The coordination between the animals and the shepherds amazed me. After sitting there for a while, four of us started moving forward while other villagers along with my Nani took out their digging fork and spread it around to dig up 'chora', a special plant used for medicine and as a spice. Our group started up the mountain of Naagni. On the way, we came across the wonders of nature like the bhojpatra trees or the Himalayan birch whose bark was used in ancient times as paper. We saw wild horses grazing across the meadow and beautiful flowers in so many colours. The flowers reminded me of the folk song which is sung every year during the selku festival. All these valleys together are known as Daandu in the local language. One line of the song goes:

“Daandu Kya Full Fulaala, Daandu Kya Full Fullala”



Above: Image by Harshil Heaven
Right: Image by Diksha Nautiyal

In the Garhwali language, it means that the valley will bloom with many different kinds of flowers in the months of August and September.

After we went back to Naagni we met the others who were now sitting by the fire drinking chai and had bags full of 'chora' (local snack). After eating and talking with the shepherds, we headed back towards home. When we were sitting with the shepherds, they told us about the changing climate in the area and how it is not as cold as it used to be and that it doesn't snow as much as it used to. At first they used to come back with their animals in early October because it used to get very cold there but now they stay back there as long as November. This climate change concerns me a lot because if this change keeps up we are going to lose all the amazing and awesome wildlife nature has gifted us. This experience reminded me why we have to work on saving our planet before it's too late.



14 | Dragons of Heaven

By Abhijat Shakya
Art by Shruti Samanta

Boy- “Woah, the sky! Such brilliant colours, ooh a bird!”

Strange Voice- “That’s a Kite, let’s call it a dragon, young boy.”

Boy- “Is this a dream? Who are you?”

Strange Voice- “No, it’s not a dream!”

Boy- “Oh, who am I talking to? This feels strange.”

Strange Voice- “I am an old tree. Mother of all birds and animals. Even humans worship me and tie sacred red strings and cloth around me. Humans call me Peepal.”

Boy- “Oh, but how can you talk? And why am I here?”

Peepal- “See kid, there is a strange force which connects us all. Everyone knows it with different names. By this force, old trees like us can make connections or communicate with any being.”

Boy- “Woah that is amazing! Can you communicate with the dragon? Why do you call that bird a dragon?”

Peepal- “Sure. Well, because it flies like a dragon, motionless for hours.”

Boy- “It must be fun looking down for hours and hours.”

Peepal- “Yeah it’s fun. Dragons soar above the clouds, just as a ship sails quietly through the sea.”

Boy- “But that doesn’t make them real dragons.”

Peepal- “No it does not make them real dragons. It’s their exceptionally large size with stretched wings blocking the view of the sun from sight, that makes them terrific. They are



both fierce and brave. Whenever small birds catch even a glimpse of them, they shiver with terror. When they hunt, their eyes are as cold as the eyes of a snake about to strike."

Boy- "They are monsters! Is that why little kids are afraid of them?"

Peepal- "Are they monsters? That's really what you think? Monsters are beasts that only kill the weak for fun, like humans."

Boy- "Humans are not monsters, We have done nothing wrong. It's because of these dragons that millions of pigeons die everyday."

Peepal- "Listen kid, dragons are animals, just as all of us and they need food to exist. For you it is some plant or a fruit, for them it is a pigeon. They do not kill pigeons because it is fun, they kill to eat. Without food, dragons will disappear and then what will happen? The pigeon population will explode to thousands which will lead to an imbalance in the ecosystem. Humans are monsters because they cut down the forest and take away homes of wild animals."

Boy- "So, am I a monster?"

Peepal- "Are you?"

Boy- "I don't want to be a monster. How can I not become a monster?"

Peepal- "Hmm, educate yourself about nature, not necessary to dig deep into books but to learn about nature just by observing it. I have gained knowledge for about 500 years, so I take kids like you on the journey of nature as you are the last hope to save these dragons."

Boy- "So how can I save these dragons?"

Peepal- "It's simple, learn about these dragons and teach others about them!"

15 | An Evening Encounter

**By Ankita Rajasekharan
Art by Prajakta Darade**

It was a time when having acquaintances and friendships outside the human world was a common affair. It was unsurprising to know where a particular stray cat or dog could be found in the evening, in which pot the giant frog buried itself and rested, in which little tree the bulbuls built their nest and which patch of soil erupted with soft velvet bugs during the monsoon. Afternoons and evenings were spent in quiet observation and in the company of these creatures and stories arose from knowing these details.

Some routines ensured acquaintances developed into unconventional friendships; unconventional in that the shared language was simply one of offering presence and not necessarily spoken exchange. Every evening, for a month and more, I walked to a friend's home for what we called 'combined study'. Like all homes, there is a long, well-travelled motor road and then there is the shortcut! The shortcut is often one that is used only by children, needing regular use to keep the bushes apart and the path alive!

Hugging a stack of books, my steps were hurried that evening. Few rays of sunlight reached the floor of the thicket, marking out pockets of soft glowing warmth.



A mellow but audible pressing of leaves & jungle rubble travelled to my ears, matching every step. Nothing unexpected so far. And then, there it was!

A swift slither through the leaves, just a little ahead of me. As is a trained response when in thickets of bushes and trees, I swiftly craned my neck to follow the sound, to be met with the sight of a completely still, almost camouflaged Spectacled Cobra. Rooting my feet into stillness, I lengthened my spine to catch a clearer glimpse of one that had curled its spine into waves as it remained in stillness too. Head flat on the ground, the spectacled hood resting and mimicking the leaves in the many stages of decay around. A few shared moments of quietude later, it slithered on away and I hurried on to narrate my meeting with a Spectacled Cobra to my friend. For several evenings after, this walk to my friend's home was made thrilling by a brief meeting & greeting with the very same Spectacled Cobra. How did I know it was the very same one? Well, you will know. When repeated presence is offered, connections are drawn and friendships are experienced.

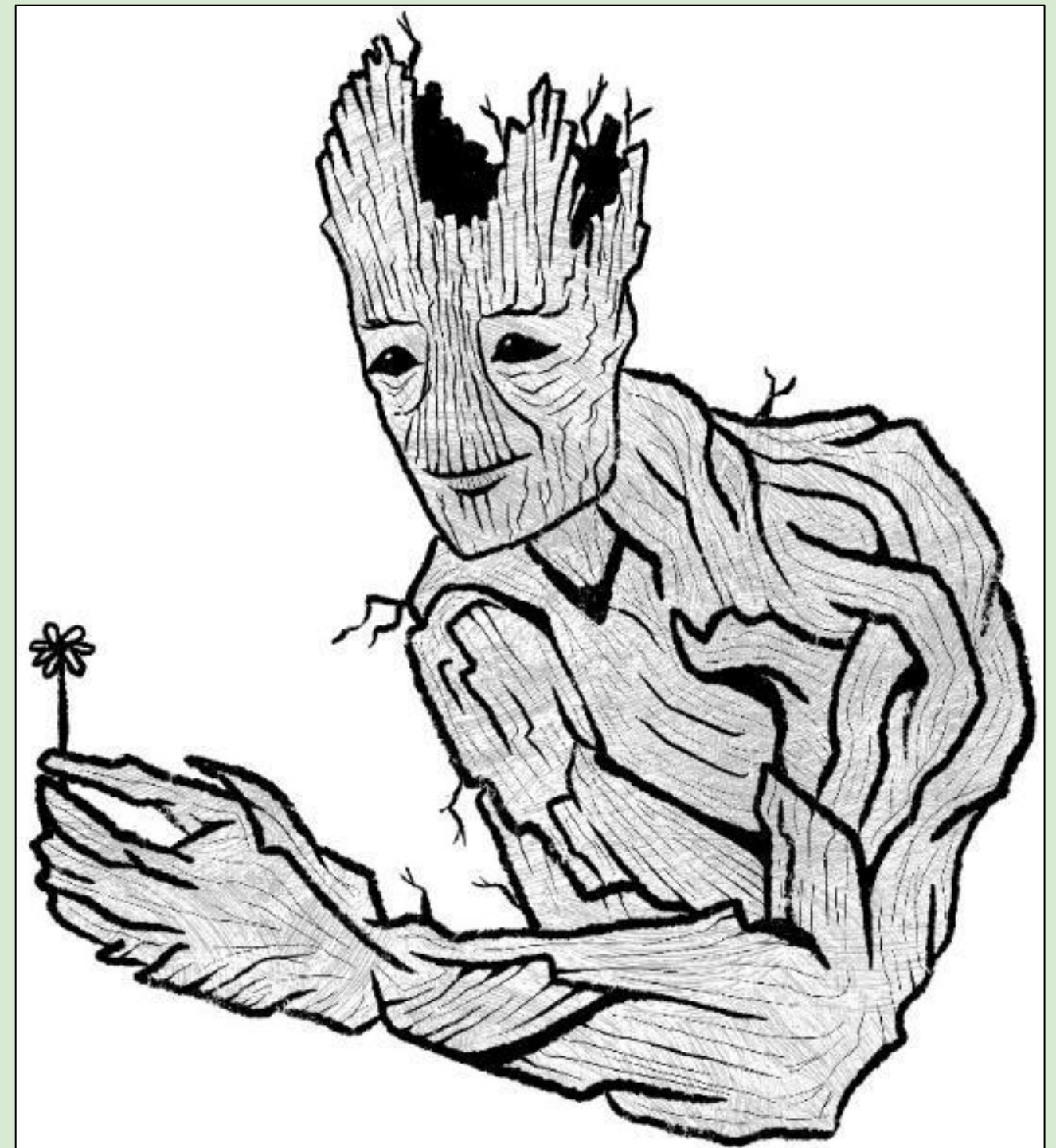
ACTIVITY CORNER

15 | Celebri-trees!

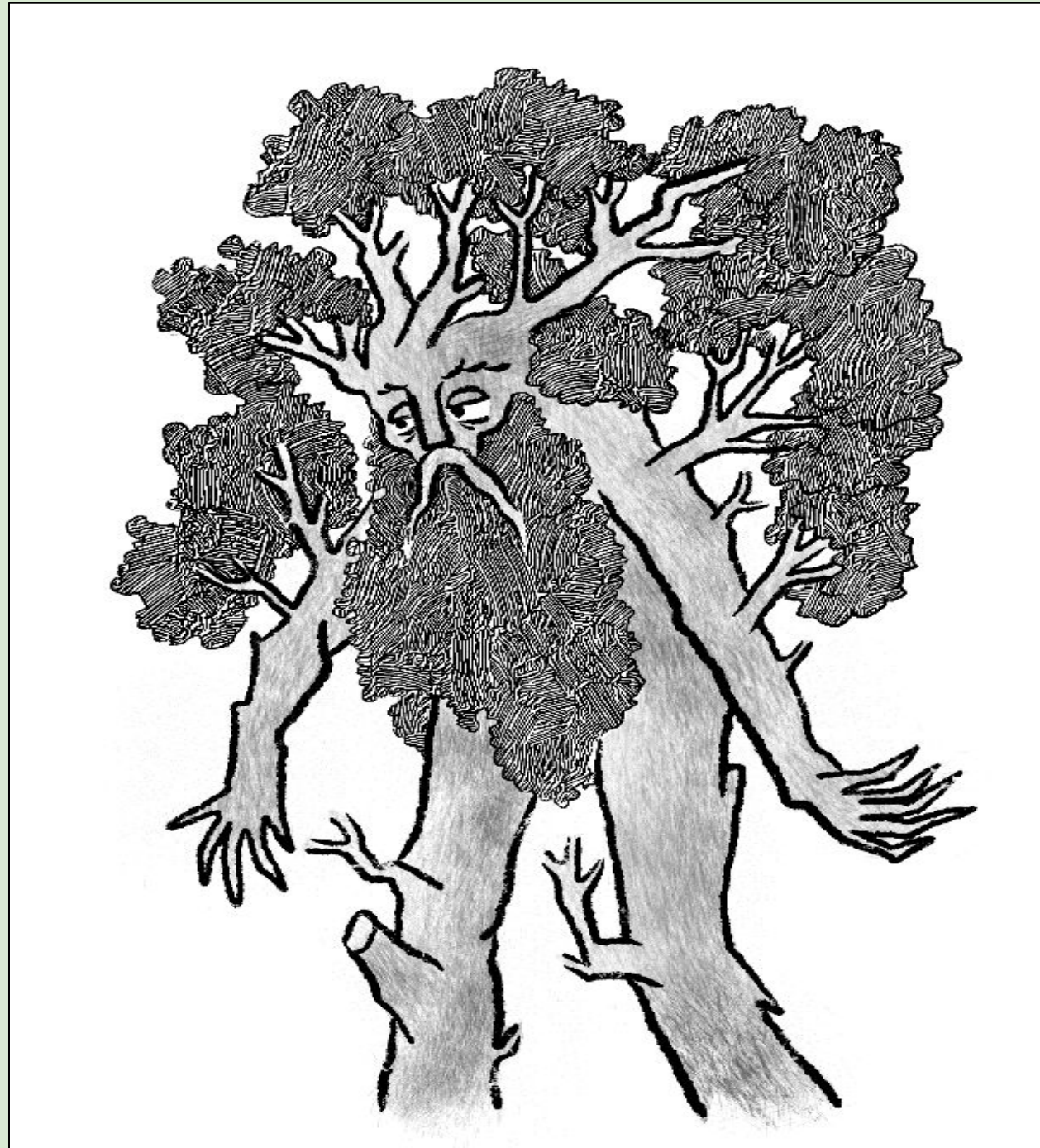
Text and Art by Kshiti Mishra

Trees play an extremely important role to support a wide variety of life in many different ways. Some trees have gained fame and stardom in works of literature, mythology and movies, having as important a presence as the human characters themselves! Here are some trees that made it big. Do you remember their names? Find all the answers at the end of the activity section in the answer key!

1) This extra-terrestrial tree-like creature belonging to the species *Flora colossus*, has a stiff voice-box, making its language nearly impossible to understand: when it speaks, it instead sounds like it is just repeating a certain phrase again and again. It has the ability to regenerate, and has helped several superheroes on their missions to save the Earth and other planets and galaxies!



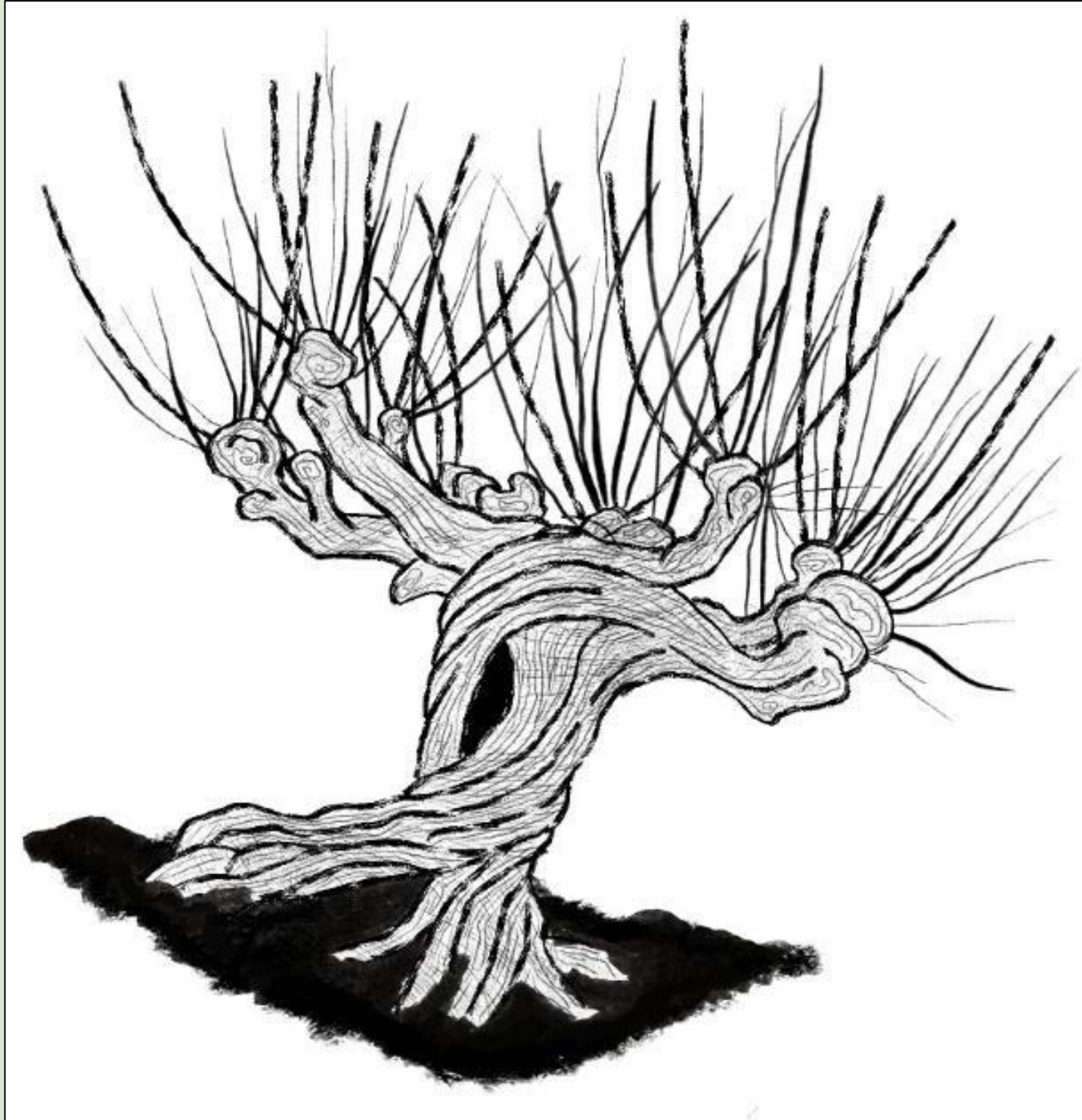
2) These creatures were created as shepherds of the forests across Middle-Earth, to guard trees from Dwarves, Orcs and other perils. Over time, they themselves began to resemble the trees that they were meant to protect. The last of these creatures remain in the forest of Fangorn. They have a long and sonorous language so that even short debates last for hours, but when needed, they are well capable of marching to war and taking down evil wizards that are killing large numbers of trees.



3) The tree of life in Hindu mythology, this tree emerged as one of the *ratnas*, or treasures, when the *devas* (celestial beings) and *asuras* (demi gods) were churning the ocean. It is a divine, wish-fulfilling flowering tree whose flowers never fade or wilt. After emerging from the ocean, it was planted in *Indralok* (heaven) by the *devas*.



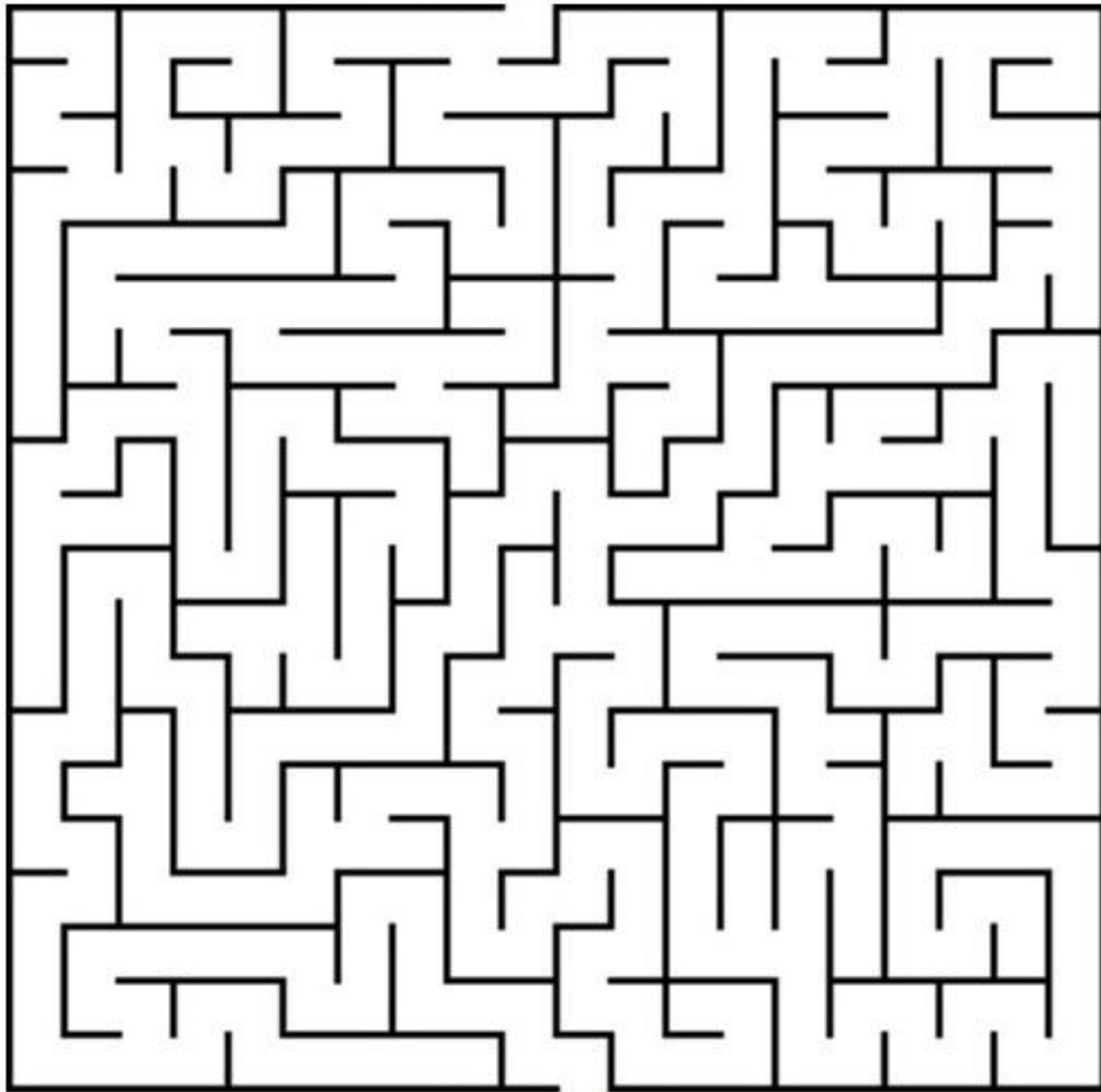
4) A very valuable and very violent species of trees with a nasty personality – they will whack anything that comes within the range of their branches. One member of this species is planted on the grounds of a famous school and is known to have battered cars, broomsticks and people alike. But if you find out the right trick, it might lead you to an unexpected place!



5) Believed to be an eternal, sacred world tree, this tree serves as a connection between the nine worlds in Norse mythology. Just as our trees on earth support a large number of animals and birds, this tree also has creatures dwelling in it such as an eagle, deer, a dragon and a squirrel.



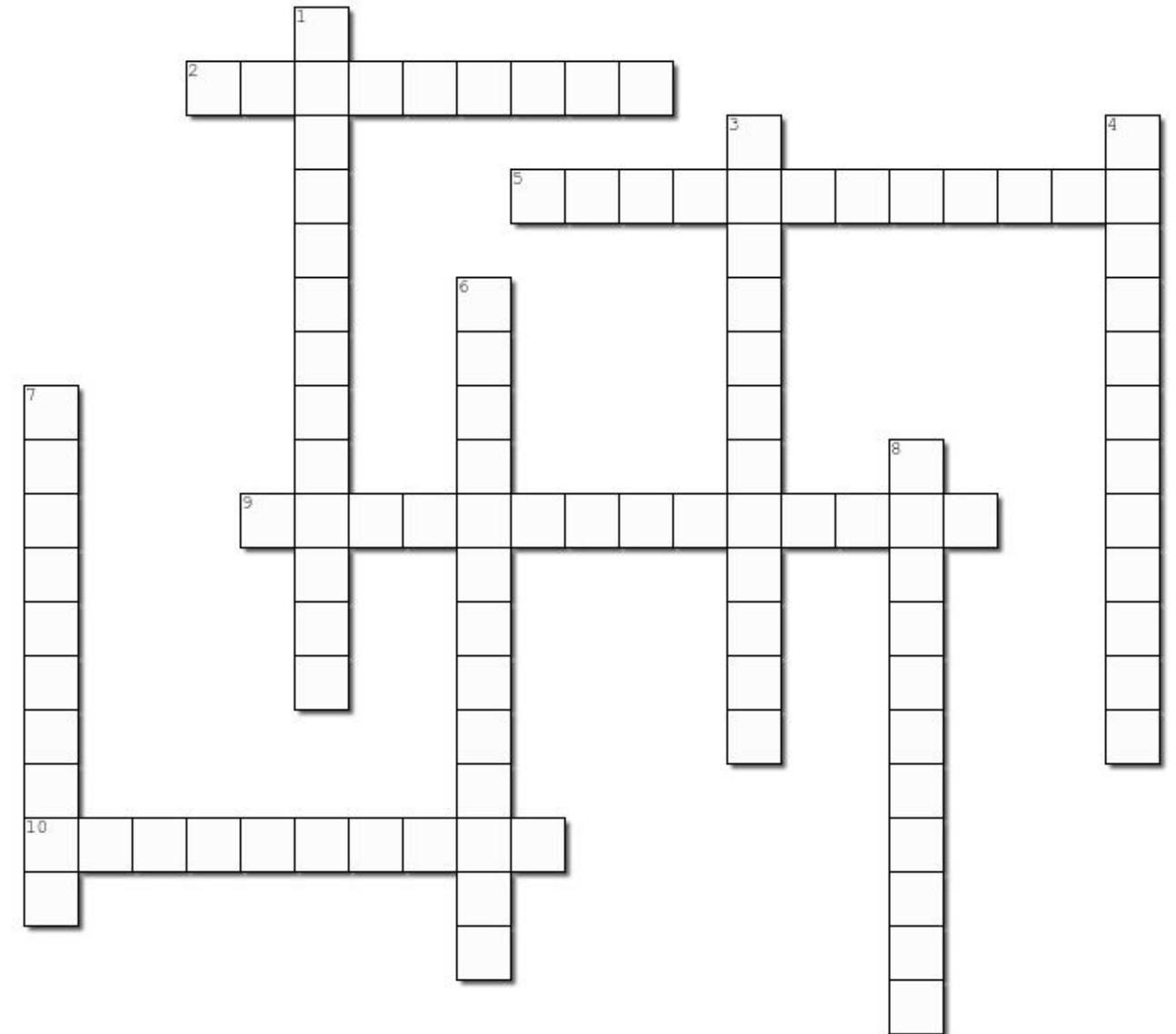
Help the Sunbird find the flower to pollinate!



Answer Key on the next page

Women of the Wild

Complete the crossword puzzle below and find the names of these inspiring women in conservation, from past to present!



Created using the Crossword Maker on TheTeachersCorner.net

Across

- 2. An artist, wildlife warrior, and National Geographic Explorer...psst, she draws plants!
- 5. Chief Scientist at a wildlife NGO in India, studies tropical forests and hornbills
- 9. A Kenyan wild warrior who founded the Green Belt Movement and was the first African woman to win a Nobel Peace Prize
- 10. Studied the mountain gorillas of Africa, and founded the Digit Fund.

Down

- 1. National Geographic Explorer and Chief Conservation Scientist at one of India's oldest wildlife NGOs
- 3. She wrote the famous book 'Silent Spring' about pesticides and wildlife
- 4. A 109-year-old mother to hundreds of leafy children...and another gem of Karnataka
- 6. A young climate change warrior...you all know her name!
- 7. An elderly tree-loving environmentalist from Karnataka...she knows an encyclopedia's worth about the forests!
- 8. The world's leading chimpanzee expert, works in Africa

ANSWER KEY

CELEBRI-TREES!

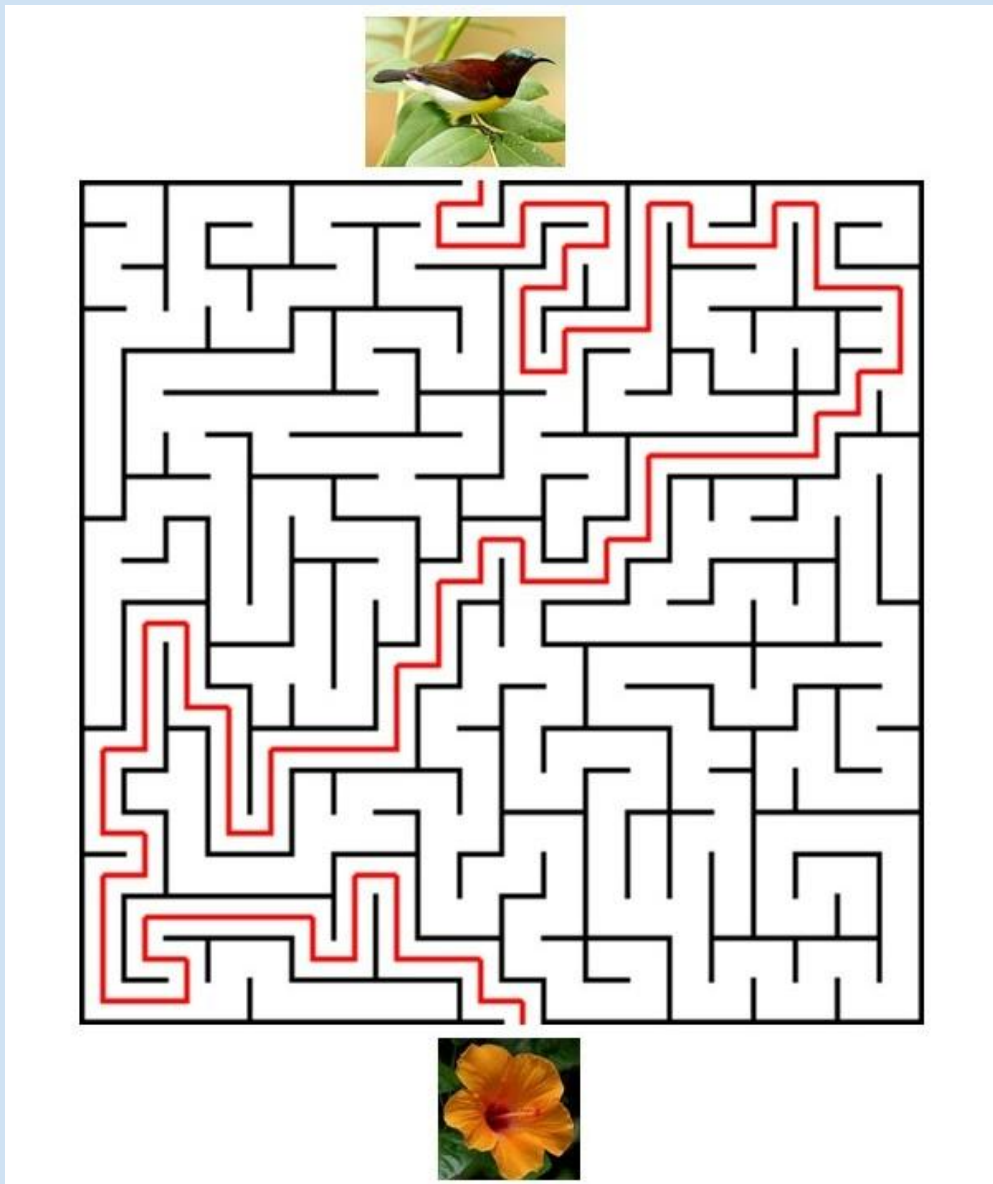
Ans. 1: Groot (from Marvel comics and movies such as *Guardians of the Galaxy*)

Ans. 2: Ents (from *the Lord of the Rings*)

Ans. 3: Kalpavriksha

Ans. 4: The Whomping Willow (from the *Harry Potter* books)

Ans. 5: Yggdrasil



Women of the Wild

Complete the crossword puzzle below and find the names of these inspiring women in conservation, from past to present!

Created using the Crossword Maker on TheTeachersCorner.net

Across

2. An artist, wildlife warrior, and National Geographic Explorer...psst, she draws plants! (**niruparao**)

5. Chief Scientist at a wildlife NGO in India, studies tropical forests and hornbills (**divyamudappa**)

9. A Kenyan wild warrior who founded the Green Belt Movement and was the first African woman to win a Nobel Peace Prize (**wangarimaathai**)

10. Studied the mountain gorillas of Africa, and founded the Digit Fund. (**dianfossey**)

Down

1. National Geographic Explorer and Chief Conservation Scientist at one of India's oldest wildlife NGOs (**krithikaranth**)

3. She wrote the famous book 'Silent Spring' about pesticides and wildlife (**rachelcarson**)

4. A 109-year-old mother to hundreds of leafy children...and another gem of Karnataka (**saalumaraada**)

6. A young climate change warrior...you all know her name! (**gretathunberg**)

7. An elderly tree-loving environmentalist from Karnataka...she knows an encyclopedia's worth about the forests! (**tulsigowda**)

8. The world's leading chimpanzee expert, works in Africa (**janegoodall**)



Meet the Team



Our Editorial Team:

Co-Editors: Priya Ranganathan & Nikita Bhat
Social Media Manager: Sankaranarayanan R.

Priya Ranganathan is a wetland ecologist and geologist by training who works in the wild Western Ghats. When she isn't out wading through swamp forests, she can be found scribbling away in her notebook or practicing Bharatanatyam. Check out her website ['On Life and Wildlife.'](#)

Nikita Bhat is an environmentalist from Bangalore. She is particularly interested in issues of environmental justice and building resilience in social-ecological systems. She is looking forward to hiking, camping and travelling to far and distant lands in a post-COVID world.

Sankaranarayanan R. is pursuing an M.Sc. in Conservation from ATREE and TDU, Bengaluru. Raised in Chennai, he enjoys being in nature.

Meet Our Writers:

Abhijat Singh Shakya is a student of the 12th class. A nature enthusiast and an amateur nature photographer who likes to share wonderful life processes and occasionally writes articles about nature.

Abhisheka Krishnagopal is an artist and conservation practitioner, who enjoys combining these two diverse fields to spread the message of nature conservation and respect for wild places to a wide audience. You can see her beautiful artwork on Instagram at @kala_kaanana.

Amisha Rathore is a first-year student pursuing her M.Sc. in Wildlife Science.

Ananya Rao is a Researcher at Ashoka Trust for Research in Ecology and the Environment (ATREE), working on community forest rights and forest based livelihoods in Bastar District, Chhattisgarh. She spends her spare time painting, writing, or generally being outdoors.

Ankita Rajasekharan is a nature and art enthusiast. She enjoys spending time in the natural environment, observing and documenting small happenings in nature. She believes art has deep potential for self exploration and expression and is in continued pursuit of discovering and uncovering this potential. She has been working as an educator for over 6 years now.

Ashika Talreja is a postgraduate in Wildlife Science and a nature educator. She has a love-affair with birds and their songs. She tries to get more people involved in nature through nature walks, writing, sharing field stories and exciting nature games. She posts as @the.vagrant.bird

Avik Banerjee is pursuing a PhD at the Center for Ecological Sciences at Indian Institute of Science, Bangalore. His research includes studying behaviour of lizards and their diet. Avik is a nature enthusiast who loves to travel around and learn new things. He also has a keen interest in nature photography.

Diksha Nautiyal is pursuing her Bachelor's degree in Zoology, Botany and Chemistry from D.A.V P.G College. In her free time she likes to volunteer at the community clinic of her village and write about the rural tales of Garhwal.

Kshiti Mishra is pursuing a PhD in physics in the Netherlands and occasionally likes to dabble in different kinds of art.

An engineer-turned-wildlife biologist, **Prakhar Rawal** has a Masters in Wildlife Sciences from Amity Institute of Forestry and Wildlife, and is currently a Junior Research Fellow at Zoological Survey of India, Dehradun. He is interested in studying birds living in human-modified landscapes, and figuring out ways to co-exist with them. He has done research work in Delhi and studied birds residing in urban ponds and street trees.

Sai Devi is the Founder of Thicket Tales. Growing up with an abundant backyard, she always had Mother Nature and the art of nature appreciation to fall back upon during difficult times. Given the changing and busy lifestyles of today, she believes nature appreciation could be a secret ingredient to bring families and friends together. With that as her mission, she started Thicket Tales. When not working, she is found lost in the world of books and food, or often digging up something in her backyard!

Tithi Kagathara has completed her Masters in Wildlife Conservation and Action from Bharati Vidyapeeth University, Pune. Currently, she is working on a Grassland Ecology and Conservation Project at Neemuch, Madhya Pradesh with Tata Power Company Ltd.

Yamini Srikanth (he/they) is an environmental educator who is trying to reevaluate what environmental education can mean to all of us. His hobbies include being outside, roaming around and writing.

Meet Our Artists:

Working in wildlife, **Adyasha Nayak** found a way to marry her love for nature with her love for art. Through art, she tries to shine a light on the diversity of wildlife around us, and the challenges in conservation of that life.

Asmita Sapre Ranganathan is a doctor, Sanskrit teacher, artist, poet, and writer from Mumbai. She enjoys wearing her many hats and especially enjoys illustrating for children's books and magazines.

Maneesha Warkade is a passionate and creative engineer turned designer. She did my bachelors degree in E&TC from Jabalpur Engineering College (2012-2016) and worked in MNC for a few years. Her interest in working for children and the educational field moved my career interest to the design field. Her design journey started from 2019 and she completed her degree in Masters in Design from the School of Planning and Architecture, Bhopal in the year 2021. Maneesha is a self-taught illustrator who wishes to take a small step in making the learning stage of children thoughtful and enjoyable.

Meera Phadnis is in the 10th standard at Campolindo High School, San Francisco, California (USA). She is an avid artist, reader, and Kathak dancer. She also is a member of the school debate team and enjoys exploring new places and meeting new people.


Prajakta Darade is a final year student at Sir J.J. College of Architecture and a self-taught artist. She loves canvas painting and illustrating animals. Initially, she started doing it as a leisure activity, but with time, she realised that she could showcase her artwork to raise awareness and create interest among people. You can view her work on Instagram at @pdprajakta

Rohan Sharma firmly believes that wildlife and art are his cup of tea. He has been sketching since school days and finds it to be a great stress buster! He is also an avid birder and a wildlife photographer.

Shruti Samanta is a PhD student at ATREE, Bangalore, where she will be studying sustainable management practices in monoculture plantations. She loves painting and puts her thoughts into her pictures. She is also fond of birds and can be found photographing or sketching them.

Cover Art by Asmita Sapre Ranganathan
Back Cover Art by Adyasha Nayak

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Youth for Nature focuses on bringing current environmental news, informative pieces on India's wildlife and wild places, and engaging activities to bring children closer to nature. We take pride in showcasing the work of children as well as professionals working to save India's wilderness to inspire youth to speak for our natural world.

Contact us at yfn.magazine@gmail.com with queries or if you would like to write/illustrate/translate into regional languages in upcoming issues.