

turtle tightly in its grip. According to the photographer, the crab found the turtle's carapace too hard and eventually let it go. The ghost crab is named after its ability to move at a superfast speed, which allowed the discussion only a shostly glimpse.

A stalk-eyed ghost crab has an olive Ridley

allows it to disappear quickly, usually offering only a ghostly glimpse.



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The beautiful and mysterious margay cat is native to central and South America.

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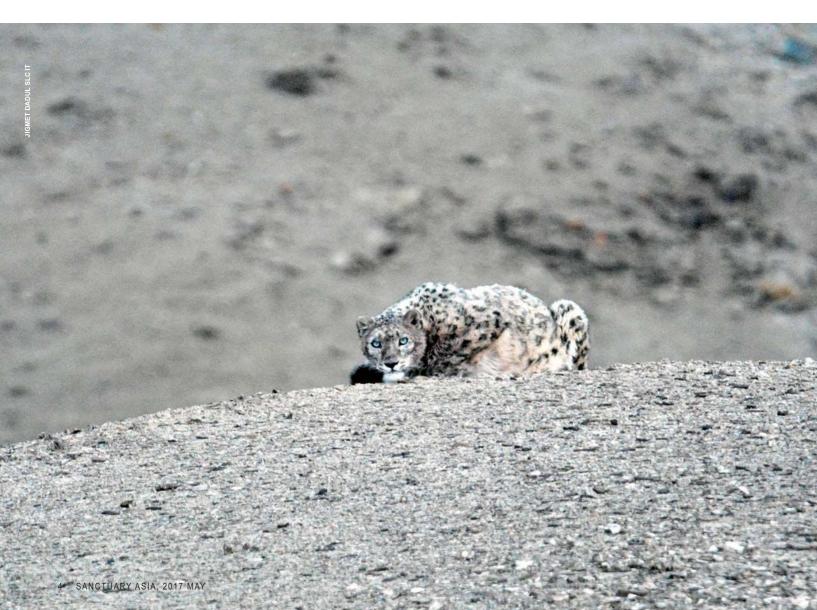
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FOR THE LOVE OF SNOW LEOPARDS

*

The way it moved with elegance and confidence was a sight to behold. "The ghost of the mountains!" I murmured. It was equipped with all the tools to be comfortable in the world's toughest terrain. Its thick body fur and long tail were just perfect for the harsh weather. Its best adaptation, of course, was the colour of its fur that allowed it to perfectly blend with the surroundings. This was my first sighting of a snow leopard and it was enough for me to fall in love with this beautiful cat. Text by Anzara Anjum



It began with a call on February 24, 2016. We were informed about a snow leopard sighting in Miru village, which is around 60 km. from Leh. Without a second thought, our team from the Snow Leopard Conservancy-India Trust set off on a rather unplanned expedition. It took us almost two hours to reach Miru village, located on National Highway 21. It is a small village with a cluster of nearly 30 households around the river bank and a few houses dotting the base of the mighty mountain. In the summer, most villagers carry out subsistence* farming to make a living. This is their only source of income apart from raising some livestock. There's no household plumbing in these parts – women have to collect drinking water from nearby streams. Life is hard... but broad smiles are easy to come by.

A wild village

The village is in an area that comes under the proposed Gya-Miru Wildlife Sanctuary. What makes it exciting is that the region has recorded almost all carnivores found in Ladakh such as the Tibetan wolf. red fox, dhole, lynx and the snow leopard. The area has a healthy ungulate* population including endangered argali, blue sheep and the endemic Ladakh urial. Birds such as the Lammergeier, Snow Cock, Tibetan Sandgrouse and Chough are also found here. Poplar and salix are the two dominant tree species along the river valleys, which add to the stunning beauty of this otherwise barren landscape.



Hiking uphill

We were told that there was a kill in the valley area near the *Amchi* family. *Amchi* means a healer or a doctor in Tibetan medicine. The traditional knowledge acquired by an *Amchi* is passed down from one generation to the next. Two little girls from the *Amchi* family enthusiastically accompanied us to the site where a donkey had been killed by the snow leopard a few days ago. Their father, however, was not sure if the snow leopard would still be around considering that the kill was a few days old.

The hike up to the kill site lasted about 10 minutes from the house. It was a narrow valley with rugged and steep slopes on both sides – ideal snow leopard habitat. One of the girls, Skarma, advised us to move cautiously in case the animal was still feeding.



Spotting a ghost

To our delight, the snow leopard was still around. Sensing our presence, he quickly moved up the ridge. It happened so quickly that all I caught was a glimpse, as he peeped from behind a ridge around 50 m. away from us. Even in those few seconds, I realised that this was a mesmerising creature. I was overwhelmed and my enthusiasm to get a better look grew with each passing moment. Though we did not see the animal feeding, the blood stains around his mouth confirmed the fact.

Hoping to get a better view, we began hiking uphill. The terrain was so steep that we had to literally crawl to avoid falling off the slope. Unlike us, the snow



leopard's quick ascent earlier was a clear indication of how swift and comfortable the animal is in this rugged terrain. We found the snow leopard resting just behind the ridge. Initially, he seemed to be waiting for us to pass by. Then suddenly, he moved away towards the valley. He looked back at us time and again, perhaps to make sure we were not following him. We saw him for almost 10 minutes before he finally disappeared behind giant boulders and sedges*.

A close encounter

We hung around for an hour, hoping to catch sight of him again. Later in the evening, we trekked higher up, and were rewarded with another sighting of the same snow leopard. He was well camouflaged and only when we were 100 m. from him, did we notice him. It was almost 5 p.m., the temperature was plummeting and the wind was picking up pace. I had always thought that the snow leopard's long tail was cumbersome, but now I realised that besides giving it balance, it could be wrapped around its body for warmth. We watched the animal for almost an hour. Though it seemed comfortable with our intrusion, it kept an eye on us. It never left the area, perhaps because the kill was still to be relished.

Spending an entire day in the wilderness is exciting enough, but spending a day with a snow leopard in the wild... priceless.



A Ladakhi native, Anzara Anjum has a post graduate degree in Forestry from FRI-Dehradun. She is currently working as a researcher with the Snow Leopard Conservancy-India Trust, where she focusses on human-snow leopard conflict.

* See glossary on page 23 SANCTUARY ASIA, 2017 MAY

The Inbox

We love hearing from you! Here are some of your letters and e-mails.

BOOK REVIEW!



The Secret Lives of Indian Mammals

By Vivek Menon Published by Hatchette India Paperback, Rs. 399 /-

Trust Vivek Menon, a renowned wildlife conservationist, author, photographer and Founder-Director of Wildlife Trust of India, to create a wildlife guide that is super interesting for children! Quite frankly, as an adult, it was super interesting for me too! Filled with enthralling facts and information about over 400 mammal species found in India, *The Secret Lives of Indian Mammals* is a must-have guide for every child. Colour photographs of the most rare and charismatic animals of our forests, deserts, mountains, rivers and seas, grace these pages.

We are introduced to our mammalian treasures. What are mammals? What is their role in the ecosystem? How many kinds of mammals are there? These and many more questions are all answered in this fascinating book. The presentation of information and graphics is simple and engaging, keeping in mind a young audience. A thorough wildlife guide for budding wildlife enthusiasts!

By Purva Variyar

A Tale from Pench

The sun has risen above the woods shining bright,

Birds chirping, deer calling, unlike the night, it isn't quiet!

All the living beings are out to fill their tummy,

The adorable little fawn is faithfully following its deer mummy!

The previous night left the grass with dew,

The whole pasture feels fresh and new.

The greener the grass, the juicier it is, This is a feast for everyone to relish!

Waiting around the corner is the elusive mother cat,

Stalking her prey, she quietly sat.

Chital and langur triggered their alarm calls,

And then the haunting, low grunt stops!

The little fawn can no longer breathe, The tigress finally bought her cubs a yummy treat!

A slender jackal was keeping an eye out, Waiting for the tigress and her cubs to fill up their mouth.

She waited for the queen to be content and leave the scene,

Because stealing someone's kill is just too mean!

When the mighty tigress was done feeding her cubs,

It was now time for the jackal to feed her pups.

She ran away with the half-eaten fawn, So her pups can sleep well till it's again a new dawn!

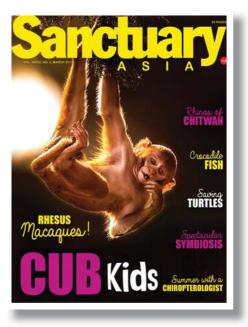
One species gets life, while other lays to rest,

No day is easy in this magical forest!

Avadhesh Kumar, Bordi

Young Turk

I am very keen to start working to conserve our natural environment as I feel it is being destroyed as the years go by. Our animals and plants are being killed just to fulfill our unnecessary needs. I feel this is unjust. I would love to work with cats around the world as I have been inclined towards them since I was five years old. Tigers, leopards and cheetahs are being killed around the world and I feel we should protect them.



I love *Sanctuary Asia* and *Cub* magazine and would love to have an opportunity to work with you.

Aryaman Darda, Mumbai

Aryaman, we look forward to working with you! Till then, do keep writing in! – Ed.

Creatures Around Us

Hoot like an owl, Hover like a fly. Soar like an eagle, High up into the sky.

Leap like a kangaroo, Or gallop like a horse. Hunt like a lion, Without any remorse.

Bang your chest, Like a chimpanzee. Or be like a butterfly, Fluttering in glee.

Glide like an albatross, Or slither like a snake. Grunt like an otter,

As it swims across the lake.

Creatures are all around us, Some swim, some crawl, some fly. So let's explore the wild, And unleash the inner child.

> C. L. Trayambak, New Delhi

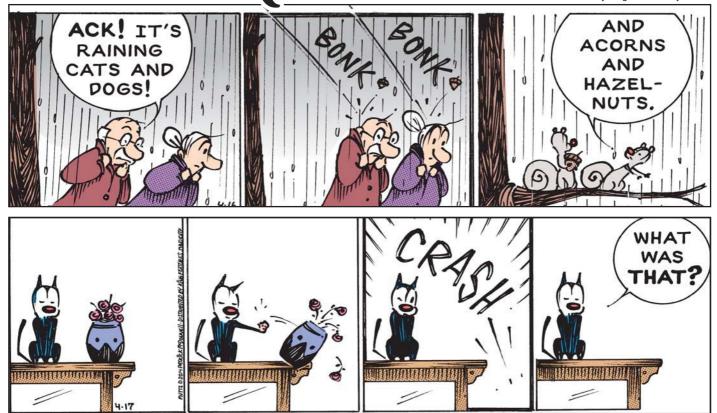
Write to us!

Send your questions, thoughts, ideas, opinions, articles and poems to lakshmy@sanctuaryasia.com or mail them to 145/146, Pragati Industrial Estate, N. M. Joshi Marg, Lower Parel, Mumbai - 400 011.

Mulls

By Patrick McDonnell

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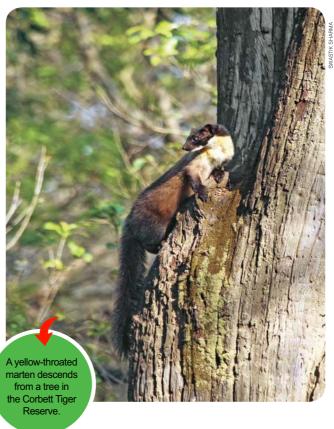


Since 1994, MUTTS has dealt with themes ranging from animal protection, love and kindness to art and artists, highlighting many of the important issues that the world faces, including wildlife and environmental conservation. For more MUTTS, please visit www.muttscomics.com



WHO Swastik Sharma, 18 WHERE Corbett Tiger Reserve, Uttarakhand WHEN January 13, 2016 **SPECIES** Yellow-throated marten

CHAIN OF EVENTS Loud and rapid calls! Foretelling a predator's visit. Excited, I tightened my gear and set out to photograph it! Just the previous night, I had sighted a tiger, and now I was all pumped up to encapsulate its beauty in my camera. It was my last day in the jungle. I waited and waited at waterhole number three. However, all that the camera could capture was my disappointment. It seemed like the tiger wasn't thirsty, but I was parched. Disheartened, I looked around one last time. Suddenly, I saw a branch moving on a sal tree. A yellow-brown creature was camouflaged perfectly against the sunlight and the brown bark of the tree. Proud and graceful, it descended to the waterhole with the rest of its family. I couldn't believe it! In search of a tiger, I had sighted not one, but three yellow-throated martens! Animals are like celebrities, only better, and I am the paparazzi, only quieter.





KIDS FOR TIGERS is a nation-wide effort of *Sanctuary* and school children to save the wild tiger. To join **Kids for Tigers** send an email to amandeep@sanctuaryasia.com today!

Nothing can diminish the incredible imposing of seeing a tiger in the wild. It does not matter if it's one's first sighting or the hundredth one. The magnificent perfection of the tiger is a sight to behold!



KIDS FOR TIGERS CAMP, RANTHAMBHORE

A lucky group of Kids for Tigers
Ambassadors (TA), teachers
and members of the
Sanctuary family returned
with some incredible
memories! In less than
24 hours, the magic of
the habitat and its birds,
grasses, trees and wild
encounters with eight tigers
and cubs and a rare leopard
left them in 'love'. Words are
not enough... but they will have to
do. On these pages are some reactions
from the participants.

KIDS SAY...

"There we were in our canter, sitting quietly, patiently expecting the striped beauty. Then she emerged, walking the ramp in black stripes and gold. I couldn't breathe. I felt shock waves through me. I had seen my first tiger!'

Netra Krishna, TA, Chennai

"I photographed the tiger and found to my delight that the images were good. I wish to show my images to others so that and not let such a beautiful animal go extinct.'

Jahnab Dutta, TA, Guwahati

"Though we saw the tiger for just a minute after waiting silently for an hour in anticipation, the reward of sighting my first tiger in the wild was unbeatable."

Raheel, TA, Goa

"Today, as I saw the proud royal Bengal tiger, I felt it wanted to tell me 'I am the king of Ranthambhore and this is my territory'."

Pragati, TA, Tezpur

"I first saw the langur. Then nilgai, chital, birds such as the darter, lapwing, peafowl and a treepie that constantly followed us. But the real triumph was seeing the tiger that stretched royally in front of us. Wonder of wonders!"

Aary Bhole, TA, Mumbai

"After seeing the tiger just six metres away in its natural habitat, I was speechless! As it walked, my heart was in my mouth. The big, well-built animal leaped gracefully like a ballerina. It has an aura like no other animal. The majestic cat left an everlasting image in my mind."

Rishab, TA, Bengaluru

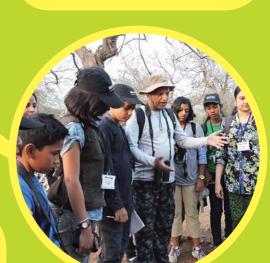


"Even though we saw eight tigers, my experience leads me to believe it is not just about tigers, but that each species is equally important in the wonderful web of life."

Vikram D'Silva, Visitor, Goa

"I have never been so excited in my life as at the sight of my first tiger. It was so close to us!"

Ramananda Haloi. **Teacher, Guwahati**



"Ranthambhore's tigers have called me here - with my children! Four years ago, I came on my own and wished to bring them here some day. This time, they were with me and

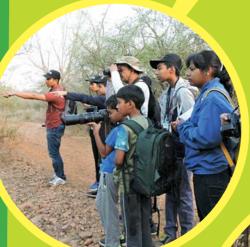
we saw a beautiful tigress with her cubs!"

Tallulah D'Silva, Kids for

Tigers Coordinator, Goa

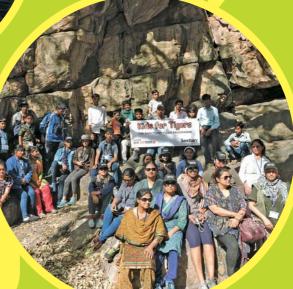
"My very first tiger! Until now, I had located them and Ranthambhore only on maps. The tiger looked straight into my eyes leaving me spellbound. Such a charismatic animal! The image of the cubs and the mother will never leave me. I recognise now the need to conserve nature and will not leave it to

Priya N., Teacher, Chennai



"A dream come true! After the initial excitement of seeing my first tiger, I felt THIS is how it should be! The wilderness should be left alone to all wild creatures to exist as they should. The tiger should be held in the awe it deserves, respected and protected."

K. S. Smitha. **Teacher, Kolkata**









THE TREASURES OF

Text and photos by Rohan Arora

The Sálim Ali Bird Sanctuary, popularly known as the Thattekad Bird Sanctuary, is situated in Kerala's Ernakulam district at the foot of the Western Ghats. The only bird sanctuary in Kerala, it was set up in 1983. It spreads over 25 km. on the north side of the Periyar river. It is a hotspot of endemism* and is famed for its bird diversity of around 324 species (including the very recent additions of the Black-and-Orange-Flycatcher and Amur Falcon). Thattekad came to public notice because of Dr. Sálim Ali, who came here to study birds. In his report on avifauna* in the region, he described this place as "the richest bird habitat in Peninsular India, as good as the Eastern Himalaya".

BIRDS AHOY!

I visited Thattekad in January 2017 and had a wonderful time observing and photographing endemic birds along with other migrants. I was lucky to find about 70 species of birds while trekking through this mesmerising forest, including the Malabar Trogon, Indian Pitta, Black Baza, Ceylon Frogmouth, Red Spurfowl, Indian Blue Robin, Palani Laughingthrush, Crimson-backed Sunbird, Nilgiri

Flycatcher, Malabar Grey Hornbill, Orange Minivet, White-bellied Treepie and Heart-spotted Woodpecker.

The Malabar Trogon – a striking red bird found in Peninsular India and Sri Lanka was on the top of my wish list. It is very shy and mainly feeds on insects. I was overjoyed when I was able to see a vibrant-coloured male, comparatively dull female and a juvenile with its orange plumage.

Spotting my favourite bird of prey, the Black Baza, was equally memorable. It is a resident of forest habitats in the Himalaya and Southeast Asia, but migrates to south India and Sri Lanka in the winter.

SO MUCH TO SEE

Another favourite, the Indian Pitta, had eluded me for the last seven years. A passerine* bird native to the Indian subcontinent, it is colourful, but shy. I was able to hear its call at dusk and finally could take a photograph.

The Sri Lankan Frogmouth is a small tropical bird found in the Western Ghats and Sri Lanka. It is a nocturnal bird with a huge frog-like gape. Its plumage colouration resembles that of dried leaves,

making it difficult to spot when it is quietly resting on branches. It regularly uses the same roost spot for months. About 80 pairs of Frogmouths have been recorded in Thattekad and adjoining areas. I was lucky to see and photograph five individuals. The nest of this bird is a small moss-lined pad, covered on the outside with lichen and bark. The bird incubates a single white egg. The female cares for the egg at night, while the male watches over it during the day.

THE BIRDMAN OF KERALA

I was extremely lucky to meet eminent ornithologist Dr. R. Sugathan, popularly known as the 'Bird Man of Kerala'. Dr. Sugathan shared experiences from his journeys into the world of birds. He told us about his Himalayan expedition near the China border in search of the Black-necked Crane in extremely tough conditions. I listened to every word as he described his adventurous missions in search of rare species such as the Greateared Nightjar and Red-faced Malkoha. He also shared his amazing experience of spotting the Frogmouth. While revising the Red Data Book, Dr. Sálim Ali asked him to check the status of the Ceylon Frogmouth that hadn't been spotted for

FIND

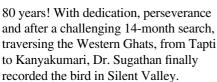
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WALKING IN HIS FOOTSTEPS

There were countless lessons for me to learn. His words, "I want the youth

Orange-headed Ground Thrush

of today to be ornithologists and not just birdwatchers" will be ones I will remember.

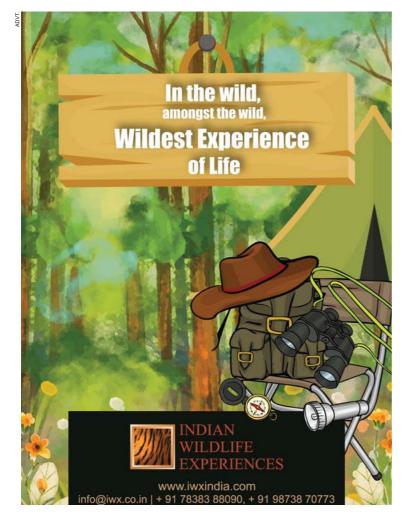
It is thanks to amazing people like Dr. Sugathan that we are able to sight the Ceylon Frogmouth in India's wilds. I hope to follow in his footsteps and be a true student of nature. Time flew by



like the birds of Thattekad, but the sweet and wonderful memories of the trip will be cherished forever.



Fourteen-year-old wildlife enthusiast Rohan Arora has a special interest in birds. A keen observer and reader who picked up the camera when he was six, he hopes to complete his book on birds by the end of this year.







* See glossary on page 23 SANCTUARY ASIA, 2017 MAY 11

WILDLIFE AND ENVIRONMENTAL NEWS FROM INDIA AND AROUND THE EARTH

New population of Indochinese tigers the species' remarkable resilience illegal rosewood logging present (DNP) in collaboration with the new population "demonstrates joint-statement released by the Freeland, suggests a density of just 0.63 tigers per 100 sq. km. in the complex. Though this is very low, the discovery of this given wildlife poaching and organisations Panthera and in the Complex," says the carried out in eastern Thailand's survey, carried out by Thailand's Indochinese tiger. This is only Forest Complex has revealed the second-known breeding population of this tiger sub-A camera-trapping exercise photographic evidence of species in the world! The Dong-Phayayen Khao Yai a breeding population of the critically endangered

breed," said Songtam Suksawang, the Director of the National Parks less than 300 Indochinese tigers found in western Thailand. "The only other breeding population a pivotal role in conserving the efforts in this area have played iger population by ensuring a safe environment for them to stepping up of anti-poaching patrols and law enforcement survive in the wild, with the Division of the DNP.

ARGENTINA The discovery demonstrates the species' remarkable of this new population resilience of tigers

frog discovered Fluorescent

under conditions of moonlight continent, appears olive-green author Maria Gabriela Lagorio n Argentina have discovered molecules called hyloins that detection among individuals ight. However, when viewed rog glows neon green! This the world's first fluorescent polka dot tree frog quite by Inorescence is caused by a are found in the frog's skin, wide-spread species in the under ultraviolet light, the being researched, study co ymph tissue and glandular group of newly-discovered purpose of this trait is still suggests that it "enhances the researchers discovered the fluorescent trait of the rog! The South American or twilight." Interestingly with red spots in regular secretions. Though the polka dot tree frog, a orightness and visual

organisations. It is believed that

Department of National Parks



accident, while conducting

studies on other species.



A LETTER FROM THE EDITOR-IN-CHIEF

Dear Cub Kids,

Did you know that many astronauts come back home from outer space with a powerful desire to protect the Earth?
When they see our little blue planet, all alone in the vastness of the universe, they say it makes them realise how fragile she is, how beautiful, and how alive.
This feeling of love and awe that astronauts feel has a name – it's called the 'overview effect'.

Some people have similar feelings right here on Earth too when they're up in the airy mountains, diving deep in watery depths or just watching the abundance of life in the middle of a rainforest. I guess you could say, it's a feeling of being 'one with everything', and I imagine this is the feeling that starts off brave environmental activists in their fight to save the planet and its creatures.

From what I hear, humans aren't the only ones who have feelings of awe towards nature. Primatologists (scientists who study primates such as apes and monkeys) have seen chimpanzees in a 'trance-like' state around spectacular natural sights like booming, cascading waterfalls!

The chimps sway, stamp, chatter, dance' and even just gaze in amazement. Could it be that they feel in 'awe' of what they see?

That they 'marvel' at the great works of nature? We will probably never know for sure. But what we do know, is that scientifically speaking, chimps are more like us than unlike us. So, it's not that far-fetched a possibility!

In this issue, we bring you a woman in love with snow leopards (page 4), a man in love with the ocean (page 22) and children – in the words of William Wordsworth – whose 'hearts leap

up' when they see wild tigers (eight of them to be precise!) (page 8).

"My heart leaps up when I behold A rainbow in the sky:
So was it when my life began;
So is it now I am a man;
So be it when I shall grow old,
Or let me die!

The Child is father of the Man; And I could wish my days to be Bound each to each by natural piety."

Happy reading!

Your friend,





More space for GIBs

problem will be solved by its

The Gujarat state government has allocated 3,700 hectares of land to the Forest Department in the interest of Great Indian Bustard (GIB) conservation. The state is home to fewer than 30 of the critically endangered bird. The land directly adjoins the Kutch Bustard Sanctuary and comprises grasslands that provide prime breeding habitat for them. Though the land was already used by bustards, they were vulnerable to disturbance from humans and livestock. This

notification as a sanctuary, which will allow more protection for the birds and better regulation of human activity in the area.



Rivers are 'living entities'

Jttarakhand High Court declared horrific levels of pollution in the Sharma and Alok Singh declared them to be 'living entities'. This order has granted the rivers the and allows for complaints to be duties and liabilities." They also establish boards to clean up the 'legal and living entities having appointed officials to act as the filed in the names of the rivers. the rivers and their tributaries Ganga and Yamuna rivers, the same legal rights as a person, with all corresponding rights, legal custodians of the rivers. In their order, Judges Rajeev The High Court also directed the status of a legal person he central government to On March 20, 2017, in yet another effort to stall the

This remarkable move of granting human rights to non-living entities was begun by New Zealand, which granted full degal rights to the Whanganui river just a week before the Uttarakhand order.



Turtles saved from smugglers

Twenty three critically endangered red-crowned roofed turtles were saved in Agra during an operation conducted by the U.P. Special Task Force and the state Forest Department.

Two wildlife smugglers were also arrested. It is believed that the animals were to be sold as pets abroad. Instead, they will now be released in their

first turtles to have been saved in five years! The pet trade is a threat to many wild species and must be strongly opposed by one and all.

roofed turtles are only found

Department. Red-crowned

in the Indian subcontinent

natural habitat by the Forest



Wild Life Protection Act (1972)

under Schedule I of India's

Nepal. They are protected

in Bangladesh, India and

which gives them the same

importance as the tiger.

Though information on

THOMAS HARDWICKE/ILLUSTRATIONS OF INDIAN ZO

shared before, these are the

turtle smuggling has been

heavily-polluted waterbodies.

Did Know?

The jaguarundi of the Americas is larger than a domestic cat but smaller than a jaguar.

In the tropical* wildernesses of South America and Mexico lives an unusual species of small cat known as the jaguarundi *Puma yagouaroundi*. It is also found in Texas and Florida in the United States, where it was probably introduced by humans.

At first glance, it doesn't even look like a cat. Its otter-like appearance, long and slender body, short legs, flattened head, round, short ears and long, thick tail make it unique and rather striking! No wonder then that it is also sometimes called an 'otter cat'!

Jaguarundis can and do exist in a variety of colours. The more common individuals are blackish brown and grey. But it can also have an orange-yellow to bright brownish-red coat! According to some studies, a jaguarundi could have quite a large set of distinct calls, almost 13. It can purr, scream, whistle and even chirp like a bird!

Unlike most other cats which are nocturnal, the jaguarundi is active during the day. It can thrive in dry and arid scrublands, swamps, savanna woodland and even dense rainforests. This cat has been found living at elevations of 2,000 to 3,000 m.

It can measure up to 50 to 80 cm. from head to tail and weigh about five to nine kilogrammes. It is an agile and powerful hunter and is capable of jumping up to two metres high to bring down birds!



Hi Cub kids, apart from being an expert tree climber, the jaguarundi has a large set of distinct calls. This small cat can purr, scream, whistle and even chirp like a bird!

Africa's largest reptile and the second-largest in the world after the saltwater croc, the Nile crocodile can grow up to six metres and weigh more than 700 kg.





The

Milky Eagle-owl

or the Verreaux's

Eagle-owl is the largest

owl in Africa and one of

the largest owls in

the world.



The giant weta,
endemic* to New
Zealand, is easily
the heaviest insect in the
world. At 71 gm., it outweighs
a mouse and even a sparrow!

BRUSH ALLAN

Consider the mongoose. Small and lightweight. Fast and flexible. Valiant dueller of deadly snakes.

Studied by boxers and martial artists down the ages for its fighting style. A very useful creature for humans to have around (as Rikki-Tikki-Tavi in Rudyard Kipling's The Jungle Book proves!), the mongoose rids crop lands of snakes, rats, mice, frogs, lizards and insects – it's part of nature's pest control service.

All six mongoose species found in India are protected under the Wild Life (Protection) Act, 1972, which prohibits their poaching or any buying or selling of live mongooses or their body parts. But they continue to be hunted, of all reasons, to make paintbrushes.

WHEN THE BUYING STOPS, SO DOES THE HUNTING.

Mongoose-hair paintbrushes are easy to identify because they have a pattern.

- (1) The bristles are stiff, not limp and point steadily upwards, coming to a fine point.
- (2) The tip of the brush is generally dark or light chocolate brown, followed by a narrow horizontal cream coloured strip, and then a mix of dark brown, grey and cream towards the base





Not a pretty picture

The international demand for mongoosehair paintbrushes is big. The hair are of a medium thickness and come to a fine point, making them suitable for painting fine details, especially for professional artists who work with oil paints. And while there is a ban on the international trade of Indian mongooses and their hair under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), some high-end dealers in art supplies still advertise these paintbrushes openly. Others are more careful, claiming that their brushes are made of sable or badger hair, the use of which is legal. One mongoose yields just a handful of hair. Up to 50 are needed for a kilogramme. A study conducted by the Wildlife Trust of India (WTI) in the early 2000s estimated that 50,000 were being killed per year!

The crackdown

WTI's investigations revealed how mongooses were trapped in nets and snares by local hunters. They would keep the meat and sell the fur to middlemen, who collected the fur from several hunters from around the country and sold it in turn to

paintbrush manufacturers, some of them well-known brands, mainly working out of Uttar Pradesh. A crackdown by enforcement authorities followed; all mongoose species were given more legal protection and the issue received nationwide attention. But while the local use of mongoose-hair paintbrushes has gone down, the illegal trade continues to thrive thanks to demand in the United States, Europe and the Middle East. No one needs to buy mongoosehair paintbrushes! There are synthetic replacements available that a lot of artists have found to be more than adequate.

You can help!

You can help save mongooses by spreading awareness about the role they play in their ecosystems. Start a discussion with your friends, teachers and classmates. Encourage them to buy synthetic brushes as far as possible, and teach them how to identify a mongoose-hair paintbrush!

To know more about mongooses see The Secret Lives of Indian Mammals, a field guide for children written by Vivek Menon, **WTI Executive Director and Senior Advisor** to the President, IFAW, and published by Hachette. Contact shop@wti.org.in to buy this book.







Help save our tigers, our forests, our water - and ourselves.



- ◆ Morarjee Textiles Ltd. ◆ Peninsula Land Ltd.
- Miranda Tools PMP Components Pvt. Ltd.
 - Piramal Renewable Energy

Half of the world's wild tigers live in the forests of India. Despite roaming over vast areas of Asia a century ago, today habitat destruction and poaching are pushing our national animal to the brink. Global wildlife poaching represents the largest illegal trade in the world after arms and narcotics.

With climate change threatening human societies across the globe and in India, forests such as Kanha, Corbett, Mudumalai and Pench, the home of the tiger, are invaluable. They sequester carbon and store water, providing invaluable services to human society. In return, we need to protect them.

The Ashok Piramal Group is committed to saving the environment for the benefit of future generations.

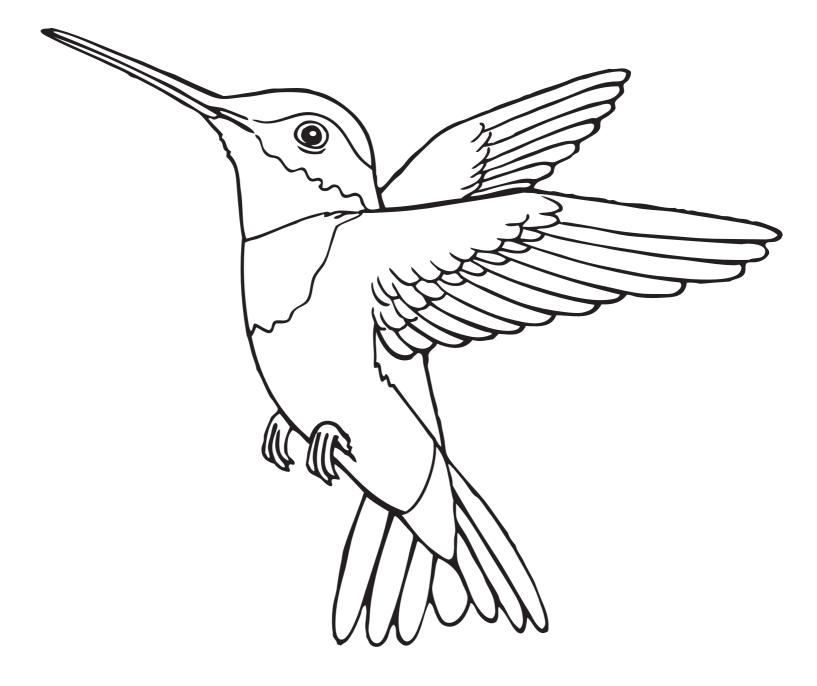
Photo: Harsh Piramal.

Brought to you in the interest of wildlife protection by the Ashok Piramal Group.

Colour Ne

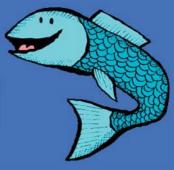
Hummingbirds are really small! Among the smallest of all birds, they are named so due to the humming sound made when their little wings flap at high frequencies – about 80 times per second! They can fly right, left, up, down, backwards, and even upside down. Colour this hummingbird and you may win a prize! Scan and email your art to anirudh@sanctuaryasia.com

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You never know what you might find in the

Mixed Bag



Which part of a fish weighs the most?

WHO WAS Zafar Futehally?

Tall, wiry, and with a twinkle in his eye, he was one of the pioneers of India's modern conservation movement. A birder since his youth, he was also an unyielding fighter. At a time when few others did so, Zafar Futehally took up the cause of birds and the tiny refuges in which they found shelter. The Karnala Bird Sanctuary, less than 100 km. from Mumbai, had been selected as the site for factories to be set up by the Industrial Development

Corporation. Zafar took on the challenge, fought and won the battle to save this tiny bird haven. One thing led to another and soon he found himself fighting (and winning) yet another war against the felling of teak trees

in what is now the Sanjay Gandhi National Park, the catchment area of the lakes that provide drinking water to the citizens of Mumbai. An economics graduate from St. Xavier's, Mumbai, his column 'Birdwatcher's Diary' in the *Times of India* was very popular. He was Secretary of the Bombay Natural History Society between 1959 and 1973, and was also appointed Vice President of the International Union for Conservation of Nature in 1969. Futehally also fought for the lakes of Bengaluru, where he moved to from Mumbai. People passing by Bengaluru's Hebbal lake today, should say a quiet 'thank you' to this grand old man of conservation.

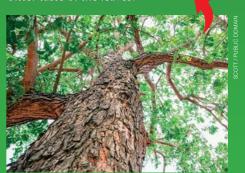


When people think of hibernation, they think of bears. But did you know that there are several other animals and even a few birds that hibernate? Take hedgehogs for instance. Depending on the weather, they hibernate from a few weeks to six months. While hibernating, their heart rate drops by 90 per cent. Interestingly, they also undergo aestivation, which is just like hibernation, but occurs in the hot summer months. Seems like hedgehogs do a whole lot of resting!

The scales!

THE NEEM TREE

Most Indians are familiar with the neem tree. Its scientific name Azadirachta indica means the free tree of India in Farsi or Persian language. The tree finds reference in many ancient texts. The bark, seeds, flowers and leaves of the neem have various medicinal properties. Chewing neem twigs ensures oral health, while leaf extracts are used in oil and skin care products. The leaves are also used to reduce itchiness and keep mosquitoes at bay. Scientists have isolated and examined the chemistry of components of this tree and found that they do have anti-bacterial and anti-fungal properties. The main compounds are called liminoids, which are also responsible for the bitter taste of the leaves.



The temperature of the nest determines the gender of alligator babies. Temperatures below 28° Celsius result in females and above 33° Celsius result in males!

Most of the elements found in the **human Dody** originated in stars; we are literally made of **startlust...** \star



In sun-soaked Goa, riding on a boat over the tidal waters of the Zuari river, we were looking for birds, more specifically, kingfishers. That's when we noticed something hopping up and down on the mudflats, close to the water's edge. Getting closer, we realised that they were mudskippers, those lovely amphibious fish.

Mudskippers are fundamentally fish, but have developed some amazing adaptations to be able to live on both land and in water, thus making them completely amphibious. They move about on land by skipping around using their pectoral* fins as legs! To lead their amphibious lifestyle, when in water, they breathe with their gills as most fish do. But before climbing out onto land, they fill their over-sized gill chambers with



water, creating an 'oxygen tank' that allows them to breathe out of water.

photos by

Santhosh

Krishnamoorthy

On land, these fish moisten their gills periodically by wiping them with their fins. To get additional air, mudskippers can also breathe through their blood capillary-rich skin, and blood-rich membranes in the back of the mouth and throat. They often keep their tails in water and roll in puddles to keep their skin moist.

They live in small burrows, which they build on mudflats by excavating the mud with their mouths. The males build these homes and the females follow the males into them as a mark of their acceptance.

Another interesting thing about mudskippers is their bulging, multicoloured eyes. An evolutionary gift of cones on top for colour vision and rods below for monochromatic (of one colour) vision allow these creatures to see both above and below water at the same time. How amazing is that!

When we saw them, they were super active. Males were very busy, proudly displaying their gorgeous, fluorescent-coloured fins to impress the females while vigorously jumping up and down!

also seemed to be putting on territorial displays. Using their tail fins, they thrust themselves up into the air. There was intense competition all around. The females seemed to be choosy,



undertaking close examination of the males and their coloured accessories. Indeed, it seemed like a lot of effort on the little fishes' part to get a prospective partner to say 'yes'.

We spent quite a bit of time observing these lovely fish before we said adios and went on our way. A birding trip had turned into a fish-exploring trip. But we're not complaining!

Santhosh is a passionate naturalist and nature photographer. He runs **Birdwing Travel & Photography, where** he mentors budding and amateur nature photographers. For more of his work, check @santhosh.kris on Instagram and www.framesofnature.com.

SANCTUARY ASIA, 2017 MAY 21 * See glossary on page 23

of Nature

On this page meet two people - very different from one another but who each showed us how it's possible to take action against all odds and change the world for the better.

Elon Musk

Whatever anyone may think about his literally out-of-this-world ideas, this much is clear - Elon Musk is a businessman/ industrialist who actually cares about the future of life on earth and is committed to fighting climate change. How refereshing!

Just 45 years old, this entrepreneur, engineer and inventor has founded several hugely profitable businesses, but what he is best known for is his company Tesla, based in California. Tesla manufactures electric vehicles (EVs) and focuses on creating renewable energy solutions like Lithium-ion battery energy storage and solar panels.

The company first caught the world's attention when it came out with the Tesla Roadster, the first electric sports car, in 2008. Tesla has a network of highpowered superchargers located across North America, Europe and Asia for Tesla vehicles. It recently introduced a first-ofits-kind solar storage battery that has the capacity to power an average American home for two days. Go Tesla!

Musk was recently featured in Leonardo DiCaprio's film on climate change Before the Flood released by National Geographic.





"I do what I do because it is the right thing to do. I am a warrior, and it is the way of the warrior to fight superior odds. If we wipe out the fish, the oceans are going to die. If the oceans die, we die. We can't live on this planet with a dead ocean."

- Captain Paul Watson

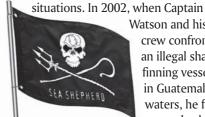
"It's not as though we can keep burning coal in our power plants. Coal is a finite resource. We must find alternatives, and it's a better idea to find alternatives sooner then wait until we run out of coal, and in the meantime, put God knows how many trillions of tons of CO, that used to be buried underground into the atmosphere."

- Elon Musk

Captain Paul Watson

In 1977, Paul Watson founded the Sea Shepherd Conservation Society, a marine conservation organisation, which uses direct-action tactics to investigate and fight illegal activities on the high seas. For 35 years, he has been at the helm of the most active marine non-profit organisation the world has ever seen. Before founding Sea Shepherd, Watson worked with Greenpeace, where he was one of its very first members. He left Greenpeace to pursue his passion in a more direct, more effective manner.

His relentless approach has time and again got him into dangerous and controversial

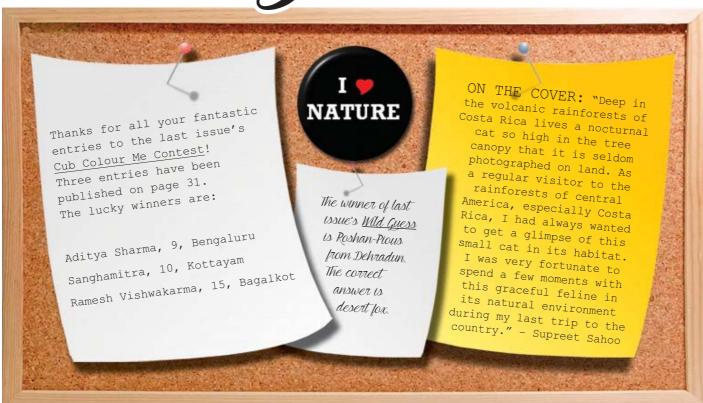


Watson and his crew confronted an illegal shark finning vessel in Guatemalan waters, he faced severe backlash

and had to flee after Costa Rica issued a 'Red Notice' against him. Japan did not take kindly to Sea Shepherd's campaign to end their illegal whaling practices either. In 2013, Watson stepped down as head of Sea Shepherd Conservation Society to abide by an injunction that prevents him from going close to Japanese whaling ships and because of legal issues.

However, this fearless man, determined to protect the oceans, is unstoppable. In January 2008, The Guardian newspaper named him as one of its '50 people who could save the planet' for the work he does with the Sea Shepherd Conservation Society. Along with whale biologist, Nan Hauser, he has been credited with contributing to the return of humpback whale populations in the south Pacific. To find out why it's essential to save whales and protect oceans, turn to Earth Manners on page 28.

The Pin Roard





1. Violet Sabrewing

2. Purple Sunbird

3. Violet-backed Starling Email your answers to anirudh@sanctuaryasia.com

of Glossary of Environmental Terms

Cub kids, here are the meanings of a few difficult words and phrases used in this issue that will help you understand nature better.

SUBSISTENCE: Production only for one's own use or consumption.

UNGULATE: A hoofed mammal.

SEDGE: A grass-like plant with triangular stems and unnoticeable flowers, growing typically in wet ground.

ENDEMISM: The occurrence of a species unique to a particular location.

AVIFAUNA: The birds of a particular region, habitat, or period.

PASSERINE: Birds having feet that are adapted for perching, including all songbirds.

TROPICAL: Very hot and humid.

PECTORAL: Relating to the breast or chest.

FURROW: A rut, groove, or trail in the ground or another surface.

CUB QUOTE "Nature does not hurry, yet everything is accomplished." Lao Tzu, ancient Chinese writer and philosopher.

Takec Lation Support nine-year-old Ridhima Pandey's

petition to take climate change seriously!

Cub kids, at Sanctuary we often say that there are only two parties in the world. The Buddha Party, whose members have grey hair, and the Bachcha Party, whose members are too young to vote. Each one of you, below the age of 18, is a member of the Bachcha Party. Unfortunately, though the Bachcha Party usually cares more for the environment and others than the Buddha Party, it is the Buddha Party that takes important decisions that impact everyone!

Well, nine-year-old Ridhima Pandey from Uttarakhand is very unhappy with how the Indian government has failed to take firm action against climate change. In fact, the young activist has, with the help of her guardians, filed a petition in the National Green Tribunal demanding that the government take climate change seriously!

"My government has failed to take steps to regulate and reduce greenhouse gas emissions, which are causing extreme climate conditions. This will impact both me and future generations," says Ridhima. In her petition, she has asked the court to order the government to take steps to reduce carbon emissions and protect forests, amongst other measures. The National Green Tribunal has taken Ridhima's appeal very seriously, and has issued notices to the Ministry of Environment, Forest and Climate Change and the Central Pollution Control Board to respond to the issue. This is the power of your party – the Bachcha Party!

Cub kids. Ridhima told an interviewer that "Children and future generations have the right to a healthy environment. But they are also the most vulnerable to climate change..." And she's right! You have a right to a healthy environment, and it is the duty of the Buddha Party to ensure this. Ridhima has taken a bold step against climate change and government inaction, and we stand by her every step of the way.



Pandey filed a petition in the NGT demanding that the government take climate change seriously!

You can help!

The impacts of climate change harm everybody, and children are especially vulnerable. Write to Justice Swatanter Kumar, Chairperson of the National Green Tribunal, expressing your support for Ridhima's petition. Here are some points you can make:

- Children are very vulnerable to the impacts of climate change. According to the World Health Organisation, children suffer over 80 per cent of the diseases attributed to climate change!
- It is the duty of the government to protect natural resources and ensure a healthy environment for its citizens.
- You support your friend Ridhima Pandey, and want the government to act on climate change issues urgently.
- The NGT should take your concerns seriously as you are citizens of the country and the leaders of tomorrow.

Send your letters to: **Justice Swatanter Kumar** National Green Tribunal, Faridkot House, Copernicus Marg, New Delhi 11001.

or send your email to: rg.ngt@nic.in - with a copy to: editorial@sanctuaryasia.com





Special Launch Rate: Rs 300

WHAT is the rhino's horn made of?

HOW do deer and langurs help one another in the forest?

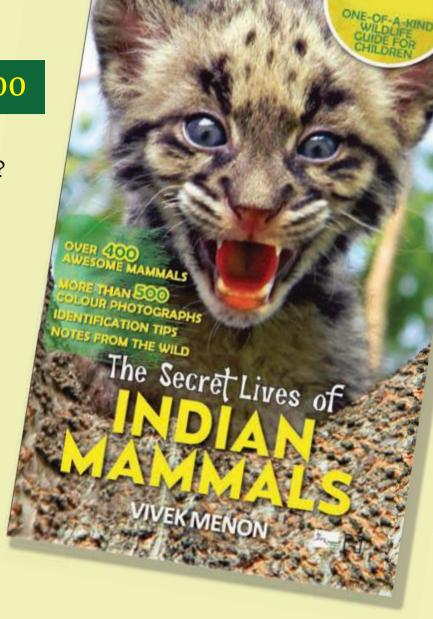
WHERE could you find the smallest Indian mammal?

WHEN is the best time to see lion cubs at play?

Covering these and many more fascinating facts, this handy wildlife guide features more than 400 mammal species in India, from tigers, elephants and rhinos to monkeys, rodents and bats.

With expertly researched information about where these animals are found, and how they live, communicate and behave, conservationist and photographer Vivek Menon shares insider notes from his adventures in the wild.

Key identification pointers and stunning colour photographs help you recognise different mammals easily, making *The Secret Lives of Indian Mammals* both a ready reckoner as well as a field handbook for animal lovers.



Contact shop@wti.org.in

Ask for an exclusive author-signed copy!

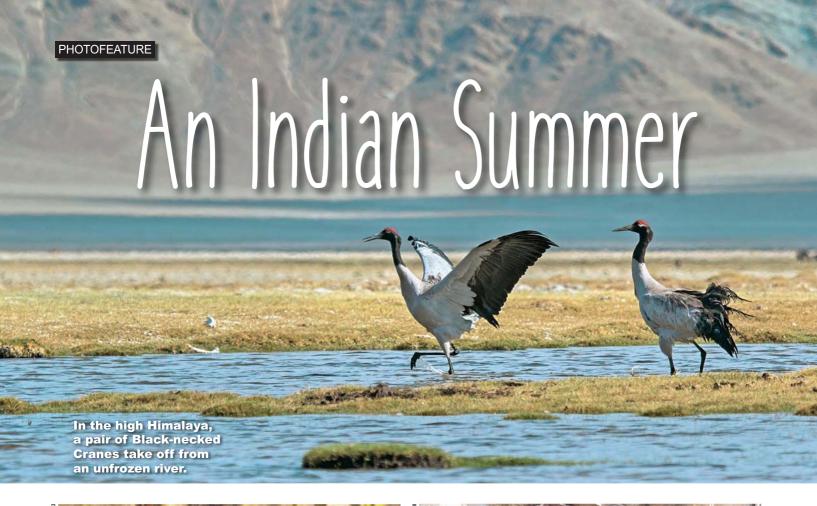
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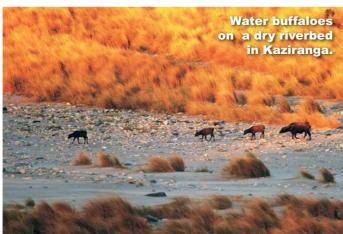














The summer has arrived! The trees are bare, and the forest takes on beautiful shades of yellow and brown. A season for play, and if it gets too hot, there's always plenty of time to rest in the shade or take a dip and cool off. Turns out, our animal friends are not too different from us!



Earth Manners

Everyday habits matter! Let's be kind to the planet, animals and ourselves!

Did you know that life on earth began 3.6 billion years ago in the ocean? Or that today 2.2 million species live in the sea? Or that more than 70 per cent of the Earth's surface is covered with water? No wonder ours is called the 'blue planet'! Sadly, in the last few hundred years, we have been treating the ocean like a giant toilet, dumping all kinds of poisonous garbage into it. Luckily, your generation knows better and is going to change things. Here's how.

Befriend the ocean We may be 'land mammals', but humans love water. When we are immersed in water, it relaxes us – our heart rates slow down and our stress levels fall. So go to the beach more often and learn how to swim so you can enjoy the ocean safely.



Go snorkelling on family holidays or just sit by the water and watch the tides and currents. Research the underwater world – you won't believe what you will find out! Did you know ocean tides are controlled by the moon? Or that whale poop is the reason we can breathe? Or that the Great Barrier Reef (photo above) is the largest living organism on earth and that it can been seen from space?

Save the whales

Phytoplankton (the billions of microscopic plants found in the ocean) produce more than 50 per cent of the oxygen on our planet. Interestingly, whale poop is phytoplankton food.



Without the great whales, there would be no whale poop obviously. And without whale poop, there would be no phytoplankton, and well, there would also be no humans. If you save the whales, you save our entire ecosystem! Lend your support to organisations like Sea Shepherd (see page 22) that fight hard to protect whales and save our oceans from the terrible impact of overfishing, coastal destruction and other threats.

Seashells on seashores

Once you are done playing with them, toss shells back where they belong – on the shore! Seashells are a very important part of coastal ecosystems. They make great attachment surfaces for creatures like algae and sponges and wonderful hiding places and homes for fish and crabs!

Coral is not jewellery Coral

reefs are home to millions of ocean creatures. They protect shores against damage and even regulate the chemical balance of the ocean! They are incredible super organisms – about 25 per cent of the ocean's fish depend on healthy coral reefs! Never buy coral trinkets and jewellery. They aren't useless bits of rock, and they must be left in nature, where they belong.

Be the beach police Most of the plastic we use ends up in our oceans, often inside the bellies of marine life. There are huge masses of

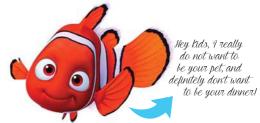


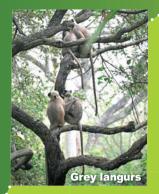
Beach holidays are the best! Learn how to be a good earthling when visiting the seaside.

plastic garbage floating around the planet. So please, refuse the straw in your coconut water, use reuseable paper lanterns instead of balloons at your birthday party, take a cloth bag when you shop and bring your own sand toys from home! Sand toys maybe cheap to buy at the beach shop, but our planet pays for them dearly. If you live near the sea shore you could get your friends (and your parents) together and organise a clean-up drive!

Leave the fish alone

Dangerous fishing practices are wiping out several marine species from our seas. Thousands of turtles, dolphins, sharks and more get killed as bycatch every year and the truth is there is no 'environmentally friendly' way to eat fish. As any doctor will tell you, seafood contains dangerous levels of mercury and other heavy metals and isn't as healthy for you as the fishing industry wants you to believe! So watch that plate, and remember, don't buy fish as pets. The pet trade is a big problem, and besides, just imagine having to live your life forever trapped in a glass bowl! Apart from being cruel, nature doesn't have any fish to spare for the pet trade, not even the little cute ones like Nemo!





Mining hat

Where the RARE is COMMON!

As I was boarding the boat after finishing my field work, I saw a male tusker standing with his back towards me. barely five or six metres away on a mid-river sand bar. I quickly rushed to the range office to grab my camera. Luckily for me, the tusker had not left the spot. He turned around on my arrival, perhaps having picked up my scent. He gazed at me. flapping his ears occasionally. What an amazing animal! I remembered the dialogue from the film The Jungle Book, "The elephants created this jungle. Where they've made furrows* with their tusks, the rivers ran," Indeed, the forest I was in was the abode of this magnificent, gentle giant.

On the tail of gharials

I was in the Katarniaghat Wildlife Sanctuary for my doctorate field study on the critically-endangered gharial. Historically found across the entire Indian subcontinent, from western Pakistan until the Irrawaddy river system in Myanmar, the Indian gharial is now confined to a few isolated habitats across India and Nepal. Human-caused pressures from sand mining, fishing and alteration of river systems through damming have reduced its population to less than 10 per cent of what it was in the 1940s. Katarniaghat is part of the Dudhwa National Park in Uttar Pradesh. It harbours one of the few breeding populations of the gharial. During my study, I frequently encountered them swimming or basking on mid-river sand bars.

Watery wonderland

Boasting of a large number of waterbodies such as wetlands, ponds and the river Gerua, this sanctuary is home to elephants, rhinoceros, tigers, leopards, gharials, muggers, dolphins, otters and various turtle species. As the board at



the ecotourism centre at Naav Ghat (do not miss the sunset view from here), reads "Where rare is common", it is home to a wide variety of species that are not so commonly seen elsewhere. The ecotourism centre offers good facilities for tourists.

Leopard spotting

One night, my friend Rohit and I were driving towards Bichia, a small town located five kilometres from Katarniaghat, for dinner. I stopped the bike to avoid hitting a frog on the road. To our surprise, we found a pair of eyes staring at us from the nearby bushes. A sub-adult leopard! He seemed to be feeding on something. We saw a forest patrol vehicle approach from the opposite side and we flashed our light indicating to them to slow down. We approached them as the leopard retreated into the bushes. Then suddenly, the leopard emerged and began walking just ahead of us. It stopped at a small puddle on the road, took a few sips and moved on. We watched it for five minutes before proceeding and leaving it to its nocturnal adventures. Though I did not take any photographs, I could not erase the huge smile off my face that night.

A magical forest

Katarniaghat is indeed a magical forest. The days were hot and humid but rain

provided relief at night. I enjoyed listening to many jungle stories from the Conservator of Forest Ashish Tiwari, IFS. He spoke about his childhood wildlife encounters, shared many field-based case studies, and his vision for wildlife conservation - all of which helped me critically analyse my own work.

I also joined Rohit in a camera trapping exercise in the Kaudiyala section of the sanctuary, a dense elephant forest on the India-Nepal border. After walking for merely 15 minutes, we were sweating and had cuts all over our legs from the thorny shrubs. Later, the leeches joined the party. We walked through the elephant jungle for 14 km., occasionally passing through three-metre-tall elephant grass. Although we were dead tired, we managed to walk back to the forest post. Despite the pain, the experience of walking through the jungle was invaluable. I returned to Delhi the next day, but hope to return soon for more unexpected sightings and forest magic. *

A Ph.D. student at the University of **Delhi, Gaurav Vashistha studies reptiles** at the Katarniaghat Wildlife Sanctuary in Uttar Pradesh and the National **Chambal Sanctuary in Madhya Pradesh.**



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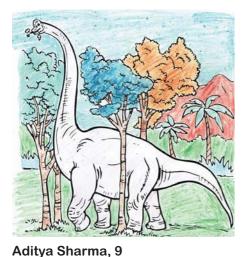
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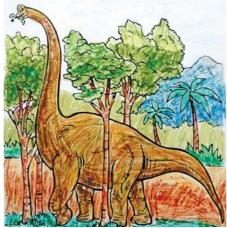
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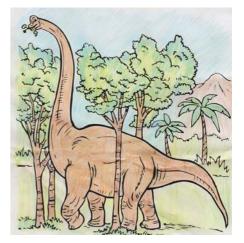


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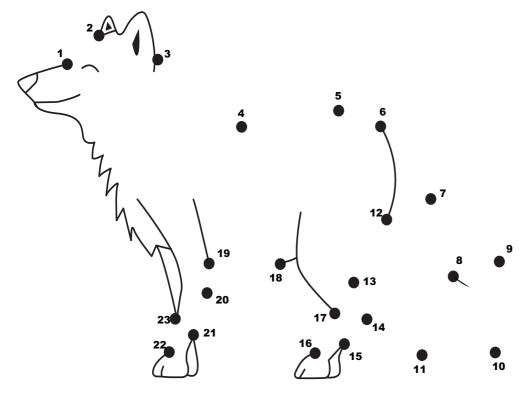


Sanghamitra, 10



Ramesh Vishwakarma, 15

Jointhe () ots





The wolf is the largest member of the Canidae family, which includes jackals, foxes, coyotes and domestic dogs.

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www.dspblackrock.com/wildlife

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The survival of the tiger and all the creatures that share its habitat, including leopards, wild dogs, elephants, rhinos and uncounted plants, insects, birds, reptiles and herbivores, depends on whether humans can set aside vast parcels of land for nature.

The wildlife conservation movement needs the support of us all. For more information on how you can help, or to pledge your support for those who work 24x7 to protect our wildlife, write to Dr. Anish Andheria (Director, Wildlife Conservation Trust) at anish.andheria@gmail.com or visit www.wildlifeconservationtrust.org

Issued in the interest of wildlife conservation

