WILD SOJOURNS

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A Rendezvous with Red Panda

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PULSE

I was asked recently "what do you hope to achieve by being a wildlifer?" That seemingly innocuous query created a fresh train of thoughts in my mind. "How about giving back to nature? I replied after a while. Can we do anything really worthwhile apart from clicking images and sharing them with our friends and social platforms? How can any one person aspire to create a difference? Can we really help Mother Earth on our own???

We definitely can!!!!! We definitely should!!!!

In a nutshell, our present ecological and environmental crisis boils down to one simple fact: We are taking more than we're giving back to the Earth. What if each of us started giving back as much as we take? It is not as difficult as it sounds really. To love nature and encourage all around you to connect with and embrace nature is the obvious first step.

Creating an acute awareness takes the precedence and needs to be the most fundamental strategy.

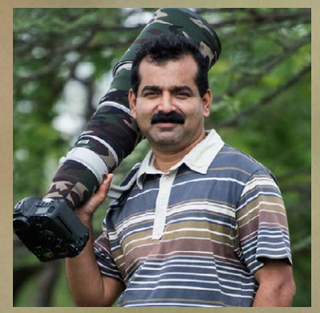
Majority of educated Indian population is now city based. If you live in a place that lacks a connection to nature, you'll never realise what you're missing. Or worse, you'll sense something's missing from your life but will be unable to put your finger on it. Each individual around you should be made to comprehend the current situation. Photographers should use their images to tell a story and try to narrate the struggle of each species to survive. Minimising our use of unsustainable resources is another vital step in giving back to the Earth.

A nature lover, Caroline Mauldin puts it very succinctly. " Some would say history is in the past, but I say history is here, all around us. These places I have seen, these lands that I have walked, they are all part of the story that I am living. I am part of their history as they are a part of mine. By committing to preserve these precious environments, I am keeping up my part of the bargain. You nourish me; I will fight for you. That is our deal".

I wholeheartedly agree with her.

Megh Roy Choudhury

Ritesh Nangare



Prasanna AV

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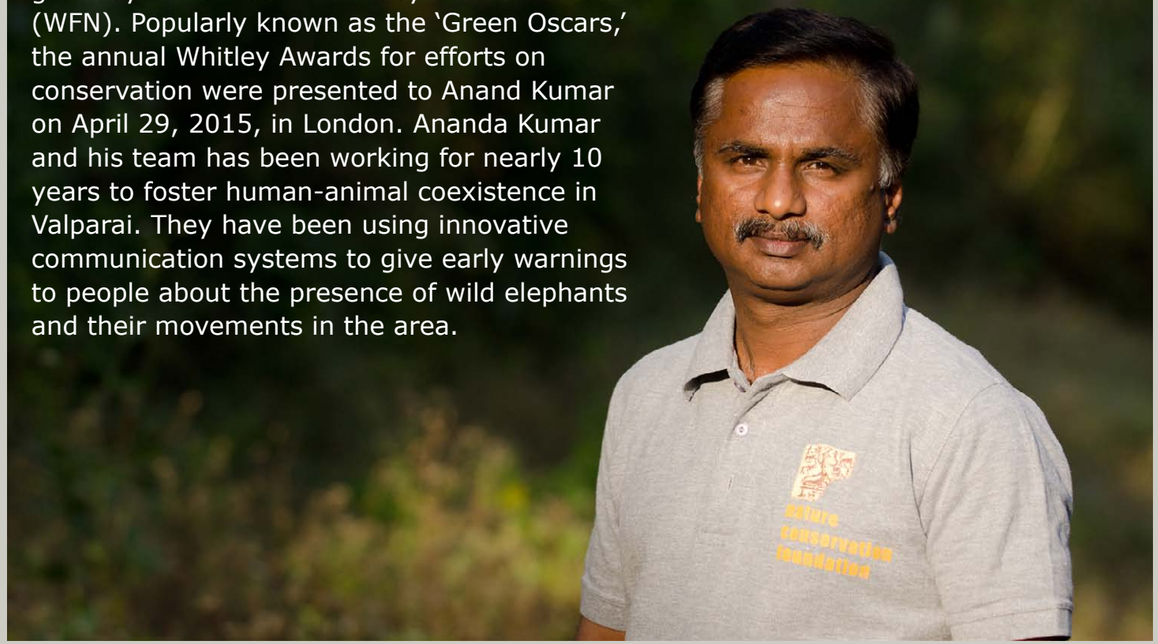
Nurturing a Peaceful Coexistence

Wild Asian Elephant [Elephas maximus] has a distribution in Southeast Asia from India to Borneo. It has been listed as an endangered species in the IUCN red list. The Asian elephant has also been recognized as a National Heritage animal by Government of India. Two-thirds of its population is encountered in non-protected areas either close to or within areas of human inhabitation and creates conditions for greater contact with people. One of the major threats to existence of elephants outside protected areas is the Human-Elephant conflict. Nearly 400 people and over 100 elephants lose their lives annually due to these clashes. This reveals the seriousness for the need of conservation of elephants in human-dominated terrains in India.

Valparai plateau encompasses an area of 220 square kilometers within the Anamalai hills in Southern Western Ghats. This area has a very healthy population of elephants and is an important conservation area for them. The rainforest fragments, the riverine vegetation patches exist as discontinuous regions due to the intervening areas of tea and coffee plantations and human settlements. Also the Nadu Ar-Sholayar Riverine system which flows in the middle of the plateau is a vital corridor for the elephant movements. Elephants have no choice but to traverse these areas while moving from one forest segment to another. There are about 70,000 people working in tea and coffee plantations and staying in this area. This has obviously increased the incidence of the man-animal conflict.



Ananda Kumar M, is a wildlife scientist from Nature Conservation Foundation (NCF) working to reduce the human-animal conflict in Valparai. He has received the Whitley Award, given by the UK-based Whitley Fund for Nature (WFN). Popularly known as the ‘Green Oscars,’ the annual Whitley Awards for efforts on conservation were presented to Anand Kumar on April 29, 2015, in London. Ananda Kumar and his team has been working for nearly 10 years to foster human-animal coexistence in Valparai. They have been using innovative communication systems to give early warnings to people about the presence of wild elephants and their movements in the area.

Fostering the Coexistence:

There have been 41 human deaths reported in this area between 1994 and 2015. There have been many attacks resulting in injuries and property damage. Most of these attacks could be attributed to the ignorance of people towards elephant behaviour. Valparai is a very unique place where the safety of both human and elephants is considered paramount. A peaceful coexistence was the need of the hour and multiple measures were devised. There were efforts to educate the public regarding the elephant behaviour. Involvement of general public was deemed very essential for the very success of this project. The amalgamated efforts from the general public, the forest department, plantation owners was coordinated by Nature Conservation Foundation involving Ananda Kumar and Ganesh Raghunathan.

Ananda Kumar started to study the behaviour of these elephants in 2002. At that time nobody even knew how many elephants were there, how many herds and how they used the landscape. Signs such as feeding, dung, fresh tracks along movement paths, and information from local informants were used to detect elephants and record their movements on the Valparai plateau. Each individual elephant or herd detected were followed through plantations until they entered surrounding protected areas. It was found that the Valparai plateau was intensively used by about 80 - 100 elephants annually. Elephants also showed a consistent movement pattern indicating a strong affinity to their ranges. When near human establishments food was the main source of attraction. Sometimes baby elephants got entangled in human residences warranting an attack on the houses by the adult elephants. All these elephant attacks were carefully documented with regards to property damage, human fatalities due to elephants. Fatal encounters with elephants and loss of property damage to buildings which stored food grains such as rice, dhal, lentils, and salt had caused fear and trauma in local people and reducing their tolerance levels. The conflict situation was discovered to be primarily due to lack of advance intimation about elephant presence and most attacks happened as unexpected encounters.

Improvement of natural vegetation:

The long-term research clearly indicated that the riverine system flowing through the the middle of plateau formed a critical area for elephants to move within various forest segments. Growing natural vegetation on either side of river with a width of 10 meters would facilitate easy passage for elephant and minimize human interactions.

Better management of food grains and ration shops:

Property damage by elephants were noticed principally in ration shops and school noon-meal centres where food grains such as rice and lentils, salt and sugar were stored. While this happened, adjoining residences were also damaged. To avoid this the following measures were taken.

a] All ration shops adjoining worker residences were shifted to separate buildings.

b] Storage of food grains in school noon-meal centres was discouraged.

c] Food grains was kept in more secure centralised stores and brought to distribution centres only on specific days, after which the store was cleaned and kept empty.

d] State government is also contemplating the idea of mobile ration shops.

Implementation of early warning measures:

An elephant information network has been initiated by communicating the elephant location information in the following ways:

Establishing conflict response team (CRU):

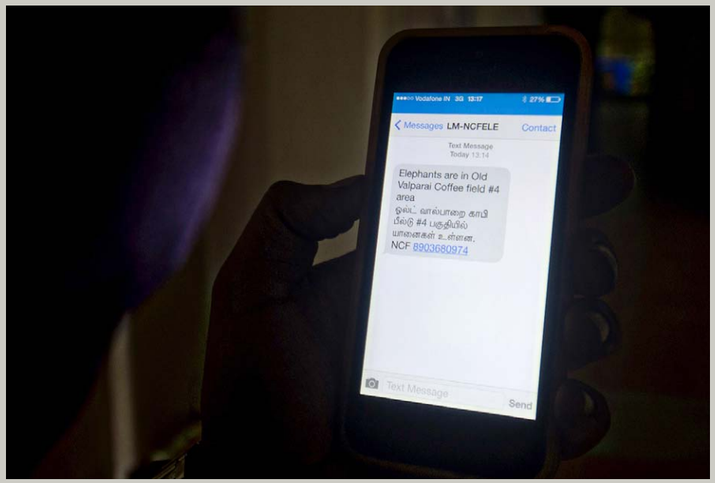
A team of proficient people from the local community who could track elephants within plantation limits during the day and record information was formed. The CRU would record various data about the herd composition and movement of elephants with handheld GPS. The information from CRU is intimated to the elephant information centre on daily basis.

Elephant tracking and use of Television network:

Location and tracking of elephants from Conflict Response Unit (CRU) and information from Forest Department field staff and local people was displayed as a crawling message on local cable TV channels after 5 PM on a daily basis to reach out to people as an early elephant intimation system. At present, the cable channel covers nearly 5,000 families (approximately 20,000 people) on the Valparai plateau. Information about elephant presence was broadcasted on local television channel which also carried an emergency contact number. Response calls to contact number were systematically noted for analyzing the effectiveness of measure.

Initiation of Bulk SMS warning:

New addition to the early warning systems was made to reach to the people more effectively by the use of Bulk SMS. Mobile numbers of people working in the plantations were collected and SMS about elephant presence was sent as a text message in English and Tamil. This created a platform for people to enquire and convey information about elephants in their locality, thereby increasing the awareness of elephants in their region.



Awareness campaigns through audio visual mediums:

In an attempt to provide awareness and education to local residents, a film was made emphasizing the importance of understanding the landscape and sharing space with elephants. The film portrays various opportunities made available to the people by conservation group and plantation management to avoid accidental fatal encounters. The film titled 'Living with elephants' by Evanscence Studios is available on YouTube.

How effective are these measures??

The early warning systems are just facilities provided to the people and it is up to them to make the best use of it. Early warning systems is an idea and what is most important is not the early warning system itself but the sound understanding of the situation over the years which is crucial. Conflict mitigation measures based on sound scientific understanding needs to be taken to the local people to make any measure sustainable. However, the response of the people to these remedial measures has been very positive. The facilities provided are getting used in a proper way within the target community. Voluntary assistance is also given by local people, responsible persons from each estate have accepted to take the onus of switching the lights on when elephants were seen within 1km distance from each light locality.

Installation of elephant alert indicators:

An improved version of semi-automated lights were designed In place of simple red lights as proposed earlier with additional support from Forest Department, and plantation companies. The alert indicators are mobile operated with LED-lights installed in 24 locations. These lights signal the presence of elephants and their movements within one kilometer radius of each light. Each indicator is equipped with a SIM card and fitted with red flashing LED bulbs on a 30 feet pole and are located in strategic places that are visible from up to 1km distance. Each light can be operated from any of three registered mobile phones. At least two persons from every “light locality” are registered with each light and are responsible for activating these lights when information regarding elephants is passed onto them.

Aneesh S

Reduction in incidences of conflicts

There is a definite reduction in the incidence of the conflicts. It shows the effectiveness of the practised early warning measures and the success of the coordinated efforts of the general public with the authorities. Such collective efforts would further enhance human-elephant coexistence in the Valparai region. As a long–term measure, there is a need to protect existing rainforest fragments along elephant movement areas by declaring them as satellite elephant reserves and developing natural vegetation along Nadu Ar and Sholayar river with the involvement of plantation companies, which would minimize human-elephant interactions on the Valparai plateau.

From concerts to conservation, it has been a journey of transition for Ganesh Raghunathan. His interests lie in the field of elephant behaviour and this has helped him to be instrumental in human elephant conflict management in the Anamalais. Over the past few years, he has witnessed and documented some of the rare and intimate moments of elephant life. Besides spamming the residents of Valparai, he is also interested in photography and filming the natural world around him.

References:

a] Asian Elephant conservation case study: Mohamed bin Zayed species conservation project.

b] FOSTERING HUMAN–ELEPHANT COEXISTENCE IN THE VALPARAI LANDSCAPE, ANAMALAI TIGER RESERVE, TAMIL NADU. M. Ananda Kumar and Ganesh Raghunathan. [Human-Wildlife Conflict Resolution in the Mountains of SAARC - Success Stories, 2014].

c] The elephant hills; From conflicts to coexistence in the Anamalai hills, Nature Conservation Foundation/projects.

d] Kumar, M. A. and Singh, M. 2010. Behavior of Asian elephant (Elephas maximus) in a land-use mosaic: implications for human-elephant coexistence in the Anamalai hills. Wildlife Biology in Practice. 6: 69–80.

Text By **Prasanna AV**

Images by **Ganesh Raghunathan**

A RENDEZVOUS WITH THE RED PANDA

There are some unforgettable experiences which remain indelibly etched forever in one's mind. In one such instance, Megh Roy Choudhury narrates one of her wildlife escapades where she had a tryst with the highly elusive Red Panda in the dense jungles of Eastern Himalayas.

Megh Roy Choudhury

Red Panda is one species everybody who goes to Eastern Himalayas would dream to have a sighting off. When we planned a trip to Singalila National Park in North Bengal and Nepal in October 2014, We actually had targeted two signature species of the area, Red Panda and Satyr Tragopan. For a week, we had roamed around the dense Himalayan jungles in vain. Though we could sight some beautiful species of birds our targets totally eluded us. We returned disappointed and decided to revisit this place sometime in the near future.

Red Panda is sparsely distributed in a very narrow range in southeastern Asia in the areas of the Himalaya Mountains in northeast India, south China, Nepal and northern Myanmar. In India it is reported from three states of West Bengal, Arunachal Pradesh and Sikkim. Most of this populations are not interconnected and live as disjunct entities.

Singalila National Park is located at the Singalila ridge in Darjeeling district of West Bengal. This is a high altitude park spanning between 7,900ft to about 12,000ft covering an area of 78.6 square kms. It was declared a National Park a national park in 1992. Singalila range starts shortly after Manebhanjan and stretches through Tonglu, Tumling, Gairibas and all the way up to Sandakphu and beyond to Phalut. To the north of the park is Sikkim and to its west is Nepal.

Few salient factors need to be taken into account before embarking on a journey to sight this beautiful Animal. Red Panda is seldom seen in open and has been very rarely photographed in the wild. It is a solitary and predominantly nocturnal animal and it is not so active during the day and the best time to sight would be April to June during the breeding season.

After researching all the available facts, we planned a trip between 24th April and 1st May 2015. We reached Tumling, [10000ft above MSL] a tiny hamlet situated in Nepal on 24th. There we encountered a massive earthquake on 25th of April. It was raining incessantly throughout the day. We were relaxing in our rooms when suddenly we felt everything shake very violently. It went on for some interminable moments and I sprang to support my camera and tripod which were about to crash to the ground. I ran out of my room to realise that what we just had was a fierce earthquake. All communications were down and we had to decide whether to proceed or not. Though we were advised not to go ahead, we were very determined and resolved to continue our quest.

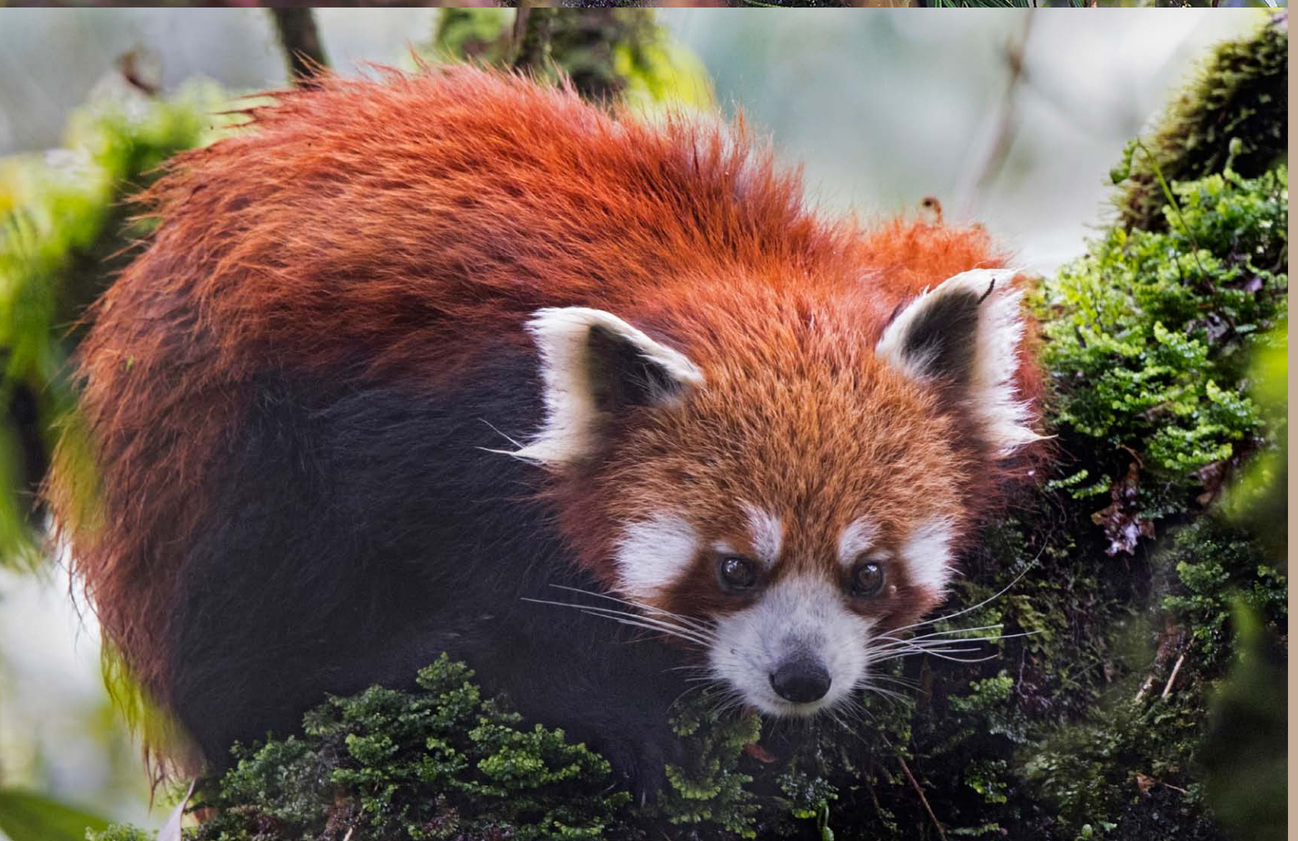
Our Next stop was at Gairibas [9000 ft above the MSL]. Here we met a team led by Shantanu Prasad who sighted a red panda in the same stretch of the jungle on the same day. We were highly encouraged by this fact and resumed our quest with a renewed vigour. For the next few days we scoured the thick forests with the help of two local experts. Our plans involved driving in the locally available land rovers and trekking whenever any trail looked promising. These land rovers are a miracle unto themselves and appear to be out of some age old English action movie. But they are tough war horses and are the best suited for rugged and steep mountainous terrain. Unseasonal and torrential rains and dense fog made all attempts to make our job more strenuous. Constant and tiresome human interference due to an ongoing road construction also was a huge hinderance.

Our next stop was Sandakphu, which at 11,941 ft above MSL, is the highest point on the Singalila Ridge. We left Sandakphu on the 30th of April and moved gradually downhill. The gravel road which goes through the park accords magnificent views of the lush green forests.

Our eyes were on the constant lookout throughout hoping to sight the Red Panda. We crossed Kalipokhri and were nearing Gairibas [9000 ft above the MSL] when our guides were told by a local cowherd that a Red Panda was sleeping on a nearby tree.

With a rush of adrenaline, we immediately hurried to the place and gleefully laid our eyes on the animal of our dreams. Aptly named as a 'Fire-tailed cat" the furry tail was as long as the body itself. The reddish brown fur on the upper body contrasted strikingly with the bluish back on the lower body. It was elegantly and lazily perched on a thick mossy bough. Our guide repeatedly instructed us to be very silent and careful, as at any moment the panda could just move and disappear. Though at first sighting it was around 100 meters away, we moved very carefully downhill, till we could station ourselves at an eye level with the Panda. It sure was a feast to look at the magnificent animal from such close quarters. As we stood there mesmerised, our hearts were beating erratically and limbs were frozen.

It was a divine opportunity conferred on us to record the images of this beauty in the wild. We took advantage of some neighbouring bushes to convert them into natural hides and set up our gears. Though at first the Panda appeared to be sleeping, we found out that it had it's eyes open and was just resting. As we started to click the images it yawned and slowly and gracefully moved on the tree and bestowed us with some beautiful poses. The entire habitat with dense moss covered trees with sunlight peeking here and there was surreal. We stayed close to two hours spending many gratifying moments there. As the panda finally drifted off into sleep, we reluctantly bid adieu and left with a lot of cherished memories, elated hearts and fulfilled dreams.



Dr. Sunita Pradhan

Dr. Sunita Pradhan, is one of the India's leading Red Panda ecologists. She got her Ph.D. studying the Red Panda in the Singhalila, National Park , Darjeeling. Her experience of 12 years in Padmaja Naidu Himalayan Zoological Park, Darjeeling [Darjeeling Zoo], had her overlooking the Red Panda captive breeding and ex situ conservation of the species. Now in ATREE, she is working to better understand Human-Wildlife interactions in the Darjeeling-Sikkim Himalaya and has many projects across the region. She has been associated with Red panda and its conservation for than 20 years now is one of the few persons to have studied them both in the wild and in captivity.

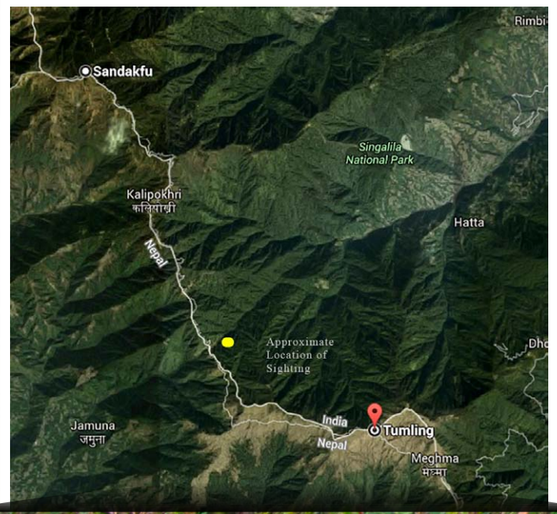
Her present project on Red Panda Conservation is making effort towards understanding and analysing a perceived threat (Tourism) to Red panda habitats, across the Red Panda landscape. She and her team assessed tourism in Singhalila for the first time in 2013-2014 after 20 years of the National Park being open to tourism. Amongst many generated information, the most obvious was the inadequate capacity of the 70 + local guides. Despite the local tour guides and porters being mandatory and important components of tourism in Singhalila, the highly undermined role of nature guides in promoting responsible and sustainable nature tourism in Singhalila, was no less than a root cause to tourism being a threat to the conservation value of Singhalila as a critical Red Panda habitat.

Local Guide Training in Singhalila

The Team has now started a Capacity Building Program of local guides to instill skills for their profession and thus aid in promoting responsible nature tourism in Singhalila. The team also found that Singhalila had a changing profile of tourists with the current visitors being more leisure seeking, with greater demands for heating facilities, better accommodation, and transport as compared to the minimalistic trekkers who used to visit Singhalila in 1990s.

Red Panda is still under threat due to habitat loss, hunting and trade. The species was listed as "vulnerable" in the IUCN Red List, but has recently been upgraded as Endangered, indicating its threatened status. A census carried out by the Forest Department, Government of West Bengal and the Darjeeling Zoo in 2012 showed a maximum of 38 red pandas in the Singhalila National Park and its adjoining areas. According to Sunita's opinion, visitors to places like Singhalila – which is serene, picturesque and critical habitats to endangered species like the Red Panda should be prepared and orientated to be very responsible and sensitive towards the place while enjoying it.

Location of the Sighting



Conservation status:

Red Panda is listed as Endangered because its population has declined by 50% over the last three generations and this decline is projected to continue, and probably intensify, in the next three generations. The overall forest loss rate at appropriate altitudes in the species' range is suspected to be reaching Near Threatened status, but Red Panda populations are suspected to be declining much faster, reflecting a battery of direct threats, this species' fragmented present range, and poor survival in fragmented areas.

Threats:

A] Red Panda diet is 98% bamboo. These plants show mass flowering followed by die off. Red Pandas will not readily find new feeding grounds in a highly fragmented landscape and are exposed to other threats when crossing unsuitable habitat. These bamboos do not easily re-establish after flowering in areas of environmental degradation and deforestation, which are now widespread across the species's range.

B] Red Pandas are highly susceptible to canine distemper (even developing the disease after vaccination with domestic dog vaccine), which is lethal to them. As more people, particularly herders, encroach Red Panda habitat, contact between domestic dogs (and their excreta) and Red Pandas increases. Unless all dogs (including feral ones) in Red Panda habitat are vaccinated against this disease the chance that it will enter and spread in the wild Red Panda population with catastrophic consequences are high.

C] Red Panda has specific habitat requirements for forest type, altitude, slope gradient and aspect, proximity to water courses, precipitation and presence of tree stumps. The gentle slopes and rich bamboo understorey of Red Panda habitat make it also a

prime choice for herders with their dogs. Cattle also prefer these more gentle slopes, so trample bamboo, which is also collected extensively by herdsmen and used for fodder. In addition tree stumps are often collected by local villagers for firewood.

D] Hunting for trade seems to be increasing. Deforestation and road building are easing access to Red Panda habitat. There are reports of poachers capturing Red Pandas in Nepal and Myanmar to satisfy the Chinese demand for the species (as wild meat, for medicine and for skins).

E] The human population in the Eastern Himalayas is growing at a steady rate. With this growth more people are moving into Red Panda habitat for their livelihoods, thereby exacerbating the above threats.

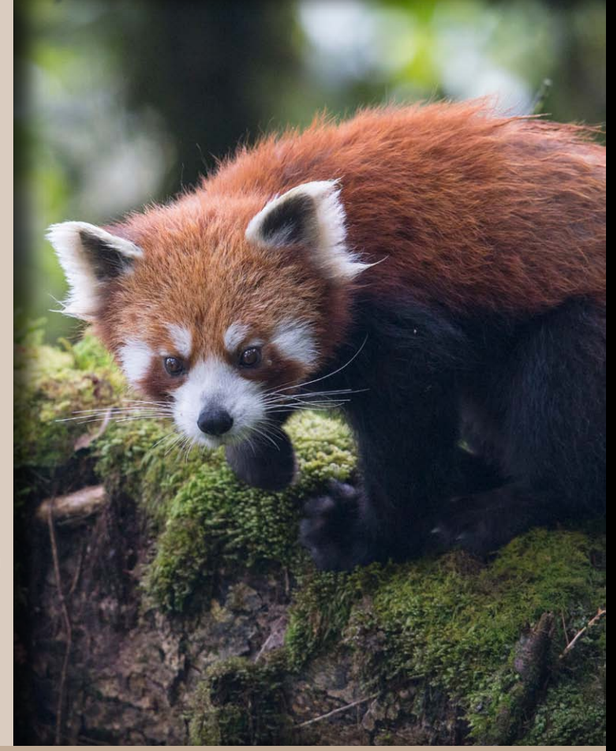
Conservation Actions:

The Red Panda is covered under CITES Appendix I , and Schedule I of the Indian Wildlife (Protection) Act 1972, the highest protection possible for a species in India . It is also legally protected in Bhutan, China, Myanmar and Nepal.

There are 20 protected areas in India that have known or possible populations of this species, yet these protected areas cover only about one-third of the total potential habitat for this species. Protection of this species is more or less adequate in the protected areas of India, due more to their remoteness and difficulty of terrain, rather than actual enforcement of laws. The following conservation strategies are recommended.

Megh Roy Choudhury is based in Kolkata and is professionally a teacher. She started her tryst with nature three years back. Photographing bird is the principal area of her interest. She firmly believes that the photographic documentation of these beauties will arouse an ardent public interest in nature conservation. Her journey into wildlife journalism started recently as the Editor of 'Wild Sojourns', an online magazine dedicated to wildlife, nature and conservation.

As a wildlife enthusiast her main aim is to make people aware of the importance of conserving Mother nature and her beautiful denizens which will create a better world with a peaceful co-existence.



Expansion and strengthening of the protected area network, prevention of illegal felling, control of jhum cultivation and overgrazing, regulation of tourism, public awareness of threatened status of this species, and enforcement of existing legal protections.

The proposed creation of the Panchthar-Ilam-Taplejung Red Panda Protected Forest in Nepal would connect the tri-national Kanchenjunga Conservation Area with India's Barsey Rhododendron Garden and Singhalila National Park, creating an uninterrupted stretch of protected land extending for 11,500 km2. This area is critical not only to the red panda but also to other endangered species such as the clouded leopard and leopard cat, as well as an exceptionally rich avifaunal diversity.

As the Red Panda breeds and lives well in captivity, many zoos worldwide are making sincere efforts in raising these magnificent animals. A multipronged effort in conserving the Red Panda can be a real success story.

References:

a] An overview of the status and conservation of the red panda Ailurus fulgens in India, with reference to its global status. Anwaruddin Choudhury. Oryx. Volume 35, Issue 3, pages 250–259, July 2001.

b] IUCN Red list of threatened species/ Red Panda. [http://www.iucnredlist.org/details/714/0]

c] Animal Diversity Web [http://animaldiversity.org/accounts/Ailurus_fulgens/]

d] Tourism in Red Panda Habitats of Singhalila and Neora Valley National Parks, Darjeeling Himalayas, India – An Assessment for Appropriate Strategies. Dr Sunita Pradhan.

Images by **Megh Roy Choudhury and Prasanna A V**

Macro Secrets Explained

Yuwaraj Gurjar

Jewel Bug molting @ Gibbon WLS

Nikon D7100, Tamron 90 mm VC with Nikon R1C1 f20, 1/60, ISO 400, Aperture Priority, Hand held

Yuwaraj Gurjar is a very highly respected macro photographer. He stays in Thane city, which is on the outskirts of Mumbai's Sanjay Gandhi National Park, spread across 104 sq. km and home to many small creatures and even leopards. He has been visiting this park almost every weekend for the last 28 years and he still finds something new in every visit. When he found a mating of huge Atlas moth pair there, he was hooked and then started looking for butterflies and other unusual and fascinating fauna. He then started observing and photographing butterflies, ants, bugs, beetles, dragonflies, other small insects and wildflowers. He feels that the big mammals and birds get all the attention and tiny insects and flowers are always neglected. Very little information is available on many Indian macro species. So he concentrated on photographing them and started writing about them. His photos have won many national and international awards and have been exhibited across the world. Some photos have been included in field guides, educational websites and magazines. Only observing and photographing nature is not his goal. He loves to spread awareness and knowledge about nature and wildlife. He has written and published more than 1000 photo features in various newspapers, magazines and blogs. He has made audio and video CDs for school children on nature education and awareness. Recently he has developed a Mobile App on Butterflies names "I Love Butterflies" which is based on Android platform and now free to download which consists all the 168 species found in and around Mumbai. He also conducts talks and workshops on nature, wildlife and photography.He accompanies students, groups, families to help them see the hidden natural world and the rich biodiversity across the country. Here are few of his experiences from the wild forests, particularly related to smaller fauna with necessary technical tips.

Camouflaged Draco or Flying Lizard on tree bark

Location : Bondla Wildlife Sanctuary, Goa

Nikon D90, Tamron 180 macro 1/60, f10, ISO 400

Some insects and animals use camouflage as an effective way to protect themselves from natural enemies. Camouflage works for prey as well as predators, both sides in the battle for survival. Many times while searching for one particular insect / reptile in its habitat we are unable to locate the same, though we are very much sure that it will be hiding just there. Photographing these camouflaged insects / reptiles is an extremely tricky situation. There will be two angles for your photography, either you can show the animal or you can show effectively how it is blended in the surrounding. I was in Bondla Sanctuary Goa, when I saw a flying lizard or "draco" gliding from one tree to another. I saw where it was settled, but it was so well camouflaged it was just impossible to make out its presence. I clicked the macro shots with the help of my long 180 mm macro lens. Here I tried to show how the flying lizard was well camouflaged on the tree trunk. I have fired the flash to get the even lighting on the tree bark but at the same time I have avoided any shadows which will show the lizard's location.

Mantis Fly laying eggs

Location – Karnala Bird Sanctuary, India.

Nikon D7100, Tamron 90 mm VC macro, 1/60, f11, ISO 200

I often lead Photo walks in Karnala Bird Sanctuary. One such photowalk was just after the monsoon and all the forest was lush green and fresh. The weather being cloudy, the insect activity was very poor and all were resting under the leaves. But to my satisfaction the climate changed to sunny and immediately insect activity started. Butterflies were visiting flowers and started nectaring. Dragonflies were gliding in the air and capturing tiny insects. I noticed a very tiny fly landed on a dried twig. She was perfectly mimicking a small Preying Mantis, The fly was very tiny say just size of a wheat grain from family Mantispidae. Her movements were quite abnormal. I started observing minutely… soon she started moving on the twig rather rotating in circular motion wriggling her abdomen. Yes… she was in the process of laying eggs. Her bulging abdomen was full of tiny egg mass. She started laying eggs in circular manner, after laying one egg she turned to left and lay another. This process lasted long and soon the dried twig was full of white, creamy eggs. It was a real sight for me as well as for the camera. As it was a very slow process of laying eggs it gave me ample time to shoot in various modes.

Grass Blue Butterfly with dew drops

Location - Yeoor - Sanjay Gandhi National Park, Thane, India.

Nikon D70s, Tamron 180 macro, 1/60, f14, ISO 200

In Mumbai winter season is negligible. But still in those months we can see dew drops very early morning in the forest. All the forest paths get moistened due to dew drops as though it drizzled in the previous night. In these cold mornings we often see butterflies or dragonflies studded with dew drops. Butterflies are cold blooded insects which roost under the leaf or on grass blades. I particularly visit forests to see these dew drops of flowers or insects and then try to capture these dewy beauties on camera, Few years back I was looking for particular species of butterflies with dew drops, These “Grass Blue” butterflies are one of the tiniest butterflies of India, so searching them in the forest is a tough task. At this particular time of the year all the grass and undergrowth is dried and looks pale yellow. So I was searching for such tiny butterflies with dew drops and I noticed this butterfly. It was very small in size say just 18 to 20 mm, about the size of nail of our little finger. It was studded with dew drops shining like jewels. I managed to get the shot with the blurred dried grass background. The twin flash system illuminated the dew drops on butterfly wings well.

Under water coral formation

Location – Sawantwadi, India.

Nikon D70s, Tamron 180 macro, 1/60, f16, ISO 200

These are Corals under the water. I was visiting forest areas near Sawantwadi and we visited a beach called Redy there nearby. It was a pleasant morning and time for high tide. So waves were rising and bumping over the rocky surface near the beach. I was observing the movement of the sea crabs over the level of rising water. It is when I saw these magnificent colored corals on the water puddles on the rock surface. Now seeing with naked eyes and capturing the coral under the water was tricky task. The rocks were shiny black and corals were deep in the water by two to four inches. So I tried to use my flash to illuminate the green corals. But as the corals were dipped in the water it was difficult to penetrate light there without bouncing from the water. I calculated few angle where the bouncing of the light will be minimum and tried with the high aperture value to get good depth of field.

Assassin Bug emerging from eggs

Location : Yeoor, Sanjay Gandhi National Park, Thane.

Nikon D7100, Tamron 90 mm VC macro with Nikon R1C1 flash system F25, 1/125, ISO 400

I was coming back from one of my nature trails and was late in the morning. It was a winter month in the semi deciduous forest so all the jungle was leaf less and dried, yellow in color. While walking on a small jungle path I noticed some movement on the path side dried twig. It was a tiny red insect wriggling out. I started observing carefully. It was an egg mass of around 50, laid singly on the twig with dull reddish brown in color and size of a sesame seed. Suddenly there was a very minor sound like “phat” and one egg shell broke out. A tiny red head moved out hanging upside down. The newly hatched one wriggled out with great pressure and then started spreading its legs; soon it started venturing the twig. Then another popping sound and another baby came out. It was just like a series and soon many babies came out one by one. I managed to capture the emergence of these Assassin Bugs coming out of the egg shells as well as a fully emerged baby roaming around.

Lobster Moth Caterpillars

These are caterpillars of the Lobster Moth which possess a warty nobbly look which allows them, when alarmed, to strike a pose waving the elongated forelegs around, giving the appearance of an ant. Combined with this they can squirt formic acid onto an aggressor from a special gland in the 1st thoracic segment which greatly enhances the mimicry. I was doing a nature trail in Nagla forest in the rainy months to search for macro opportunities. I chanced upon these bizarre looking moth caterpillars. In the past also I have seen these caterpillars with various sizes and with more bright colors. But this time there were two caterpillars standing in the perfect position and studded with rain drops. It was risky to shoot them in the pouring rain but I managed to do that within a short span of time. Even the fresh green leafy background was perfect for the image.

Location – Nagla, Sanjay Gandhi National Park, Thane, India.

Nikon D7100, Tamron 90 mm VC macro with Nikon R1C1 flash system, 1/60, f11, ISO 200

Leaf Blue Eggs.

Location : Yeoor, Sanjay Gandhi National Park, Thane. on 12.01.2014

Nikon D7100, Tamron 90 mm VC macro with Nikon R1C1 flash system F16, 1/200, ISO 200

Though these are looking like Golf Balls, these are very tiny eggs of Leaf Blue Butterfly. Butterfly eggs come in various shapes and colors. But commonly they are yellow or green with spherical or oval and flattened shape with ribs and pits on it. The eggs of some Lycaenids have most beautiful sculpturing when seen under a microscope. Female lays egg underside of the leaf of their respective food plant.

It protects the eggs from rain, direct sunlight and to some extend from some predators. It always cemented by some sticky chemical to the leaves or twigs. Female butterflies select the food plant for egg laying both by chemical and visual cues.

Most butterflies lay eggs singly, but a number of species deposit their eggs in clusters, sometimes more than 100. I was looking for the caterpillar of this Leaf Blue butterfly on its specific host tree. At one fresh leaf I found this mass of eggs newly laid. It was so tiny just the size of poppy seeds. I have used 90mm macro lens along with all the three extension tubes (12 mm + 20 mm + 36 mm) and further some cropping to get this image.

Spider eating Dark Cerulean Butterfly

Location : Yeoor, Sanjay Gandhi National Park, Thane. on 17.05.2015

Nikon D7100, Tamron 90 mm VC macro with Nikon R1C1 flash system F16, 1/60, ISO 100

I was walking in Yeoor forest and saw some flashy blue color on the ground. I observed carefully and saw that a small blue colored butterfly was fluttering on the ground. The movement was quite abnormal, so when watched more carefully I noticed that a very tiny female Jumping spider had caught the Dark Cerulean butterfly and sucking juices out of it. The butterfly was mud puddling and the opportunist Jumping spider was just waiting for the right moment to grab the butterfly. Obviously the butterfly was bigger the size of the spider but the spider pounced on the butterfly and started injecting its mouthparts into the butterfly body. The butterfly was fluttering to get rid of the spider and the butterfly wing scales were shattered here and there. It was a real drama and action on the ground. As the butterfly and spider were tiny in size, I wanted to shoot at eye level so I lay on the ground and started taking eye level shots. In a particular angle only I was able to see the dazzling, metallic blue color of butterfly upper wing so I managed to fire flash in particular angle to capture those beautiful colors as well as the action.

Spider approaching Planthopper

Location : Yeoor, Sanjay Gandhi National Park, Thane. on 20.09.2009

Nikon D90, Tamron 180 macro 1/60, f25, ISO 200

Once I was running behind a Blue Oakleaf butterfly but it sat with the closed wing and totally camouflaged with the surroundings.Then I saw this funny looking Planthopper (Family Derbidae) sitting idle on a leaf nearby. Its extra long wings were kept in very unusual way and shining. Now getting those shiny wings on photo is a big task. I reduced the power of flash output substantially and started clicking with certain angles to capture the iridescence of the wings. The insect was so small that I had to go very near to capture him in the frame. But at the same time I didn't want to startle him so I approached very carefully centimeter by centimeter ahead and started firing. While shooting the Planthopper I saw one Jumping spider was approaching and about to jump and hunt for the Planthopper. But somehow the Planthopper sensed the spider's movements and flew away.

Snake Tongue flick!!

Location- Tadoba National Park, Chandrapur, India.

Nikon D90, Tamron 180 macro, 1/60, f18, ISO 200

I was in Tadoba National Park and had finished all my Tiger Safaris there. It was the last day and being Tuesday park was closed for the safaris so I just went behind the MTDC resort at Lotus lake. It was the month of May so majorly the lake was dry and at very few places there were water and dried mud. I clicked few lotus close ups and suddenly I sensed some movement around. It was a White Checkered Keelback struggling out from the mud block. The Keel Backs are the commonest freshwater snakes. A forked tongue is a tongue split into two distinct tines at the tip; this is a feature common to many species of reptiles. Reptiles smell using the tip of their tongue, and a forked tongue allows them to sense from which direction a smell is coming. Sensing from both sides of the head and following trails based on chemical cues. I concentrated to capture this particular "forked" tongue. The task was definitely not easy. The snake being on the ground I was lying down literally on the mud to take a "eye" level, rather "tongue" level shot. Another challenge was the snake was continuously flicking its tongue in and out, so was concentrating on particular "out" position to focus and click. As there was enough ambient light and I was planning to use my flash so I was not worried about the exposure. So I simply concentrated on the flicking tongue and managed to get this shot.

Location- Tadoba National Park, Chandrapur, India.

Nikon D90, Tamron 180 macro, 1/60, f18, ISO 200

Text & Images by **Yuwaraj Gurjar | www.yuwarajgurjar.com**

BROWN WOOD OWL

ABHISHEK MB

The Brown Wood Owl [*Strix leptogrammica*] is a highly shy and reticent species. It is distributed throughout all of India though the Himalayan subspecies is now recognised as a distinct species in it's own right. The "leptogrammica" part of its scientific name means "finely barred stomach". It is a medium sized owl with no ear tufts and a uniformly brown plumage.

It is a strictly nocturnal bird. It spends the daytime perched in tall trees in dense woodlands. It is very difficult to locate this bird. However the location can be pinpointed by many small birds which mob it while roosting. Whenever disturbed, it initially tries to camouflage itself by clinging close to the tree trunk, appearing remarkably like a stump of the tree. If this fails it often flies deeper into the dense forest. Despite its secretive nature, it is a very vocal bird particularly in moonlight and even more so during the breeding season. The breeding season of the Brown Owl is from January to April. Nest is mostly built in a cavity in the tree and usually two eggs are laid.

Brown Wood Owl is classified as being of "Least Concern" over its entire territory, but in localised regions deforestation is causing a serious decline in the population.

Abhishek MB stays in Virajpet in Karnataka. He juggles both his profession as an assistant manager in HDFC bank and wildlife photography expertly. He is a die hard nature and bird lover.

Himalayan Wood Owl

Initially Himalayan Wood Owl was treated as a subspecies of Brown Wood Owl but is now considered a separate species, Strix newarensis. It is specifically different in terms of it's habitat and calling pattern. It also lacks the distinct chest band of Brown Wood Owl. This is a comparatively rarer species. This image was taken at Mayodia at an Altitude of 8700 ft in Mishmi Hills, Arunachal Pradesh.

Image By **Chandan Chakravorty**

Pelagic Birding

Crossing the Last Frontier

Shiva Shankar

Pelagic birds are sea water birds, which are found away from the shore, where the sea has a considerable depth. Seabirds spend a significant portion of their life on the open ocean and come to land only to breed. Pelagic birds are usually found in hundreds or thousands of nautical-miles offshore, only strong winds can bring them to the shore during cyclone. They are very powerful fliers and have a high degree of endurance. These birds rest by floating on the water. Typically they feed on fish, squid and crustaceans.

When I started the offshore trips from Karnataka coast in 2010, I was completely clueless about oceanic birds and their distribution across coast. The only data was from the windblown species and the small maps in field guides. The distribution maps were either too general or had just few crosses/question marks. I could never imagine that someday I'd go to sea to watch these birds, as my knowledge about them was limited.

First thing was to look for the availability of commercial boats. Public transportation from Udupi harbour to St. Mary's island was available, but not suited to our purpose. Finally, with a friend's help, my first pelagic birding trip materialised – I and a few of my friends hired a small fishing boat for our first foray off the Mulki coast. After half a day, we were forced to return, as we hadn't carried enough fuel for the boat. Also, one of the birders was sea-sick.

Then I started gathering information about many other factors – boats with larger fuel tanks, safety factors, life-jackets, sea-sickness remedies, toilet and many other criteria which need considering before tackling the deep sea.

Greater Crested Tern

Then I could talk to the fishing boat which can carry enough fuel to keep the engine running for 2 days. But these didn't have any toilet facilities on-board, and that was indeed worrisome. Overnight trips without a toilet facility was unthinkable, but we had no other choice. There were make-shift type toilets available in market, but I failed to acquire them in time. Many of my friends were willing to join the overnight expedition. So the first overnight sojourn got materialized and about 15 of us could get into the boat early morning at Udupi fishing harbor.

It is hard to convey our experience in words: the boat ride, spending the night in the vast, open sea, seeking pelagic birds, and watching the drama of skuas harassing terns, was an exhilarating feeling. The open sea was not a habitat I'd been exposed to and hence, the dynamics were new – we usually saw birds from a distance, or sometimes, passing swiftly by our boat. Some times, there were scores of birds flying around the boat, sometimes mixed fishing parties too. With the bird and the boat moving away from each other, the time at hand to identify the birds or understand their field character is extremely short.

Most of us on that boat were armed with cameras and binoculars. Thousands of images were taken, filling many GB-worth of memory cards; they proved invaluable indeed, in confirming the identities of several birds which had passed well away from our boat.

While on a boat the problem is that one never has a firm footing, unlike when birding on land. It affects your balance, the rolling and heaving of the boat as it rides the waves makes it impossible for you to even hold your binoculars or camera steady. The birds are in constant motion, and you move with the boat, dipping towards waves or steadying again to roll over to the other side, if you don't hold on to something or aren't seated firmly with the necessary support, you may even be thrown overboard! But, the open sea presents an equal number of surprises and plenty of opportunities; I would consider the open sea one of the last frontiers of bird-watching.

Swinhoe's Storm-petrel

Pomerine Skua

In 2012, we did the most luxurious pelagic, when I did manage to find the boat with toilet and luxury of roof-top, with a deck over head where atleast 7-8 people could stand. But it was lacking the speed that we wanted to get closer to the deep sea, the continental shift occurs at ~150kms (though in the sea the distance is measured in Nautical miles) away from shore. Interesting thing to note during this expedition was that we had drifted by 10kms when the boat engines were off at night.

Bridled Tern

Arctic Skua

Wilson’s Storm Petrel

Masked Booby

In this pelagic environment, birds constantly seek food resources. There are two common food sources, the first one being fishing boats which use drag-nets. These drag-nets, as they plough through the water, churn up animalcules from the sea's depths, to the surface. You see seabirds foraging in the wake of these boats, gliding and circling effortlessly around them, swooping-down from time to time to pick up scraps from the water. Sometimes, these birds settle momentarily to gobble a morsel before catching up with the boat again, using seemingly leisurely wing-beats.The second food source is when birds hit shoals of fish. When they discover a moving shoal of fish, there are just a few birds initially, but within minutes, their numbers swell. They send out visual signals far and wide, across the vast, open sea, and you see birds arriving in all earnest, to partake in the feast. There are Bridled Terns, Common Terns, Greater and Lesser-crested Terns, Shearwaters and Skuas. This seems to indicate that thanks to their acute vision, pelagic birds keep an eye on other birds around, and are familiar with their behavior when encountering a shoal of fish. The flock follows the shoals of fish, diving into the waves from above.

Each bird has its own way of feeding on the fish: while Bridled Terns, usually found in scattered ones and twos or small parties sometimes having large gatherings of 50-100, pick-up fish from the surface, Common Terns do not hesitate to plunge into water. Shearwaters usually maintain a more close-knit group, swimming the churning waters, dipping their heads to pick up fish from beneath the surface. You often see one of these shearwaters patters along the surface of the water with their booty, to distance itself from you, as you request the boatman to steer closer to get a better look.

The congregation gets more interesting with the arrival of the Skuas. You rarely see Skuas feeding by themselves, as they are given to a life of piracy – avian goondaism if you will – by harassing helpless terns. Be it the Common, Lesser-crested or Great-crested Tern that has just acquired a fish, Skuas chase them relentlessly, showing great agility as they pursue the victim, twisting and turning to match the Tern's every move.

Common Tern

Arctic Skua harassing a Greater Crested Tern

Unable to withstand the harassment, the terrified Tern disgorges the contents of its stomach, which it had probably swallowed a few seconds ago, to escape the attack from the Skua. No sooner is the fish voided by the Tern, than the Skua expertly rolls on its wings to catch it a few feet below the departing Tern, well before the fish hits the waves. This drama, witnessed barely a few meters from your boat, allows you to watch every move the Skua, a master showman, makes till the end. These parasitic Skuas (also called Arctic Skua), never fail to impress you with their strength and forceful presence.

Each visits recorded a new sighting for the state's coast. Many of the earlier records were wind blown injured or dead birds found in the coast. The pelagic birds that we came across from coast of karnataka state were Arctic Skua, Pomarine Skua, Long-tailed Jaeger, Bridled Tern, Common Tern, Sooty Tern, Sandwich Tern, Fresh-footed Shearwater, Persian Shearwater, Wilson's Storm-petrel, Swinhoe's Storm-petrel and Jounin's Petrel.

Eight pelagic bird-watching trips along the west coast, from Udupi, Mulki and Mangalore, resulted in a few new records for Karnataka, thanks to the efforts of all the participants and those who helped directly and indirectly in conducting these pelagic surveys.

A nature photographer, Shiva Shankar is a post-graduate degree holder in Embedded Systems. Born in the town of Udupi, he received his primary and secondary education in the picturesque Malnad region of Karnataka. He has co-authored the book "Birds of Southern Coastal Karnataka" and "Birds of Nitte University Campus".

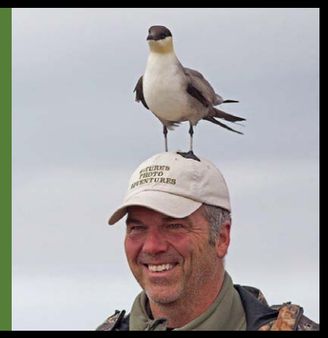
Wildlife Photography

Creating a High Visual Impact

Wildlife photography is being actively embraced by a huge number of enthusiasts today. Apart from the routine images one should also strive to construct inspirational and creative images. Imagination and vision should be used to fashion a unique perspective of wildlife. Images need to have an instant visual impact to be admired and remembered. Sometimes one such moment or one such image frozen in eternity can end up defining oneself.

David Hemmings

David Hemmings is a world-renowned bird and nature photographer who is known throughout the nature photography world for creating some of the most dynamic and impressive wildlife images. We are happy to present here few of his very creative and high impact images.



Bald Eagle, Alaska

Booted Rocket-tail, Ecuador

Long-tailed Jaegar, Canada

Birds In Flight

Certainly, the most demanding technical challenge in bird photography is that of capturing crisp images of birds in flight. The spirited energy flowing in a well-executed flight shot creates a truly dynamic image.

This image of Resplendent Quetzal, arguably the most beautiful bird in the world has been taken in Costa Rica. The mind blowing composition, the crisp details and free flowing feathers create an image which becomes a lasting memory for any viewer. The delicate texture of the bough and a beautiful background perfectly compliment this stunning beauty.

Northern Hawk Owl

Owl scapes in Ontario, Canada

Great Grey Owl

The majestic presence of birds of prey and their elegance in flight makes for striking bird portraits and breathtaking action images. David's Owl scapes just ooze action and adventure.

Snowy Owl

Great Grey Owl, Ontario, Canada


Arctic Fox kits, Cambridge Bay, Nunavut, Canada

Two to Tango!!


Grizzly bear cubs, Alaska


Northern Gannets, Newfoundland, Canada
Many times catching more than one subject in the frame creates a truly amazing perspective and adds a creative element.

Polar Bear with Cub

David Hemmings has his work published on the cover of National Geographic, Canadian Geographic and has also appeared on the cover of other numerous nature photography publications including Audubon Magazine, On Feathered Wings, Birding Essentials and more. David is also known throughout the nature photo community as being a leader in grizzly bear and polar bear photography. He has led and continues to lead numerous trips the world over to photograph these amazing animals. In addition to David's photo passion, he is the President of Natures Photo Adventures. Combining his photo passion, imagination and public relations expertise, he strives to introduce new, exciting and unique photo nature adventures. David loves meeting new people and sharing his passion for bird and nature photography with others.

Natures Photo Adventures was formed in 2005 with the goal of providing photographic learning adventure travel for novice, intermediate and advanced bird and nature photographers. Our goal at Natures Photo Adventures is to lead photographic workshops to the some of the world's most beautiful and unspoiled destinations while providing a rewarding and educational learning experience.

We strive to exceed your expectations, taking you on an adventure and a once in a lifetime experience. Explore nature, share, learn and develop new levels of photographic skills and leave with fantastic photographs, wonderful memories and new found friends. We will teach you the techniques to enhance and improve your current level of photography while providing a safe, unique and enriching travel adventure. Our workshops are designed with a limited number of participants and small group settings for a more intimate and conducive learning experience. They are ideal for photographers, birders, and nature lovers as the opportunities are seemingly endless to see and photograph new species. We are looking forward to sharing our passion for photography by leading you on our unique adventures!

Green-throated Mango Hummingbird, Tobago

FOREGROUND
in Landscape Photography

Amit Rane

Lohagad Fort, Maharashtra

One of the basic techniques to improve your Landscape photography is to consider your frame in three parts- foreground, midground and background.

In Nature and Wildlife, we pay lot of attention on the subject and background; similarly in Landscape Photography, we should give significant importance to foreground along with mid and background.

Foreground by definition is the part of the scene, which is nearest to the photographer/viewer. The foreground in landscape photography is like the initial paragraph in a good novel. The foreground, like that opening paragraph, is where you're enticed. It's where your eyes first land, it's what first grabs your attention. The foreground element has you wanting to read, or more accurately in the case of a photograph, to see more, to look deeper into the frame. Having a distinct foreground and background gives a good sense of depth to your images and they won't appear flat.

Interestingly, if we include a foreground; it creates a depth, but it should not be just a foreground. Your foreground should create a visual interest to your image. So in short, your foreground should be a compositional element, which will create visual interest to hold the viewer's attention and direct him/her towards the main subject of interest.

Near Zojila Pass, Ladakh, Jammu & Kashmir, India. Nikon D800, Nikon 24-85mm @ 24mm .

Aperture : f16, Shutter : 1/125, ISO : 160, Exposure Bias : +0.66, Matrix Metering, Handheld

Umngot River, Meghalaya

Place: Dal Lake, Srinagar

Composing a foreground is very vital. In the above frame placing the boat diagonal, created very interesting composition, and the golden light created rest of the drama.

Location: Stone Quarry, Cherrapunjee, Meghalaya, India with DCP Expeditions

Nikon D800, Nikon 24-70mm with NDx 400 filter Base.

Aperture : f16, ISO : 50, 3 Frames Base shutter : 8sec, Tripod Mounted

So it is imperative to find these interesting foreground elements while shooting your scapes; and there are plenty of them available in nature. These elements can be, moss laden rocks on seashore, wild animals in a forest scape, pebbles /shells in seascape, rocks/puddles and textures in streams, wildflowers against mountain scape, lit tents / huts in startrails /Milkyway scape and the list goes on…..

There are a few Important points one should remember while working with foreground. Go low with your wide-angle lenses as these foreground elements could by small or tiny.

The foreground and the background should establish a relation and should complement each other. Eg- Shapes and forms. Always keep your foreground sharp (Use narrow aperture F11-F16 onwards, but avoid using highest aperture value as it could lead to refraction). Use apps to calculate DOF / Hyperfocal distance. It comes very handy in field and they are not very complicated as one perceived.

Remember, foreground is one powerful element that could transform an otherwise ordinary scene into a dynamic landscape. But to achieve this, the photographer should have a strong understanding of the concept and vision.

"There is nothing worse than a sharp image of a fuzzy concept" — Ansel Adams.

Location : Krangsuri Waterfall, Meghalaya, Nikon D800, Tokina : 11-16mm @15mm with NDX400 Filter.

Aperture : f16, Shutter : 25sec, ISO : 100, Matrix Metering, Tripod Mounted.

Inclusion of foreground always creates Depth in the frame. Rocks in the foreground always provide interesting elements with their colour and texture.

Location: Bhandardara, Maharashtra, Nikon D800, Nikkor 16-35mm Lens + NDX400 Filter

Aperture: f16, Shutter : 30sec, ISO: 100, Matrix Metering.

In the above image the stones in the stream bed are used a foreground which gives a three dimensional effect to the viewer, ND filter is used to cut down light by 9 stops which give a motion blur to the clouds.

Location: Dhianthlen Falls, Meghalaya, Nikon D800, Tokina 11-16mm @15mm

Aperture: f16, Shutter : 3sec, ISO : 100, Matrix Metering, Tripod Mounted

Streams and puddles makes some interesting foreground elements, In above image the Moss and texture of rocks makes a very unique foreground.

If the foreground is unique and beautiful, let it dominate the frame.

Location: Kunkeshwar, Maharashtra, Nikon D800, Tokina 11-16mm @ 15mm with NDX400 Filter.

Aperture: f16, Shutter : 2.5sec, ISO : 100, Matrix Metering, Tripod Mounted.

Always watch out for Algae /moss laden rocks to create a vivid texture in your foreground.

Location: Cherrapunjee, Meghalaya, Nikon D800, Tokina 11-16mm @16mm

Aperture: f16, Shutter : 1/125sec, ISO : 100, Matrix Metering, Tripod Mounted.

One or more foreground objects will give the impression of three-dimensionality, and can help to frame the scene. Depth is achieved by combining foreground, middleground and background objects.

Magic of Monochrome

Location: Shivaji Park at sunset. Nikon D800, Tokina 11-16, Aperture: f11, Shutter: 4 Min, ISO: 100 Matrix Metering, AWB, Tripod Mounted + Cable release

Location: Bandra Fort, Mumbai, Nikon D800, Nikkor 24-85mm @ 24mm + NDX 400 Filter. Aperture: f13, Shutter : 2.5 sec, ISO : 50, Matrix Metering, Tripod Mounted.

Rocky beaches always make interesting foreground. The above shot is taken a mid noon on a stormy day and Neutral Density filter is used here to give that long exposure silky effect to waves.

Location: Leh –Khardung-la Road, Canon 7D, Tokina 11-16mm f2.8 @ 11mm

Aperture: f4, Shutter : 25sec, ISO: 6400, Evaluative Metering, Tripod Mounted.

In India the best place to shoot night sky is the high altitude Himalayan range. and Ladakh is a paradise for the night shooters, Unfortunately we see lot of images of only sky which does not make any sense.

Always make it a point to add an Interesting foreground in such situations. Your foreground should be immovable /rock sturdy since we are shooting a long exposure of 25-30 seconds.

Animal Scape is always fun to shoot and for parks like Jim Corbett and Kazhiranga one even doesn't need wide angel lenses if you can isolate your subjects. In the above image I've used a Rhino as a foreground as well as the key subject to create this beautiful Rhino scape.

Location: Kazhiranga National Park, Nikon D300s, Sigma 150-500mm @ 400mm.

Aperture: f10, Shutter: 1/400sec, ISO: 250, Matrix Metering, Handheld.

Amit Rane is one of the most skilled Wildlife Photographers in the DCP family. He has travelled extensively across Indian geography for more than 18 years and has in depth knowledge of difficult terrains spread across the Indian subcontinent. He has brilliant photography skills in all genre of Wildlife photography starting from bird photography to mammals, from landscapes to macro photography, from reptiles to amphibians. He is a trained Herpetologist and loves reptiles. He is a regular travel photographer and writer. He also has a deep interest in product and fashion photography. He has a fantastic teaching acumen. He is s trainer, biodiversity expert, Wildlife photography advisor and holds the chair of Director, Outbound Expeditions, Team DCP.

Brood Parasitism

Indian Spotted Owlet Parenting a Scops Owlet

Naman Doshi
Meet Vala

Owls are distinctive birds that fascinate birders and non-birders alike, but what is so special about owls that they capture our imagination and interest? Learning what makes these birds unique, can help birders better understand and appreciate every owl they see. Owls are found in all different habitats and there are different owl species found in all continents except Antarctica. Owls are depicted in cave paintings in France that date back 15,000 to 20,000 years. Owls also appear in Egyptian hieroglyphics. They have held a variety of symbolic roles in culture and have represented misfortune, death, prosperity, and wisdom. There are roughly 225 species of owls in the world, depending on how various geographic populations and subspecies are classified.

This story is about one of the species called Indian Scops Owl, that ended up in the nest of other owl species called Indian Spotted Owlet. It all started when we located an Indian Spotted Owlet pair near waterbody in Girnar. We started to observe them on daily basis as we found them very cute and fascinating. Generally owls are nocturnal but some of them can be found active during even at dusk, dawn or even at daytime depending on the color of their eye.

The different color of owls' eyes do more than help you identify the species. Eye color seems to be an indicator of when the owls prefer to hunt, whether it's at night, during the day or in the soft light of dawn and dusk. Regardless of eye color, owls tend to have excellent eyesight and the ability to see in the dark. Most owls that sport orange eyes are active around dawn and dusk, which is known as being crepuscular. Dark brown or Black Owls that have dark brown or black eyes typically are nocturnal, which means they prefer to hunt at night. Yellow eyes often appear on owls who are diurnal -- they prefer to hunt during the day. Though this is just conclusion of many observations carried out by experts they are always exceptions.

So one day in the morning we just saw one of the parents landing on a tree branch with a lizard in its talons. Instead of feeding itself, it flew directly to nest. Thus we realised that the nest was alive. We were very excited to see the chicks but instead of checking the nest we waited for about 20-25 days for chicks to come out. Meanwhile we were tracking this family daily.

We observed them preening, stretching, yawning and combing its head with its claws. One day the owlet chicks came out of nest during day. They were so cute and were very curious about the outside world. We were very keenly watching these wonderful babies. Then in an astounding moment we found an owlet with two red eyes staring at us . You can say we were hypnotized by those eyes. We realized that it must be a baby of some other owl. Most probably Indian Scops Owl. We were very surprised to see baby Scops Owl at the entrance of the nest which was supposed to be of Spotted Owlet's.

So we started observing them and began to document the behaviour in a meticulous fashion. We soon came to the obvious conclusion that the owlet pair was considering it as their own offspring. Since owls are nocturnal, it was difficult to make many observations during the daytime. So, hoping to understand this behaviour better, we began to observe the nest at night as well.

We even got to see the parent owl feeding the Scops Owl chick. Not wanting to use flash, we were unable to take photographs to document this event. But we have captured some intimate shots of the baby Indian Scops Owl and one of parents preening each other. After some days these fledglings started to explore nearby area.


@Naman Doshi

The behavior we documented is called Brood Parasitism in scientific terms. Avian brood parasitism, or the laying one's own eggs in the nest of another bird, is a reproductive strategy whereby brood parasites offload the onus of rearing their offspring onto another individual, the host. Brood parasitism may be facultative at the species or individual levels, with some eggs incubated by the parents and some laid in other nests, or obligate. Brood parasitism may also be intraspecific, with eggs laid in other nests of the parasite's own species, or interspecific, with all eggs laid in the nests of other species. Cuckoos are the most commonly studied avian brood parasites. Conspecific brood parasitism – where a female lays eggs in another nest of the same species – is seen among Burrowing Owl (an Athene species) that is found in the American continents, but none of the other owl species have been recorded practicing brood parasitism. We did not see the Indian Scops Owl female lay the egg in the Spotted Owlet's nest, but it is difficult to imagine how else the chick would have ended up there. Our wild world is still filled with several mysteries yet unknown to us!

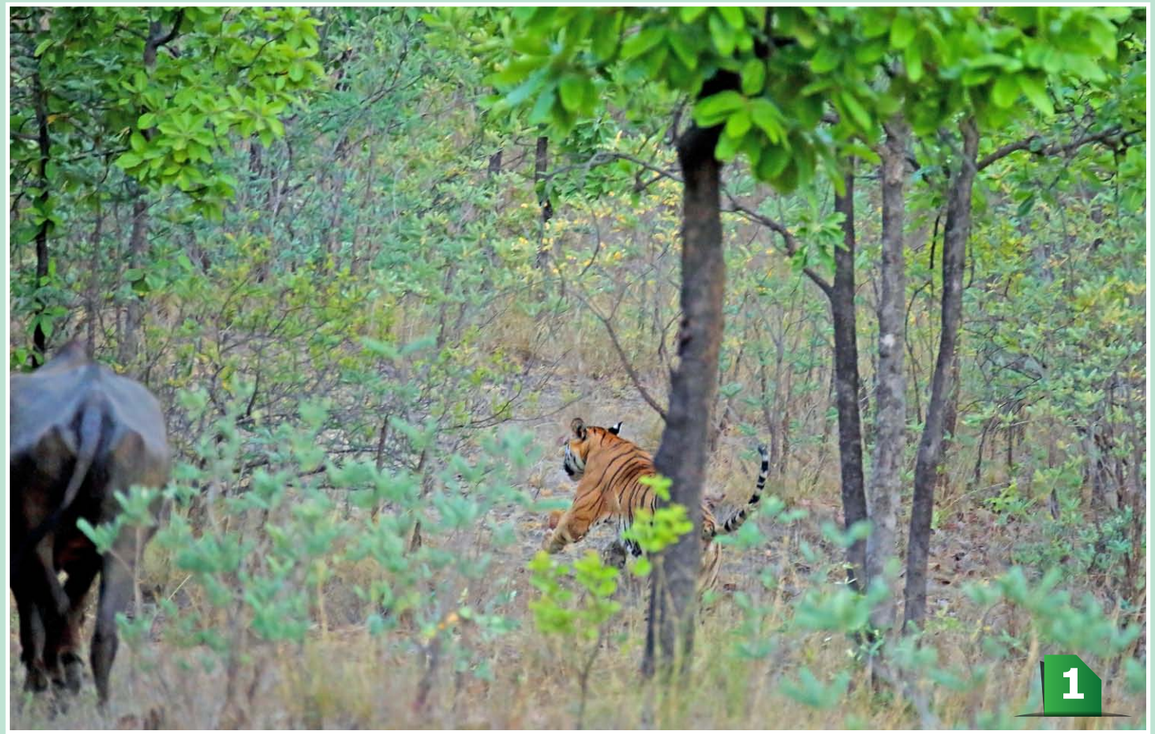
Naman Doshi is from Junagadh and currently studying in 11TH Commerce. At the age of 14, he took his first steps of love towards nature. Specially birds and Girnar inspired him to continue. After getting his camera, photography also became one of his passions. He enjoys the nature and believes that though the time goes on the soul remains full of energy when you are amidst the deep forests.

Meet Vala is a freelance graphic designer and nature photographer. He has always had a deep love and interest in nature and photography, so it was only natural that he ended-up following his passion. He tries to capture an unobtrusive, close and intimate view into his subject's lives; at their level. He spends an enormous amount of time learning everything he can about his subjects, their behaviour and their lives. As a visual storyteller, there is nothing more rewarding than recording a unique behaviour or moment.

The **HUNT**

Shantanu Prasad

One hot morning in 2013 June, I saw a male tiger padding silently through the woods in India's Satpura Tiger Reserve, where I worked as a naturalist. The big cat was walking through the jungle with a lazy elegance when it suddenly froze. I realised then that he was staring at a cluster of about 40 cattle grazing nearby. As the herd feasted on unaware of the imminent danger, the tiger perfectly camouflaged in the vegetation, crept closer very furtively. At the last moment as the tiger was to go out on an all out attack, the buffalos noticed and retaliated, attempting to chase him away. Unfazed by the numbers against him, the mighty feline pounced on a calf and crushed its neck in his jaws. The young one had little chance to defend himself as the powerful beast started to drag him away. As I followed him at a distance I noticed that he left the dead calf and wandered off. I kept a watch over him for the next few days. He didn't start eating the calf until three days later, a clear sign that his stomach had been full when he encountered the cattle.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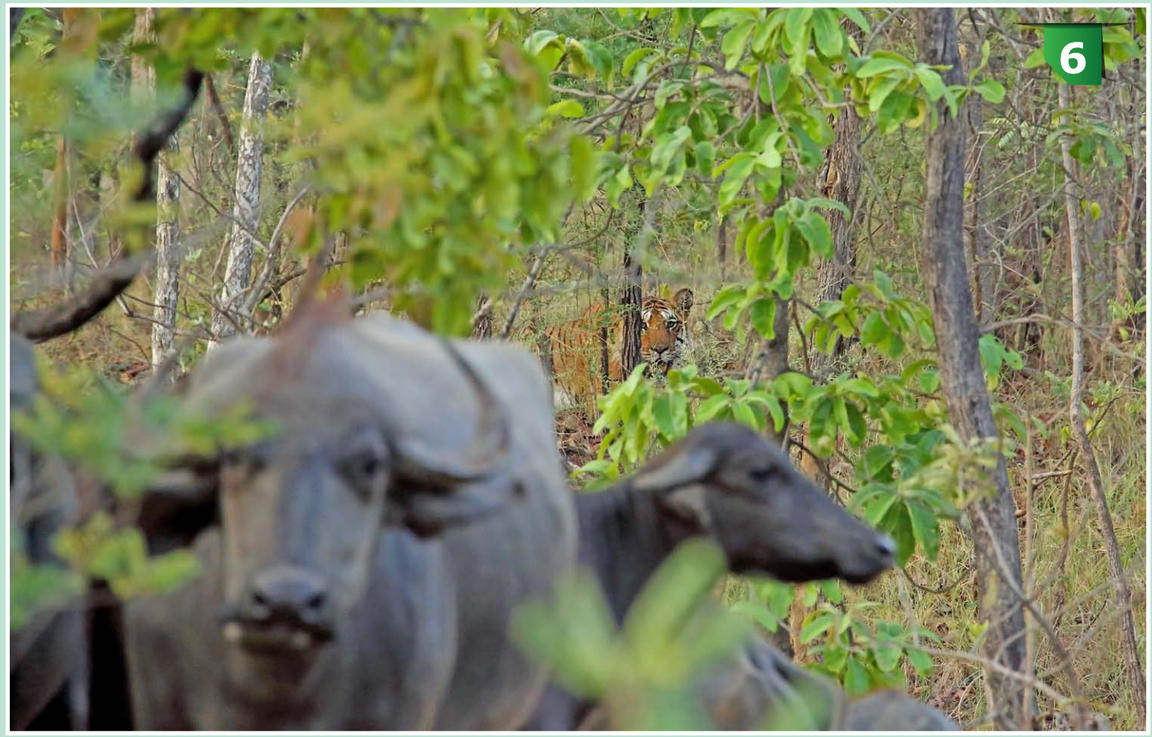
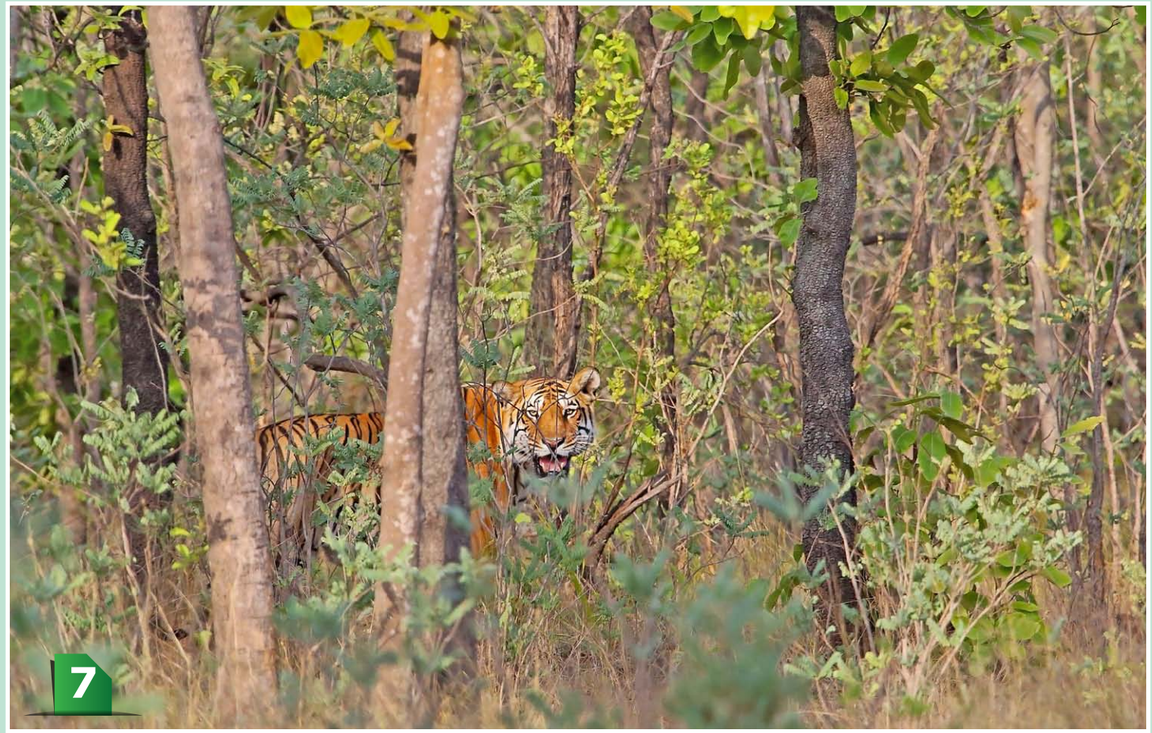




That behaviour is common among tigers. They can wolf down up to 88 pounds of meat at a time, and even when they're stuffed, they're on the lookout for future meals--especially easy ones. Livestock, lacking the alertness and speed of wild prey, are among the easiest. Human encroachment and livestock grazing in protected areas not only result in reduced wild tiger prey, but also lead to such encounters.

Once they're accustomed to preying on livestock, tigers often become casualties of human-tiger conflict as herders retaliate. Satpura Forest department is working hard to prevent such conflicts and secure tiger populations into the future. Still, seeing this great beast in action was an experience I'll not soon forget. Thanks a lot to Cindy Thomas, my friend who gave me her Camera to shoot this event.

Shantanu Prasad is an engineer but has devoted his time fully to wildlife since 2011. He has worked mostly in the Himalayan strip from Ladakh to Tripura, Central India, Sundarbans & Masai mara. In these years he has got several national and international level awards. His work has been published in most of the Indian wildlife magazines & International magazines. He has worked with a wildlife magazine as an editor. He has worked as a naturalist in Satpura Tiger Reserve. He also conducts photography workshops and leads wildlife tours in India and Africa.

Thar Desert

A Unique Abode for Reptiles

Bhavya Joshi

Saw-scaled Viper

Many National Parks and Sanctuaries are located within the Thar Desert. One of the most popular wildlife destinations is Desert National Park, near Jaisalmer – Rajasthan. Our team of four (Vipul Ramanuj, Catherene Christian, Amatya Sharma and me) decided to go for a one of a kind herping expedition in Thar Desert to explore the hidden treasures of the reptile world.

Thar, the Great Indian Desert is also known as the ocean of sand for obvious reasons of course! The seemingly infinite dunes of sand are accompanied with some unique geographical features like plains and hills, sparingly interspersed with vegetation, lakes and salt marshes.

This barren and arid region receives very scanty rainfall annually amounting to less than ten inches, typically between July and September. Another distinctive aspect is the wildly fluctuating temperature, from freezing cold in the winters to well over 45 degrees Celsius in summer months. There's also a wide temperature variation between mornings and nights on a regular day.

Despite the inhospitable climate, Thar is a haven for an amazing wildlife with mammals like Blackbucks, Chinkaras, Desert and Indian Fox, Desert Cat, Wolf, Hyena, Jungle Cat and the adorable Desert Jird. As for our feathered friends, Falcons, Vultures and Eagles make their appearance during the winters as well as Demoiselle Cranes that visit and stay here for a few months.

It is amazing to witness how well the Wildlife here has adapted to their habitat with many smart survival strategies displayed across species. Since the water is scarce in many parts of the desert, some animals can even conserve the amount of water longer and sometimes rely on obtaining moisture through their intake of food. Four techniques that help the animals to survive the dry heat are avoiding heat, dissipating heat, acquiring water and retaining water.

A Camouflaged Wolf Spider

Rocky hills to sand dunes, gravel plains to dry land, different habitats merge seamlessly creating a very balanced ecosystems sustaining life amidst torrid conditions. On our week long exploration in the desert, we came across some very interesting species. We also studied the survival techniques adapted by the wildlife here.

It can be honestly said that the desert wakes up in the night as a number of species are predominantly nocturnal. We did many night trails and spent some really long nights but spent a great time sighting a number of species.

These are some of the species that we came across:

Spiny-tailed Lizard:

The Indian Spiny-tailed Lizard [Saara hardwickii] lives in arid and semi-arid habitats. Locally known as "Sanda", it lives in groups with one burrow per individual. They're herbivorous lizards and are prolific grass eaters. Categorised as 'Endangered' by the IUCN, the major threats for them are habitat destruction, predation by raptors and human consumption for its meat and fat.

Saw-scaled Viper

Brilliant Agama

Sind Sand Gecko

Saw-scaled Viper:

This is the smallest member of big four venomous snakes of India. Saw-scaled Viper [Echis carinatus sochureki] is a highly venomous snake and one of the fastest striking too. It has a tremendous striking speed, often taking less than a second to bite and recoil. Predominantly nocturnal, it can be seen basking under the sun in its preferred habitat. They're also known to exhibit male combat during mating period.

Brilliant Agama:

Though Brilliant Agama [Trapelus agilis] looks a lot like a garden lizard, it gets striking blue colours during the breeding period, especially the males. Rightly named 'brilliant' in that case! They're very agile and swift hence the significant term 'agilis'.

Sind Sand Gecko:

Sind Sand Gecko [Crossobamon orientalis] is a small gecko with unarguably the prettiest set of reptile eyes. When seen from the front it looks as though the gecko is smiling back at you. It is very active during the night jumping, running and hunting small insects.

Toad-headed Agama

Fringe-toed Lizard

Toad-headed Agama:

Toad-headed Agama [Bufoniceps laungwalansis] is a tiny reptile found in this endless desert. It is a master of camouflage and uses a novel technique to hide and disappear when threatened. It uses all its four legs to sink in the loose sand burying itself within seconds, making it very tough to spot in the vast sand dunes. It is one of the diurnal species of reptiles. We spent almost three days to find this little guy and finally we got its small pug marks that took us to it. The vanishing act that we witnessed was just magical and hard to believe our eyes too!

Fringe-toed Lizard:

These are one of the most attractive lizards [Acanthodactylus cantoris cantoris] with juveniles that look absolutely beautiful with a blue tail and dark stripes on the pale coloured body. It is normally found near loose sand in dunes. It displays a unique habit of tinkling its tail left to right to attract small insects and distract predators. Though smaller in nature, but they protect their territories with determination.

Fringe-toed Lizard

Sandfish:

Sandfish, a tiny legged skink [Ophiomorus raithmai], provides a true example of the connective link between Lizards and snakes, how the prehistoric snakes evolved from lizards and lost their legs over a period of time. It is also known as the three fingered sandfish. The legs are not of much use in walking rather it swims in the desert sand and uses them to burrow.

Persian Sand Gecko:

Persian Sand Gecko [Microgecko persicus euphorbiacola] is one of the most colourful geckos I've ever encountered before. I fell in love with it the moment I set my eyes on this beauty. We were lucky to find an adult with beautiful coloured patterns on its body. During the day they hide underground in sand tunnels or under rocks only to remain all active at night. A methodical scan of the surroundings with a combination of still hunting and foraging enables them to capture small arthropods.

Sind Awl-headed Snake:

The Awl-headed Snake [Lytorhynchus paradoxus] at present has been recorded from a few areas of Rajasthan. Its unique characteristics are the pointed snout covered with tough rostral scales which is mainly used to shovel out prey from under the sand. It is one of the non-venomous snakes found in this region.

Sind Awl-headed Snake

Sandfish

Persian Sand Gecko

Bug Life:

Bug life in the desert is impressive with hundreds of species documented. Since they're a source of food for many other species, they're well equipped with amazing camouflage abilities, making it tough for us to spot them at times. Spiders, Mantis, Lacewings, Robber-flies, Monster Crickets and Grasshoppers are commonly seen across various habitats.

Indian Desert Jird:

Indian Desert Jird [Meriones hurrianae] is a small sized rodent found in Rajasthan and Gujarat. They love barren areas with firmer soil. These rodents are very social and live in burrows dug close to one another, often inter-linked too. They are extremely active and alert as they form a vital source of food for snakes and raptors.

An expedition amidst the spellbinding landscape of Thar Desert enriched us with a wealth of knowledge. The striking strategies adopted by wildlife and plants to survive within the treacherous environment of the desert are not only fascinating but also complex and intense.

Our foremost objective was to document and observe the arid species and we surely returned greatly satisfied, so much so to be tempted to head out again from the word go! Still there are many species out there that are yet to be studied and discovered as well. It will be tough but pleasantly rewarding to explore and unravel the hidden secrets of this magnificent desert. A journey through this magical land of sand dunes and golden sunsets is must for every wildlife lover.

Monster Cricket

Indian Desert Jird

Bhavya Joshi got addicted to nature at a very young age. A Civil Engineer by profession and a Wildlife and Nature Explorer by passion he tries to be in the wild as long as he can, to understand how nature works and also to get the self-satisfaction of observing and photographing nature. His work has been appreciated by many National and International magazines and he has won many National and International Awards too.

Text and Images by **Bhavya Joshi**

Prized Catch

Pallas’s cat

Kartik Patel

The Pallas's Cat is also commonly known as Manul. It is a small wildcat known for its cute and adorable, look. It appears to be bigger and heavier than it actually is due to the stocky build and long, dense coat. In reality, it is about the small domestic cat in size. It has a broad head, and low forehead. The ears are low-set and widely parted giving the scientific name, Otocolobus, which can be translated as 'ugly-eared.' The body is silvery grey and is very compact with low limbs. In winter, it's coats is grayer and more uniform in color, while in the summer it has more stripes and ochre colors in it's fur. it has black rings on it's tails, scattered black spots on the forehead, and dark stripes running from it's eyes down the cheeks. The frosted, silvery appearance of the coat is due to the white tips on the hairs. It has a long thick tail with black tip. The cat is carnivorous and is an ambush hunter. It stalks it's prey using short vegetation and rocks for cover, or sometimes wait at entrances of burrows and pounce when mammals like pika and rodents exit. It also feeds occasionally on birds. The male is similar and slightly bigger than female.

Its habitat is mainly located in the vicinity of pika habitat in arid flat grasslands. The cat is mostly seen solitarily. It prefers cold and arid environments of rocky terrain and grasslands at elevations up to about 15,000 feet. The cat is generally active from dusk to dawn with rare sightings during day. During the day it uses rock crevices, small caves and burrows of fox and marmots for resting and hiding. its sighting is very difficult as it has a habit of moving low on the ground and nocturnal nature. The cat breeds once in a year delivering 3 to 6 kittens during April-May. It makes a variety of sounds like a small dog and hissing growl when excited.

In India, it is found only in eastern Ladakh at an elevation between 3000 to 4800 m.The Pallas's Cat in Ladakh is best seen in Rupshu/ Changthang area. Due to the habitat destruction and decreasing numbers it is placed in "Near Threatened status".

When we planned a trip to Ladakh, I heard that there was a chance of seeing the "Pallas's cat". After reaching there, I eagerly enquired about the possibility of a sighting. I had a disappointment in store as my friend firmly replied in the negative. We were in the big flat open grassland type area and this shy and elusive cat is a mountain dweller and is predominantly crepuscular. We dismissed the thought of this feline from our mind and pushed on for other species. On the first day in the evening around 4:00 – 4:30 pm we visualised something moving very low level in grass.We initially thought that it could be a Himalayan Marmot. As I saw the animal through my camera viewfinder my heart started fluttering. Yes of course!!. It was the female Pallas's cat!!. We waited patiently and the cat slowly ventured out from grass and started to walk in open area. We could make a few images but after sometime she became alert and suddenly started to stare at us. Then she ran towards the grass and disappeared. We waited patiently biding our time but she didn't reappear.

On the second day as we were travelling across the vast landscape of ladakh , we saw a small animal basking near one small mound on the ground. As that animal was very far from us we stopped the car and started to scan the animal. Suddenly two more animals appeared on the scene and I just couldn't believe how nature surprised us with three very cute and little kittens of Pallas's cat. We spent around 30 minutes shooting and watching them play and departed without disturbing them.

FOUR IN
A FRAME!!!

On the third day we decided to just chance our luck and visited the same place. We could immediately see two kittens and as we stood mesmerised two more kittens joined the party!!! It sure was an out of the world moment for us and we could capture some cute and lovely moments. We were very happy to get all the four kittens in a single frame. I think this is the first ever record of four kittens of this beautiful species in the wild. However we realised that we just couldn’t stay there for a long time and left them with a very heavy but a elated heart.

Kartik Patel is a chemical engineer by profession and hails from Ahmedabad, India. He has been a dedicated birder since 2002 and started wildlife photography in 2011. He has volunteered in many activities held by the Forest department of Gujarat including many bird census.He has taken part in the “Borneo Bird Race” in 2014 as representative from India, held by Malaysian and Brunei Government at Borneo Island, and has won ‘Best sporting team’ award.

The SAFARIST

A Novel Wildlife Travel Sharing Platform

Tanmay Keshav and Maulik Desai are best friends, avid wildlife enthusiasts and have been traveling together for close to a decade. They set out to make a travel community which can solve some of the problems they themselves faced over their travels to wildlife destinations across India. Thus was born 'The Safarist'. The first issue they wanted to address was something we all have experienced at some point - finding the right company to travel to a place of choice, at the right time.

Vivek Kumar's trip to Kanha & Pench. By the end of it, Safique was to join the group in their next trip to LRK as well!

For the past 3 months, they have been actively promoting the idea of co-traveling within the nature community in India. The benefits of doing so are quite obvious- the company of like-minded people & reduced travel costs as a result of people sharing expenses. The vast majority of us are well acquainted with destinations in our vicinity and most of our trips are confined to these areas. Put this into perspective with the massive bio-diversity that India is blessed with and it pales in front of it. If we could channelize all the experience out there, it would be possible to make trips to all sorts of destinations, while traveling in an enriched and affordable manner.

Anudeep Agrawal's trip to Tadoba, by the end of which he discovered a good friend & future travel partner in Surendra Athnikar.

Arpit Desai's trip to Tadoba which got together 4 people from 4 states- Delhi, Gujarat, Maharashtra & Tamil Nadu!

However, there are genuine challenges which we believe can be solved with the help of technology. People have various priorities when it comes to trips. Some are looking for spectacular big cat photographs, some want to photograph birds. Some want lot of time with a subject in order to compose the perfect shot; others are interested in identifying as many species as possible. To add to this, people have varied experience levels and some are more advanced than the others. On The Safarist, an intelligent platform is being developed, which matches people up with others who have similar interests. User profiles are tailored so as to help people connect with like-minded people. Facebook profiles are integrated and emails and phone numbers are verified.

With that being said, these images show some of the experiences the Safarist has helped conceive in the past couple of months. All of the following have involved a trip creator sharing their travel plans on www.thesafarist.com, interested people joining the trip & finally the entire group traveling together while sharing all costs.

These are just some of the fascinating experiences which have been conceived on The Safarist over the past couple of months. Apart from the ones mentioned above, there have been trips to LRK, Tal Chhapar, Kaziranga, Ladakh, Sikkim - to mention a few. In the past 3 months, about 200 plans have been shared on The Safarist by travellers & enthusiasts across India. With more sophisticated technology & increase in adoption of the idea, it is possible to create many such memories for people! Eventually, Tanmay and Maulik wish to bring on-board local stakeholders so that we can benefit the entire eco-system. They also will be be unveiling an improved version of the website along with a mobile app soon. If you haven't already, go to www.thesafarist.com and register now! You have an entire community waiting for you.

Tanmay is an engineer with an MBA from IIM Ahmedabad. He previously worked in the finance domain for three years. Maulik is an engineer with an MBA from NITIE, Mumbai. He previously worked with a leading FMCG company. Avid wildlife lovers and the best of friends, The Safarist was born as a result of their experiences while traveling together over the past 10 years! Go to www.thesafarist.com for more.

Trip to Dudhwa by Anurag Kumar, a noted conservationist. Also, the first trip to be joined by a female participant!

Mehul Patel's trip to Gir-a wildlife enthusiast and photographer who has been to Gir 44 times! Co-traveling with like minded people reduced his costs and got him some great friends.

Maulik Desai

Tanmay Keshav

JAMNAGAR
A Birding Paradise

Urmil Jhaveri

Pallas’s Gull

Jamnagar, in the state of Gujarat in India is a unique place for bird, mammal and marine life enthusiasts. A set of diverse habitats make this dreamy place a wildlife paradise.

Whenever we think about Gujarat and birds, first place which springs into the mind is Jamnagar. Several migratory birds make Jamnagar their home during the winter season. There is a proud checklist of 300+ birds from this birding haven. The advantage to this place is its real diverse climate, land and habitat options. Very good spread of vegetation attracts many reed and bush birds to Jamnagar. The longest coastal area of Gujarat, brings many shore birds like crab plovers, oystercatcher, red and great knots and so on to this area. Small water bodies make a safe abode for ducks, grebes and waders alike. Places like Pirotan and Narara island, Khijadiya bird sanctuary, Vijarkhi dam, Ranjitsagar dam, Sasoi dam, Sinhan dam, Charakhala salt pans area, Lakhota lake, Dhichada, Sachana, Bedi port, Valsura, Balachhadi, Gandhinagar are the major places one can visit and find variety of birds at Jamnagar.

Khijadiya Bird Sanctuary:

The sanctuary is unique having both fresh water lakes, salt and freshwater marshlands. It is spread over an area of 6.05 km2. Before Indian independence, a check dam was built for storing the waters of river Ruparel just before it entered the sea. Over the years with fresh water of the rain and river on one side and salt water of the sea on the other side, a unique area has formed here. On the other side of the bund large creeks flowing from the Gulf of Kutch are located. These creeks supports mangroves and other marine vegetation while on land side of the sanctuary inland vegetation like Deshi babul, Pilu, Prosopis and others are found profusely.


Black-tailed Godwit


Grey Plover


Spotted Owlet

The Khijadiya sanctuary is located at the watershed of Ruparel river and Kalindri at the North East coastal region of Jamnagar district in the Gulf of Kutch and has a very special and unique ecosystem. It is a paradise for waterfowl, waders, terrestrial birds and nearly 260 species are found in the Sanctuary. Once the water dries out, this whole area turns into an excellent grassland. Numerous insects, amphibians, reptiles, small mammals like jungle cat, and herbivores like Blue bull can be sighted here.

Dhichda is another excellent birding location with lots of water bodies. Dhichda can be reached by taking a detour after the village of Bedi from the road turning left before the entry road of Bedi Port. The entire stretch offers excellent birding from roadside.... another effortless experience. Here the Lesser and Greater flamingos can be seen at close quarters.

Indian Skimmer

Little Tern

Indian Skimmer

Marine National Park & Sanctuary

The breathtaking islands of Pirotan and Narara have coral reefs, mangroves, sea-grass beds, mudflats, network of creeks and other ecosystems which support rich marine life & bird life. Here one has chance to spot octopus, puffer fish, sea turtles, lobsters, crabs, dolphins, ray fishes, jelly fish, star fish, sea anemones, colourful corals, exotic marine flowering plants, etc. A boat ride is necessary for pirotan Island while Narara is accessible by road. Both islands are the places where crab plovers can be found in large numbers.

Lakhota Lake

Lakhota Lake is situated in the middle of Jamnagar city with the Lakhota Palace as its center and is home to more than 75 species of birds. Surrounding Lakhota lake there are smaller lakes. it is very surprising to see so so many birds inside a busy city!! A walk alongside the lake or a relaxed time under the beautiful domes allows you to experience nature to one's heart's content. Ducks, Pelicans, Gulls, Terns can be seen at very close quarters.

Charakhala Salt Pans area

The Charakhala salt pans area on the way to Dwarka is a place where there are a lot of waterfowl like flamingos and pelicans. Other waders, grebes, ducks and terns are also found in good numbers here. This is also a nesting ground for Caspian tern.

Many other locations are there in and around Jamnagar which are ideal for birding and wildlife photography. Winter season particularly is very rich in avifauna.

Hardik Pala

Hardik Pala is a wildlife photographer and hails from Jamnagar, Gujarat. Image credit for the above two landscape belong to him.

Jungle Cat

Jamnagar is one place where you can go very close to the birds without disturbing them. Several migratory birds make Jamnagar their home during the winter months.

The sanctuaries, the coastal areas, salt pans, the rivers & water reservoirs of Jamnagar provide a wholesome experience of wildlife and is a must visit for any nature lover.

Nilgai

Jungle Cat

Indian Hare

Urmil Jhaveri

Urmil is a wildlife photographer and hails from Jamnagar, Gujarat. He has been exploring the wildlife habitats of Saurashtra for quite some time now and documented several species and landscapes over the last few years.

Vampires of the Crawling Kingdom

Text By Javed Ahmed
Images by Dr. Krishna Mohan

Amongst all denizens of the crawling kingdom, none perhaps evoke such strong and disparate feelings of loathsome fear and unbridled fascination as Spiders.

Love them or loathe them, spiders were here before us – first appearing on the scene some 400 million years ago, before the mighty dinosaurs and long before early shrew-like mammals decided to scamper down trees, to see what lies beneath - And they are here to stay.

Inhabiting diverse habitats, in a wide range of ecosystems, ranging from tropical rain-forests, wetlands, deserts, and even our homes, spiders are everywhere. They come in a wide variety of shapes and sizes, ranging from the dainty flower-crab spiders, which blend into, and hide amongst flower-heads, preying upon insects lured by the promise of nectar, and thereby turning the angiosperms' very own evolutionary advantage, to their benefit, to the mighty monarchs of the eight legged realm, the tarantulas, which when opportunity presents itself, are not averse to taking frogs, lizards and even small snakes.

So, what exactly are spiders?

Simply put, Spiders (Order Araneae, Class Arachnida) are mostly venomous (though some species lack venom producing glands), eight legged, predatory (at least one species, Bagheera kiplingi, a kind jumping spider is largely vegetarian) arthropods (joint legged animals), with bodies divided into two (prosoma and opisthosoma) instead of the usual three parts of the average insect anatomy (head, thorax, abdomen), possessing pediplaps, which replace the insect antennae as sensory organs, and double up as copulatory organs in the males. They also possess anywhere between six to eight eyes (some cave dwelling forms lack eyes, altogether), and the table manners that would make a vampire proud.

A Lynx spider (Oxyopes: Oxyopidae) makes a safe landing - Spider silk is one of the strongest organic materials found in nature, incredibly tensile and flexible. While every spider has the ability to produce silk, not all use it the same way; ambush hunters like lynx spiders, do not spin prey-catching webs, but instead, utilize silk for a host of purposes, including, but not limited to, safety-line, and a protective casing for their eggs.

A 'twin tail' spider (Hersilia sp.) with a male alate weaver ant (Oecophylla cf. smaragdina) - Twin tail spiders are voracious, flat bodied hunters, which lie in wait, on walls and tree-trunks, their drab colors rendering them near invisible to passing insect prey, which is then rapidly encircled, covered in silk, and quickly dispatched with a venomous bite.

Spiders feed by injecting their prey with venom, and assorted digestive enzymes, effectively dissolving and partially digesting their innards, before proceeding to slurp this loathsome (to us) cocktail of insect blood and guts. And in case that wasn't already gruesome enough, most web-weavers go the extra mile, by trussing up their meal, much like the mummies of Egypt, and storing up surplus food-items to be consumed at ease.

All spiders possess the remarkable ability to produce silk. Spider silk is liquid protein produced in specialised silk glands found in the abdomen, which is connected to a spinneret which opens outside the body wall, via a tiny spigot. The silk glands are as varied as the spiders themselves, and produce different types of silk, utilised for a variety of purposes ranging from the construction of traps and snares for trapping prey, the formation of sperm webs for fertilization, egg-cocoons, safety drag-lines, and in case of burrowing spiders, for lining the walls of their dugout retreat. Spider silk is also remarkably tough, having the tensile strength of steel and nearly as strong as Kevlar, used in bullet proof jackets and vests.

A flower-crab (Thomisus: Thomisidae) spider snags an al fresco meal - Flower crab spiders are a diverse family of ambush hunting predators, some of which will often lie waiting in flower-heads, ambushing potential pollinators and thereby turning the angiosperms very own evolutionary advantage against them.

Hunter becomes hunted as a female Common Housefly Catcher (Plexippus petersi) takes down a Twin-Tail Spider (Hersilia sp) - 'Araneophagy' or eating spiders, is always risky business; tables can be turned, and your prospective meal can in turn, eat you. Most jumping spiders, however, will often take other spiders, including other jumpers as prey, and the behavior seems more common than previously presumed (Dr. David E. Hill pers. comm.)

An Asemonia jumper surveys it’s surroundings - Jumping spiders (Salticidae) are a fascinating group, as diverse as birds with a myriad of complex behaviors. Possessing perhaps the most actute vision amongst all terrestrial invertebrates, these teddy-bear vampires have adapted to a wide variety of ecological niches, globally.

A Pompilid wasp drags a wandering spider (Ctenus sp.) to it’s nest. While spiders are formidable predators, they’re themselves preyed upon by a myraid of organisms, ranging from birds and reptiles, to small mammals, and even insects, such as parasitic wasps, which after delivering a strategically placed venomous sting, utilize the paralyzed (but still living) spiders, as a convenient way of storing ‘fresh’ food, for their impending offspring.

Amongst the finest predators of the crawling kingdom, spiders play a dual role in the biomes they inhabit; keeping insect numbers in check, several of which include important agro-economic or diease-vector species, while being themselves preyed upon by a host of predators, ranging from reptiles, amphibians, birds, and small mammals, to parasitic wasps which utilize them as food for their offspring, thereby maintaining a delicate natural balance in the innate workings of an ecosystem.

And yet, sadly, like the vast majority of the denizens of the natural world, spiders are fast headed the way of the dodo, with global warming, habitat fragmentation, and unsustainable developmental practises of a burgeoning human population extracting its toll, plunging many species over the brink, by the minute.

In times like these, with climate change and extinction being household terms, and the fate of our doomed wildlife resting uneasily upon the shoulders of uncaring bureaucrats, it has become crucial to understand and conserve the biodiversity our forests, before they are irrevocably lost.

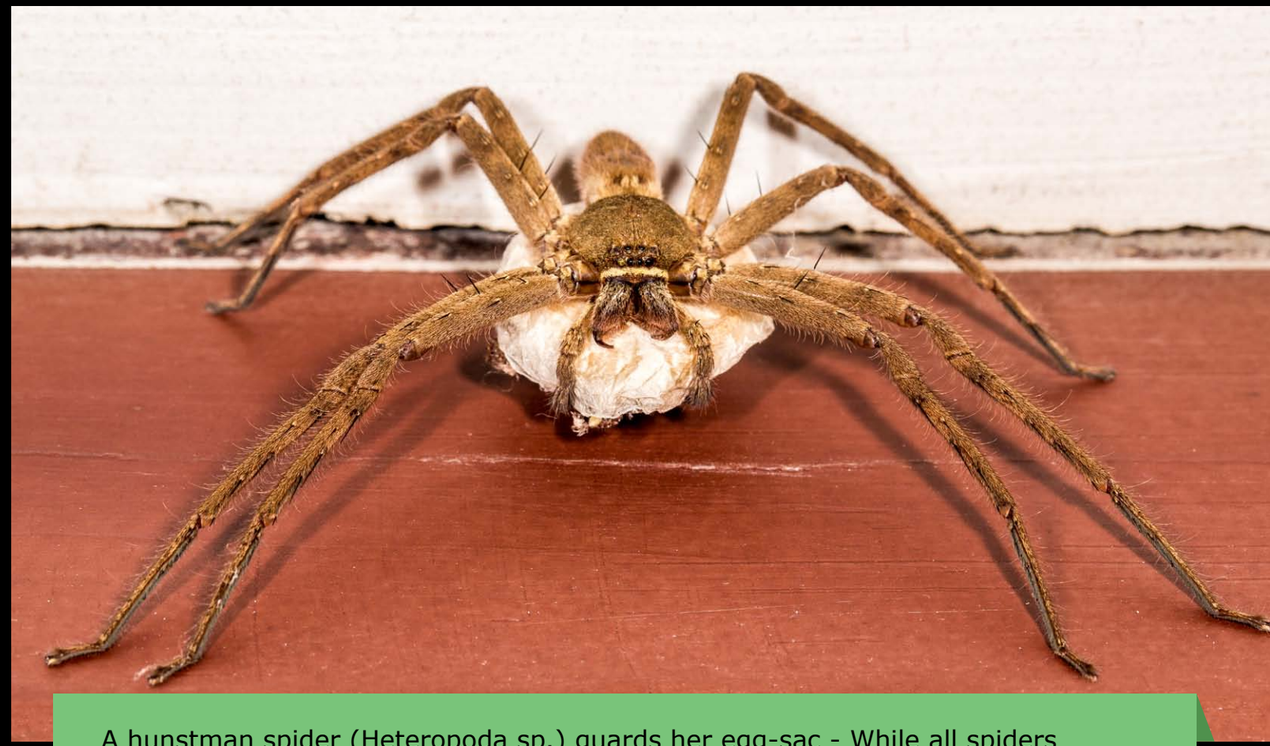
A cellar spider (family Pholcidae) preys upon a (major) Golden Backed Carpenter Ant worker (Camponotus sericeus) - While worker ants are usually given a wide berth by the vast majority of insectivores, owing to their pugnacious demeanor, they often fall prey to spiders, in this case, a surprisingly small, and delicate looking cellar spider. The key to the spiders success lies their venom, which enables them to overpower, and consume much larger prey.

Invertebrates are important bio-indicators of the ecosystems they inhabit, their disappearance often serving as an early-warning against impending environmental catastrophes, much the same way as theminers of old were warned of their own impending doom, by the death of the birds they carried into the coal mines, with them.

If these canaries of our ecological coal mines were to disappear, would we be far behind?

If you wish to live and thrive, let the spider run alive

– Medieval English Proverb



A hunstman spider (Heteropoda sp.) guards her egg-sac - While all spiders are formidable predators, female spiders in particularly have supremely strong maternal instincts, and will often always stand guard over their spiderlings, until they can fend for themselves, and some species, like this female huntsman spider, often forgoe meals while guarding their egg-cocoon.

Javed Ahmed is an arachnologist working on the taxonomy, distribution and natural history of Indian spiders. Other research interests include, but are not limited to, the phenomenon of urban wildlife, scrub-land and wetland ecology, aboriginal and land-race dog breeds and the behavior of free-ranging dogs.

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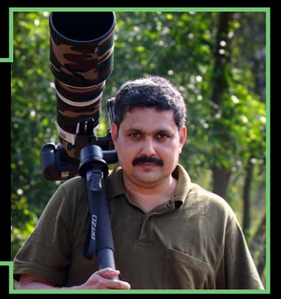

Brood Parasitism

Jungle babbler Parenting a Common Hawk-cuckoo

Image by **Niket Chaudhary**

PEACOCKS IN A TERRITORIAL FIGHT

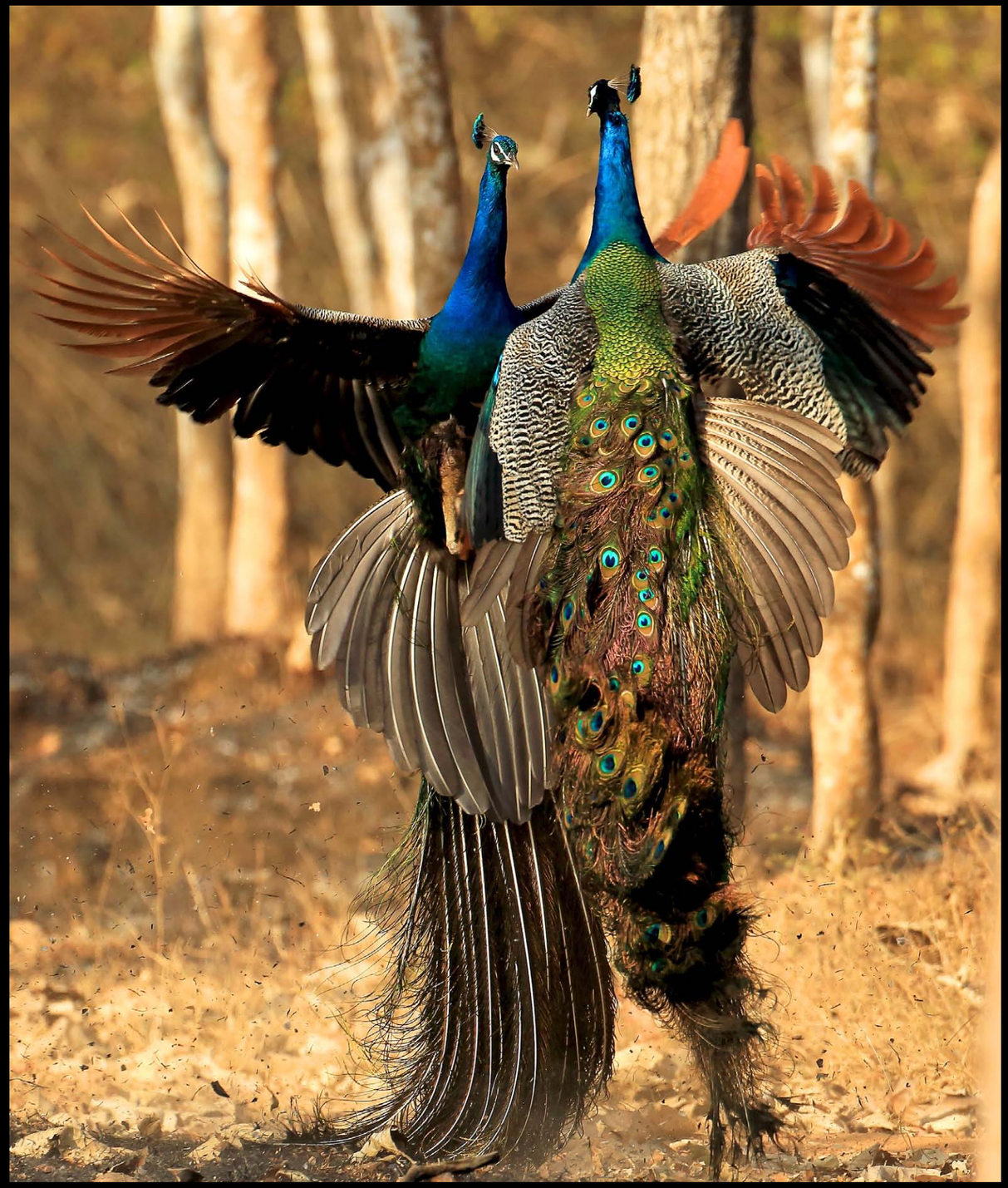

Image by Kiran Nagendra

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