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EXPLORERS

OCT / NOV 2018



**INTO THE WILD**  
WITH DHRITIMAN MUKHERJEE

**PANGOLIN**

By Kerne Mackie

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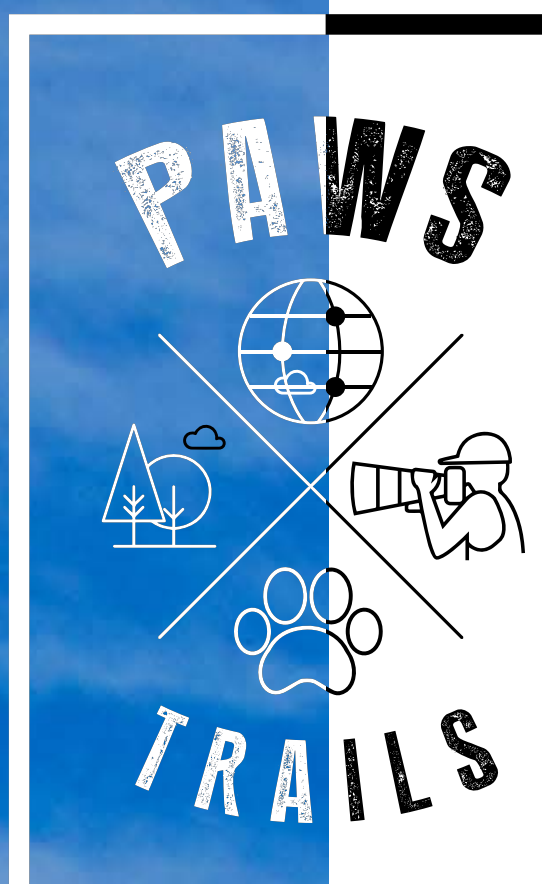
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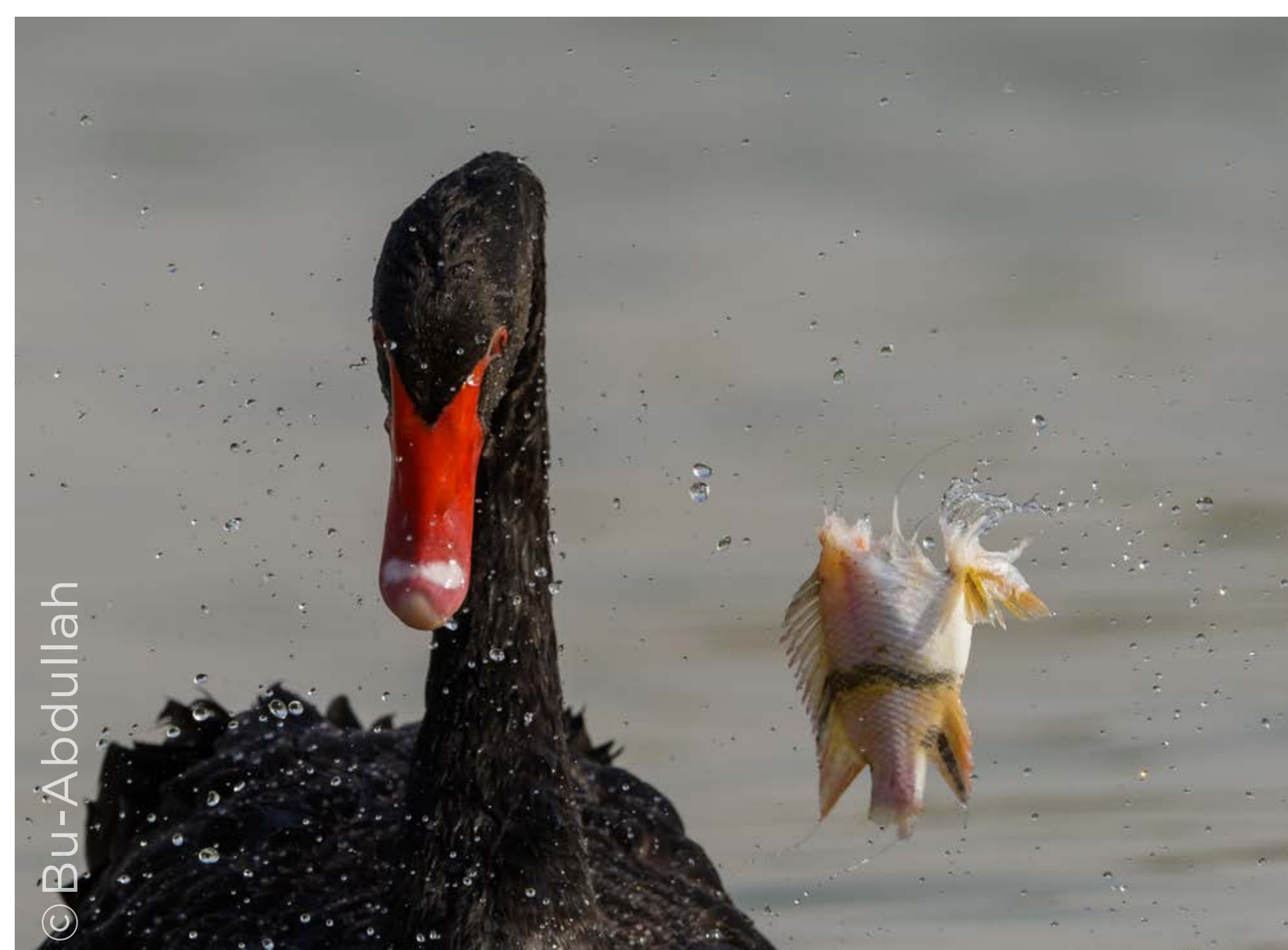


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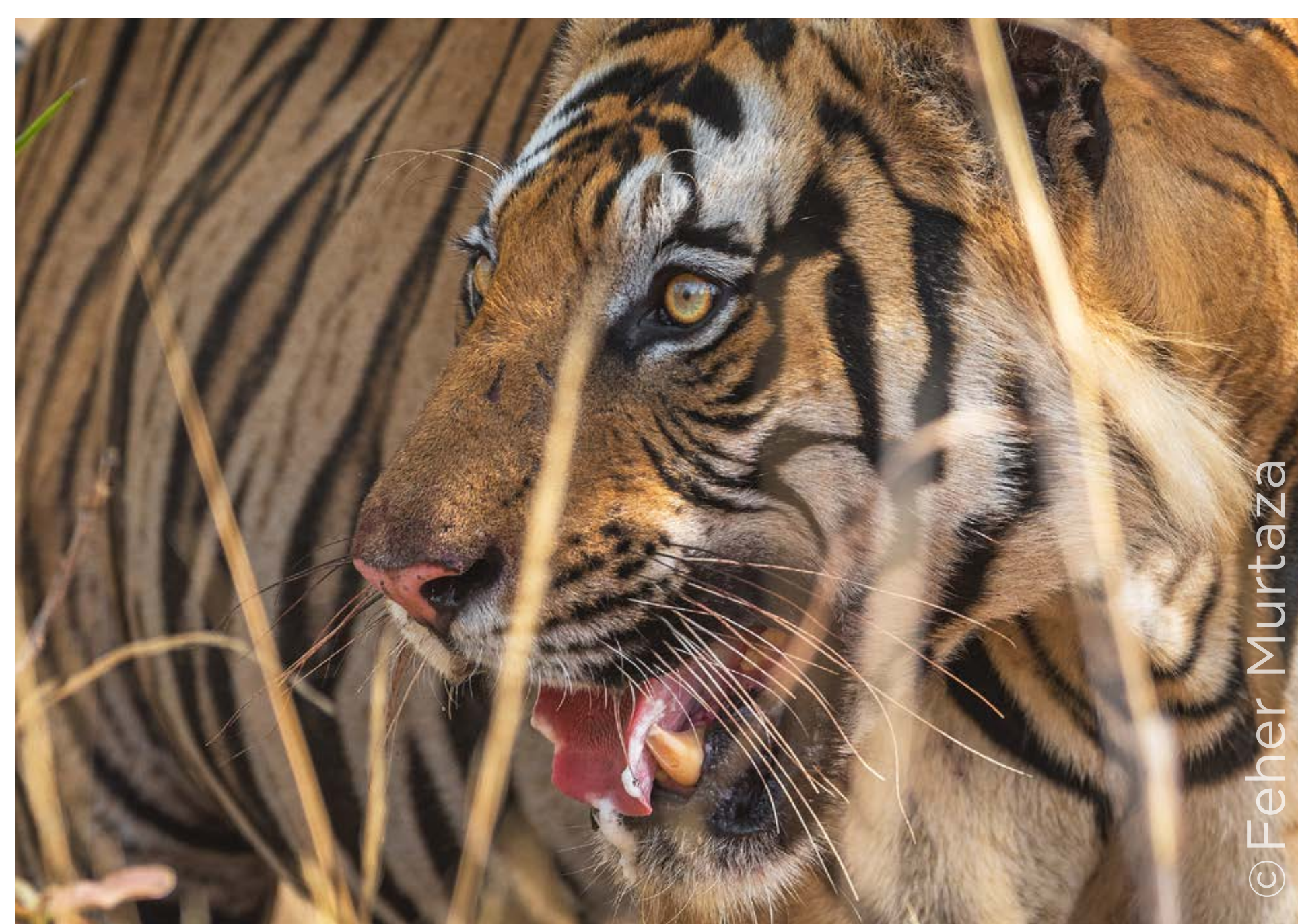


010

Into the Wild  
with Dhritiman Mukherjee



©Bu-Abdullah



©Feher Murtaza





Hank Tyler  
Editor

Indian nature photographer Dhritiman Mukherjee discusses his life experiences in our interview cover story.

Kathleen Wong of the University of California describes the world's largest system of nature reserves maintained by a university for research, education and habitat conservation. The 39 areas in the Natural Reserve System protect a wide range of California's ecological areas for research by students and professors.

Safwanah Varachia of South Africa tells us her story of establishing an ecotourism business.

Kerne Mackie of the Tikki Hywood Foundation in Zimbabwe writes about the plight of the eight species of Pangolin an enigmatic, shy mammal. The four African and four Asian species are all killed for illegal trade in animal parts. The IUCN lists all eight species in different categories of endangerment. Pangolins deserve much more conservation attention to prevent the extinction of these vulnerable and critically endangered species.

Zimbabwean Ann Warner presents a short story of the Civet.

Robin Hadder, an American journalist and photographer, describes a little known volcanic site in western United States.

Feher Murtaza of Bhopal, India presents stunning wildlife images for a beginner photographer.

Russian wildlife artist Tatiana Petrova describes her wildlife career in Russia as well as an opportunity to study at the Santiniketan University in West Bengal, India. Tatiana looks forward to creating artwork and writings for her own books on wildlife.

Bu-Abdullah explains his experience of photographing birds in flight.

With Volume 13, PT Explorers begins our third year of showcasing outstanding nature photography from around the world. We are looking forward to presenting eye-catching images in 2019.



© Trikansh Sharma

PHOTOGRAPHY DIRECTOR'S CHOICE

**Trikansh Sharma**  
Indian Peafowl  
(*Pavo cristatus*)



EDITOR'S DEN





## FOUNDERS' NOTE

We complete the first two years of our existence. It was on 1st October 2016 that PT Explorers magazine, one of our tool for conservation through photography, went online for the first time. This is our 13th edition. It has been one exciting journey for us. Yes, we faced many challenges and continue to do so, but our commitment to mother earth keeps us going. The flock of PT explorers are a bunch of ardent nature lovers, who has managed to keep the flame alight in the face of all challenges. In the last two years we have hosted 14 international wildlife photography exhibitions in Dubai. Our outreach programs has seen us conduct 50 plus conservation talks and photography workshops across the world and lectures in educational institutions to create awareness among the students. We published a coffee table book and associated with 200 plus passionate photographers from across the world. We have 40 active and passionate volunteers of different nationalities working for us.

Now to herald our third year, we have got big plans. Announcing the Paws Trails International Wildlife Festival, our first full-fledged wildlife festival. Come November, UAE will see its most prestigious event of its kind open the doors to the public and the next three days will see internationally acclaimed photographers, conservationists and scientists coming down to share their experience and knowledge. These will be luminaries in their field and will be a rare and unique opportunity in Dubai to have them under the same roof. We are launching an all new coffee table book on species of the Arabian peninsula. There will be an area specific photography exhibition, showcasing 25 species from this part of the world. There will be another exhibition on international collection showcasing 25 images of animals in their habitat from around the world proclaiming the importance of habitat conservation. Our aim is to be the region's premier voice of conservation and we hope and pray to the citizens of Dubai to make heartily participate and make this festival an important event of the city's calendar. To our readers from around the world, Welcome to Dubai if you can make it. Mark your calendars for the first three days of November and visit our website or social media pages for more information.

Let us hold our hands together for this journey!

[www.pawstrails.com](http://www.pawstrails.com)

**Hermis Haridas & Nisha Purushothaman**

Founders - PT Explorers



COVER STORY

# Into The Wild

with Dhritiman Mukherjee







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**Dhritiman Mukherjee is one of the most respected and loved Nature photographers in India today. He is admired for his dedication, perseverance and hard work.**

He has got RBS Earth Hero Award 2014 for inspiring people with his images towards conservation and Carl Zeiss Conservation award for contribution in conservation in 2013 with many other national and international photographic awards. As a professional photographer his work has been being published in all kind of print and digital media in numbers and with brands like BBC, National Geographic, New York Times, Lonely Planet, WWF, London Geographic, Telegraph, The Guardian etc to name a few. He is a field guy working from mountain to underwater or desert to rain forest. He climbed mountain for rare species, flew in sky to get a rare angle of bird, dived under ice, climbed volcano, spent days in tree canopy, dived in the caves, he did all possible thing to make a difference. He works around 300 days a year in the field. Recently he does a comprehensive coffee-table book named "Magical Biodiversity of India" by BNHS and Oxford. Also he did at least 30 other books where he was sole or major photographer. He is one of the founder members of an Indian Wildlife magazine Saevus. Recently he was the one of the three juries for national award for photography government of India.

[www.dhritimanimages.com](http://www.dhritimanimages.com)

[instagram.com/dhritiman\\_mukherjee](https://www.instagram.com/dhritiman_mukherjee)

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**If photos speak a thousand words, your photos translate into full length productions! Tell us, how did you become a wildlife photographer?**

I was an outdoor guy. During my school and college days I hated biology. I loved mathematics and physics. I selected statistics as the 4th subject in my 11th grade just to avoid biology. After completing school I started mountaineering and spent lot of time in climbing and outdoor activities. I bought my first camera in 1997 and started doing photography during my trekking and climbing trips. I photographed mountains, rivers, flowers along with images of climbing, this is how my love affair with nature started and I pursued my masters degree in Ecology and Environment inspite of my hatred of biology in the early days. We had a bit on wildlife in our masters syllabus and that was quite addictive for me.

I was keen to know more about wildlife and as a coincidence, I met a few wildlife enthusiast and bird watchers, who were doing conservation work. I started joining them for bird watching and started little bit of bird photography in the year 1988-1999. By the year 2000, I decided to make this my career. I had no idea about this field but I was so sure of myself that I left all my hobbies and all sources of earning, came out of my comfort zone to become a full-time photographer. My idea was, other activities could be a distraction that would keep me away from pursuing photography whole heartedly.











©Dhritiman Mukherjee

I was a serious climber, my goal was to scale peaks and to climb rocky spurs and walls, now the goal of life changed, wildlife photography became the driving force and climbing became a tool for photography

Up to 2006 my income was almost nothing, it was a difficult time financially, my parents, sisters and friends are amazing and did everything possible for me. Looking back at that phase, it makes me believe that if you really want something whole heartedly, it becomes possible.

**What is your biggest success or the one thing you are most proud of?**

For me it is not about success or failure. There is nothing to be proud of, photography is not comparable.

A lot of objects are already photographed, so for getting the first time impact you need to go for newer objects. Often what we can do is, try to do things differently from what others have done. So whichever way, this makes each work unique, there are no good or bad photos, but only different ones. A newer photo can come any day which will please people more, so there is no point in feeling proud about one's own work. People might start disliking my work any day. Hence I don't feel happy about doing so called good work, but it makes me happy being in nature and getting inspired and surprised by nature.

When there is no existing photo of an object, the impact is more, but that does not necessarily make it a good picture.

Two photographers can never shoot the same picture, as they have unique rhythms and situations and hence there is no scale of comparison.

In a photography Exhibition, I feel more satisfied if common people turn up in good numbers rather than accomplished photographers, and they get surprised by the nature in the form of my photographs and become voters for wildlife. I keep connected with many natural history and scientific societies; I give whatever image they need without a second thought, because images actually works for science. I do not work for money; money has to be an automatic by-product. Getting something on camera is not my main target in photography. Even if I need 20 trips to get a photo, it is fine; each of these trips is a step towards my goal and will bring more learning on the subject and ecosystem.

Every trip I learn something new, so I cannot stamp a trip as successful or failure. This is a life long journey that will end, when I end my journey.

**In this context, so haven't you attended any competitions?**

Of course, I attended. I have ended up on jury panels even though I don't like competition. Each image is different and not comparable, each judge will mark differently, even if you judge the same photo on different days the judgment is likely to be different. Two years back, I decided not to be part of any competition as jury anymore. The positive aspect about these competitions is I get to see so many images from different photographers, all new images for me,





©Dhritiman Mukherjee

they surprise me and makes me humbled and inspires me, and I always have realisation that lot of work is still undone for me.

**Do you have a wish list of shots you still want to get?**

The world is so huge, I have done almost nothing. What is left is uncountable and never ending, so why should I make a wish list of that!

**You shoot all genres of nature photography - wildlife, macro, landscape, birds, underwater among others. Do you have a favorite and why?**

Like a mother can't point out who her favorite child is, I won't be able to answer

this question, I think I love each of these forms of photography equally, of course sometimes there are situational need to prioritise one over the other.

**There are not many underwater photographers in India. What, or who, has been your biggest inspiration for underwater photography?**

I love to see other's images and see something different in each of them. All images are inspiring for me.

But specific to underwater photography, this amazing underwater world itself is an inspiring factor for working.

The underwater world is a huge world and only 5% of it is explored. 70% of the

earth is covered with oceans and only 5% is explored.

This means that so much of new subjects and knowledge are waiting out there and that's the reason enough for me.

**Tell us about your most memorable underwater shoot experience**

Again I have objection about this "most" word, it has an essence of competition.

All my favorite moments can't compete with each other!

The first time I went under the ocean was really a special moment because it was a huge surprise, the encounter with a new world which was beyond my

imagination. I visualized, tasted, smelled that amazing underwater world for the first time in my life. Last few years I have done interesting stuff like, dived with many of the so-called dangerous sharks, ie Bull Shark, Great White, Tiger Shark, and Hammerhead, Crocodiles in Mexico. I dived with Leopard Seal in Antarctica, with Orca in Norway, Humpback Whales, Blue Whales and I dived with Anaconda in Brazil. So definitely I have had some good moments with all these creatures.

I have many more memorable experiences underwater. I did Ice diving in frozen white sea in Russia and Under Lake Baikal in winter , where the atmosphere was about -20 C and we had to cut the ice on the sea and lake surface and cut hole to enter the water , I have







seen amazing ice formation under Baikal lake and was amazed to see colourful coral and fishes under the frozen white sea.

I saw Baikal seals, I photographed a rare baby Baikal seal under water, I was surprised with the immense beauty of the moment, it was a blessed moment.

All these moments are memorable for me.

**Have you had any notable missed opportunities, such as a rare bird/animal that took off just as you were about to press the shutter release?**

Yes, I missed many times, but I feel “missed” is a negative word related to some kind of sadness or frustration.

I just see it as - couldn't do it this time, may be will get to do it later-.

Whenever we return to nature it offers more and more surprises, so virtually we get more than what we think we missed.

**Having photographed in so many wilderness areas, do you have some favorite places or locations that keep drawing you back?**

I loved all the places I have photographed; I try to go back to all the locations.

**What are your top tips for shooting wildlife that are almost never taught? Something new and fresh!**

I don't want to talk about techniques. First you learn about your camera and know how to make it shoot according

to your wish. Actual photography starts after that. Photography is a form of meditation for me. No desire should be related to it. Enjoy your surroundings, be calm and cool and let it happen, don't be mad or aggressive for getting a shot. Don't be competitive. Appreciate other's work and try to contribute to science and society.

**Was there ever a time when you felt like you were in danger while photographing?**

Wild animals are not dangerous. If you ask what fear is, in relation to wildlife it is the lack of knowledge. If you know the situation, know the behavior of animal then it cannot be dangerous. If you don't get in to their private space it is never dangerous. Once in a while accidents occur and that is normal.

**What is the inspiration to start “Saevus”, one of the leading nature and wildlife magazines in India?**

The thought of “Saevus” was to give a platform to nature photographers, as there are no such platforms for photographers in this country. A platform to share and earn.

**What do you think is the greatest difficulty for someone trying to get into the field of wildlife and conservation photography?**

There were two important landmarks in photography in the recent past. One is shifting from film camera to digital camera and second is evolution of Internet. Because film to digital camera increases the supply of media by a million

times, people can take any number of images, as there is no limit on storage.

Also we get to see all the images through Internet, sometimes in real time too.

Nowadays we don't buy magazines or books to see photographs, rather preferring to see it free over the Internet. World is so much exposed, and everything is available online. People don't need to spend money to see the images. Supply is much higher than demand, and the viewers have more options. It is difficult for photographers to survive in this environment.

One can do something else related to photography like photography workshops or photo tours, but again this is not pure

form of photography, but these activities can be pursued for survival, otherwise earning bread from publishing is a big challenge now and it is better to keep it as a hobby.

**Any specific equipment that you are fond of? Or, how important is equipment?**

A very common question I am asked often, “what is the best wildlife lens”. The problem is in most cases equipment comes first, then the photographs.

I think that your photo should be created in your mind, then you choose the equipment you need to create it. There is nothing-called wildlife lens, landscape photography lens and so on, lenses are basically tools, which helps you to









execute your visualized frame. You can even shoot landscape with an 800 mm lens.

I have all kind of lenses and I use all kind of lenses in different situations. When I need to create something specific, I use the proper lens to create that frame.

**What's the most elusive animal you've had to photographed?**

Some interesting elusive species I photographed are Bullfinch, Bengal Florican, Western Tragopan, Brown Bear, and Snow Leopard. Recently I photographed the Marbled Cat, but that was a camera trap photo and not a direct sighting.

Major challenge is their elusiveness and lack of information, for photographing some of these species I had to make 10 to 20 trips over few years in different areas.

When I get an elusive animal, or when a species is being photographed for the first time by me, I don't feel happy because I am the first to do it. I feel happy that finally its being done.

**With your experience, most of the things you say is a lesson, anything more you would like to add?**

You need to have natural history knowledge, so you must study the ecosystem before you work in it. If you need to work with something, you need to predict it. You cannot do that unless you have the knowledge. Prediction is an important aspect of photography.

**Your opinion on achievements and what do they mean to you?**

For me recognitions in any form is not an achievement.

Achievements are when I set my goal and I could reach close to my goal.

Yes, of course I feel happy when I see my photographs inspiring people especially children and spreading awareness.

**Few words on your future projects and goals?**

I was working in different places all over the world and feel that I had left out the things to do in India. Of course, the world is huge and I do need to see a lot of it, but for now it is going to be India. There are so many things left undone, like work on the lizards and frogs. There are also some un-photographed areas in some parts of Northeast, Andaman and Nicobar island, I would like to concentrate on them. When this interview will be published I will be in Arunachal Pradesh with few scientists, exploring the biodiversity of Siang river Basin.

**What is the favorite reward that you get from nature photography?**

When I share my pictures with people and see them getting inspired and falling in love with the natural world, that makes me happy and that is most rewarding.

**Tell us about family, how do you balance personnel life and professional life?**

I don't have to do any balancing, my parents, sisters, friends all of them does

everything for me so that I can follow my dreams. All the sacrifices are theirs, they do all the balancing.

Often people clap and give me lot of credit after seeing my work. I would like to tell them humbly that my photographs are not just the result of my hard work, it's the contribution of many, i.e the scientists I gather information from, my field boys, my drivers, all the people who worked on the particular species or

places before and passed on information, my sponsors (on the sponsored trips), last but not the least, my friends and family. I believe my work is the result of collective effort, so I cannot claim and accept the entire credit for my work. I feel if I get any credit any clap for my work that has to be distributed among all the people I mentioned above. My field boys, drivers and friends are my extended family, I couldn't have done anything without this big family of mine.



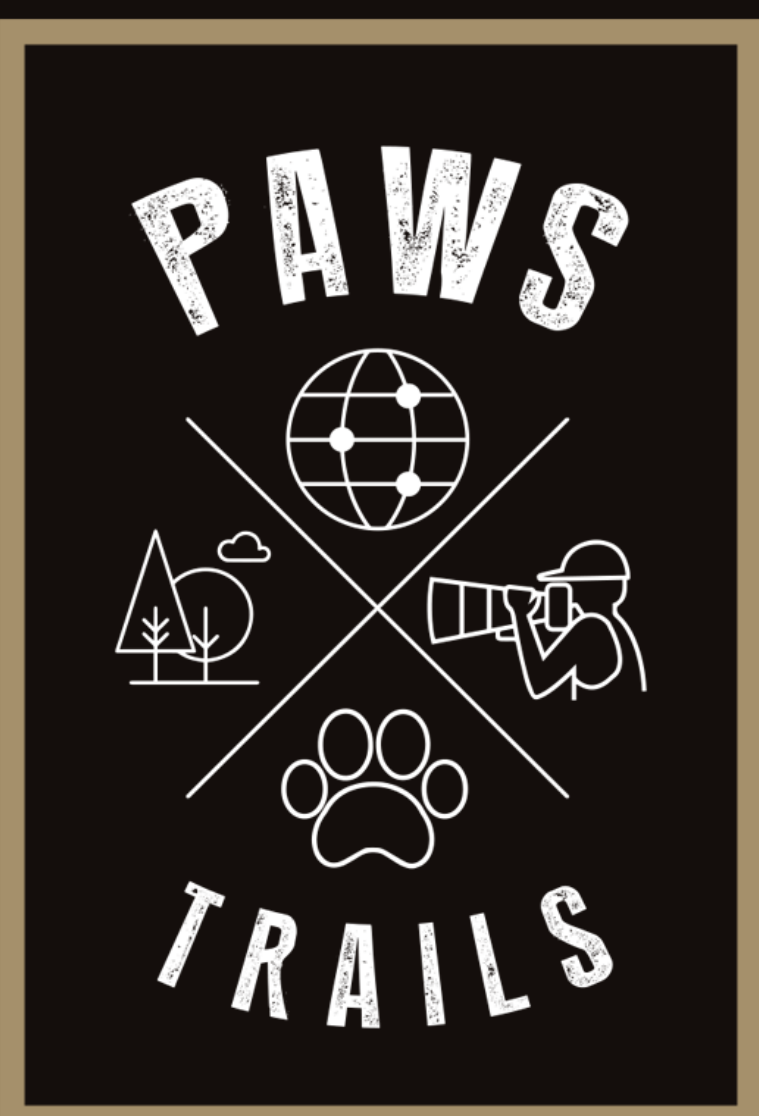
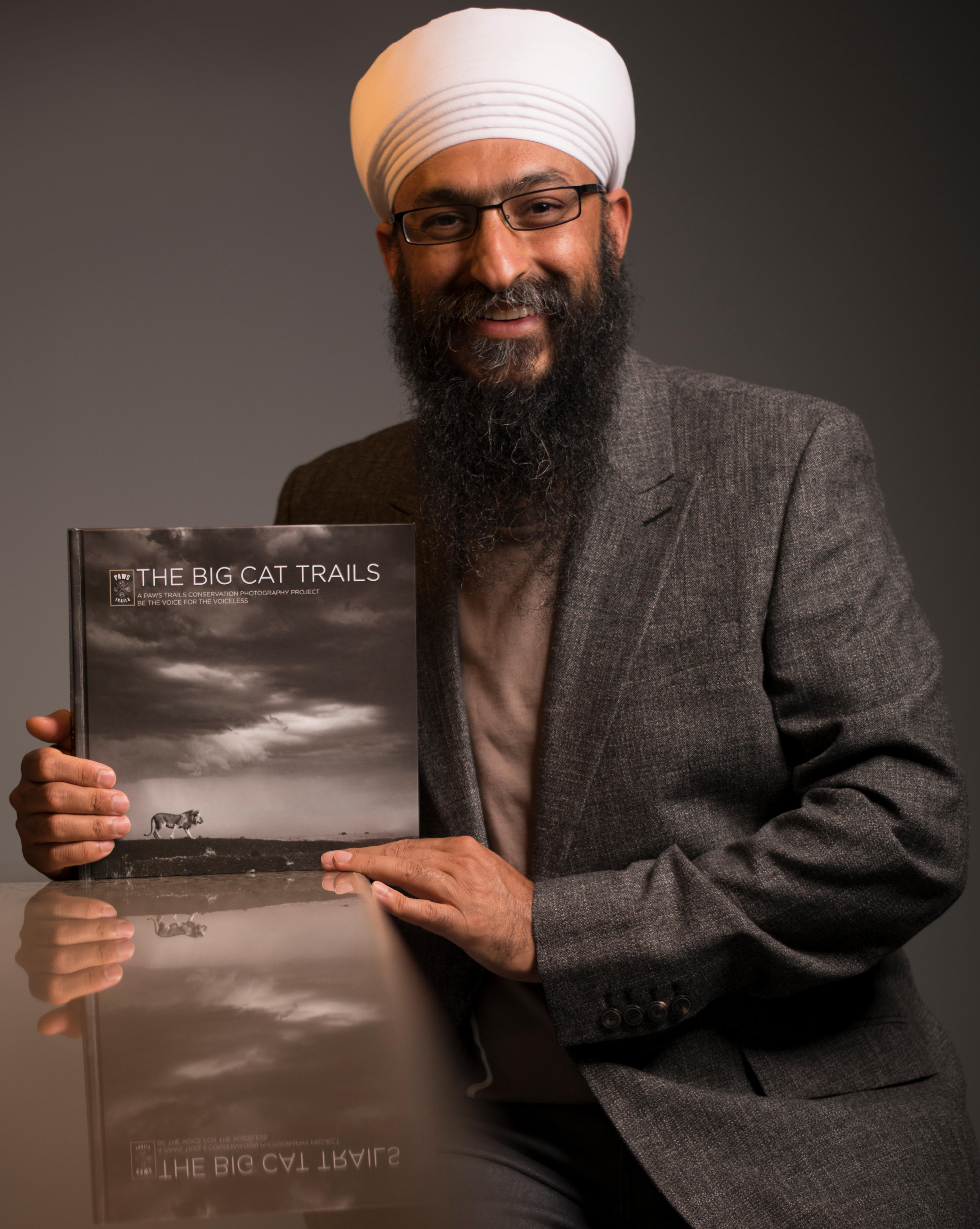












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 \*\* Requires Interval Timer settings and 3<sup>rd</sup> party software.





HER VIEWS & VISUALS

## Hobby Turns Into Career

By Safwanah Varachia







**Safwanah Varachia**

**The 27 years old South African is a qualified FGASA level 1 field guide with a passion for photography.**

**She started her own safari tour company operating in the Kruger National Park.**

**[instagram.com/safariwithsafwanah/](https://www.instagram.com/safariwithsafwanah/)**

# Her Views and Visuals





### **How did your interest for wildlife arise?**

Growing up in Malelane, a town which is no more than 10 km from the Malelane Gate entrance to the Kruger National Park, as a family we visited the park fairly often. I always loved the thrill of seeing the unexpected drama & beauty of nature. The older I got, the more I understood the intricate complexity of the bush. The more I started to see, the more in love with nature I fell and continue to fall right until this day.

### **How do you describe your journey as a photographer and a person?**

Initially it was purely about the wildlife & the memories, however in an effort to share these memories with the wider audience, I took up photography. Very soon I realized capturing the beauty of nature can become an obsession, then it also became about the angle, the light, the frame & most importantly the moment. It was at this point I chose to study and become a Field Guide as the better I understood nature and was at harmony with it, the better I was able to share these moments photographically.

### **What is your view on Nature Conservation? How can we, as wildlife photographers, help to protect our Mother Nature?**

Nature is under threat globally and it is our responsibility as humans to not selfishly destroy but rather protect the few isolated pockets of nature which are largely preserved. As photographers by sharing the beauty and creating a general awareness to the public, we can







greatly increase awareness on both the importance of nature conservation as well as highlight the difficulties experienced in the field.

**Can you give our readers the best bird or wildlife photography tips? Do you have any recommendation on settings or gear for bird photography?**

It's all about the animals behavior. Have patience, be camera ready and anticipate when the animal is going to give you

that epic opportunity for the perfect shot. Naturally great lighting is critical in the first few hours after sunrise and the last few hours before sunset - known as the golden hour are the best times to be shooting. For bird photography try using shutter speed priority and crank the speed up to 1/4000 or more to try getting the perfect in flight shots. Obviously a really fast lens does help immensely.

**What plans do you have in the future**

**related to Wildlife Photography?**

I plan to start hosting specialized photographic safaris in the Kruger National Park & Sabi Sands. I also plan to photograph a larger variety of wildlife species in different habitats, such as tigers in India & orcas in Norway.

**Tell us something about the gears you use.**

I've been lucky enough to get the chance

to shoot with many different lenses & bodies, and while I started with a Canon 750D and Sigma 150-500mm, today my weapons of choice are a Canon 1DX MK II with either the prime Canon 400mm f/2.8 or Canon 70-200mm f/2.8 lenses. Different gear enables different shots and different levels of creativity are needed to maximize the artistic value of each shot. I've been able to grow through various equipment and scenarios over the years.







SPECIES

**The pangolin, is officially  
the most trafficked  
mammal on earth..**

By Kerne Mackie

Images By: The Tikki Hywood Foundation







**Kerne Mackie is public relations and media manager at Tikki Hywood Foundation, Zimbabwe**

See:  
[www.tikkihywoodtrust.org](http://www.tikkihywoodtrust.org)

[facebook.com/Tikki-Hywood-Foundation-139026799530505/](https://facebook.com/Tikki-Hywood-Foundation-139026799530505/)

This gentle, scaly, ant-eating mammal, has the infamous reputation of being the most illegally trafficked mammal in the world today - have you heard of a Pangolin?

Since the CITES CoP17 held in South Africa September/October 2017, Pangolins have emerged from obscurity and have been thrust firmly into the limelight. Modern convention teaches us that once an animal is listed as CITES Appendix I, the threat is recognised, quantified and is in the process of being counteracted, this penultimate listing also means that we as the human race has already failed the species. Sadly the reality of CITES Appendix I protection for the pangolins species could not be further from the truth, as the frenzied

illegal harvesting of these mammals continues on, throughout both the Asian and African Range States. In West Africa the pangolin is still considered as part of the bushmeat culture. Coupled with the socio-economic issues facing West, Central and Southern Africa, we are a long way from a comforting belief that Africa can save these mammals from extinction. The rise in demand for the pangolin has caught many African governments off-guard.

*"I founded, the Tikki Hywood Foundation, in memory of my father - Tikki Hywood",  
Lisa Hywood, CEO and Founder, Tikki Hywood Foundation*

The Tikki Hywood Foundation, a wildlife conservation and rescue, rehabilitation and release centre, has been operating in



© The Tikki Hywood Foundation



Zimbabwe for the past 26 years. It was founded and developed by Lisa Hywood in 1994, in loving memory of her late father, Tikki Hywood, a man who 'looked to the future with optimism' and who had instilled in Lisa a deep passion for nature and wildlife. She formed the Foundation to champion the wildlife causes of a country to which she is bonded and from which so much has already been taken. Lisa is to date the Founder and managing Trustee and has been the driving force behind the Foundation since its inception.

*"We exercise a multifaceted approach to conservation of Zimbabwe's natural heritage. From Elephants to Pangolins, the Foundation has a wide range of experience with the rescue, rehabilitation and release of wild animals and their protection"*

Since receiving its first ground pangolin in a sack in 1994, The Tikki Hywood Foundation has established themselves as global authorities in African pangolin species, giving this species a complete conservation approach from rescue, to rehabilitation and release. The difficulty with pangolin rehabilitation is that they can't be put in a cage and fed an artificial diet, it is a species that doesn't adapt well to captivity. Rehabilitation is exceptionally specialised and intensive, particularly in man hours. Zoos attempting to breed pangolin have yet to do it successfully and experience a high mortality rate and unfortunately all their "guinea pigs" are wild caught pangolins.

The Tikki Hywood Foundation's approach to conservation is diverse, dovetailing to ensure an umbrella approach touching all areas vital in conservation. These include:

endangered species programs, education and awareness, environmental protection, and wildlife legislation and enforcement. Whilst it advocates for the protection of the environment as a whole, it was the persecution of the Pangolin, one of the focal species, that led the Foundation to address the challenges with Illegal Wildlife Trade in Zimbabwe, which is the primary reason for the demise of this amazing creature.

Illegal Wildlife Trafficking (IWT) is big business, and interlinked with big criminal syndicates across the world. Unfortunately, you just don't hear about the plight of the 'little guys', like pangolin, only the larger charismatic animals; Rhino, Elephant and the big cats like Lion and Tigers. The little guys aren't particularly cuddly or relatable, all the while in the background the scourge of human desire and greed is wiping them off the face of the earth at a rate that will see them extinct before they are even known.

IWT is thought to come in third, behind drugs and weapons as most valuable of the world's illicit commerce, earning an estimated 26.5 billion US Dollars a year. The cost, is the innocent lives of many animals not only pangolins, who endure unimaginable cruelty and death at the hands of the poachers and smugglers. The big question is Why? "Why is the pangolin in such peril?" Quite simply - to supply the human demand. Pangolin meat is seen as a delicacy in China and Vietnam, with pangolin foetuses being prized above all. The pangolin scales are ground down to powder form and used in traditional Chinese Medicine, just like Rhino horn and Tiger and Lion bones. In



© The Tikki Hywood Foundation







Africa pangolins are threatened by the bushmeat trade predominantly in West and Central Africa and their scales are used for cultural and ethno-medicinal purposes, including traditional African medicine, known as muti or juju. The plight of the pangolin is dire indeed. A species that has been protected and revered culturally in Zimbabwe for decades is now being actively sought out to supply the demand in the illegal wildlife trade. The horrifying reality is that there is currently no accurate population census for any of the four species of pangolin that occur in Africa. There are even anomalies being found in their proposed distribution.

Unfortunately, a census on pangolin is not possible, these animals are notoriously hard to find let alone count, mainly due to their predominantly nocturnal habits. Many sleep burrowed underground during the day. Due to their size, even the largest of the species, the Giant Ground Pangolin, is difficult to find in its natural habitat. Some pangolin species live in trees, and all are too small to detect in aerial surveys. Lastly pangolins are solitary animals, except when a mother is raising a pup.

*“We don’t even know how many pangolins there are left to save, so we’re fighting a silent war,” says Hywood.*

The ‘scale’ of the problem can only be measured by the product that is seized, which many anti-trafficking organisation believes to be an average of only 10% of what is actually trafficked. In 2013, 674kgs of African pangolin scales was recovered in China, in 2016 a staggering 19 tonnes

of scales was recovered in China, an indicated increased of 2,570%. A further 36 metric tonnes were seized (194% increase) in 2017 alone. This equates to between 9,000 - 59,000 individual pangolins, depending on the species, as they differ in size. When captured the most common method of restraint is to keep the animal bound up in a grain sack or container. Pangolins will often be kept like this for days and even weeks before they are sold or confiscated. A pangolin will roll up into an impenetrable ball in defence against natural predators which is particularly effective because of its scales, but this makes the pangolin extremely vulnerable against man, and quite simply ‘easy pickings’.

Africa is the second largest continent in the world physically. It is home to four of the eight pangolin species worldwide. The 35 Pangolin Range States in Africa represent 65% of the continent. The other four species of pangolin are found in Asia.

All eight species appear on the IUCN Red List, The IUCN or International Union for Conservation of Nature is an international organisation working in the field of nature conservation and sustainable use of natural resources. The IUCN Red List of Threatened Species (also known as the IUCN Red List or Red Data List), was founded in 1964, and has evolved to become the world’s most comprehensive inventory of the global conservation status of biological species.

*“Pangolins are a unique group of insectivores unlike any other. There are only eight species, four of which occur in Africa and four in Asia. Persecuted for*



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*their flesh as a delicacy and their scales as unproven medicine, these mammals have been harvested by the millions in the last decade,” Lisa Hywood.*

The four Asian species are The Chinese Pangolin (*Manis pentadactyla*) IUCN Red List status: Critically Endangered. The Indian Pangolin (*Manis crassicaudata*), also known as the Thick-tailed Pangolin, IUCN Red List status: Endangered. Sunda Pangolin (*Manis javanica*), also known as the Malayan pangolin, IUCN Red List status: Critically Endangered. The Philippine Pangolin (*Manis culionensis*) IUCN Red List status: Endangered. Together their range extends from Pakistan eastward through southern China, south from the Himalayas in Nepal and throughout the Indian sub-continent including Sri Lanka, as well much of mainland and island Southeast Asia,

including the Palawan faunal region in the Philippines.

Four species also occur in sub-Saharan Africa, the Temminck’s Ground Pangolin (*Smutsia temminckii*), also known as the Cape Pangolin, IUCN Red List status: Vulnerable. The Giant Ground Pangolin (*Smutsia gigantea*) IUCN Red List status: Vulnerable. These are the largest of all eight species and have been recorded to weigh up to 33 kgs. The White-bellied Pangolin (*Phataginus tricuspis*), also known as the Three-cusped Pangolin or Tree Pangolin, IUCN Red List status: Vulnerable. And the Black-bellied Pangolin (*Uromanis tetradactyla*), also known as the Long-tailed Pangolin, IUCN Red List status: Vulnerable. The Black-bellied Pangolin are the smallest of all the species, weighing around 2-3 kgs. Collectively they are distributed

throughout west and central Africa, as well as parts of East Africa, and Southern Africa, as far as south as South Africa.

*“Pangolins have proved to be an incredibly challenging mammal to track, so sadly we do not know how many are left in the wild,” Lisa Hywood*

The name ‘pangolin’ is derived from the Malay word “pengguling”, which loosely translated means “something that rolls up”. They are in a unique group or order all of their own called Pholidota. Pangolins are small mammals, with sizes ranging from 1.8 kg up to 35 kg, who are both ground dwelling and some tree dwelling. Pangolins are toothless and covered in plate-like scales made of keratin, the same protein that forms human hair and fingernails. The scales cover the entire body from head to tail,

except for their undersides and face which is soft skin and covered in fine hair of which the density differs depending on the species. The scales contribute an estimated 20% of their total body weight. Pangolins eat ants and termites, some species from the earth and other species from the trees, using their extraordinary long and sticky tongues and strong, curved claws.

*“We’ve been to the moon but we still don’t know about pangolins” - Ellen Connelly, Zoologist, Tikki Hywood Foundation*

Pangolin are enigmatic because we are still learning so much about them and they are currently the subject of intense research. Due to their size and secretive habits, current research on the species is still at basic levels. Tracking individuals is





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even more challenging. They are uniquely covered in scales and have extreme habits of rolling in mud, water and various manure of herbivores, a tracking device placed on the animal would need to be very robust. Not to mention that the wild

terrain in which they live makes tracking them without a device near impossible. However, research efforts are being made a priority and even though these are still in the infancy stages, it is exciting to know that all data collected can be used

to determine how best to protect the species going forward.

The Tikki Hywood Foundation believes that the most urgent requirement for the protection of the species, and all endangered wildlife, is protected spaces. The Foundation is actively lobbying for a more unified protection for all Africa pangolin species across the range states. The Foundation wants Africa to unite in the preservation and conservation of the species. The Tikki Hywood Foundation is currently working in Uganda, Cameroon, Liberia and Mozambique.

Working in these countries with government authorities and through the government systems, including their wildlife authorities in the hope of creating an African thought process or idealism, a reality for Africa on how to protect her wildlife. A first positive step saw all African range states unite for the first time at CITES CoP17 and unanimously vote to uplift the pangolin from Appendix II to Appendix I status.

*“Wildlife conservation is not a stand-alone practice, it requires collaboration from all stakeholders in order to successfully protect our wildlife heritage”,  
Lisa Hywood*

The Tikki Hywood Foundation not only rescues, rehabilitates and releases pangolin, it follows the whole judicial process, once they have retrieved a pangolin rescued from trade. In Zimbabwe the Foundation has been working tirelessly with local government authorities and has been instrumental in the collaboration between government

departments in conservation efforts for this and many other species. Zimbabwe can boast the highest conviction rate for pangolin poaching in the world. There is a deterrent penalty of nine years in jail for those convicted of the crime with the additional potential of a USD 5000 fine on top. The Foundation believes that a tough stance and high penalties are some of the tools we can employ in breaking the Illegal Wildlife Trafficking cycle.

The Foundation is currently researching parameters of range territory that released pangolin can or choose to maintain. It hopes that through sightings of previously released pangolin it can determine an area’s population and potential for further growth. It is also categorising the preferred food source of the released pangolin, through sampling and identification. This is mostly done during ‘soft releases’, a release done over a period of time.

Soft release pangolins are usually those that have come to the Foundation as juveniles and have been cared for over many months. Pangolin minders can observe behaviour and report on their findings. Knowing more about the species and their habits, will play a vital role in determining the ‘safe spaces’, where pangolins can be wild and free.

Having the status of the world’s most trafficked mammal has made the world curious, and interest in the pangolin has increased exponentially. Let’s pray it is not too late.









© UC Nature Reserve

CONSERVATION

# University of California Natural Reserve System

By Kathleen M. Wong





**K**

**Kathleen M. Wong is a science writer specializing in the natural history and environment of California and the West. With Ariel Rubissow Okamoto, she coauthored *Natural History of San Francisco Bay* (UC Press, 2011), for which she shared the 2013 Harold Gilliam Award for Excellence in Environmental Reporting.**

**When not hiking, bicycling, or enjoying other outdoor adventures, she serves as the science writer for the University of California Natural Reserve System.**

**See: [ucnrs.org](http://ucnrs.org)  
[rams.ucnrs.org](http://rams.ucnrs.org)**





In the late 1940s, a graduate zoology student named Kenneth S. Norris began observing a community of desert iguanas near Palm Springs, California. After spending weeks sweating amid the desert dunes, he returned one day to discover his field site razed, the iguanas scattered, and a motel under construction. Later, as a professor of the University of California, Norris learned many colleagues had experienced similar losses of field sites. Human populations were booming in post-World War II California, and development was consuming the fields and forests natural scientists had studied for years. Instead of merely bemoaning the situation, Norris set out to do something about it. In 1965, Norris and the University of California founded what is now the largest university-administered reserve system in the world.

The UC Natural Reserve System is a network of wildlands managed

specifically for research, university-level education, and public service. Its 39 reserves range across 600 miles of California north to south, 450 miles east to west, and more than 14,000 feet of elevation. As a result, the system includes examples of most major habitats in the most biologically diverse state in the nation. Its holdings include coastal wetlands, oak savannas, evergreen forests, vernal pools, inland deserts, sandy beaches, and much more. Altogether, NRS lands now cover more than 1,200 square miles.

NRS reserves contain an astonishing degree of biological diversity. Of California's roughly 8,000 native or naturalized vascular plant species, more than 3,300 species, or 41 percent, are found within the NRS. Santa Cruz Island Reserve alone protects 44 plant species found nowhere else in the world, like the Channel Island tree poppy (*Dendromecon*



*harfordii*) and the Santa Cruz Island bush mallow (*Malacothamnus fasciculatus supnesioticus*). Animals found on reserves run the gamut of native species, from black bear (*Ursus americanus*) to California quail (*Callipepla californica*) and Costa's hummingbird (*Calypte costae*).

NRS reserves are working lands. Their primary purpose is to permit experimentation and instruction. That means visiting scientists may install equipment like sap flow meters, capture and release animals to demonstrate field methods to students, and take samples of plants for herbarium

collections. Most reserves also have visitor accommodations such as beds, kitchens, showers, and internet service. Some also provide laboratories, office space, and even vehicles.

#### FIELD RESEARCH

Researchers flock to NRS reserves for field studies. Because NRS lands are protected in perpetuity, researchers can feel comfortable launching long-term studies within reserve boundaries. Unlike parks, the reserve system specifically encourages research, making permission for studies easier to obtain.



The fruits of this research focus can be seen at every reserve in the network. At the oak woodlands of Hastings Natural History Reservation hosts one of the world's longest-running studies of a vertebrate animal. Researchers have tracked the behavior, heritage, births, and deaths of virtually every acorn woodpecker (*Melanerpes formicivorus*) seen at the reserve for nearly 50 years.

Another major research effort is happening at Año Nuevo Island Reserve, where a colony of northern elephant seals (*Mirounga angustirostris*) gathers to breed each winter. By mounting tracking devices on the seals, reserve researchers have figured out that elephant seals, once believed to hug continental coasts, actually swim from California to Alaska and Hawaii each year, and characterized the physiological adaptations they have developed to sleep at sea, dive a mile deep, and hold their breath for more than an hour. The technology they developed for the seals is now revolutionizing our understanding of where sea turtles, whales, tuna, and albatrosses go on their marine voyages, and how they utilize temperature, salinity, and other oceanographic characteristics to find food.

Reserve use is hardly limited to those studying natural history. Artists visit reserves to gain inspiration and collaborate with scientists. Historians delve into reserve records to document the progress of environmental research. Doctors study high elevation physiology at 12,000 feet. Engineers analyze stream behavior. Computer scientists study wireless network performance. And so on.

In fact, research in all subjects based at NRS reserves resulted in more than 900 research papers, books, theses, and other publications in the five years between 2011 and 2016.

### **PARTNERSHIPS**

Individual reserves range from a few hectares to more than 1,000 square miles. A few were purchased by the University, but the majority were donated by conservation-minded landowners. A number of other reserves involve partnerships with state and national parks. These arrangements provide researchers with access to such gems as 640,000-acre Anza-Borrego Desert State Park, as well as a crown jewel of the National Park System, Yosemite National Park.

The NRS is now expanding its connections beyond California and even the United States. Just last year, it established a sister reserve relationship with Namibia's Gobabeb Research and Training Centre. The center is located along the southwestern coast of Africa amid the vast and sparsely populated Namib Desert. The partnership encourages researchers to do studies comparing desert adaptations, ecosystems, and conditions on both continents. More sister reserve connections are in the works.

### **MANAGER OVERSIGHT**

A manager oversees activities on each reserve. Most managers have scientific training, which they apply to ensure sound stewardship of native species, review proposed experiments, and



© Año Nuevo Island Reserve





© Agnes Creek Field Station

assist visiting students and researchers. Managers also keep housing, equipment, and roads functional, cooperate with neighbors and government agencies, and participate in larger NRS projects. The result is a system that provides outdoor laboratories for field scientists, classrooms without walls for students, and critical insights into the workings of the earth and its environments.

Reserve personnel are fonts of knowledge. They know where and when species are likely to be found, can point out the routes of reserve trails, and can suggest good locales for projects like photo expeditions and sketching classes.

### GATEWAY RESERVES

Several reserves, such as Sweeney Granite Mountains Desert Research Center in the Mojave, and White Mountain Research

Center in eastern California, are located adjacent to vast tracts of national forest or Bureau of Land Management properties in regions with few other facilities. These reserves serve as gateways to more than a million acres of public lands.

Access to most reserves is granted by permission only. This helps prevent unwanted tampering with instruments, experimental sites, and equipment. Limiting visitation also helps keep reserves more ecologically intact than surrounding landscapes. For example, while the surrounding desert has largely been stripped of big cacti by collectors, the NRS's Boyd Deep Canyon Reserve still harbors plenty of California barrel cacti (*Ferocactus cylindraceus*) as tall as a person, plus forests of cholla (*Cylindropuntia spp.*) covered in halos of golden spines. That means native animals

rare elsewhere in the region, such as desert tortoise (*Gopherus agassizii*) and bighorn sheep (*Ovis canadensis*) are still found in the reserve.

### CALIFORNIA-WIDE

The statewide reach of the reserve system enables researchers to compare species and conditions in one portion of the state with those in another, at a spatial scale relevant to entire ecosystems. Researchers see the system's statewide reach as a major plus. For example, UC's California Heartbeat Initiative uses the NRS as a gigantic laboratory to study the effects of climate change on California ecosystems. The first component of the project, CHI-Freshwater, monitors the pulse of water through natural habitats. The project will link plant responses to environmental conditions such as heat waves, rainstorms, and drought on a landscape scale. The results will be used to produce forecasts of environmental health helping Californians adapt to climate change.

The California Heartbeat Initiative is one of many research projects that makes use of the NRS Climate Monitoring Network. This system of 28 climate stations provides researchers with highly localized weather data at 24 reserves. The instruments and sampling protocols are identical for all stations, enabling reliable data comparisons between sites.

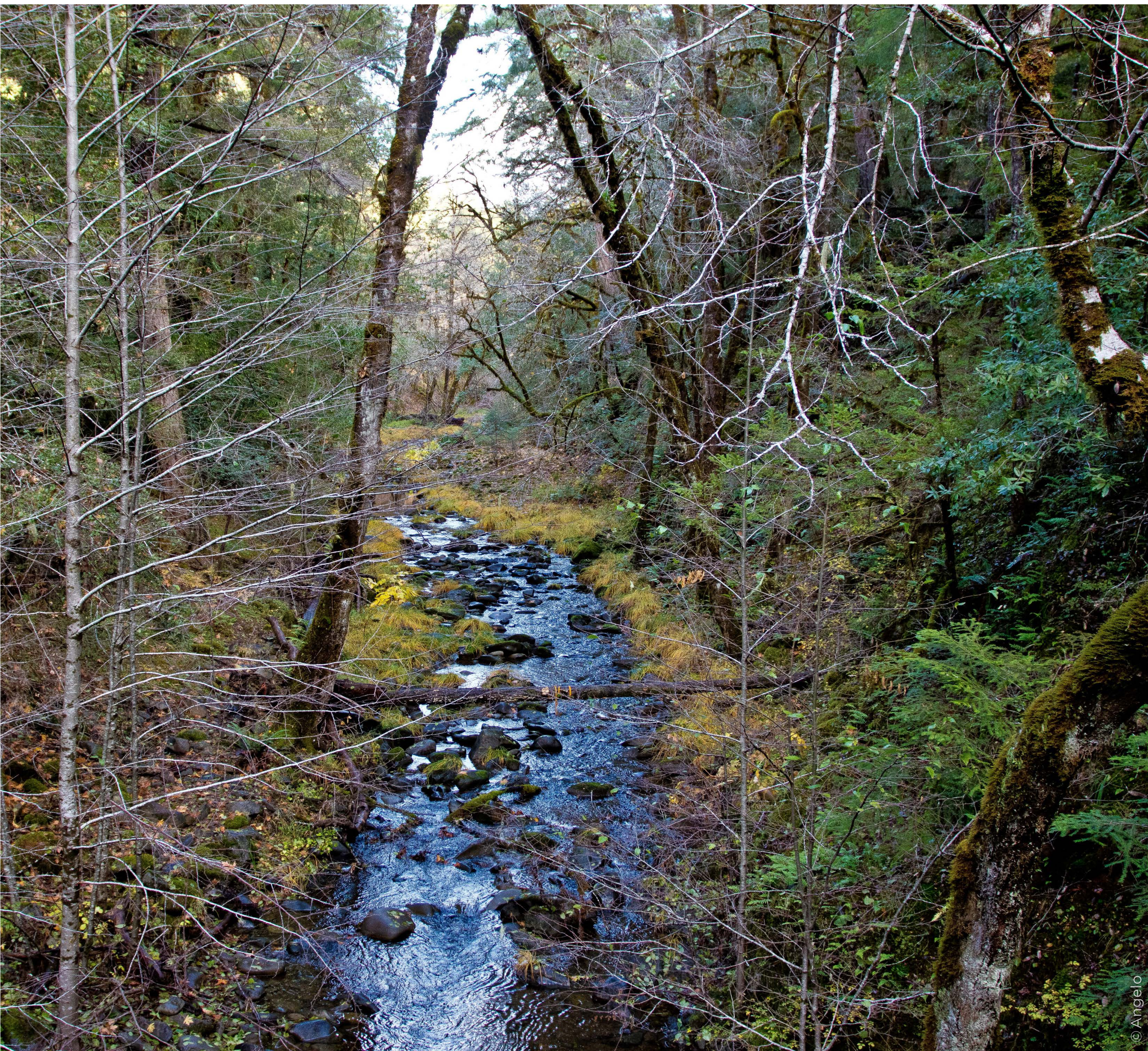
### UNIVERSITY-LEVEL EDUCATION

The reserve system is well used by those in the know. More than 147,000 university-level students and researchers visit reserves every year. The NRS also hosts more than 150 UC undergraduate courses on topics ranging from art to archeology, geology to ecology. At San Joaquin Marsh Reserve, for example, undergraduates in UC Irvine's freshwater ecology wade through the wetland to identify native plant species, sample fish and snails, and learn to manage aquatic landscapes. At Younger Lagoon Reserve, located just 4 miles from UC Santa Cruz, dozens of undergraduates sign up each term to



© SvalentineCampReserve





raise native plants and learn techniques to restore a former farm field to coastal prairie.

### **PUBLIC SERVICE**

Reserves also open their doors to members of the general public. For example, Stunt Ranch Santa Monica Mountains Reserve hosts thousands of schoolchildren from across Los Angeles each year. Many hail from urban areas and shrink in fear from bugs and lizards upon arrival. But after a nature walk through reserve chaparral and meadows, these girls and boys are eager to start their own insect collections and observe birds back in their own neighborhoods. Eight NRS reserves have docents and other citizen scientists who each year record the dates when particular plants enter phases such as leaf out and fruit production. With this data, the California Phenology Project aims to track the progress of climate change on state landscapes. Many reserves also host events such as science lecture series and open houses to inform the community about the natural world around them.

### **CONSERVATION CONTRIBUTIONS**

The NRS has been instrumental in conserving many species of special concern. For example, the U.S. Geological Survey chose

the NRS's James San Jacinto Mountains Reserve to re-establish a population of California's most endangered amphibian, the southern mountain yellow-legged frog (*Rana muscosa*). The agency first released captive-bred eggs and tadpoles into pristine reserve pools in 2010, and has monitored their progress ever since. Reserve research has also informed regulations protecting species. Decades of experiments at the NRS's Jepson Prairie Reserve established that the federally endangered California tiger salamander (*Ambystoma californiense*) needs nearly a mile of upland habitat to survive during summer months when its breeding ponds go dry. This habitat requirement has been incorporated into the recovery plan for the species.

Access to most reserves is granted by permission only, to conserve the natural resources for future generations. But anyone whose purpose is consistent with the NRS mission of research, teaching, and public service can apply to visit. Reserves also welcome the public to events like lectures and hikes, classes on creative writing and botanical illustration, weeding days and bio-blitzes.

As California heads into the twenty-first century, the Natural Reserve System will be key to tackling daunting environmental challenges such as drought, species declines, and, of course, widespread climate change. The network offers unparalleled opportunities for people to observe these processes at work, understand their intricacies, and manage their effects. In these and innumerable other ways, Ken Norris's visionary idea is now more important than ever.







# SNIPPET

The Craters of the Moon National Monument is in the state of Idaho. It contains over 600 square miles of lava fields, making it the largest volcanic area in the lower 48 US States. It lies less than 300 miles from Yellowstone National Park, which is a highly active volcanic area. The super volcano, which is Yellowstone, erupts on roughly 600,000 year cycles. This volcanism is due to a hot spot in the earth's crust, which brings hot molten rock very near to the surface. The North American tectonic plate is slowly sliding over this hotspot. It used to be under southern Idaho and Craters of the Moon. This area has been volcanic for many eons, but the lava flows that you see are quite recent in geologic terms. They are from 2000-15000 years old. The area is considered dormant, but not inactive.

The lava beds of Idaho were a hell on earth for early settlers on the Oregon Trail. It was impossible to traverse in a wagon. Many who ventured into this rocky and rugged area perished and were never heard from again. Those hearty few who explored the area gave the landmarks forbidding names, such as the Devil's Orchard. This is an area of ancient twisted pines and up-shooting lava formations,



©Robin Hadder

## Craters of the Moon National Monument and Preserve

By Robin Hadder

called cinder crags, that they imagined as looking like trees.

The path to the south was more desirable, along the Snake River, but the area was inhabited by native Americans, who were not always friendly. Attacks in the 1850's and 1860's, such as those near Massacre Rocks, killed many settlers. To avoid conflict and the impassible lava beds, the settlers were motivated to find a northern route. In 1862, a guide, Tim Goodale, lead 1,095 emigrants in 338 wagons along a new route, through the foothills. This route was then named after him, as the Goodale Cutoff. It took the pioneers through mountainous terrain, but out of the danger of death by Indian raid or perilous journey through the lava fields.

You can see the start of this detour in the northern part of the park.

There were already modern roads in the area before any European settler crossed from south to north across the main lava fields. The most famous trek across the lava fields was the Limbert expedition, which was documented in a 1924 National Geographic Article, "Among the Craters of the Moon." His eloquent account of the journey captivated the imagination of the public.

Native Americans have been passing through Craters of the Moon for thousands of years. They created stone markers to show the location of nearby hidden water holes.



©Robin Hadder



Limbert's article prompted President Calvin Coolidge to sign a proclamation creating the Craters of the Moon National Monument. For many years, geologists, biologists and environmentalists advocated for Craters of the Moon to become a national park. In 2000, the park was expanded to include the Great Rift, two other large lava fields and all the lands in between. Local ranchers and sportsmen were opposed to the plan to create a national park. In 2002 a compromise was made and the monument was also designated as a

National Monument. NASA believed at the time that they could encounter such rough terrain on the moon, even though the surfaces were created in quite different ways. The moon's surface is pitted because of meteor strikes, while Craters of the Moon is volcanic. The place where the astronauts landed on the moon was covered with a fine powdery dust. When stepping onto the moon, one astronaut proclaimed, "It feels just like Sun Valley!" He wasn't referring to the park, but the ski slopes of the Sun Valley resort.



©Robin Hadder

National Preserve. This allowed for cattle grazing and hunting, which is not allowed in National Parks. Today more than 250,000 people visit the park every year.

In 1969 NASA astronauts Alan Shepard, Eugene Cernan, Edgar Mitchell, and Joe Engle trained at the Craters of the Moon

While you are there, you can trek up the Inferno Cone, a young cinder cone volcano. The half mile trail is steep, but still quite an easy climb. The surface is covered in fine volcanic gravel and pumice, which makes a crunching sound as you walk up its jet black slopes.

Not a single plant will grow on its flanks, but at the top you will find a flat area covered with wildflowers, shrubs and even a few hardy trees. The view from the plateau is one of the best in the park and its 360 degree panoramic views are

liquid water, which could help a traveler survive a trip across the large lava fields.

Indian Tunnel is the most easily accessible of the park's caves. It is 800 feet long and the ceiling is up to 30 feet tall. Parts of



©Robin Hadder

well worth the hike. It will impress upon you the sheer size of these lava fields, with black lava rock extending in some directions as far as the horizon.

While visiting the park you can explore several caves. These caves are lava tubes, which are natural tunnels through solid lava rock, created when molten rock flowed under a hardened surface. These caves sometimes contain snow, ice or

the roof have collapsed, filling the large caverns with light.

Craters of the Moon is far from devoid of life. Within the park there are 169 species of birds, 8 reptiles, 375 species of plants and 48 species of mammals. In Springtime you will even find colorful wildflowers. They will grow in any bit of soil, in volcanic gravel or from cracks in rock. Even in this harsh environment, life finds a way.



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# The African Civet.

(*Civettictis civetta*) By Ann Warner



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Being a solitary animal Civets usually only comes out under the cover of darkness having spent most of their daylight hours resting in the safety of a high tree.

African Civets (*Civettictis civetta*) are most commonly found in tropical forests and jungles and areas where there is plenty of dense vegetation to provide both cover and animals that the African Civets feeds on. Despite being a carnivorous mammal it has quite a varied

diet of both animal and plant matter. Small animals such as rodents, lizards, snakes and frogs make up the majority of its diet along with insects, berries and fruits that it finds on the forest floor.

Despite their cat-like appearance and behaviours, the African Civets are not felines at all but are in fact more closely related to other small carnivores including Weasels and Mongooses. Having very distinctive features they are one of the

easiest cats to recognise. The average African Civet has a body length of 70cm and a tail of about the same length. Fur colouring is black and white with black bands around the eyes in a grey face which gives them a look similar to that of a raccoon. The hind legs are quite a bit longer than the front and the paws of the African Civet each have five digits with non-retractable claws to enable the Civet to move about in the trees more easily.

Mating seems to be the only time one sees Civet cats coming together. Gestation lasts for a couple of months with up to four young being born in underground burrows that have been made by other animals. Civet babies are born quite mobile and with fur, the young are completely dependent on mother's milk for about six weeks. After about 42 days, their mother provides them with solid food and by the second month, they are catching food for themselves. While they can live for up to 15 - 20 years old it is very rare that they do.

While being a rather ferocious predator they are preyed upon by many other predators within their natural environment the most common being lion, leopard along with reptiles such as large snakes and crocodiles.

African Civet populations are also under threat from both habitat loss and deforestation, and have been subject to trophy hunters in the past across the continent and the bush meat trade. One of the biggest threats to the African Civet is the want for their musk.

The glands close to the African Civets

reproductive organs secrete musk (*civetone*) which Man for hundreds of years have collected. In its concentrated form, the smell is said to be quite offensive to people, but much more pleasant once diluted. It was this scent that became one of the ingredients in some of the most expensive perfumes in the world and made the African Civet a well-known African animal.

African civets have been kept in captivity and milked for this secretion which is diluted into perfumes, secreting three to four grams per week and it can be sold for just under five hundred dollars per kilogram. The WSPA says that Chanel, Cartier, and Lancôme have all admitted to using this secretion in their products and that laboratory tests detected the ingredient in Chanel No. 5

Capturing and keeping of African Civets for their musk is said to be an incredibly cruel industry with the Civet very often dying in the first three weeks from stress and being kept in small cages. As far as I understand from what I have read they are not bred in captivity and are replaced from the wild when they die.

I was very pleased to read that today few perfumes still contain actual musk from the glands of African Civet cats as many scents today are easily reproduced artificially. However even though synthetic alternatives have been available for nearly 70 years, civetone remains an important export commodity in several countries!

The ICUN reports that (quote) there are over 200 registered and licensed African



Civet farmers who capture African Civets in the wild and keep several thousand individuals in captivity for musk production in Ethiopia. In that country, only 2% of the civet musk produced is used nationally; the rest is exported, essentially to France (85%), for the perfume industry (Girma 1995). Small quantities of civet musk are also exported to Arabian countries for medicinal purposes and to India for use in the tobacco industry.

Ann Warner lives in Zimbabwe where she is a conservationist and involved with animal rescues, photography and teaching children.







# Wild Trails

By Feher Murtaza

CUB'S CORNER



## CUB'S CORNER



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Photography is an art of capturing your vision. Whatever appealing a photographer sees, he tries to freeze that moment to preserve the history. Some capture landscape, some architecture or portrait, but it is difficult to capture the unpredictable species. Don't you think?

Feher Murtaza is a 15-year-old boy from Bhopal, India who has mastered the art of capturing wildlife. Feher is in love with nature since childhood. He started capturing birds and animals in his neighborhood with his father's old Kodak roll camera when he was just 8. Since 2012, his interest started to grow and gradually it turned into passion. His passion was appreciated by his parents and they gifted him a Nikon D7100 camera to image the wildlife digitally. Feher started learning the tricks to photograph the wild animals and birds from senior photographers and by seeing other photographer's works. Each of his photographs tell a story. According to Feher, "when you take a photo, your aim is to express the story to the world."

Feher' website has a wide collection of wildlife and nature photography, [www.fehermurtaza.com](http://www.fehermurtaza.com).

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Wildlife photography is not easy. The most important thing a wildlife photographer has to learn is patience. Feher being a young photographer has acquired the patience, to study the bird or animal's behavior, stalking and approaching skills. He chose wildlife photography to spread awareness through his photographs about the ecology, ambience and bio diversity around us. He wants to tell people that there are so much more in the forests than the big cats. He suggests every nature lover to go out and explore the unexplored world of animals, but with utmost care and sensitivity towards them.

Being a wildlife photographer Feher always looked up to the experts in the field. His inspiration is renowned Wildlife Photographer Mr. Sudhir Shivaram. Feher took online lessons from him on wildlife photography and recently accompanied him to Ranthambore for a photography tour. Another inspiration is International photographer Mr. David Lloyd for his daring personality and the way he interacts with wildlife.

Every photographer has a favourite subject, likewise Feher loves to capture Kingfisher birds and Tigers. Among birds, Kingfisher has many species which are colorful and attractive, making them praise worthy subject for a photographer. Similarly, photographing a Tiger in its natural habitat is every wildlife photographer's dream. To accomplish this dream, Feher has travelled to many National Parks in India like Kanha, Bandhavgarh, Satpura, Ranthambore and Bandipur. His photographing skills portrayed some beautiful expressions of

tigers in their natural habitats. Feher is now a regular visitor to the national parks for his love to the nature and wildlife accompanied by his family. From helping him psychologically to supporting him financially, his family always encouraged him to carry forward his passion. His architect mother is also a photographer by passion and loves to accompany him during his photo-walks and photography tours. Feher aspires to be a Civil Engineer in future.

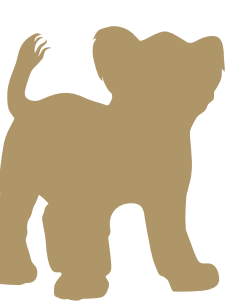
Successful wildlife photography requires special equipments like long focal length lenses, camera traps, flash extenders, tripod etc. Feher started to upgrade his equipment for a better photography experience which led him to a full frame camera, Nikon D750 with 600mm f/4 prime lens for a tighter look of the animals. He has a Nikon 1.4x tele-converter, gimbal head, ball head and different types of filters as per his needs.

Feher is not only a young wildlife photographer, he works for conservation of the wildlife too. In Bhopal, he is attached to 'Bhopal Birds' and 'We Sparrow' groups for conservation of local and migrated birds. He is concerned about the fact that the Sumatran tigers are decreasing and they are in the list of critically endangered species on the IUCN Red List in 2008. Deforestation, poaching, retaliatory killing for endangering animals and humans are the reasons behind the decreasing population of the Sumatran tigers.

Feher also likes to be associated with the local camera clubs to teach newcomers and learn from the experts about



© Feher Murtaza









wildlife photography. 'Bhopal Camera Club' is a local camera club founded in 2018, having photographers from all genres. Feher thinks the community of 200 people is a good platform to create experience, review and criticize the photographs which could help to build up the aspect and character of a photographer. One of the club's most Senior Wildlife Photographer Mr. Goutam Mitra accompanied Feher during his photography trips to Van Vihar National Park, Bhopal. Mr. Mitra has a wide knowledge about birds which helped very much. Tips from him on camera angles, lenses, time of capturing the birds helped Feher a lot. Mr. Rajnish Khare, the founder of Bhopal Camera Club has been a guiding figure to all the members of the group. Feher is happy to be in this club and participates in every photo-walk and photo trips arranged by them.

Recognition gives an artist the enthusiasm to work better. As a young photographer, Feher always got support and accolades from his school. He got featured in the School Newspaper of Madhya Pradesh. He bagged the First prize in Summer Inter-school Photography Competition in 2017 in the State of Madhya Pradesh in India and in Black and White contest by Instagram Group of Bhopal in 2017, where he presented a black and white portrait of a Bengal Tiger. He got the Second Prize in Wildlife Week arranged by Van Vihar National Park, Bhopal. Local newspapers always admire him by featuring his photos. His works were exhibited at many photography exhibitions in Bhopal. In 2016, 5 photos of Feher were exhibited at Bharat Bhawan in collaboration with Bhopal Birds community. In 2017, 2 photos were exhibited at Bharat Bhawan by Instagram Bhopal community, in 2018, 6 photos were exhibited by Bhopal Camera Club and 3 photos by Dainik Bhaskar in collaboration with WWF on the occasion of 'Earth Hour'.







TIPS & TRICKS

# Birds In Flight Tips & Insight

By Bu-Abdullah



# B



**Bu-Abdullah Sami Alqaderi is from the UAE who started with digital photography as hobby in 2013. Experimenting with different genres of photography, he has found his niche and now specializes on photographing birds in flight. He was drawn to them as he felt they were the most challenging and versatile subjects. Uses Nikon gear for capturing his favorite subjects.**

Bu-Abdullah currently uses Nikon D500, D850, D5 along with the NIKKOR 500mm f4, NIKKOR 80-400mm and Sigma 150-600mm Sports.

<https://www.instagram.com/uaebif/>

## HOW DO WE GO ABOUT SHOOTING BIRDS IN FLIGHT?

It differs to a great extent from other genres of photography, closest being wildlife photography. Still, birds in flight are more challenging, after-all we are dealing with wings compared to legs.

We start with the general basics, assuming that all have read the manual and learned his exposure triangle, depth of field etc, which can be found discussed

in detail according to your camera model all over the internet.

## WHICH GEAR?

That is the most common question being asked, and the short answer is, any camera and lens capable of giving you a reasonable reach and autofocus would do. Entering this field is going to get more and more demanding, with experience, you'll soon find out what are your needs.







© Bu-Abdullah

### CAMERA MODE ?

There are many ways of setting your camera for shooting birds in flight. Mainly three modes can be used, the best out of three being the one that fits your needs most and feels comfortable to you.

These modes are Aperture Mode, Shutter Mode, and Manual Mode.

As the names imply, **Aperture mode** is to be used when the depth of field is your priority, while you can adjust your camera to make the shutter stay at a certain range, auto ISO will be used here to compensate for the equation.

Aperture mode is used by many experienced photographers, so don't assume that the most experienced

photographers use only Manual mode. As mentioned earlier the mode selected should be according to needs and not on the years of experience.

**Shutter mode** is the way of telling the camera that your priority is getting the shutter speed fixed and compensating will be done through Aperture and ISO values.

**Manual mode** has two options, one with the Auto-ISO, in which you will set your Shutter and Aperture to your taste, the camera will compensate for your exposure using the ISO. You can also control its range according to taste, if you don't want the ISO to go way up and introduce noise and loss of details. Second is going Manual with manual ISO, here you control everything and requires









© Bu-Abdullah

that you keep track of the light changes, which effects your exposure. You have to do a check-up shot once you think that the light is changing.

### **IMPORTANT FOCUS MODE AND POINTS**

Shooting moving targets requires a continuous auto focus drive from your camera. Check the manual on how and which continuous auto focus mode is suitable. Points of focus are different from one camera to another, basically you want to start with a fairly good number of active focus points to help you get a lock on a moving target. Experienced photographers might use one focus point as that will give more accuracy and speed to the Auto Focus module.

### **GOING TO THE FIELD**

Now that we are done with the boring but important tech info, things will start to get more interesting. Go to a place where you can find birds, for a start you can visit your local zoo. Ponds, lakes, seashores, forests are all areas where birds are expected.

### **APPROACHING AND COMPOSING**

There are mainly three situations, a perched bird, flying bird, and a moving bird - be it on the ground or swimming in the water. What we need is to be able to get as close as we can to these birds in order to fill at least 25% of our frameso that we can crop and get out with a decent image. A tiny target in your frame will not be a nice thing to look at, so get closer as much as you can.

Now that we are close, we want to be at eye level with the bird, which makes a big difference. Avoid shooting birds from high to low or opposite. If possible, try to sit down or even to lie flat to do that. For a bird on a tree, the further you move away from it, the better the level will appear, instead of shooting it from right underneath where it is perched. Don't try to chase birds around as they will fly away and might not return when they feel uncomfortable. Instead study their behavior, most birds will have a route that they fly on, or an area where they feed, try to get in closer without disturbing them, find a good spot with the sun behind your back and remain still, it won't be long before they get used to you. At first you want to train yourself on finding the birds in your viewfinder, takes time, but the wider your lens is, the easier it will be., you can zoom in later. Start with big targets, slow moving birds, get used to following the birds while keeping it within your viewfinder so that your Autofocus will be able to lock and track it.

You might want to pay attention to the backgrounds, a bird is best looked at when it has a blurry background, it pops out of the frame when there are no distracting subjects around it. Try to keep it as wild as much as you can, building, electricity poles, fences, cars, boats are not going to look good in the picture and might be a hassle to get rid of in post processing.

Always try to get the birds eye sharp and would be even much better if it is looking towards you. Avoid shooting a bird that is going away from you, best is to have it



incoming or perpendicular to you. Once it goes away, stop shooting, unless you are trying to show an artistic view of the wings or another artistic idea that you want to specifically show.

Try to capture something interesting, a perched bird might be a dull thing to look at compared with one that's preening or catching an insect, or flapping its wings, making that bird shot alive with some interesting actions.

Birds in flight can have an interesting look if you avoid having the empty sky as your background. You might want to position yourself and anticipate the moment they fly into a more colorful interesting background.

Practice with Gulls, they are very good targets and usually in abundance.

There are more details to this subject, but for now, having the passion and determination would be the key factors along with practice.

Any questions will be gladly answered through Instagram @uaebif









THROUGH THE LENS



# Hyena & Topi

By Hussain A Nalwala

© Hussain A Nalwala

THROUGH THE LENS





Hyenas or hyaenas are feliform carnivorous mammals of the family Hyaenidae family. Basically, there are two species of Hyenas found in African savannas; Spotted Hyena and Striped Hyena.

It is a general belief that Hyenas are scavengers, but the reality is that Spotted Hyena (*Crocuta crocuta*) kills up to 95% of the animals they eat; whereas Striped Hyena (*Hyaena hyaena*) are largely scavengers.

During my trip to Masai Mara, I had an opportunity to see a Hyena hunt. By about noon time it becomes really hot and the Topi were scattered all over the

place. Some were on the mount and a few were seating on the ground with their heads down trying to sleep. There, we saw a Spotted Hyena quietly moving towards the Topi and trying to hunt. Once we saw this, we started following them expecting to see some action.

The Hyenas quietly walked closed to the Topi, but before they could reach, the Topi would get up and run; and since the Hyenas are not good runners, they were not able to catch them. This went on for about 2.30 hours, losing their prey one after the other. They would not give up and kept moving from one Topi to the other. The hunting style remained the same... they always came from the back

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**Photography has been a passion since Hussain's early childhood days. He has traveled to some of the most exotic destinations of the world for nature and wildlife photography.**

Hussain's images have been displayed at various International photography exhibitions and won several International awards. He has been conferred fellowships of various photography and conservation societies.

**See:**  
[instagram.com/hussain\\_nalwala](https://www.instagram.com/hussain_nalwala)  
[facebook.com/hussain.a.nalwala](https://www.facebook.com/hussain.a.nalwala)  
[www.hussainnalwala-photography.com](http://www.hussainnalwala-photography.com)





side of the Topi.

Finally, one of the Hyena was able to catch a Topi who was drowsy. The bite was so firm that however hard the Topi tried to release the grip, it failed. By that time, another Hyena who was close by joined him and two of them had a very firm grip on the Topi. Within a few minutes, the Topi was on the ground and both the Hyenas started opening up the belly of the Topi.

It was a horrendous sight to see the belly of the Topi being opened up while it was still alive. We were surprised at how quick the signals were sent to other Hyenas in the area that within few minutes, quite a few of them arrived and polished up the Topi in less than 30 minutes.

I have never seen a hunt like this before and it was special because of the different style of hunting. We always see big cats hunting and they go for the neck of the prey, whereas in this case, the Hyenas went for the belly of the prey.













TRAVELOGUE

# Kabini: 'The Land of Leopards'

By Kalyan Chakraborty



©Kalyan Chakraborty

TRAVELOGUE





**Kalyan Chakraborty famously known as 'KC' is a media professional, Award Winning Wildlife Photographer, Karnataka State Level Gold Medallist in Shooting, Defending Champions in Racing.**

His heart is equally divided between his passions - Wildlife Photography, Racing, Martial Arts, Fitness & Adventure. 'Live with no regrets and never regret not having lived life to the fullest' is his heart song...

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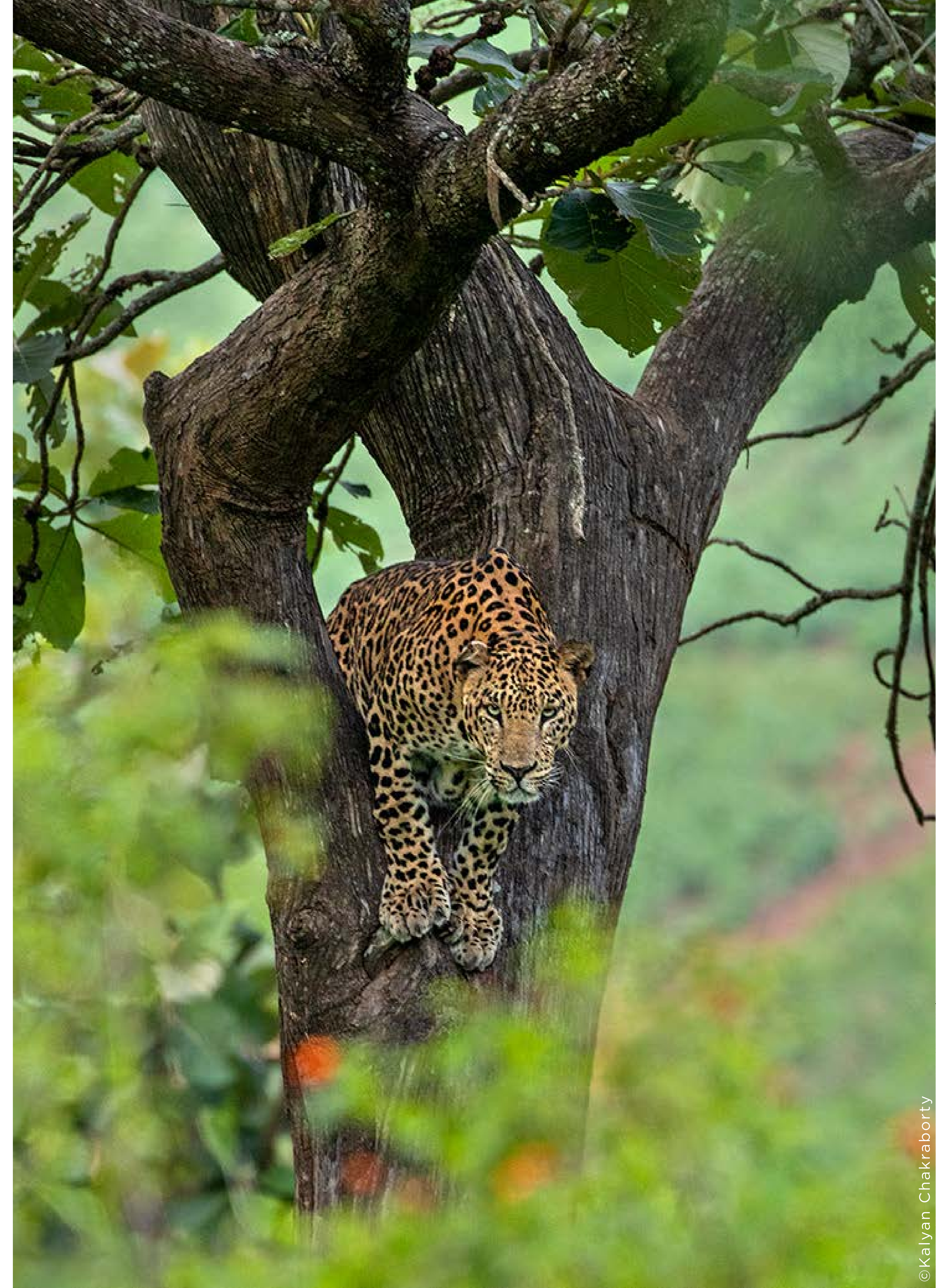
#### **Origin:**

Kabini Wildlife Sanctuary in the south of India was established in 1955 and became a National Park in 1988. The name Kabini is derived from the famous Kabini River that flows from Pakramthalam Hills in Wayanad District of Kerala via the Nagarhole National Park. Kabini Wildlife Sanctuary is also known as the 'Land of Leopards' because of the highest density of cat population within the reserve.

#### **About the Place:**

Kabini Wildlife Sanctuary is currently

part of the Nagarhole Tiger Reserve with an area of 643.39 Sq Kms. Back in the days, the area used to be the hunting grounds for the Royal Maharaja Families, and currently is home to many endangered species including the famous 'Black Panther' which is none other than a melanistic leopard. Kabini has the highest density of leopards in the nation, thus got the tag of 'Land of Leopards'. According to my experience, Kabini should have been retagged 'Land of Cats' as it has equal or more number of tigers across the reserve, making the place one of the best habitats to sight big cats through out the season. It is the







©Kalyan Chakraborty

only Tiger Reserve across India which remains open 12 months a year for game drives within the forest, compared to all others which remains closed during monsoons. The whole forest is divided into 2 zones: Zone-A & Zone-B, Zone-A records the highest sighting of cat movements including the Black Panther (Melanistic Leopard) where as Zone-B is adjoining the Kabini Dam Backwaters, home for some breath-taking landscapes. Some of the rare bird sighting and the famous tusker from India, Mr. Kabini or Bhogeshwar can be sighted within Zone-B.

**Activities:**

**Wildlife Safaris:** The park conducts 2 different kind of safaris, one through the Karnataka Forest Dept via Canters and another through the Jungle Lodges & Resorts via Jeeps & Small Vans. Jungle Lodges & Resorts also arrange Boat Safaris along the Kabini Backwaters home for cute Oaters, fresh water Crocodiles, some amazing species of birds, elephants and breath-taking views of landscape. The safaris are conducted twice a day, morning 06:00 - 09:00 Hrs and evening 15:30 - 18:30 Hrs. To avail the Forest Department safari, one needs to stand in the queue to buy the tickets

at 10:00 Hrs for the same day evening game drive and one needs to stand in the queue to buy tickets at 16:00 Hrs for the next day morning game drives. When it comes to Jungle Lodges & resorts, one either needs to have a reservation for stay with Jungle Lodges & Resorts or needs to have reservations with nearing Resorts like Kaav, The Serai, Water Woods, Evolve Back & The Bison.

**Coracle Rides / Boat Rides:** Get in touch with your respective resorts, most of them are tied up with the local Coracle Boatmen's who can take you for a spin. The high-end resorts does have their own

motor boats to take you for a package ride.

**Bicycle Ride / Local Tribal Village**

**Visit:** One can quickly paddle down to the nearby tribal village to get some traditional and cultural experiences. One can even experience their local spices from the adjoining farms.

**Nature Walk:** Reach out to your respective resort's activity desk for an early morning nature walk on the banks of the river, this can be done only in winter or before the rains. Post rain the









©Kalyan Chakraborty

water level rises and is not safe at all for the activity. On this Nature Walk, one can sight some amazing bird species, family of cute oaters, fresh water crocodiles, if lucky you can even sight big cats on foot or elephants.

#### **Different Moods across Seasons:**

The best time to visit Kabini Wildlife Sanctuary is between October to March when the sightings are at it's peak. If you love Monsoon and want to enjoy the lush green belt of the nature, don't miss between July - September. I can guarantee you, she will glow like a bride soothing your eyes...!

#### **My Experience past 12 Years:**

Well, it's been a while that I have been visiting Kabini and can claim to be my 2nd home. As based out of Bangalore, I had seen many transformations over the past many years but when I look back to my experiences with Kabini, I see not many changes. Probably took the right decision in claiming Kabini my 2nd Home.

I have travelled the length and breadth of India visiting most of the Wildlife Sanctuaries, Kabini still remains my all-time favourite. One of the reasons could be, it never disappoints. I had experienced the jungle across all seasons and have frozen in time. Known for its highest density of cats across the nation, it is unique to see most of the tiger families sharing same territories & water holes without any conflicts. Generally, cats are territorial animals and don't entertain outsiders into their territory. Because of the high density, most of the times the big cats (both Tigers & Leopards) venture out of the

reserve targeting the local cattle & dogs as easy prey. One such moment I have experienced, when I was on foot walking on the road capturing birds early in the morning, I got a shock of my life sighting one of the boldest leopards from the reserve looking at me head-on, sight tightly locked on me from one of the tree's outside the National Park. If you are a cat lover, Kabini will never disappoint you by any form. This forest has a magical landscape and gives you most of the amazing habitat frames of the Leopards on the Trees or Tigers on the grassland.

Kabini is blessed with one of its kind of Leopard 'The Bagheera', a Black Panther (Melanistic Leopard) which is the rarest of all. We have only one of them in the entire park. I had waited for more than a decade to get my first sighting of him. I kept wondering when my photographer friends used to talk about their magical experiences encountering him till I had my share of the occasion.

#### **How to Reach:**

**Flight:** Kabini is about 80 Kms away from the closest airport that is Mysore. Next main destination is Bangalore, approx. 230 Kms away. One can either connect via flight till Bangalore / Mysore and take a road trip.

**Train:** The closest railway station is Mysore, approx. 80Kms from Kabini.

**Road:** Being located centrally, Kabini is well connected across most of the nearby cities with good roads. Mysore, Calicut, Coorg, Bangalore are the common destinations to reach out to.









Tatiana Petrova –  
Russian Wildlife Artist

WILD ARTS SHOWCASE





Since childhood Tatiana loved animals, even her favorite toys were animals, and in school time she was deeply involved in reading books such as Grzhimek, Durrell, Goodall, Corbett, Anderson, Sladkov, Bianki, Drozdov etc.

Many of these books were illustrated by great wildlife artists such as Charushin, Kapustina, Vatagin, Gorbatov and others.

[www.art-tpetrova.jimdo.com](http://www.art-tpetrova.jimdo.com)

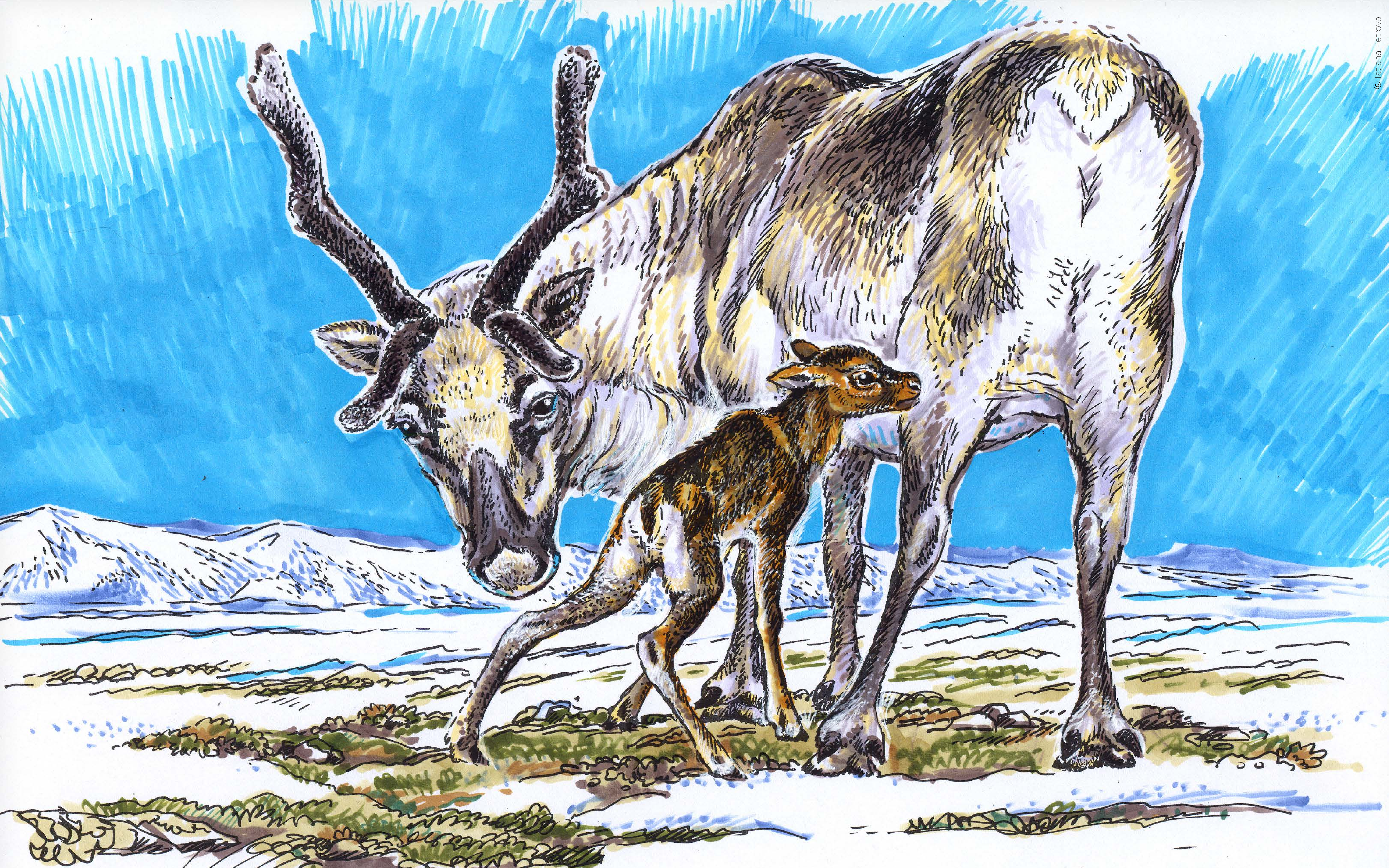
Since childhood I loved animals, even favorite toys were animals, and in school time I was deeply involved in reading books such as Grzhimek, Durrell, Goodall, Corbett, Anderson, Sladkov, Bianki, Drozdov etc. Many of these books were illustrated by great wildlife artists such as Charushin, Kapustina, Vatagin, Gorbatov and others. Their works were a big inspiration for me. I started drawing on my own when my mother gave me pen and paper in early

childhood, and later I dedicated my drawings mostly to animals of all kinds both real and fantastical ones. In the beginning these even included microbes and active molecules such as ferments and antibodies which were as much imaginary as dragons!

Most of the time I was drawing on my own, following only own imagination or living nature. I am from St. Petersburg where I live and work. While attending









school outing classes in Leningrad Zoo I was totally involved in watching and drawing my dear animals. My favorite ones were horses, big cats, big birds and baby birds.

There in Leningrad zoo for the first time I met a true wildlife artist Vladimir Chernoglazov. He worked as an artist in the zoo for 40 years. A zoo artist's job in old time required a lot of various skills such as making fully handmade info boards for hundreds of animal enclosures, wall painting and decorating, illustration, decorating of the park, buildings and enclosures etc. Despite of loads of routinely technical work, Chernoglazov managed to draw on his own and he was an amazing artist. Although he never gave me any class or workshop, a part of several valuable advices, it was he who introduced me into understanding of animal drawing, their anatomy, behavior and drawing techniques.

Later I attended art school and then went to study zoology in St Petersburg State University, and a fellow zoologist introduced me to another famous wildlife artist Tatiana Kapustina. Kapustina was creating illustrated books since 1960's, and several generations of Soviet children (including me) grew up on her wonderful illustrations. Her unique style is easily recognizable even for people in foreign countries such as India where soviet books used to be translated and published in local languages. Her warm works of fluffy and kind animals done in watercolor or lithography are a great inspiration for me.

At the end of my university study I understood that I needed to study academic drawing and went to study in Fine Arts Academy as well. Although academic teachers did not understand and support my passion to draw animals, they gave me a lot in drawing and painting techniques. After completing all my studies I got a job as an artist in Leningrad zoo. This work was a great opportunity for me to stay in everyday contact with my favorite wildlife although it was mostly about designing advertisements and info boards and not drawing real animals. I was doing animal drawings for illustrations and info boards.

It was while travelling in India when I started drawing wildlife from wild nature. In Russia it is almost not possible to see large animals in wild as they are shy and often rare. India amazed me for the possibilities to go and watch in a forest a lot of exciting wildlife, not only tropical birds but also large mammals like tigers, gaurs, deer, wild dogs etc. This rich and blooming nature inspired me a lot to travel in different parts of India to see as much places and animals as possible. It was interesting to meet compatriot zoologists in India, many of them were very helpful and heartily shared their knowledge.

This also inspired me to submit for ICCR\* stipend for studying in India. I was very grateful to India for this opportunity to study and live in the surrounding of Indian nature. I studied for two years in Santiniketan University in West Bengal. Santiniketan is not only highly cultural and historical place but



© Tatiana Petrova

also full of green trees and wonderful bird life. Its founder, Rabindranath Tagore started not only the university and the town but also rich gardens and parks. Gardens attract a lot of birds not seen otherwise in surrounding areas of Bengal villages and paddy fields. As well

as travels these gardens gave me lot of inspiration for my art.

In 2017 I received an invitation to Nepal art workshop dedicated to art helping to save nature. I was very thankful to Harry Tyler for the invitation and with some



friends managed to participate in it at Suklaphanta National Park. It was great to meet the forest again and experience drawing in open air with fellow artists.

### Wildlife Art

My favorite citation on wildlife art is from a Russian artist Vasily Vatagin. "For wildlife artist the first and main condition is love to animal world, to its forms and life moments... The love gives him the sense of animal, which helps him to find its most characteristic lines, most impressive and attractive peculiarities. Deep knowledge of form, structure and anatomy, life and habits of animal is important condition for creation of really valuable image... " (Vasily Vatagin,1957)

Vatagin was a great wildlife artist in the beginning of 20th century, who started and literally created State Darwin museum in Moscow. This museum is not only one of best contemporary biological museum but also a treasury for art of wildlife artists. Many exhibitions of paintings, sculptures and applied arts on wildlife are going on in Darwin museum all year round.

I was lucky to participate in an exhibition there in 2017 along with my mentors Tatiana Kapustina, Irina Makoveyeva and other wonderful artists.

Being a graphic artist I love to work with watercolor. It allows to use many different techniques including a unique one taught to me by Tatiana Kapustina. Drawings are usually based on field and zoo and imaginary sketches, where

oil pastels are favorite medium for me. Capturing sketches from nature is very important for creating lively work on movement, mood and shape of animals.

As a follower of academic graphic art I don't like drawings from photo. I consider copying from photo as a kind of craft similar to cross-stitching needlework using ready-made template picture. I strive to tell something important about life and expression of animals from my own sight and knowledge, not from a camera snap. But nevertheless I like to use my simple camera in travels as it lets me to capture and memorize quickly changing circumstances, landscapes and other details.

One of my projects was a big work on Animals of the World Map. It required me to work with speed and correctness of multiple animal images which were more than 300. So for quickness I was using some photos for correcting details and proportions, but I never copied from photo, because for every image I was composing best posture, shape and color and not refer on random captured moments.

My future plans are to illustrate a couple of children's books of verses written by my friend and colleague, and also to write my own illustrated book on my experience with Indian birds and animals.

There is a website for my works with examples of my multiple interests and experiences in art, including not only illustrations, but also paintings, zoo works and handicraft.







YOUR GALLERY



Keyur Nandaniya

Bush Frog Egg (*Raorchestes chalazodes*)





YOUR GALLERY

Munib A Chaudry

Northern carmine bee-eater (*Merops nubicus*)



YOUR GALLERY

Hira Punjabi

Osprey (*Pandion haliaetus*)







YOUR GALLERY

Sarah Calderwood

Arabian sand gazelle (*Gazella marica*)



YOUR GALLERY

Amith Bhavikatti

Indian leopard (*Panthera pardus fusca*)







YOUR GALLERY

Praveen Ashok

Himalayan monal (*Lophophorus impejanus*)



YOUR GALLERY

Hariprasad V M

Milkweed assassin bug (*Zelus longipes*)







YOUR GALLERY

Poonam Nayaka

Purple heron (*Ardea purpurea*)



YOUR GALLERY

Jatin Vasandi

Striped hyena (*Hyaena hyaena*)





YOUR GALLERY

Sangeetha Damodaran

Olive-backed sunbird (*Cinnyris jugularis*)



YOUR GALLERY

Sham Shankar Bhat

Brahminy kite (*Haliastur indus*)





**UPCOMING  
FEATURES**



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**THROUGH THE MELTING  
POLAR WITH  
FREDRIK GRANATH**

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**WIDE IN THE WILD**  
By Nisha Purushothaman

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**INDIA'S PROTECTED  
LANDS**  
By Amrita Das

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