

# P

EXPLORERS

OCT / NOV 2017



## THE MAGICAL MARINE WORLD!!

By Ali Bin Thalith

## THE WALRUS & THE SEAL

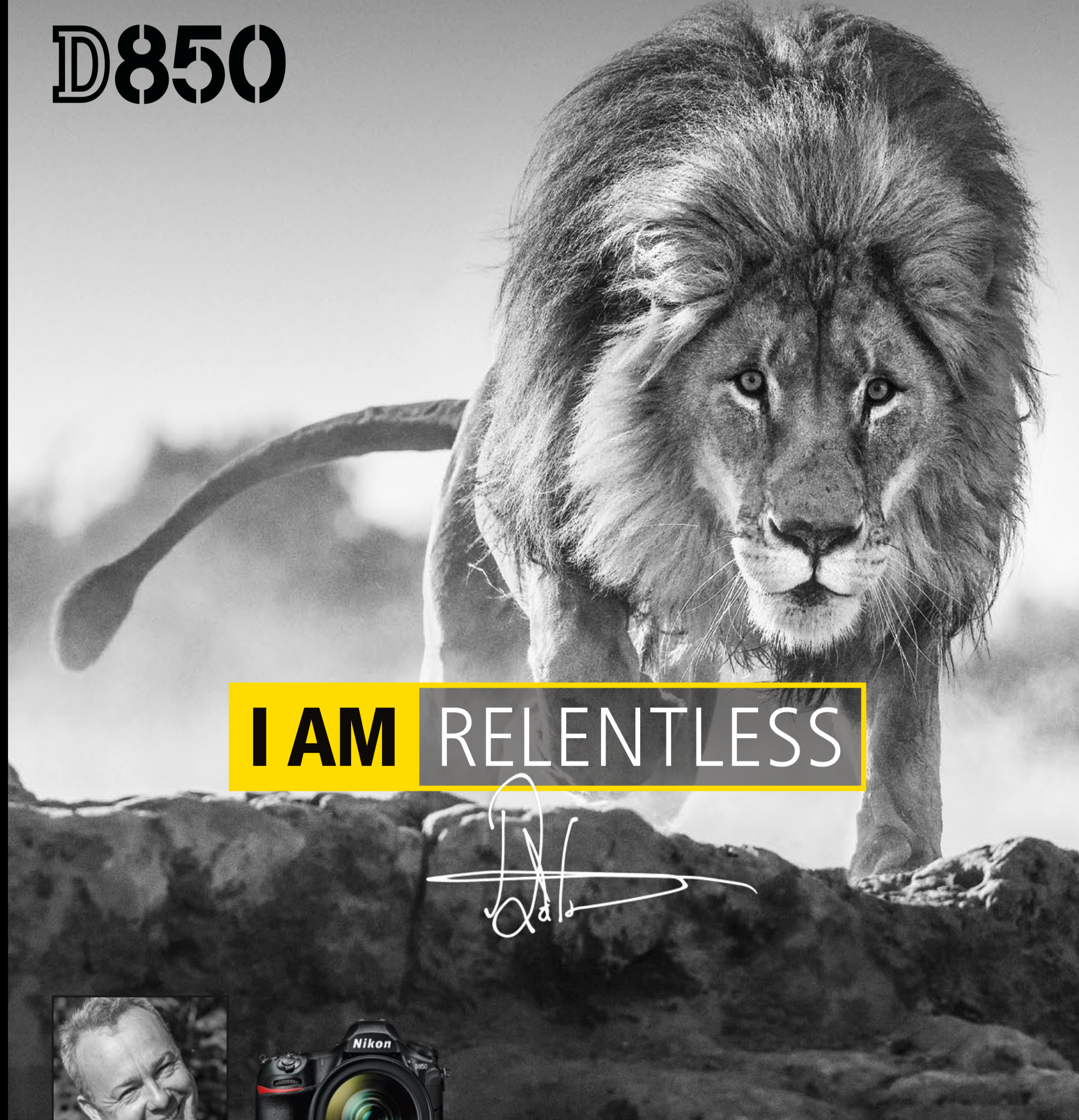
By Peter Hudson

## CHEETAH FOR EVER

By S. Gandrille, T. Crocetta, A. Escriva



# D850



**I AM** RELENTLESS

*David Yarrow*



**DAVID YARROW INTRODUCES THE NEW NIKON FULL FRAME D850.** To launch the new Nikon D850, master wildlife photographer David Yarrow was given the creative freedom to capture the image of his lifetime, shot on the new D850. Thanks to the powerful combination of the 45.7MP FX format back-side illuminated CMOS sensor and the speed of 9\*fps shooting, he could tell a story like never before. With ISO 64 to 25600, 153-point AF, 8K time-lapse\*\* and full frame 4K UHD video, now you too can capture your masterpiece. David is passionate about wildlife conservation, and is the affiliated photographer of the Tusk Trust Foundation. To find out more about the D850, and David's story, follow Nikon on Facebook and YouTube.

\* Requires the optional MB-D18 Multi-Power Battery Pack and EN-EL-18a/b battery.  
\*\* Requires Interval Timer settings and 3rd party software.

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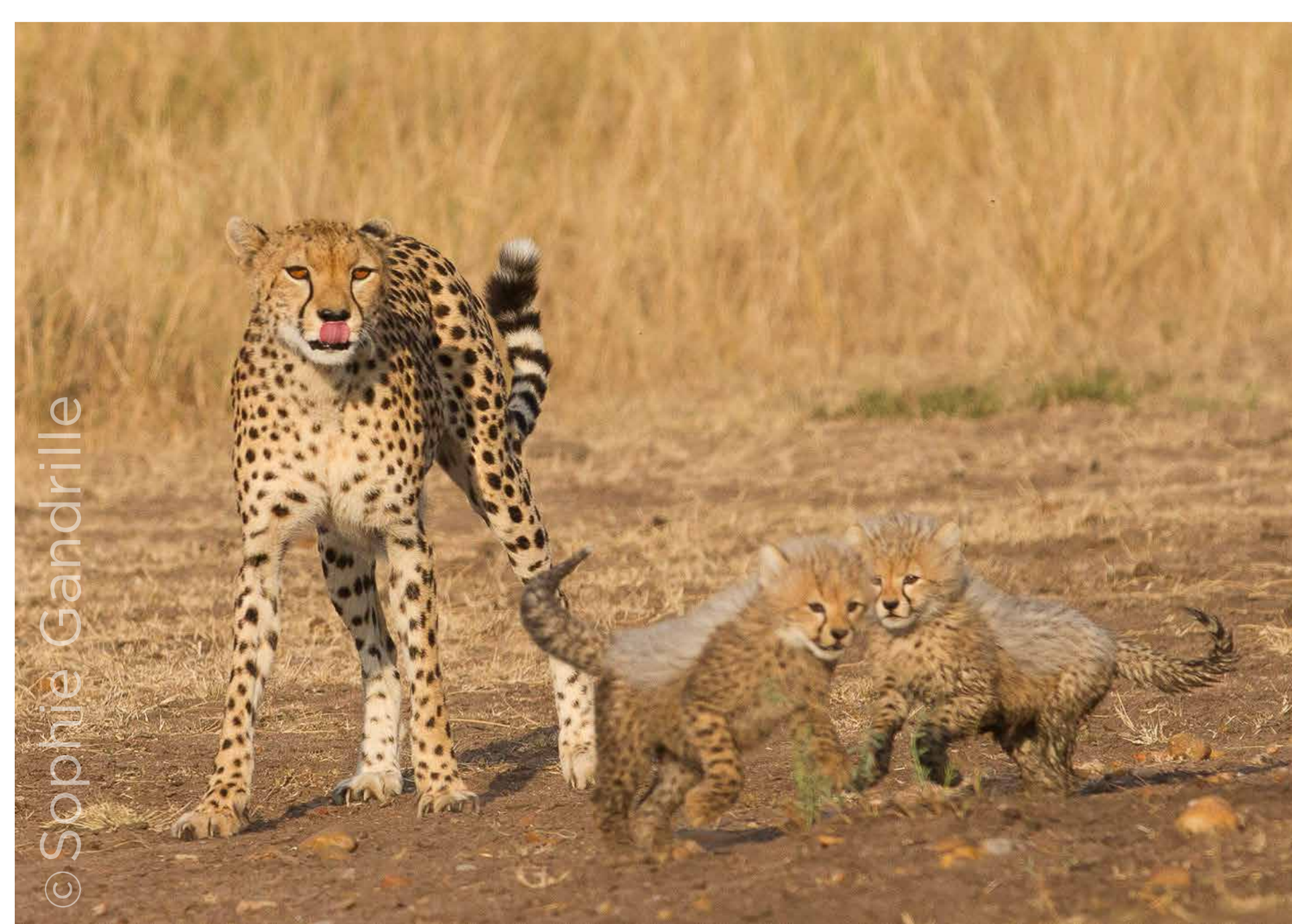
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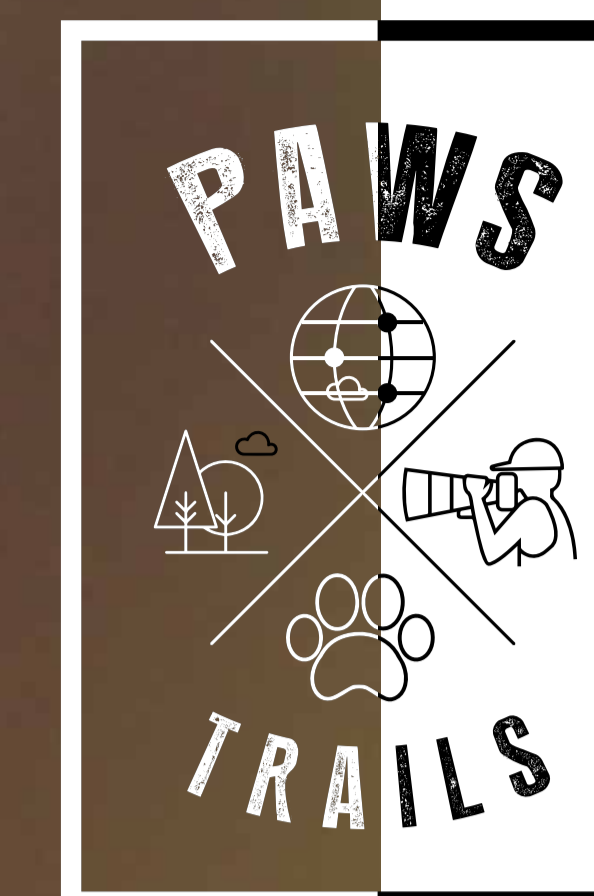
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092

Into the Small World

By Karthikeyan Shanmugasundaram





Hank Tyler  
Editor

PT Explorers celebrates its first year of publication. Several hundred outstanding nature photos and over ninety articles have appeared online during our first year. This volume focuses on wildlife issues in Southern India, the United Arab Emirates, Cheetahs in Africa and Walrus in the Arctic.

PT Explorers is volunteer powered. Articles and photos from around the world have been contributed by dedicated photographers. Dedicated biologists and naturalists who are passionate about the species they study or lands they seek to protect, make major contributions to PT Explorers.

Sophie Gandrille's article on Cheetah conservation efforts in Africa's Masai Mara illustrates the value of biological studies of populations to determine their trends. This information is crucial to the reserve manager's efforts to properly manage a protected area. Involving the Masai people who live in the reserve is crucial to the Cheetah's survival. Unfortunately, recent studies document the Cheetah's continual decline.

Peter Hudson's article on the Walrus that lives in the circumpolar arctic habitat highlights their feeding behavior, feasting on thousands of clams. During the past several decades, the summer ice in the arctic has been rapidly melting. Soon the arctic will probably be ice-free during late summer and early autumn. How will the Walrus respond to the changes in their environment?

We thank those who have contributed photos and articles. We invite and encourage you to consider contributing and expanding our coverage of globally significant species and habitats.

Your Gallery showcases spectacular photographic images...works of digital art. These photos capture stories of special species and outstanding protected habitats. With patience and persistence, your camera can capture images that can be used to promote the protection of endangered species and unique habitats.

## EDITOR'S DEN



©Ramesh Sarvani

## PHOTOGRAPHY DIRECTOR'S CHOICE

Ramesh Sarvani  
Bonnet macaque  
(*Macaca radiata*)  
Lion's point, Ionavala,  
Maharashtha, India



# FOUNDERS' NOTE

August 2nd. This year, that day, the earth said “enough is enough” and called it quits. The official name is Earth Overshoot Day\*. It marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year. It is alarming - every year, this day is coming earlier.

**September 2016.** That is when we said enough to inaction and launched our website, followed by our first edition on **3rd October**. All to make a difference, to spread the word against the never ending plunder, to do our bit to maintain the fine balancing act that mother earth plays to sustain this planet, to help the vanishing species get a fighting chance at survival.

Our Journey is **one year old** now, it's our first anniversary and this is our anniversary edition and needless to say, we are excited. For an organization which runs on volunteer power, this has been no easy feat. **Thanks** to all **our volunteers** and **contributors** from around the world. You have given us your wonderful images, insightful articles and fascinating stories and it has been our pleasure working with you to get your works to adorn the pages of PT Explorers.

We have had our set of accomplishments - 3 exhibitions, Youth awareness through our school outreach programs\*\*, Children's involvement through nature themed competitions\*\*, but we are more excited about what is still in store. Another exhibition, a coffee table book and a calendar are all in the works for this year. And next year promises to be even more exciting.

Thanks to all our readers around the world. We remain committed to bring you shocking and fascinating stories, stunning imagery from across the globe - all with an aim to make you aware and contribute your bit towards the future of mother earth.

\*As defined by Global Footprint Network

\*\*More on this in Cubs Corner section

**Encourage** Photographers

**Inspire** Viewers

**Create** Crusaders

**Protect** Nature

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

**Hermis Haridas  
& Nisha Purushothaman**

Founders - PT Explorers







©Ali bin Thalith

COVER STORY  
**THE MAGICAL  
MARINE WORLD!!**

By Ali Bin Thalith



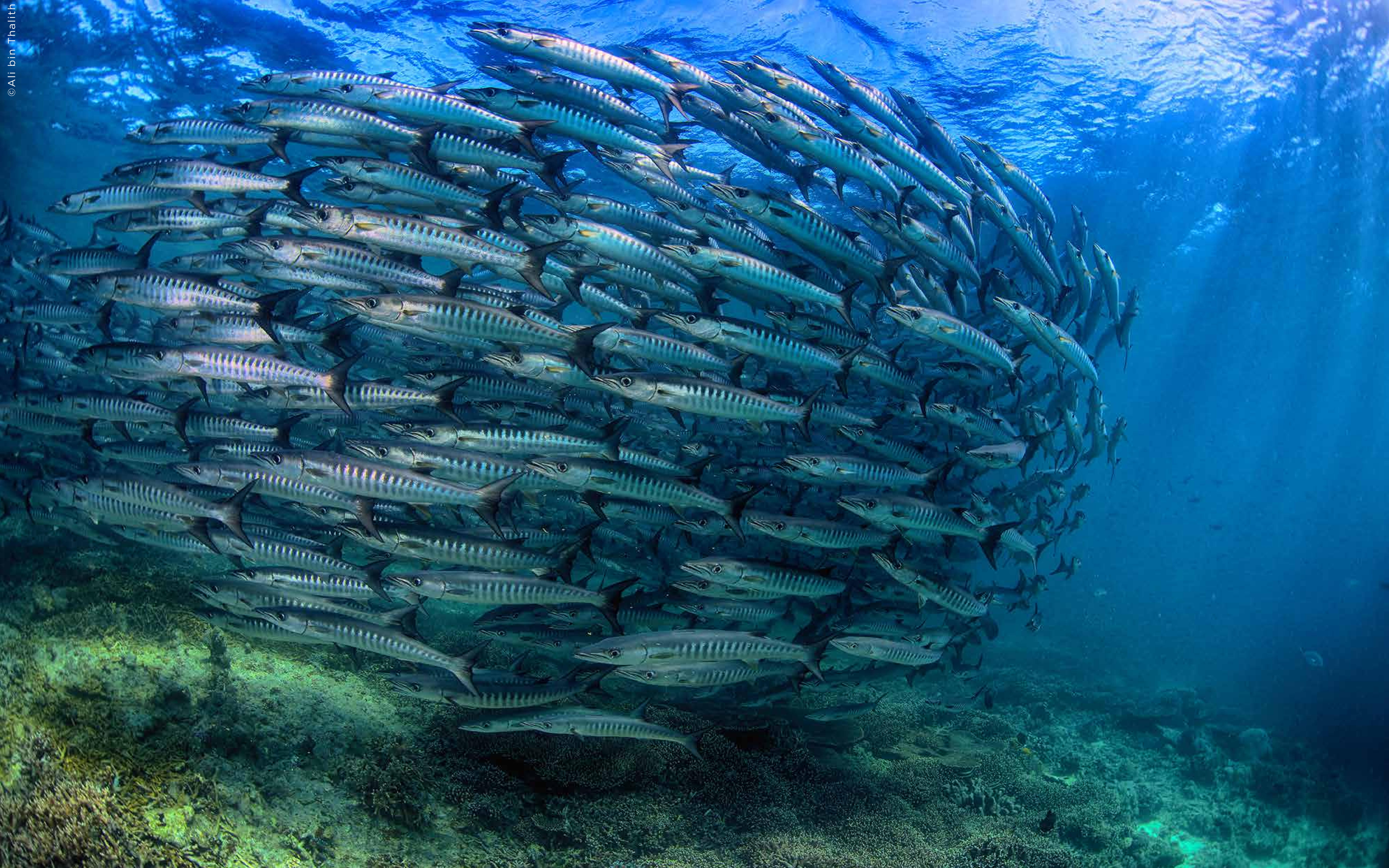


Ali Bin Thalith is a professional documentary film photographer hailing from Dubai in the United Arab Emirates. He holds diplomas in Photojournalism and Documentary Photography (London Academy). As an underwater photographer, he has participated in many underwater expeditions throughout Asia notably in Indonesia's Raja Ampat Islands and Sipadan in Malaysia. In Sipadan, he also helped establish an educational program for children of the remote oceanic island. As Secretary General of HIPA, Bin Thalith oversaw the fledgling competition in reaching photographers from 154 countries within its four years of existence.

In 2014, Bin Thalith was awarded with the International Photographic Council's (IPC) Professional Photographer Leadership Award for his career work in the field of photography. As a result, Bin Thalith became the first Emirati and Arab recipient of the prestigious accolade at the IPC Pro Luncheon at the United Nations in New York City.

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[instagram.com/ali\\_bin\\_thalith](https://www.instagram.com/ali_bin_thalith)







**A hearty welcome to PawsTrails Explorers Ali, we are extremely happy that you accepted our request. Please tell us about yourself and how did your passion for underwater photography start?**

It is my pleasure to take part in this interview.

My name is Ali bin Thalith and I am an underwater and wildlife photographer from Dubai in the United Arab Emirates.

I began diving underwater in 1995 near my home on Jumeirah beach, with the help of my older siblings who continued the family tradition of diving underwater (since my forefathers were pearl divers). I always had a passion for photography from a young age and one day decided to mix the family tradition with my personal passion and began to photograph underwater.

**What, or who, has been the single biggest inspiration for your underwater photography?**

My father was and always will be my biggest inspiration in my career and life. He taught me a lot about the sea and instilled inside me a love for the ocean that can never be erased. This helped me when I wanted to photograph underwater in that I am very passionate about underwater creatures and strive to document as many as possible.







**What are the challenges in this type of photography?**

All forms of wildlife photography can be considered challenging for photographers. I believe that for underwater photography though, these challenges are quantified due to the complexity of the sea and the difficulty in focussing on a single organism when there are hundreds if not thousands floating around you at the same time. Likewise, finding rare underwater organisms that are usually quite small in size is very difficult and quite frustrating.

**Animal behaviour is obviously important when it comes to underwater photography. Do you invest a lot of time researching your subjects?**

For sure, this is an essential step that any serious wildlife or underwater photographer has to undertake before setting out on a shoot. You will find that any time spent researching a species and its habitat will save time in capturing the best photographs onsite.

**Is there a favorite marine animal you love shooting?**

I love shooting all creatures of the sea, be it great white sharks or tiny planktons. They are all equally beautiful and worthy of shooting with camera.

**What is the toughest ocean plant or animal picture you have taken so far?**

Any marine animal or plant which is considered rare is difficult to shoot due to the time needed to find the creature in the first place. The Bubble Coral Shrimp, which I shot in Wakatobi, Indonesia was one such case, though I'm proud to say that the photographs I took of the shrimp were well worth the trouble. Also, Western Clownfish which can be found in the waters of Matakang, Malaysia are known to be a shy species of fish and thus need extra care when being approached so that they don't swim away.

**What is the biggest challenge you face in capturing the "perfect" image?**

Making the photograph look as natural as possible is the single biggest difficulty most wildlife and underwater photographers face. Also, ensuring the right focus in an uncontrolled environment is essential.

**What do you look for when you are making your images?**

I always aim to showcase the beauty of the creatures that I shoot, and the passion I have for them in my photographs.

**How do you plan a dive or a series of dives aimed at photographing a subject?**

Of course, I will research the location where I plan to shoot beforehand and then move on to studying the types of species that live there. Knowing the types of species, their habitat and behavioural



patterns is critical at this stage as it will allow me to draw up a strategy of how to approach each and every single organism before shooting it.

**Do you prefer macro or wide angle photography?**

I am a fan of all forms of photography, but because of my eye for detail I would have to say Macro photography.

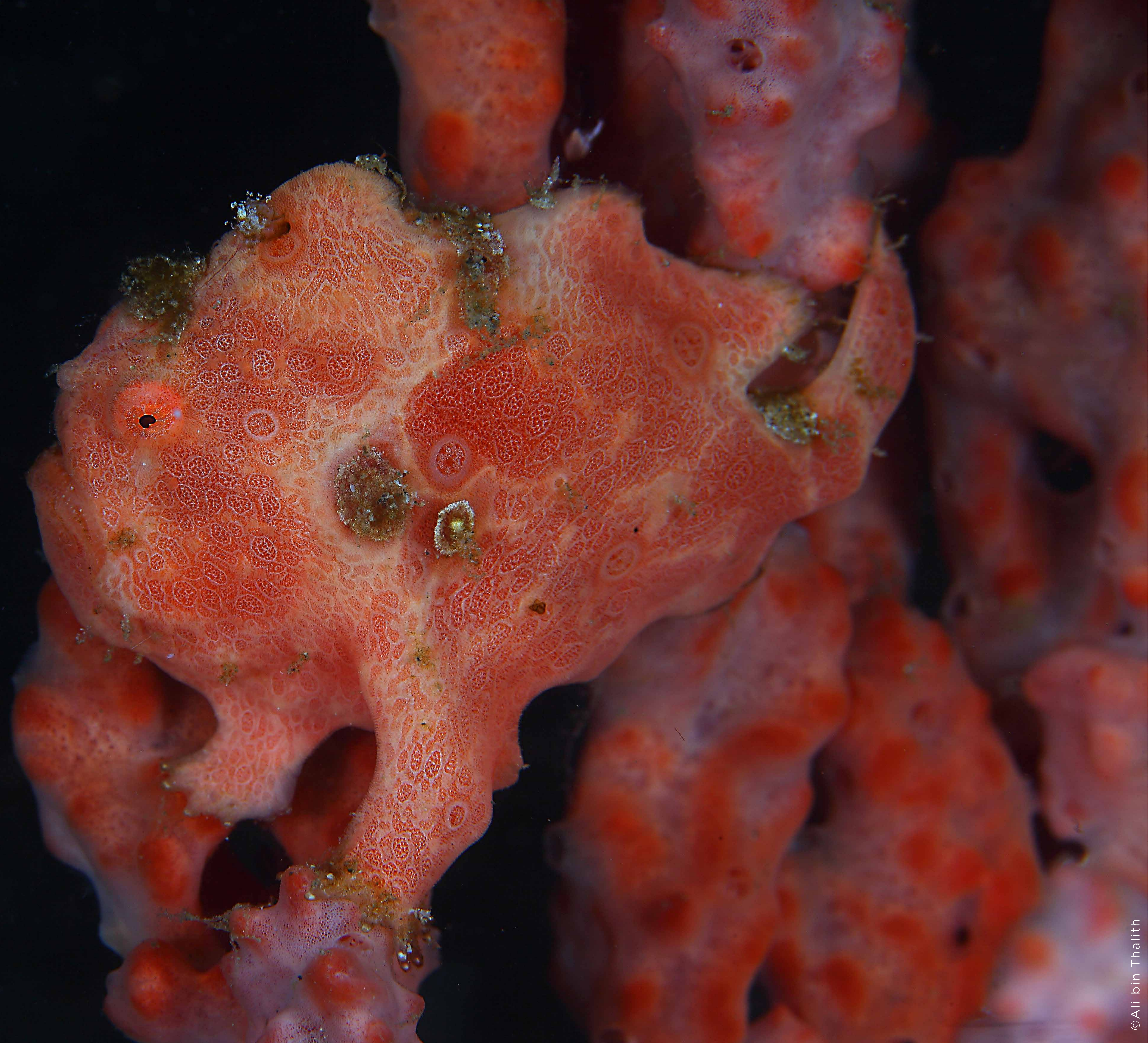
**What is the typical day for the underwater macro photographer?**

**What would be the typical challenges in underwater macro photography?**

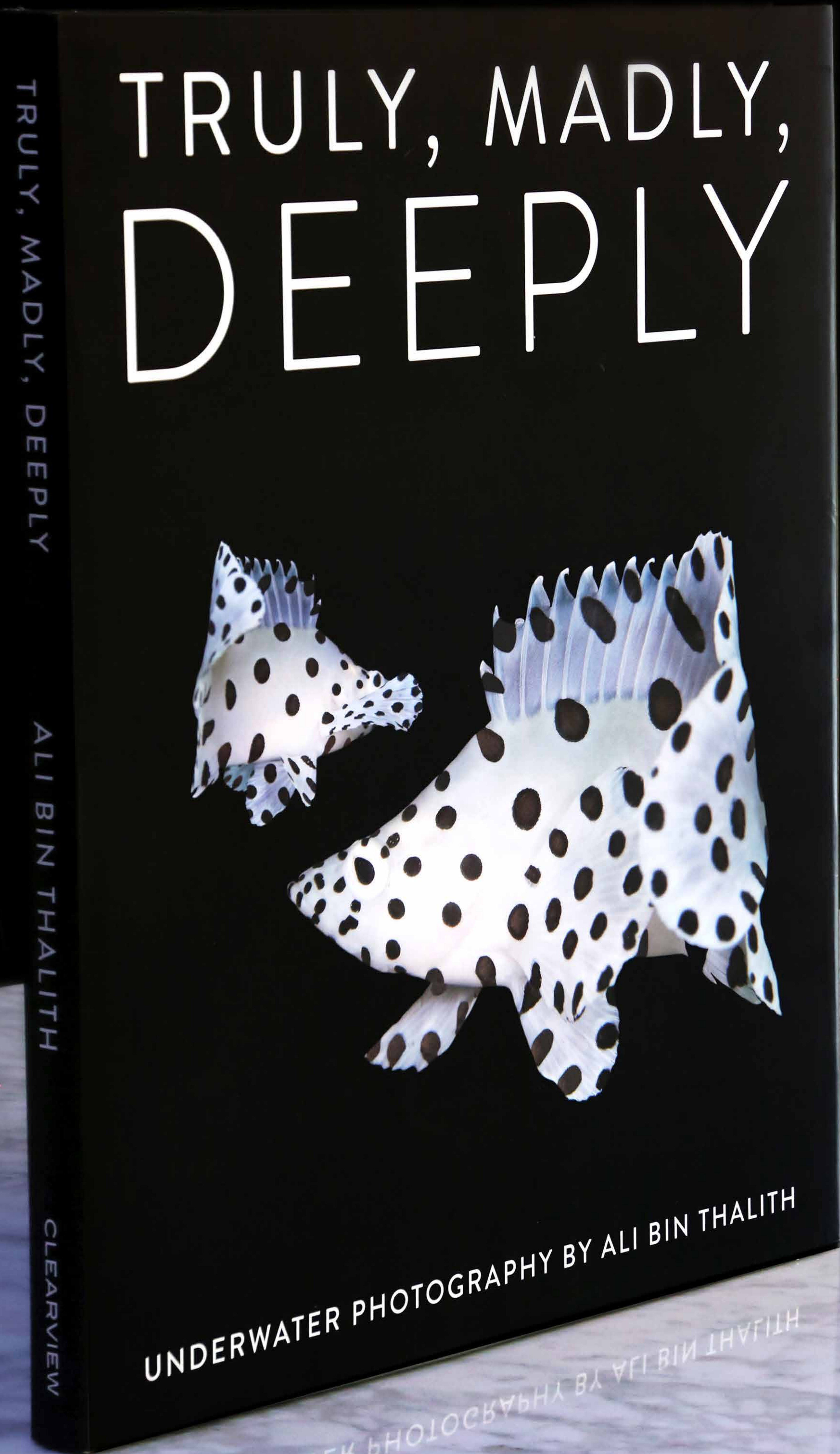
For underwater macro photographers, a typical day while photographing is usually a very long one due to the amount of time required to search for tiny organisms to be shot. Shooting underwater can be quite frustrating and draining, both physically and mentally on the most seasoned photographers, hence patience and resilience is the key.

**What is your most hair-raising (underwater) event so far? The most difficult shoot technically and physically?**

I have had the pleasure of diving and shooting in various locations with many different creatures and organisms around the world. These organisms range from the harmless to the deadly; approaching each one is different but always requires a key element, which is 'comfort'. If a photographer is able to maintain comfort







underwater then technical issues will be easy to deal with, I can happily say I am more than comfortable when shooting and the process of shooting has become natural for me.

**How important is patience in this wonderful genre of photography?**

Patience is not only important, it is critical. As I mentioned earlier, comfort plays a big part in the success and ability of an underwater photographer to deliver good photographs. To reach the desired level of comfort, a decent bit of patience is required.

**You have done underwater photography in Indonesia's Raji Ampat Island and Sipadan In Malaysia too... Can you tell us the experience of these places?**

Diving and shooting in South East Asia is unique in the sense that the water visibility is usually quite high and the creature diversity is mouth-watering for an underwater enthusiast like me. Therefore, I love shooting in both Indonesia and Malaysia and I make sure to visit each country at least once a year to discover new habitats and organisms.

**Light plays an important part in Photography. Which light (day or night) do you prefer most while shooting Underwater and why is it like that**

Night time photography underwater is quite difficult and in many cases

considered dangerous, so I try not to shoot too much at night, though I have dared to do so on a few occasions. At night, the creature activity underwater is much higher though, so it is a tempting risk for many underwater photographers (myself included) to conduct underwater shoots then.

**Tell us about a most memorable underwater shoot**

As a photographer, I consider every single one of my photographs and shoots to be my favourite. One particular experience and photograph does stand out due to its strange beauty.

In the Andaman Islands in the Indian Ocean, I was fortunate to photograph the island's famous swimming elephant during a dive in the sea. This elephant, which is used to transport goods between different islands is the last living one of its kind, a truly remarkable and beautiful creature. The unnatural beauty of this experience is something that I will never forget.

**Can you tell us about Your Book**

'*Truly, Madly, Deeply*' was my first ever book published, featuring some favourite photographs I have taken throughout my career. This past year, I have also published my first underwater photography book in Arabic, titled '*Underwater Photography: Without Secrets*'. In the case of both books, I feel very happy to share my photography in a publication mainly due to the close attention I give to my photographs.







Publishing my first two books within a short space of each other has now made me even more active in wanting to capture more underwater creatures and publishing them in future books.

**What is your experience as Secretary General of HIPA? We have heard about the training and workshop of Syrian Children at the Emirates Jordan Refugee camp. Please share about that**

HIPA is an international photography competition that was launched under the patronage of His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, the Crown Prince of Dubai and Chairman of the Executive Council. In my role, I have been the Secretary General of HIPA since its inception in 2011 and have watched the competition grow to become one of the most internationally recognisable and prestigious competitions in the world of photography.

The initiative of training the young Syrian children in the Emirates-Jordan camp was a result of a directive from His Highness the Crown Prince of Dubai as a means to present the everyday lives of the camp's children through photography. We gave it the name 'Faces' because we also took multiple portrait photographs of the children during our stay there. The vast majority of the children were very happy to have us teach them the art of photography and likewise it was a very rewarding experience on a personal and humanitarian level.

**How did it feel when you became**

**the first Emirati & Arab Recipient of International Photographic Council's (IPC) Prestigious Photographer Leadership Award**

In truth, it was a great honour. To be presented with such a prestigious accolade amongst some of the biggest industry names at the United Nations, no less, was an unforgettable moment in my career.

**Please share about your notable short documentary film "Gaza Diver"**

A few years ago, I came across a young amputee by chance on Jumeirah Beach, this young man would go on to become the protagonist of '*Gaza Diver*'. The young man had been in Dubai to receive a pair of new prosthetic leg but when speaking to him I was surprised to learn that he was a very astute diver, despite his disability. The documentary was a very special project for me because of its ability to mix a humanitarian case with two of my dearest passions; photography and diving. Among the innumerable experience you have had in the ocean, can you share with us some truly memorable moments

Be it swimming with the aforementioned elephant in the ocean, having the world's deadliest snake glide onto my shoulder or even swimming for hours in shark infested waters in Bahamas, every second I spend documenting life underwater is memorable and unforgettable in its own special way.

**What kind of camera gear are you using today to capture your awesome images?**

I have a wide range of cameras but my favourite one is the *Cannon 5D Mark 3*. I also use a *Nauticam NA - 5DMIII* which is a sturdy and very reliable camera case for my underwater shoots, it never disappoints!

**Do you mind sharing a few of your best shots and explain what makes each special?**

The photo of the swimming elephant stands out for reasons I've mentioned above. As for my "best shots", I like to think every shot I take is my best.

In truth, I probably don't have a clear favourite due to each and every single one of my photographs having an amazing story behind it.

**What is your advice to those who would like to become underwater photographers?**

Do not be scared to try something different and challenging, but have the patience when the going gets tough, it's never easy underwater









SPECIES

*The Walrus*  
(*Odobenus rosmarus*)  
and *The Seal*  
(*Phoca vitulina*)

By Peter Hudson







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# P

**Peter Hudson is a Professor at Penn State University who studies the ecology of wildlife diseases. How infections threaten wildlife and identifying management actions that help conserve free-living animal populations. His passion is biology and he loves watching and photographing wildlife.**

**He is The Willaman Professor of biology, the Director of Life Sciences at Penn State and a Professor at the Nelson Mandela African Institute of Science & technology in Tanzania. He is a Fellow of The Royal Society.**

**[peterhudsonphotos.com](http://peterhudsonphotos.com)**

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© Peter Hudson

### **Walrus diet - mostly clams and the occasional seal pup**

I am always surprised how much people know about the basic biology of the Walrus (*Odobenus rosmarus*). For instance most knowledgeable people appear to know that Walruses feed almost exclusively on clams and mussels and that they swim along the floor of the ocean using their sensitive stiff whiskers to find them. Like many, my initial knowledge of Walrus biology was derived from the narrative poem that Lewis Carroll wrote in his book "*Alice through the looking glass*" when the Walrus and the Carpenter go for a very strange stroll along a beach, meet a group of very silly young oysters and encourage them to be friends and follow them - then they eat them all up. In comparison, I suspect general knowledge of the other large seals, is almost totally lacking - how many people know elephant seals consume squid, sharks and octopuses? In this article I am going to explore aspects of the biology of the Walrus and its diet and tell you about an event where I watched a Walrus grab a baby seal.

### **The bivalve vacuum cleaner**

The majority of seal species, correctly known as the Pinnipeds, are carnivorous and take fish, squid and some even feed on krill. Walruses are somewhat different from the rest when it comes to diet since they feed predominantly on clams and other molluscs, in particular the bivalves which have two parts to their shell. An adult male Walrus can weigh as much as 1680 kg (3700 lbs.) and will consume as many as 6000 clams in a single feeding session, stopping to rest once their stomach is full and then repeat the

feeding session, often twice a day. That is a truly astonishing number of clams and even more astonishing when you hear the rate of consumption has been estimated at a thousand over several minutes. If this is indeed correct, then this reflects not only the sheer abundance of these invertebrates in the marine arctic ecosystem but also the efficiency at which Walruses suck up clams. They are remarkably effective at consuming clams and they utilize their specialized mouth and tongue to vacuum up the clams and suck out the soft contents—they are little more than a clam-vacuum on the sea floor. Recent videos also reveal that Walruses will suck up water into their

## **In this article I am going to explore aspects of the biology of the Walrus and its diet and tell you about an event where I watched a Walrus grab a baby seal.**

mouth and then "power-hose" the sand while using their flippers to expose their prey. So, while Walruses vacuum their way across the ocean floor they are not exclusively clam gobblers - they will also suck up smaller invertebrates such as worms, those squidgy sea-cucumbers and even the occasional fish like a polar cod. For many years the Eskimos in the Barents Straits reported that the Walruses would catch and kill seals although there has been some confusion about whether they are actually killing the seals or simply taking advantage of dead or dying animals. Even as far back









as 1889 the zoologist Robert Walker Grey recorded finding parts of seals within the stomach of a Walrus that he had shot. One suggestion is that it is only a few rogue males that actually take live seals and you can identify these seals by their grease stained skin that is derived from eating the blubber of other seals.

### **Direct observations on Walrus catching a seal**

I was extremely fortunate to witness a Walrus capturing a baby Harbour Seal (*Phoca vitulina*) in Svalbard this summer. Here is the story behind that event. We had landed by zodiac boat into a bay on the north western part of Svalbard to watch and photograph the seabirds - here there are huge cliffs that go straight up hundreds of meters with circling and noisy Black-legged Kittiwakes (*Rissa tridactyla*) with their characteristic rhythmic "kittiwake" call filling the air with sound and excitement - added to this are the groups of Brunnich's Guillemots (*Uria lomvia*) - known as Thick-billed Murres in north America - they whizz past at great speed, land on the cliffs and initiate raucous post-landing calls from their neighbors. I spent three years living and working on a remote island studying seabirds so these sounds are both evocative and welcoming to me and I miss the pungent smell of guano at these colonies. Obtaining meaningful photographs from the birds was not easy as everything was taking place well above our heads, so we strolled on along the foreshore. We stopped to photograph the arctic skuas that were paired-up and just starting to nest - watched the Fulmars as they swung by like the little albatrosses they are. There were a few

male Svalbard reindeer hanging about doing what reindeer must do during the summer months and that is getting their head down and eating large quantities of food to lay on the fat reserves before they hit the long cold winters. These are the smallest of Reindeer species and unlike their counterparts in other parts of the world are non-migratory. Anyway, as the Reindeer was walking along the fore shore we spotted a group of Harbour seals on some rocks near the shore - several females were with their young, others were hanging out on the rocks in the sun while three of the females swam around playing with the pups - some of the mothers had their babies riding on their backs and were chasing and playing with their pups. The pups and mums were calling to each other - and they were extremely sweet.

Suddenly, something spooked the seals and they all panicked - those on the rocks jumped into the sea and a few made an alarm call and dived underwater. Initially we thought we must have upset them and caused the stampede and then my friend Robert said - "Walrus!" Just then a male Walrus emerged, with his head above the water and carrying something in his flippers. At first it was not clear what he was holding, then we realized he had a baby seal in his flippers, the body was bent over in two and he swam backwards watching us. It looked as though he was biting part of the seal and sucking at the neck or upper body area and there was a small amount of blood in the water. The impression I got was that the Walrus was actually sucking out the contents of the seal pup - probably using its tongue and mouth to vacuum

up the soft tissues although he was just holding his head on the seal and not actively crunching or biting in any clear way. The Walrus dived again and then re-emerged further away from us, swimming backwards, while holding the body in its flippers. In the meantime, the seals kept diving and emerging and looking around to see where the Walrus was and what he was up to - it was too hard to work out which was the mother that had lost the pup but they were all stressed. We stood there with our mouths open, hardly believing what we had just observed and then I saw a male arctic fox running along the foreshore straight towards us. I half wondered if he had come to see what the commotion was about but may be he was just on his daily rounds looking for food. Typical in wildlife photography, you go hours without seeing much and then everything happens within a few minutes - seals, Walrus, reindeer, fox and me - with a big smile!

### **Walrus diet and seal-eating**

Previously, photographs have been taken of Walruses eating seals - although in most instances it is not clear whether the seal was dead beforehand or the Walrus killed it first. Previous photographs are not of Walruses in the sea but on ice or land where they have probably pulled the dead seal. One photograph in the article by Burton (2014 : *Frontiers in Ecology & Environment* 12: 312) shows a Walrus eating a freshly killed Ringed Seal (*Pusa hispida*) and since the seal is so fresh we can assume the Walrus must have killed it before dragging it on the ice flow. I believe the photographs shown here are some of the first taken of a Walrus actually capturing and devouring a seal pup.



Interestingly, in the late 1970s Lowry and Gage (1985: *Polar Biology* 3:1-8) recorded an apparent increase in the seal-eating behavior of Walrus in the Bering Straits. At this location the Walrus is the Pacific Walrus, which is a subspecies (*Odobenus rosmarus divergens*) of the Atlantic Walrus but ecologically very similar. This scientific study examined stomach contents of animals killed in spring by the Eskimos subsistence take and found that seal-eating had increased over a period of three decades some 10 to 100 fold reaching a peak in the late 1970s and early 1980s. The authors attributed this increase in seal-eating behavior to the recovery of the Walrus numbers after heavy exploitation and may also have been influenced by climatic change in the ice distribution that brought seals and Walrus into contact more than usual. Their analysis of the stomach contents led them to suppose that predation was more common than scavenging behaviour so maybe seal-killing isn't that rare, just difficult to observe.

There are records of Walrus catching and eating different bird species including brunnich's Guillemots (*Cepphus grylle*), Eider Ducks (*Somateria mollissima*) and Pink-footed Geese (*Anser brachyrhynchus*) when they were molting and flightless (Burton 2014: *Frontiers in Ecology & Environment* 12: 312). Once again the authors recorded that the Walrus grabbed the birds and appeared to suck off all the soft body parts and then left just the feather and bone remains.

### Walrus tusks

Originally, the general consensus

amongst zoologists was that Walrus used their long tusks as an aid to digging up clams and shellfish. Both sexes have tusks although they are of different shapes in the males (in females they are more circular in diameter) and they grow significantly longer in males where they can reach a meter in length (39 inches) and weigh 5.5kg (12 lbs). Inspection of the tusks finds no signs of abrasion patterns that would be consistent with digging in the bottom of the sea and the marks are more consistent with the tusks being dragged through the sediment and we now know that the Walrus uses their upper edge of the snout to do the digging. This has been confirmed with some excellent underwater photography and videography, some of which you can find on YouTube. Males clearly use their tusks for fighting and threatening other males in battle, either for access to females or when they compete for space at summer haul-out sites. There are also observations of them using their tusks to help them climb onto ice flows and while they do use them in aggressive interactions with other animals I haven't yet found evidence that they use them to stab potential prey species.

Of course, the tusks are a form of ivory and this attracted the attention of hunters and Walrus populations were heavily exploited from 1600 to 1900 and numbers were reduced to very low levels. Canada banned commercial Walrus hunting in 1931, the US in 1941, Svalbard and Greenland populations were protected in 1952 and Russia in 1956. Subsistence hunting by indigenous people continues and in North America there is care to make this sustainable, although there is









probably some serious exploitation still on some Russian populations. So while commercial hunting took them to the verge of extinctions and they were wiped out from important parts of their former distribution, they are recovering and, recovering well.

The big conservation issue is what impact global climate change will have on their food source and so on the Walrus. A loss of ice is going to be important in many ways, algae grow on the undersurface of the ice and this then drops off and provides important food for the molluscs that live on the sea floor. Of more concern is that global warming leads to increased CO<sub>2</sub> and acidification of the sea, in particular in the arctic. The decrease in the pH has reduced the carbonate ions by as much as 55%, which will have serious impact on the ability of the snails to make shells. With the arctic oceans becoming the most severely impacted by acidification, the impact on the Walrus's main food source does not look good.

### Photographing Walrus

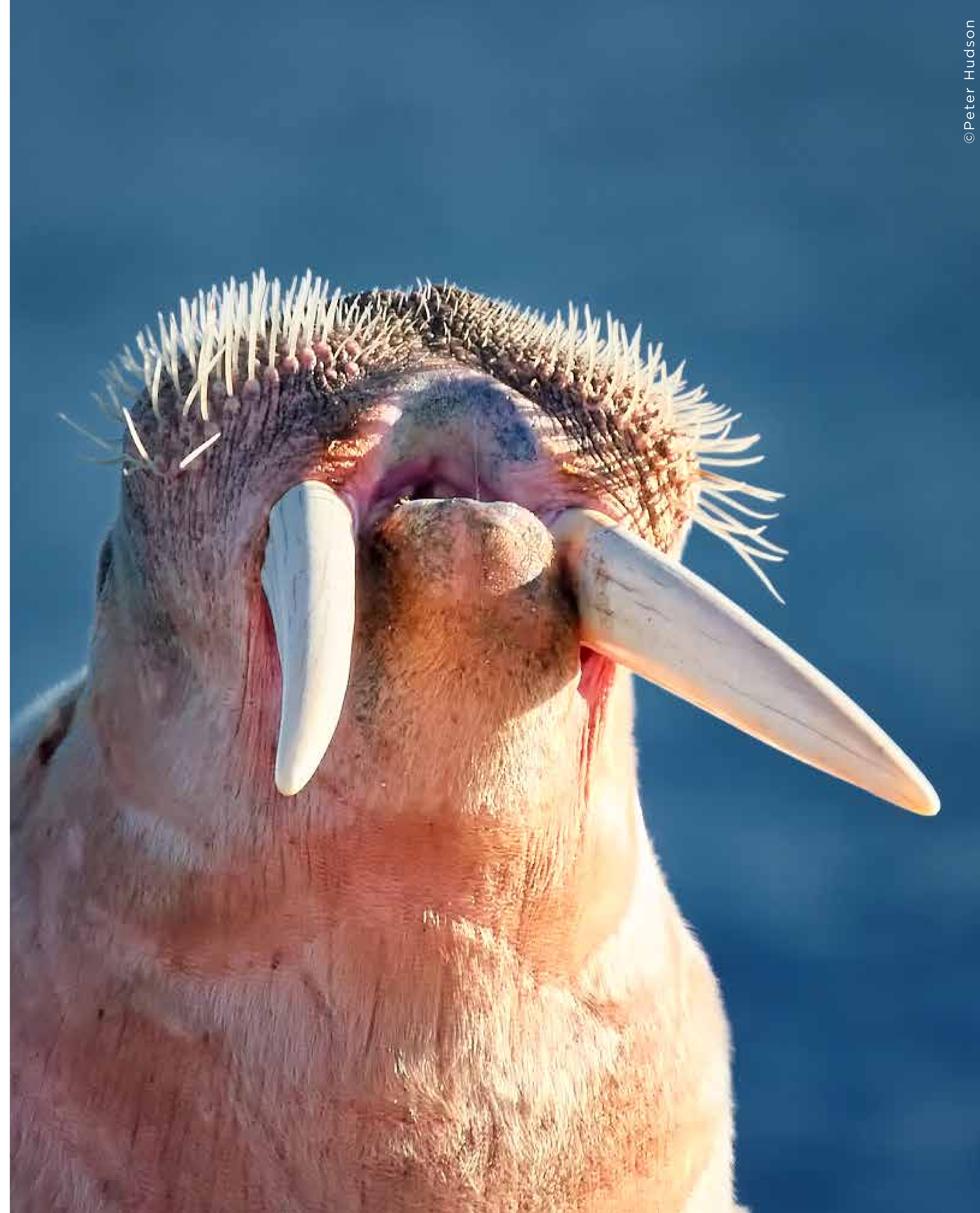
There are three things you need to know about Walrus natural history if you are going to photograph them - first they are highly inquisitive. Second the younger individuals are easily spooked and will initiate a stampede at a haul out unless you move slowly and keep a low profile. Third, they can be dangerous, in particular if you are in the water with them - they will hit you with their tusks, which I suspect, is no fun. One of the best ways to get a photograph is to sit quietly close to the water's edge near

to a haul-out site and wait while the Walrus enter the sea, swim close to you and simply pop up out of the water just to have a closer look at you. They will be nervous, so stay still, move slowly and keep a low profile.

I use a Canon 1Dx Mk2, the rapid-fire rate helps to catch fast moving events like the Walrus catching the seal. I took most of the photographs here with a Canon 100-400mm mk2 lens, really a versatile lens that lets you compose most of the shots you want. The portraits were taken with a canon 24-70mm lens. Climbing in and out of Zodiac boats makes it difficult to use long lenses and a tripod and even two camera bodies can be a bit of a pain at times when you want to ensure they don't get splashed while you are wearing waterproof gear and life jackets. I did take a few nice photographs from the deck of the boat we were on and while not as low as I would have liked, you can lie on the deck and shoot through the port holes to get fairly nice shots.

I travelled out with Polar Quest on the MS Stockholm. The guides were superb, relaxed and helpful. The ship had just 12 guests and I would make a point of avoiding the big cruise ships with decks far too high for you to photograph from. This number of people was just right for this type of trip. I can't recommend them high enough - <https://www.polar-quest.com/ships/ms-stockholm>.

There is wonderful natural history in the arctic and with the incredible 24-hour sun - lots of photo opportunities.





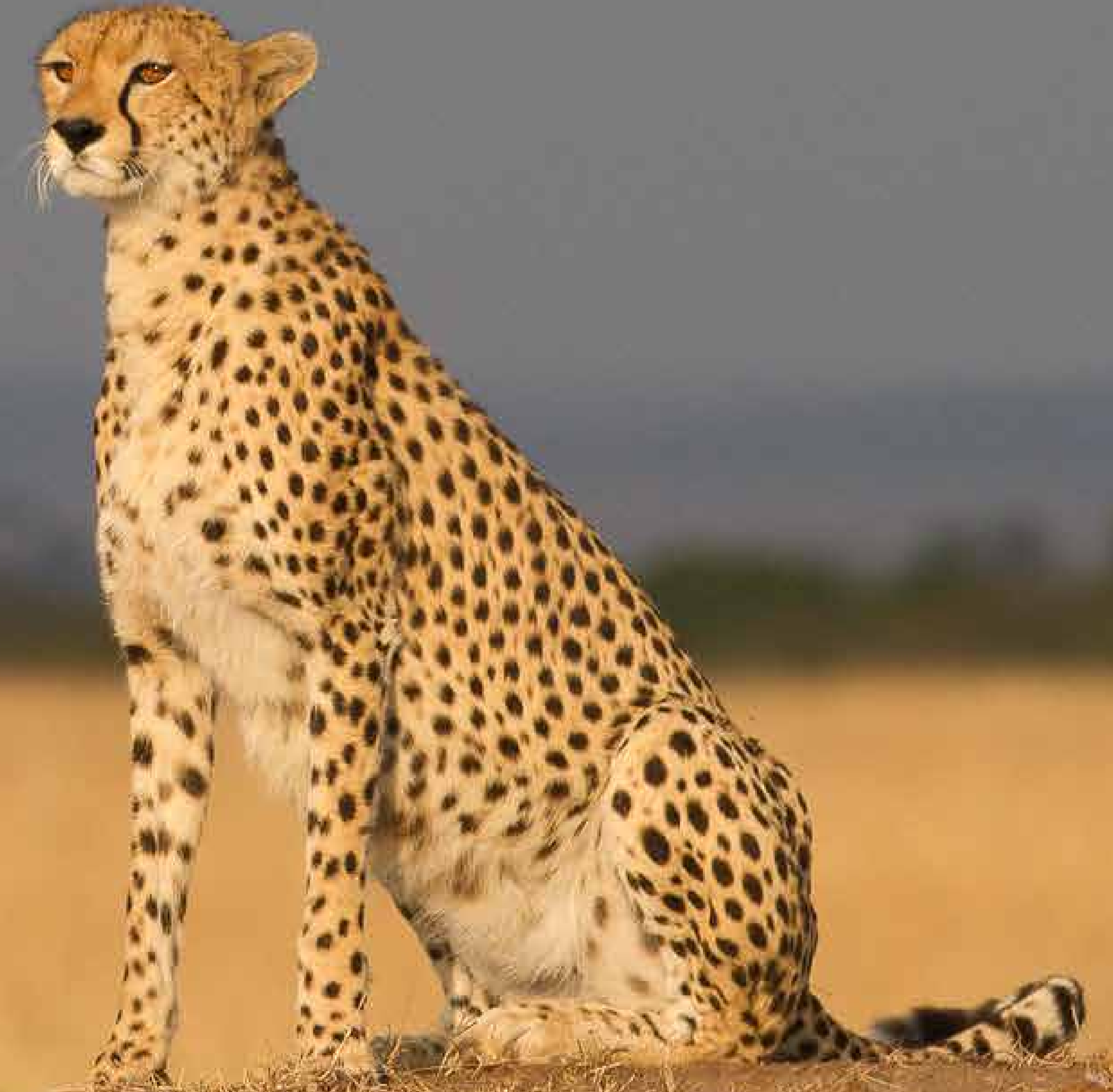




CONSERVATION

# Cheetah for Ever

By S. Gandrille,  
T. Crocetta,  
A. Escriva

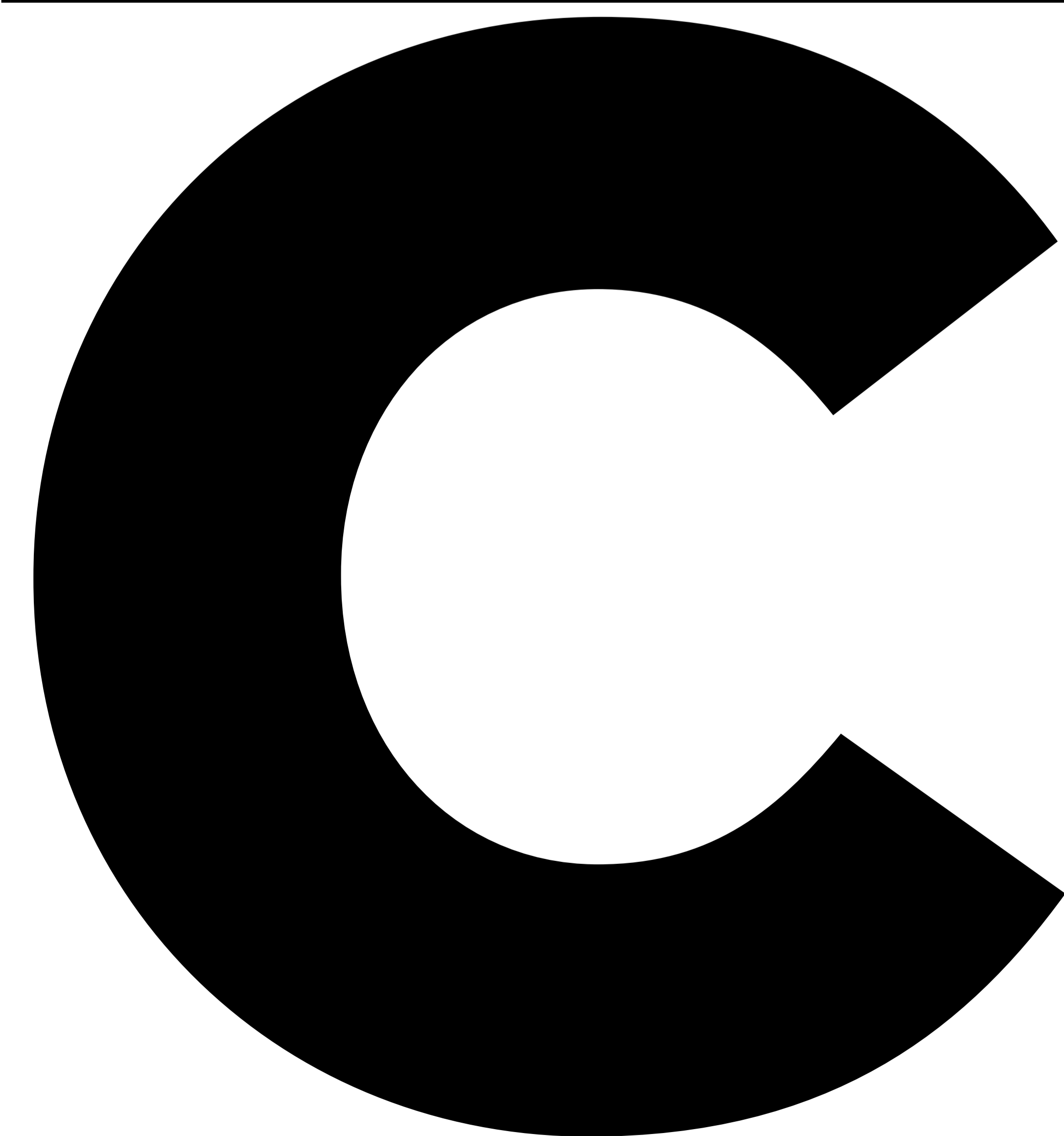






**Sophie is passionate about wildlife since her childhood. She has been traveling again and again in Africa as soon as she could. Photography is her second passion, and the Maasai-Mara is her favorite place to observe and photograph the big cats. Sophie follows the story of some prides of lions, or some leopards and Cheetahs for several years, and was able to witness the difficulties they are facing, mainly the fragile Cheetah. So, when two other photographers, passionate about wildlife too, T. Crocetta and A. Escriva, proposed to create an association to contribute to the Cheetah preservation in the Mara, and thus to commit herself in a conservation program, she didn't hesitate one second...**

It's now known since the end of 2016: the Cheetah population has decreased at a rate even more alarming than expected, to reach a number as low as 7100 individuals worldwide (1). The



**Cheetah For Ever: An association fighting against the cheetah population decline of the Maasai-mara National Reserve (Kenya)**

[cheetahforever.org](http://cheetahforever.org)

[facebook.com/cheetahforever](https://facebook.com/cheetahforever)





scientists now recommend that its statute as “vulnerable species” on the red list of UICN, being changed in “endangered species” to ensure a better protection of this elegant and shy felid.

The primary homerange of this big cat was entire Africa and the south western part of Asia. Today, Asian Cheetah has almost disappeared. The African population is fragmented and restricted to few countries where viable populations are mainly located in Namibia, Botswana, South Africa, Tanzania and Kenya. Only 20% of the individuals are estimated to live in protected areas, which means that 80% are living outside protected area, facing many dangers due to increasing urbanization, fencing which limits their moving, and making them particularly vulnerable to poachers and human wildlife conflicts.

Even in protected area, survival of Cheetahs is precarious due to an increased human encroachment and an always increasing poaching. The Maasai-Mara National Reserve (MMNR) is one of these protected areas in Kenya who formerly had a significant population of Cheetahs. All the big African fauna is present in what is considered as the jewel of Kenyan wildlife sanctuaries. Although no counting of the Cheetah population was available until recently, people who regularly spent their time in this famous national park agree on the fact that the cheetah number was declining rapidly there too.

Among these persons, a famous French photographer, Tony Crocetta, who photographs the Maasai-Mara wildlife

since more than 15 years and is the co-owner with Simon Chebon of a safari camp located near Musiara Marsh, was the privileged witness of this decline. While encountering several Cheetahs per day was frequent in the past decades, he considers himself as lucky when he sees now one Cheetah during one week of safari. Tony and his wife Sylvie couldn't resign to the fading of this elegant big cat and were convinced that something had to be done to avoid what could be considered as a disaster: Cheetah extinction, which would inevitably occur if nothing was done. Some action had to be tried, and urgently. Two scientific programs were already on the field since several years, whose results improved the knowledge of Cheetah behavior in the MMNR and highlighted threats against cheetahs (see below for the description of these threats). One of the immediate consequences of these threats was a particularly high mortality rate of Cheetah cubs. Less than one out of 20 cubs is able to reach adulthood in the reserve, which is far under the rate required to ensure the survival of the species.

**Thus, facts were known. Now, action was required without any additional delay to prevent this animal species from becoming extinct. Action... Yes, but what kind of action could be efficient and quick enough to have an immediate effect and to benefit concretely and directly to the Cheetahs?**

During discussions between the Crocetta and other passionate people, the same remark came back again and again: Since Cheetah cub mortality rate was abnormally high and since the causes



were known, why not trying to limit this mortality? But apart staying with the Cheetah mother 24 hours a day to perform a monitoring of very young cubs, nothing could guarantee to protect the litter efficiently. Such a monitoring seemed completely unrealistic and utopian! Unrealistic... utopian... surely, but after all... why not trying? No better idea popped up.

Thanks to the tenacity of Sylvie Crocetta, who managed to convince several of us that “unrealistic”, like “impossible”, was not French, **the concept of “Cheetah For Ever” was born: brigades of motorized scouts will monitor by day and by night**

**the female Cheetahs having cubs. A 24 hours-watch will start at the birth of the cubs (at least when they come out of the den with mum) and will end when they are able to escape to dangers.**

**The Cheetah For Ever** association was thus created in France, as a non-profit association whose main objective is to collect the funds necessary to finance and to implement the monitoring program of Cheetah cub watching in the MMNR. The monitoring program is performed in the field by the Kenyan association Or Mara Eramat (OME). Actually, one can consider that CFE is an association with two branches, one French branch (CFE)





©Cheetah for Ever

which collects the funds, and OME which performs the work on the field.

The program of CFE/OME (that will be further called “CFE program” to be clearer) has been accepted, approved and is monitored by the authorities of the Kenya Wildlife Service (KWS, owner of the wildlife of the reserve), by the Narok County government (the owner of the land) and by the Maasai-Mara University (MM University). CFE has also obtained the authorization to work in the Mara during the night. The CFE program is not a scientific program. However, since the scouts stay 24H/day near the Cheetah mothers, they are witnesses of facts that can be recorded such as births, location of the families, behavior and movements of the Cheetahs inside the reserve. These data, which can be of potential interest, are regularly sent to the KWS and the MM University via monthly written reports.

Many factors contribute to the Cheetah population decline in the MMNR, most of them being known. Some are linked to the biology and behavior of the Cheetah himself, but most of them are related

directly or indirectly to human population increase.

The natural factor playing against the Cheetah survival is mainly his way of life and its fragility compared to the other predators he is frequently facing. The female Cheetah leads a solitary existence during her whole life, and she’s alone to raise her offspring. She gives birth to a litter of 4 to 8 cubs that are unable to move during their first weeks of life. She keeps the cubs in a “den”, also called a “nest”, mostly a simple shrub. When she needs to hunt, she has to leave the litter alone, and her quest of prey often takes her frequently far from the cubs. At that time, the cubs are very vulnerable, and any litter spotted by Hyenas, Lions, or any other predators can be destroyed in an eye blink. Among the predators or animals that will destroy Cheetah cubs, one can list Lions, Spotted hyenas, Leopards, Jackals, Martial eagles, Baboons, Pythons and sometimes Stray dogs. Buffaloes can also be a threat for cubs since they trample them. If the female Cheetah is there when the litter is spotted by Lions, she may be killed when

desperately trying to defend their cubs. Cheetah is a fragile species that cannot compete with mightier species. When injured during a fight, the Cheetah mother can be unable to hunt, which means a certain death. This particular aspect of Cheetah life is responsible to the high vulnerability of this species.

On another hand, the human pressure around the MMNR has worsened the picture. Its surface has been reduced to a very small surface of 1500 km<sup>2</sup>, and the ecosystem has sustained changes due to uncontrolled land burning that transformed it from an ecosystem of shrubs into wide areas of grassy plains, leaving only few places to the Cheetah mothers to find safe places to hide their cubs. All the great fauna and thus predators can be found on this now reduced area, which increases the risk for a Cheetah to encounter lions, as well as spotted hyenas: the unusually high number of the latter, which are the main predators of the very young Cheetahs and the competitors with bigger Cheetahs, is a factor that is weakening the future of the species in the MMNR.

The human pressure has tremendously increased inside the reserve too. The

intrusion of increasingly bigger herds of domestic cattle by day and by night, is an important factor of disturbance for all wildlife, but of course for Cheetahs too. Other disturbance caused by certain careless actors of the tourism industry is conspicuous. Not saying that litters of young Cheetahs “disappear” sometimes overnight without any trace of natural predation being established, but due to poaching to fuel the trade of Cheetah cubs for the Arabian peninsula.

And finally, another factor has to be taken into account: Populations living in the vicinity of the reserve are frequently not aware of the importance of preserving the ecosystem and the wildlife.

The program of CFE intends to act on two different aspects. First, to limit the Cheetah cub mortality with a monitoring program aiming to help the Cheetah mothers, and second, to perform an educational program settled to raise awareness about the importance of preserving the ecosystem and its wildlife, Cheetahs of course, but also wildlife as a whole.

The monitoring program is performed by motorized brigades of one scout and one



©Cheetah for Ever







armed ranger of the MMNR. The brigades watch at a reasonable distance the Cheetah mothers having cubs, and check the absence of danger in the surroundings. Ideally, this monitoring has to be done by day and by night, but we started with a single brigade, and thus, the monitoring of the first year of CFE in the field was restricted to a day monitoring.

The active monitoring begins when the mother leaves the hiding place (the den) where she has kept her litter during the first weeks, until Cheetah cubs reach the age of 6-7 months, an age when they are able to follow their mother and to run away more easily from the multiple dangers they can encounter. In addition, the presence of the monitoring teams twenty four hours a day limits and puts an end to the acts of the poachers and traffickers as well as to the disturbance caused by unscrupulous tourist guides (this disturbance can for example hinder the Cheetah's hunt). It can also easily prevent the confrontation between the domestic herds (and the maasai dogs) and the litters.

As soon as a potential danger for the Cheetah cubs is detected, the brigade can use the car to stop the predators, to deter them to attack or to make their attacks fail, in order to give time to the Cheetah mother and their cubs to run away, or to protect their retreat.

Allowing Cheetah mothers to raise several cubs has a clear benefit for the cubs themselves by favoring a better education and survival at adulthood: indeed, 1/an only Cheetah, prematurely

deprived of its siblings is much less armed for its future survival, 2/ The games of early life are paramount for its education and for efficient learning. They allow early learning of the indispensable hunting techniques as the Cheetahs exclusively feed themselves with living preys that they must capture, 3/The males of a same litter frequently stay together and form hunting groups when they are adults, which significantly improves the rate of successful hunts, and 4/siblings can more easily protect their preys as they are often stolen by rival species. Being many allows a better surveillance when for example a group of lions is approaching. In no case physical contact is established with the Cheetahs, nor any capture, veterinary acts or collar use carried out. In case a veterinary care is needed, it depends only and exclusively on the authority and responsibility of the KWS (Kenya Wildlife Service).

The ultimate aim of this part of the program is to limit the mortality of the young Cheetahs and to significantly increase their chances of reaching adulthood. By doing this, we hope to permit a certain increase of the number of adult Cheetahs of the Mara.

The educational program began actually before the creation of the CFE association and thus before the beginning of the monitoring program on the field. It was indeed important that the populations are able to apprehend the utility to protect the wildlife, so that they can support the program. Without their support, nothing could be durably set up.

This program includes awareness-raising



activities of the population living in the vicinity of the reserve about the wild fauna and flora, visits of the reserve for the young Maasaïs, campaigns of plantation of native species, actions of environmental protection such as campaign of waste collect.

A library has been constructed and offered to the Mararienta village, one of the villages adjacent to the reserve, as well as books about wildlife for children of young age up to teenagers, video material and movies about wildlife.

A club has been created, the Cheetah Club, involving school children motivated by the conservation of the fauna and the ecosystem and their primary school teachers of the Mararienta village. In the meantime in France, another club was born, the Duma club, which involves young people and adults in situation of handicap and who were sensibilized by the critical situation of the Cheetahs.

With the help of their instructor, they imagined the story and created a book describing the dangers encountered by a young Cheetah called "Duma". Both clubs exchange now pictures, drawings and e-mails, and from these exchanges arised a common project of another book, narrating the story of Tembo, a young elephant. The book, entitled "Tembo", includes drawings of the children of the Cheetah club, is written both in French and English, and is sold to the profit of the CFE program, like was the book "Duma".

Sessions of tree and shrubs planting are organized regularly with the children of the Cheetah Club. These sessions are of particular importance, since the Maasai-Mara suffers from a massive deforestation. This deforestation facilitates the access of the numerous and enormous herds of Maasai cows to the plains of the reserve into which the herders penetrate in a total illegal way.





Transplanting trees in border areas will allow to regenerate some wooded area, area in which cows do not venture.

An assay of beehives implantation has been undertaken. This project has a double purpose: first to supply a revenue streams other than cows to the Maasaï, and second, to exert a deterrent effect on elephants which are many in this part of the Mara. They venture into the cultures, at the risk of provoking accidents and human/wildlife conflicts (HWC).

Elephants dislike bees, and beehives implantation can then limit these HWC. Cheetah For Ever also promoted the

filming of the Loic Lechelle movie "Draw me a Maasaï Cheetah". This movie tells the story (in Maasaï language) of the meeting between a safari guide and a young Maasaï boy. The guide explains to the young boy why he should not be afraid of the wildlife but rather should protect it. The recent projections of the movie in the school of the Mararianta village and in a manyata encountered a huge success.

**First results of the Cheetah cub monitoring program.** The monitoring program started in the field in July 2015. Two scouts were hired to initiate the

monitoring in the field. The brigade began the supervision with 4 Cheetah mothers having cubs, Malaika, a well-known Cheetah mother, Imani, Musiera and Nora. The brigade managed to make fail several attacks of predators (lions and hyenas). Some of these attacks could have been dramatic with a loss of the entire litter, but the scout interventions allowed to preserve all the cubs.

At the beginning we only had a single brigade committed on the ground. The brigade was thus forced to alternate the supervision periods, and to choose one Cheetah mother to watch according to the potential dangers identified in their close environment. Several cubs were killed or disappeared during these periods of alternated watching (killed by hyena, martial eagle, or disappeared without identified cause, but we suspect a kidnapping within the framework of Cheetah traffic towards the countries of the Arabian Gulf), while the brigade was occupied with another Cheetah family watching, or at the end of the night, when the brigade is not still at work (the night supervision cannot be assured with a scouts' single brigade). We also noticed that the only presence of the Cheetah for Ever car also allowed to reduce considerably the harassment by tourist cars. Since August 2016, we have two cars on the field.

We perfectly know that we will not be able to protect all the cubs we monitor. For example, one subadult Cheetah was killed by a crocodile while he and his family were crossing the Mara river: there was nothing that could be done by the scouts to save him in such circumstances.

But the worse happened last October when our brigades were monitoring the Cheetah Imani who, at that time, had 4 two-weeks old cubs. The den was located in a very dangerous place, right in the middle of the territory of a pride of 10 lions. And unfortunately, what seemed to be ineluctable occurred: a lioness of the pride spotted the den (or the Cheetah mother moving her cubs) and attacked. With the help of other cars, the scouts avoided twice the worst. But the lions didn't give up and waited patiently at a safe distance, lying in the grass and surrounding the den. At 2 hours am, when the CFE car was alone in the night, they attacked simultaneously from all parts. Nothing could change their mind from their targets, even not when the ranger fired twice in the air. The lions ripped the cubs and devoured them. Hopefully, Imani escaped without being injured. The loss of the entire litter of Imani, lived as a drama by OME and CFE, incites us to revisit our way of watching newborn Cheetah cubs, thus too young to move, and to set up a protocol to manage crisis situations in order that such a disaster never happens again.

To date, 11 Cheetahs are still alive thanks to the Cheetah For Ever action. Some are adult Cheetahs now, ready to breed, others are tall enough to have the capacity to escape their usual predators, or to poachers.

Our monitoring program was already in place in the field since almost two years, when two studies were published, one which established the number of Cheetahs in the MMNR for the first time since 10 years, and another one which



confirmed us in our opinion that the mean we have chosen to protect them was relevant.

The first one is a study conducted from August 1st to October 30, 2014, by Dr F. Broekhuis, who leads the Mara Cheetah Project (under the auspices of the Kenya Wildlife Trust) in the MMNR. The adult Cheetah density was estimated to be comprised between 1.28 and 1.34 individual per 100 km<sup>2</sup>, which means that the number of adult Cheetahs in the Mara was at that time 31 ± 1 adult Cheetah inside the 2400 km<sup>2</sup> of the study (corresponding to 1500 km<sup>2</sup> of the MMNR plus the 900 km<sup>2</sup> of the surrounding wildlife conservancies included in the study).

In light of this study, the 11 Cheetahs that CFE allowed to reach adulthood can be considered as a significant number compared to the 31 adult Cheetahs counted by this recent study. The second study published at the end of last year (1) confirms a global decline, even more severe than expected, of the worldwide Cheetah population. The

authors suggest that a way of conservation different than those used classically is required to protect this fragile species, which is a protection reliant species. Thus, our apparently unrealistic idea was maybe not so absurd! Maybe ideas getting off the beaten tracks can sometimes give positive results? Only the future can tell...

Today, several young Cheetahs and young adult Cheetahs among which some are ready to give birth at their turn, are now cavorting in the blond savannah of the MMNR, thanks to a brigade of scouts who some months ago saved them from the jaws and claws of lions or hyenas, or even maybe, from the hands of poachers by their sole presence...

The CFE program from a practical point of view. Like many programs, the CFE Program is all about money. Nothing could be done without the financial support of our members and of several generous foundations or associations. We are highly grateful to the Beauval Nature Association (our very first significant support), to the Brigitte Bardot

Foundation, to the LUSH society, for their regular support, as well as to the Zoo des 3 vallées and to the La Palmyre Zoo. The other part of the financial support originates from the members of the Cheetah For Ever association who contribute as high as 40% to the annual budget with their annual cotisation or donations. A huge thank you to all of these passionate people who cannot accept that Cheetah disappears from the Mara and who contribute so generously to the CFE program and allow him to exist.

We also benefit from a logistical support from two camps located in the MMNR, Melting Pot Bush Camp and Matira camp. We are setting up a partnership with the latter, to carry out awareness actions towards guides of the MMNR.

Would you like to help the Cheetah For Ever program, you can do it from our web site at the following address <http://www.Cheetahforever.org> Our program is described on a detailed way, as well as our needs, our actions, our projects, who we are, and the female

Cheetahs that are monitored. French people have to know that Cheetah For Ever is a general interest association, which means that they can deduce 66% of their donations/cotisations from their annual taxes.

Regular informations (frequently daily informations) about the Cheetah mothers we monitor can be found on our facebook page (<https://www.facebook.com/cheetahforever/?ref=ts&fref=ts>) that is updated regularly with news coming directly from our scouts in the field

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CONSERVATION

# A conservation challenge: Socotra Cormorant

*(Phalacrocorax nigrogularis)*

By Rob Gubiani

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**Australian photographer Rob Gubiani has travelled extensively and spent more than 10 years overseas. He developed his passion for photography while travelling and ultimately found his voice in wildlife and landscape photography.**

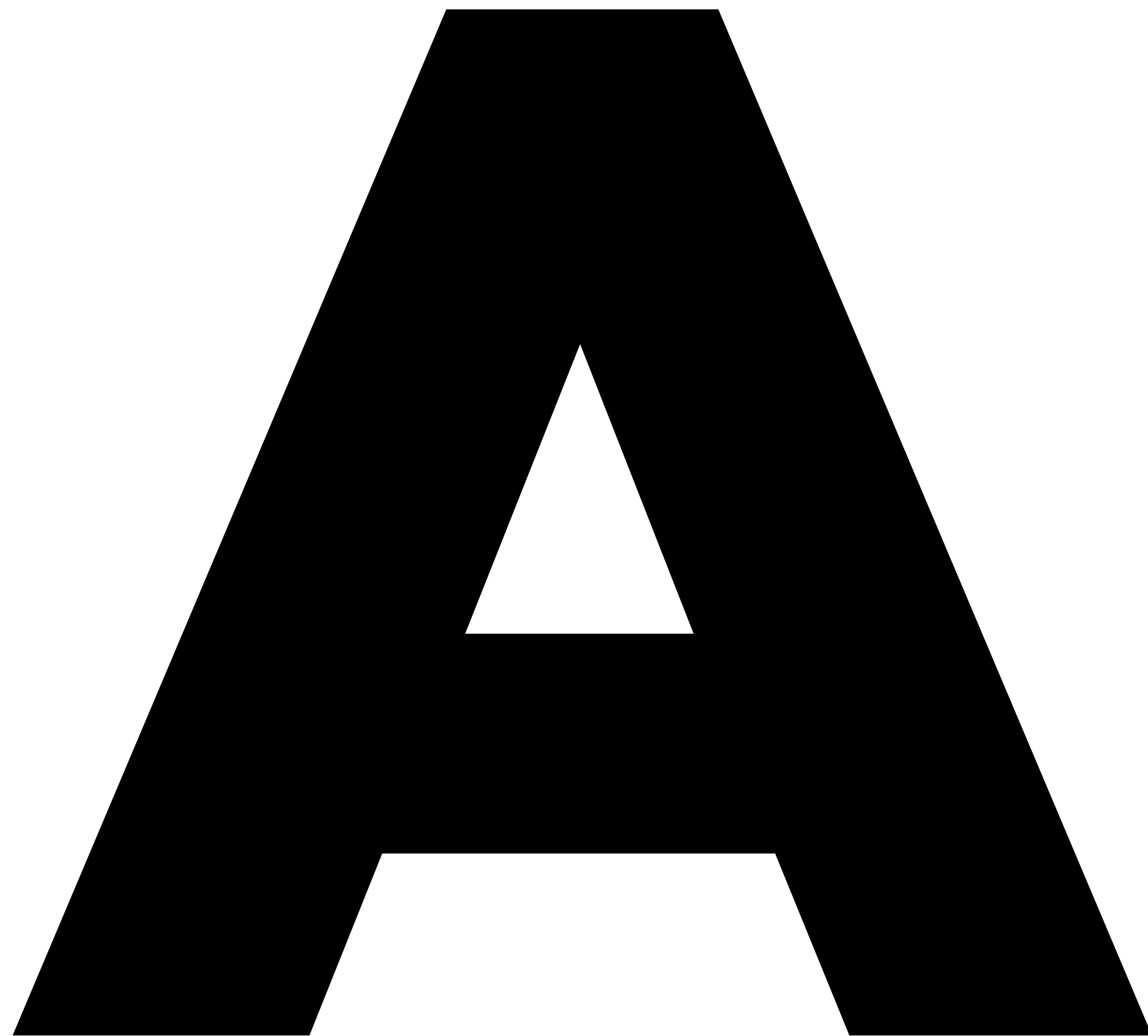
**Rob's creativity, personal values and identity shine through his work. Through his photography, he hopes to encourage education, awareness and conservation of wild areas and animal life. His photographs often bring awareness of the modern-day tension between society and the environment by juxtaposing and contextualising. He either seeks to capture 'new perspectives' intended to provoke thought or 'a moment in time and space' to photograph the essence of what our environment means to us. Rob's work was published in National Geographic in 2015 and his photos have appeared in a number of magazines, newspapers, advertisements, journals and online.**

**Rob's work can be found at:**

**[robubiani.com](http://robubiani.com)**

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

**[500px.com/robubiani](https://www.500px.com/robubiani)**



Conservation of a species or habitat often follows a fairly typical pattern: preserve the remaining habitat, engage the wider community, raise awareness and if fortunate enough, enlist a celebrity to promote the cause. However, conservation biologists rarely have celebrity sponsors, myself included. A successful formula is to integrate eco-tourism with conservation efforts to generate an income source for the local community therefore promoting guardianship of the species or ecosystem under threat. But what do you do when a country doesn't need eco-tourism and the location where the species occurs is not accessible for public participation or viewing?

I put this question forward to a large number of people at the 2013 IUCN Species Specialist Group conference in Abu Dhabi (UAE) and no one was able to give an answer. Glamorous species tend to garner support more readily as they are generally easier to market. People are likely to love cheetah cubs more than a giant earthworm. I have no issues with this, it is how it is. But as an advocate for the conservation of less desirable species, I took it upon myself to see what I could do to help some of these 'castaways.'

At the time, I was the Lead Research Associate for the understudied Socotra Cormorant (*Phalacrocorax nigrogularis*) under a research program at the United Arab Emirates University (UAEU). The Socotra cormorant is a regionally endemic seabird restricted to the Arabian Gulf and Gulf of Oman with all known sub-populations declining and the global population currently estimated at 110,000 breeding pairs – and numbers of breeding

pairs in the two largest colonies (in Bahrain and the UAE) are thought to be plummeting. A dedicated population count has not occurred for quite some time, so research scientists rely on educated estimation of the current situation.

Until now, breeding biology, habitat characteristics and ecology of this species have been poorly studied. Many colonies have become extinct and the species is currently categorized as 'vulnerable' by Bird Life International. Approximately 34% of the global population breeds in the UAE and my research revealed that breeding activity is limited to eleven colonies. Socotra cormorants nest on flat islands with sandy-gravel substrates that lack vegetation, in colonies of typically thousands of individuals. Breeding often takes place from July to mid November in the UAE and 2-3 eggs are laid directly on the gravel, ledges or among boulders. Of all the breeding sites of Socotra cormorants in the UAE, none have an elevation higher than two meters above sea level and generally nesting colonies are located in close vicinity to the ocean.

Socotra Cormorants have been persecuted for a considerable period of time. Reports of large colonies being bulldozed due to their unsightly colonies, smell or appearance are not uncommon. Egg collection still occurs and although part of the important cultural history of the region, it can result in large numbers of valuable eggs being removed. Another cause for their persecution is the presence of ticks within large colonies, which resulted in a heightened fear of tick









©Rob Gubiani

bite and subsequent disease transference although little evidence exists that this actually occurs. Even reports of the shooting of nesting birds have been made in the past, although these are not proven occurrences.

These impediments aside, the majority of negative attitudes toward this bird stem from its diet. The cormorants feed exclusively on fish and although consumption of large fish (above 20cm) has been recorded, the vast majority of the total biomass consumed is of small fish less than 20cm in length approximately as our research indicated. Their diet choice and level of consumption is seen as a direct source of competition by local fisherman. The number of fish available in the area also appears to be in decline. Combined with this was habitat degradation from washed up refuse on the beach where they nest. This is coupled with large numbers of individuals dying through fishing line entanglement. All these factors together combine and create a serious concern about the longevity of this species in the Arabian Gulf.

As I headed out on the boat to the study site in Umm al Quwain (UAE), I tried to determine how to save the Socotra Cormorant. The UAE has one of the world's largest sovereign wealth funds and it is a wealthy state on account of the vast hydro-carbon resources it possesses. In the UAE, eco-tourism for wildlife is almost non-existent. Therefore, eco-tourism as a means of spreading awareness about the threats to the Socotra Cormorant was not a viable option. Similarly, public access to



breeding grounds to view the birds is not possible. Celebrity promotion? Very unlikely. Could we educate the greater community to change the perception and stop egg collection, shooting or anger from the fisherman? Possibly, but I had insufficient funds and resources. At that point, I realized that all of the standard conservation options were not likely to result in sufficient protection and long-term conservation.

I realized that the only weapon I had in my arsenal was my photography and I used it to try to change perceptions of the Socotra Cormorant. I essentially decided to become the Public Relations Manager for a bird species that had little scientific study and is difficult to market. My task was to change the public's perception of a bird that they regarded as foul, dirty and noisy, which was generally loathed and had little physical features that would appeal to the wider audience. I needed to combine science with art.

Having studied them intensely for a number of years, I was able to obtain a unique perspective on the species as a whole. If I couldn't show them the beauty then I could show them that the Socotra Cormorant at least deserved their respect. Imagine tens of thousands of completely black birds sitting on a nest on an open unshaded beach in the middle of August when temperatures can reach above 50C! The adults will sit all day awaiting their partners return for feeding. The heat is unbearable and yet the adults remain there all day, breathing heavily to stay cool and relentlessly committed to their nests. Leaving the nest unshaded will result in the egg boiling in the sun

and chick mortality. So why do they choose the hottest time of the year to breed in open areas? It is believed that breeding timing coincides with the arrival of sardines in the Arabian Gulf. An average clutch is two eggs with as much as 11 eggs recorded in a single nest, but the vast majority of nests contain two young. A lot of energy is needed to obtain enough food for the young with daily dispersal ranges being recorded up to 60 km from the nest site. Even for the most adapted species, this is a difficult task to perform in the peak of summer and yet these birds do it with grace and enthusiasm.

I discovered that Socotra Cormorants have personality and pizzazz. This 'boring' bird is cheeky and inquisitive, yet aggressive and ruthless when needed. Courtship is gentle and affectionate with soft nibbles on the face by the partners and long periods of next wrapping. Nest maintenance is continuous and adults are very reluctant to leave the nest when disturbed, often staying very close by to protect their nest from intruders. However, individuals can also have a darker side. Within the Umm al Quwain colony, I recorded the first ever instance of cannibalism with abandoned juveniles resorting to eating their brethren to survive. This eating of young has been subsequently recorded on a number of occasions towards the end of the breeding season. Although this is not generally regarded as an admirable trait to us, it is an example of the tenacity that is needed for this species to survive in such harsh conditions. This made me respect them.







I spread the word of the Socotra Cormorants plight at natural history groups, public gatherings, social media and to anyone willing to listen when finally, a new acquaintance organized an interview with a reporter. It began falling into place. Ultimately, a double page article was printed in The National newspaper with colourful photos showing the world a different side of the Socotra Cormorant. Positive exposure had occurred at last through the integration of science and art.

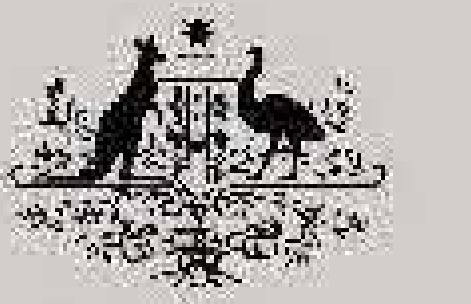
On-going research is needed as well as increased public education regarding the plight of the Socotra Cormorant. Public and financial support for research projects is always welcome through UAEU, which hosts the country's scientific work on the Socotra Cormorant. Birdlife International and the Cormorant Species Specialist Group are both working towards conservation efforts for it as well. One key area is the protection of intertidal and coastal dune areas in the Arabian Gulf. This will not only protect the Socotra Cormorant, but a number of other avian species that face significant habitat loss in the region.

So, did my public relations challenge work? At this point it has to an extent and hopefully I will be able to continue to raise awareness. I have learnt a lot from my endeavor over the past five years. The principle lesson is that just because traditional conservation tools are inapplicable or because the species isn't highly marketable, doesn't mean that conservation shouldn't be attempted. Even the "unattractive" species deserve a social makeover if that is what is required to give them a fighting chance at survival.



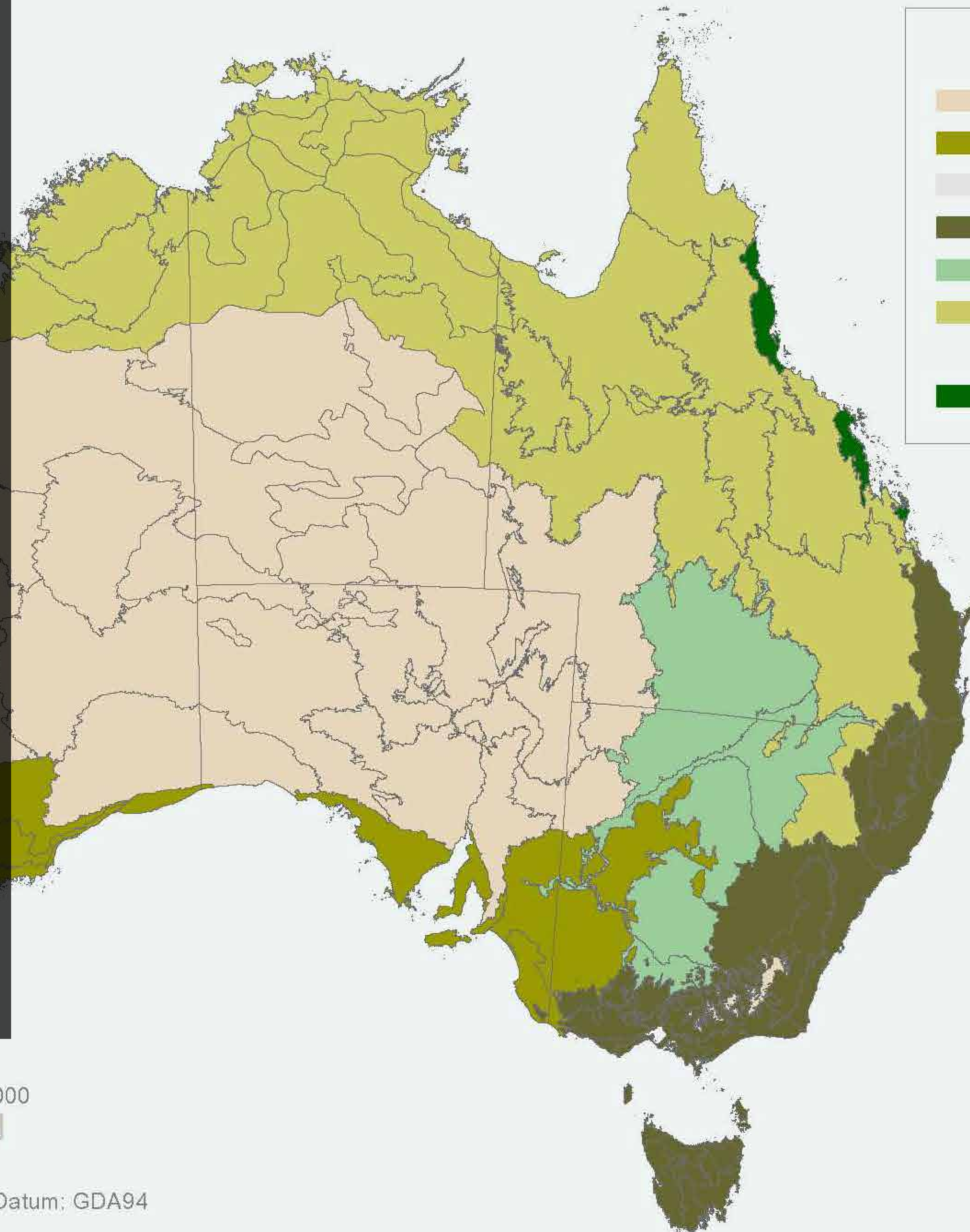






## Mapping Australia's Landscapes & Ecosystems - Bioregions

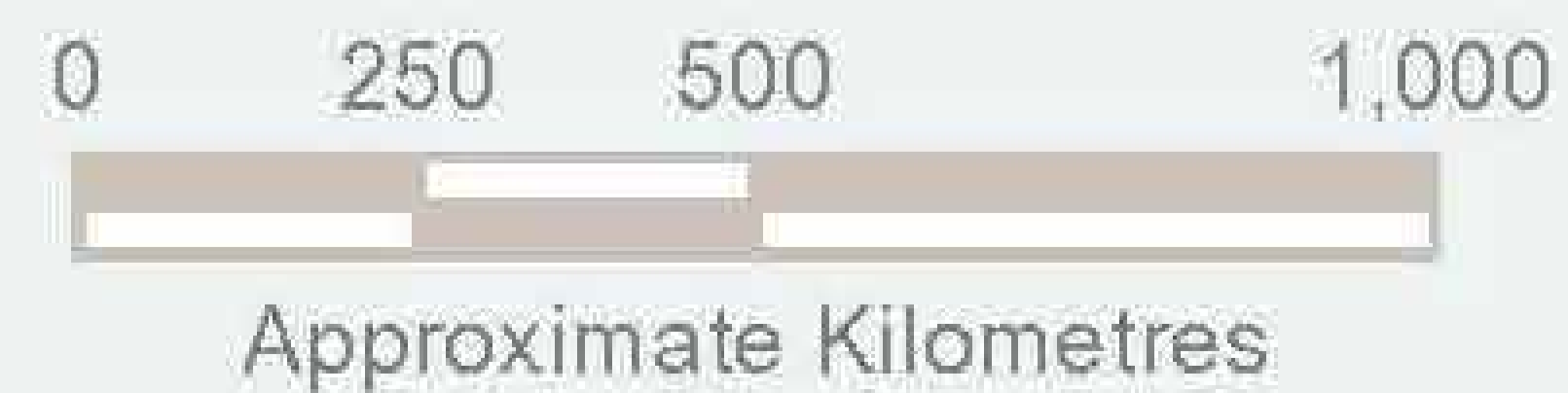
By Richard Thackway



### Terrestrial Ecoregions in Australia

- Deserts and Xeric Shrublands
- Mediterranean Forests, Woodlands and Scrub
- Montane Grasslands and Shrublands
- Temperate Broadleaf and Mixed Forest
- Temperate Grasslands, Savannas and Shrublands
- Tropical and Subtropical Grasslands, Savannas and Shrublands
- Tropical and Subtropical Moist Broadleaf Forests

Terrestrial Ecoregions were originally developed by World Wildlife Fund in 2001 based on IBRA 4.0. Updates to IBRA (now Version 7) have changed the boundaries of bioregions but not their Ecoregion classification.



Projection: Albers Equal Area - Datum: GDA94

Data Source  
Interim Biogeographic Regionalisation for Australia (IBRA), Version 7 (2012) was compiled by the Department of Sustainability, Environment, Water, Population and Communities with data provided by State/Territory land management agencies  
Australian Coastline and State Borders 1:100,000 (1994) Geoscience Australia

Map produced by ERIN (Environmental Resources Information Network), April 2012  
Australian Government Department of Sustainability, Environment, Water, Population and Communities © Commonwealth of Australia, 2012.

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**R**

**Richard Thackway, an Australian biologist worked for Australian Government for 28 years as a science-policy analyst, and now is an environmental consultant and Adjunct Associate Professor at University of Queensland, Brisbane.**

Australia developed a bioregional framework, most often referred to by its acronym IBRA (Interim Biogeographic Regionalisation for Australia), in 1995, as a tool for strategically developing a national system of protected areas that adequately sampled the biodiversity of all ecosystems in Australia. Biogeographic classification and mapping is a method that uses biological and physical information to delineate ecological units (bioregions) at a chosen scale. Bioregions are broad patterns of co-occurrence of landforms, geology, soils, plant communities and ecosystem processes. Bioregions are internally consistent accounting for reoccurring ecological patterns, often termed habitats, which underpin species distributions of plant and animals.

#### **Why the framework developed**

Australia is a federation of eight States and Territories, each of which controls its own system of nature conservation reserves or protected areas. These reserve systems, together with the federal system, make nine separate protected areas systems. While each system was developed from a variety of different political, economic and social drivers; collectively these nine systems aim to conserve and protect Australia's natural ecosystems and biodiversity. Between the early 1980s and early 1990s there was growing support to develop an agreed national classification of ecosystems as the basis for strategically developing a national system of protected areas that provided adequate representation of all of Australia's biodiversity. This period also coincided with major advances in the development of national environmental

datasets, faster computers and a growing recognition among all levels of governments and the public, that conservation of biodiversity must be strategically planned and coordinated as a federal-state land management partnership. It was facilitated through national funding.

In 1992 a federal program was established to work cooperatively with the States and Territories to develop a National Reserve System (NRS). This program was to be implemented by continuing to expand the existing Federal/State protected areas programs for the development and implementation of a national bioregional approach (i.e. classification and map of all ecosystems) to underpin the selection and acquisition of Australia's protected areas. Building on the sound cooperative federal-state work of the 1980s and early 1990s, a national classification and map of bioregions (ecosystems or environments) was first published in 1995.

That bioregional framework, IBRA, was a significant breakthrough for planning and implementation of national conservation initiatives in Australia. Commencing in 1995, all jurisdictions adopted and implemented the bioregional framework as the basis for strategically targeting and filling gaps in the national reserve system, for identifying threats to conservation of biodiversity and for developing land management priorities of all major ecosystems within each bioregion.

It ran across successive governments and was a jointly funded program working cooperatively with all the States and Territories on priorities for acquiring land to build a national system of reserves



(NRS). The program operated as a federal-state partnership with the land management agencies being responsible for the day-to-day management of the reserve system.

That ground-breaking program also initiated a new network of Indigenous Protected Areas, which 20 years later now accounts for more than 40% of the National Reserve System's total area, comprising over 65 million hectares across more than 70 dedicated Indigenous Protected Areas. It also stimulated the unprecedented growth in public-private partnerships involving covenants on private land and the development of an extensive system of private managed reserve systems which are funded by private donations.

Collectively, Australia has established a national system of protected areas that samples the biodiversity of all major ecosystems. Of critical concern is the ongoing challenge of finding the funds to manage the biodiversity in these various systems of protected areas.

### How the framework was developed?

The framework was developed through extensive consultation with researchers and ecologists over the period 1984-1995. Several different approaches were tried and tested before agreeing on a bioregional framework. This involved an extensive and rigorous review of scientific methods and development of key national datasets. In 1993-94 the first iteration of bioregions was developed but it did not meet State needs, leading to a major revision of the approach such

that in 1995 the IBRA framework was endorsed by all levels of government as a key tool for planning, identifying and selecting and enhancing Australia's system of protected areas.

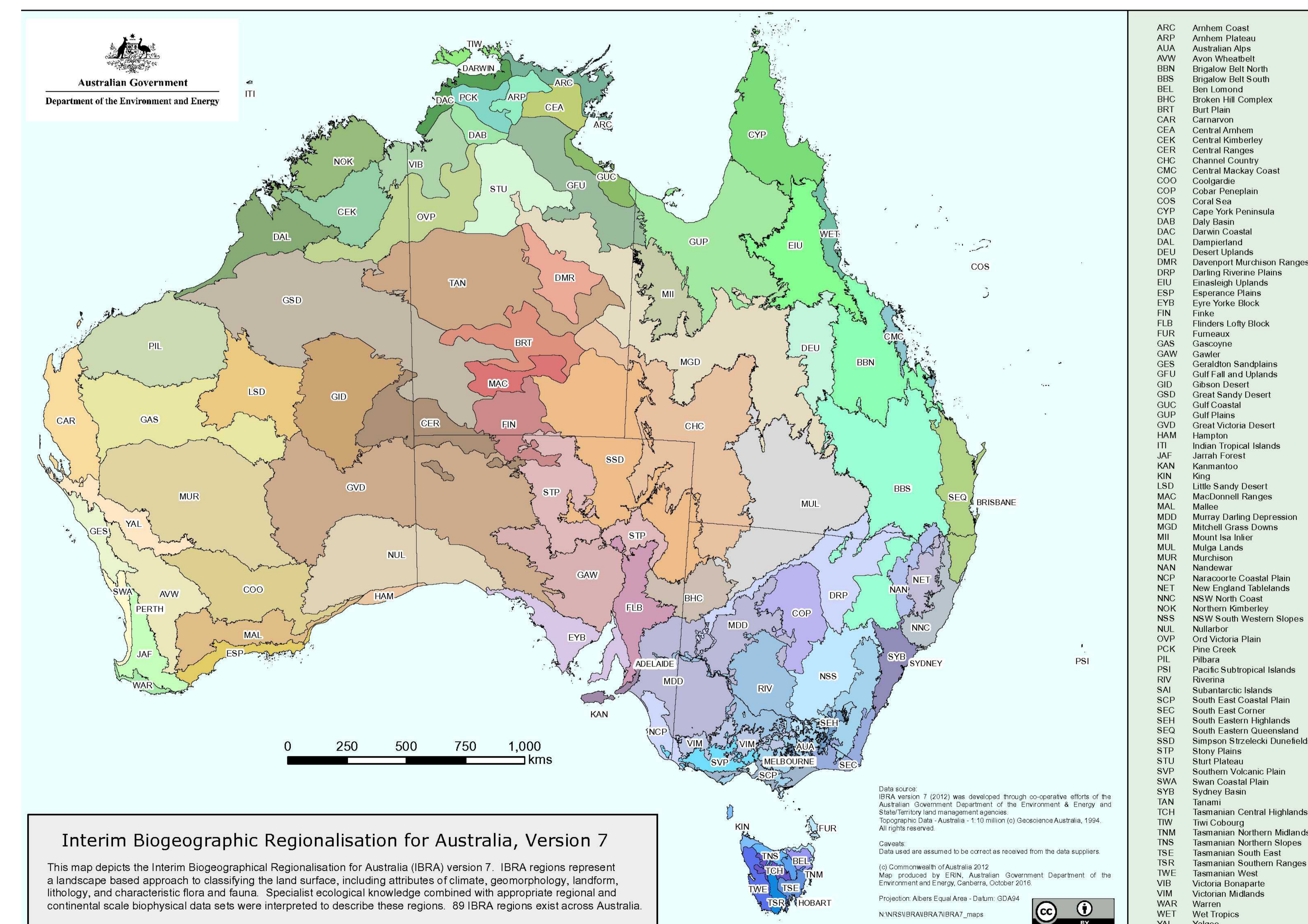
At the outset, it was envisaged that the bioregional framework comprises a hierarchy of classifications and maps at different scales. Initially, in 1995 IBRA was classified into 80 bioregions (<https://www.environment.gov.au/system/files/resources/4263c26f-f2a7-4a07-9a29-b1a81ac85acc/files/ibra-framework-setting-priorities-nrs-cooperative-program.pdf>). Since that time, as improved ecological data and information has become available, the classification and map has been revised. Currently, in version 7, there are 89 bioregions further refined to form 419 sub-regions, which are more localised and provide homogenous geomorphological units in each bioregion (<http://www.environment.gov.au/land/nrs/science/ibra>).

In the late 1990s to the mid-2000s there was a need for a coarser classification and map, with many fewer regions. To meet this need, bioregions were aggregated to seven ecoregions, which correspond to a subset of the 14 global ecoregions (<http://www.environment.gov.au/land/nrs/science/ibra/australias-ecoregions>). To ensure that these ecoregions represented a useful and relevant classification and map, the results were rigorously tested across Australia's major climatic regions and dominant vegetation types including tropical, sub-tropical, arid, temperate and cold alpine and sub-alpine regions. Australia's ecoregions,

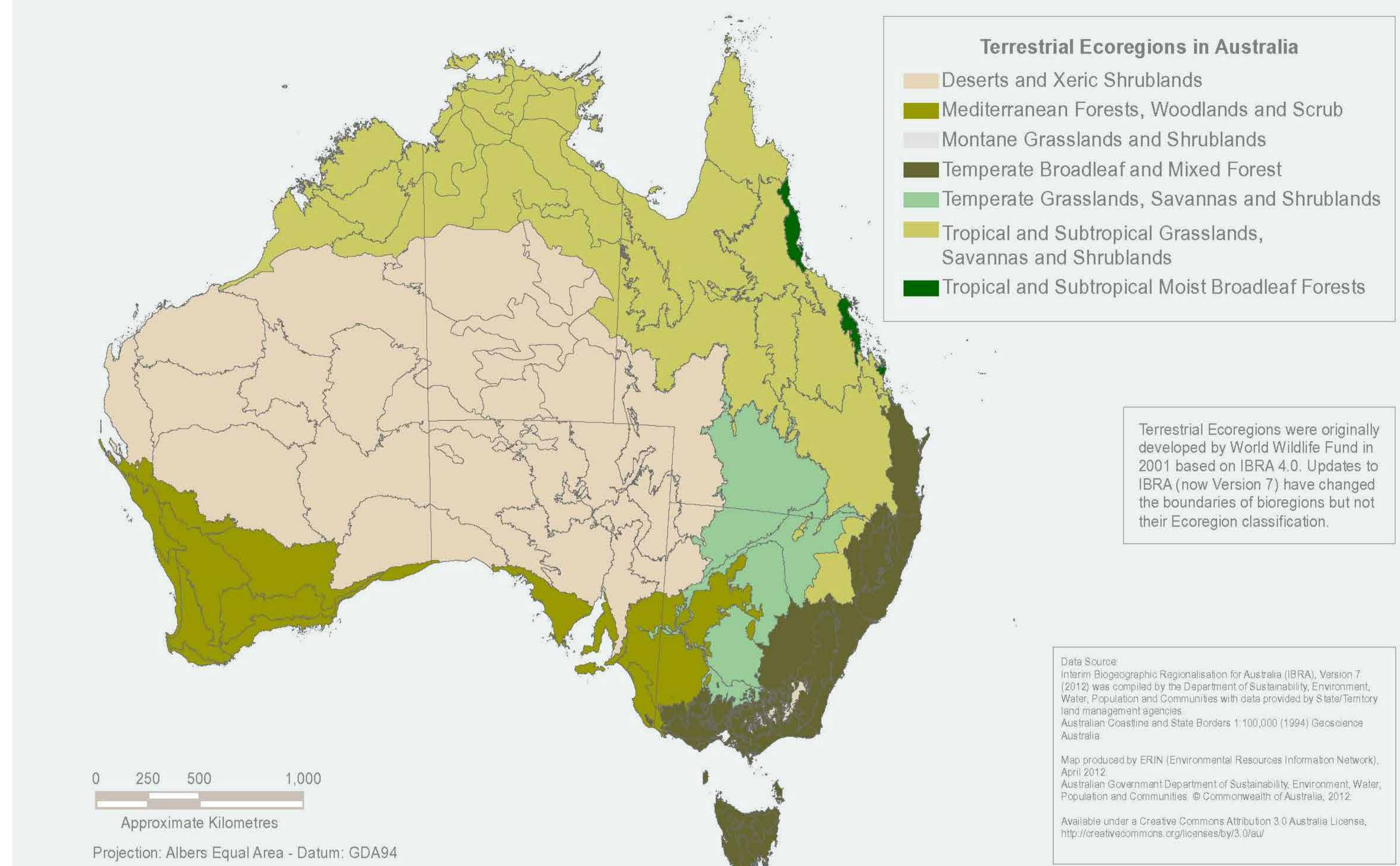
like the global ecoregions classification and map, is based on climate and vegetation. Global ecoregions were developed by the World Wildlife Fund and provides a global conservation tool. Each ecoregion contains several ecosystem types and ecosystem types may transcend ecoregion borders. While this classification has been used internationally it has not been agreed across all Australian governments, and is not used in jurisdictional planning

or management. Like the ecoregions, another internationally agreed classification system is world climatic types. In 2005 Australia's bioregions have integrated with the world climatic types to produce a 10-group classification of agro-climatic regions. Agro-climatic regions are widely recognised and used for national planning and reporting (e.g. <http://www.mdpi.com/2073-445X/5/4/40> Figure 1).

## Australia's bioregions







## Australia's ecoregions

### How the framework has been applied

An essential element for allowing the development of policy, planning and management-related uses of the bioregional framework to be developed at various scales is that the applications are ecologically meaningful and appropriate to the user's needs. This is particularly important in setting priorities for developing the NRS, which requires a coordinated strategy for engaging public-private interests, for policy and planning and for integrating management activities. As outlined, the classification and map units are hierarchical (i.e. smaller units are 'nested' within larger ones). This was deemed critical when designing and developing the framework, noting that many policy, planning and management initiatives have strategic goals that are set at national or regional scales but implementation takes place at more local scales.

The principle purpose for developing and maintaining the bioregional framework was, and remains relevant after more than 20 years, is that the bioregional framework is a tool for national and regional planning for the systematic development of a comprehensive, adequate and representative NRS, but it has also been used extensively for many other applications.

### Examples of who has used the framework

Since its inception, the bioregional framework has been extensively used by Government agencies for a wide range of purposes. State and federal agencies commonly employ the bioregional framework as the preferred classification and map for many environmental and biological related applications:

- 'State of the Environment reporting' at national and state levels
- National 'State of the Forests' reporting
- Reporting the distribution of flora and fauna
- Ascertaining threats to habitats and ecosystems
- Assessing and reporting changes in the extent and trends in the condition of native vegetation

Universities have used the framework as part of undergraduate and postgraduate coursework, comprising national and international students.

Bioregions have also been embedded in the legislative base in Queensland, New South Wales and Victoria for various purposes including clearing controls, for planning and consultation processes, and for broad-based land-use planning and allocation issues.

### Further Reading

Australia's Strategy for the National Reserve System 2009-2030  
<http://www.environment.gov.au/system/files/resources/643fb071-77c0-49e4-ab2f-220733beb30d/files/nrsstrat.pdf>

Australia's bioregions (IBRA)  
<http://www.environment.gov.au/land/nrs/science/ibra>

Australia's ecoregions  
<http://www.environment.gov.au/land/nrs/science/ibra/australias-ecoregions>

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Hutchinson, M.F.; McIntyre, S.; Hobbs, R.J.; Stein, J.L.; Garnett, S.; Kinloch, J. 2005. Integrating a global agro-climatic classification with bioregional boundaries in Australia. *Glob. Ecol. Biogeogr*, 14, 197-212.

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<https://www.environment.gov.au/system/files/resources/4263c26f-f2a7-4a07-9a29-b1a81ac85acc/files/ibra-framework-setting-priorities-nrs-cooperative-program.pdf>

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<http://www.environment.gov.au/system/files/resources/dd0867cf-d8be-40f0-b9e5-7cfa65d6e6b5/files/imcra3-3.pdf>



Amphibians are cold blooded (ectothermic) tetrapod vertebrates. They inhabit a wide variety of habitats – aquatic, terrestrial, fossorial and arboreal. The word ‘Amphibian’ comes from the ‘Greek’ word ‘amphibios’ means ‘living a double life’ as these animals are able to live both on land and in water. Amphibians evolved from fish about 400 million years ago and were the first vertebrates (with back bone) to live on land and have kept close links to water, where their ancestors originated and they returned to the water to breed. Amphibians characteristically emerge from eggs as larval tadpoles, later undergoing metamorphosis to their adult forms. They are typically aquatic as larvae and terrestrial as adults. Many species of amphibians live in temperate regions, however, some species are found in more humid conditions such as tropical forests. When the weather turns very hot or cold, amphibians hibernate by burying themselves in the mud at the bottom of ponds or under stones or logs.

In the United Arab Emirates, the only amphibians are two similar species of toads, the Arabian Toad, (*Bufo arabicus*) also known as *Sclerophrys arabica* and the Dhofar Toad, (*Bufo dhufarensis*), which are able to survive harsh

# Amphibians of United Arab Emirates

By Hakeem Kokkodan



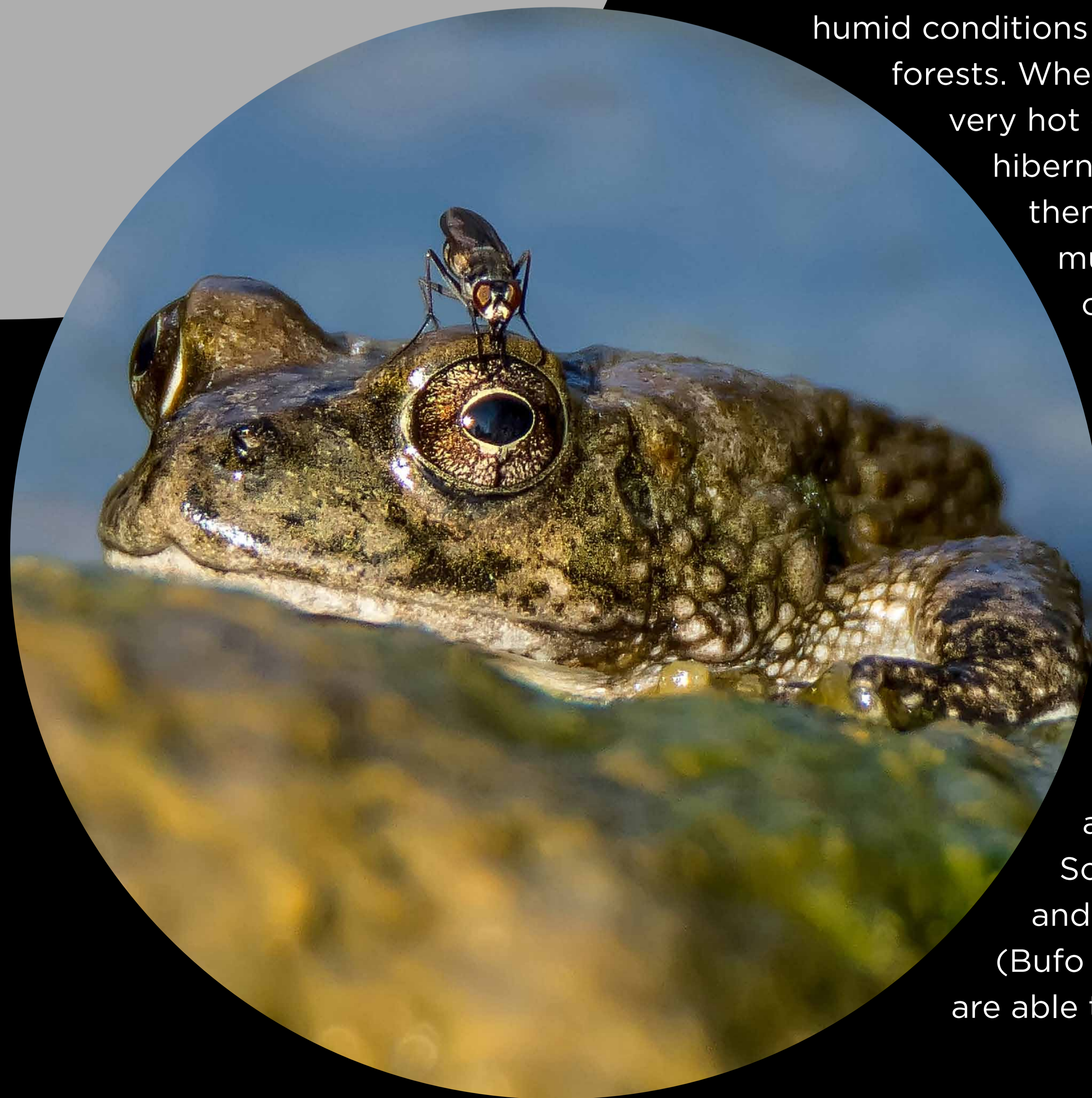
conditions by becoming dormant for up to three years or more.

The Arabian toad (*Bufo arabicus* / *Sclerophrys arabica*) is one of only nine species of amphibian found in the Arabian Peninsula, and is the most common of the two toad species found in the United Arab Emirates. The Arabian Toad’s body varies in color, appearing green, tan, brown and even grey, usually with vivid, golden speckling on the upperparts. Other distinctive features of this species include a rounded head and snout, along with small eardrums located behind the large, prominent eyes. The

females are significantly larger than the males.

Arabian Toads can often be found in groups within damp crevices, seeking shelter from direct sunlight. While prey typically consists of insects, during periods of drought small fish which have become trapped in evaporating shallow puddles may be consumed. Cannibalism is also known to be widespread, with the larger adult toads consuming the smaller juveniles.

During extended periods of drought, the Arabian Toad will excavate a hollow







in the ground and there it can persist by entering a dormant state, similar to hibernation, known as aestivation. Incredibly, this species' aestivation periods are believed to last as long as three years. Outside of aestivation, the Arabian Toad emerges rapidly in response to rain or even drizzle, and may form large congregations. Carpet vipers, which feeds predominantly on toads, also becomes active during this time to take advantage of the abundance of prey. Despite the fact that the skin of the Arabian Toad, like many *Bufo* species, produces a toxic chemical, it does not seem to affect native predators, such as snakes and Brandt's hedgehogs.

The Arabian Toad breeds opportunistically throughout the year, depositing large numbers of eggs in the form of black, pearl-like strings, following rains.

The Arabian Toads are endemic to the Arabian Peninsula. They occurs in widely

separated areas of Saudi Arabia, Yemen, and north Oman and the United Arab Emirates. The Arabian Toad has been recorded from sea-level to elevations of 2,300 meters.

The Arabian Toad is classified as Least Concern (LC) on the IUCN Red List, even though, the Arabian Toad's population in the United Arab Emirates appears to fluctuate significantly according to short-term environmental conditions, such as droughts. The global decline in amphibians currently taking place, which has been linked to various factors including global warming and pandemic fungal disease, there is some concern that the Arabian Toad could be at risk. Currently, the Arabian toad receives protection by virtue of its presence in the Farasan Islands Protected Area, Saudi Arabia.

The Dhofar Toad is the second of the only two amphibians in the United Arab Emirates, and one of nine in the whole

of the Arabian Peninsula. The body of the relatively small *Bufo* can range from green to tan to brown, and be either mottled or uniform. Distinctive feature of this species is large, prominent eardrums positioned immediately behind the protruding eyes.

The Dhofar Toad has the ability to aestivate underground during periods of drought, and can remain in this state of dormancy for as long as three years at a time. Following heavy downpours, it emerges to seek food and potentially mate. Like other frogs and toads, it catches prey by means of a sticky, prehensile tongue, with a variety of insects being the primary target.

Breeding occurs year round, with the females laying large numbers of black eggs on pearl-like strings. The Dhofar Toad occurs throughout much of the southern Arabian Peninsula, including Oman, Saudi Arabia, the United Arab Emirates and Yemen, as well as on the Farasan Islands.

Classified as Least Concern (LC) on the IUCN Red List and there are not currently known to be any major threats to the Dhofar Toad. While there are no specific conservation measures in place, the Dhofar Toad is known to be present within the Jebel Samhan Nature Reserve in Oman.

The amphibians are important and beneficial in many ways. They play an important role in nature as both predator and prey, sustaining the delicate equilibrium of nature. They feed on pest insects, helping for successful agriculture

and minimizing the spread of disease such as malaria.

In the last half of the 20th century, scientists noted the alarming decline in the numbers of amphibians and its species around the world. The reason of decline was due to a number of factors, pollution of fresh water ecosystem, the destruction of amphibian habitats by ever spreading human populations and increased ultraviolet radiation due to ozone depletion. Amphibians are known as the indicator species, whose health is a sign of the health of the ecosystem they inhabit. As their numbers decrease, so do the number of healthy ecosystems around the world, which in turn results in the loss of many other animals and plant species.

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<http://www.arkive.org/arabian-toad/bufo-arabicus/>



# Into the Small World

By Karthikeyan Shanmugasundaram







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# K

**Karthikeyan Shanmugasundaram is an ace macro wildlife photographer hailing from Tamilnadu, India. He finds pleasure in exploring the tiny things in this vast natural world.**

**Widely published and recognized with many accolades, Karthikeyan's images are eye openers to the amazing things happening around us.**

**[facebook.com/karthikeyan.shanmugasundaram](https://www.facebook.com/karthikeyan.shanmugasundaram)**

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I have been a passionate nature & macro photographer for over seven years now. It is a boon to be born in India, a country blessed with abundant natural beauty. Every micro second there are so many incredible and amazing things happening around us. Sadly, not everyone will have the time or patience to appreciate them in today's fast paced world. Hence my goal is to explore that amazing tiny natural world and capture the incredible moments as much as humanly possible and showcase its amazing beauty to the rest of the world. I think sub consciously that is the reason I opted for macro photography.

### **My Inspiration:**

There is no one individual or individual that has inspired me to opt for macro. I was inspired more by the famous macro photographs themselves and the serene beauty lying inside them. That beauty, which is not visible to normal eyes and this was the greatest motivation for me to start capturing them.

Being a macro photographer, I can play my trade anywhere. Where ever I get to capture the species of my interest, be it my backyard or the Amazonian rainforest becomes my location! This is one great advantage of macro, you get to do it daily, if you at least have access to a backyard, garden or a park. Off course you do have to travel if you are after a particular species, but the fact that you can practice often keeps you in good nick.

### **Favorite Subject:**

Although I macro photograph all insects,

my personal desire is to photograph all the species of "Jumping Spiders" throughout India first & then across the globe. The reason being, In my opinion, Spiders are easily prone to be ignored as opposed to the other colorful insects that people can appreciate even with their naked eyes. Lady bug, Firefly etc. fall into the latter category of insects, whereas there is a whole lot of beauty hidden among various species of Spiders across the world. My aim is to capture the best possible moments of their life and through those images, advocate for their serene beauty.

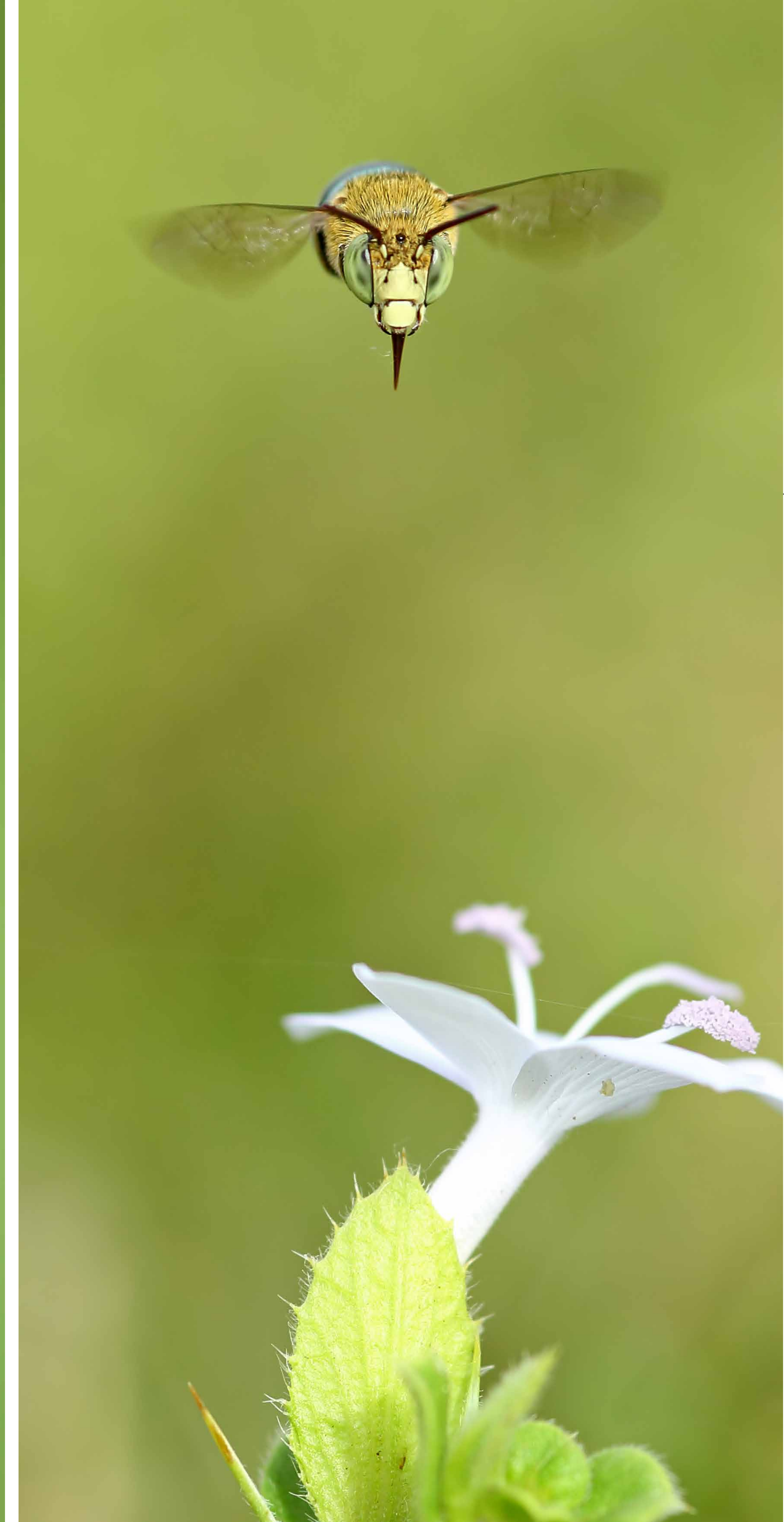
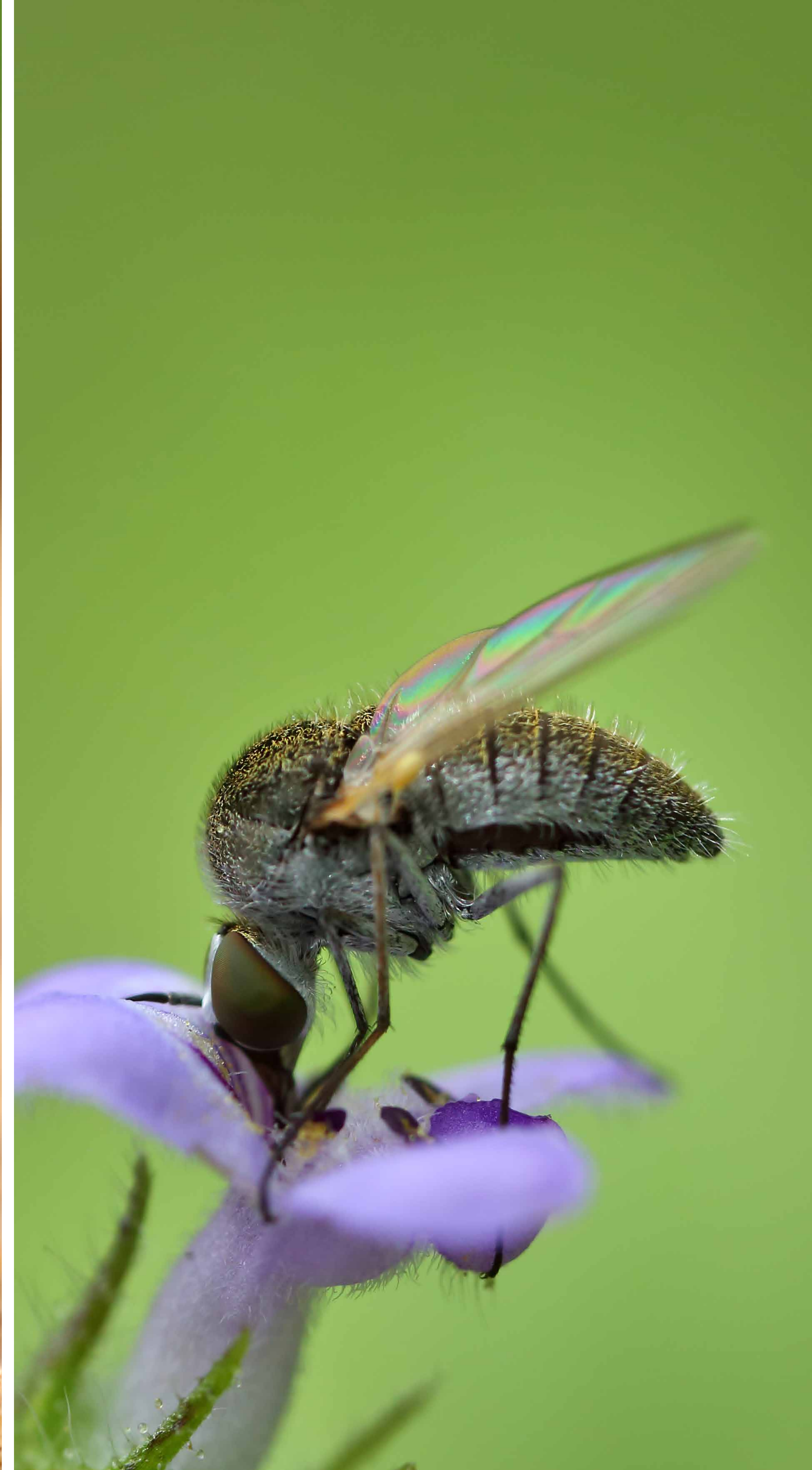
### **Dream Wildlife location:**

Indonesian Rainforest (Java and Sumatra islands). I long to roam these tropical paradises in search of hidden treasures and to capture vivid images of the amazing life that abound there.



©Karthikeyan Shanmugasundaram







## Difficulties faced by a macro wildlife photographer:

First - I faced a lot of difficulty in terms of legal permissions associated with going inside a jungle/reserved forest to photograph and other related hassles (at least in India). After all macro photography is done by getting closer to the subject and not by sitting in a safari jeep, and that requires special access at times.

Second - a difficult aspect of a macro photography is, after all the trouble you get to your spot and wait in your position, sometimes for hours together to capture and record a moment especially when you are not sure if that moment will occur!

### Gear:

Camera -

Canon EOS 550D  
Canon 5D Mark 3

Lens -

Canon 16-35 mm F4  
Canon MPE 65  
Sigma 105 mm

Flash -

Canon 430 EX2,  
Canon MT 24EX Twin lite

### Recommendation to upcoming macro photographers:

These days you see a lot of people buying







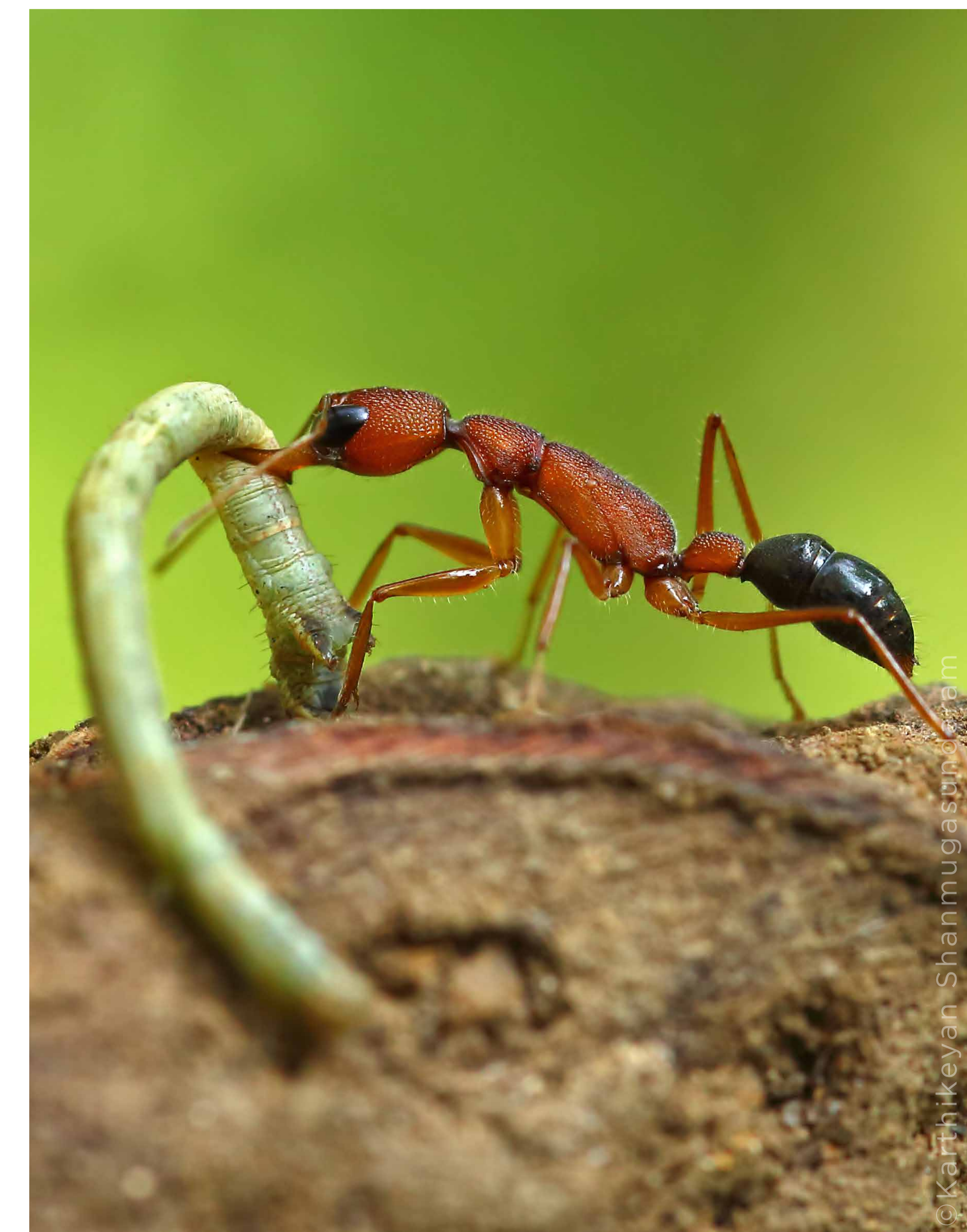
©Karthikeyan Shanmugasundaram

expensive gear in the aim of becoming a wildlife photographer. Of these more than 50% quit after a certain time partially due to impatience and partially due to criticism. You also see few people making it and who successfully achieve the feat of becoming a wildlife photographer.

It is in each of our hands to choose which half of the lot we want to be a part of. The quitting majority or the minority few with perseverance to achieve the feat.

**Future endeavors:**

In the long run, I want to release a documentary film on macro photography with special light into the difficulties and hardships associated with it and how it pays off at the end.



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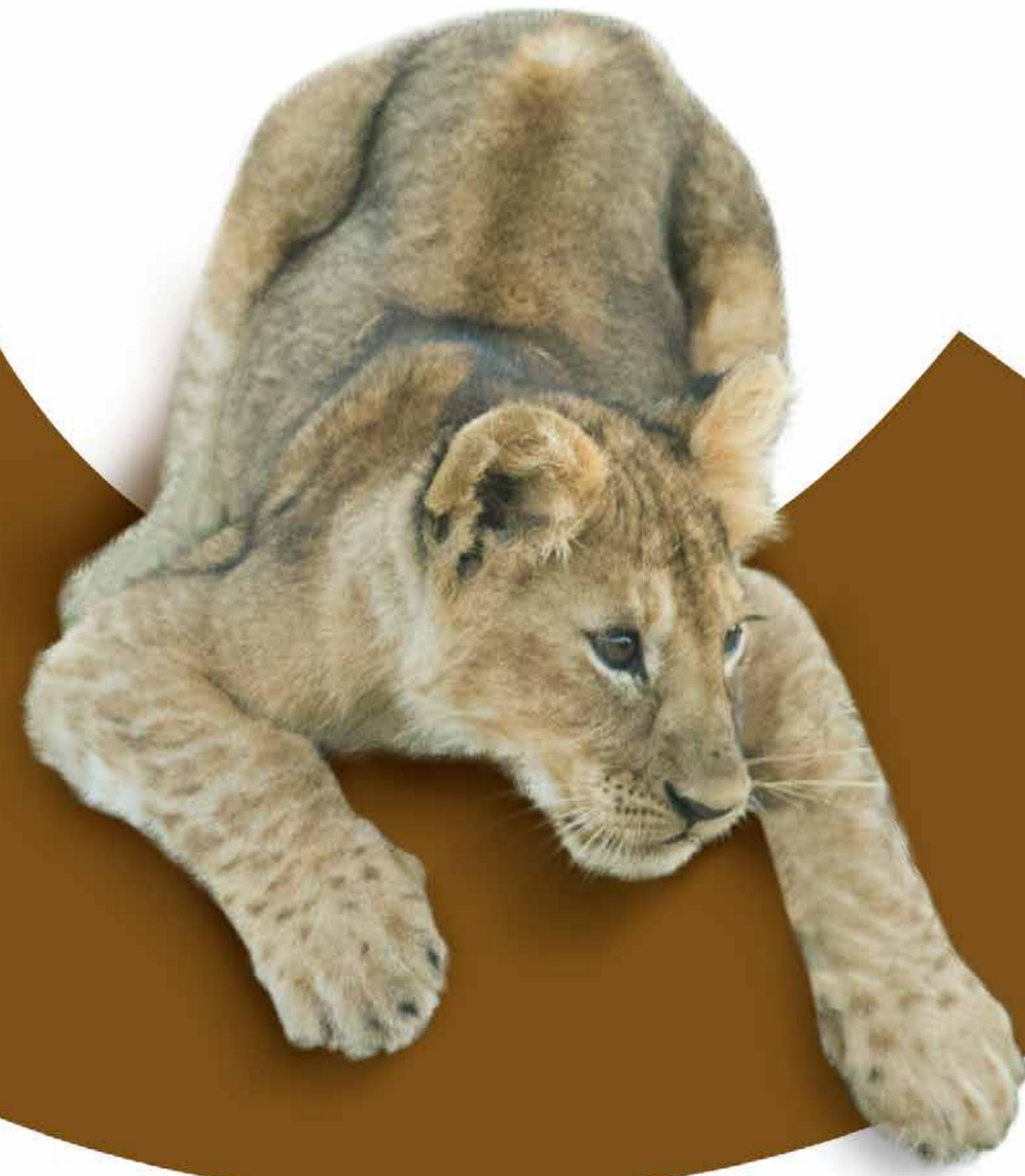
CUB'S CORNER

# Youth Trails

By Raghul Patteri



## CUB'S CORNER



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**Raghul lives in Bangalore, India and is a Software Engineer by profession. He believes in getting people closer to nature and organizes nature walks in his community.**

Passionate about nature, Raghul is the associate editor of PT Explorers since inception. A firm believer in alternative education and believes that children should learn in outdoor schools in an environment free of fear and competition.

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Paws Trails Cub's corner is conceived as an initiative to create wildlife awareness and cultivate the love for nature among children. Cub's corner also provides a platform for young upcoming nature artists and photographers to portray their work and share their experiences. Why Catch them young - because they are the future, they are the keepers of the earth for future generations. It is imperative that they grow up learning to admire and respect nature and feel the brotherhood for our many co-inhabitants on this earth.

Cub's corner aims to reach the generation young through a multi-pronged approach. It is the lack of a platform that often leads upcoming talent to lose interest and stop pursuing their interests. Cubs corner provides that platform. It is an open invitation to young artists, photographers or conservationists who has chosen nature as their subject. Reach out to us and we will portray the deserving and might even exhibit your works.







Our school outreach programs are the ultimate way of reaching maximum number of children at a time. We conduct seminars at schools, the children are taken outdoors to nearby areas and given interactive awareness sessions. They get cameras to capture the species in the vicinity, introducing them to the world of imagery. In future if they ever decide to shoot another animal, it must be with a camera and nothing else!

For every exhibition, we spread the word around nearby schools and invite the children to attend and be touched by the vivid imagery of the stunning creatures that we share mother earth with. We are all ears for the questions that arise and hope the conversations that get started at these events instill a lifetime of love for nature.

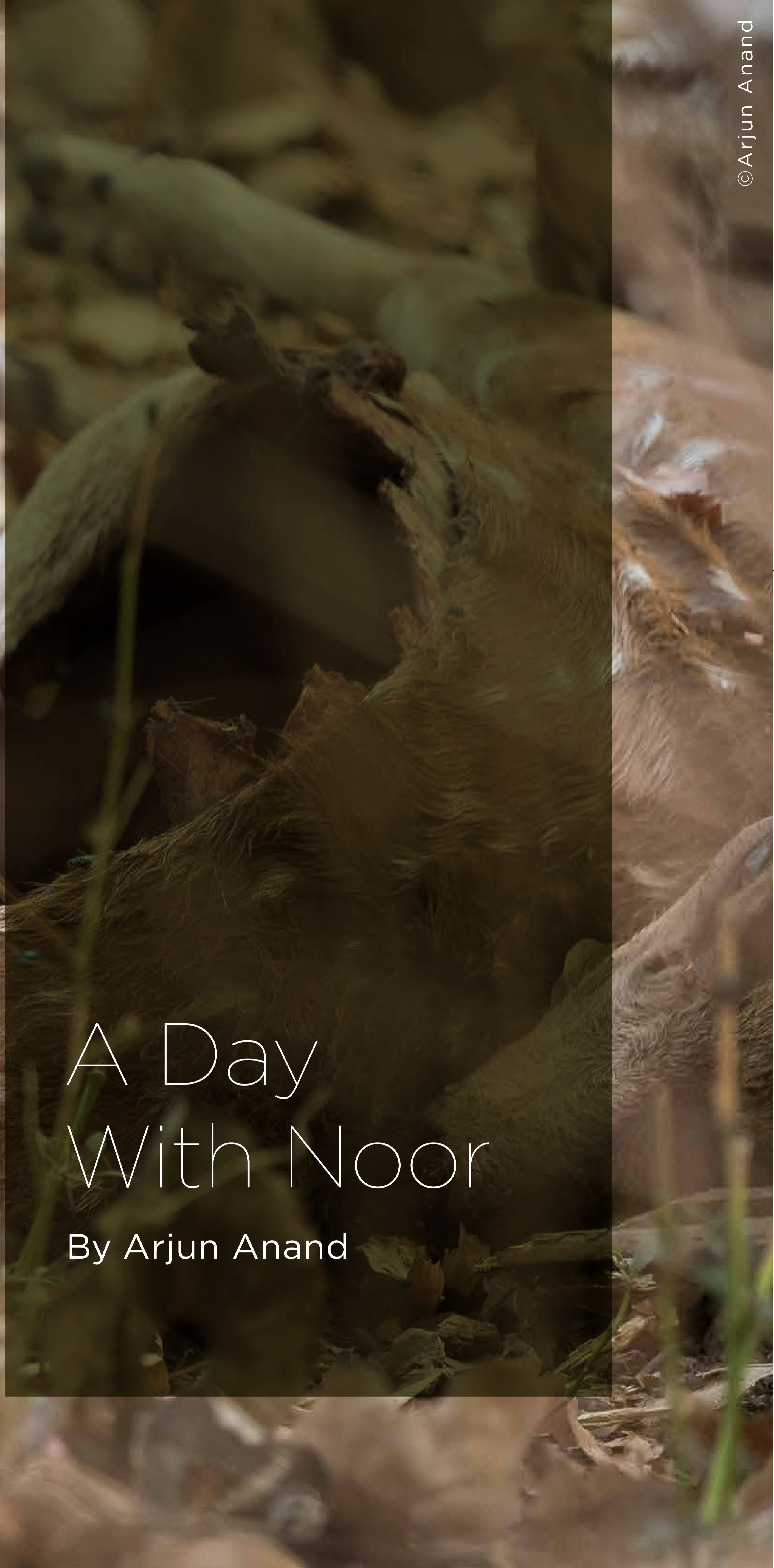
We conduct painting workshops/ competitions in conjunction with or independent of our exhibitions for children. These are all nature themed and there is no better way to understand the distinctive characteristics of a species other than by reproducing them on paper or canvas. This way, children assimilate the key fact that each species is unique and have their own role in the ecosystem. We have had 50-60 participants at these competitions. Sometimes the competitions have involved selecting the animal from an exhibited work as their subject. Children connect with the works of masters and start thinking like them. As a token of appreciation, we grade and award prizes to the winners and issue certificates for participation. This is a motivation for children to attend more of similar programs.











# A Day With Noor

By Arjun Anand

© Arjun Anand

THROUGH THE LENS





**Arjun Anand is a wildlife photographer based in India. He has spent considerable time travelling across the country and the world photographing wildlife. While he loves all wildlife, tigers and their wellbeing seems to be closest to his heart. He maintains strong ethics while photographing animals in the wild, respecting their space and placing their welfare above all.**  
[arjunanand.com](http://arjunanand.com)

[facebook.com/arjunanandphoto](https://facebook.com/arjunanandphoto)  
[instagram.com/arjunanandphoto](https://instagram.com/arjunanandphoto)

How often does one get to literally spend the entire day with one of Ranthambore's and possibly the world's most famous tiger 'Noor'.

Ranthambore National Park is located in the Sawai Madhopur district of Rajasthan at the junction of the Aravallis and the Vindhya range but before it became a safe haven for tigers, it was the former hunting grounds of the Maharaja of Jaipur. It was in 1973 that the park came within the ambit of 'Project Tiger' and later in 1980 declared a National Park. Ranthambore is easily accessible by air (140 km) or by train (10 km) from most popular cities across the country. The park is spread across an area of about 400 sq. km and with a population of about 70 tigers, is one of the finest

locations in the world to see tigers in the wild. The park derives its name from the Ranthambore fort that sits at the edge of the reserve and is also a popular tourist attraction.

Each day hundreds of tourist visit Ranthambore to catch a glimpse of the big cat, some go back disheartened while some witness magic. Here is my story.

While on a full day safari in late May this year, I had the good fortune not only to sight a tiger but to see Noor and her three cubs devour and feed on a deer carcass. Besides being a great photographic opportunity it was an awesome moment, one I may never forget.







©Arjun Anand

It was just before six in the morning and as I waited at gate number 3 of Ranthambore National Park soaked in sweat, already down a litre of water, all I could care about was what lay ahead. Would I get to see tigers, would the sightings be special and most importantly would I get to take some good photographs. As the forest guard allowed my vehicle to enter the park, my driver headed to some of Ranthambore's most iconic locations including Padam Lake and Rajbagh in search of the tigress 'Arrowhead'. Searching the area and the old ruins that are dotted around the lakes yielded no result. Arrowhead was nowhere to be found so I gave up hope and headed to a part of zone 2 locally referred to as 'Foota koat'. This was 'Noor's' territory.

Besides being bold and a beautiful tigress she was not shy of people which made photographing her an absolute pleasure and a rewarding experience. I thought to myself that if I could get a glimpse of her, maybe I can get to see her three cubs as well and just maybe I could get to take a few photographs. On reaching the destination, what I saw left me a little puzzled. In the middle of the dirt track lay a half-eaten deer carcass. While my driver, guide and myself debated on what could have happened, we heard Sambhar and Langur alarm calls faintly audible in the distance.

This was a tricky situation and I asked myself if I wanted to go after the alarm calls or stay with the carcass. In the end on the advice of the driver I decided to

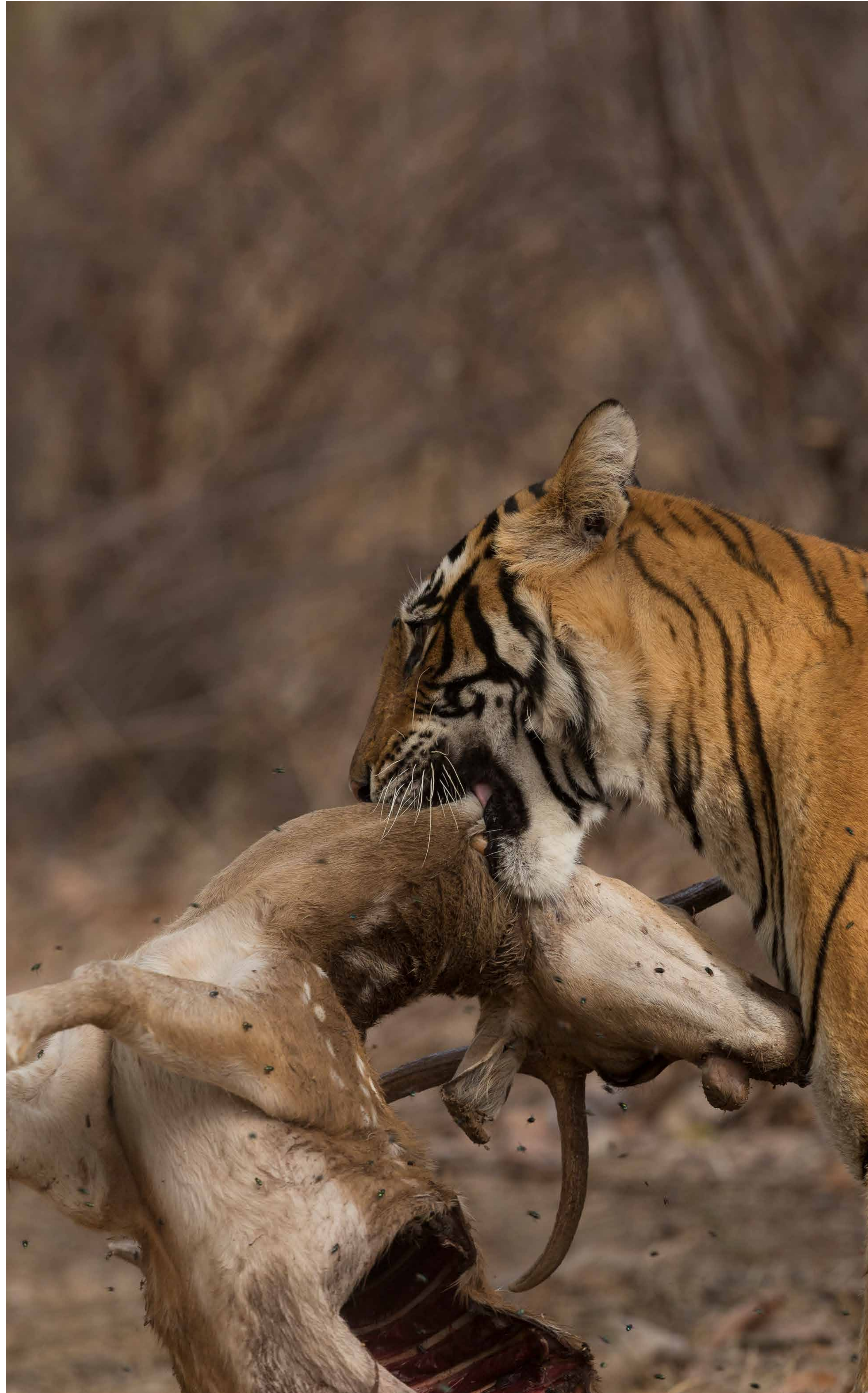
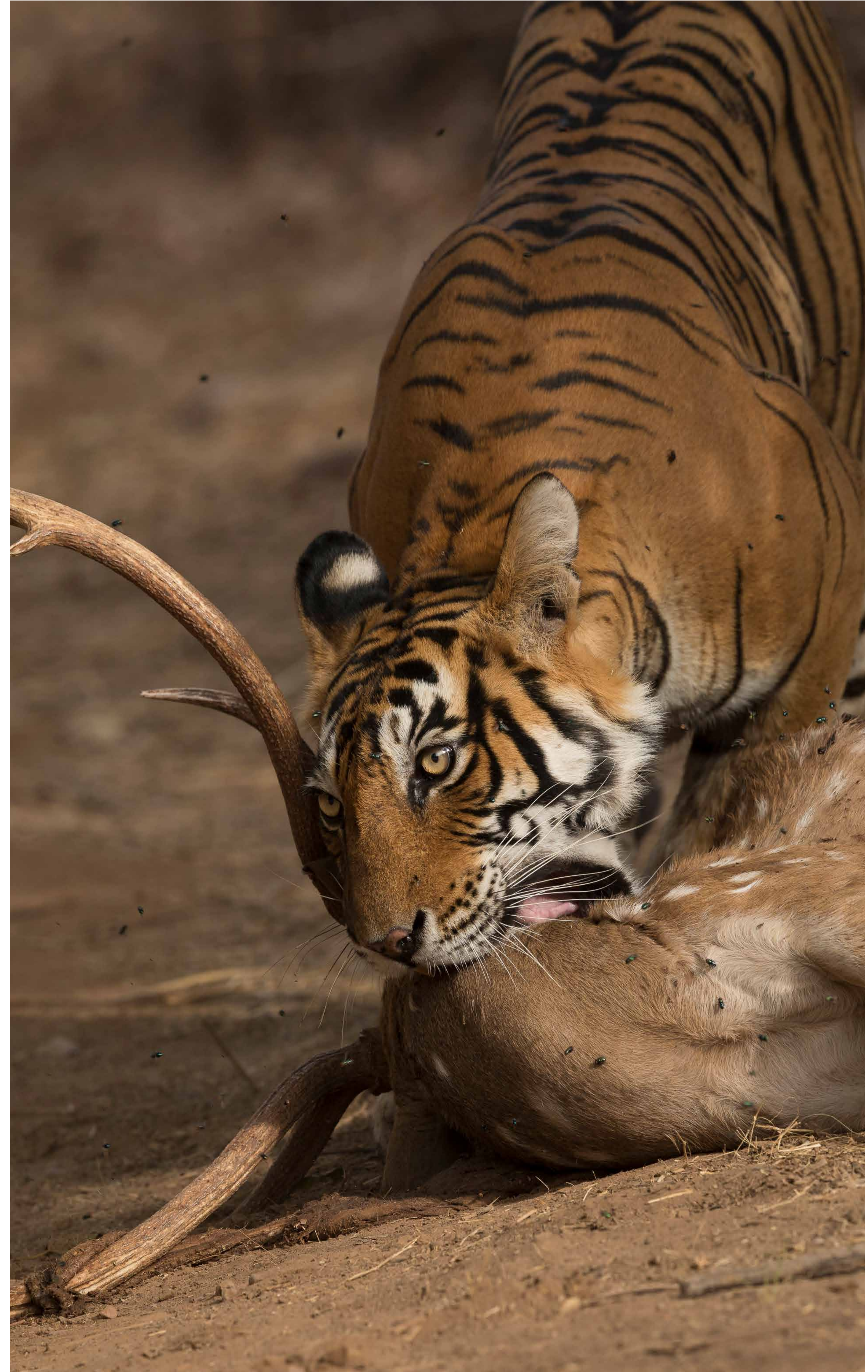
just sit back and wait. 30 minutes passed by and with each passing minute not only did I lose hope, I was getting physically tired. It was getting hot and the tree cover was scanty, not good enough to provide the shade that was desperately needed. As the empty bottles of water piled up and the wait became unbearable we heard sounds of approaching vehicles. I was excited because I realised that Noor was heading towards my direction. Those had to be vehicles following the tigress! I was about to get the so sought after head-on shot of a tiger. I lay low in my open jeep, centre seating removed, to get an eye level perspective and chose a wide aperture to get that perfect bokeh. I had my finger on the shutter all ready to fire. As anticipated she did appear on the bend but instead decided to continue walking straight to a nearby waterhole.

As I lay down my camera in despair, she suddenly stopped, turning her head ever so slightly and gazed at the deer carcass that lay right in front of me. Her casual stroll now changed to a prow, just before darting across my safari vehicle right for the kill. On reaching the carcass she grabbed it by the throat and lay down just off the dirt track. By now the cubs that were trailing her realised that mother had arranged for a meal. There was tension in the air and a lot of growling and snarling as each established a clear pecking order, the dominant cub got the lions' share of the deer carcass while the others made do with whatever they could get their hands on. The news of the sighting had spread across zone 2 and it was not long before there were over a dozen vehicles located strategically

around the tigers to get a glimpse of the action. The next few hours were spent watching them devour the carcass. At around half past eleven all the vehicles had left and I found myself all alone in the presence of Noor and her three cubs. Now the tigers were almost done with the deer carcass and were so delicately scrapping off whatever meat that still clung to the deer's bones.

By early afternoon it had gotten very hot but my persistence and patience was rewarded with some good photographs. I was no longer interested in taking more neither ready to leave just yet. Being around the tigers instilled a sort of energy that made me forget about the heat, the fact that we had not eaten all day and that we were running out of bottled water. We parked under a nearby tree and spend the next few hours watching the beautiful animals go through their post meal rituals. Noor groomed her cubs one by one and got them to take a nap, laying under a palm tree herself to get respite from the mid-day sun. One of the cubs was restless and did not want to go to sleep, choosing to explore the area instead. The cub even approached my vehicle a few times, perhaps out of inquisitiveness and wondering why on earth would anyone be so obsessed with them. Each time the cub would pass by it would lay down as if it were posing. The cub having inherited Noor's lack of shyness turned her play time into a photoshoot. The cub would look at me wherever it would go, it would hide behind bushes just to pop its head out as if to see if I was still around. The cub even climbed a tree just to get a look at me from a different perspective.







By late afternoon the tigers appeared tired and drowsy and so we decided to leave them alone and head back. As we drove off I realised that the day had been a special one. Not only did I get to see four tigers for literally an entire day but on that day, I felt that I had integrated with them just like a member of their family, a memory forever. As the wildlife tourism season comes to an end, I cannot wait until October for the park to reopen and for me to see my beloved 'Noor' and her three cubs again.

No article on Ranthambore is complete without mentioning the efforts of Forest Department, whose members have devoted most of their lives in trying to protect the tiger. Their proactive approach to conservation and out of the box thinking has made Ranthambore National Park one of the most secure wildlife destinations in India. It is popularly believed that Ranthambore has the lowest tiger cub mortality rates in the country and upto 90% of the cubs survive to adulthood, which is a remarkable feat by any standards.

Equipment:

Canon 1DX 2, Canon 5D 4,  
Canon 100 400 f4.5/5.6,  
Canon 600 f4







# Kabini Memories

By Sajeesh Aluparambil / Translated By Raghul Patteri





**Sajeesh Aluparambil is a wildlife lover who got fascinated by the beauty of nature since his childhood. He started showing his pictures to the people around him and realized the immense power that each photograph has to influence our imagination and inspire people to take up the issue of nature protection. His works are published in many magazines, books and newspapers and he has won few photography competitions as well.**

**[facebook.com/sajeesh.aluparambil](https://www.facebook.com/sajeesh.aluparambil)**

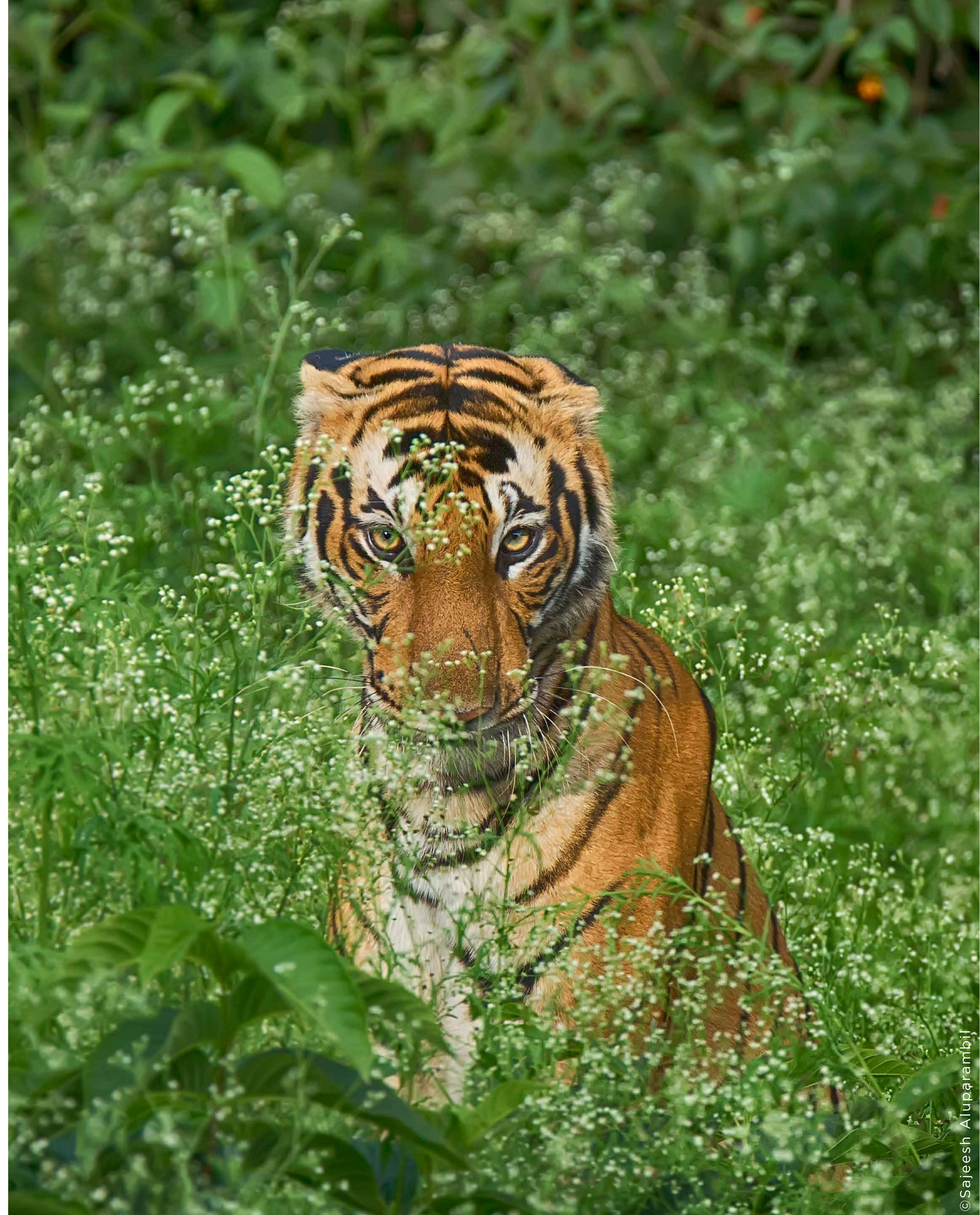
An enchanting place that keeps pulling you closer, a place so seducing that it does not bore after repeated visits - this is what I had been told about Kabini Wildlife Sanctuary, located in the state of Karnataka, India. On my return from the hot shores of adopted foreign lands, I gave first priority for a visit to the wild, enchanting sights of this promised land.

The hills of Wayand were negotiated on a foggy rainy night. Even though the night robbed us of the sights of the emerald green forests blanketed by puffy fog, the chillness of the night had its own special appeal. The experience of that journey with the fog drowning out sections of it was beyond words. The darkness was

total and visibility was low, this made the vehicles going downhill appear only as blobs of light moving downhill!

Once uphill, crossing Kalpetta and reaching Meenangadi, it was time to treat tired bodies and minds with a hot cup of tea. This warded away the chill and tiredness, reinvigorating us.

Crossing the historical Sultan Bathery and entering Mysore road, by now cameras were primed and ready. There was expectation of an Elephant (*Elephas maximus indicus*) or Bison (*Bos gaurus*) sighting at every turn in the road when our vehicle entered the Baaveli route. Alas we had to satisfy ourselves with











some Chital (*Axis axis*) sightings as the 'dark' sons of the forest eluded us. Every disappointing turn in the road brought with it the hope that the next turn would be rewarding.

The ardent observation paid off and a luminous pair appeared in our eyes out of the darkness. Standing by the wayside right at the side of the vehicle – the enthusiasm for seeing Elephants (*Elephas maximus indicus*) moved way to a bit of trepidation! A brief halt which ensured that the Elephants (*Elephas maximus indicus*) were harmless and the journey continued.

Crossing over the Karnataka state border, reached Damankatte forest office by seven in the morning. The cold attacked like needle pricks, along with anticipation. The first safari starts at four in the evening. Enthused by the countless narratives and experiences of others, the first safari for me and my wife. Even amongst the boundless enthusiasm and anticipation there was a bit of fear mixed in...

Safari started on the dot. Soon afterwards we came across Peafowl (*Pavo cristatus*) and Chital (*Axis axis*). Then a lone tusker with his ears spread, like a drawing on the green canvas of the forest. A group of Elephants (*Elephas maximus indicus*) close by and behind that a Bison (*Bos gaurus*)! Some pictures were clicked in the heat of the moment, but then tapered down as our ambition was to get the Bengal Tiger (*Panthera tigris tigris*). The journey continued, but no Tiger (*Panthera tigris tigris*). Darkness fell and we had to wind up, disappointed, but the thrill of

the first forest safari started taking root inside us.

We ensured side seats on the next morning's safari bus. Safari started at six and half an hour into it reached the Tiger tank. And there providing a visual feast to our eyes – a Tiger (*Panthera tigris tigris*). It was moving towards a side through some trees, not conducive for a clear shot. The driver pointed out that it was around two years of age. Once it disappeared inside the bush, a wait time of 20 minutes for the Tiger (*Panthera tigris tigris*) to re-emerge. The perfect entry from the insides of the grass – the perfect shot cultivated in the mind over the past many months, face to face, head on!

The camera shutters were clicking overtime. One hour there, filling our cameras and satisfying our minds. Then we returned...

One more safari in the evening, with the Tiger (*Panthera tigris tigris*) again granting an audience, but deep asleep. The sounds of the camera shutters woke the majesty, some beautiful shots, absorbing the expressions in the animal's eyes.

"When is our next safari", question from the wife as we prepare for the return journey. In just three safaris the enchantress that is Kabini has seduced us forever!









*'Magical feathers'*

By Prasad Natarajan

WILD ARTS SHOWCASE



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**Prasad Natarajan is a Bangalore based wildlife artist and founder of Artists for Wildlife and Nature(AWN). Self taught artist, his studio is out there in the outdoors! He travels to various destinations of the world to capture wildlife through his camera and does field sketches. These become finished artworks at his little studio later. He has been working on wildlife art from 2005.**

**[facebook.com/onmy.easel](https://facebook.com/onmy.easel)**

When three years old, I used to pull out flakes of paint from the wall and tell my mother there's a goat, cow, cat or dog. That's when my mother recognized my interest in art and encouraged me to make art. My primary school art teacher taught me to draw cats, dogs and mice, I am grateful to him for introducing me to animal art at a early age. Later in high school I won many art competitions at school and inter school levels. With the help of my friend's membership at the local government library I made

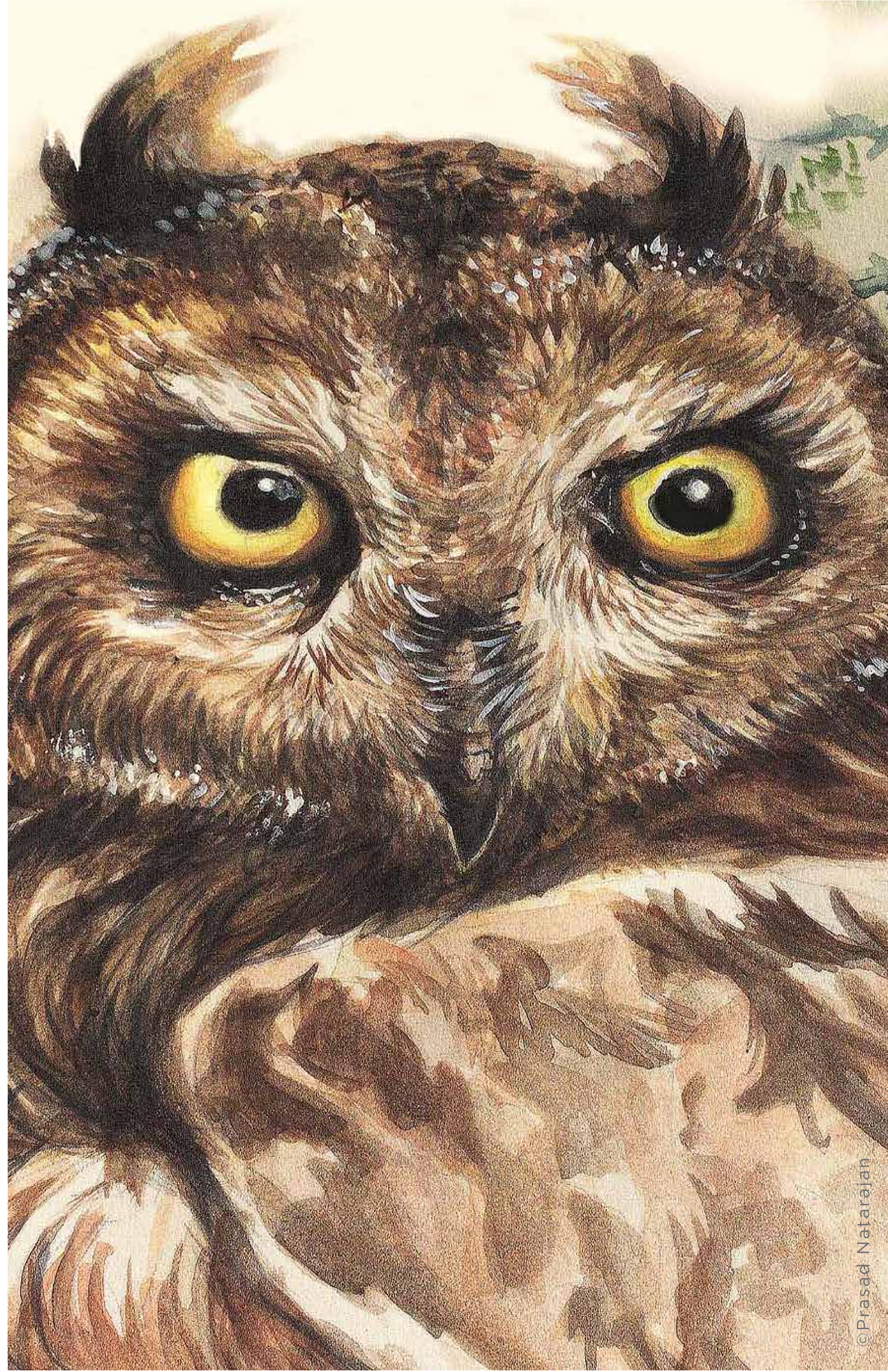
sketches of birds and animals from nature books like National geographic and other nature books.

Due to financial constraints I couldn't pursue art at college level and dropped out of graduation college at the age of seventeen. Started working for a multinational company and pursued Bachelors in Commerce by distance education. I did wildlife art occasionally over a period of nine years. In 2011 after attending few wildlife art exhibitions I

**Eurasian Eagle-owl**







©Prasad Natarajan



-Prasad.M-

Purple Rumped Sunbird

©Prasad Natarajan



got inspired to take up this art form. I met and wrote to many wildlife artists seeking their advice. Mr. Pip Garry from Mall Gallery UK was kind enough to write back to me with frank answers, his tip was straight and to the point. Field work and practicing art everyday - was his advice, which I follow even today.

I started off by visiting nearby zoos for field studies and reference images, spent four to five years making pencil drawings, which helped me gain confidence. Few sales at art fairs gave me hope that I was heading in the right direction. Field work led to my interest in birdwatching, documenting common birds' behavior in and around Bangalore.

Eco Volunteer Program organized by Karnataka forest department, exposed me to various other wildlife subjects like snakes, frogs and other lesser known species.

In 2016 I came to know from Bombay Natural History Society (BNHS) Hornbill magazine that, they featured an article about me with twenty other nature artists from India, in an edition dedicated to Mr. Carl D'Silva and nature art. That was a proud moment in my art journey so far. I also got to know about other artist in India who do nature art.

This year finally I opened up my studio after three years of planning and hard



**Common Kingfisher**

work. This space gives me the ideal environment to work on my artworks, where I can store my artworks safely and display them as well. Another dream came true recently, i started an online community called Artists for Wildlife and Nature (AWN) and plan to register a trust for the same. This is a first of its kind in India for nature artist which concentrates on nature related

art and intents to promote nature art and artists.

As a group, we have various outreach programs like Conducting Free Drawing Workshops for school kids and other nature awareness programs through art. As a group, we will be having our first annual show in January 2018, where nature artists from all over India will participate and best among the show



**Eurasian Thick-knee**



will be recognized with cash awards by the trust. The goal is to recognize nature artists for their vital contribution towards nature conservation through their art and build a community of nature artists.

My parents are my biggest inspiration, I owe it to my late mother for inspiring me to follow my dreams. She was a great supporter of my dreams and encouraged me in every initiative i have taken. My father who is my pillar of support till date and my wife who has been supportive, tolerant with me during my long absences at home, without my family support I would not be making those long field trips. I would want to continue working on Indian wildlife art and concentrate more on lesser known species in future.

**Grey Heron**







YOUR GALLERY



Harshad Karkera  
Great Gray Owl (*Strix nebulosa*)  
Location: Canada, Alberta, Calgary





YOUR GALLERY

**John Anthony**  
Lion (*Panthera leo*)  
Location: Serengeti National Park, Tanzania.



YOUR GALLERY

**I Sade**  
Eastern Festoon (*Allancastria cerisyi*)  
Location: Middle East







YOUR GALLERY

Reji Gopalakrishnan  
Tiger (*Panthera tigris*)  
Location: Bandipur, Karnataka, India



YOUR GALLERY

Rajbir Sunny Oberoi  
Leopard (*Panthera pardus*)  
Location: Ranthambore National Park, Rajasthan, India.





YOUR GALLERY



Templier Marc  
Short-eared Owl (*Asio flammeus*)  
Location: Loire Valley, France



YOUR GALLERY



Suman Dasgupta  
Indian Rhinoceros (*Rhinoceros unicornis*)  
Location: Kaziranga, Assam.





YOUR GALLERY

**Vijay Mandave**  
Lion (*Panthera leo*)  
Location: Serengeti National Park, Tanzania.



YOUR GALLERY

**Sumesh Sankarathodi**  
Spotted Hyena (*Crocuta crocuta*)  
Location: Amboseli, Kenya







YOUR GALLERY

Vinu Mathew  
White-eared bulbul (*Pycnonotus leucotis*)  
Location: India



YOUR GALLERY

Nistar PS  
Osprey (*Pandion haliaetus*)  
Location: Abu Dhabi, UAE.





**UPCOMING  
FEATURES**



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## **A WALK THROUGH THE WESTERN GHATS**

By Kalyan Varma

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## **GREAT HORNBILL**

By Hermis Haridas

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## **TAKAHE RECOVERY & CONSERVATION IN NEW ZEALAND**

By Julie Harvey

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