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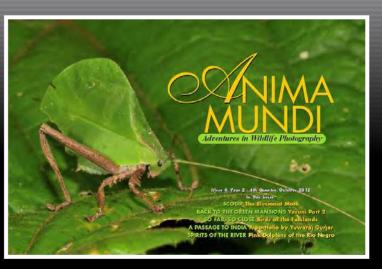
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With more than 15,000 downloads worldwide per issue (as per August 2012), ANIMA MUNDI has seen its readership consistently and rapidly growing in the brief span of only two years and eight published issues. Its authoritative and unbiased travel reports and wildlife articles offer a high level of scientifically-correct information - at absolutely no cost - to thousands and thousands of nature and photography enthusiasts all over the world. Each and every issue of ANIMA MUNDI - Adventures in Wildlife Photography is permanently available for FREE downloading - our mission is the dissemination and condivision of information to promote nature awareness and habitat conservation, and we are proud to reach out on a quarterly basis to a world of passionate, highly motivated, seriously interested readers who all share our passion for wildlife photography and travelling. This is a sample - among many others - of what our readers say:

Dear Andrea & Antonella,

I have just finished reading your latest edition of Anima Mundi and I was inspired to write and say how much I am enjoying your publication and following your adventures. My wife and dive/photo partner Cherie and I were so inspired by your feature on Yala National Park that we booked a Safari with Eco Team and we had a fantastic time. It was exactly as portrayed in your article and we also followed your recommendations for visiting the cultural triangle in Sri Lanka. As we were leading one of our dive tours on a live aboard exploring the Maldives last June, a private side trip to Sri Lanka was clearly not to be passed up due to your information. So, I guess it's good news for you both that others are reading and responding to your work. So, we just wanted to give you some feedback, say hello and wish you all the best with your future adventures. Keep up the great work.

Kevin & Cherie Deacon Dive 2000 Sydney, Australia. www.dive2000.com.au





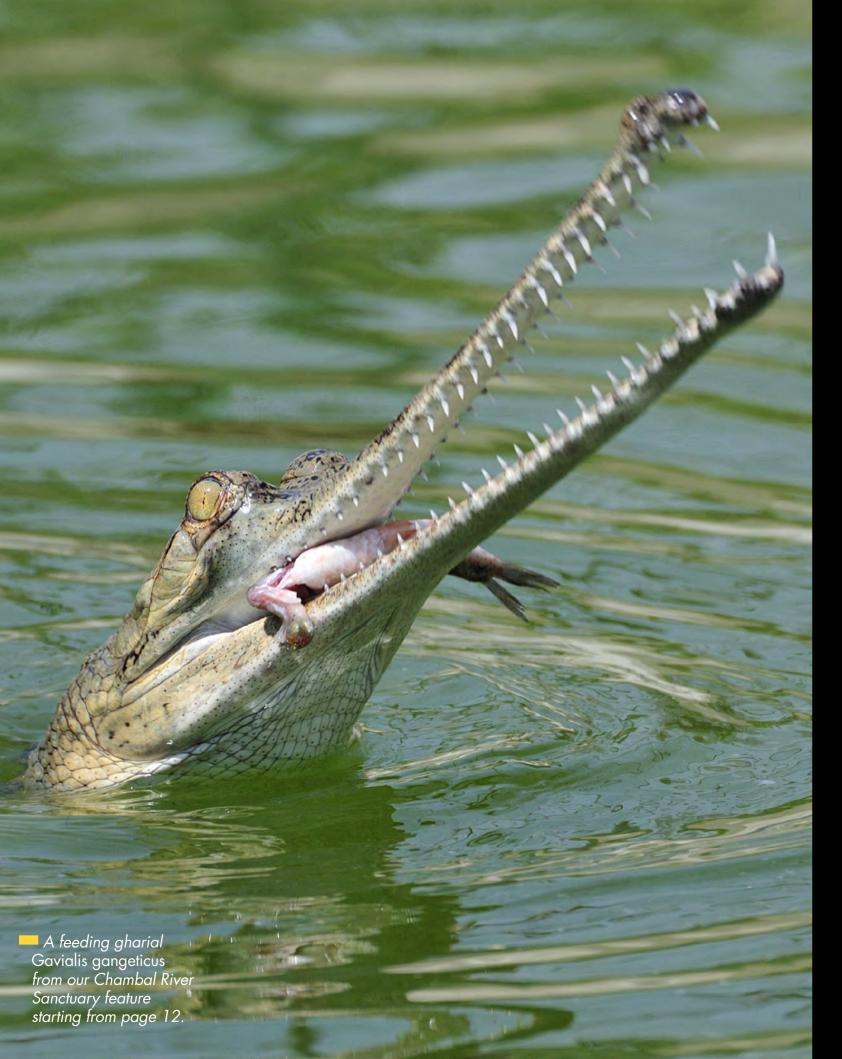








Advertising on ANIMA MUNDI - Adventures in Wildlife Photography means reaching out and getting in personal contact with such people - passionate travellers, dedicated wildlife and nature photographers, world-famous field researchers. All sharing a common bond, all interested in serious, reliable information on wildlife and nature travelling and photographic workshops, trips and equipment. All waiting to hear from you!





#### A passion-packed issue

As we are writing these words to introduce ANIMA MUNDI - Adventures in Wildlife Photography's latest issue, last-minute packing is underway at home, as in a few days we'll be leaving for another month-long adventure...this time to North-Eastern India and the State of Assam, the misty Himalayan foothills and flood-plains kingdom of tigers, hornbills, elephants and one-horned Indian rhinos. We'll do our best to come back with a rich bounty of great stories and interesting images! But back on track and to the spectacular contents of our July issue...

We start on page 4 with a delightful scoop from the frigid coast of Germany's far North, where Czech wildlife photographer Jan Veber witnessed - and photographed - the birth of a baby seal. Great images of a tender and unusual moment which we are very happy and proud to share with you all on these pages. Those seal pups are absolutely adorable, and Jan's images make a trip to the coast of Northern Germany seem to be very much in order soon!

From the freezing winds and ice-cold sea spray of Heligoland we then fly to the arid, sun-baked, stifling hot plains of India's Rajasthan - a barren, forbidding landscape through whose craggy, dusty ravines flows the mighty Chambal river, the Indian gharial's last stronghold. Discover the stunning beauty and fascinating facts regarding this severely endangered survivor from the saurian age in our heavily illustrated article starting on page 12. Unaggressive fish-eaters which can nevertheless reach a truly imposing size, gharials are some of the best indicators of river water quality one can think of in the Indian subcontinent, and their survival must be garanteed at all costs. Sadly, as you will see and read, their

very existence is severely threatened by human intervention despite a commendable and aggressive conservation and reintroduction campaign.

And since a passion for nature and a zest for the wild are possibly the most important components of a sincere, heartfelt conservation mindset, we then go to page 61 to enjoy another Czech's author brilliant photography, this time with Vladimir Cech's personal portfolio. An avid and adventurous traveller to Africa, Vladimir's images are some of the most striking we have had the pleasure of seeing lately.

A deep passion for wildlife photography however can also coexist smoothly with an interest in scientific research, as we can see with our fieldwork essay starting on page 73 - the brilliant results of both take us inside the little-known world of the "shadows of stone", the secretive and yet imposing Iberian ibex of Spain's craggy mountain peaks. Author Ismaele Tortella offers us a rare opportunity to take a peek at the private life of an often ignored species.

Don Silcock's highly detailed trip report from Florida's Crystal river and its manatees finally rounds up this issue's contents. Don's engaging and well-documented narrative and his truly exciting images offer a balanced, no-nonsense view on one of America's most celebrated wildlife destinations (or should we say "attractions"?).

All right, back to packing and then off to Assam. See you in a month! In the meantime...

Have a good trip!

Andrea & Antonella Ferrari

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We appreciate your feedback - constructive criticism, useful suggestions and interesting contributions are welcome.

Please drop us a line at editor@animamundimag.com

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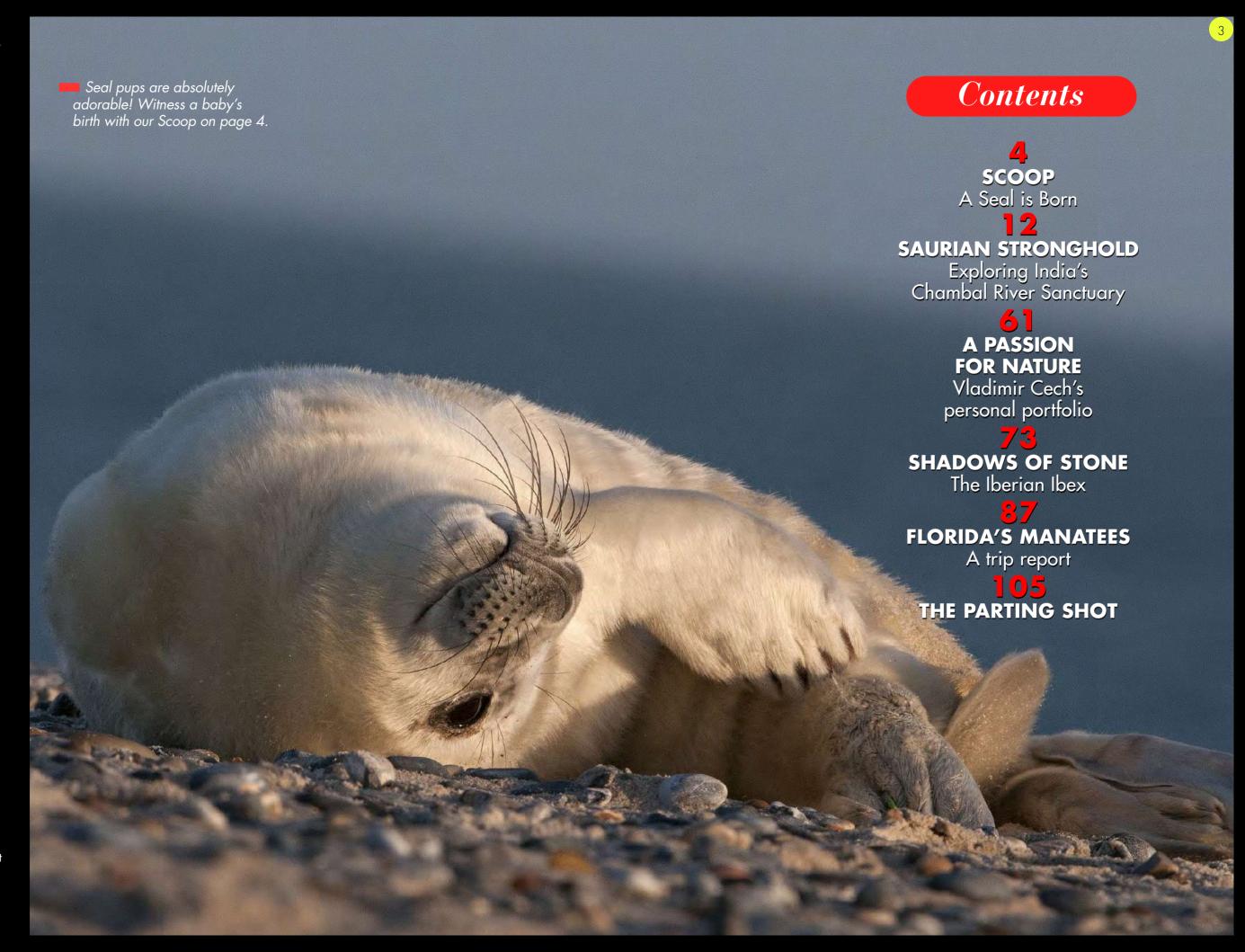
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TEXT AND PHOTOS BY JAN VEBER

ust before Christmas 2013 my family gave me a wonderful present - a travel voucher to the German island Düne in the North Sea, a small sandy islet situated one mile to the east of the well-known main island Heligoland. Mission: taking photographs of seals. Thursday night, I and my two friends Lada and Martin were heading for Cuxhaven seaport in Germany. In winter, the ferry to Heligoland departs only once daily. The weather was rather bad, but we remained positive, since the storm Xaver had impacted the said destination area the week before and the weather forecast said it would be quite fine. In the afternoon the very same day, just after we arrived to Heligoland, checked in a hotel and unpacked, we took a boat to the neighbouring Düne island, where several dozens of families of Harbour seals *Phoca vitulina* and

Grey seals Halichoerus grypus have their habitat. We were truly excited and thus vacillated between different subjects to focus our telephoto lenses on, since this was the very first time we had the occasion to see these particular mammals (that weigh up to 140 kg) in the wild. The fantastic scenery was complemented by several species of waders and the ubiquitous screaming of a great variety of gulls. After an 11-month gestation, the birthing of baby seal pups takes place on the island, thus in the evening, we returned to Heligoland and looked forward to tomorrow, for the weather forecast said it would be glorious all day. It seemed we were in luck. Back in the hotel, we reviewed the pictures taken and made plans for the next day. Also, we checked the batteries status and memory sticks capacity and inspected the photography equipment. The latter was

wrapped in cling film in order to protect it from the perpetual wind and omnipresent sand. On the edge of sleep, we heard the raindrops falling on the windows...The proverb has it that tomorrow is another day. Hence we eagerly awaited the sunrise. Although there were some clouds on the sky, the sun was shining. At 9 a.m. we started our daylong trip and took a boat to Düne, again. And we were not by far the only ones – apart from us (three Czechs), there were also Dutch, Poles, Germans and Britons aboard. Merely five minutes after we set sail, we arrived to Düne and discussed our schedule. We decided to start on the right side of the island with the sun at our back. After few minutes' walk, we set our eyes on a cove with a lighthouse and a sandy beach, covered with a layer of marine plants, standing and lying photographers and,

indeed, seals. On my knees and breathless, I looked in the almondshaped eyes of a pup lying in marine plants. I quickly took several photos to capture this big moment. After a while, we found other pups and watched seal fights and lazy mother pinnipeds wallowing but closely watching their pups, always ready to attack the unwelcome visitor. We also photographed seals hunting and bathing, older pups in thicker coats with lanugo and mothers nursing baby pups. Time passed fast. In the evening, when returning to the harbour, I suddenly noticed a knot of photographers. Something extraordinary was clearly going on there. As I came closer I realized out that a female pinniped was in labour, just about to give birth. The birthing of one pup weighing several kilograms can even take several hours. Unfortunately, we did not have so much time. I sat down in the sand and, as the others, stared in amazement at the female lying on her side. She occasionally moved and a piece of pup's body peeped out. The remaining amount of time we had before the boat departure went inexorably by. In addition, this was the very last day of our trip. Yet we were in luck! We leapt into the air with joy when we witnessed the arrival of the pup, after several additional minutes of labour. This was the most beautiful gift we could get! Our hearts were racing when we were catching the boat. In the hotel, we raised our glasses in a toast to our trip. Mission accomplished. Sunday morning, the weather was rainy and windy again, so we caught up on some sleep and then took a ferry back to Cuxhaven.

























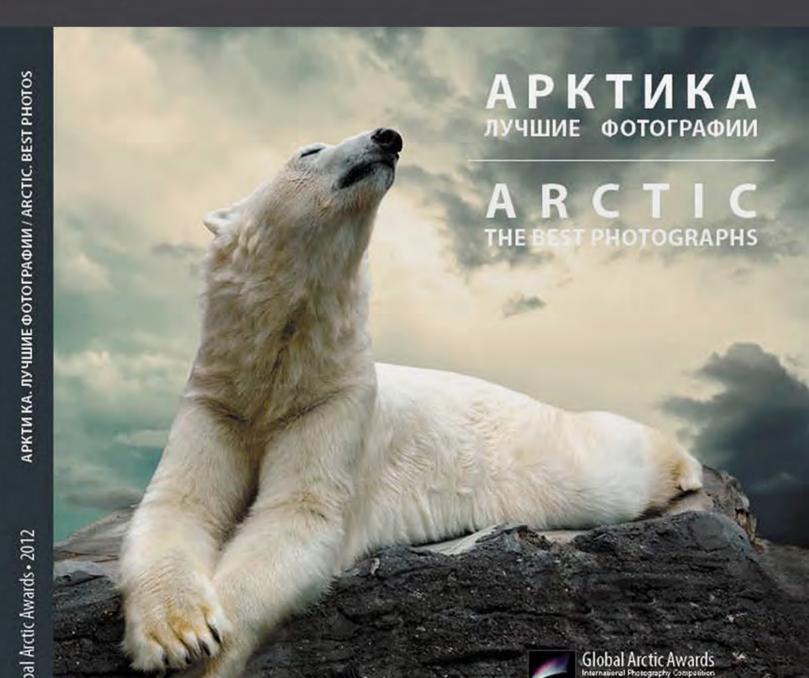












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"My experience was EXCEPTIONAL! The trip exceeded my expectations in all areas. I hoped to get in a position to see owls and couldn't possibly have been happier. It was abundantly clear that David invested significant time and effort prior to the arrival of the group in scouting the area around Quebec and Ontario. He knew exactly where to go to find every species of owl. His knowledge and efforts were very much appreciated by the entire group. My primary objective was just getting in a position to photograph owls and was not expecting much in the way of photographic instruction. I was very pleasantly surprised and was very happy with the instruction. Prior to the trip I had a love/hate relationship with auto focus as it applies to photographing birds in flight. I've struggled with this for years. While I have a lot more to

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wonderful memories and new found friends."

David Hemmings - President, Nature's Photo Adventures

learn, and need to work at honing my skills, the trip with NPA helped me tremendously in being able to photograph birds in flight. Photographing birds in flight was my main objective. Prior to the trip I was nearly clueless in comparison to my skills after the trip. You can also see from my bird list that I found the trip productive from a birding perspective as well". Kevin McCarthy, USA

"I recommend NPA workshops! The level of services by workshop leaders was excellent. Quality of photographic instruction was exceptional and they

were always on hand to solve issues that arose, and I had more than my share of equipment issues. Quality of wildlife provided was good and I was amazed at how easily the subjects accepted new setups provided. Locations visited were right on for the spices targeted. My most memorable moment was using the flash setups the first time and capturing an image of the Swordbill Hummingbird. I feel that my level of photography has improved with the custom functions that were set up on my camera for me and the resulting images that I obtained. Overall experience and

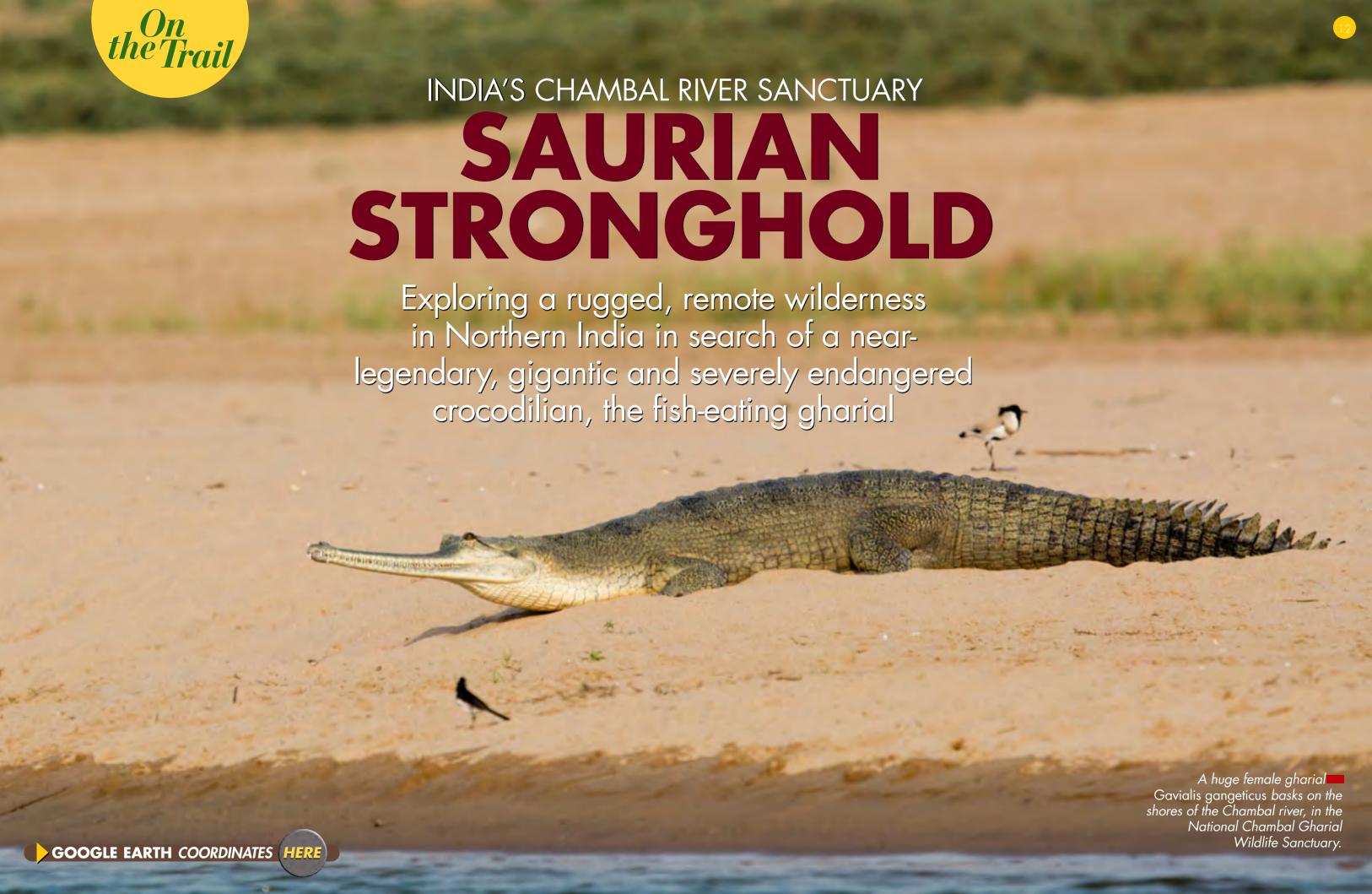
expectations were achieved and we were fortunate to have a very compatible group on our tour, which made it very enjoyable. This was my first workshop and I would recommend them to friends".

Rosemary Harris, Canada

"Great trip, great experience and great workshop leader. Great opportunity for capturing images of magnificent and uncommon (in southern USA) birds. Organizers contribute to great group dynamics and superb attitude. Cool techniques". *Eric Grossman, USA* 

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TEXT BY ANDREA FERRARI
PHOTOS BY ANDREA & ANTONELLA FERRARI

ost visitors to India - if interested at all in the wonderful wildlife of the subcontinent - hope to see a tiger in the wild. Some will also be happy with elephants, birds and the occasional cobra. But - gharials? Why, most people don't even know what a gharial actually is! In fact, gharials are pretty amazing creatures, and the stuff of legends - besides being highly endangered, major biological indicators of river water quality. Since briefly glimpsing one almost forty years ago in the swift waters on the Rapti river in Nepal, we had long dreamed to see them again in the wild. And to see gharials in the wild there is no better place in the whole world than the remote, romantic Chambal - a rugged, desolate, spectacular wilderness where nature, history and culture intermingle as only in India they can, and which we visited together with our dear friend and wildlife

photographer Yuwaraj Gurjar, with the help of local biologist Rajeev Tomar. The National Chambal Sanctuary, also called the National Chambal Gharial Wildlife Sanctuary, is a 5,400 square km (2,100 sq mi) tri-state protected area in northern India. Located on the Chambal River near the tripoint of Rajasthan, Madhya Pradesh and Uttar Pradesh, it was first declared in Madhya Pradesh in 1978 and now constitutes a long narrow eco-reserve co-administered by the three States. Within the sanctuary the wide, pristine Chambal River cuts through mazes of rugged ravines and hills, fringed by long, wide, deserted sandy beaches the landscape itself is worth the trip. The critically endangered gharial and the red-crowned roof turtle live here, and together with the endangered Ganges river dolphin they are the keystone species of the sanctuary. Other large threatened inhabitants of

continued on page 16







crocodile, the smooth-coated otter, the striped hyena and the Indian wolf. The Chambal supports 8 of the 26 rare turtle species found in India, including the Indian narrow-headed softshell turtle, the three-striped roof turtle and the crowned river turtle. Other reptiles include the Indian flapshell turtle, the soft shell turtle, the Indian roofed turtle, the Indian tent turtle and the Bengal or land monitor lizard. Mammals include rhesus macaques, Hanuman langurs, golden jackals, Bengal foxes, common palm civets, Indian small mongooses, Indian grey mongooses, jungle cats, wild boars, sambar, nilgai, blackbuck, Indian gazelles (chinkara), northern palm squirrels, porcupines, Indian hares, Indian flying foxes and

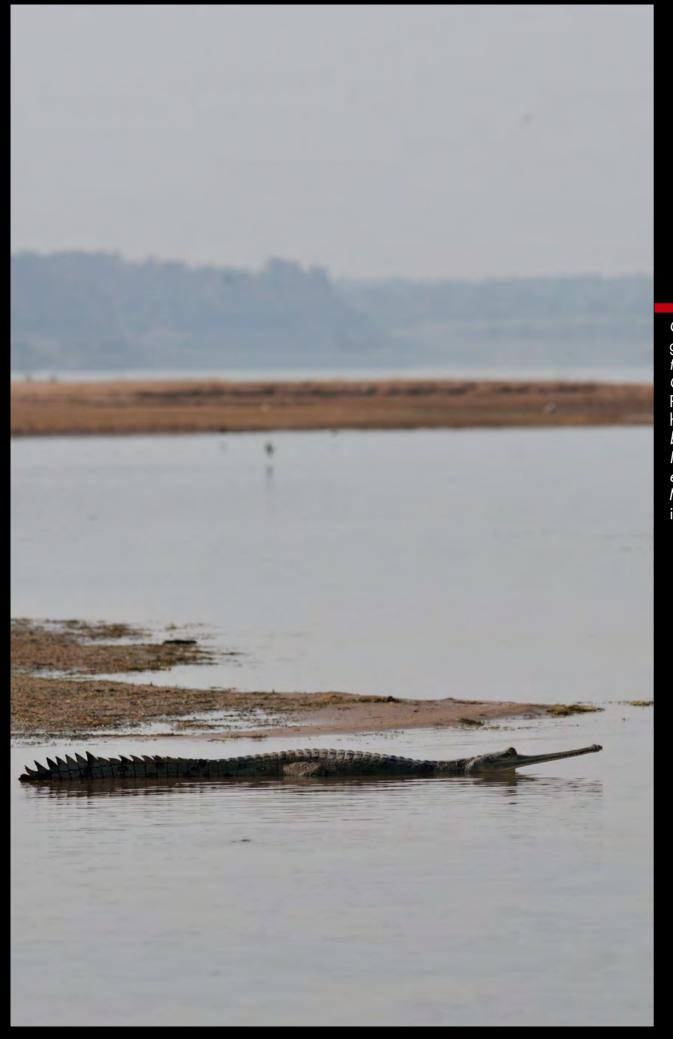
the sanctuary include the mugger

hedgehogs. The Chambal Sanctuary is and is a proposed Ramsar site - at least 320 species of resident and migratory birds inhabit the sanctuary. Migratory birds from Siberia form part of its rich avian fauna. Vulnerable bird species here include the Indian skimmer, sarus crane, Pallas's fish eagle and Indian courser; the pallid harrier and lesser flamingo are near threatened. Winter visitors include black-bellied terns, redand bar-headed goose. Other species include the great thick-knee, the greater flamingo, the Indian darter and the brown hawk owl. But the real star of the show - and the main reason for





Large Mugger or Marsh Crocodile Crocodylus palustris are commonly observed on the sandy shores of the Chambal river.



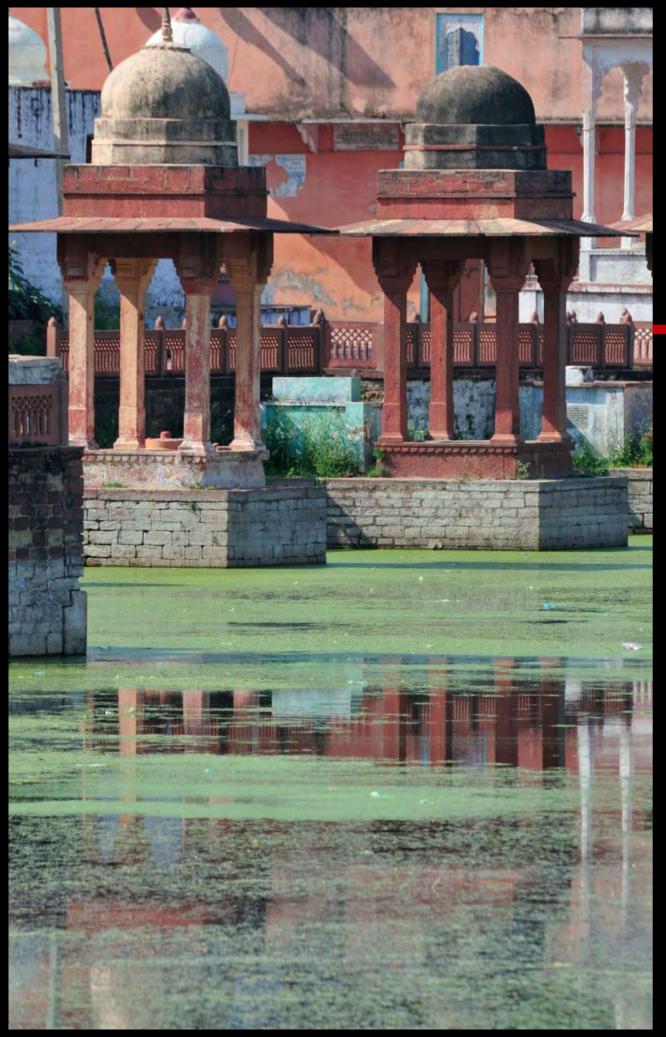
Left, immature
Gharial Gavialis
gangeticus;
top right,
Osprey
Pandion
haliaetus;
bottom right,
Intermediate
egret
Mesophoyx
intermedia.











Left,
architectural
detail of the
splendid
Machkund
complex, in
Dholpur;
right,
Ruddy Shelduck
or Brahminy
Shelduck
Tadorna
ferruginea.









Far left,
a very young
Rhesus macaque
Macaca mulatta;
left, the ubiquitous
Rose-ringed
Parakeet Psittacula
krameri, here
nesting in a wall
of the Machkund
complex in
Dholpur.

In 1977, four nests were recorded in the Girwa River of Katarniaghat Wildlife Sanctuary, where 909 gharials were released until 2006. Twenty nests were recorded in 2006, so 16 nesting females resulted from 30 years of reintroductions, which is equivalent to 2% of the total pre-2006 releases. In 1978, twelve nests were recorded in the Chambal River in the National Chambal Sanctuary, where 3,776 gharials were released until 2006. By 2006, nesting had increased by over 500% to 68 nests, but the recruited mature, reproducing females constituted only about 2% of the total number released. The newly hatched young are especially prone to being flushed downstream out of the protected areas during the annual monsoonal flooding. The gharial is characterised by its extremely long, thin jaws, regarded as an adaptation to a predominantly fish diet. Males develop a hollow bulbous nasal protuberance at sexual maturity. The name gharial is derived from the resemblance of the nasal growth to an earthen pot known locally as "ghara". They use this growth to modify and amplify "hisses" snorted through the underlying nostrils. The resulting sound can be heard for nearly a kilometer on a still day. Gharials are continued on page 29

Common but beautiful,















the only extant crocodilian with visible sexual dimorphism. Although the function of the nasal boss is not well understood, it is apparently used as a visual sex indicator, as a sound resonator, or for bubbling or other associated sexual behaviours.

The average size of mature gharials is 3.5 to 4.5 m (11 to 15 ft), with the largest recorded length is 6.25 m (20.5 ft), and a largest recorded weight of 977 kg (2,154 lb). Hatchlings approximate 37 cm (15 in) and can reach a length of 1 m (3.3 ft) in 18 months. The average body weight ranges from 159 to 250 kg (351 to 551 lb). Males commonly attain a total length of 3 to 5 m (9.8 to 16.4 ft), while females are smaller and reach a body length of up to 2.7 to 3.75 m (8.9 to 12.3 ft). The elongated, narrow snout is lined by 110 sharp interdigitated teeth, and becomes proportionally shorter and thicker as an animal ages. There are 27 to 29 upper and 25 or 26 lower teeth on each side. The nuchal and dorsal scutes form a single continuous shield composed of 21 or 22 transverse series. Gharials have an outer row of soft, smooth, or feebly keeled scutes in addition to the bony dorsal scutes, and they also have two small postoccipital scutes. The toes are partially webbed. They also have a very distinct crest on













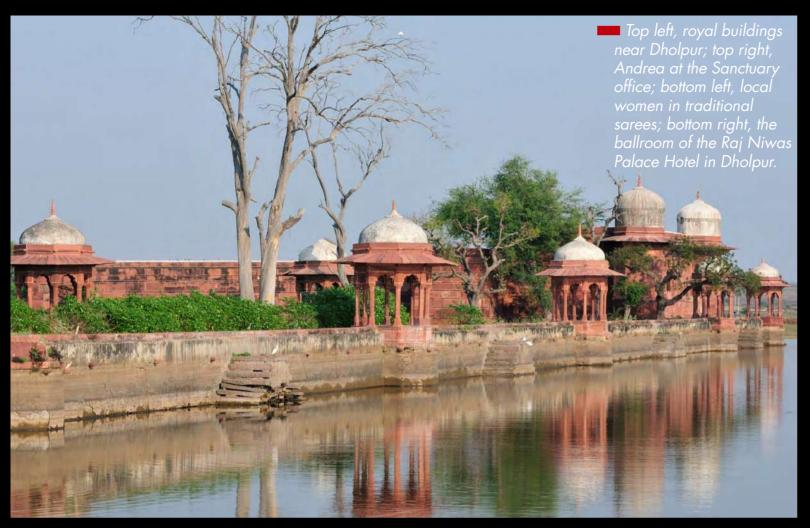






Left,
two Rhesus
macaque
Macaca mulatta
by a dilapidated
royal hunting
pavilion:
right,
Black-winged Stilt
Himantopus
himantopus,
Chambal river.

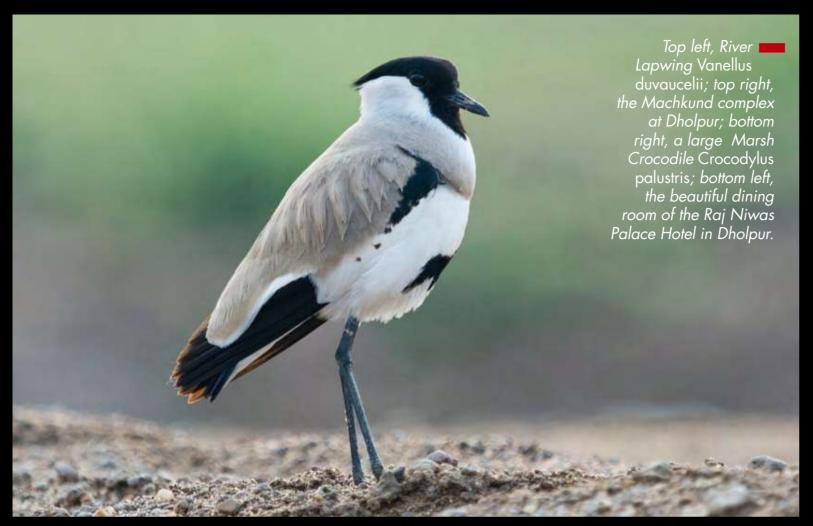


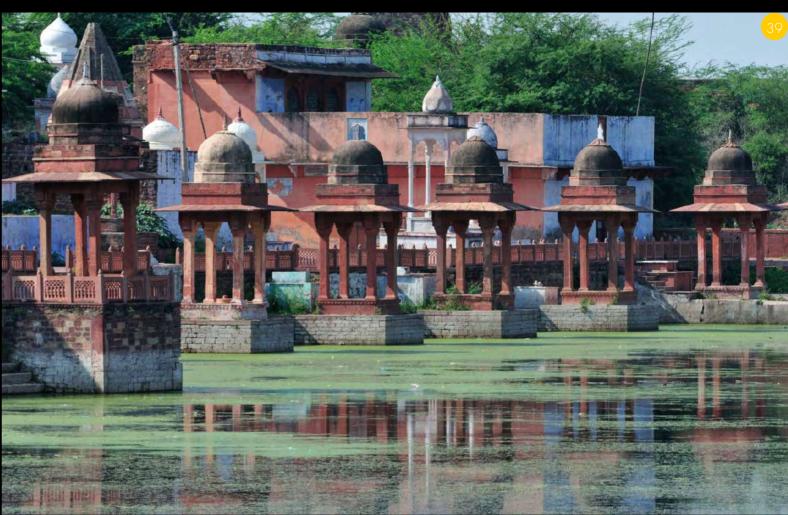












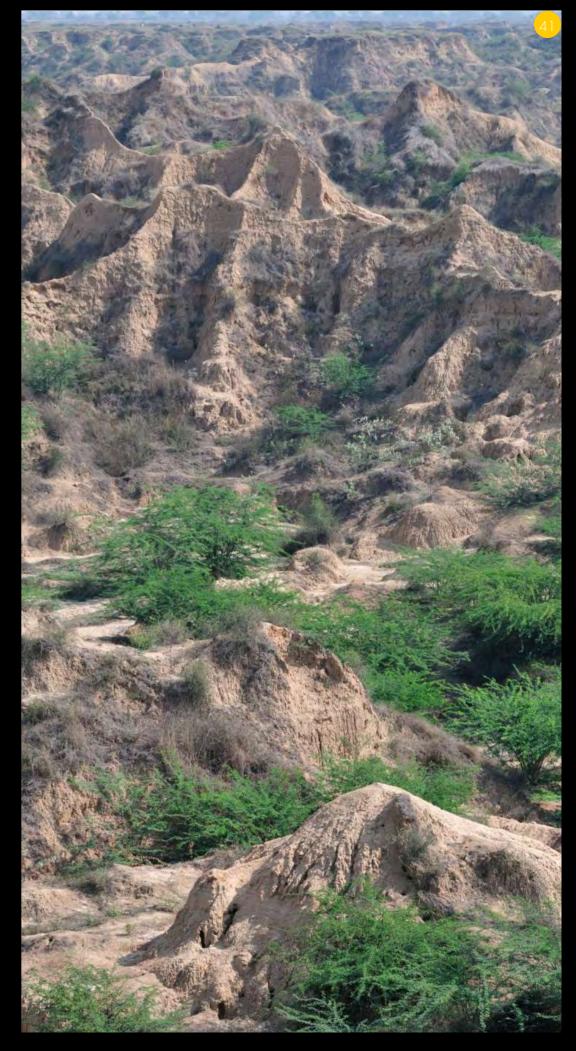








areas, and the loss of riverine habitat to dams, barrages, irrigation canals, siltation, changes in river course, artificial embankments, sand-mining, riparian agriculture, and domestic and feral livestock. Thanks to the efforts of several organizations and individuals - notably celebrated herpetologist Romulus Whitaker conservation programs have been enthusiastically and successfully undertaken in India and Nepal, being based on the establishment of protected areas and restocking of these with animals born in captivity, but nowhere has restocking yet reestablished viable populations. Gharials are being successfully bred in captivity in the National Chambal Sanctuary and in the Gharial Breeding Centre in Nepal's Chitwan National Park, where they are generally grown for two to three years until they average about one metre in length, when they are released. Reintroduction in their habitat however is fraught with difficulties largely due to growing and uncontrolled anthropogenic pressures, including depletion of fish resources - and the future of the harmless, beautiful gharial is still, sadly, very much in doubt.





Closely approached by our boat, a huge Mugger or Marsh Crocodile Crocodylus palustris launches itself in the waters of the Chambal river at lightning speed.



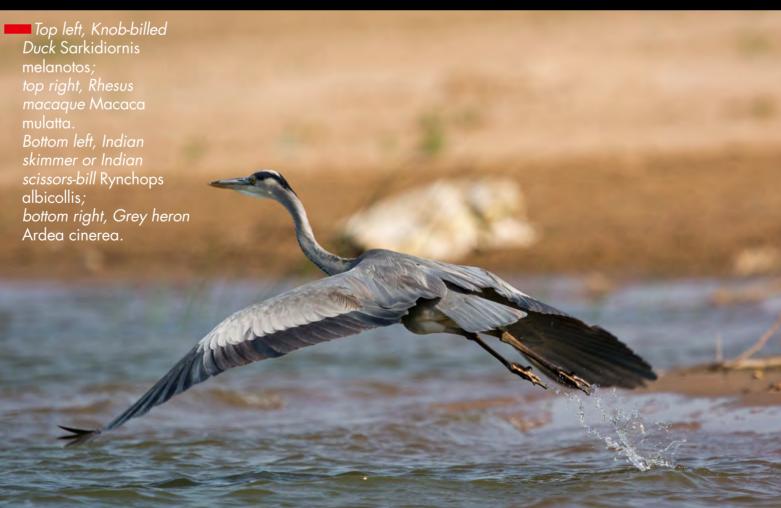


Slowly cruising along the Chambal river and its sandbanks offers great opportunities to watch and photograph the unmistakable Indian skimmer or Indian scissors-bill Rynchops albicollis.





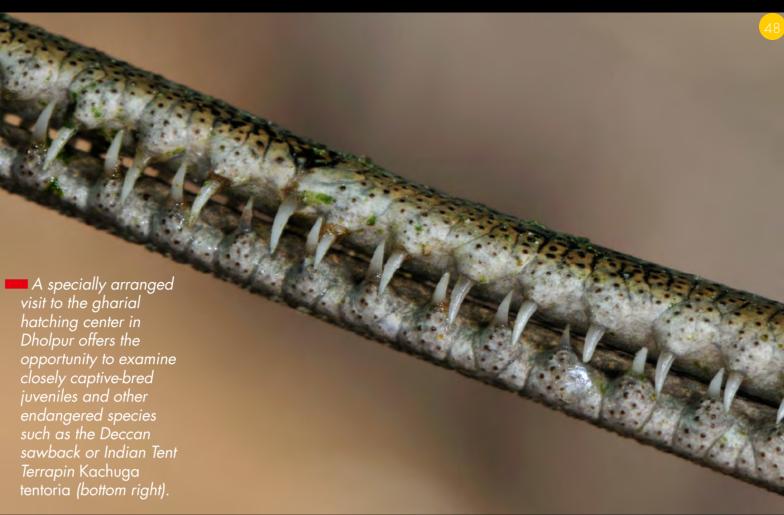








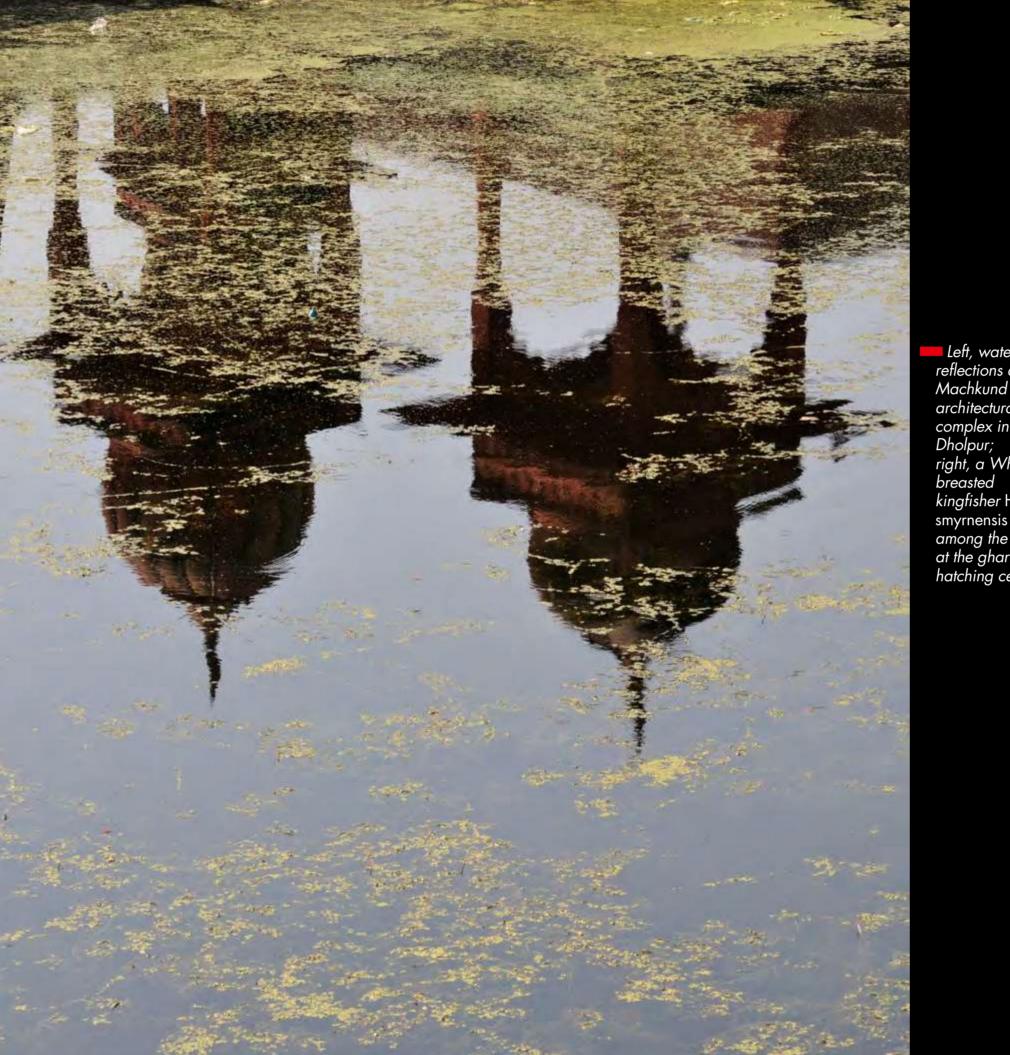




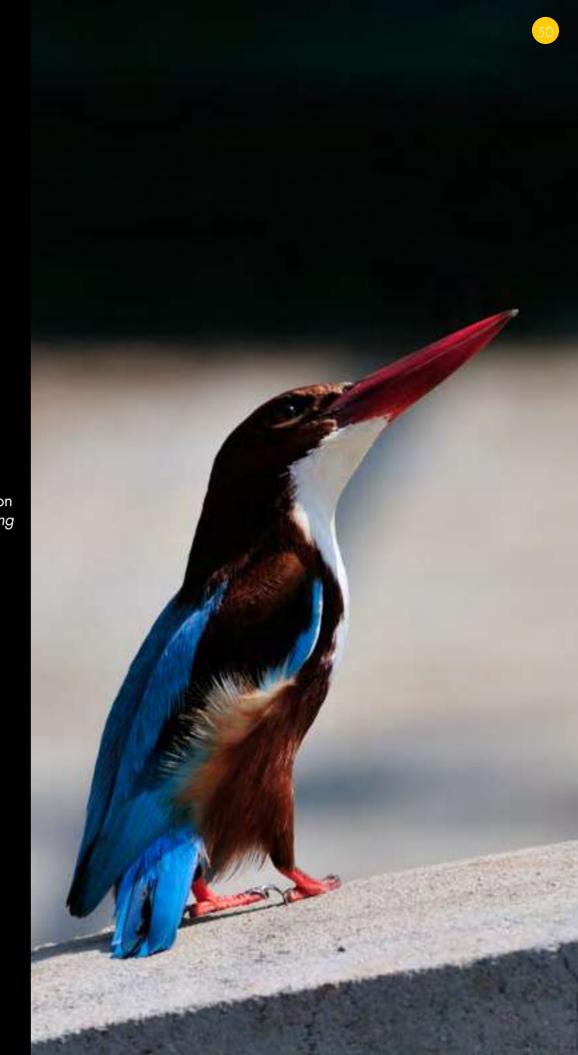








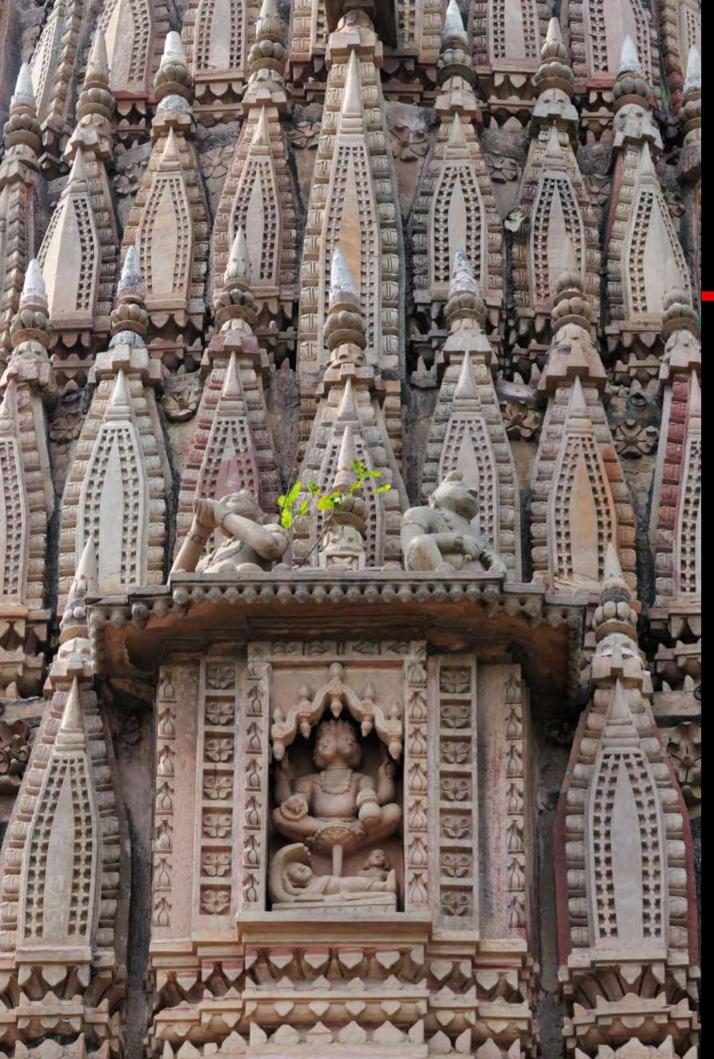
Left, water reflections at the Machkund architectural complex in Dholpur; right, a White-breasted kingfisher Halcyon smyrnensis hunting among the pens at the gharial hatching center.



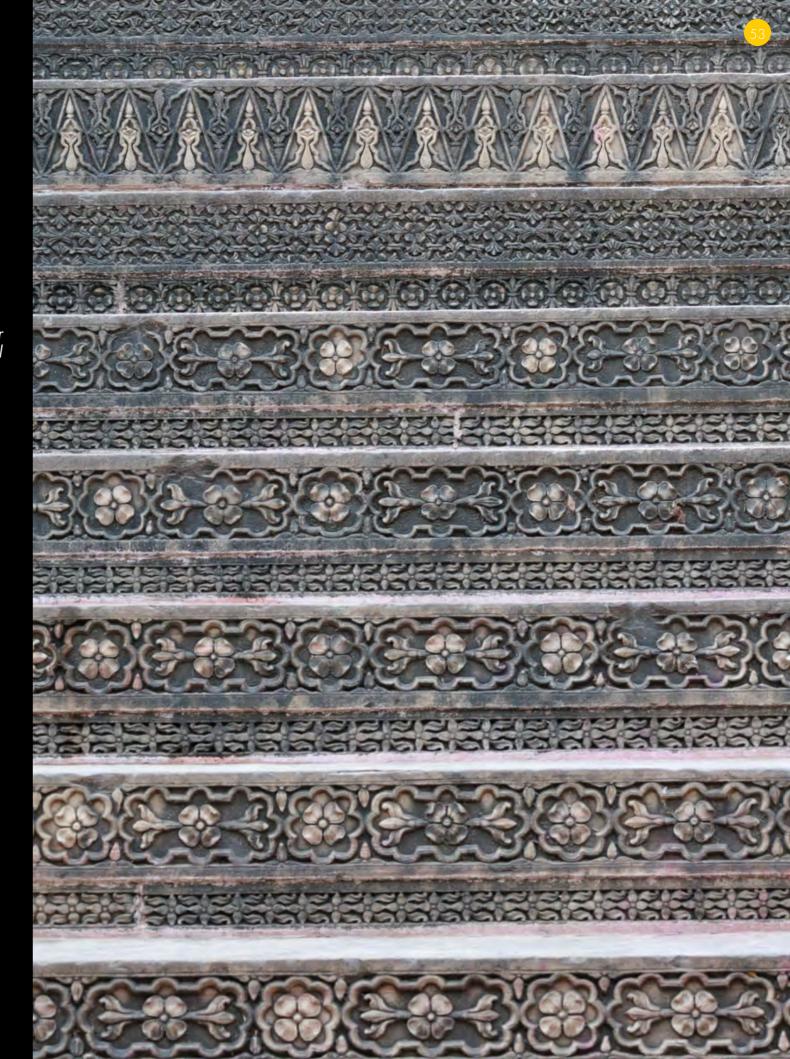




Bar-headed geese Anser indicus in typical formation as they fly over the shores of the Chambal.



The Chambal river area in the vicinity of Dholpur is rich in historical and artistic evidence. Left, detail of the sculptures of the Chropra Mandir at the Shiva Temple, Dholpur; right, a detail of the intricately ornamented and sculpted staircase of the same.













### At-a-glance travel guk





### USEFUL TIPS FOR YOUR EXPEDITION

#### Some simple, common sense, field-tested advice and information to make the best out of your trip and avoid hassles, worries and problems

that a local organizer or travel agency might prove sites nearby, such as the Mackhund complex. invaluable to avoid trouble - as usual, we secured the help of our photographer friend Yuwaraj Gurjar CURRENCY: Indian Rupee - it is highly advisable to and of local trained conservationist Rajeev Tomar.

ROUTE: If your international flight lands in Mumbai MEANS OF TRANSPORT: The Sanctuary ticket of arrival as later on you will have little or no or Delhi you'll have to spend one night there. Later office at the bridge in Dholpur offers 90-mins boat possibility to change your money in the local currency. on one can fly via domestic airlines to Agra or get trips down the Chambal (it is highly advisable for there by night train, but both options need to be photographers to rent a boat fully for themselves), booked well in advance. Domestic flights are often but keep in mind that local boatmen are not really subject to long delays and sudden cancellations, so trained to work with photographers and these trips the train option might be a bit safer, and it is are considered more as joyrides for the casual local certainly more colorful. The hotel's staff will be at the tourist than anything else, so the help of a local airport or train station to pick you up and drive you guide is highly advisable. Most hotels in Dholpur to destination. Once again, it is well worth repeating offer car trips to the ravines and artistic/historical

change Euros or USD well in advance in your port comfortable and extremely well managed.

**ACCOMODATION:** The State of Rajasthan offers the opportunity to stay in palatial hotels which are luxurious, exceedingly clean and very well kept, offering safe, tasty local food and providing highly professional wildlife and tourist guides. When in Dholpur we suggest taking the extra step and stay at the gorgeous Raj Niwas Palace, a lovely red sandstone historical building which was - according to local lore - built to welcome HRH Albert Edward when he visited in 1876. It is very roomy, extravagant,

### An extraordinary river sanctuary to be explored in safety and comfort









bread), aloo paratha (bread filled with potatoes) fact that English is not spoken in rural areas. and of course an enormous variety of curries, from very mild to exceptionally hot. Don't be prejudiced and experiment - Indian food is pure heaven, and the cooking at the Raj Niwas Palace is brilliant!

LANGUAGE: Hindi and a lot of local dialects, but English is more or less spoken and understood anywhere (except in most rural areas).

WORRIES: None worth mentioning, but like in so night walks alone, especially if carrying expensive camera or video equipment. Lone women might be **CLIMATE:** Rajasthan will be exceedingly wet and in love with the place for 35 years - trust us!

FOOD: India is one of the very few countries in the occasionally harassed and petty theft may occur humid during the monsoon season from June to world whose spectacular food can be compared in now and then even in the best hotels, so always September and very warm/hot, exceedingly arid variety, taste and complexity to Italian cuisine. It is carry your valuables and documents with you. Being and dusty during the dry season. Visiting the also a vegetarian's paradise! Staple food items with a local guide will also avoid troublesome and Chambal from February to June should present no include dhaal (lentils), roti, naan or chapati (flat possibly dangerous misunderstandings due to the major difficulties with no temperature extremes.

about anywhere in India in our long experience, and universe" to many newcomers and provoke a real that is dysentry (or worse) from tainted water or culture shock to westerners - even in today's much street food. The situation has currently greatly travel-wise world. Wildlife, art and culture are improved compared to the past, but always - repeat, always - insist on bottled water (to be opened in front delays, hurdles and bureaucracy can drive visitors of you), hot, freshly brewed tea or the occasional out of their wits (getting a visa, for one, is costly and cold Coke (no ice!), which can work wonders on complicated), but the secret is taking everything as upset stomachs. Hot, spicy food can only be good it comes - getting angry won't solve the problem but many other places it's definitely better avoiding late for you - when properly prepared in a clean kitchen. actually worsen it. This - in fact - is what makes India

**BESIDES:** With its exotic smells, flavors, sounds and **HEALTH:** There's only one thing to seriously worry colors India can still truly represent an "alien among the planet's richest and most diverse, but a seasoned traveller's paradise. We have been madly



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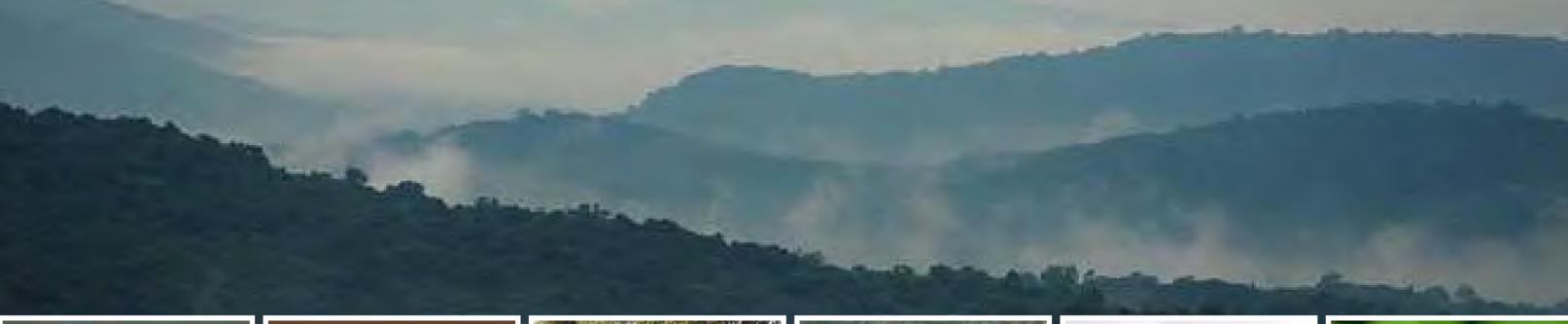


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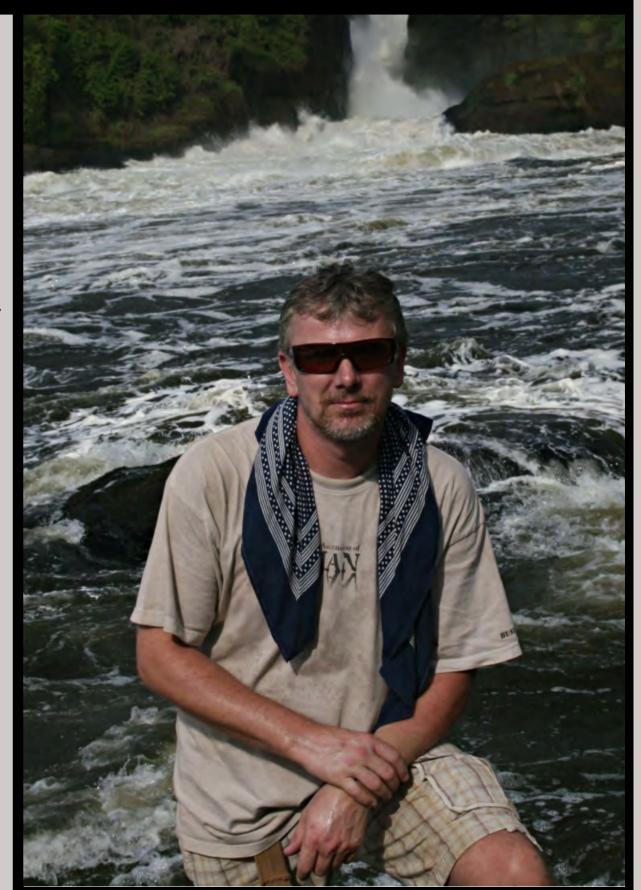
### Vladimir Cech: A Wildlife Photographer in His Own Words

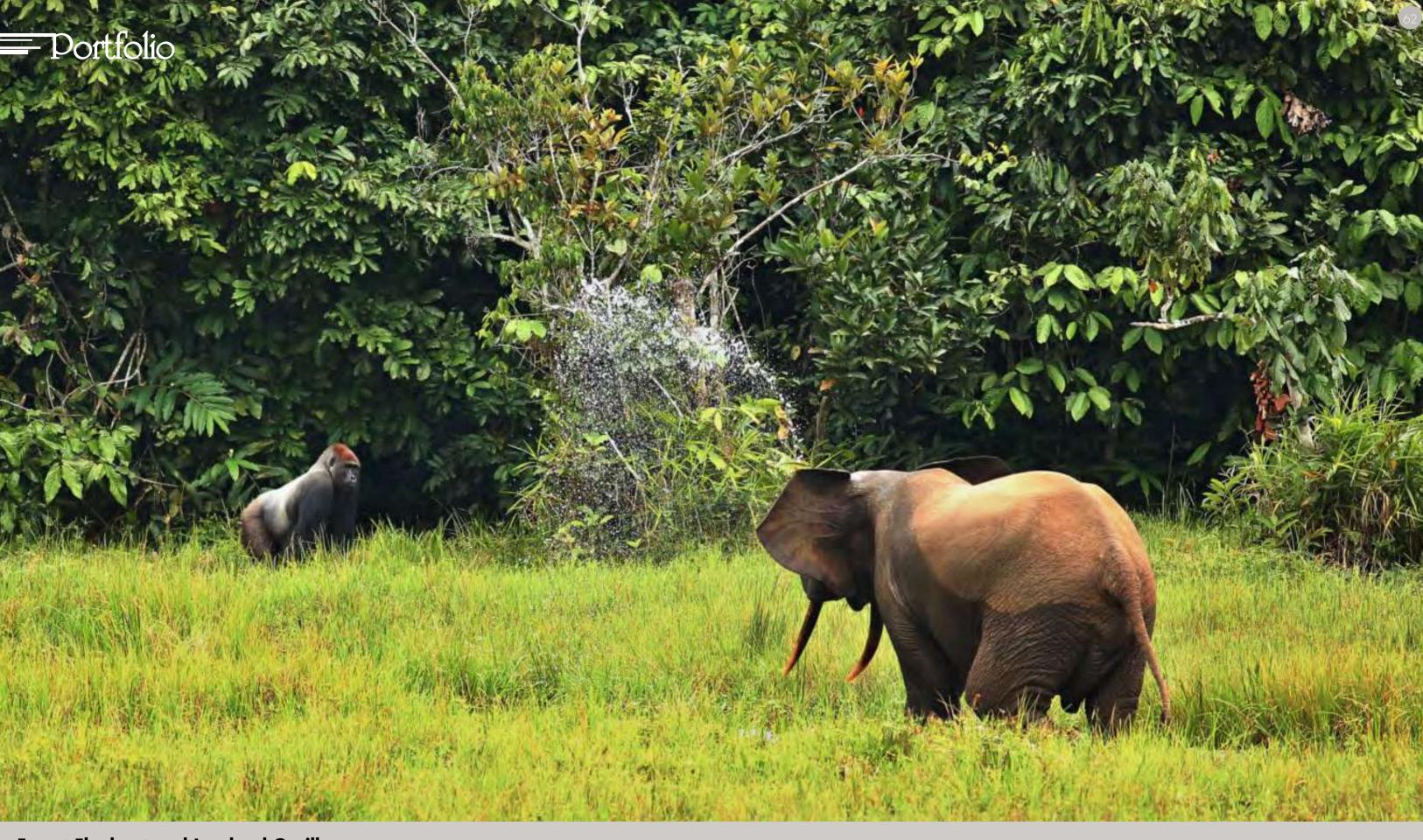
# A Passion for Nature

An amateur wildlife photographer in the purest sense of the word, which moved by a sincere zest for the untamed wild succeeds in capturing the raw essence of his animal subjects - from the dark forests of his own home to those of Africa

I was born 50 years ago in the Czech Republic, and I am a trained zoologist. Since my earliest childhood I have constantly nurtured the hobby of photographing animals, at the beginning mostly in local zoological gardens. More recently, in my later years, I have at last begun to travel around the world, taking pictures of landscapes and wildlife. Among all other international destinations, I am

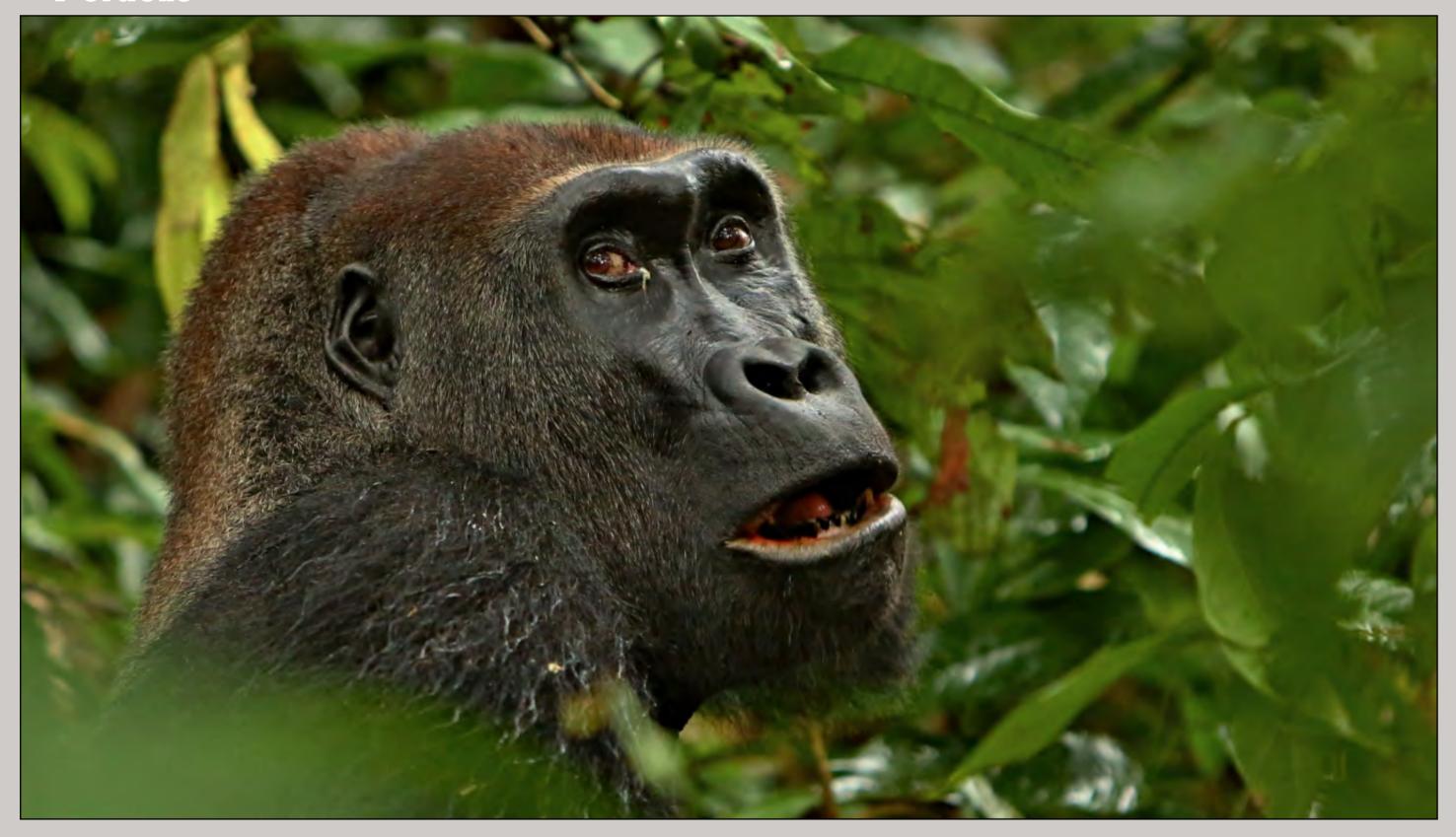
especially and deeply in love with Africa, a continent which I visit every year. I am not a professional photographer - photography is simply a great hobby for me, and I am still only too glad when I succeed in taking photos I like. I take my images using two camera bodies - a Canon 5D III and a Canon 7D, using the following lenses: 70-200mm f2,8, 400mm f5,6, 500mm f4,16-35mm f2,8.





Forest Elephant and Lowland Gorilla
Loxodonta africana cyclotis and Gorilla gorilla gorilla
Democratic Republic of Congo, Nouaballe Ndoki National Park, Canon 5D III, 400mm f5,6, ISO 250,1/640, f5,6

## = Portfolio



Lowland Gorilla
Gorilla gorilla gorilla
Democratic Republic of Congo, Nouaballe Ndoki National Park, silverback Buka, group Buka,
Canon 5D III, 70-200mm f2,8, ISO:6400, 1/250, f3,5.



Shoebill

Balaeniceps rex
Uganda, Mubamba Bay
wetland, Canon 5D III,
400mm f2,8, ISO 100,
1/400, f3,5.





Crested Hawk
Eagle
Nisaetus cirrhatus
India, Kanha
National Park,
Canon 5D III,
400mm f2,8, ISO
1000,1/30, f5

Mountain Gorilla Gorilla beringei beringei Uganda, Bwindi National Park, black-back, group Mubare, Canon 7D, 100-400mm, ISO 3200, 1/40, f5





Wild boar
Sus scrofa
Czech republic,
Canon 5D III,
500mm f4, ISO
1250,1/1250, f4



Indian Roller Coracias benghalensis India, Kanha National Park, Canon 5D III, 400mm f2,8, ISO 640, 1/5000, f4

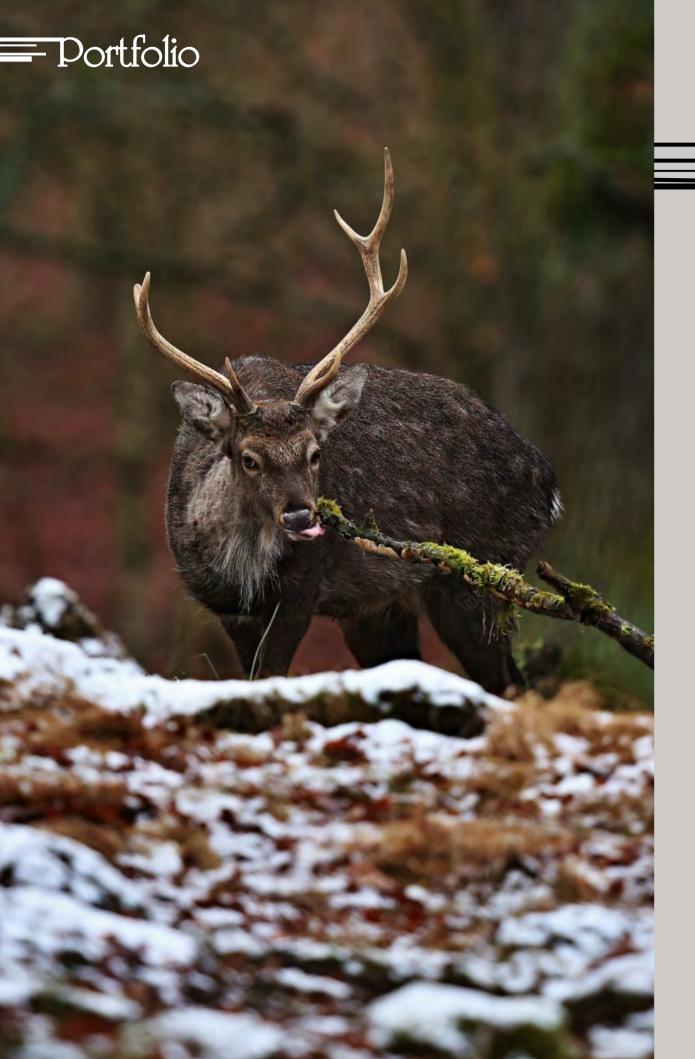


Burchell's Zebras
Equus quagga burchellii
Kenya, Masai Mara National Park,
Canon 5 D III, 400mm f2,8, ISO 100, 1/400, f3,5

Mountain Gorilla Gorilla beringei beringei Uganda,Bwindi National Park, silverback Ruhondeza, group Mubare, Canon 30D+70-200mm f2,8, 1/60, ISO 400, f4







Dybowski deer Cervus nippon dybowskii Czech republic, Canon 5D III, 500mm f4, ISO 800,1/640, f4

Shoebill

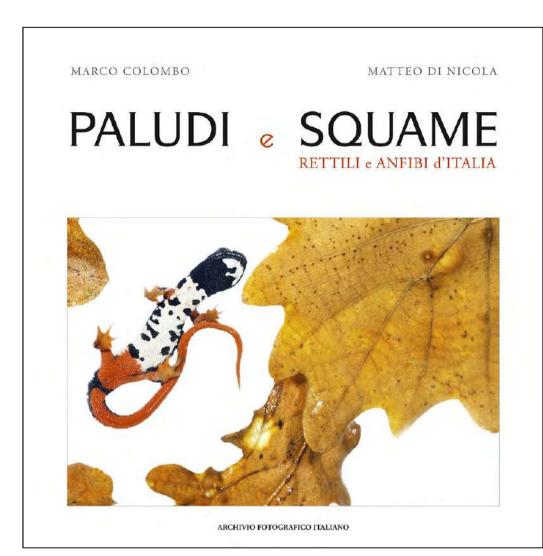
Balaeniceps rex
Uganda,

Mubamba Bay wetland,
Canon 5D III, 400mm f2,8,
ISO 100, 1/500, f3,5









# NEW HERP BOOK PALUDI E SQUAME: rettili e anfibi d'Italia

Published by the Italian Photographic Archive, this book comes from a great love for Italian herps, from the wish of making them known to the public in all their beauty and fascination, and last but not least their need of protection. This is the first strictly photographic book about Italian frogs, toads, newts, salamanders, turtles, lizards and snakes in their natural environments, through shots obtained over many years by the authors. This work has been published with the sponsorship of Rile-Tenore-Olona Local Park (Lombardy) and the patronage of Societas Herpetologica Italica (SHI).

The book is in Italian but don't be afraid, there are much more photographs than texts!

Authors: M.Colombo & M. Di Nicola

Product details: 28x28 cm, hardcover, 112 pages

**Publisher: Punto Marte** 

Price: 25 euro (shipping costs excluded)

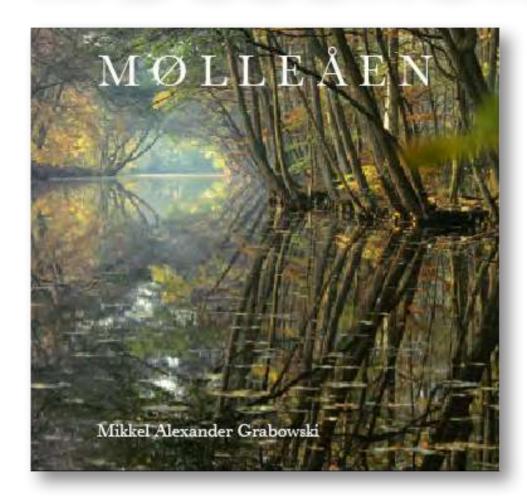
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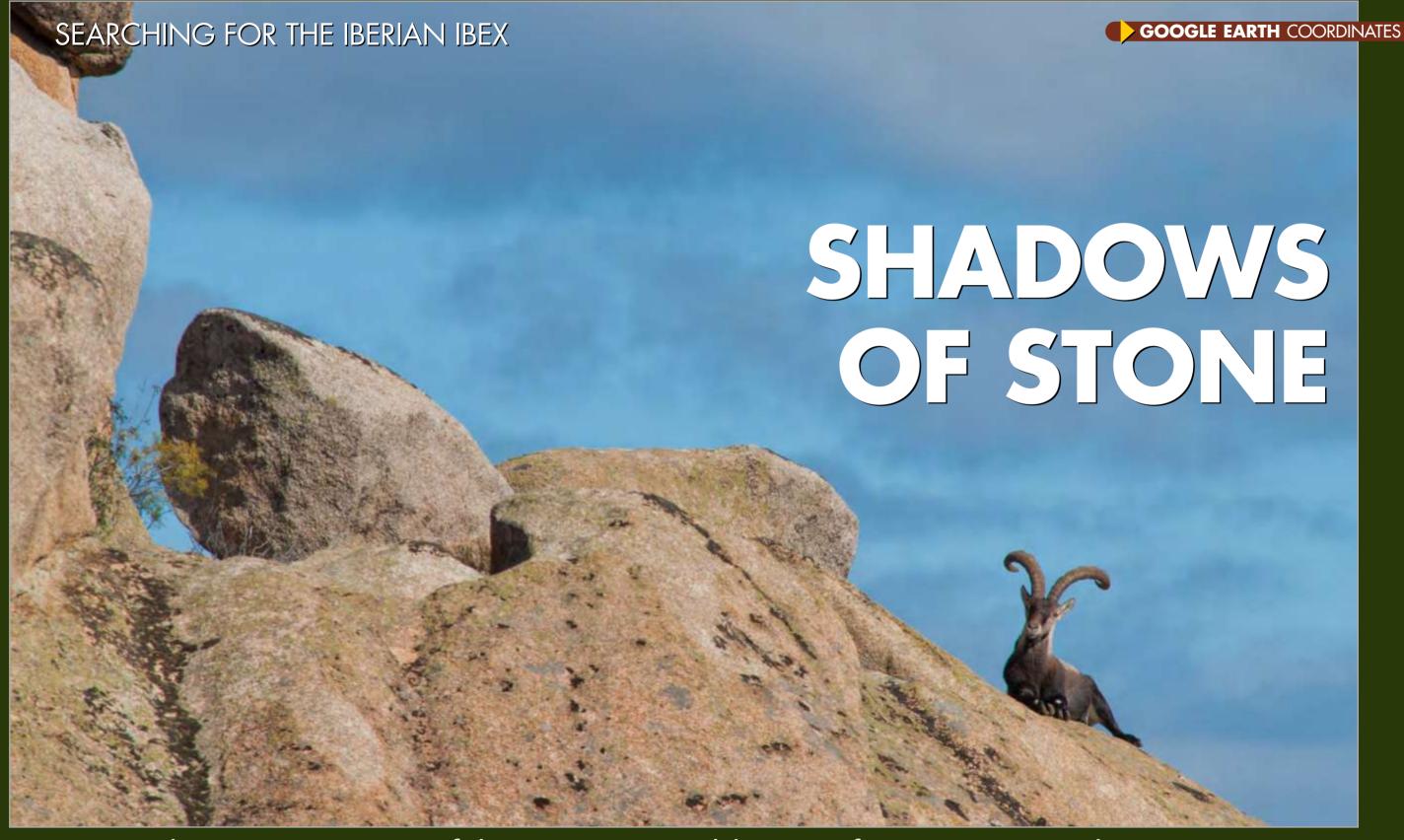




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# Fieldwork





The majestic, graceful, mysterious wild goat of Spain's rugged sierras is making a spectacular comeback from the brink of extinction



The Iberian ibex, Spanish ibex, Spanish wild goat, or Iberian wild goat *Capra pyrenaica* is a species of ibex with four subspecies. Of these, two can still be found on the Iberian Peninsula, but the remaining two are now extinct. The Portuguese subspecies became extinct in 1892 and the Pyrenean subspecies became extinct in 2000.



The two subspecies *C. pyrenaica hispanica* and *C. pyrenaica victoriae* live along the Spanish Peninsula and have migrated and settled into the coast of Portugal.

TEXT AND PHOTOS
BY ISMAELE TORTELLA

ave you ever been witness to events in life so special that you regret not being able to have documented them in some way? I have experienced many wonderful moments during my time spent with the Spanish Ibex, many I have been able to capture in my own photographic style, while others remain only as personal memories.

When I began to write about my experiences, the first question I asked myself was, "What has been my motivation?" What causes those passionate about nature to make all those many sacrifices, just to catch a glimpse of the many wild scenes offered to us? I struggle to find the words to describe it! I believe that the only people who can truly understand my drive, are those who share the same passion and sensitivity towards nature as I do, donating not only time and money, but spirit, to search for wilderness.

My first contact with the Spanish Ibex Capra pyrenaica occurred during my first year of university in Madrid, Spain.

It was during my study of "Ingenieros de Montes" that I heard for the first time the description of a large member of the Capra spp. genus, which symbolizes the unique character of the Iberian territory. Immediately I began my research, trying to find as much information as possible about this animal. To my surprise I discovered that there was a large population less than an hour away from the great Spanish capital. Without thinking twice, I enquired about transport and located the precise area, and soon after found myself on the boundary in their world. It was in the Parque Regional de la Cuenca Alta del Manzanares, a rugged land of rocks and sloping stone faces, forming one of the largest granite mountain ranges in Europe.

Slipping between those large granite boulders, I was fully focused on the search for that unique Hispanic bovid, even neglecting to observe my surroundings. So I stopped, started to listen to the activity around me, and then discovered upon looking behind me a



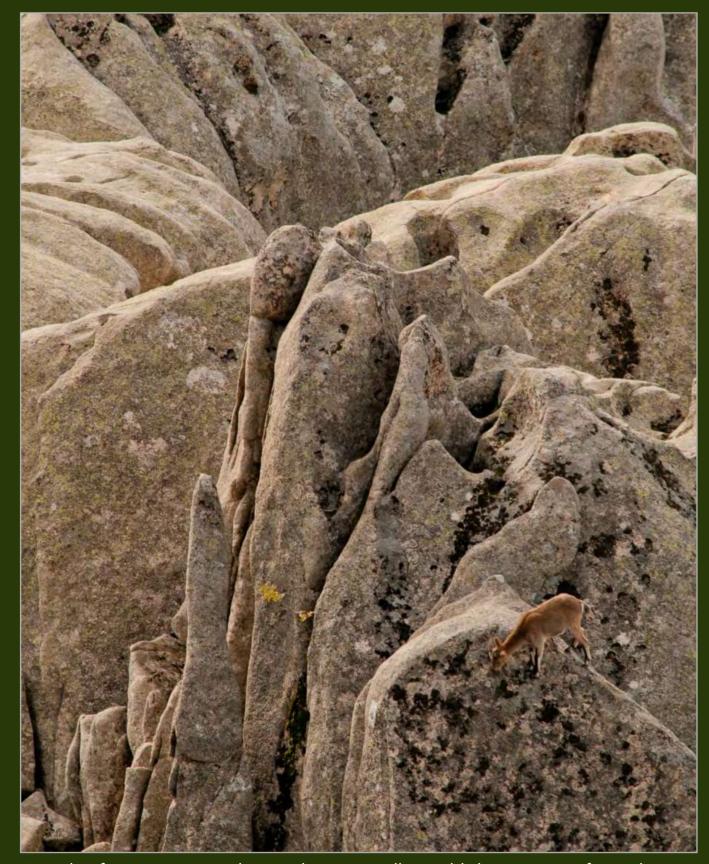


Capra pyrenaica are strong mountainous animals characterized by their large and flexible hooves and short legs. These physical adaptations allow them to be able to run and leap on bare, rocky, rough, and steep slopes. This gives them an advantage over potential predators that possibly cannot reach them because of the terrain.





The annual horn growth is influenced principally by age but can also be contributed by environmental factors and the growth made in the previous year. Even though the female ibexes are smaller, they have a faster ossification process and typically finish full bone development nearly two years before males.



Outside of rutting season, Iberian ibex generally establish two types of social groups: male-only groups and females with young juvenile groups.

meadow revealing a flock of many dozens of Storks Ciconia ciconia in search of food. I then turned to the sky, aware of the imposing forms of the Griffon Vultures Gyps fulvus soaring above my head, circling and plummeting with the thermal currents. I Looked down, noticing for the first time the lizards Podarcis hispanicus creeping out of their hiding places, their growing curiousity outweighing their fear.

Just as nature was returning once more to its rhythms, I became aware of movement amongst the rocks. The form of a creature which might have even been a rock! And there in the shadow of a cliff, I saw the silhouette of a female "cabra montesa". It is true that this species is characterized by a large sexual dimorphism : females are smaller than males, with a maximum height of 60 cms and length of 120 cms, weighing approximately between 30 and 45 kg. In appearance they are similar to our domestic goat, the female's horns very small in comparison with the male's. With my binoculars out I began to notice others, and so my next task was to approach the herd of lbex,

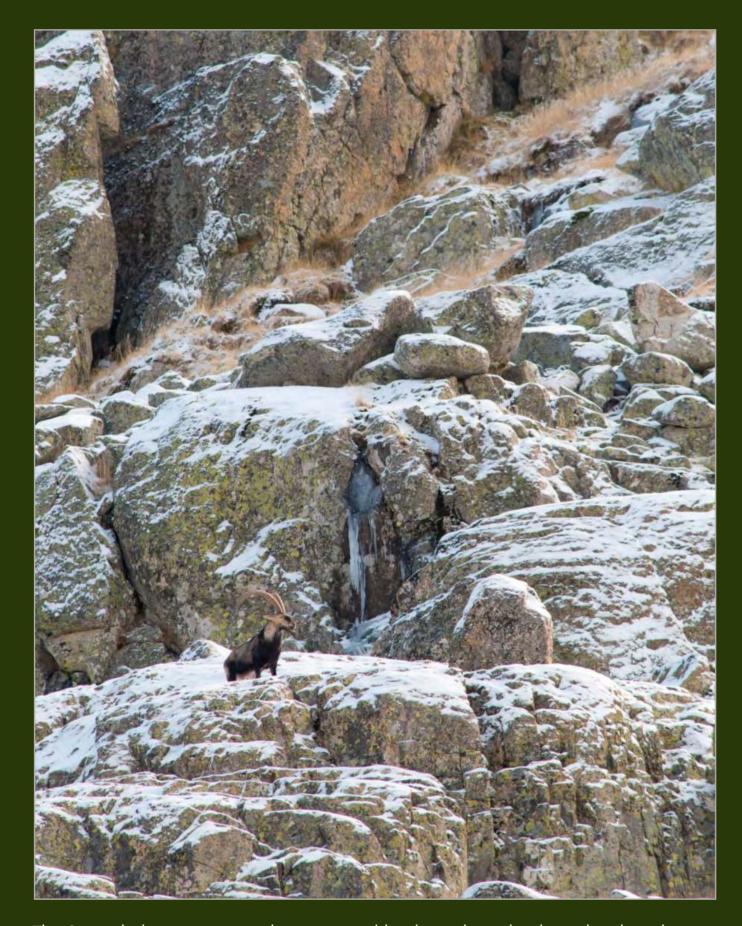
with as little evidence of my presence as possible. One of the scenes that struck me in particular involved an adult male standing on its hind legs in an agile effort to reach the fresh shoots of a stunted holm oak *Quercus ilex*.

Navigating my way through the stony terrain was a delight. Shifting through the narrow channels left by the rocks, impressed by that weathered scrub typical of the Mediterranean, discovering their kingdom. The closer I got , the more aware I became of the strong odour characteristic of the genus Capra spp., the vegetation too becoming more visibly chewed and reduced. I was right there among them. To avoid causing any more alarm, I decided to pause in the shade of a rocky ridge. Almost parallel to my position on the hill facing me sat an adult male, easily distinguishable by its size. The males can weigh as much as 110 kg, the dark fur and enormous curved horns giving an air of majesty. I stood watching him for an hour as he lay on the rocks enjoying the soft sun, staring at me all the while, curious to see if posed any threat. When at last he





Populations of *C. pyrenaica* have decreased significantly over the last centuries. This is due to a combination of contributing factors such as great hunting pressure, agricultural development and habitat deterioration. There are also a series of threats in an effort towards ibex conservation; such as population overabundance, disease, and potential competition with domestic livestock and other ungulates, along with the negative effects of human disturbance through tourism and hunting.



The Spanish ibex is most easily recognised by the striking, backward-arching horns of the male, which can grow up to an astonishing 75 centimetres long.

looked away, I knew this was a sign of acceptance, but now the sun was leaving me and it was time to go. After an hour's walk back down, I turned my binoculars once more towards the Ibex. He was still there on that rock, visible only by the dim light of the rising moon.

This was only my first outing, and it was followed by many more in that Park, discovering the different environments colonized by the Ibex. My desire to find out all I could about this animal led me to follow them throughout the year, studying the behavior. From the first warm period in May when the kids are born, until the arrival of that magical period most sought after by wildlife photographers; the courting. This takes place between November and December and is the one time of year the males can be seen to join with the females, the rest of the year they generally live apart. With the aim of photographing such an engaging moment, I joined forces with a group of

fellow photographers in the Parque Regional de la Sierra de Gredos (Comunidad Autonoma de Castilla y León). It is at this time you may be able to witness the 'rutting' between adult males, which battle in order to determine who amongst them has mating priority over the females. Once they have established this kind of briefly-lasting hierarchy, males will trail after the various females sniffing their urine, finding out if they are ready to mate. During this particular expedition, the finest photographic moment took place on the last day, when after many days of sunshine it began to snow. The snow gave a very different atmosphere to the scenery, most magical and unreal, the white falling from the sky mingling with the dark colours, softening patches of rough rock.

Following this animal throughout the year has allowed me to understand more about the natural world, adding a piece to my jigsaw puzzle of knowledge...





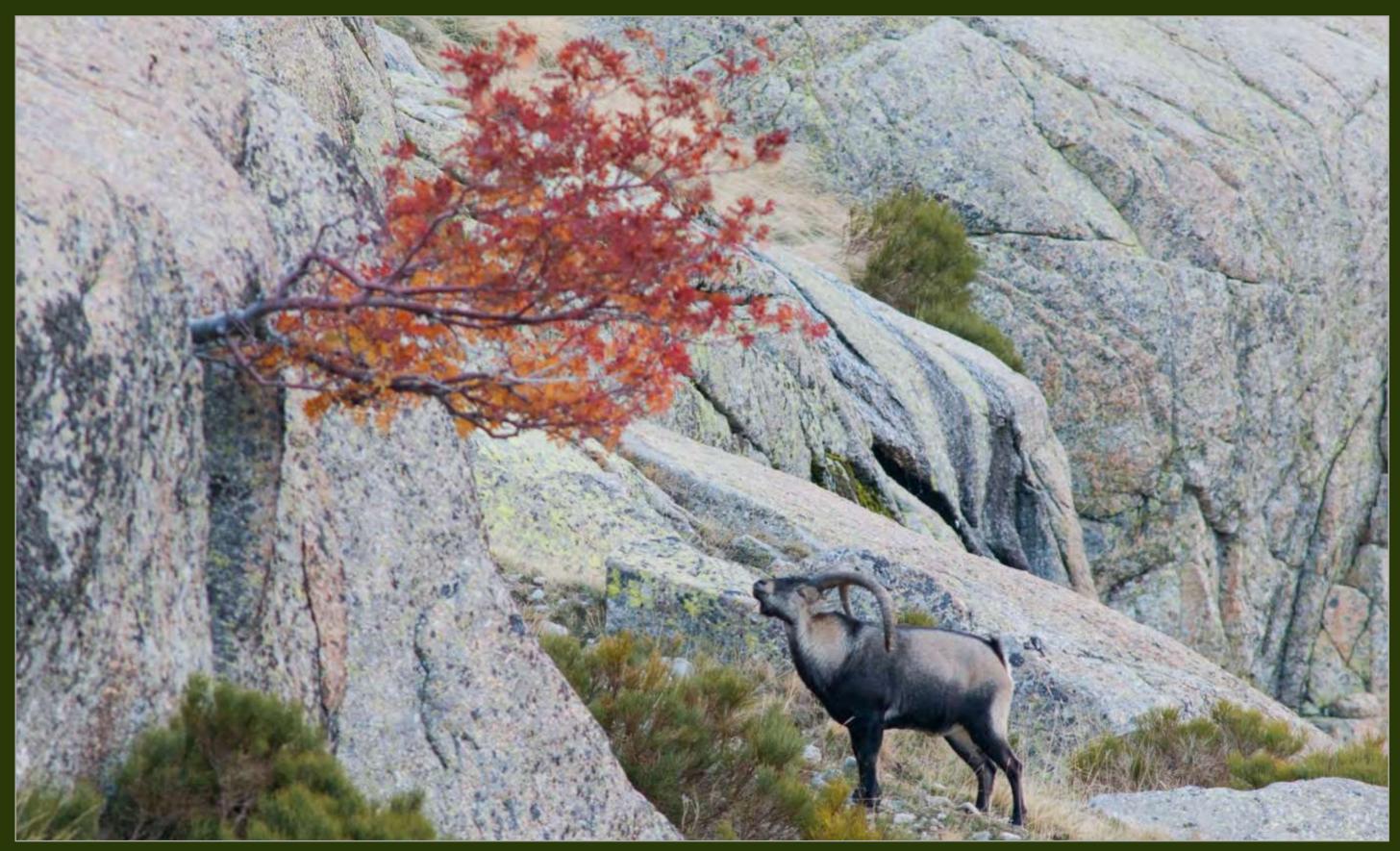
Two juveniles play as their practice their sparrying skills. Historically, the Spanish ibex was found throughout the Iberian Peninsula, in southwest France, Portugal, and Spain.





The species has become extinct in several areas within its northern range, including Andorra and the Pyrenees.





The Iberian ibex is a mixed feeder between a browser and a grazer, depending on the plant availability in their home range. Thus, the percentage of each type of resource that is consumed will vary altitudinally, geographically, and seasonally. The ibex also has a special mechanism in the kidney that stores fat to be used as energy during cold winter times.

The population in the Iberian peninsula is now estimated at 50.000 individuals.





Numbers increased since the '90s, when population was at 7.900 individuals.



During rutting season (November/December) males interact with females.





The Iberian ibex shows remarkable sexual dimorphism, with males being greater in size and weight and also having larger horns as the females. The enormous, truly spectacular horns of the ibexes are different among wild caprids as they curve out and up and then back, inward, and, depending on subspecies, either up again or down.



The Spanish ibex's coat is chestnut brown, with darker and lighter patches. Large, flexible hooves and short legs help it run and leap across its mountainous habitat.

The male Spanish ibex uses its horns to fight other males during the mating season, which takes place in November and December.





Mixed male-female groups are also common during the rest of the winter after the end of the rutting period, when food is scarce.





The Spanish ibex has a unique way of signaling others when a potential predator has been spotted. First the ibex will have an erect posture with its ears and head pointing in the direction of the potential predator. The caller will then signal the other ibexes in the group with one or more extremely loud, shrill alarm calls.

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Trip Report



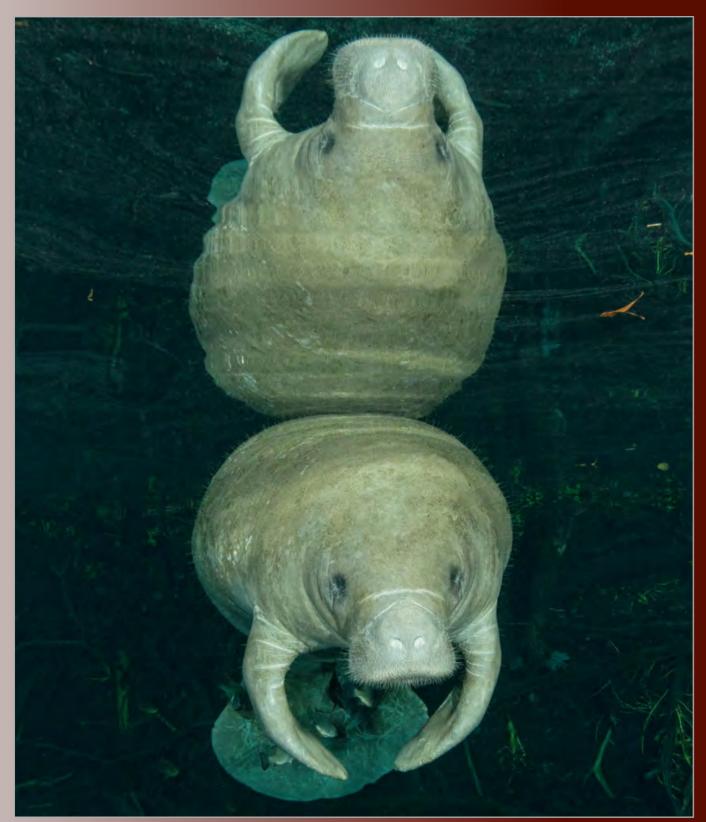
Interacting with the much-loved marine mammals of Crystal River leaves one with stunning photos and mixed feelings - Don Silcock reports





**Crystal River - Three Sisters** 

The set of three large springs known as The Three Sisters is probably the best site one could imagine to see and truly appreciate the Florida manatee. It is set in 58 acres of pristine vegetation, which is now a wildlife refuge after having been acquired in 2010 by a consortium led by the Manatee Conservation Fund.



West Indian Manatee Trichechus manatus Manatees (family Trichechidae, genus Trichechus) are large, fully aquatic, mostly herbivorous marine mammals sometimes known as sea cows.

## TEXT AND PHOTOS BY DON SILCOCK

winter's dawn is a very special time to be on Kings Bay, for as the first rays of the Florida sun appear over the horizon they light up the soft mist on the warm waters of the bay and create an ethereal, almost mystical, feeling. Listen carefully and you will hear the gentle ripples from the swirl pools formed by the paddle-like tales of the Sirenians as they make their way towards the fresh-water springs that are the source of the Crystal River. Look closely into the dark waters ahead of those swirl pools and you will see the large and unmistakeable sausage-like shape of the Florida Manatee. The arrival of the manatees usually coincides with a rising tide and heralds their return from feeding on the sea grass of Kings Bay and the Crystal River. Cold and tired, they need the warmth of the spring waters to restore their body temperature as they sleep in the natural and man-made refuges of the area. This area of the Florida peninsular in Citrus County, on the western side of the state that is bordered by the Gulf of Mexico, is without doubt the best place in the world to experience the unique and singularly exceptional Florida Manatee.

The peninsular that makes up most of the state of Florida is formed by a large plateau of karst limestone that sits on a massive subterranean platform of bedrock which stretches far out in to the Gulf of Mexico. Underneath all of Florida and the southern

parts of Alabama, Georgia and South Carolina is one of the world's most productive aguifers - the massive Floridan Aguifer, which covers a total area of almost 100,000 square miles. Instead of running off into river systems, the porous karst limestone allows the state's regular and heavy rainfall to percolate down in to the many underground chambers of the plateau and, as new water makes its way in to the aquifer system, hydraulic pressure forces previous rainfall out in areas where those chambers are closest to the surface such as Kings Bay in Citrus County. The water that emerges in those natural springs is extremely clear, having been thoroughly cleaned by the percolation process. In an area covering about 1 square mile, Kings Bay has between 70 to a 100 natural springs (depending on whose opinion you accept) 15 of which are significant "first magnitude" ones. Combined they pump out some 300 million gallons a day, all at a constant temperature of 72 deg F, filling the bay with warm water and forming the head waters of the Crystal River which flows out in to the Gulf of Mexico. This constant flow of warm water is the reason why the manatees come to Crystal River every winter.

Said to be the source of the mermaid myth, Sirenians are large mammals with stout bodies which look a bit like a small whale Their considerable size – a fully grown

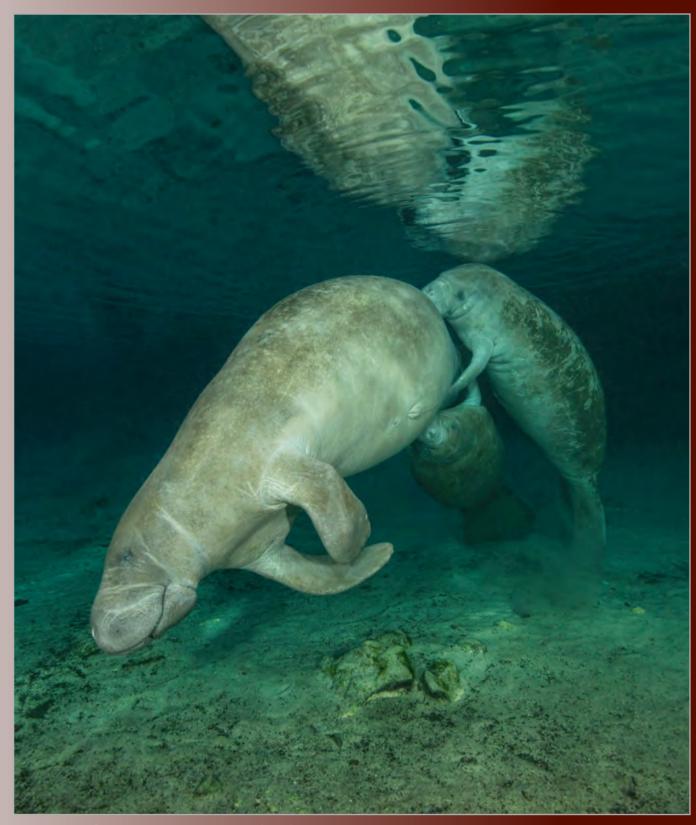




West Indian Manatee Trichechus manatus
There are three accepted living species of Trichechidae, representing three of the four living species in the order Sirenia:
the Amazonian manatee Trichechus inunguis, the West Indian manatee Trichechus manatus, and the West African manatee Trichechus senegalensis.



Crystal River - Three Sisters
Unlike the other main springs in Kings Bay, the setting of the Three Sisters means that the crystal clear waters that emerge from the underground aquifers do not merge with the darker waters of the bay until they exit the refuge. This means that - in the right conditions - the visibility there is absolutely stunning.



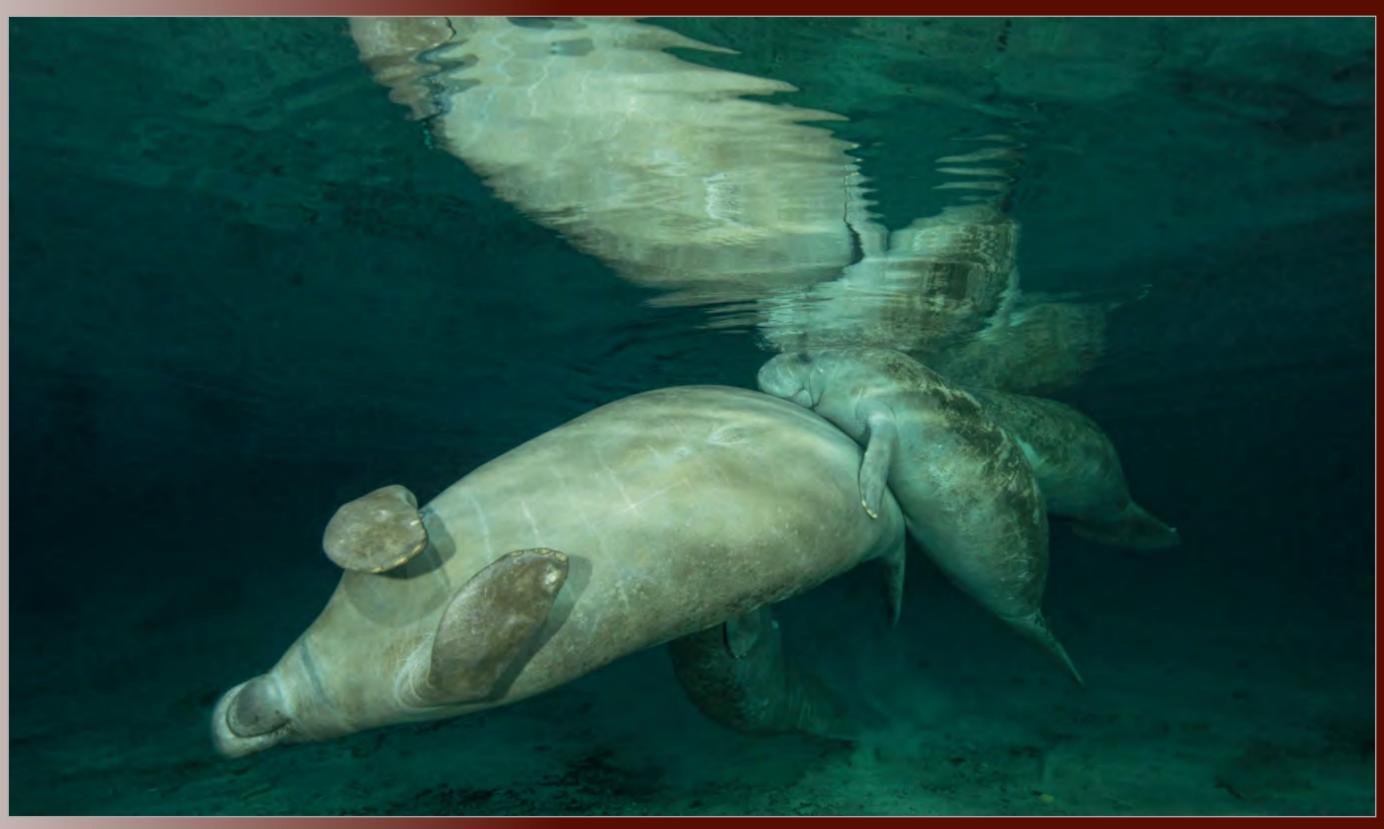
West Indian Manatee Trichechus manatus
This trio of Manatees is engaged in a bout of sexual foreplay, leading to later actual mating. Manatees are generally solitary animals.

female manatee can reach 4m in length and about 1500kg - means they have evolved without any natural enemies and have developed a rather slow and passive nature. They get their name from "sirens", the ancient term used to describe the sea nymphs and their captivating songs that lured sailors to their deaths in treacherous shallow waters. Distantly related to elephants, but usually referred to as "seacows", there are now only four species of sirenians still alive of the 35 that are known to have once existed - three of which fall in to the Manatee family, while the fourth is in the Dugong family. A sub-species of the West Indian manatee species, the Florida Manatee is usually found in the shallow coastal waters around the state, but in summer can be spotted as far west as Louisiana and all the way up to the Carolinas on the east coast of the USA. Solitary creatures that can live more than 70 years, manatees are the only aquatic mammal that is also an herbivore and they exist on a primary diet of sea grass, the pursuit of which consumes up to 8 hours a day, with a full grown adult consuming up to 10% of its body weight every day. Contrary to what its rotund appearance might suggest, the manatee's diet means that it is actually a really "lean machine" with virtually no fat or blubber to keep it warm when the water temperature drops in winter. At water temperatures below 68 deg F the Florida Manatee simply cannot maintain its core body temperature and will

die of cold stress unless it can find a source of warmth, which means that Kings Bay and its natural springs provide a perfect natural refuge for them.

There are actually two Crystal Rivers – the river itself and the town of the same name that sits on the shores of the 400-acre lake that is Kings Bay. First impressions are not always what they might appear, and such is the case with the Town of Crystal River where the sign outside of City Hall proudly informs you that you are now in the "home of the manatee". With a population of just over 3000, Crystal River gives the first-time visitor a feeling of small-town America doing OK, thank you very much. There are numerous hotels and restaurants, plus a large shopping mall and the area around Kings Bay hosts numerous very nice canalside homes. This prosperity derives from two very different sources, the estimated 150,000 people who come to experience the manatees every winter, injecting somewhere between \$20m and \$30m in to the local economy. Then there are the "snowbirds"... wealthy residents of the north-east American states and Canada who migrate south in the winter months to escape their harsh weather for Florida's much warmer southern version. Peel the Crystal River onion however and you will find a lot of lingering resentment amongst both local residents and snowbirds towards the manatee because of the boating speed and access restrictions in





West Indian Manatee Trichechus manatus
More sexual activity in the cool, clear waters of Crystal River, Florida. Manatees typically breed once every two years; generally only a single calf is born.
Gestation lasts about 12 months and a further 12 to 18 months are needed to wean the calf.



West Indian Manatee Trichechus manatus Manatees measure up to 13 feet (4.0 m) long, weigh as much as 1,300 pounds (590 kg) and have paddle-like flippers.

place under both State and Federal law to protect them. Their basic argument is that manatees have been formally classified as "endangered" under Federal law since 1967, which was probably justified at the time, but the protection mechanisms have worked so it is time to move the status to "threatened" and relax the restrictions which impact heavily on the local boating community. Resident groups such as Save Crystal River point to the increasing number of manatees in Kings Bay as the rationale for the change and even went as far as suing the US Fish and Wildlife Service to make the change – forcing them to formally consider it. Manatee advocacy groups like the Save the Manatee Club have equally strong, but diametrically opposed views, arguing for stronger protection and making the main Three Sisters Spring a closed sanctuary. Their basic argument being that there is still a long way to go before any status change can be considered, pointing to the loss of 830 manatees in 2013 because of unusually cold winter weather and pollution induced red tides.

The unique nature of the manatee has long been recognized in Florida, with the first state protections against killing or mistreating them enacted in 1893. Nationally, manatees were the first species to be listed as formally endangered under the Federal Endangered Species Preservation Act of 1966, with other State and Federal protection following - all tacitly

recognizing the unique status of the Florida manatee. Further legislation in 1978 recognized the entire state of Florida as a "refuge and sanctuary for the manatees" and established enforceable access restrictions and marine craft speed limits in 13 critical aggregation areas where manatees gather each winter. Manatees prefer shallow water, swim slowly and because they are mammals they must surface regularly to breathe - which puts them right in the danger zone where water craft are involved. For most of the year that danger is relatively small, as they roam far and wide in search of the sea-grass that sustains them - so the chances of being hit are minimal, but in winter when they aggregate in places like Kings Bay they are incredibly vulnerable. Possibly the single biggest life-style attraction in Florida is the "life-aquatic" and boating in general is extremely popular in the state. The no-go access restrictions and speed limits in place in Kings Bay and the Crystal River are like red rags to a bull to those who argue that the manatee conservation pendulum has swung too far. The conservationists counter that such restrictions are essential if the unique manatee is to prosper and survive. A common statistic doing the rounds is that the most common cause of manatee fatality is water craft collision, with about 45% of those fatalities by propeller cuts and 50% because of "blunt trauma" from the boat hull. However fatality statistics on the Florida Fish and Wildlife Commission's website





West Indian Manatee Trichechus manatus
The deep scars left on a manatee's back by a boat propeller leave little doubt to
the dangers facing these slow-swimming marine mammals in Florida waters.



West Indian Manatee Trichechus manatus The name manatí comes from the Taíno, a pre-Columbian people of the Caribbean, meaning "breast".



King's Bay

In the USA manatees were the first species to be listed as formally endangered under the Federal Endangered Species Preservation Act of 1966, with other State and Federal protection following. Further legislation in 1978 recognized the state of Florida as a "refuge and sanctuary for the manatees".

show that in 2013 "only" 4 of the 17 reported manatee fatalities in Citrus County were due to water craft. Obviously the conservationists would argue that this shows the restrictions are working, while the resident groups and boaters would probably point to the statistical disinformation bandied around is typical of what happens when that pendulum goes too far!

While the access restrictions and speed limits are the big issue in town, the "swim with" program is also a major source of contention between the manatee conservationists and tour company operators. Crystal River is the only location in the United States where tourists are allowed to enter the water and have a degree of interaction with the manatees. An anachronism that dates to before the 1966 Endangered Species Act, swimming with the manatees was always a popular tourist drawcard in Crystal River and was "grandfathered" through the legislation something that would never be permitted if it were proposed today. But back then the numbers of tourists swimming with the manatees were a mere fraction of the projected 150,000 who did it in 2014 and Crystal River was certainly not the hot location it is today. Tourist numbers have more than doubled since 2007 when they hit an all-time record of 60,000, and they look set to climb further as travel magazines Booming tourism is both a blessing and a curse for the Florida manatee.





26 Crystal River companies and 110 boat captains offer daily manatee tours.

and television shows continue to publicize the chance to swim with manatees in Kinas Bay. Add to that Crystal River's appearance in the book 1,000 Places to See Before You Die and it is easy to see how tourist numbers could top 200,000 in the next few years! For the 26 Crystal River companies offering manatee tours, not to mention the 110 licensed boat captains, the "swim with" is a big drawcard with huge emotional pulling power. Something you will quickly come to appreciate when you arrive for your first dawn departure on to Kings Bay and find yourself surrounded by dozens of excited schoolkids and their mothers! About 60% of all tourists who visit Crystal Bay are from Florida and swimming with a manatee is a very popular thing to do...The problem is that while many of those tourists leave Crystal River with a greatly heightened appreciation for the manatee, there are always those who get carried away by the excitement of the moment and do stupid things like trying to ride them! Local manatee activist Tracy Colson started documenting this on video and posting them on YouTube. She even caught local guides taking babies manatees from their mothers to pass around to tourists... Stricter interaction guidelines have since been introduced, but I know from my personal experience in Kings Bay a moment of sublime but cautious connectivity as a curious manatee approaches is instantly negated by the arrival of dozens of hyper

active schoolkids! Quite what impact this all has on the placid manatee can only be guessed at...

The set of three large springs known as The Three Sisters is probably the most unique and inspiring place you could imagine to see and truly appreciate the Florida manatee. Set in 58 acres of pristine vegetation, which is now a wildlife refuge after having been acquired in 2010 by a consortium led by the Conservation Fund, the Three Sisters is one of Florida's last remaining urban springs. Unlike the other main springs in Kings Bay the setting of the Three Sisters means that the crystal clear waters that emerge from the underground aquifers do not merge with the darker waters of the bay until they exit the refuge. Which means that in the right conditions the visibility is absolutely stunning creating a magnificent backdrop to those manatees that enter the Three Sisters through the narrow channel that connects it with the nearby canal system and Kings Bay itself. However... it is also open to the public and what can seem like a unique and tranquil haven if you are there alone, quickly turns in to thriving mass of assorted legs and torsos suspended from flotation sausages as the next party of tourists arrive. Very few tourists know how to snorkel and so they end up kicking madly to stay afloat, which rapidly stirs up the sandy bottom and sends the manatees to the deeper parts of the spring in search of some peace and quiet.





West Indian Manatee Trichechus manatus
Manatees are herbivores and eat over 60 different freshwater and saltwater plants. Using its divided upper lip, an adult manatee will commonly eat up to 10%-15% of its body weight (about 50 kg) per day. This requires the manatee to graze for up to seven hours a day. Manatees have also been known to eat small amounts of fish from nets.





West Indian Manatee Trichechus manatus
The Sirenia have evolved from four-legged land mammals over 60 million years
ago, with the closest living relatives being elephants and hyraxes.



A formidable Florida icon
More than 150.000 people have dived with manatees in 2014 a huge boost to Florida's local economy.





West Indian Manatee Trichechus manatus
Manatees have a mass of 400 to 550 kilograms (880 to 1,210 lb), and a mean length of 2.8 to 3.0 metres (9.2 to 9.8 ft), with maxima of 3.6 metres (12 ft) and 1,775 kilograms (3,913 lb) seen (females tend to be larger and heavier). When born, baby manatees have an average mass of 30 kilograms (66 lb). They have a large, flexible, prehensile upper lip, which they use to gather food and eat, as well as using it for social interactions and communications.



Crystal River National Wildlife Refuge

Established in 1983, it is the only refuge created specifically for the protection of the endangered Florida Manatee, a subspecies of the West Indian Manatee.

Interestingly of the 400+ manatees that have been identified (usually from their propeller scars) by the Florida Fish and Wildlife Commission as return winter visitors, only around 100 of them will enter the Three Sisters. The rest stay in the sanctuaries where tourists are not allowed to go... Whether it's the more sociable manatees that go into the Three Sisters or those that prefer their warm water from as close to the source as possible is not known. The tidal nature of Kings Bay means that the water height in the Three Sisters also varies with the tides – something that the manatees can sense through their vibrissae, the incredibly sensitive facial and body hair believed to give them a kind of three-dimensional spatial and navigational awareness. One of the most interesting experiences I had during the 10 days I spent in Crystal River was early one morning at the entrance of the narrow channel that provides access in to the Three Sisters Spring. Entrance to the Three Sisters is not allowed before 07.00, which that morning coincided with more or less the low tide and as I entered the water and made my way towards the channel I realized that I was surrounded by several large manatees that were all waiting patiently for the water level to rise. It was really quite something to be surrounded by three to four meter long animals who seemed either oblivious (hard to believe given their vibrissae...) or accommodating of my presence! Then I realized that in all probability the manatees were simply cold and were enjoying the warmth of the water coming out of the Three

Sisters! Quite how long the Three Sisters will remain open to the public is far from clear as there is a strong belief amongst the conservationists that allowing large number of tourists in is greatly stressing those manatees that use it. They argue that it should be made a true sanctuary with observation only allowed from a boardwalk around the springs.

For me, an opportunity to interact and photograph large marine creatures is as good as it gets - they grace you with their presence, are in charge of the agenda and I find the actual experience utterly inspiring! A trip to the Crystal River had long been on my personal bucket list, but Florida is a very long way from where I live and despite several attempts at getting there it just never worked out until February 2014. The Sirenians of the Crystal River was just something I had to do and so I girded my loins and flew two-thirds around the world. complete with all my dive and camera gear. I am so glad I did, but I have to say that I left Crystal River with a degree of ambivalence. On the one hand I loved the manatees - I mean how could you not? They are big, cute and wonderfully photogenic plus, if you can get time alone with one in the Three Sisters, the backdrop is just spectacular. But... I was just not comfortable with the way Crystal River has so commercialised them and if they really are one of the thousand things to see before you die - then it can only get worse. My overall sense of things was that everything that could be done was being

continued on page 104



**Crystal River canal** 

Several homes here are literally on the waterfront and boats are a necessity.





**Manatee Watch Warden** 

A constant watch is being kept within the National Wildlife Refuge.

**Crystal River National Wildlife Refuge**A grand total of about 600 manatees are protected here.





**Crystal River** 

Dawn offers a quiet view - before the arrival of the tourist crowds.





West Indian Manatee Trichechus manatus
More sexual activity among manatees. Adults have no incisor or canine teeth, only a set of cheek teeth, which are not clearly differentiated into molars and premolars. These teeth are continuously replaced throughout life, with new teeth growing at the rear as older teeth fall out from farther forward in the mouth.





**West Indian Manatee** Trichechus manatus

Manatees have shorter snouts than their fellow sirenians, the dugongs. The tail is paddle-shaped, and is the clearest visible difference between manatees and dugongs - a dugong tail is fluked, similar in shape to a that of a whale.

done to minimize stress on the manatees – the Fish and Wildlife Service seem to have good systems in place to monitor the overall situation. The tour operators seem to really know what they are doing and follow the rules (well certainly mine, Birds Underwater did) plus the extensive number of Manatee Watch volunteer wardens do a great job. I felt incredibly fortunate to have had some close personal contact with a few of those manatees that use the Three Sisters. This was always on their terms though, where they came to me and allowed me to photograph them! The rules of engagement from the Fish and Wildlife Services for "professional photographers" is that after you have watched an instructional video on how to behave and paid a fee, you are given bright vest with a number on and are allowed to submerge rather than stay on the surface like all the other tourists. You are not allowed to pursue the manatees, under any circumstances, so you have to hold your breath and hope they come to you! But when that happens it really is a special moment that can only really last until your desire to breath overcomes your desire to cherish it! What troubled me about the Crystal River was the difference between those incredible moments of intimate interaction and what happens when hordes of tourists arrive eager to spend an hour or so in the water and then go home and tell friends, "I touched a manatee."

Don Silcock's images, articles and extensive location guides can be found on-line on his website www.indopacificimages.com

# PELAGIC EXPEDITIONS RHODE ISLAND



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An old trick used in the field by seasoned macro photographers - especially in the rainforests of the tropics - is to methodically check underneath leaves at night, ie to take a good look at the downward-facing side of each, especially with large and flat ones like those adorning many palm species. It is admittedly to be done with some care - one never really knows what might be lurking there - but it is the best method, especially at night, to chance upon some interesting subjects. Spiders, centipedes, praying mantids, small

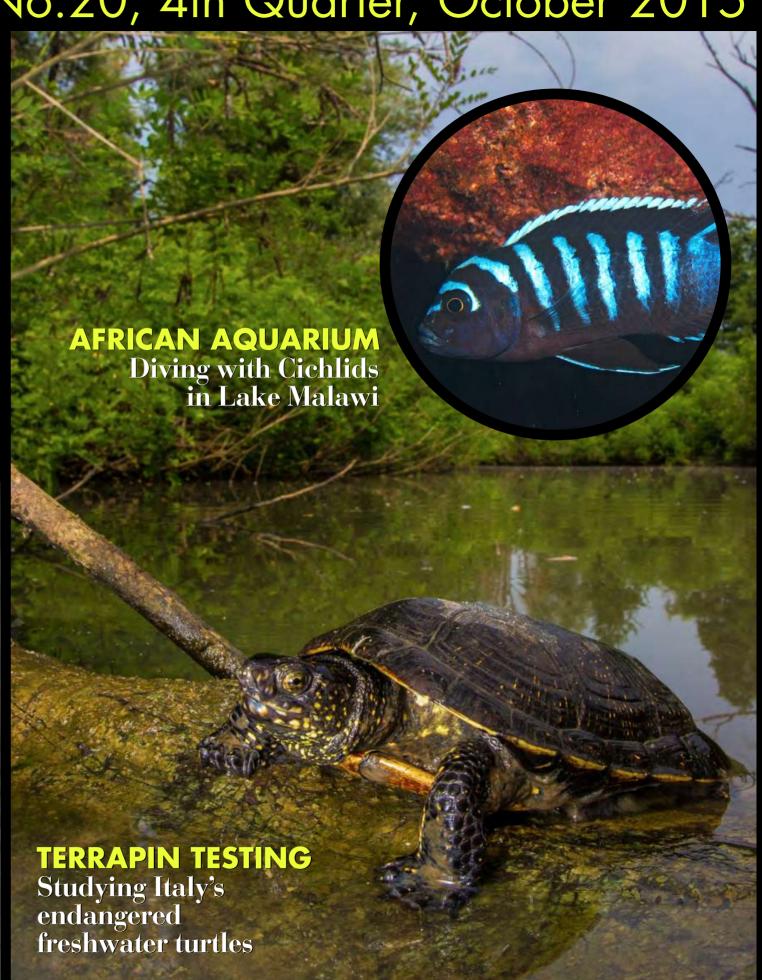
geckoes, breeding tiny tree frogs and a lot of other fascinating critters like to spend their nights hanging upside down - protected by roaming predators by the big leafy roof above, and enjoying a vantage point from which to drop on their unsuspecting prey below. One such night, as we clumsily made our way in sticky ankle-deep mud in the heart of the rainforest of Borneo, deep in Danum Valley, bathed in perspiration and soaking wet from the recurring downpours, the light from my headlamp shone on this deli-

ghtful little piece of theatre on the large leaf I had just upturned - a brotherhood of ever-so-tiny shield bug nymphs literally holding hands after having just hatched from their egg cases. There was something so outrageously Keith Haringesque in their merry-go-round that I stood transfixed for a few seconds, having completely forgotten the stifling heat, the running sweat, the all-pervasive humidity and those pesky mosquitoes before I remembered I actually had a camera in my hands - and started clicking.

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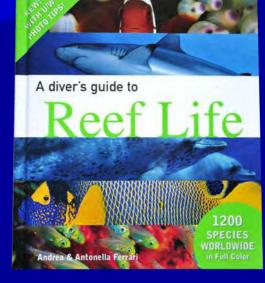


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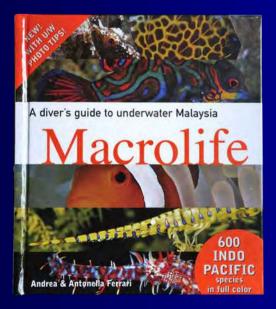
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