



ANIMA MUNDI

Adventures in Wildlife Photography

Issue 15, Year 4 - 3rd Quarter, July 2014

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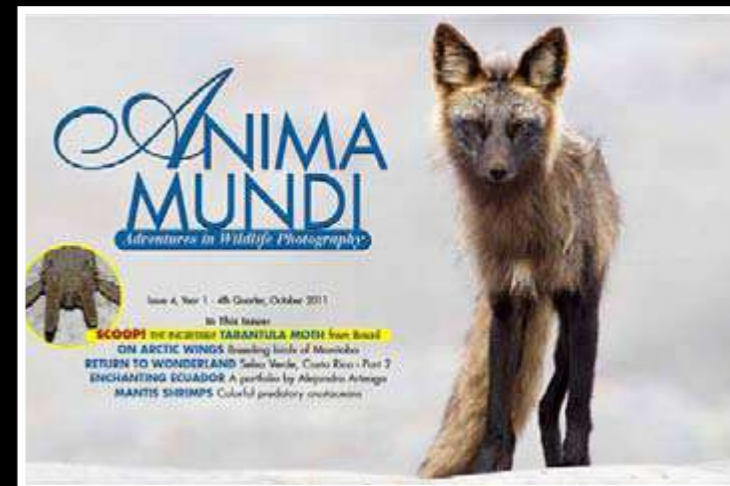
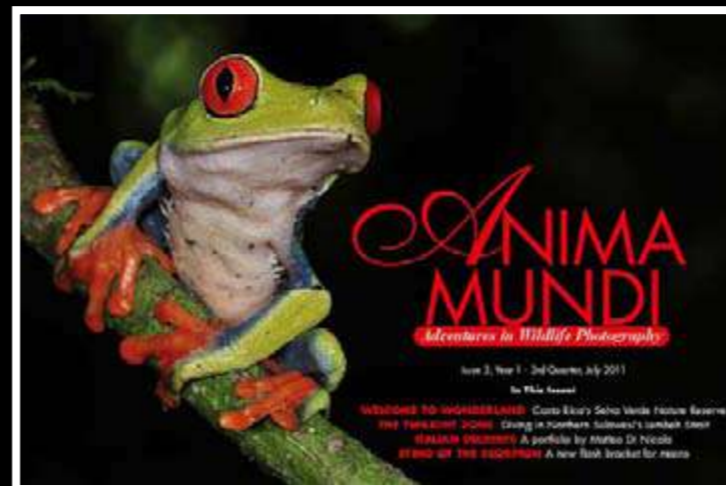
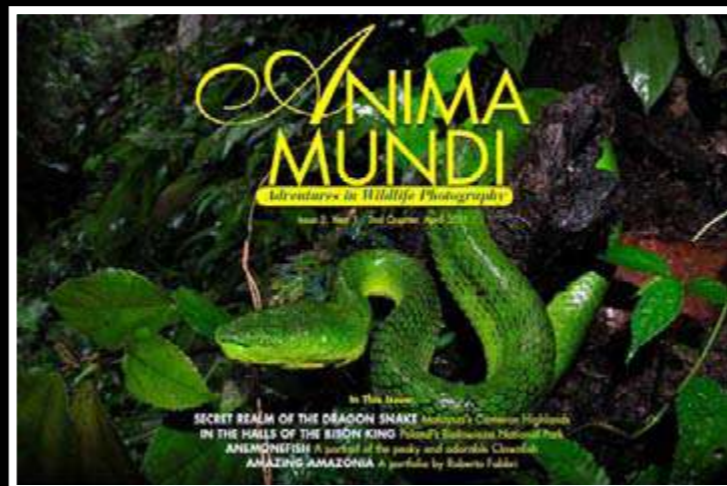
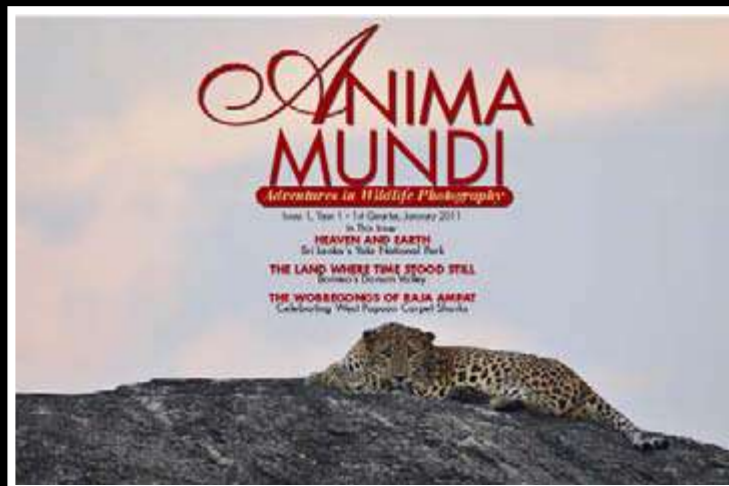
SCOOP Meet the Fan-throated Lizard

MAGICAL MADAGASCAR Chameleons and much more

THE GLOBAL ARCTIC AWARDS Winners Portfolio

SAVING DARWIN'S FROGS Dante Fenolio's fieldwork

FANTASTIC FINLAND A Photo Trip Report

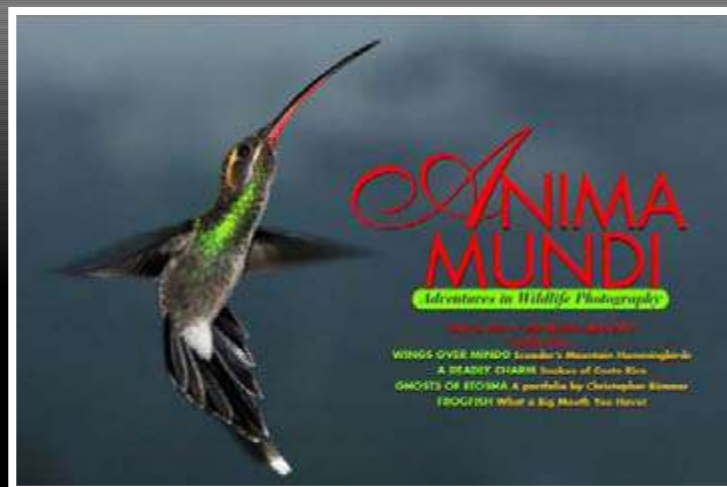
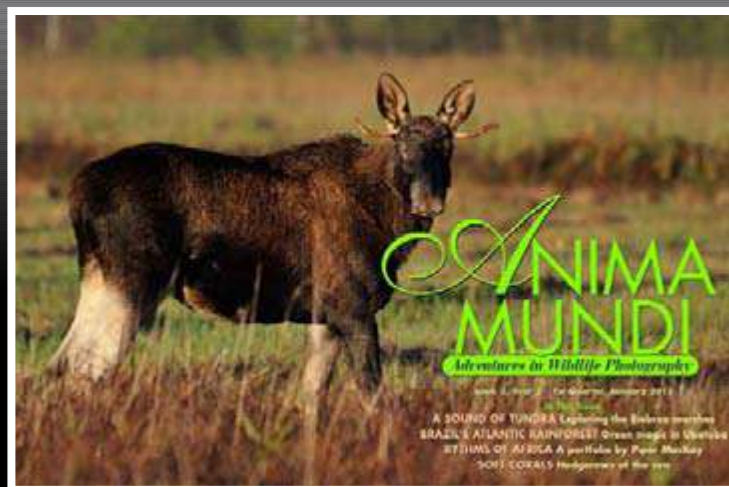


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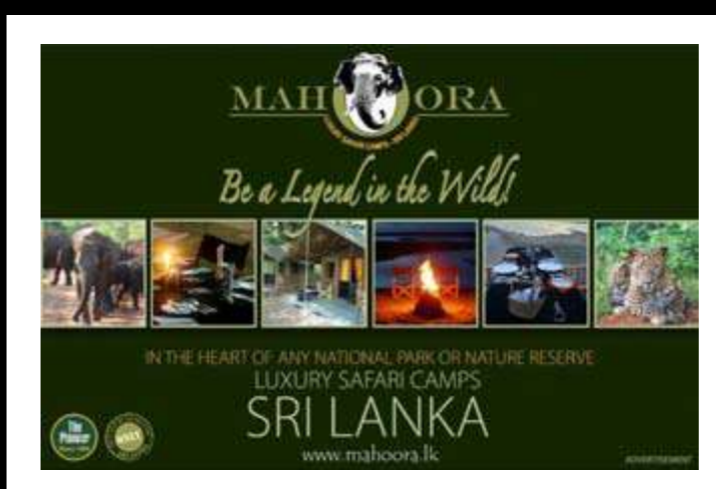
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With more than 15,000 downloads worldwide per issue (as per August 2012), ANIMA MUNDI has seen its readership consistently and rapidly growing in the brief span of only two years and eight published issues. Its authoritative and unbiased travel reports 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 condision 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!

Contact us for details at nautilus@reefwonders.net

ANIMA MUNDI

Adventures in Wildlife Photography

Sharing to promote conservation

Welcome to a new wonderful issue of *ANIMA MUNDI - Adventures in Wildlife Photography*!

We have just returned from an exceptionally successful six-week trip to India and Sri Lanka (during which we have observed and photographed tigers, leopards, peacocks, gharials and countless more beautiful species), but we have barely had the time to start editing our 15,000 + images as the editorial deadlines for this issue were an absolute priority - and what a pleasure it has been to put it together! So what's in store in the following pages?

We start with a fascinating feature on a delightful and little-known reptile from the Indian sub-continent - it might be small, but the colorful Fan-throated Lizard certainly packs a tremendous visual punch with its dazzling, extensible, technicolored dewlap! Check it out on page 4, with text and images courtesy of our Indian contributors Suraj Ravindra Das and Vishal Potdar.

Following up is the first installment of an extensive 2-part feature on our recent 4-week trip to Madagascar - a truly enchanting destination for nature and wildlife lovers, this enormous Indian Ocean island is rightfully famous worldwide for its exceptional rate of endemisms - be it chameleons, frogs, insects or lemurs, what you encounter there you won't be able to see anywhere else. And such fantastic, unique species inhabit it! Believe us - Madagascar may be an occasionally demanding destination, but it is well worth the effort. To share our enthusiasm - and enjoy our story and photographs - you just have to jump to page 10.

From the scorching heat and sunny landscapes of the Red Island to the frozen wastelands of the Arctic is a long jump - but it's just a few pages away for us. Turn to page 59 and behold the stupendous photogallery of the award-winning ima-

ges from the first edition of the Global Arctic Awards. Icebergs, polar bears and the cold glamour of the Arctic fauna and landscapes are beautifully celebrated in a truly stunning collection of beautiful images from Russia, Iceland and several other countries.

We are very proud of what follows on page 76 - the first of our "Fieldwork" articles showcases in detail the tremendous work to save the endangered amphibians of Chile done by our new contributor Dante Fenolio, celebrated wildlife photographer, field researcher and Manager of Conservation and Research at the San Antonio Zoo, Texas. Dante's first article for us, in fact, marks the beginning of a media joint venture by *ANIMA MUNDI - Adventures in Wildlife Photography* and the Conservation and Research department of the San Antonio Zoo, as our website at www.animamundimag.com will soon feature an exclusive space fully devoted to the conservation initiatives of the latter. Together with the space already reserved to the activities of the Amphibian Survival Alliance (ASA), and with more partners active in conservation to follow, this reinforces the bond between wildlife photography, responsible ecotourism, scientific research and habitat/species conservation initiatives - a concept which is very dear to us. Welcome aboard, Dante!

To finally complete the contents of this issue, go to page 96 and enjoy the latest of our readers' Trip Reports, a detailed feature on wildlife photography from hides in Finland by our new contributor Guido Muratore. Finland - together with Poland - has long been a choice destination for wildlife photographers in Europe, and now you'll see why! In the meantime...

Have a good trip!
Andrea & Antonella Ferrari
www.animamundimag.com

■ Tail detail of a Panther
Chameleon *Furcifer pardalis*,
Ambanja color morph, from
our Madagascar article
starting on page 10.

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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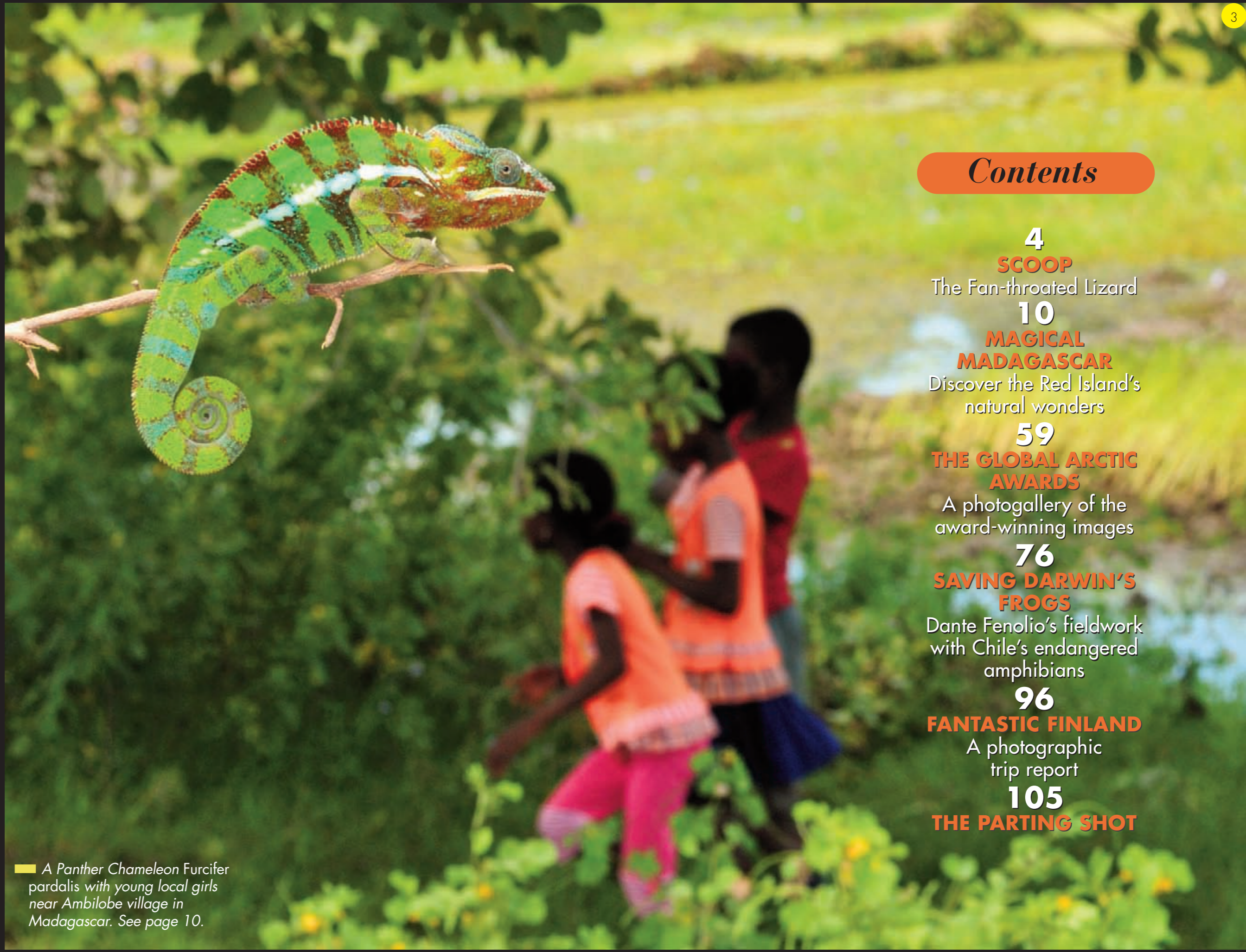
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■ A Panther Chameleon *Furcifer pardalis* with young local girls near Ambilobe village in Madagascar. See page 10.

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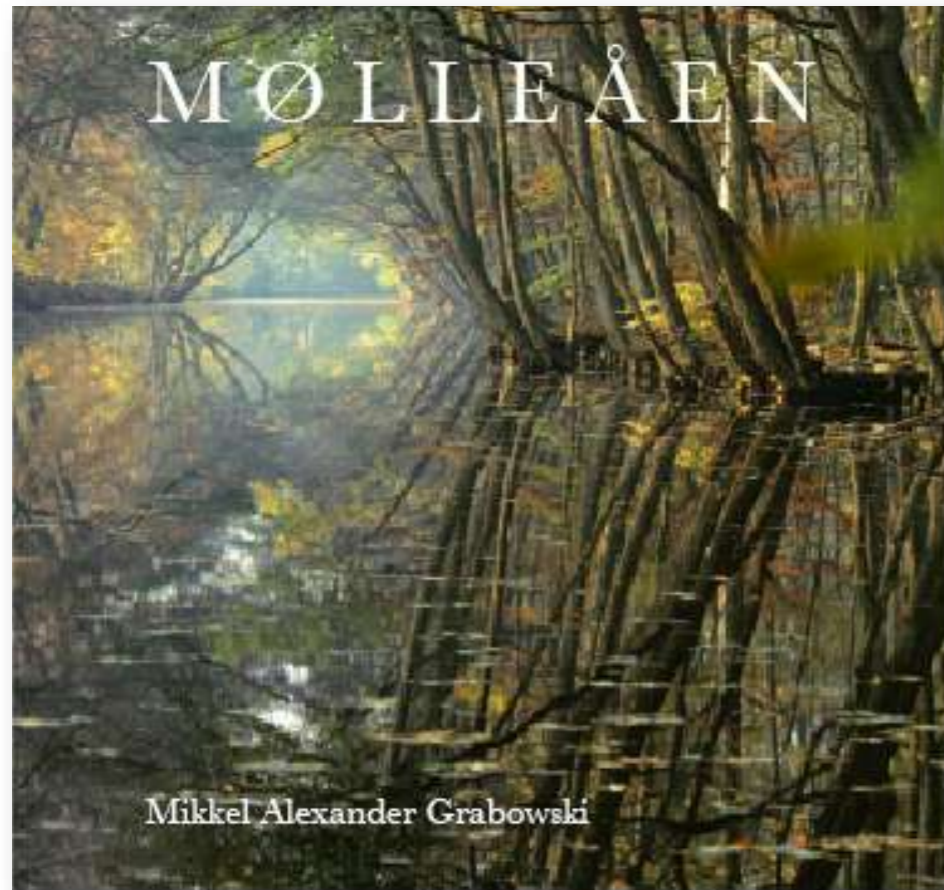
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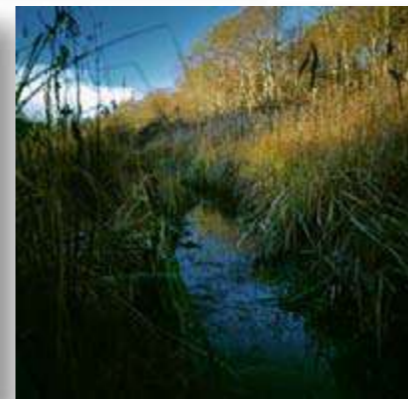
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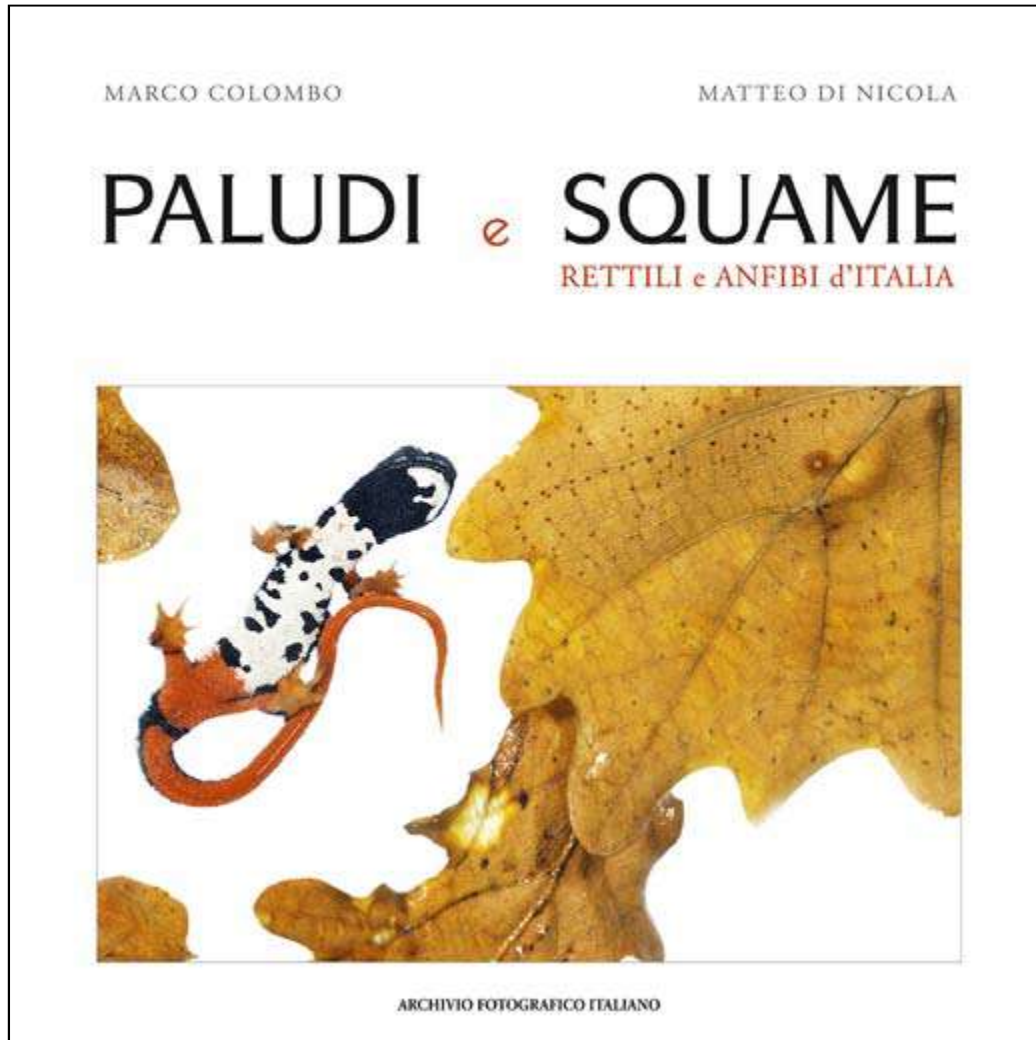
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NEW HERP BOOK

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

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The Fan-throated lizard Sitana ponticeriana is a species of agamid lizard found in India, Sri Lanka, and parts of Pakistan, where it can be found mostly on the ground, in open ground patches in thin forests.

The Fan-throated Lizard **INDIAN BEAUTY**

SMALL, RELATIVELY COMMON
AND OFTEN OVERLOOKED -
MEET THE TINY JEWEL
OF THE SCRUBLANDS

■ This species inhabits moderately moist scrub, rocky and sandy coastal areas, and open areas in dry forests and dry scrublands. It is primarily a ground-dwelling species, but is sometimes found on trees.



TEXT BY SURAJ RAVINDRA DAS

PHOTOS BY SURAJ RAVINDRA DAS & VISHAL POTDAR

The Fan-throated Lizard *Sitana ponticeriana* is a beautiful agamid found in most parts of India, Pakistan, Sri Lanka & Nepal. These gentle agamids are colorful dragons of the modern world. These lizards have a thin flap of skin called a gular appendage, between their throat and their abdomen which they can flap/ flash at will. Normally these appendages are whitish or creamish in color, but what's interesting is that during the breeding season (mainly May-June) the males of these species develop a wonderful coloration ranging from blue-black-red. They take positions over small rocks or

branches on the ground and flash their brightly colored gular appendages to attract other females and also to warn off other males about their territory. I had been always been intrigued by the idea of capturing the beauty of these gorgeous dragons, and so one day I set out to a place called Chalkwadi, near Satara, in Maharashtra, India, which is supposed to have a huge population of these agamids. Reaching the place, I saw a number of huge windmills and then I realized that probably, due to these windmills, there was a lesser density of raptors and in the absence of their natural

predators, these agamids should have thrived. I was right! There were brightly colored males every few meters of this vast plateau. We decided to get acquainted with an apparently rather tolerant fellow who seemed undisturbed by our presence. He was flashing his bright colors to potential mates and rivals alike. After getting some good shots of this very co-operative male, we set out in search of a female. Very soon we came across a gravid female with dull colors but beautiful patterns on the dorsal part of her body. Finally, the day ended with a dip in the nearby Thoseghar Waterfalls. ●

■ This species attains a maximum length of 44 mm (snout to vent length). The coloration is generally olive-brown above, with a series of rhomboidal patches along the middle of the back. A more or less distinct light band is seen along each side of the back.




■ The name Fan-Throated Lizard is given because the males of this species bear a large gular appendage - a loose skin flap of the throat which can be erected up in the form of a fan. This fan-like gular appendage is roughly triangular in shape and extends from the tip of the lower jaw to a considerable length along the belly.



Males of this fascinating species - especially the large territorial ones - extend an iridescent, red-blue-black throat fan as a courtship behavior. Females (seen at right) show a complete absence of the dewlap.



A fan-throated lizard is shown in profile, facing right, with its head tilted upwards. Its most striking feature is a large, fan-shaped dewlap that is fully extended, displaying a vibrant blue color with a fine, grid-like pattern. The lizard's body is a mix of brown and grey, with a bright red patch visible on its lower belly. It is perched on a mound of dry, brown grass and twigs. In the background, several large wind turbines are visible against a clear blue sky with a few wispy white clouds. The overall scene is brightly lit, suggesting a sunny day.

Fan-throated lizards can be locally common and typically inhabit sandy coastal areas and open areas in forests and scrublands. The males' brightly colored dewlap is used primarily in courtship, but might also play a role in communication and possibly defense.

TO TRAVEL IS TO LEARN.

When Giovanna Holbrook took on the challenge of leading two University of Florida science professors and a group of naturalists to the Galápagos Islands in 1971, she had no way of knowing the lasting impact that experience would have on her life and on the lives of those traveling with her. The group journeyed throughout the archipelago aboard a retired navy vessel, propelled by their spirit of adventure and thirst for knowledge. At that time, the Galápagos was just celebrating its twelfth year as a national park, conservation work at the Charles Darwin Research Station was still in its infancy, and tourism in the islands was virtually non-existent.

More than thirty years later, Holbrook Travel continues to serve the needs of teachers, students, academic institutions, and nature lovers. Although many changes have taken place over the years, Holbrook Travel has taken great care to remain true to its roots. As news of environmental concerns and world conflicts continue to fill the airwaves, it seems more important than ever to help people gain a better understanding and appreciation of the natural world and other cultures through firsthand experiences. In the words of Andrea Holbrook, president: “Our goal is to try to continue the great work my mother started.”

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NATURAL WONDERS OF THE RED ISLAND

MAGICAL MADAGASCAR

*Panther Chameleon
Furcifer pardalis, adult male,
Ambilobe color morph,
near Ambilobe village.*

An herpetological expedition to the legendary land of endemisms in search of colorful chameleons - not to mention rare lemurs, amazing insects and spectacular landscapes

Ambalabongo Canyon,  landscape sculpted by erosion,
Ankarafantsika National Park.





Malagasy Tree Frog ■
Boophis madagascariensis,
Andasibe-Mantadia National Park.

TEXT BY ANDREA FERRARI
PHOTOS BY ANDREA & ANTONELLA FERRARI

*A*s a rule, we always travel alone - never in groups - and we organize our own expeditions, never joining trips offered by travel agencies. However, there are always exceptions to the rule - and Madagascar is one of these. Exploring by one's own means the Red Island is perfectly feasible of course - if one has plenty of time to spare for the inevitable delays, is willing to face frequent discomfort and the occasional petty crime, and can travel light. In Madagascar roads are mostly in bad shape, travel schedules by public transport are unreliable or non-existent, accomodation can be

severely uncomfortable by Western standards, safety of food and drinks is dubious at best and health can occasionally be at risk. Renting a private vehicle and a personal guide is again perfectly feasible, but can be exceedingly expensive - and there are no guarantees of being happy and safe if one doesn't use a reputable, experienced, specialized operator - of which in Madagascar there are few. So - once we had thrown the dice and finally decided to visit Madagascar, lured by its unmatched reputation as a true (and severely endangered) paradise for endemic wildlife, we had

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Panther Chameleon Furcifer pardalis, Andasibe color morph, male in breeding livery, Andasibe-Mantadia National Park.

A land where the outrageous and the amazing are the norm



to opt for an organized tour and join a small group. We are happy to say that our worries were completely unfounded - in fact, travelling to the Red Island together with a small group of German dedicated herpetologists and chameleon specialists presented us with the opportunity of making several new friends. The trip we joined - plus several others - is expressly tailored for dedicated herpetologists and wildlife photographers by **TanalaHorizon** - a highly specialized German tour operator and a small, high-quality company which in 20 years' experience in Madagascar has been able to build a reliable network of drivers and guides there. Groups of like-minded, highly motivated travellers are kept deliberately small to

guarantee full satisfaction in sightings and photography to all, and a very reasonable standard of comfort and cleanliness in lodging and food is offered wherever possible. Above all, the exceptional experience of Thorsten Negro, TanalaHorizon's owner, guarantees success in finding, observing and photographing most species on one's list - depending on the itinerary chosen, as we shall see.

SPECIALIZED TRIPS FOR WILDLIFE ENTHUSIASTS

Such is the rate of endemism in Madagascar, in fact, that several species can only be found in very small isolated patches of forest, or even single locations, often very remote and

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■ Nile Crocodile *Crocodylus niloticus sub.madagascariensis*, lake Ravelobe, Ankarafantsika National Park.

■ *Malagasy or Rainforest Scops Owl Otus rutilus, Ankarafantsika National Park.*



far from each other; other species - such as the ubiquitous Panther Chameleon, are present in color morphs and local variations of such dizzying quantity and variety that a single customized itinerary may be necessary to see them all; some species - such as most chameleons, for instance - can only be found and observed in all their colorful glory during their brief mating season, remaining mostly invisible, hidden in the forest canopy, for the rest of the year. Add to this perplexing puzzle that Madagascar enjoys a tremendous variety of environments, several climate zones, two distinct seasons (depending on which coast -Western or Eastern - we are talking about) and a huge number of protected or semi-protected National Parks and Nature Reserves, several of which offer the possibility of sighting single species which are nowhere else to be found, and you'll soon realize

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Ankarana
Sportive Lemur
Lepilemur ankaranensis,
Ankarana National Park.





Left, Indri lemur *Indri indri*, Andasibe-Mantadia National Park; top right, Golden-brown Mouse Lemur *Microcebus ravelobensis*, Ankarafantsika National Park; bottom right, Mongoose Lemur *Eulemur mongoz*, Ankarafantsika National Park.



■ Ambalabongo Canyon, landscape sculpted by erosion, Ankarafantsika National Park.



■ Parson's chameleon
Calumma parsonii, female,
Andasibe-Mantadia National Park.



why motivated wildlife photographers need to sort out their priorities first of all and then rely on some experienced tour operator to avoid disaster and bitter disappointment. Being this our first visit to Madagascar, and loving reptiles, we then opted for a specialized itinerary entirely created for chameleon lovers: other creatures uniquely Malagasy - such as lemurs, which would require a different itinerary and a different time of the year to visit to guarantee optimal results - would have to play second fiddle on this occasion.

SPECIES TARGETING IS THE KEY TO SUCCESS

For one unfamiliar with Madagascar the following list may mean little, but herpetologists will readily recognize many familiar Northern and Western locations in the following itinerary. During a three-week overland trip, we visited chameleon and gecko heavens such as Andasibe, Voimana,

continued on page 23 >



Left,
Coquerel's
sifaka
*Propithecus
coquereli*,
Ankarafantsika
National Park;
right,
Diademed
Sifaka
*Propithecus
diadema*,
Andasibe-
Mantadia
National Park.





*Wearing a colorful livery
to find a willing mate*

Panther Chameleon █
Furcifer pardalis,
Andasibe color morph,
male in breeding livery,
Andasibe-Mantadia
National Park.



Far left, Malagasy Red Tree Frog *Boophis pyrhus*, Andasibe-Mantadia National Park; left, Malagasy Hognose Snake *Leioheterodon madagascariensis*, searching for gecko eggs in Ankarafantsika National Park.

Analamazaotra, Ankarafantsika and Montagne d'Ambre National Parks, exploring along the way spectacular landscapes such as the Ambalabongo canyon, les Tsingys rouge, the Tsingys d'Ankarana and the island of Nosy Faly. Since we were already there, we also decided to lengthen our stay and spend one more week by ourselves exploring Ranomafana National Park, which is located more in the South and which is so exceptionally rich and diverse to warrant it an extensive, separate feature on a future issue of *ANIMA MUNDI - Adventures in Wildlife Photography*. We hasten to add that - while the main focus of our expedition was clearly on chameleon species and their local morphs - we had abundant opportunities to observe and photograph many more species: frogs, snakes, birds, insects and above all lemurs. In brief, all those amazing creatures which contribute in making Madagascar such a unique ecosystem.

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Andasibe Parson's
 Chameleon *Calumma parsonii*
sub.cristifer, adult male,
 Andasibe-Mantadia
 National Park.

*The gentle
yellow giant
of the Malagasy
rainforest*



Antonella with Parson's
Chameleon *Calumma parsonii*,
male in breeding livery,
Andasibe-Mantadia
National Park.



Top left, Comet moth *Argema mittrei* caterpillar, near Mandraka; top right, Madagascar Emperor Moth *Bunaea aslauga*, near Mandraka; bottom left, Malagasy Freshwater Crab *Madagapotamon humberti*, Ankarana National Park; bottom right, Scorpion *Grosphus ankarana*, Ankarana National Park.



■ The Red Tsingy or Tsingy Rouge, a spectacular limestone riverbed shaped by water erosion, Ankarana National Park.

■ *Crowned Lemur*
Eulemur coronatus,
Montagne d'Ambre
National Park.



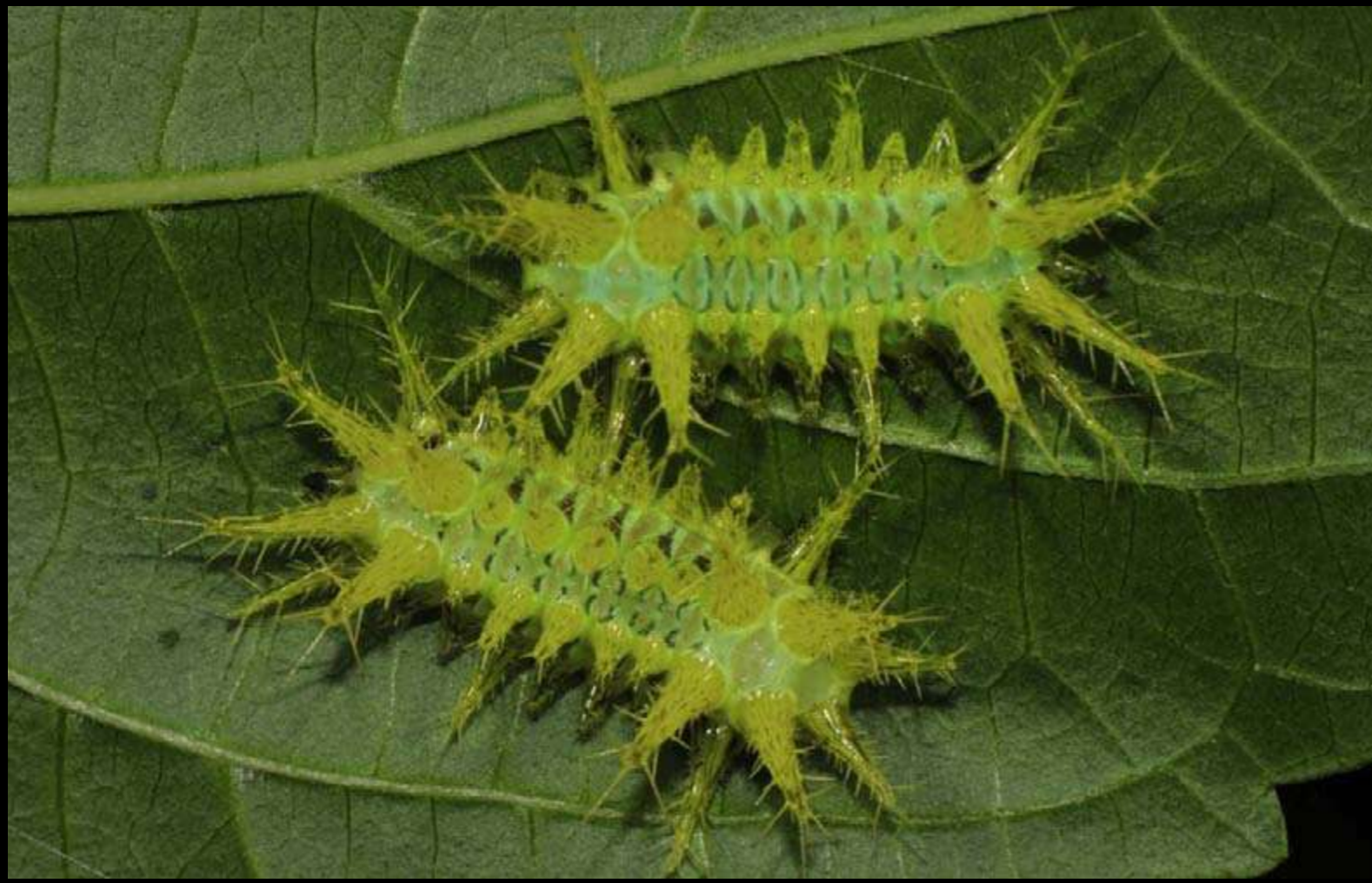
A TRULY UNIQUE DESTINATION

Before examining in detail the humungous number of species we found and the locations we visited, let us reply to the most obvious of questions - was Madagascar worth visiting? The reply is obviously "yes, absolutely". This enormous island is so rich in endemic and strange species to leave even seasoned travellers like us speechless. Its fauna is often disconcertingly easy to find and fearless of humans, most often totally unique in aspect and behavior; what you see here - chameleons, geckoes, frogs, snakes, lemurs - you won't see anywhere else. And - possibly - you won't see anymore soon, because Madagascar is desperately poor, with a booming and largely illiterate population, a high degree of corruption in the government and extremely severe environmental damage in the making everywhere, including large-scale mining, large-scale logging and large-scale slash-and-burn agriculture, not to mention smaller scale threats such as poaching by locals and endangered wildlife

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■ Top left, Malagasy Green Lynx Spider *Peucetia madagascariensis*, Ankify; top right, Admiral butterfly *Antanartia* sp., Ankarafantsika National Park. Bottom left, Nettle/Slug Caterpillars of Limacodidae Moth, near Ankify; bottom right, Scorpion *Opisthacanthus madagascariensis*, Ankarana National Park.



trafficking. Some Malagasy species - particularly several species of lemurs - survive in desperately small numbers and/or in increasingly threatened, isolated pockets of forest; and most of the forest habitat itself is under immediate threat everywhere, as illegal logging for exotic wood goes on unabated day and night under the eyes of complacent authorities, finding its way by container ship to insatiable mainland China. As it is often the case, wildlife tourism might play a role in saving Madagascar - bringing in much-needed hard currency, creating jobs in the local communities and above all generating motivation in the younger generations, in whose hands lies the future fate of the Red Island. The question is - is there any time left for hope? People who have visited Madagascar in the recent past are often appalled by the rate of destruction going on, and aerial

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Giraffe or Giraffe-necked weevil Trachelophorus giraffa, male, Andasibe-Mantadia National Park.



Rhinoceros Chameleon ■
Furcifer rhinocerotus, female,
Ankarafantsika National Park.




Left, Malagasy
 Day Gecko *Phelsuma*
madagascariensis,
 Ankarana National Park;
 center, Tree frog
Heterixalus variabilis,
 near Ambilobe;
 right, Montagne d'Ambre
 Leaf-Tailed Gecko
Uroplatus fiavana,
 Montagne d'Ambre
 National Park.



Antonella with
Giant Leaf-tailed Gecko
Uroplatus giganteus,
Montagne d'Ambre
National Park.



Left,  Montagne d'Ambre Chameleon *Furcifer* sp. "Montagne d'Ambre", female, Montagne d'Ambre National Park; right, Panther Chameleon *Furcifer pardalis*, adult male, Ambilobe color morph, near Ambilobe village.



■ Montagne d'Ambre
Leaf-Tailed Gecko
Uroplatus fiavana,
Montagne d'Ambre
National Park.




photography documentation shows in depressing detail the amount of rainforest being lost on a monthly basis. Wildlife photographers remember with delight the times when lemurs would be sighted in numbers, crossing the trails and sitting by the camps: now one has to look for them, often hard. Chameleons, luckily, aren't actively hunted or persecuted as locals tend to consider them harbingers of bad luck (village kids will occasionally kill them with slingshots), but - together with many geckoes, frogs and tortoises - are often illegally exported in great numbers for the exotic pet trade, especially to the USA and Japan. In any case, the main threat - as usual - comes from the continuing destruction and degradation of the local environment. Madagascar, with its unique treasure trove of endemic, strange and rare species, needs more protected areas and a severe enforcement of the existing laws defending its fauna and flora. It has already done so in the past, and it has worked - in the 70's and 80's of the

continued on page 39 ➤



■ Top left, *Plated lizard*
Zonosaurus laticaudatus,
 Ankarafantsika; top
 right, *Collared iguanid*
 lizard *Oplurus cuvieri*,
 Ankarafantsika; bottom
 left, *Malagasy Hognose*
 Snake *Leioheterodon*
madagascariensis,
 Ankarafantsika; bottom
 right, *Bell's Hinge-back*
 Tortoise *Kinixys belliana*,
 Nosy Faly.

*Glimpses of a lost
Eden hidden in
a forgotten forest*

La Petite Cascade,  Montagne d'Ambre National Park.



Left, Short-horned Chameleon █
Calumma brevicorne,
 camouflaged juvenile,
 Andasibe-Mantadia
 National Park; center,
 Henkel's Leaf-tailed
 Gecko *Uroplatus*
henkeli camouflaged on
 tree trunk, Ankarana
 National Park; right,
 Lined Leaf-tail Gecko
Uroplatus lineatus.





■ Panther Chameleon
Furcifer pardalis, adult male, Ankaramy "Pink Panther" color morph, encountered near Ankaramy village.



*Carpet
Chameleon
Furcifer lateralis,
male, found along
the Ambanja-
Ankarana route;
right, the Red Tsingy
or Tsingy Rouge,
a spectacular
limestone landscape
shaped by erosion,
Ankarana
National Park.*

20th century the Red Island was a beacon for conservationists and ecotourists worldwide, with excellent infrastructures and internationally-funded field research going on. Then, sadly, something went wrong. We can only hope for the best, but in the meantime our suggestion is to visit Madagascar as soon as possible. Contributing to the economy of the National Parks system, to the local guides' and drivers' daily survival, to the environmental education of the younger Malagasy generations is our moral duty and the only feasible, tangible thing we can do. The Red Island desperately needs wildlife tourism to survive, and in a few years it might be too late. Go there, now - Madagascar needs all of us. ●

**DON'T MISS THE SECOND
INSTALLMENT OF OUR
MADAGASCAR STORY –
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■ Left, Panther Chameleon *Furcifer pardalis*, adult male, Ambanja color morph, Ambanja; right, Oustalet's or Giant Chameleon *Furcifer oustaleti*, adult male, near Ankify.





■ Left, Panther Chameleon *Furcifer pardalis*, adult male, Ambilobe color morph, near Ambilobe village; right, Panther Chameleon *Furcifer pardalis*, adult male, in a variation of the Ambilobe color morph, near Ambilobe village.



*The same species in
an apparently endless
variety of morphs*



Panther Chameleon ■
Furcifer pardalis, adult male,
Ambilobe color morph, near
Ambilobe village.



Top left, Malagasy Paradise Flycatcher *Terpsiphone mutata*, Ankarafantsika; top right, Northern Ring-tailed Mongoose *Galidia elegans dambrensis*, Montagne d'Ambre. Bottom left, Crowned Lemur *Eulemur coronatus*, female, Ankarana; bottom right, Madagascar Crested Drongo *Dicrurus forficatus*.





■ Panther Chameleon *Furcifer pardalis*, Nosy Faly color morph, male in breeding livery, Nosy Faly.

The spectacular
landscape of Antsiranana
Bay, in Diego Suarez.





■ Left, Cuckoo-roller
Leptosomus discolor,
female, Montagne
d'Ambre National Park;
center, Northern Ring-
tailed Mongoose
Galidia elegans
dambrensis, Montagne
d'Ambre National Park;
right, Madagascar or
Olive Bee-eater *Merops*
superciliosus, Ankarana.



An infinite catalogue of casques, crests, horns and various protuberances



Short-horned Chameleon ■
Calumma brevicorne, male,
Andasibe-Matadia
National Park.



■ Left, Short-horned Chameleon *Calumma brevicorne*, female in defensive threat display, Andasibe-Mantadia National Park; right, Malagasy Common Big-eyed Snake *Mimophis mahfalensis*, Ankarafantsika National Park.





■ Left, Madagascar Golden Orb Weaver *Nephila inaurata madagascariensis*, Ankarafantsika National Park; center, Jumping Spider with cockroach prey, Salticidae, Ankarana National Park; right, Orb spider *Neoscona* sp, Araneidae, Ankarafantsika.



Panther Chameleon *Furcifer* ■
pardalis, Nosy Faly color morph,
another male in breeding livery,
Nosy Faly.



■ Left, Mongoose Lemur *Eulemur mongoz*, Ankarafantsika National Park; right, The Red Tsingy or Tsingy Rouge, landscape shaped by erosion, Ankarana National Park.




Underground river mouth,
Ankarana National Park.



■ Malagasy Red Eyed
Tree Frog *Boophis boehmei*,
Andasibe-Mantadia National Park.





Left,  caterpillar of Madagascar Emperor Moth *Bunaea aslauga*, near Ankaramy; center, Giant millipede, *Aphistogoniulus* sp, near Ankify; right, Leafhoppers, Cicadellidae, Andasibe-Mantadia National Park.



A giant island inhabited by countless species found nowhere else

■ Collared iguanid lizard *Oplurus cuvieri*, Ankarafantsika National Park.





Left, Oustalet's or ■
Malagasy Giant
Chameleon
Furcifer oustaleti,
Ankarafantsika
National Park.
Right, Madagascar
Tree Boa *Sanzinia*
madagascariensis,
juvenile,
Andasibe-Mantadia
National Park.



At-a-glance travel guide

COUNTRY OF DESTINATION: MADAGASCAR



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

ROUTE: Your international flight will land in Antananarivo (called Tana by most), the present capital and largest city of Madagascar, usually after a mid-flight stop-over in South Africa or La Reunion. Arrange in advance for your tour operator (we can safely recommend the highly specialized German agency TanalaHorizon) to come and pick you up. Most itineraries depart Tana on the morning of the day following the clients' arrival to make sure everybody is there in time, so your agent will book you a basic hotel room for the night.

MEANS OF TRANSPORT: If you are serious about your comfort, safety, baggage and wildlife

photography equipment forget about local transport (mostly represented by the chaotic *taxi-brousse*, typically African, overcrowded, noisy and usually run-down private minibuses). When touring with TanalaHorizon we had roomy, comfortable 4-wheel drive SUVs managed by experienced, responsible drivers (a must on Madagascar's pot-holed and often dangerous roads). Inside National Parks one can safely walk (there are no large terrestrial predators or venomous snakes in Madagascar).

CURRENCY: Malagasy Ariary. Changing foreign currency such as Euros or US\$ is not always easy in the countryside, so change upon arrival.

ACCOMODATION: Small hotels in towns, government or private small lodging and camping grounds in National Parks. Tents - despite the inherent discomfort, especially in torrential rains and cooler altitudes - are often the better choice. TanalaHorizon and most other tour operators have their own tents and will fix the camp for you. Toilets - often unhygienic - and washing facilities are obviously unattached and shared when camping.

FOOD: The Malagasy are the world's greatest consumers of rice, which is grown wherever possible, and most often consumed with charcoal-grilled Zebu meat (a wonderfully tasty and soft beef).

The “Eight Continent” which is totally different from all others



Strict vegetarians might have a hard time in Madagascar, and the fare can be monotonous, especially when off the beaten track and away from the usual tourist traps and beach resorts. Beware of street food, which has spoilt many a visitor’s holiday.

LANGUAGE: Malagasy and French. Professional guides however often speak fluently a surprising variety of languages.

WORRIES: Crime - theft and armed robbery - in cities. The countryside is safer, but it is better not to be around after dark with money or camera equipment. The Malagasy are a very kind, sweet people, but their recent post-colonial history and turbulent politics have left many in abject poverty.

HEALTH: We did not experience any problems, but malaria is prevalent in several locations (the use of

Malarone is advised by most health authorities). Ticks and other parasites may present a hazard when walking in the forest, but the major cause of illness and serious discomfort is the consumption of contaminated street food and the drinking of tainted beverages - stick to food safely cooked and bottled drinks if you want to avoid troublesome, debilitating gut problems. Beware of petting the occasional semi-domesticated lemur, as they have been known to bite and might force you to suffer an extremely painful course of anti-rabies shots.

CLIMATE: Expect high tropical temperatures during the day, but climate is extremely variable and highly dependent on season and coastline. Check your itinerary and act consequently - generally speaking the Eastern side is more rainy and gets hit by the occasional Indian Ocean cyclone, while the South is drier and more desert-like.

BESIDES: The island of Madagascar - 1.500 km long and sited in the Indian Ocean in front of Mozambique - is extraordinarily diverse, with an apparently endless variety of habitats and landscapes - from the steaming coastal rainforests to the cool central highlands and from the beautiful beaches of the resort islands such as Nosy Be to the baobab-dotted deserts of the South. Indigenous culture - with its peculiar cult of the ancestors and the dead in general - is of great interest to many, but Madagascar’s most appealing aspect lies in its extraordinary fauna and flora, rich in endemisms but currently severely endangered throughout the island. Several National Parks and Nature Reserves - some privately managed - offer exceptional chances for close observation and photography, but the dizzying abundance of species makes it highly advisable to concentrate only on some and tailor one’s itinerary consequently. ●



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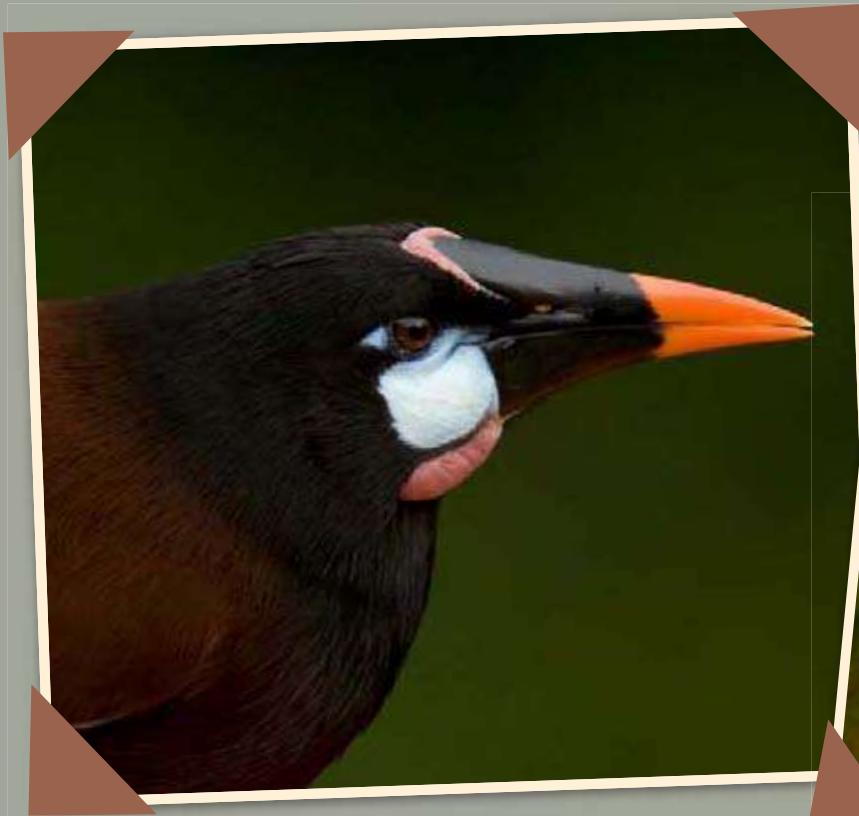


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The Global Arctic Awards

A competition which strives to show the splendor of the Arctic, offering a stunning selection of images which successfully pay homage to a variety of landscapes and wildlife from the frozen wastelands of the extreme North

A Gallery of the Spectacular Winners of the First Edition

"Conquering the cold heart of Arctic is a challenge, but there is nothing impossible for those truly in love with the North".

The first International contest of the North and Arctic images "Global Arctic Awards" has taken place in 2012 and has collected together the best images from its participants, depicting the Northern and Arctic regions in their full splendor. For the first time in Russia, the project has also been supported by the accreditation of the international photo-associations FIAP, PSA and UPI.

The gallery of the images of "Global Arctic Awards" consists of the 10 category winners and other images honored by the members of the jury. The winners from 12 countries, who have submitted the most distinguished images of the picturesque Arctic, have been awarded a grand total of 63 international prizes, being additionally awarded trophies and gifts from the contest partners. The winner of the "Northern lights" category has also been awarded with a trip to Finland by the "Visit Finland" company. The images were judged by people truly passionate about photography. The contest jury included Russian

and international photographers: Sergey Majorov, Vladimir Neskromniy, Chris Hinterobermaier, Michael Bondar, Chris Coe, Bryan Alexander, Mike Reyfman, Sergey Frolov, Sergey Lidov and Sergey Anisimov. They have chosen from the best color entries in these 10 categories: "Northern Nature", "Northern and Arctic Wildlife", "Human and nature", "Portraits of Northern inhabitants", "Ethnography", "The Arctic", "Northern Lights", "Northern civilization", "Nature section", "Travel section". Each member of the jury - at his own discretion - has also awarded his best over-all image with the Gold UPI medal. Finally, the entries which had passed the selection round were accepted into the catalogue "The best images of Arctic - 2012" and were also honored by the Diploma of Global Arctic Awards.

The organizers of the First International Contest of Northern and Arctic images "Global Arctic Awards" express their sincere gratitude to the partners and sponsors, whose support played a vital role in holding the contest. The project was performed with the participation of the United Nations Information Center, UNESCO, and the government of the Yamalo-Nenetskiy autonomous region.



Harp Seal pup
(*Gunther Riehle - Germany*)

Newborn harp seal pup on ice flow. Madeleine island, Canada.

Previous page:
Beached Jewels
(*Christian Klepp - Germany*)
Jökulsárlón
Strandur, Iceland.

**The Crystal
Grotto**

(Christian Klepp
- Germany)
Ice cave in
Svínafellsjökull
glacier in
Skaftafell,
Iceland.



**Phoenix Rising** (*Bjorn Jorgensen - Norway*)

The Aurora Eagle was captured in January 2012. These explosion-like northern lights are called a corona, and can occur during very strong aurora activity. Kvaløya, Tromsø, northern Norway.

Arctic Enemies

(*Ole Jorgen Liodden - Norway*)

An Arctic tern chasing an Arctic fox away for the nesting ground. The tern was very aggressive and it was painful for the fox. Svalbard.



Polar Bear
Against
Golden Light
(Sepp
Friedhuber -
Austria)
Franz Josef
Land, Russian
Arctic.





Golden Eagle
(Bob Devine - UK)
Taken from a hide
in Finland.

**Ice Reflections**

(Sebastian Copeland - USA)

Mirrored reflections from the dense and cold waters of a fjord, on Ellesmere island. At latitude N81° in the high Arctic. Ellesmere Island, Canadian Arctic.



**Polar Bear
at Night**

*(Ole Jorgen
Liodden -
Norway)*

Polar bear
sleeping on
drifting ice on
the west coast
of Svalbard.

Fight

(Michal Jastrzebski - Poland)

Fighting glaucous gulls about remains left by polar bear.
Norway, Spitsbergen, Burgerbukta.



Manta Ray

(Raymond Hoffman - Iceland)

Northern Lights in Skaftafell National Park, Iceland.



**Crystal of the
North Sea**

*(Victoria
Rogotneva -
Russia)*
Evening ice shot
at the Lagoon
Jokulsarlon,
Iceland.

Conflict

(Sergey Gorshkov - Russia)
Arctic Fox and Geese.

Nykvag (Christian Bothner)

After a bad weather with snow and rain the sky comes out and the clouds are burning to the limit. Lofoten, Norway.



Polar Bears

(Anna Yatsenko -
Russia)

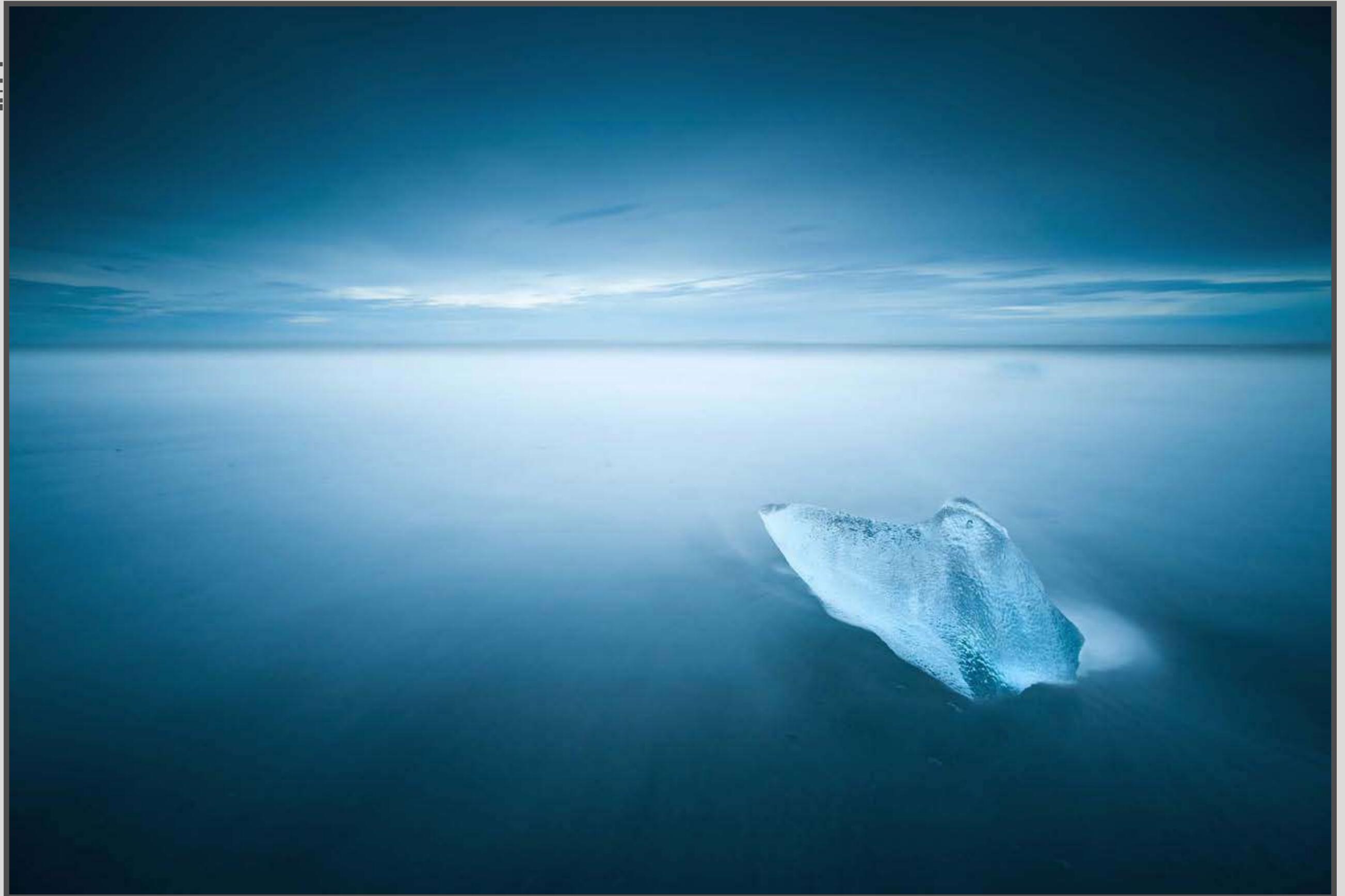
Polar Bears on ice
float. Svalbard.



Timabundin

(*Raymond Hoffman*
- *Iceland*)

Melting ice from the
glacier Jökulsárlón -
Iceland.





**Are You
Coming For
Us?**

*(Marina Malikova
- Russia)*

Mother Polar Bear
with cubs,
Svalbard.

Ice Dream

(*Benoist Clouet -
France*)

This photo was taken
to the front of
Monaco glacier on
Svalbard. These
kittiwakes were
placed on ice, all
sounds were muffled
by the mist that
enveloped us. The
atmosphere was
magical ... an
impression of the end
of the world!
Svalbard, Norway.



**On the Move**

(Michelle Valberg
- Canada)

A walrus herd stampede into the Arctic ocean after being spooked by something behind them. The dust from the stones underneath the walrus create a mystical and somewhat prehistoric feeling to the photo. Hall Beach, Nunavut, Canada.

Kingdom of Ice

(Yuiry Pustovoy -
Russia)

Panorama of 5 hand-held shots taken from the boat at sunset. Cruise between the icebergs by small boat in Ilullisat, Greenland.





**Kiilopää
Lapland**

*(Christian
Schweiger -
Germany)*

I visited this wonderful place four times at minus 36 degrees. Each time it was a long and difficult way. On the fourth day I finally found the right light for this photo. Lapland, Finland.



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David Hemmings - President, Nature's Photo Adventures



"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

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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CHILE'S ENDANGERED AMPHIBIANS

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SAVING DARWIN'S FROGS

People can and do make a difference - read how Dante Fenolio and his colleagues are fighting to preserve threatened amphibians and their environment



A mountain stream in Villa Rica National Park, Chile. In the opening title page, the iconic Darwin's Frog *Rhinoderma darwinii*, one of the world's most distinctive amphibians. The bizarre proboscis is often coupled with a beautiful dorsal color.

TEXT AND PHOTOS
BY DANTE FENOLIO

John Edmonstone, a former slave from Guyana, taught taxidermy to Charles Darwin in Edinburgh and regaled him with tales of the sunny, tropical rainforests of South America. That led Darwin to read Alexander von Humboldt's 7-volume personal narrative about his travels through equatorial America. So it is no surprise that Darwin jumped at the chance to join Captain Robert FitzRoy on the H.M.S. Beagle as the expedition's naturalist. However, he soon found himself enduring incessant rains and gray mist as the ship made its way past the gloomy forests of Tierra del Fuego. Naturally all were elated when, on November 26, 1834, the downpours ceased and they glimpsed glacier-capped Volcán Osorno billowing smoke over the Andes.

rugged coast is stunning today, but it must have inspired awe when the Beagle made its legendary voyage to Chile. And it was apparently vexing to Darwin. Later, while exploring the forests of nearby Valparaiso, he discovered a strange and beautiful creature. His journal comments were, "Nose finely pointed. Jumps like a frog. Inhabits gloomy forest." He was referring to what is now called the Darwin's Frog, *Rhinoderma darwinii*.

Darwin and others had left the ship the previous day and proceeded through pounding storms to explore the coast of Chiloe Island via yawl and whale boat. He wrote this in his journal: "Torrents of rain: we managed, however, to run down the coast as far as Huapi-lenou. The whole of this eastern side of Chiloe has one aspect; it is a plain, broken by valleys and divided into little islands, and the whole thickly covered with one impervious blackish-green forest." By evening they made anchorage in a lovely cove north of Isla Caucahue, deep in temperate rainforest territory. The lush growth of ferns and mosses draping the

Sandwiched between the Andes Mountains to the east, the Pacific Ocean to the west, and the Atacama Desert to the north, a narrow strip of southern Chile and Argentina accommodates temperate humid forest. Biologically unique owing to isolation since the Tertiary Period, these rainforests contain at least 41 (of about 59 in Chile) endemic frog species, constituting roughly 70% of the regional amphibian fauna. Today some of these species are listed as Vulnerable, Endangered, or Critically Endangered by the International Union for the Conservation of Nature (IUCN). The reasons behind the declines are not always obvious; however, general problems of deforestation, replacement of native forests with mono-cultured exotic tree species, invasive species, and non-sustainable land management practices have all contributed. Habitat alteration is not the only cause of the declines.



Darwin's Frog *Rhinoderma darwinii* displays counter-shading; its lateral pattern offsets that on its dorsum such that the frog may resemble a fallen leaf.

continued on page 81 >



Insuetophrynus acarpicus is one of the most endangered frogs in the world. The species inhabits just several small sections of stream in coastal mountain ranges, all its remaining habitat has been destroyed.



Darwin's Frog *Rhinoderma darwini* has an unusual nasal appendage that Darwin noted when he captured his first specimens. Its purpose is poorly understood. This species is polymorphic, and a population may include individuals that are gray, green, brown, tan, or violet in dorsal coloration.



Mountain streams are common in Chile owing to the wet nature of these forests. This locality is in Altos de Lircay.

Emergent infectious amphibian disease has now been detected in Chile. One pathogen that infects and kills many species is amphibian chytrid fungus, *Batrachochytrium dendrobatidis*, or Bd. It has been implicated in a variety of amphibian declines across Central-, North, and South America, Europe, and Australia. Aside from the presence of the fungus, little is known of the extent of the pathogen in Chile’s amphibians or how it is affecting the mostly endemic amphibian community. Conservation initiatives for these species are desperately needed, particularly for the taxa that have small ranges or were previously in decline. One group of stakeholders is attempting to make a difference via a balance of experience, trained personnel, space, and relationships with government wildlife authorities in Chile: the Chilean Amphibian Conservation Center.

OUR PROGRAM & FACILITIES

Interest in conservation of Darwin’s Frogs brought partners together in 2007/2008: the Atlanta Botanical Garden (ABG), the National Zoo of Chile in Santiago (NZC), and the Center for the Advanced Studies of Ecology and Biodiversity at the Catholic University of Chile. They formed the Darwin’s Frog Conservation Initiative. One result was a conservation breeding facility for endangered Darwin’s Frogs on the grounds of the NZC complete with 32 breeding enclosures, automated climate

controls, a backup and self-starting generator, a dedicated 1,200L water reservoir, and breeding groups of frogs. Reproductive behavior in the facility was noted initially in March 2010; the first baby frogs were produced in November 2010, and the colony continues to breed to this day.

Our program has trained NZC personnel in captive amphibian husbandry practices in the United States. As an education and outreach step, the Initiative developed a website and blog to highlight the effort and to educate the public about amphibian declines in Chile (www.savedarwinsfrogs.org). The collaboration has provided a platform from which to enact additional amphibian conservation measures in Chile. While the breeding center for Darwin’s Frogs has been a success, each stakeholder realized that this was just the first step necessary to conserve South Chile’s endangered amphibian fauna. We have documented die-off events and an amphibian pathogen, amphibian chytrid fungus, in the amphibians endemic to Chile’s southern humid temperate forests (Fenolio et al., in prep). Additional conservation steps are required for Chile’s other imperiled amphibian species.

The program has evolved into the Chilean Amphibian Conservation Center since the focus of the work no longer hinges only on Darwin’s Frogs. Efforts now include several other

continued on page 83 ➤



Batrachyla antantartica, Villa Rica, Chile. The Marbled Wood Frog is spectacularly patterned in a distinctive jigsaw-puzzle livery.



Fenolio and Nunez collecting frogs in Valdivia Province, Chile, Nov 2013.

imperiled amphibian species. The two coordinating institutions are the San Antonio Zoo (Texas, USA) and the National Zoo of Chile, with credit to the Atlanta Botanical Garden (Georgia, USA) for its many years of involvement. The program's facilities are broader in scope now. We have expanded our laboratory space to include a breeding facility for 4 additional species of endangered amphibians (Table 1, first 4 focal species). Species were selected based on the amphibian species conservation prioritization meeting, held in Chile in 2009, and on our own field observations and assessment of critical need. Our approach increases capacity by building breeding facilities in the range country. We believe that empowering local stakeholders will sustain the program well into the future.

The new laboratory is modeled after a cost-effective amphibian breeding lab at ABG, made from two shipping containers or "portable modular units." Please visit www.savedarwinsfrogs.org and click on "downloads" to see a video of the installation of our new lab facility. Because project staff had the experience and expertise to successfully convert shipping containers into amphibian breeding laboratories, this cost effective approach allowed us to move forward. The new lab has all of the same automated features as our original facility for Darwin's Frogs. Our primary goal is to see these efforts produce captive assurance colonies and opportunities for reintroduction

programs of captive produced individuals. Despite the fact that the focal amphibian species are listed as Vulnerable, Endangered, or Critically Endangered by the IUCN, there is no other conservation breeding effort active in Chile that works with any of the first four species (see Table 1 for the first four focal species).

Table 1: The five species below represent the endangered and endemic Chilean amphibian species with which the Chilean Amphibian Conservation Center is working. The new amphibian conservation breeding lab has been established on the grounds of the National Zoo of Chile.

- Common Name/Species/IUCN Status
- Chile Mountains False Toad
Telmatobufo venustus
Endangered
 - Bullock's Mountains False Toad
Telmatobufo bullocki
Critically Endangered
 - Pelado Mountains False Toad
Telmatobufo australis
Vulnerable
 - Barrio's Frog
Insuetophrynus acarpicus
Critically Endangered
 - Darwin's Frog *Rhinoderma darwinii*
Vulnerable

continued on page 85 >



The Darwin's Frogs breeding facility at the National Zoo of Chile.



Calyptocephalella gayi, Nahuelbuta Mts., Chile. An aggressive aquatic predator, the Chilean Wide Mouth Frog feeds on a variety of prey items.



Telmatobufo venustus, Altos de Lircay, Chile. Although they are variable, most Chile Mountains False Toads are clad in black and orange.



Eupsophus altor or the "Chilean Tomato Frog," has a small range in the coastal mountains of Chile. The species faces real conservation challenges as habitat loss in the region is severe.

THE FROGS AND FIELDWORK

Living in the humid leaf litter of Chile's temperate pluvial forests is a frog so unique that it captured the attention of Charles Darwin when he visited Chile. It was known as *sapito vaquero* or "cowboy frog" to the locals and *llüngki* (Mapudungun) to the Mapuche Indians (some authorities argue that the name "sapito vaquero" only applied to Chile's Darwin Frog, *Rhinoderma rufum*). Stranger than the fictional animals reported in the day, these amphibians have a bizarre physical appearance to match their colorful name, sporting, as Darwin noted, a long, fleshy, nose-like appendage. Collectively referred to as "Darwin's Frogs," there are two species in the genus *Rhinoderma*. The Darwin's Frog, *Rhinoderma darwinii*, was formally described in 1841 (based on Charles Darwin's collection in the rainforests around Valdivia) and Chile's Darwin Frog, *R. rufum*, was described in 1902. The former is found in Chile and Argentina while the latter is a Chilean endemic that may now be extinct.

Darwin's Frogs have a noteworthy reproductive mode. Like many anurans, male *Rhinoderma* call to attract females. However, the courtship behavior of the two species can include direct kicks to the male's head and body by the female. Females deposit a clutch of eggs on the damp forest floor and the male fertilizes

Collecting *Insuetophrynus acarpicus*.



them. At that point, the female leaves and her parental duties are complete. The male remains in the area of the clutch as it develops. When the tadpoles hatch, the male takes the developing larvae into his mouth and manipulates them through an opening (the vocal slit) below his tongue and into his vocal sac. The tadpoles develop inside the structure that is normally used for vocalizing! After a developmental period that can last from 45 to 60 days and is temperature dependent, male *Rhinoderma darwinii* "spit out" fully formed froglets, while male *R. rufum* spit tadpoles into a water source where they complete their development. The reproductive strategy of these frogs (vocal sac brooding) has long been recognized as unique. Unfortunately the Chile's Darwin Frog, *Rhinoderma rufum*, has not been seen since the 1970s. The decline of the Darwin's Frog, *R. darwinii*, is also documented and is most apparent in the northern portion of its range.

recorded for the first time in 100 years in 1999; the tadpole was not even described until 1983, 84 years after the species's description. During our surveys, we encountered several specimens of the ultra reclusive Bullock's False Toad, *Telmatobufo bullocki*, in *Nothofagus* forests of the Nahuelbuta Mountains. Barrio's Frog, *Insuetophrynus acarpicus*, is a strongly aquatic species associated with mountain streams. It is only known from a small region of montane forest along Chile's central coast.

Fieldwork has involved visiting historic localities from which these species have been reported. It also includes checking forests without reports of the focal species but that have appropriate habitat. Since 2008, we have visited dozens of localities looking for frogs. When we find populations, skin swabs are collected. The swabs are tested for the presence of amphibian chytrid fungus (Bd) in the laboratory of M. Levy at North Carolina State University, School of Veterinary Medicine, in the USA. Visits to field sites have involved a few localities accessible via a 2-wheel-drive vehicle. However, all-terrain vehicles are usually required. Hiking in from logging roads and other non-developed access ways is sometimes required. For a few localities, renting horses and mules and a field crew has been necessary. This allows multi-day access to distant forests.



Another view of the Darwin's Frogs breeding facility at the National Zoo of Chile.

"False Toads" of the genus *Telmatobufo* are seldom encountered and all known species are endemic to southern Chile. One biologist recently wrote of them, "Since the description of this genus, specimens of only 20 adults of the three species have been collected." That number has risen but the frogs are widely considered among the least commonly encountered in the world. Adult *Telmatobufo venustus* were

Trips to these remote, pristine fragments

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Our conservation breeding lab at the National Zoo of Chile is made of a collapsible shipping container. Here, workers are lifting the roof on the pod.



A portrait of *Rhinoderma darwini*, Villa Rica, Chile. Many neotropical amphibians that inhabit leaf litter display orange throats and chests. The function is unknown.



We had an artist make a statue of a Darwin's Frog by our lab. The idea was to attract children, bringing their parents, who would then read our signage.

Batrachyla leptopus, Linoico, De Los Rios, Chile. The Gray Wood Frog is among Chile's few arboreal anuran species.



Telmatobufo venustus, Altos de Lircay, Chile. The function of its bold pattern is unknown. Perhaps it is disruptive to predators, such as owls.



Batrachyla antantartica, Villa Rica, Chile. The Marbled Wood Frog is one of Chile's most distinctive amphibians owing to its jigsaw-puzzle like pattern.



Rhinoderma darwini, like many forest floor inhabitants, is disruptively colored, with the darker facial tone entering the iris so as to better disguise the eye.



Telmatobufo venustus, Altos de Lircay, Chile. Exotic fish introduced for anglers wreak havoc among Chile's native amphibians, preying on larvae and competing for food.

have offered us a glimpse of what all of the area was once like. Southern Chile lies at the southeastern edge of the "Pacific Ring of Fire" - the region fairly bristles with volcanoes, some of them still active today. When we are surveying a forest, we are seldom far from the brooding shadow of a volcano. The slopes are carpeted by lush stands of Southern Beech trees (*Nothofagus* spp.) and dissected by tumbling streams with thundering waterfalls. The scenery is truly awe inspiring, and the Austral Forests and the unique amphibians that inhabit them are a natural treasure. ●

Please visit our website for more information:
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The expansible throat pouch is used by male Darwin's Frogs *Rhinoderma darwini* to house the developing tadpoles.



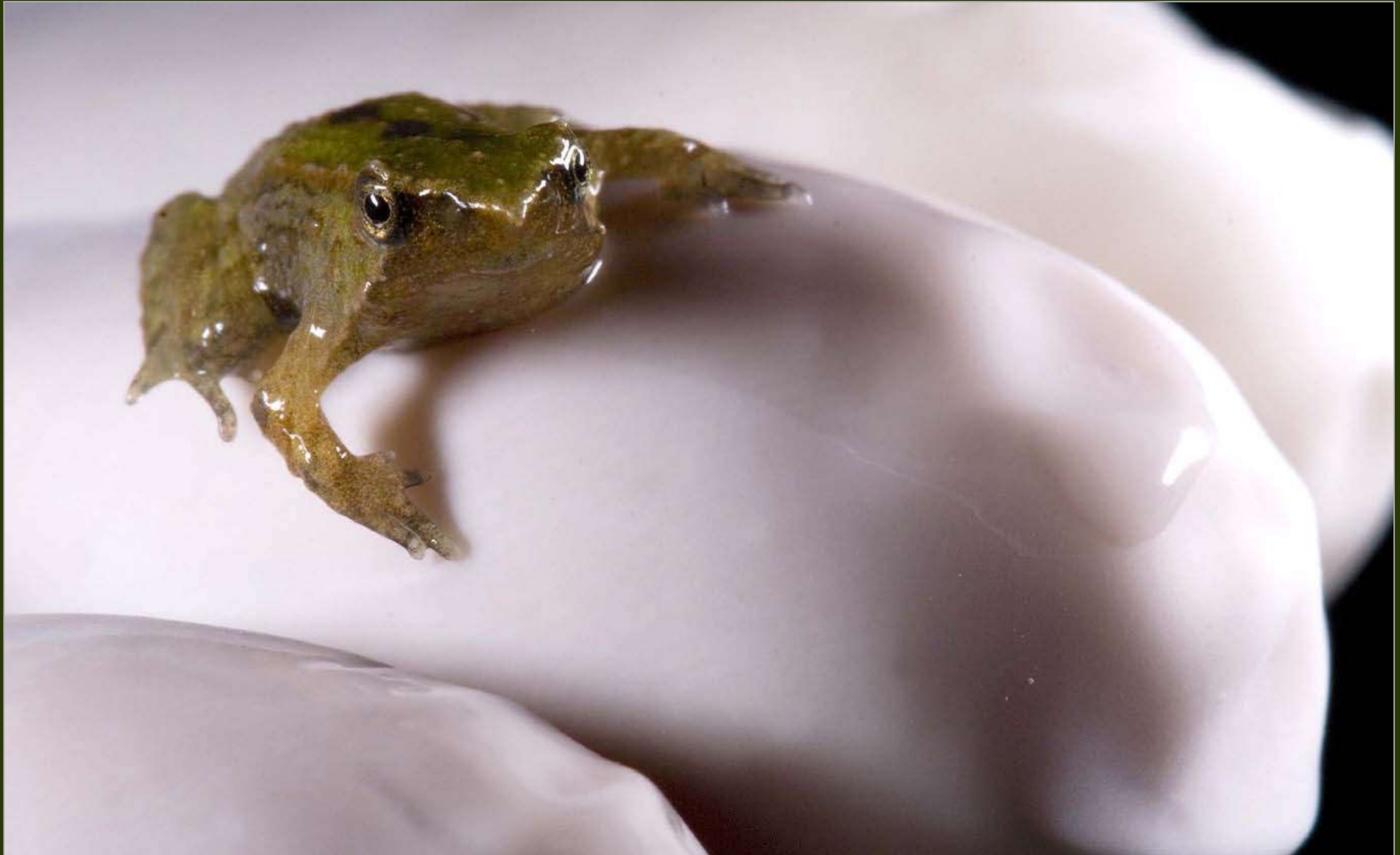
Alsodes tumultuosis, Farallonas, Chile. This robust anuran is adapted for life in splash zones and rapids, as its name implies.



Eupsophus roseus, Linoico, De Los Rios, Chile. The Rosy Ground Frog can be found in a variety of color morphs including a solid orange or red color phase.



Eupsophus migueli, Mehúin, De Los Rios, Chile. The Mehúin Ground Frog is another endangered species with a small range.



A tiny captive bred baby Darwin's Frog *Rhinoderma darwini* on a rubber-gloved finger tip.

Eupsophus vertebralis, Linoico, De Los Rios, Chile. Middorsal stripes provide cryptic benefit confusing potential predators. This is the Valdivia Ground Frog.



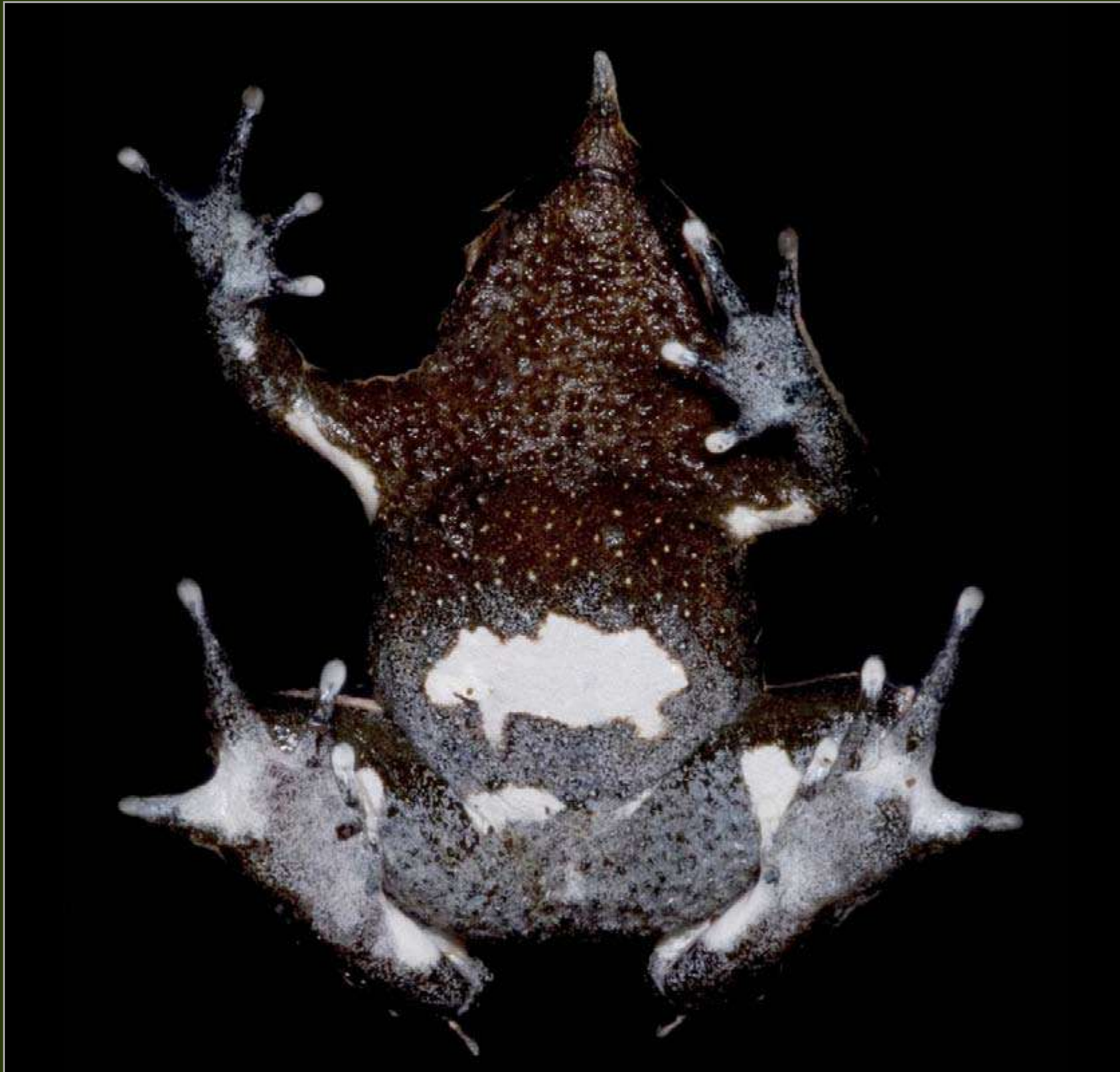
Eusophus contulmoensis, Contulmo, Chile. The endangered Contulmo Ground Frog is primarily known from a small park surrounded by pine plantations.



Alsodes igneus, Mocho Choshuehco National Park, Chile. The Tolhuaca Spiny-chest Frog inhabits isolated forest fragments and has a small range.



Eupsophus cf. roseus, Oncol, Chile. The Rosy Ground Frog is among the most unusually colored in all of Chile.



Startling ventral coloration may serve a cryptic or aposematic function in Darwin's Frogs *Rhinoderma darwini*, as it often happens with several other amphibian species.



Telmatobufo bullocki, Nahuelbuta Mts., Chile. Its dermal glands possibly provide protection as it aestivates during the dry season.

Shaggy male Chilean Hairy Tarantulas *Euathlus vulpinus* are a conspicuous part of the Chilean fauna during breeding season as they move on the forest floor.



This Chilean "Freshwater Squat Lobster" of the genus *Aegla* (*Aegla cf abtao*) is a crustacean in the family Aeglidae and is related to hermit crabs.



The Dwarf Armadillo *Zaedyus pichiy* inhabits grasslands, ranging from central and southern Argentina west through Chile and south to the Strait of Magellan.



The aptly named Chilean Truculent Tarantula *Euathlus truculentus* - found in the highlands of Chile - is quick to adopt a defensive posture when disturbed.



An extravagantly ornamented and outrageously colorful Chilean Opilionid from the Valdivia Province - another fascinating species from the little-known and severely threatened temperate humid forests of Chile.

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Trip Report

LAND OF BEARS, BLACK GROUSES AND WOLVERINES

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FANTASTIC FINLAND

An early spring, ten-day visit to the Martinselkosen Eräkeskus wildlife center to photograph Northern Europe's spectacular and wary wildlife



Eurasian Brown Bear *Ursus arctos arctos*

A large bear emerges from the boreal forest of the Martinselkosen Eräkeskus wildlife centre. To guarantee good photographic opportunities and clear sightings of this normally shy species three separate hides - where regular baiting is used - are at the disposal of visitors.



Wolverine *Gulo gulo*
Wolverines are the size of a medium dog, with a length ranging from 65–107 cm (26–42 in), a tail of 17–26 cm (6.7–10.2 in), and a weight of 9–25 kg (20–55 lb).

TEXT AND PHOTOS
BY GUIDO MURATORE

When I think about bears, the first place that comes to my mind is Finland. The country has one of the largest bear populations in Europe, and the bear is the Finnish national animal. In April 2013, I visited Finland for ten days, trying to photograph the brown bears after they woke up from hibernation in the Martinselkosen Eräkeskus, a wildlife centre in the midst of the great Kainuu wilderness. The Martinselkosen Eräkeskus wildlife centre provides rather comfortable accommodation and dining services to visitors, and it is located in the municipality of Suomussalmi, in a place called Pirttivaara. There are three hides nearby - one in the forest, one in a swamp and the third by a pond - where baits are used and which are available to small groups and photographers. This was my first long photographic trip and it was very carefully planned, as this is the only time of the year when photographers can capture images of the bears on snow.

When you photograph wildlife, you always have to consider that it is possible head out and return home without pictures, because, as a friend says, "Nature is nature." While being with the right guide helps to increase the chances for good shots, we still felt lucky to see bears on our first night out. Around 20.00, a large male came out of the forest heading towards us. The excitement we felt was indescribable. He

began to get closer and closer, to a position about ten meters from the hide, allowing us to take some amazing photos. The most incredible thing was to see how he was aware of our presence because with every shot, he raised his head as if to scold us. During this time of the year, when the bears first rouse from hibernation, they are not very confident and any sudden movement might make them suspicious and flee, so every action must be well thought out. Nevertheless this bear remained in front of our hide all night, walking around and stopping to eat from time to time. We found him the next morning still there, so we could photograph him with the beautiful light of sunrise.

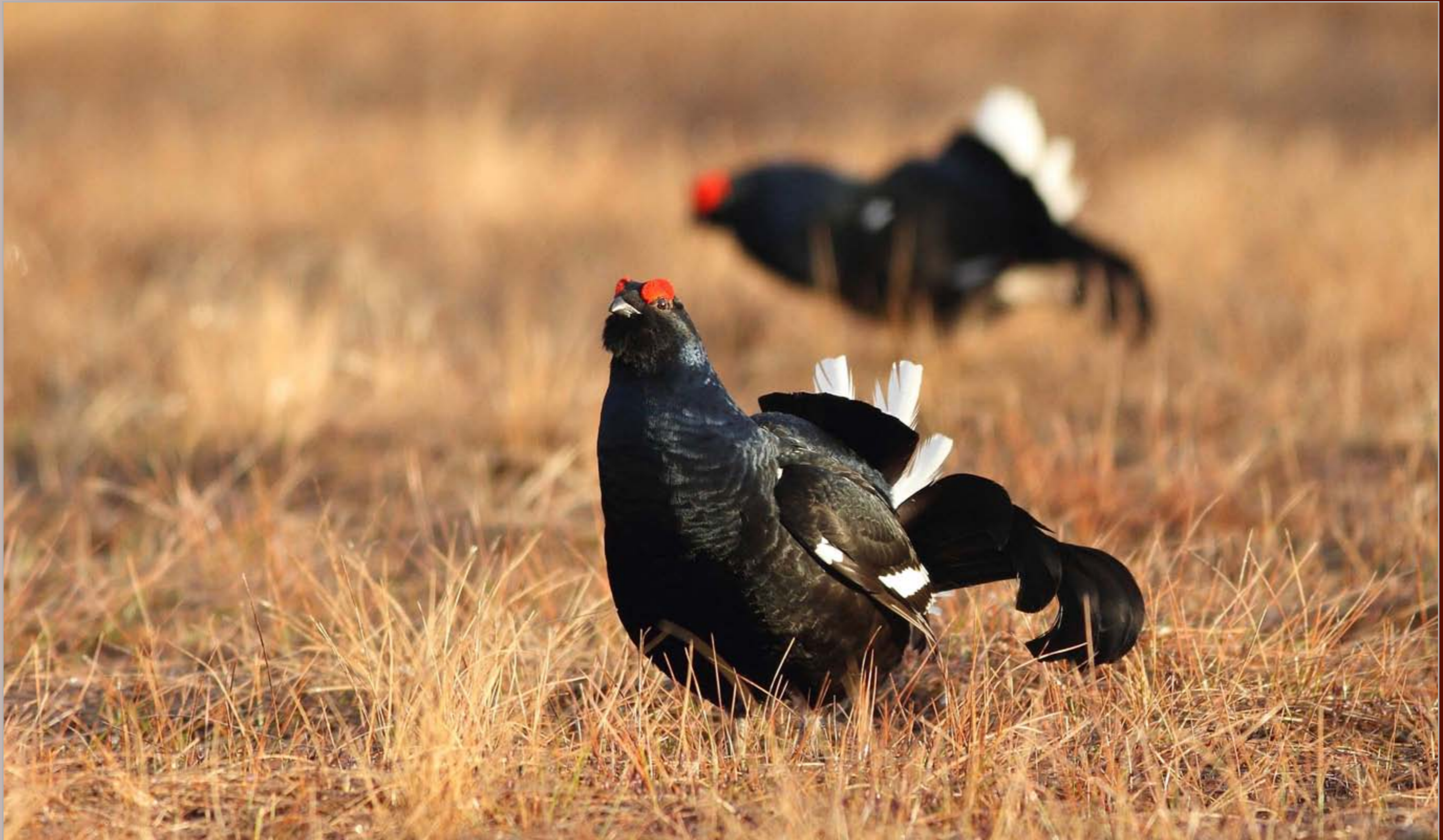
One of the things I like most in wildlife photography is to use a wide angle lens with animals. This isn't easy because of the extreme proximity of the subject required. From the beginning of the trip, I wanted to photograph a bear this way. The forest was definitely the most suitable place for the purpose, so I decided to try. Even though the bear approached our hide and allowed for many photographs in the beautiful light, it wasn't close enough to allow me to do the shot I wanted. After nearly three hours the bear finally found a seat right where I wanted him. The picture is not perfect; I would have preferred completely snow covered ground, but I was happy with what I got.

continued on page 101 ➤



Eurasian Brown Bear *Ursus arctos*

A large male - bathed in a warm golden light - approaches the hide where visiting photographers sit in wait. Without the use of well-camouflaged hides and - above all - regular baiting, capturing such images would require an enormous amount of time and an inordinate amount of luck.



Black Grouse *Tetrao tetrix*

A large bird, with males being around 53 centimetres (21 in) long and weighing 1,000–1,450 grams (2.20–3.20 lb) and females approximately 40 centimetres (16 in) and weighing 750–1,110 grams (1.65–2.45 lb). Males sport black plumage, red wattles, a white wingbar, and a lyre-shaped tail, which appears forked in flight.



Although it was still April, at the end of our journey the snow had already melted and the landscape was completely transformed. The number of bears present grew day by day as they awoke from hibernation, and consequently increased the chance of seeing them. The last three days in particular I photographed bears in all possible conditions: sunrise, sunset, fog, and also under a snowfall. I could not hope for anything better!

The last night we definitely had the best show. Two young males had finished their snacking and began to play in front of our eyes, first rubbing their snouts against each other then standing up and beginning to sink. We could see it was not a real fight because the bites were only hinted at and there was no aggression in their hits. Unfortunately it was too late and too dark to take pictures, but I remained in ecstasy watching that scene, filming it as a record. I could not hope for better experiences from this adventure. I look forward to returning again at another time of the year to photograph the cubs with their mothers. They are easy to see in June and July, when you can photograph them in the treetops where they climb to escape from the big males who try to attack them to mate with females. I expect another fantastic Finnish adventure!

Finland is not just good for bears. I think it should be considered, at least in Europe, the paradise of every wildlife photographer, both for mammals and for

Eurasian Brown Bear *Ursus arctos*

The Brown Bears of the The Martinselkosen Eräkeskus forest are most active in late April and early May, at the end of their hibernation period. The landscape then can still be partially covered in snow.

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Eurasian Brown Bear *Ursus arctos arctos*

Another dramatic close-up of a large Brown Bear. This extremely powerful and normally peaceful species is noted for its unpredictable disposition. However - unlike in America, where an average of two people a year are killed by bears - Scandinavia has only three fatal bear attacks in the last century on record.



Eurasian Brown Bear *Ursus arctos arctos*

A full grown male weighs on average no more than 250 and 300 kilograms (550 and 660 lb). The largest Eurasian brown bear recorded was 481 kg (1,058 lb) and was nearly 2.5 m (8.2 ft) long. Females typically range between 150–250 kg (330–550 lb).

birds. There are so many animals that it is not rare to find a capercaillie on the roadside or white hare behind a house. On my trip, we focused our attention on two particular species, dedicating ourselves exclusively to them for few days: the wolverine and the black grouse. The wolverine is one of the shyest mammals and an absolutely fascinating creature. It is the size of a medium-sized dog and has long curved claws that are rather scary. Wolverines run with a curious gait, the awkward bounding stride characteristic of all mustelids. Anything but awkward, the black grouse is a beautiful bird that, during this time of the year, fights with other males for the conquest of the females. During these battles, you can sometimes see twenty grouses simultaneously in the arena, a pleasure for every photographer.

Finland has proved to be one of the most fascinating places I've ever seen. If you are a wildlife photographer, you should absolutely plan a visit. ●

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Eurasian Brown Bear *Ursus arctos arctos*

In antiquity, the Eurasian brown bear was largely carnivorous, with 80% of its diet consisting of animal matter. However, as its habitat increasingly disappeared, meat consisted of only 40% of its dietary intake in the late Middle Ages, till modern times where meat now amounts to little more than 10–15% of its diet.



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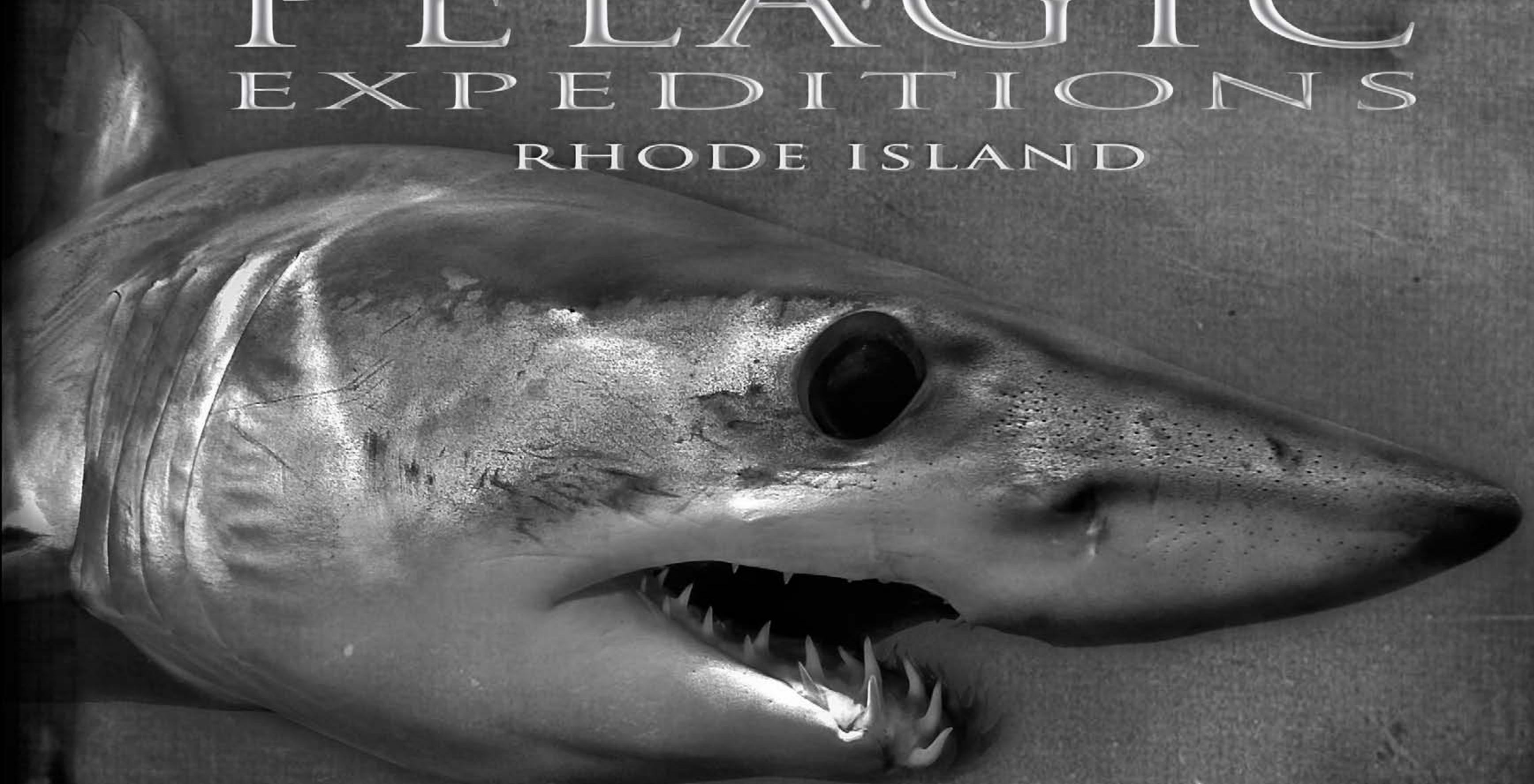


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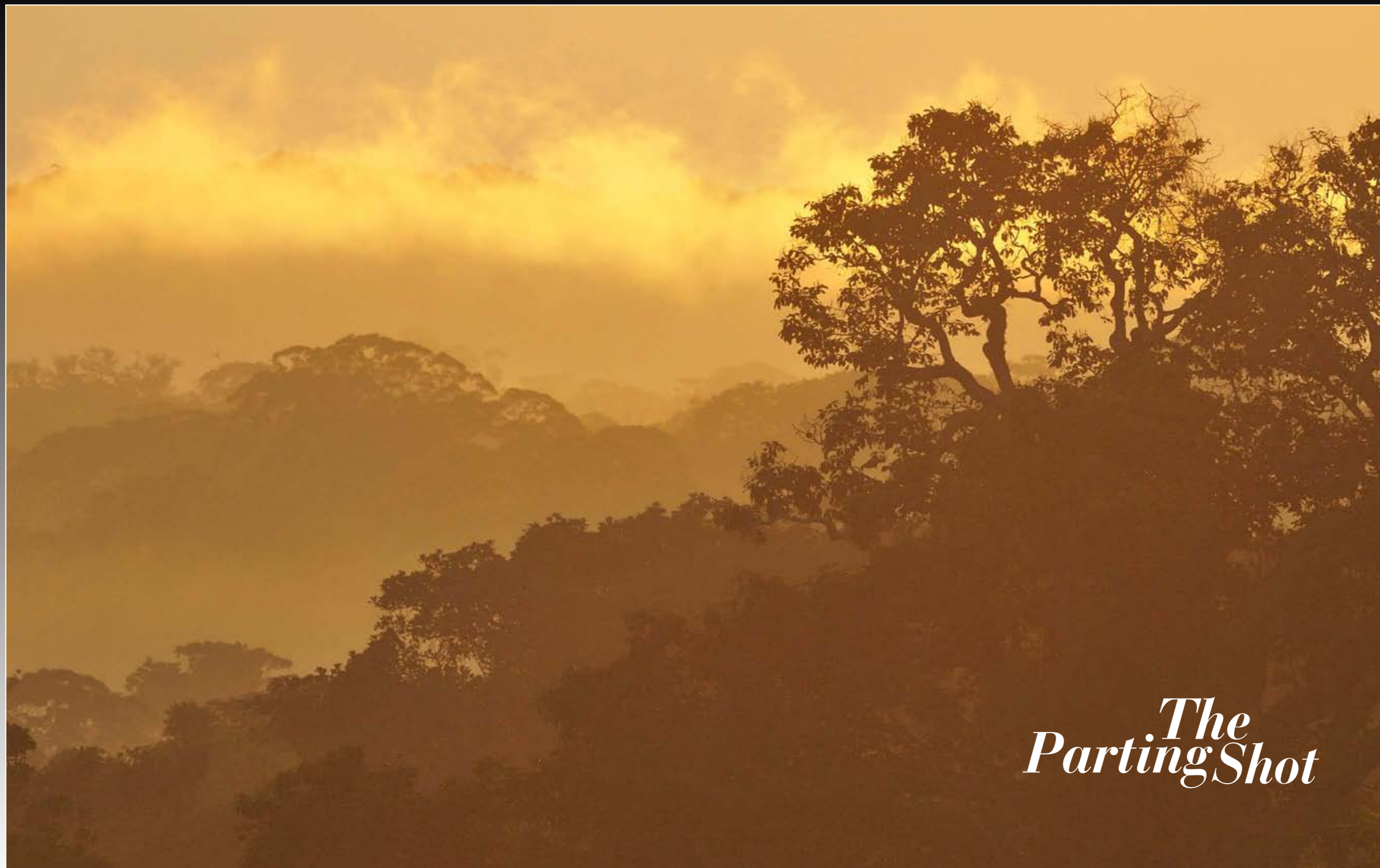
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The Parting Shot

As dawn breaks over the Peruvian rainforest of Tambopata Nature Reserve, a blinding explosion of pure golden light shines over the treetops, firing up the sheets of mist hanging among the towering trees and the canopy vault like a magical floodlight. Forty meters up, at the top of a wildlife observation tower, drenched in sweat and water droplets and perfectly alone, we speechlessly admire the

undulating, shimmering sheets of gold and copper in which the glorious tropical sunrise has momentarily transformed the stupendously theatrical rainforest landscape. As a deafening cacophony of shrill chirping, raucous squawking and booming calls welcomes the rising sun, the golden light dissipates in a matter of seconds, and the forest canopy returns to its infinite hues of green. We often

think of protecting and conserving single animal species, but it is during life-changing moments such as these that one realizes that without the protection and conservation of complete *habitats*, of the actual *environment*, saving single species is pretty hopeless. Perhaps it is time for all of us to start thinking differently, on a grander scale - to finally realize that all living things are one. ●

**MAGICAL
MADAGASCAR - 2**
Back to the Red Island



**GENTLE
GIANTS**
Rinie Luykx
swims with
Basking Sharks



INDIAN LIONS
A Trip Report
from Sasan Gir
National Park



**LONG LEGGED
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A visual tribute
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A DANGEROUS GAME
The venomous snakes portraits of
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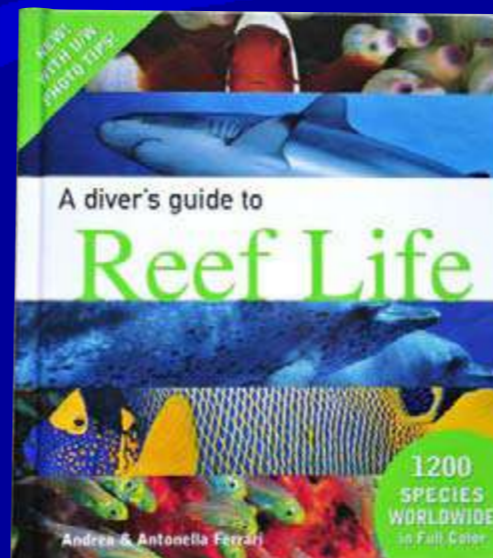


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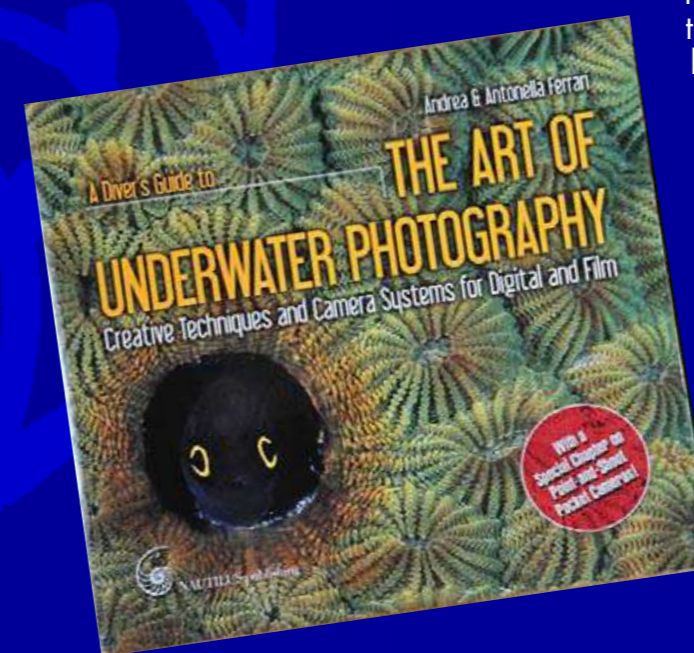
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