

A large tortoise, likely a Galapagos tortoise, is the central focus of the image. It is resting on dark, moist soil with some dry leaves and twigs. The tortoise's head is turned towards the left, showing its wrinkled skin and small eye. Its shell is dark and textured, with visible scutes. The background consists of green trees and a blue sky with white clouds.

# ANIMA MUNDI

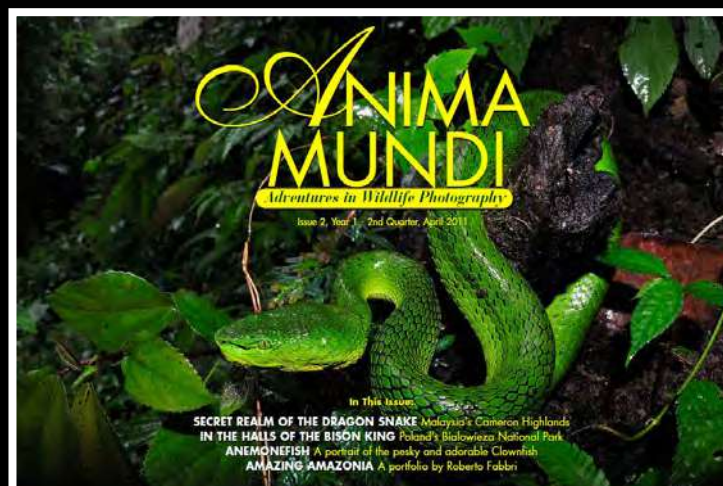
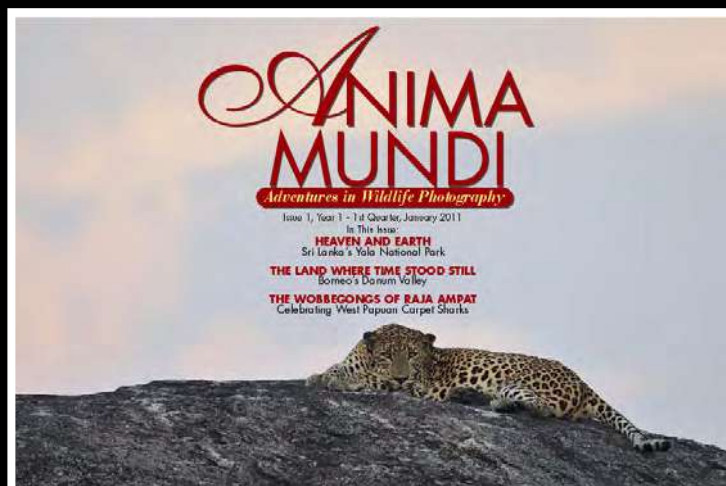
*Adventures in Wildlife Photography*

Issue 36, Year 9 - October 2019

In This Issue:

**PSYCHEDELIC DRAGONET** The Mandarinfish  
**ENCHANTED ISLANDS** The Galapagos - Part Two  
**A LOVE FOR VIPERS** Thor Hakonsen's Portfolio  
**BLACK WATER STORIES** Diving in the Dark





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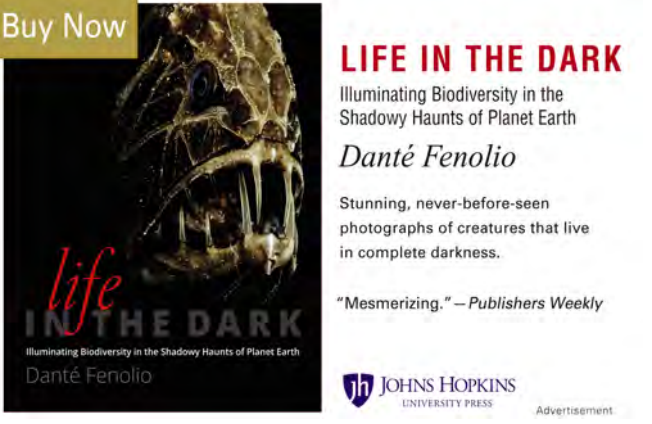
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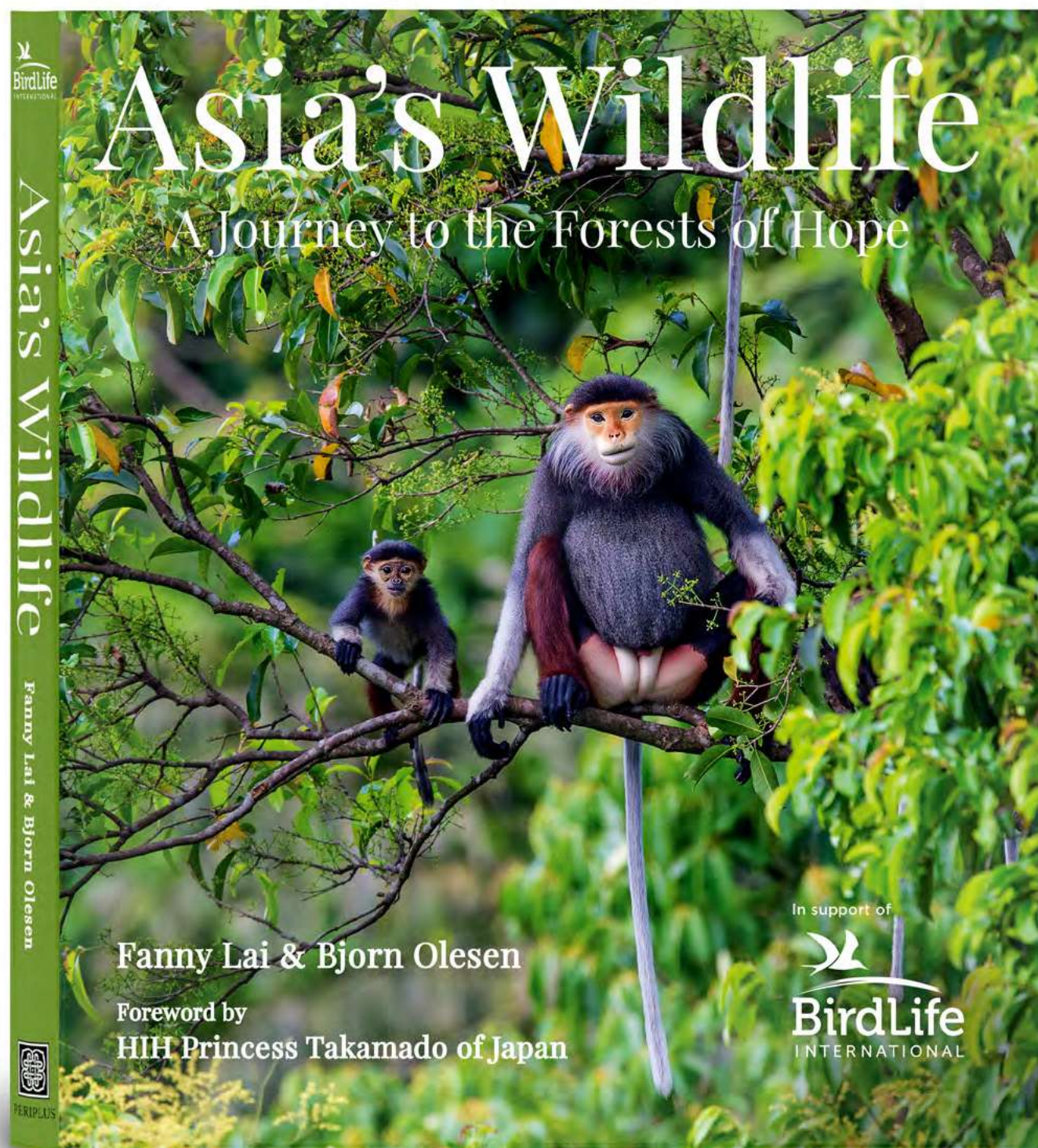
*I have just finished reading your latest edition of Anima Mundi and I was inspired to write and say how much I am enjoying your publication and following your adventures. My wife and dive/photo partner Cherie and I were so inspired by your feature on Yala National Park that we booked a Safari with Eco 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.*

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Dr. Nigel Collar, Leventis Fellow in Conservation Biology, BirdLife International.

*This book features some of the world's least known species like Vietnam's Saola and the Sumatran Tiger in their natural environment. It weaves high quality photography of these species and inspiring conservation stories from forest sites across Asia together through the lenses of lead photographer, Bjorn Olesen. I recommend it highly to anyone interested in saving Earth's biodiversity.*

Prof. Paul R. Ehrlich, President, Center for Conservation Biology, Stanford University.

*Wildlife of Asia's Forests of Hope has been produced to raise funds in support of **BirdLife International**, and to increase awareness of nature conservation and their Forests of Hope programme in Asia. The authors have contributed their time and resources on a pro bono basis for the production, research and travelling for this one-of-a-kind publication.*

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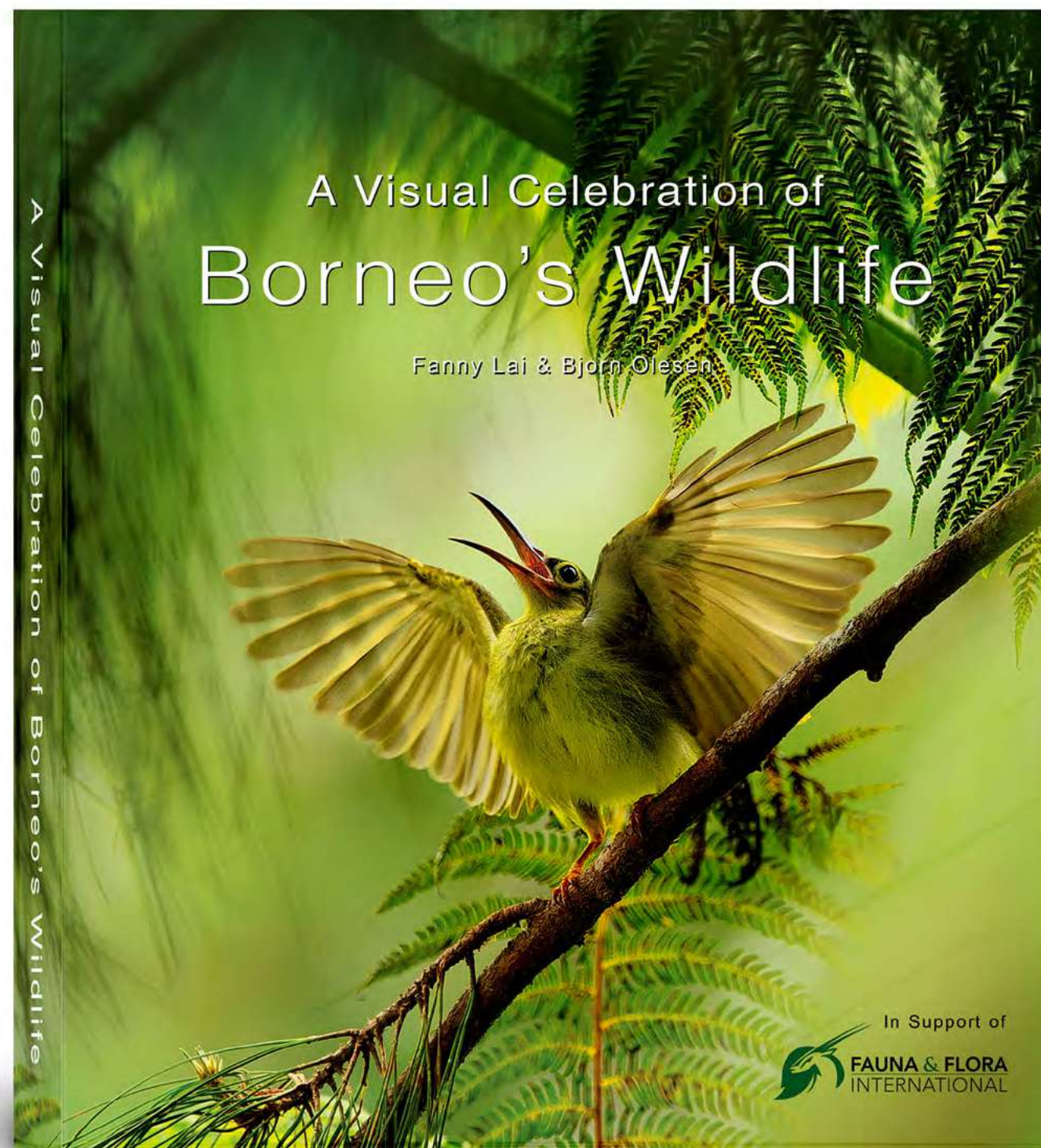
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■ Galapagos icon:  
Blue-footed booby  
*Sula nebouxii*,  
Isla Seymour Norte.



# ANIMA MUNDI

*Adventures in Wildlife Photography*

## Holding the line

Welcome to a new issue of *Anima Mundi - Adventures in Wildlife Photography*! As we near our tenth year of publication things are not looking good for the planet, sadly. Whether one looks at reputable scientific journals or easily influenced and manipulated social media, the outcome is always the same - rampant deforestation, wildlife being exploited and massacred everywhere, growing pollution, rising temperatures worldwide and, what's worse, no political will whatsoever to tackle the rampant raping and pillaging of our world, our only home...quite the opposite, in fact. What can we say? Only this - enjoy what we still have today, because most probably it won't be around for much longer...

And on this somber note we begin this issue on page 4 with a short article by Argentinian underwater photographer **Aldo Galante** about a diminutive but incredibly colorful wonder of nature - the stunning and aptly called "psychedelic" Mandarinfish.

We then continue on page 7 with the second and final part of our own extensively illustrated trip report from a legendary wildlife photography destination which even the most seaso-

ned nature traveller cannot afford to miss visiting - the Galapagos archipelago of Ecuador, cradle of Darwin's theory of evolution, home to countless endemic species and a National Park where animals show no fear of man.

From page 60 and on we present you **Thor Hakonsen's** Personal Portfolio, a stunning photo gallery testifying this young photographer from Norway long-lasting love affair with vipers - a dangerous but altogether fascinating subject to whom he has paid a glowing tribute with a series of spectacular portraits.



On page 77 we finally have USA scuba diver and underwater photographer **Suzan Meldonian's** work in the open ocean's water at night to document a variety of fascinating and very tiny marine creatures during their nocturnal rise from the deep. This so-called "black water diving" is proving extremely valuable to marine scientists too.

And that is all for now - until January 2020 with a new issue. In the meantime...

Have a good trip!  
**Andrea & Antonella Ferrari**  
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■ *Galapagos Land Iguana  
Conolophus pallidus, Isla Santa  
Fe, Galapagos archipelago,  
Ecuador. The second and final  
part of our big story on  
this legendary destination  
starts on page 7.*

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**SCOOP!**

4

*Tiny and crepuscular, the Mandarinfish *Synchiropus splendidus* is one of the most incredibly colorful fish species of tropical marine waters and one of only two vertebrate species known to have blue colouring because of cellular pigment.*

# THE AMAZING MANDARINFISH **PSYCHEDELIC DRAGONET**

TINY, CREPUSCULAR AND DWELLING  
IN CORAL RUBBLE, THIS IS ONE OF  
THE OCEAN'S MOST COLORFUL DENIZENS



■ This photo - taken in Borneo about 30 years ago by Anima Mundi - Adventures in Wildlife Photography's editors and publishers Andrea and Antonella Ferrari - was for a long time the only one ever taken of a mating pair of Mandarinfish *Synchiropus splendidus*.



TEXT AND PHOTOS  
BY ALDO GALANTE

Sunset is the time of the day when one of the most fascinating events of the tropical marine world occurs - the mating ritual of the Mandarinfish *Synchiropus splendidus*, one of the most beautiful and interesting fish of the ocean, particularly for underwater photographers. Its common name comes from its peculiar coloration and due to the similarity with the clothes of the Chinese Imperial Officers (or Mandarins). The standard colors of the fish are a blue background with orange wavy lines, yellow,

orange, red, purple and green; because of this, they are also known as "psychedelic fishes". It is one of the few fishes that has no scales and as a protective compensation for its lack of scales, it is protected by a viscous and malodorous skin covered with toxic mucus, which not only protects them from parasitic diseases of the skin, but also discourages predators because of its unpleasant taste. Its main predators are scorpionfish and man, who takes them out of the aquatic environment for the high-end aquarium trade, where many fish die, both during transport and in the tanks, since they are very delicate. Mandarinfish feed mainly on small crustaceans and tiny fish. They present

sexual dimorphism, differing mainly because the males are larger than the females and have a much longer spine, so they can be recognized by the divers. They usually measure no more than 7 cm approximately. They hide during the day but can be seen between dead or fragmented coral branches where they live at depths between 3 and 18 meters in waters of 24 ° to 28 ° Celsius. They swim with a quick pulsation of their fins, which makes them look like they are some kind of marine hummingbird. They tend to be very shy, appearing and disappearing quickly, so taking a picture is quite difficult. Normally, they become visible at dusk to mate, avoiding any bright light.



This is why underwater photographers use dim lights or red lights to deceive them a bit and stimulate their approach and subsequent mating, and thus be able to photograph them. This happens just before the sun goes down. Three to five females will go to a particular region of the reef and they will meet with males, which are usually the largest and strongest, and tend to be favored by females. Fights between the males are frequent for them (as you can see in the images). The most successful male will join the female resting on her pelvic fins and together they will line up belly to belly and rise approximately 1 meter above the reef. Once they are at the top of their ascent, the female will release a cloud of eggs (usually up to 200) and the male the sperm. The fish then quickly disappear down to the reef to avoid being devoured by predators, ending the mating. The whole affair barely lasts one or two seconds. The fertilized eggs are incorporated into the plankton and in 2 weeks the fry will hatch, settling in the reef and choosing an appropriate habitat where they will live during the next 10 to 15 years of their long life. For the underwater photographers, this pairing is one of the most incredible and looked-for opportunities, since the resulting images usually do not disappoint. Mandarinfish inhabit the Pacific Ocean and the Coral biodiversity triangle that includes Malaysia, Indonesia, the Philippines and Australia. They are so shy that any sudden breathing or movement will scare them, quickly sending them back to their shelters to avoid being seen. That is why photographing them is not simple, and we must always do it with extreme patience, care and perseverance.



■ Mandarinfish  
*Synchiropus  
splendidus* males  
in territorial disputes  
show exceptionally  
colorful, “psychedelic”  
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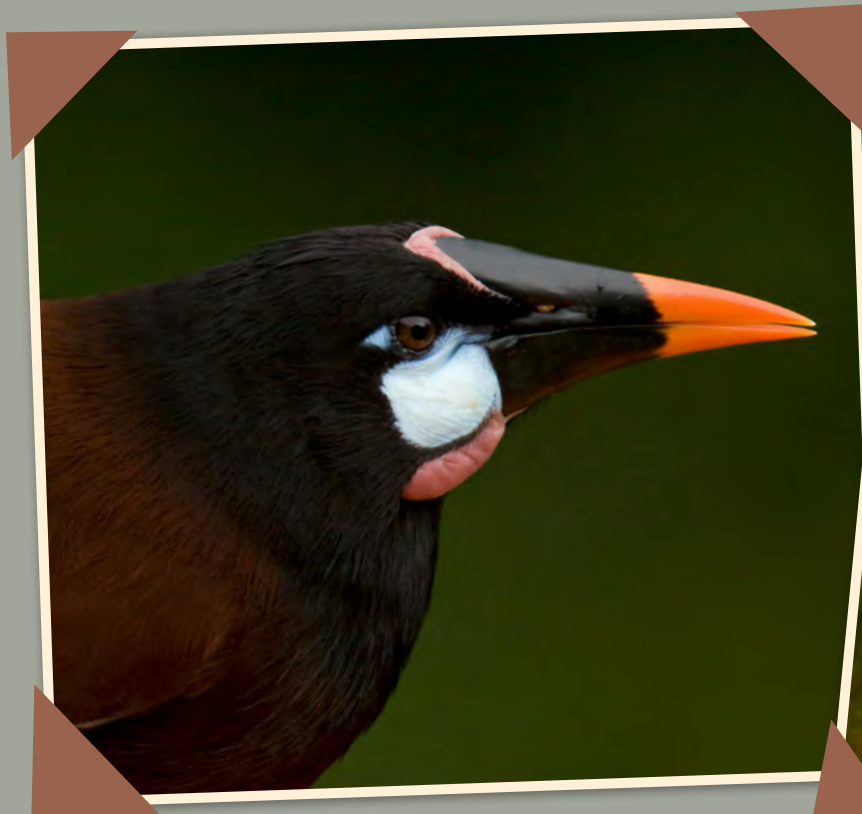


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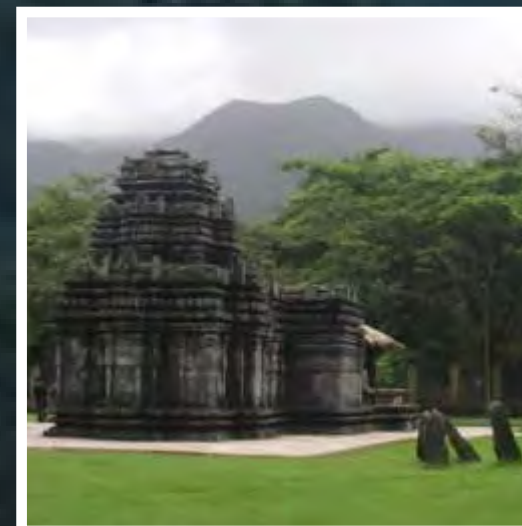
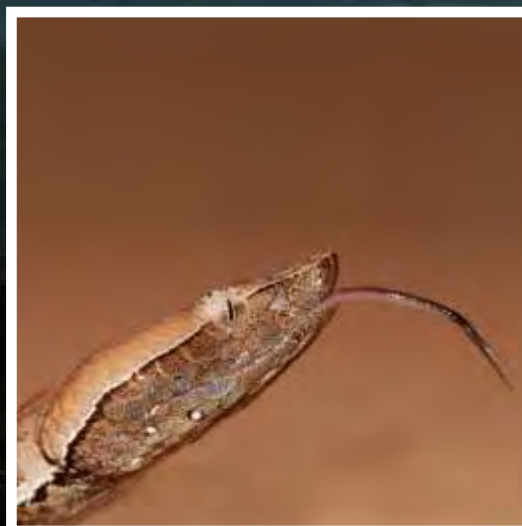


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THE GALAPAGOS ARCHIPELAGO  
**ENCHANTED  
ISLANDS**

PART 2

An unforgettable trip to Ecuador and  
the magical place of origin of Darwin's  
groundbreaking theory of evolution







*Galapagos land iguana* ■  
*Conolophus subcristatus*,  
*Isla Seymour Norte*. On the  
opening spread, *Galapagos Brown*  
*Pelican* *Pelecanus occidentalis*  
*urinator*, *Isla Seymour Norte*.



TEXT BY ANDREA FERRARI  
PHOTOS BY ANDREA & ANTONELLA FERRARI

The second part of our unforgettable and extensive trip to the Galápagos archipelago - which was expertly organized for us by our friends at **Tropical Herping** with the complex logistics faultlessly taken care of by the stupendous **Finch Bay Hotel** - saw the two of us, together with our friend and wildlife photographer Lucas M. Bustamante, explore three more islands of this stunning National Park of Ecuador. These were totally different from each other, but once more immensely interesting and exceptionally rewarding from the point of view of a nature photographer - their names are Seymour Norte, Santa Fe and Floreana. It is important to remind the reader that the first two can only be visited following clearly marked trails - which cannot be abandoned - and for a short period of time only (about two hours for each group of visitors).

**ISLA  
SEYMOUR NORTE**

Seymour Norte is a small island rising from the Pacific Ocean near Baltra Island. Named after an English nobleman, Lord Hugh Seymour, it was created by an uplift of a submarine

lava formation and it is entirely covered with low bushes. The island has an area of 1.9 square kilometres (0.73 sq mi) and a maximum altitude of 28 metres (92 ft) and it is home to a large population of Blue-footed boobies and Swallow-tailed gulls. It hosts one of the largest populations of magnificent frigatebirds *Fregata magnificens* and a slow growing population of the Galápagos land iguanas *Conolophus subcristatus*. It has a visitor trail approximately 2 kilometres (1.2 mi) in length crossing the inland of the island and exploring the rocky coast. The stock for the captive breeding program of the Galápagos land iguana is descended from iguanas which Captain G. Allan Hancock translocated from nearby Baltra Island to Seymour Norte in the 1930s. Seymour Norte, which has no people living on it, is only viewable today with an official guide who works for the Galápagos National Park. Seymour Norte was created by seismic uplift, rather than being of volcanic origin. The island has a flat profile with cliffs only a few meters from the shoreline, where swallowtail gulls and tropicbirds sit perched in ledges. A tiny forest of silver-grey Palo

*continued on page 11* ➤



Magnificent   
frigatebird *Fregata  
magnificens*,  
*Isla Seymour Norte*.





Red rock crab or  
Sally Lightfoot crab  
*Grapsus grapsus*,  
Isla Seymour Norte.



Santo trees stand just above the landing, usually without leaves, waiting for rain to bring them into bloom. The island is teeming with life. While visiting the island, one may have to give way to a passing sea lion or marine iguana. Flocks of pelicans and swallow-tailed gulls feed off shore, and seasonally, Nazca boobies can also be seen. North Seymour is an extraordinary place for breeding birds, and it is home to one of the largest populations of nesting Blue-footed boobies and Magnificent frigate birds. Pairs of Blue-footed boobies can be seen conducting their mating ritual as they offer each other gifts, whistle and honk, stretch their necks towards the sky, spread their wings, and dance - showing off their bright blue feet. Magnificent frigatebirds perch in low bushes, near the boobies, while watching over their large chicks. The frigates are huge, dark aerobats with a 90-inch (2.3 m) wingspan, and male frigates can puff up their scarlet throat sacks to resemble giant red balloons. Boobies and frigates have an interesting relationship, as boobies are excellent hunters and fish in flocks, while frigates by comparison are pirates, dive bombing the boobies to force them to drop their prey. Then, the aerobatic frigate swoops down from the sky and picks up the food, most of the times before it even hits the water.

*continued on page 13* ➤



*Blue-footed booby Sula  
nebouxii, Isla Seymour Norte.*





■ Blue-footed  
booby *Sula  
nebouxii*, Isla  
Seymour Norte.



## ISLA SANTA FE

Isla Santa Fe, also called Barrington Island after admiral Samuel Barrington, is a small island of 24 square kilometres (9.3 sq mi) which lies in the centre of the Galápagos archipelago, to the southeast of Santa Cruz Island. Geologically it is one of the oldest; volcanic rocks of about 4 million years old have been found here. The vegetation of the island is characterized by brush, Palo Santo trees and stands of a large variety of the prickly pear cactus *Opuntia echios*. Barren, rock-strewn and somewhat unwelcoming (but maybe this has something to do with the fact that it was quite and uncommonly overcast when we visited it) Santa Fe is home to two endemic species and two endemic subspecies: the Barrington land iguana *Conolophus pallidus*, the Barrington leaf-toed gecko *Phyllodactylus barringtonensis*, the Santa Fe marine iguana *Amblyrhynchus cristatus trillmichi* and the Santa Fe rice rat *Aegialomys galapagoensis bauri*. The visitor site is a sand beach located in Barrington Bay on the northeastern side of the island. Large numbers of sea lions are found on the beaches in the bay, occasionally hindering access to the two trails leading from the beach but offering wonderful photo opportunities and unique chances of careful approach (without physical interaction).

continued on page 16 ➤



Galapagos  
Brown Pelican  
*Pelecanus  
occidentalis  
urinator*, Isla  
Seymour Norte.





Left, Blue-footed booby *Sula nebouxii*, Isla Seymour Norte; top right, Galapagos land iguana *Conolophus subcristatus*, Isla Seymour Norte; bottom right, Lucas M. Bustamante photographing a Galapagos Brown Pelican *Pelecanus occidentalis urinator*, Isla Seymour Norte.







Magnificent   
frigatebird *Fregata*  
*magnificens*,  
*Isla Seymour Norte*.



ISLA FLOREANA

This was one of the most interesting among the islands of the archipelago we had the opportunity to visit during our trip. Floreana was named after Juan José Flores, the first president of Ecuador, during whose administration the government of Ecuador took possession of the archipelago. It was previously called Charles Island (after King Charles II of England), and Santa Maria after one of the caravels of Columbus. The island has an area of 173 square kilometres (67 sq mi) and it was formed by volcanic eruption. The island's highest point is Cerro Pajas at 640 metres (2,100 ft), which is also the highest point of the volcano like most of the smaller islands of Galápagos. Since the 19th century, whalers kept a wooden barrel at Post Office Bay, so that mail could be picked up and delivered to their destination by ships on their way home, mainly to Europe and the United States. Cards and letters are still placed in the barrel without any postage. Visitors sift through the letters and cards in order to deliver them by hand. Due to its relatively flat surface, supply of fresh water as well as plants and animals, Floreana was a favorite stop for whalers and other visitors to the Galápagos. When still known as Charles Island in 1820, the island was set alight as a prank by helmsman Thomas Chappel from the Nantucket whaling ship the Essex. Being the height of the dry season, the fire soon burned out of control. The next day saw the island still burning as the ship

continued on page 27 ➤



Galapagos ■  
Brown Pelican  
Pelecanus  
occidentalis  
urinator, Isla  
Seymour Norte.



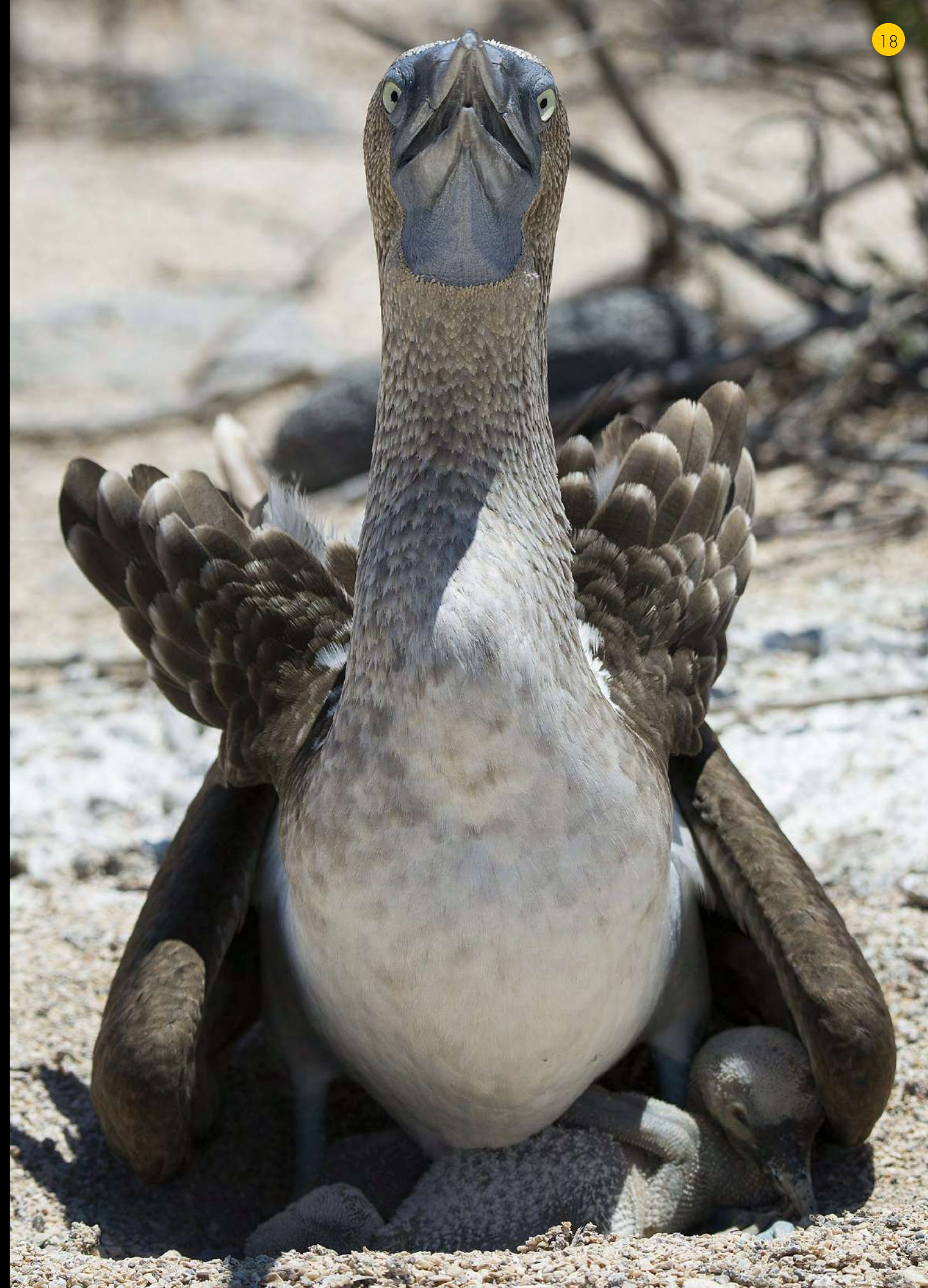


Blue-footed booby  
*Sula nebouxii* on nest  
protecting chicks from  
the scorching sun,  
Isla Seymour Norte.





■ Left,  
*Magnificent  
frigatebird*  
*Fregata  
magnificens*  
*juvenile, Isla  
Seymour Norte.*  
Right, *Blue-  
footed booby*  
*Sula nebouxii*  
*on its nest with  
chicks, Isla  
Seymour Norte.*





■ "Photobombing"  
Galapagos Brown  
Pelican *Pelecanus*  
*occidentalis*  
*urinator* with  
National Park  
guide, Isla  
Seymour Norte.








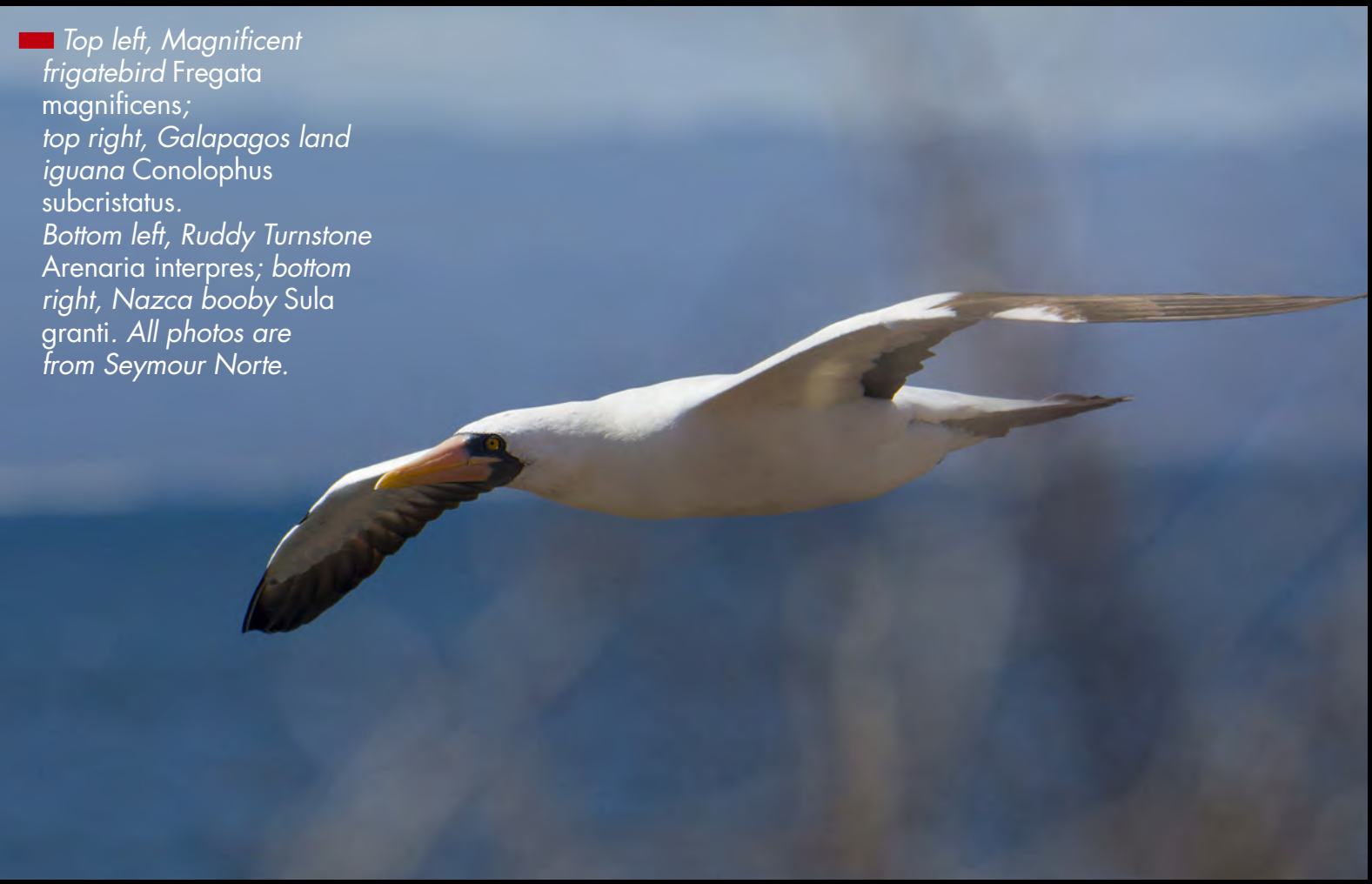
Far left, Blue-footed booby *Sula nebouxii*, Isla Seymour Norte. Left, Red rock crab or Sally Lightfoot crab *Grapsus grapsus*, Isla Seymour Norte.






Can you spot the iguana? Galapagos land iguana *Conolophus subcristatus* in its habitat, Isla Seymour Norte.





■ Top left, Magnificent frigatebird *Fregata magnificens*; top right, Galapagos land iguana *Conolophus subcristatus*. Bottom left, Ruddy Turnstone *Arenaria interpres*; bottom right, Nazca booby *Sula granti*. All photos are from Seymour Norte.





*Magnificent frigatebird* ■  
*Fregata magnificens* feeding  
its young by regurgitation,  
Isla Seymour Norte.

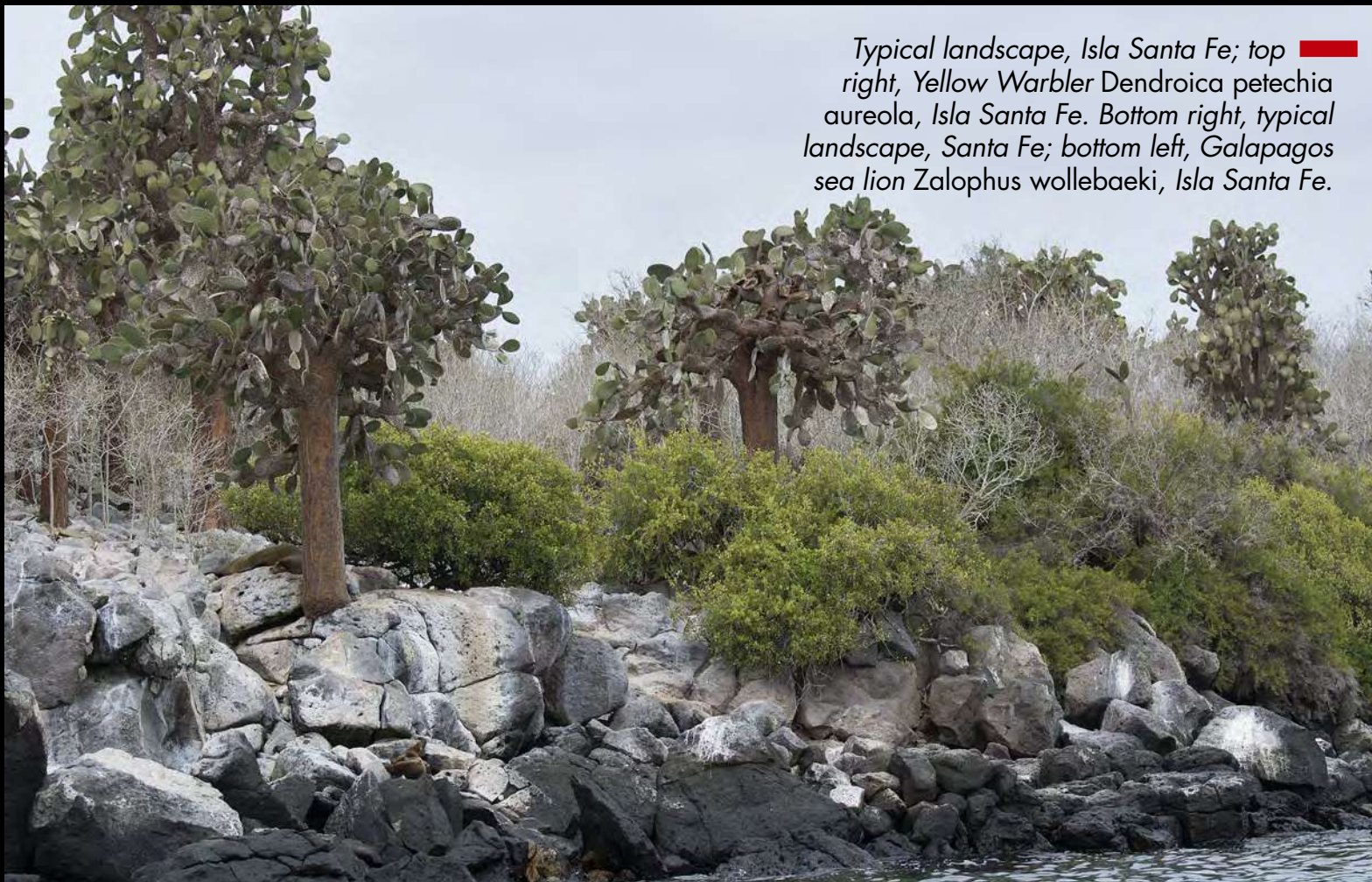


■ Ruddy Turnstone  
*Arenaria interpres*,  
*Isla Seymour Norte*.





Typical landscape, Isla Santa Fe; top right, Yellow Warbler *Dendroica petechia aureola*, Isla Santa Fe. Bottom right, typical landscape, Santa Fe; bottom left, Galapagos sea lion *Zalophus wollebaeki*, Isla Santa Fe.





■ Barrington Land iguana  
*Conolophus pallidus*,  
Isla Santa Fe.





Santa Fe lava lizard ■  
*Microlophus barringtonensis*,  
 Isla Santa Fe.

sailed for the offshore grounds and after a full day of sailing the fire was still visible on the horizon. Many years later Thomas Nickerson, who had been a cabin boy on the Essex, returned to Charles Island and found a black wasteland: "*neither trees, shrubbery, nor grass have since appeared.*" It is believed the fire contributed to the extinction of some species originally on the island.

In September 1835 the second voyage of HMS Beagle brought Charles Darwin to Charles Island. The ship's crew was greeted by Nicholas Lawson, acting for the Governor of Galápagos, and at the prison colony Darwin was told that tortoises differed in the shape of the shells from island to island, but this was not obvious on the islands he visited and he did not bother collecting their shells. He industriously collected all the animals, plants, insects and reptiles, and speculated about finding "*from future comparison to what district or 'centre of creation' the organized beings of this archipelago must be attached.*"

On 8 April 1888 USS Albatross, a Navy-manned research vessel assigned to the United States Fish Commission, visited Floreana Island during a 2 week survey of the islands. In 1929, Friedrich Ritter and Dore Strauch arrived in Guayaquil from Berlin to settle on Floreana, and sent letters back that were widely reported in the press, encouraging others to follow. In 1932 Heinz and Margret Wittmer arrived with their son Harry, and shortly afterwards their son Rolf was born there, the first citizen of the island known to have been born in

*continued on page 34* ➤



■ Galapagos sea lion  
*Zalophus worlbebaeki*,  
Isla Santa Fe.







■ Antonella with Galapagos sea lion *Zalophus wollebaeki*, Isla Santa Fe. These - obviously - are wild animals, which have always right of way and which must not be approached too closely.






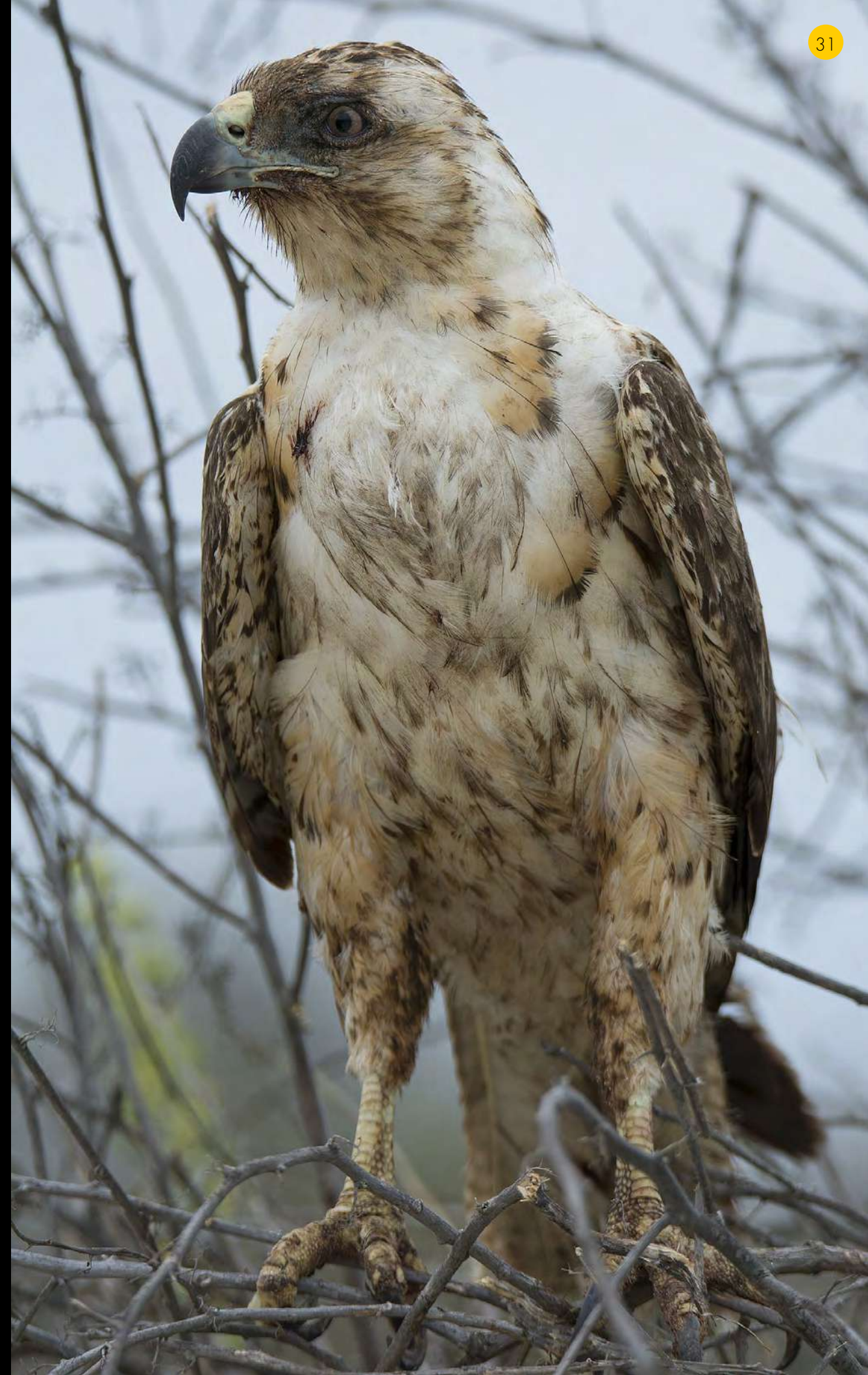


■ Galapagos hawk  
*Buteo galapagoensis*,  
feeding on dead sea  
lion pup, Isla Santa Fe.






Left, Barrington   
Land iguana  
*Conolophus pallidus*,  
Isla Santa Fe ; right,  
Galapagos hawk  
*Buteo galapagoensis*  
juvenile, Isla Santa Fe








Galapagos sea lion   
*lion* *Zalophus*  
*wollebaeki*,  
*Isla Santa Fe.*





■ Top, Barrington Land  
iguana *Conolophus*  
*pallidus*, *Isla Santa Fe*;  
Bottom left, Santa Fe  
lava lizard  
*Microlophus*  
*barringtonensis*, *Isla*  
*Santa Fe*; bottom right,  
Galapagos  
Mockingbird  
*Nesominius parvulus*  
*barringtoni*,  
*Isla Santa Fe*.



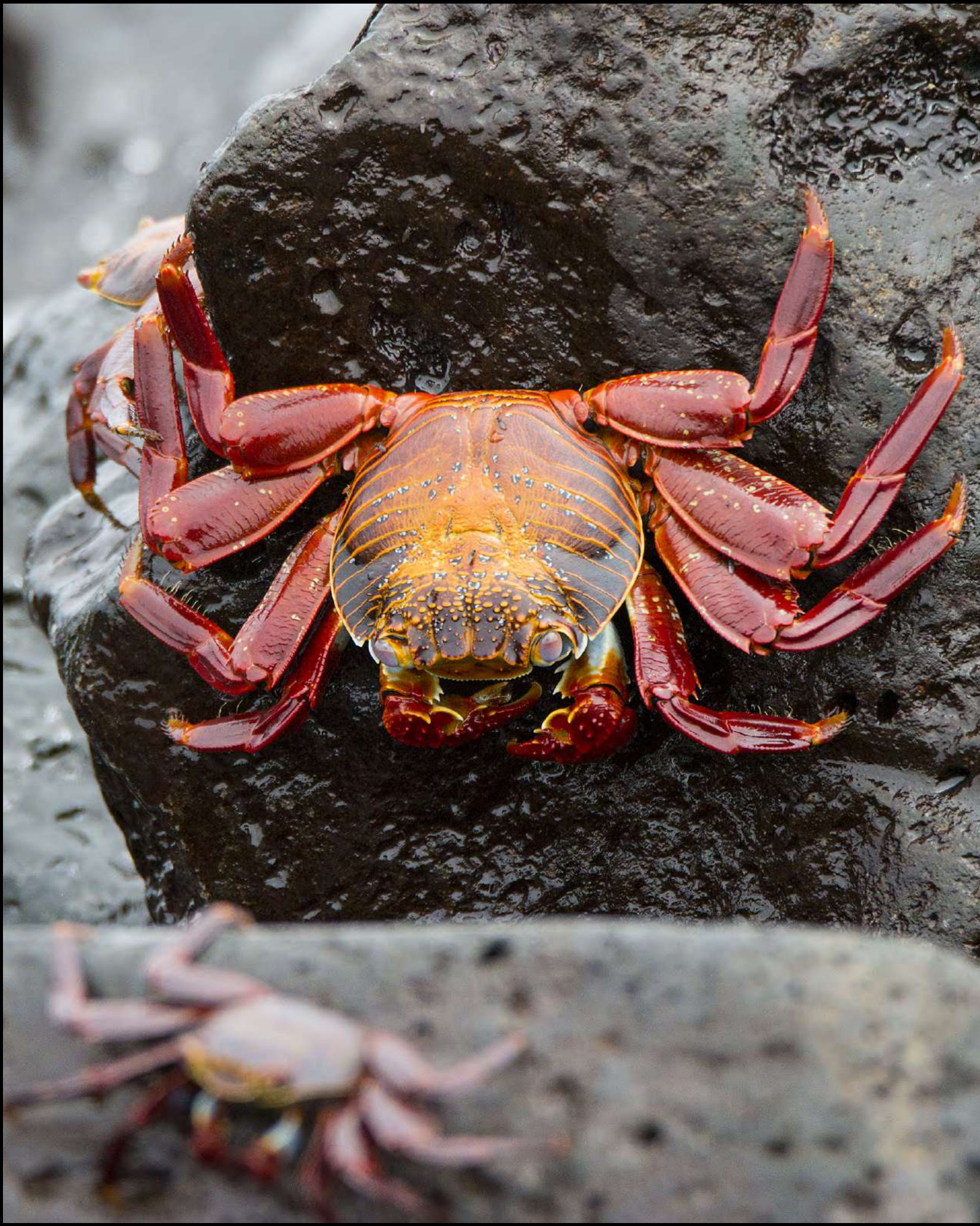



the Galápagos. Later in 1932, the self-described "Baroness" von Wagner Bosquet arrived with companions, but a series of strange disappearances and deaths (including possible murders) and the departure of Strauch left the Wittmers as the sole remaining inhabitants of the group who had settled there. They set up a hotel which is still managed by their descendants, and Mrs. Wittmer wrote an account of her experiences in her book *Floreana: A Woman's Pilgrimage to the Galápagos*. A documentary film recounting these events, *The Galapagos Affair*, was released in 2013. The demands of these visitors, early settlers, and introduced species devastated much of the local wildlife with the

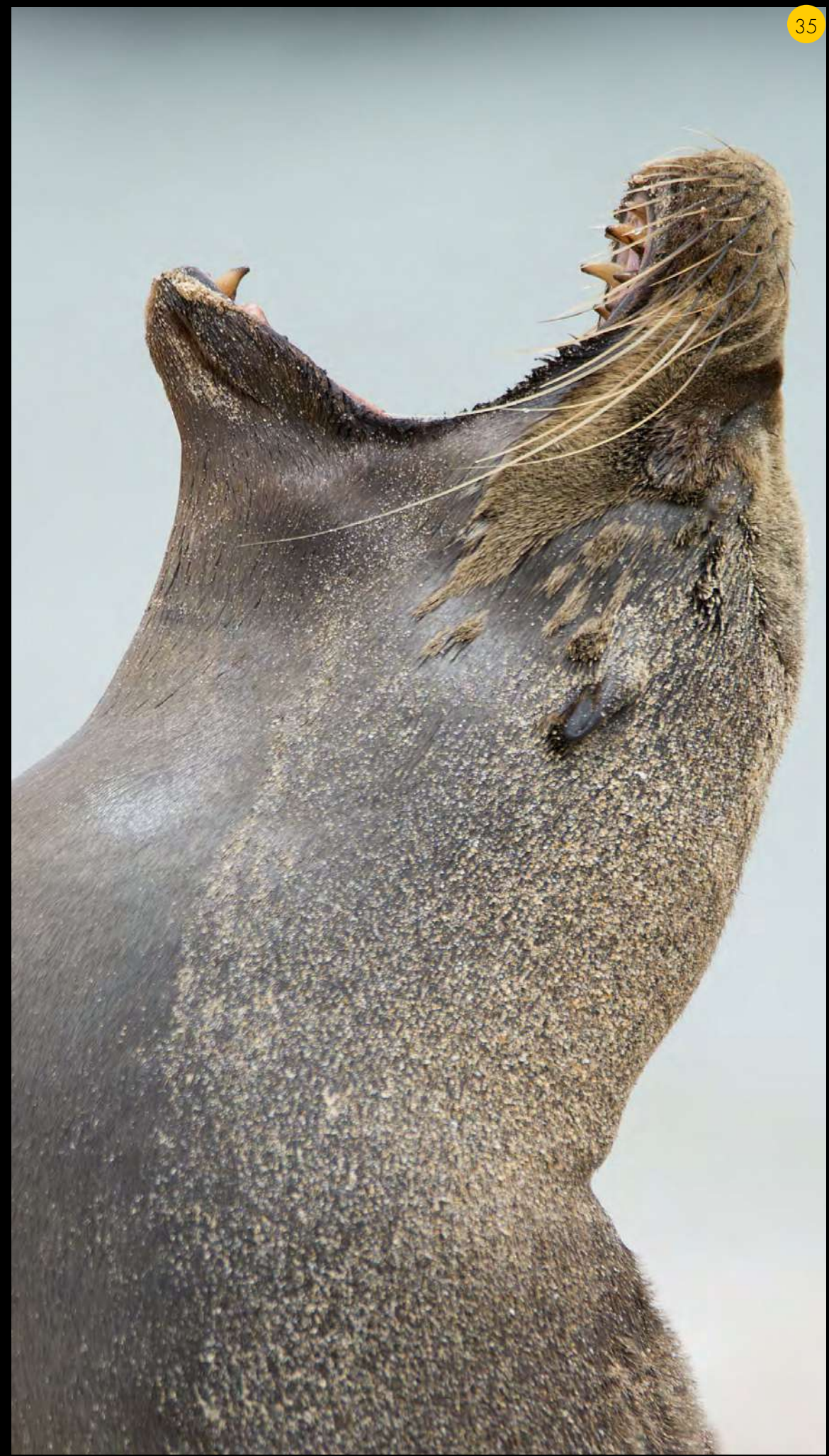
*continued on page 37* ➤

■ Galapagos sea lion *Zalophus wolfebaeki*, Isla Santa Fe.





Left, Red rock  crab or Sally Lightfoot crab  
*Grapsus grapsus*,  
Isla Santa Fe;  
right, Galapagos  
sea lion *Zalophus  
wolfebaeki*, Isla  
Santa Fe.





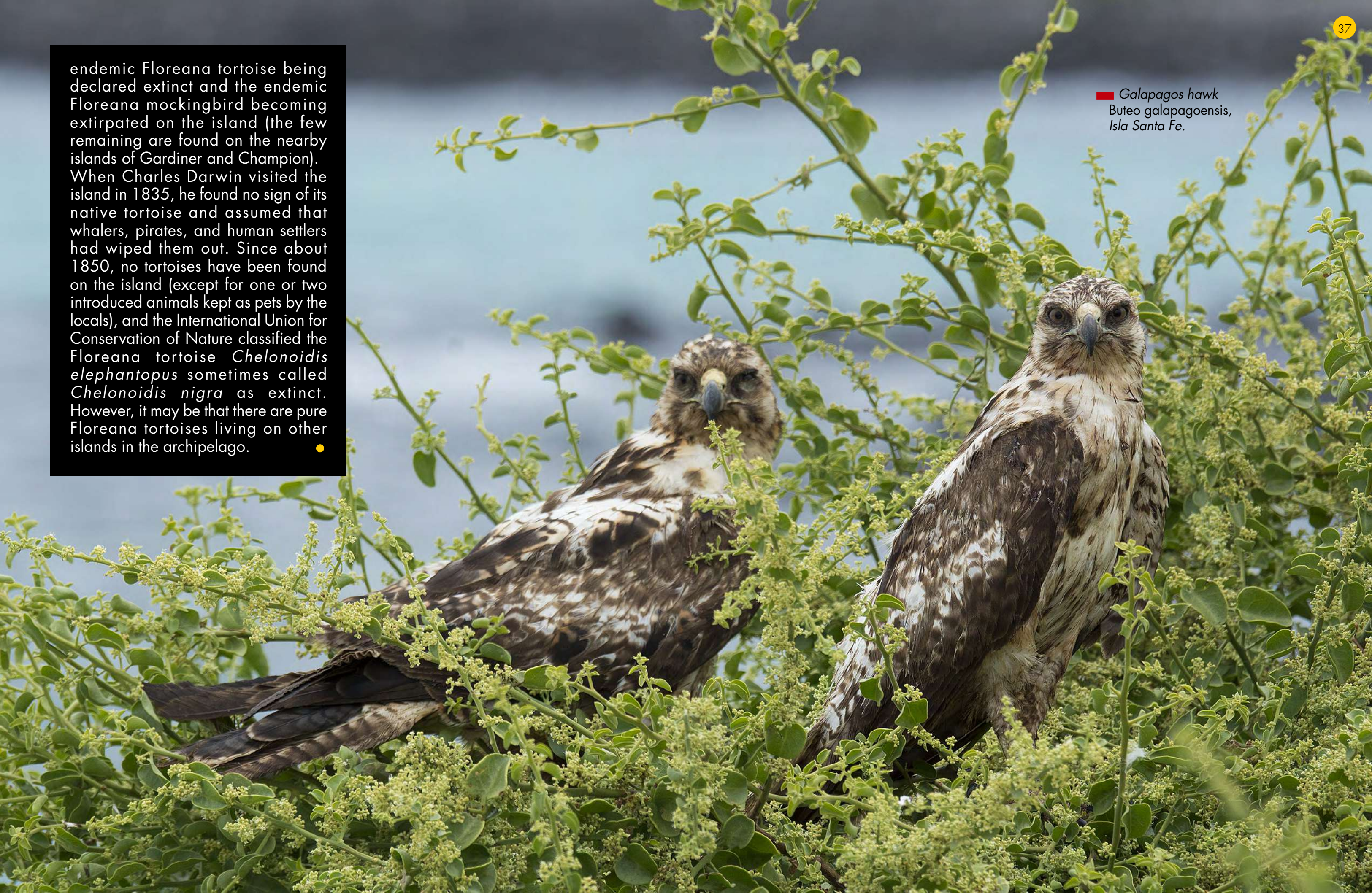


Galapagos sea lion  
*Zalophus wollebaeki*,  
Isla Santa Fe.



endemic Floreana tortoise being declared extinct and the endemic Floreana mockingbird becoming extirpated on the island (the few remaining are found on the nearby islands of Gardiner and Champion). When Charles Darwin visited the island in 1835, he found no sign of its native tortoise and assumed that whalers, pirates, and human settlers had wiped them out. Since about 1850, no tortoises have been found on the island (except for one or two introduced animals kept as pets by the locals), and the International Union for Conservation of Nature classified the Floreana tortoise *Chelonoidis elephantopus* sometimes called *Chelonoidis nigra* as extinct. However, it may be that there are pure Floreana tortoises living on other islands in the archipelago. ●

■ Galapagos hawk  
*Buteo galapagoensis*,  
Isla Santa Fe.





*Santa Fe lava*   
lizard *Microlophus*  
*barringtonensis*,  
*Isla Santa Fe*.





Galapagos hawk *Buteo galapagoensis*, feeding on dead sea lion pup, Isla Santa Fe.






Typical coastal landscape  
with sea lions and *Opuntia*  
cactus, Isla Floreana.







■ *Marine iguana*  
*Amblyrhynchus*  
*cristatus sub.*  
*venustissimus*  
*at sunset,*  
*Isla Floreana.*  
*The bright shades*  
*of pink and*  
*turquoise unique*  
*to the Floreana*  
*Marine iguanas*  
*are still apparently*  
*unexplained.*



■ Whimbrel  
*Numenius  
phaeopus*,  
*Isla Floreana*.







Galápagos  
giant tortoise  
*Chelonoidis "nigra"*  
from the government  
breeding center,  
Isla Floreana.





Lava heron *Butorides*  
*sundevalli*, with moray eel  
prey, Isla Floreana.



Marine iguana *Amblyrhynchus*  
*cristatus* sub. *venustissimus*,  
*Isla Floreana*.





Red rock crab or Sally  
Lightfoot crab *Grapsus*  
*grapsus*, Isla Floreana.







Galápagos giant tortoise ■  
*Chelonoidis "nigra"* from the  
government breeding center,  
Isla Floreana.





■ Left, typical coastal landscape, Isla Floreana; right, Galápagos giant tortoise *Chelonoidis "nigra"* from the National Park breeding center. Isla Floreana.







Galapagos icon: Marine  
iguana *Amblyrhynchus*  
*cristatus sub. venustissimus*  
basking at sunset,  
Isla Floreana.



Left, Lava heron *Butorides*  
*sundevalli*, Isla Floreana;  
right, Antonella with Marine  
iguana *Amblyrhynchus*  
*cristatus sub. venustissimus*,  
Isla Floreana.





*Marine iguana* ■  
*Amblyrhynchus cristatus sub.*  
*venustissimus* feeding on  
algae in the surf,  
Isla Floreana.





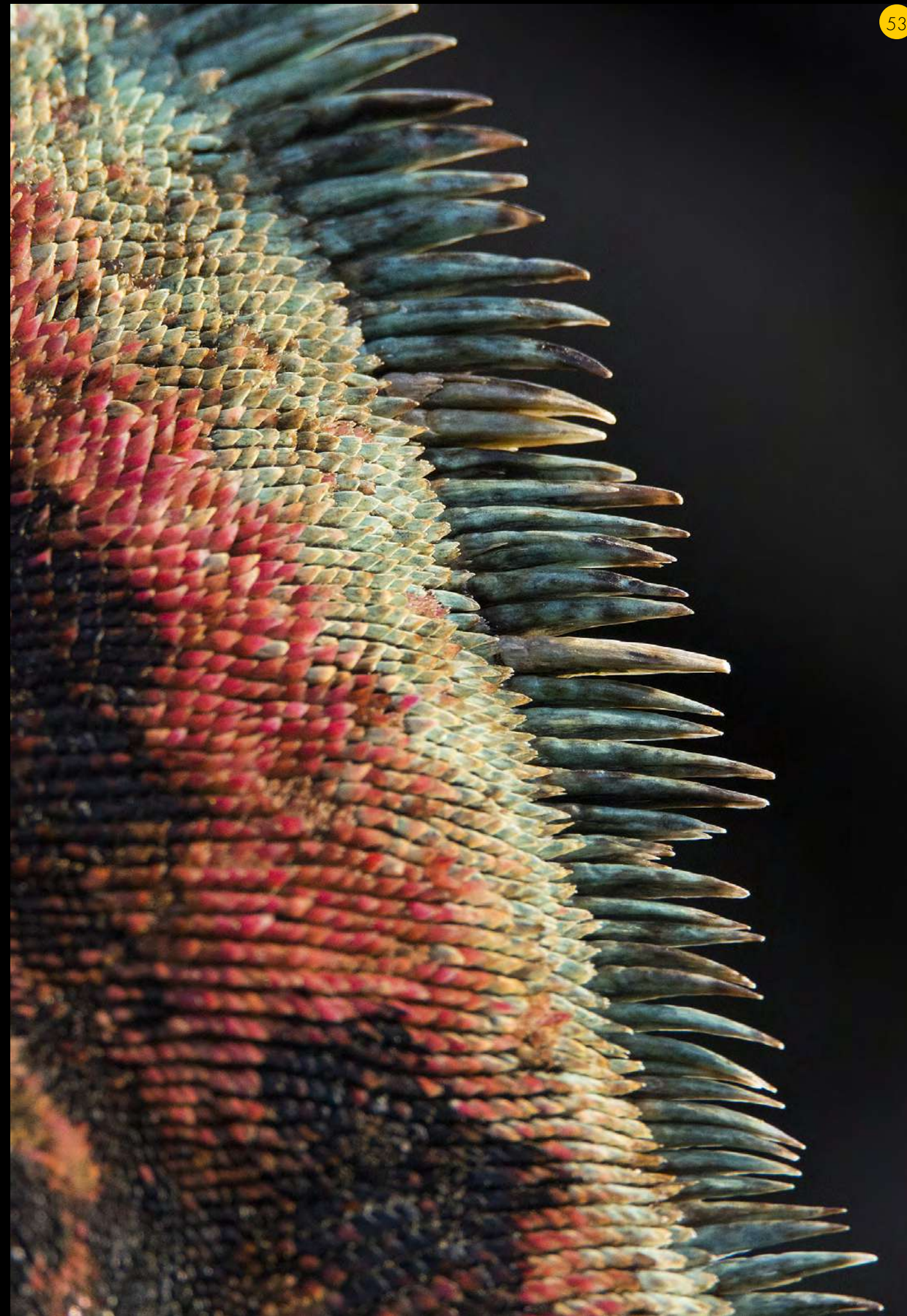
■ Galápagos sea  
lion *Zalophus*  
*wollebaeki* pup,  
*Isla Floreana*.







■ Left, Green turtle *Chelonia mydas*, Isla Floreana; right, dorsal detail of the typically colorful Marine iguana *Amblyrhynchus cristatus sub. venustissimus* found on Isla Floreana.





Typical - and stunningly  
beautiful - coastal landscape  
of Isla Floreana.





■ Galápagos giant tortoise *Chelonoidis "nigra"* from the breeding center of Isla Floreana.







Left, ■  
Galápagos  
giant tortoise  
*Chelonoidis*  
"nigra" from  
the breeding  
center of  
Isla Floreana.  
Right, typical  
coastal  
landscape with  
*Opuntia* cactus  
and marine  
iguana.





■ *Marine iguana*  
*Amblyrhynchus*  
*cristatus sub.*  
*venustissimus,*  
*Isla Floreana.*





# At-a-glance travel guide

COUNTRY OF DESTINATION: **ECUADOR**



## 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 at Mariscal Sucre International Airport, close to Ecuador's high-altitude capital Quito. Domestic flights to the Galapagos leave from Quito or Guayaquil, both of which have regular morning flights to the islands (the Quito flight will however pass through Guayaquil). The islands are about two hour flight from Guayaquil, and the flight from Quito to Guayaquil takes about half an hour. The landing strip is on a small deserted island just in front of Isla Santa Cruz, which is reached after landing by a ferry service. The archipelago may also be reached by luxury cruise ships and scuba diving liveaboards, again usually departing from Guayaquil.

**MEANS OF TRANSPORT:** Keep in mind that the National Park rules are very clear and adamantly enforced everywhere: visitors can only walk on the islands along fixed, well-marked, immaculately kept trails and - most importantly - for a given, limited period of time, to make room for the following group and not unduly harassing the confident wildlife. A National Park service guide will always be present. If staying on a given island, local boats will be used to reach the other islands nearby; cruise ships offer longer and wider-ranging itineraries. For a well-organized and successful trip we can - as it always happens with trips to Ecuador - heartily recommend the services of our friends of **Tropical Herping**.

**CURRENCY:** Since the year 2000 Ecuador has opted not to have a national currency of its own - all transactions are done in US dollars.

**ACCOMODATION:** For our first visit we opted to stay on land rather than joining a crowded, highly organized cruise, and we can heartily recommend to all readers the stunningly beautiful and perfectly managed **Finch Bay Galapagos Hotel**, located in an untouched and peaceful setting in Puerto Ayora.

**FOOD:** Simple but healthy and filling. Ecuadorians love soups (try the delicious *Locro de Queso* - potatoes, cheese and avocado), meats and fish and



## *A trip to these enchanted islands is also - literally - a voyage back in time*



are blessed all-year round with fantastic vegetables and fruit. Being in the Galapagos and in the middle of the Pacific, the natural choice for most will obviously be the spectacular fish catch of the day.

**LANGUAGE:** Ecuadorian Spanish and English, especially in tourist areas where many foreigners congregate, such as the Galapagos.

**WORRIES:** In the past Ecuador used to have a rather (and well-deserved) bad reputation regarding street muggings and tourist-related crimes. Things are much better now, but - like in so many other big cities worldwide - it's always better to be accompanied by local friends when visiting Quito's beautiful historical areas. The inhabited islands of the Galapagos archipelago - such as Santa Cruz or Floreana - are very peaceful, tourism-oriented and quite safe at all times of day or night.

**HEALTH:** No worries. New changes to entry requirements for the Galapagos Islands in 2018 require that you have a reservation with a cruise or land-based hotel, a return ticket, and proof of health insurance before leaving for the islands. Pre-registration for a transit card is available online.

**CLIMATE:** From June to December the southern trade winds bring the colder Humboldt Current north to the Galapagos. This means that the water is cooler, and a layer of mist pervades the island skies. The highlands of the larger islands are green and lush while the sea level islands and shorelines have little precipitation. June to December is generally called the "dry season" which is known for its blue skies and mid-day showers. Due to the water temperature, this is the perfect time for diving. The period between December and May is considered the "wet season." During this warmer season, the

Galapagos' climate is more tropical with daily rain and cloudier skies, and the ocean temperature is warmer for swimming and snorkeling.

**BESIDES:** Don't miss the historical center of the capital Quito, extensively and lovingly restored and featuring spectacular examples of colonial architecture from the Spanish domination. Quito is a vibrant metropolis - restaurants, theaters, art galleries and universities have much to offer to all, not to speak of the stunning vistas and landscapes surrounding it. Ecuador is a small but diverse Country, and it's impossible summarizing it in a few lines - a few hours's travelling will have one passing through high-altitude plateaus and valleys, Andean landscapes and cloud forests - descending to the dry Pacific coast (and the Galapagos Islands) if going West and to the lowland rainforest of the Amazon - locally known as El Oriente - if going East. ●



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photo Michael Wilms



# My Love Affair with Vipers

Single-mindedly pursuing his beautiful reptilian subjects around the globe, a Norwegian artist creates photographic portraits of exquisite elegance

*Thor Hakonsen -  
A Wildlife Photographer  
in His Own Words*

I was born and raised on the west coast of Norway, a place with only one snake in the local fauna. But that snake was the European Adder - Scandinavia's only viper species. Perhaps it is no wonder my travel and photography almost solely is based on looking for viper species around the world. I started out early with photography, but as many young boys coming to adulthood other things came in the way for many, many years. But when digital photography took over analog around 2006-2007 I got back to photography and got more and more specialized on photographing reptiles and

vipers. My motto soon became "A place without vipers is not a place to visit", and since then I've not travelled to any spot with my camera if not for finding vipers – both to study and photograph these fascinating creatures. But even though I'm mainly interested in vipers, I will stop to shoot other reptiles and amphibians I spot on my walks in deserts, forests, moors or jungles. My daily work is in Scandinavia's largest photo retailer, CEWE Norway, where I work with amongst other things Photo Culture. I've also been leader of Norsk Herpetologisk Forening (Norwegian Herpetological

Society) since 2014. My photos have been used in several books and magazines. With my pictures of vipers and other reptiles I always try to show the details in the animals. Details that get easily overlooked in a short glimpse in nature or on television. And in this way I am trying to transfer my fascination for these animals to others, something that works surprisingly well when you get people to take the time to study the details. When out in the field I use a lot of time to find the correct angles, using a low camera angle and both background and foreground when

possible, and using only natural light when possible. In my bag you will always find one or two Nikon cameras. For the last couple of years my most used cameras have been the Nikon D5 and D500, always paired up with an assortment of macro-lenses - my favourite being the Sigma 180 f/2.8 OS Macro, but in the bag I will usually also travel with the Nikkor 105 f/2.8 VR Macro and the Nikkor 60mm f/2.8 Macro. These macro lenses will always give me the best possible sharpness and a great flexibility as I both can do full body shots and close-ups with the same lens.





**Gumprecht's  
Pit Viper  
*Trimeresurus  
gumprechtii***

Phu Hin Rong Kla  
National Park,  
Thailand

Nikon D5  
Sigma 180mm  
f/2.8 OS Macro  
f/5  
1/160  
ISO 800



**Sahara**  
**Horned Viper**  
***Cerastes cerastes***

Negev, Israel

Nikon D5  
Sigma 180mm f/2.8  
OS Macro + 1.4 TC  
f/10  
1/160  
ISO 200  
Godox V860II  
w/80cm Octa  
Softbox







**White-lipped Pit Viper**  
***Trimeresurus albolabris***

Kaeng Krachan  
National Park, Thailand

Nikon D5  
Nikkor 105mm f/2.8 VR  
Macro  
f/5  
1/400  
ISO 800

**Malaysian Pit Viper**  
***Calloselasma rhodostoma***

Trang, Thailand

Nikon D5  
Nikkor 300mm f/4 VR + 1.4TC  
f/5.6  
1/200  
ISO 800





**European Adder**  
***Vipera berus***

Akershus, Norway

Nikon D5  
Nikkor 60mm f/2.8  
Macro  
f/4  
1/200  
ISO 100







**Siamese  
Peninsular  
Pit Viper**  
*Trimeresurus  
fucatus*

Khao Luang,  
Thailand

Nikon D5  
Nikkor 60mm  
f/2.8 Macro  
f/5  
1/160  
ISO 800  
Godox AD860II  
w/15x20cm  
softbox





**European Adder**  
***Vipera berus***

Østfold, Norway

Nikon D5  
Laowa 15mm f/4  
Macro  
f/4  
1/160  
ISO 1600

**Sahara**  
**Sand Viper**  
***Cerastes vipera***

Negev, Israel

Nikon Z 6  
Nikkor 105mm  
f/2.8 VR Macro  
f/7.1  
1/2000  
ISO 800





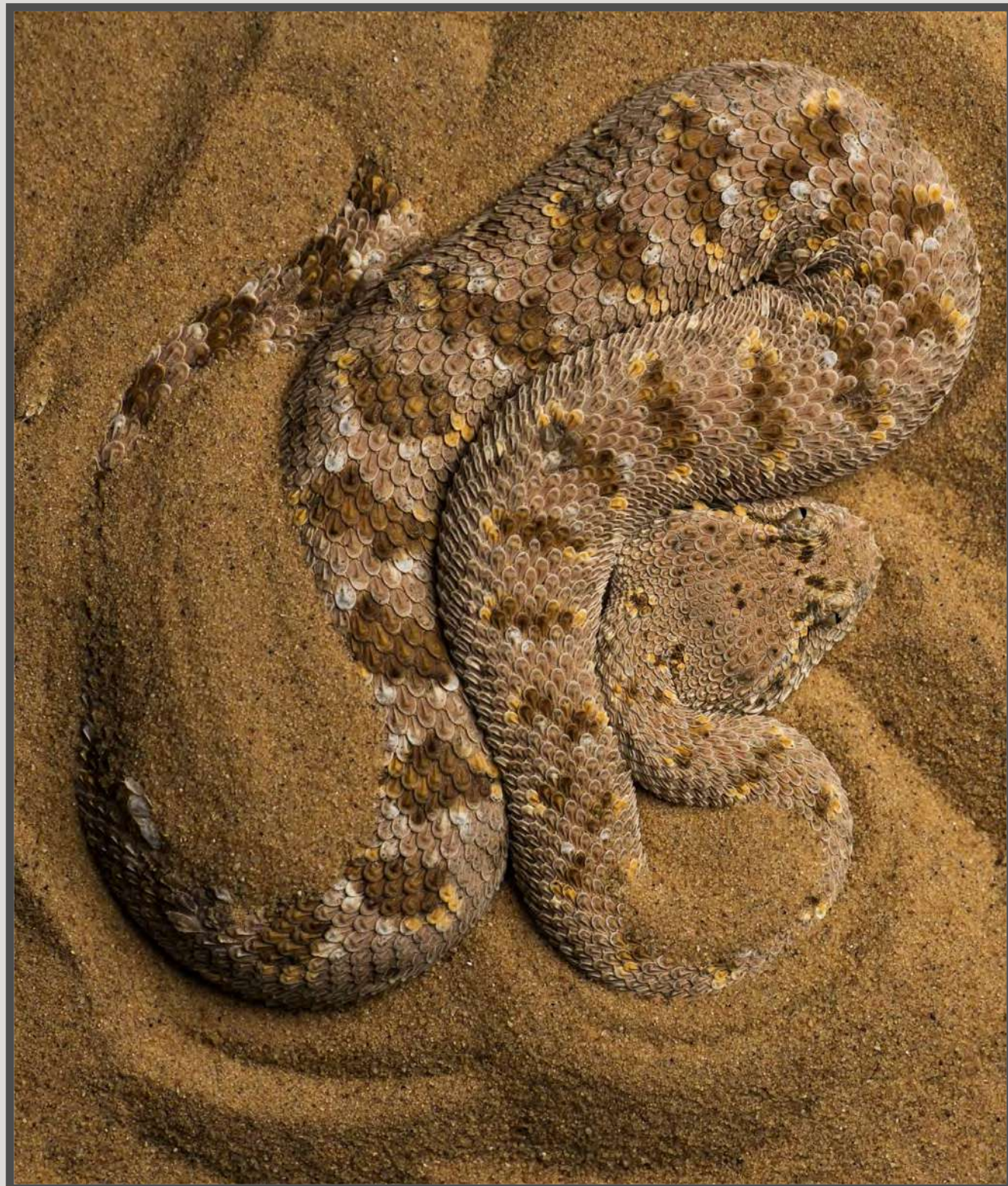


**Mangrove  
Pit Viper**  
*Trimeresurus  
purpureomaculatus*

Ranong, Thailand

Nikon D5  
Nikkor 105mm f/2.8  
VR Macro  
f/11  
1/160  
ISO 800  
Godox V860II  
w/80cm Octa softbox





**Wagler's  
Pit Viper**

*Tropidolaemus  
wagleri*

Phuket, Thailand

Nikon D5  
Nikkor 105mm  
f/2.8 VR Macro  
f/3  
1/250  
ISO 400

**Arabian  
Horned Viper**

*Cerastes  
gasperetti  
mendelssohni*

Arava Valley,  
Israel

Nikon D5  
Sigma 180mm  
f/2.8 OS Macro  
f/10  
1/200  
ISO 200  
Godox V860II  
w/80cm Octa  
Softbox







**Sahara  
Sand Viper**  
***Cerastes vipera***

Negev, Israel

Nikon Z 6  
Nikkor 105mm  
f/2.8 VR Macro  
f/7.1  
1/2000  
ISO 800



***Trimeresurus cf. popeiorum***

Kaeng Krachan National Park, Thailand

Nikon D5  
Sigma 180mm f/2.8 OS Macro  
f/5  
1/250  
ISO 640



**Prairie Rattlesnake  
*Crotalus viridis***

Arizona, USA

Nikon D500  
Sigma 180mm f/2.8 OS Macro  
f/6.3  
1/160  
ISO 800





**Desert Monitor *Varanus griseus***

Negev, Israel

Nikon D5  
Sigma 180mm f/2.8 OS Macro  
f/4  
1/3200  
ISO 800





**Mojave Rattlesnake**  
***Crotalus scutulatus***

Arizona, USA

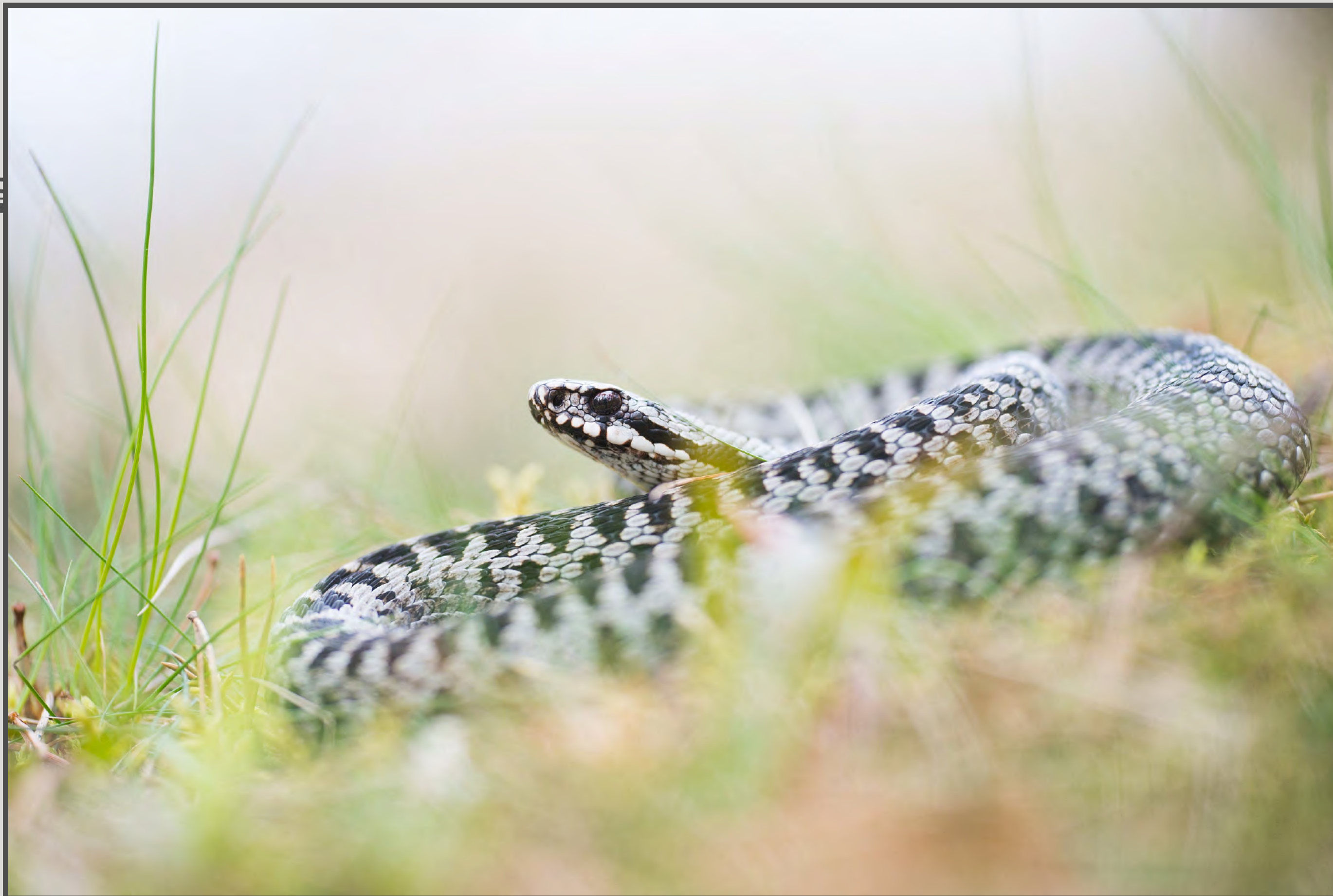
Nikon D5  
Sigma 180mm f/2.8  
OS Macro  
f/5  
1/320  
ISO 800



**European Adder**  
***Vipera berus***

Østfold, Norway

Nikon D5  
Sigma 180mm  
f/2.8 Macro  
f/3.3  
1/320  
ISO 200





**European Adder**  
***Vipera berus***

Østfold, Norway

Fujifilm X-H1  
Fujinon 16mm f/1.4  
f/4  
1/300  
ISO 400



**Indo-Chinese Forest Lizard**  
***Calotes mystaceus***

Kanchanburi, Thailand

Nikon D5  
Sigma 180mm f/2.8 OS Macro  
f/7.1  
1/500  
ISO 800



**Sahara**  
**Horned Viper**  
***Cerastes cerastes***

Negev, Israel

Nikon D5  
Sigma 180mm f/2.8  
OS Macro + 1.4 TC  
f/18  
1/160  
ISO 400  
Godox V860II  
w/80cm Octa  
Softbox





**European Adder**  
***Vipera berus***

Hordaland, Norway

Nikon D4s  
Nikkor 60mm f/2.8 Macro  
f/5  
1/250  
ISO 400



**Ottomans Viper**  
***Montivipera xanthina***

Thrace, Greece

Nikon D5  
Nikkor 300mm f/4 VR  
f/5  
1/250  
ISO 400





"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 species 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*

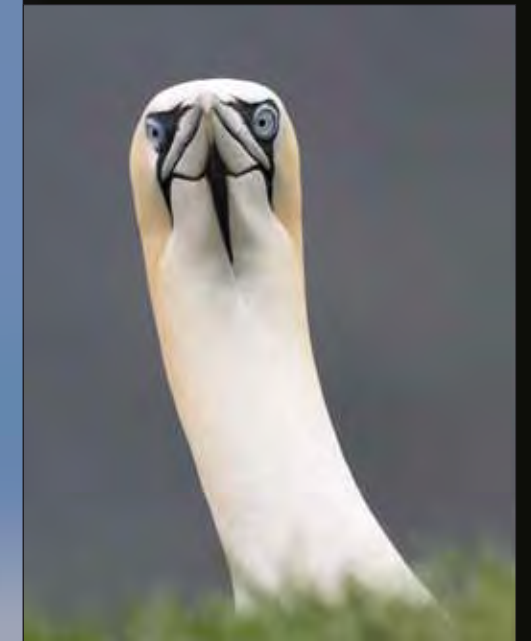
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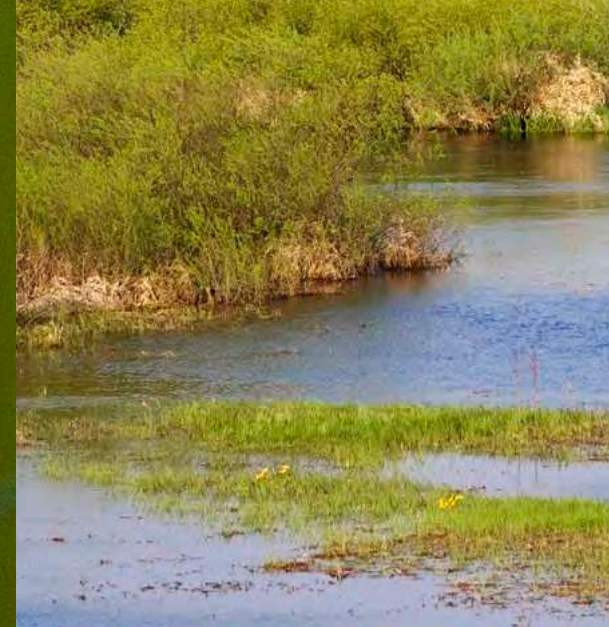
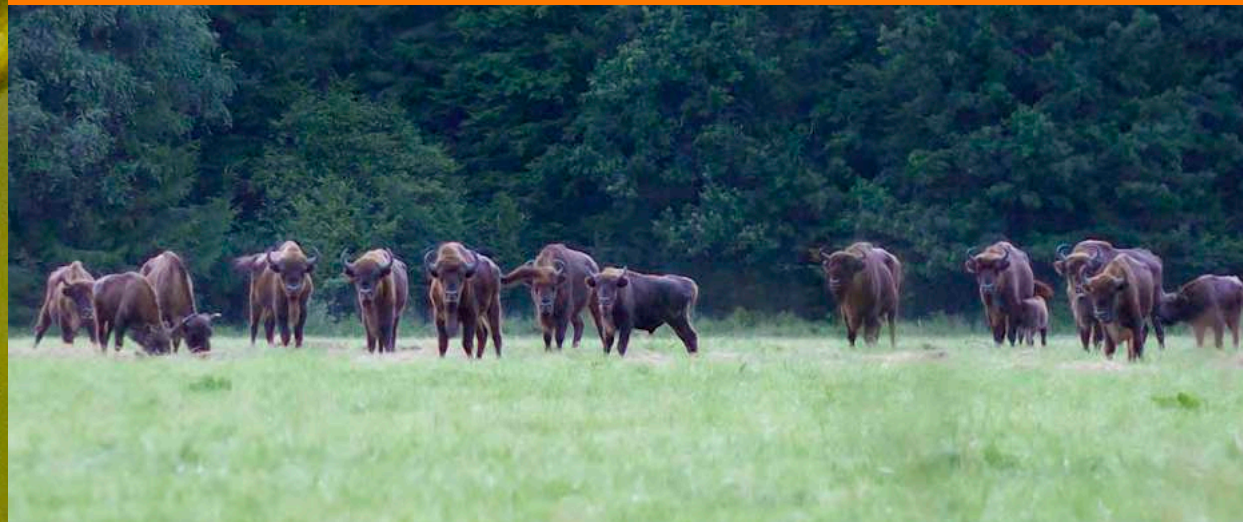


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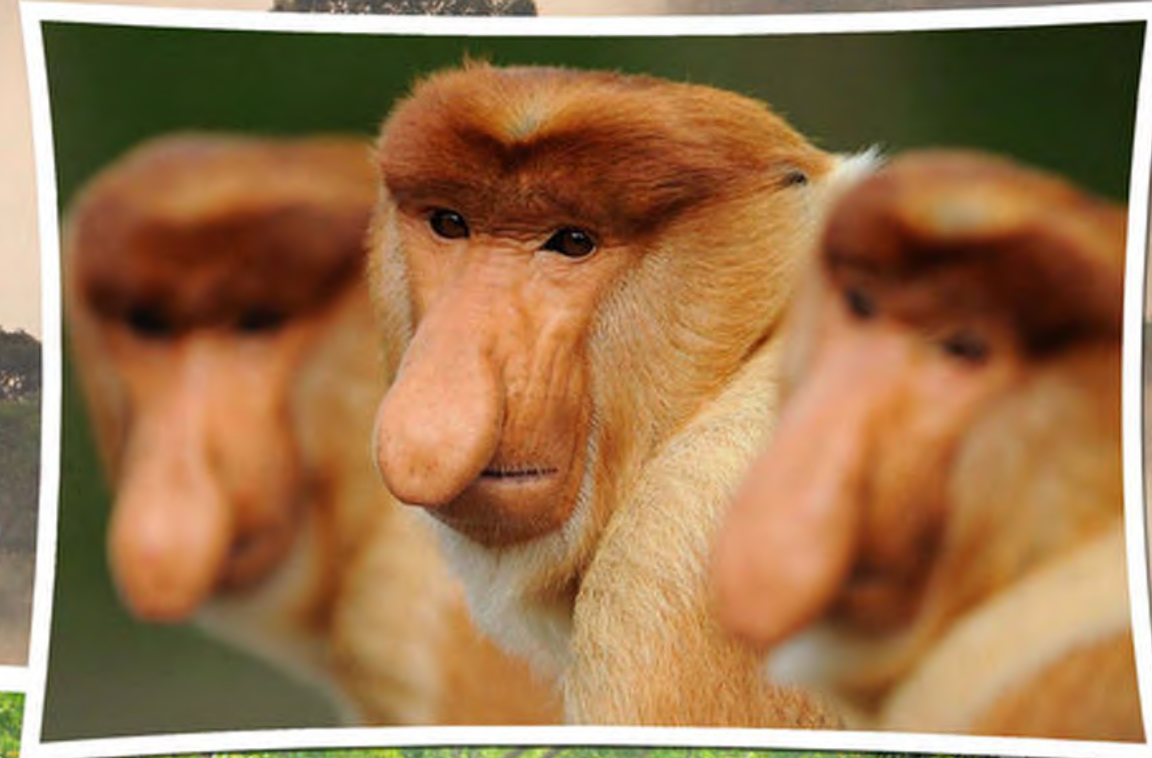
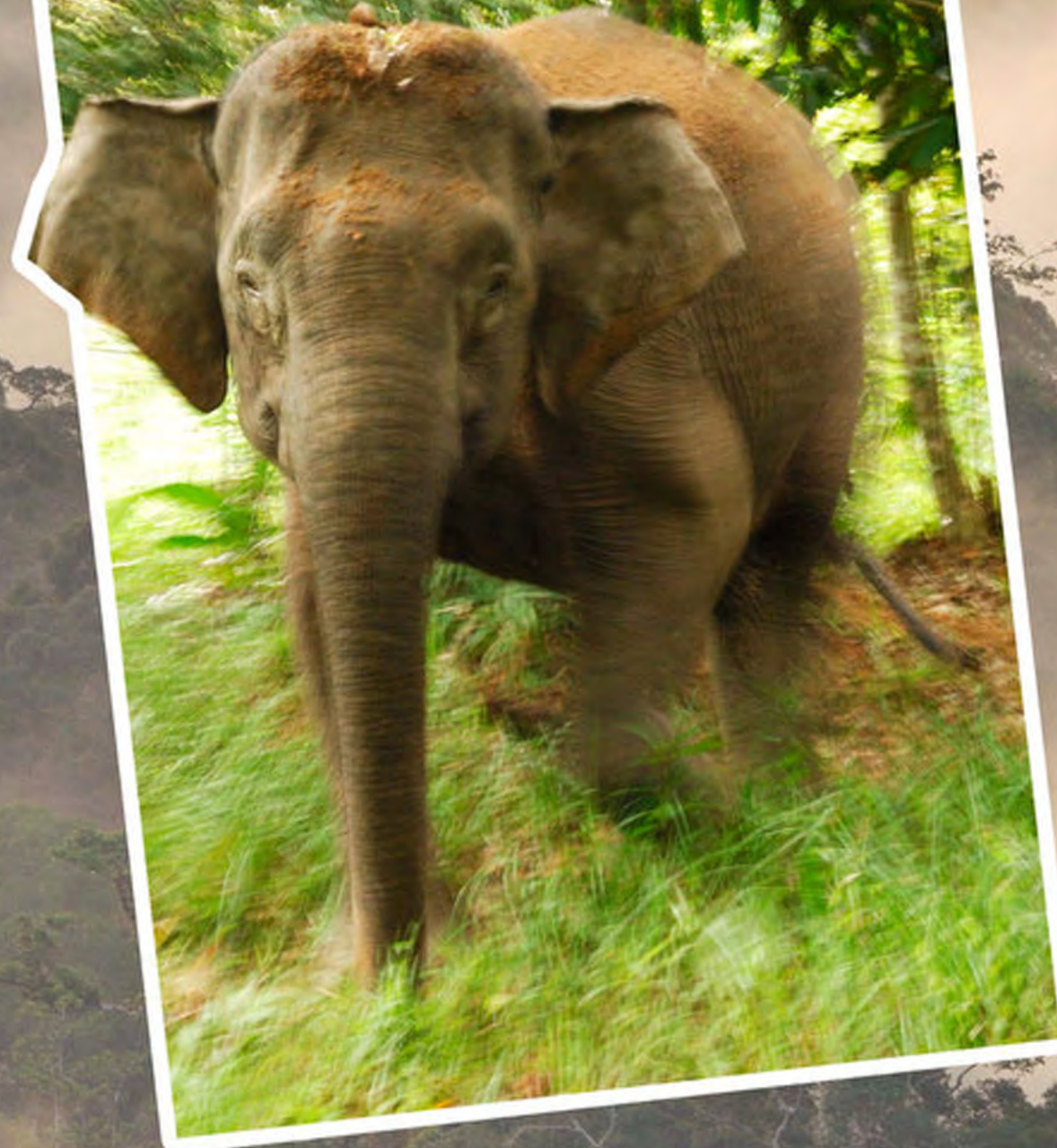


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NIGHT DIVING IN THE WATER COLUMN

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## BLACK WATER STORIES

The “new frontier” of underwater photography - taking macro images of the tiny denizens of the deep which migrate towards the surface after sunset





A Juvenile Flying fish, family *Exocoetidae*, photographed against the surface. On the title spread, the larval stage of a Spotfin flounder *Cyclopsetta fimbriata*.



TEXT AND PHOTOS  
BY SUZAN MELDONIAN  
[HTTP://WWW.NITEFLIGHTPHOTO.COM](http://WWW.NITEFLIGHTPHOTO.COM)



Spotfin flounder *Cyclopsetta fimbriata*.

From the time we begin our first lesson in scuba diving, we are taught to get in the water and drop down letting gravity take its hold. It is enchanting, this euphoric feeling of weightlessness, or a chance visual encounter with wildlife in their world. Soon many of us take up underwater photography to capture and share these moments. In due course, you soon begin seeking out exotic locations to go diving, in search of cool animal encounters and even wilder underwater scenics. In many ways it can become an addiction. For many photographers, it is about capturing the beauty, the challenge of underwater imagery, and documenting as many creatures as possible. We are struck by the colors, the patterns and as we drill down further, capturing the behavior on film. I think innately we are all pioneers in our own right. Every time we enter the waters, we feel like we are going where no others have gone before. The possibility exists to see and photograph something that no one else has seen before almost haunts us at the core. As our imagery progresses, it becomes grippingly clear that as photographers, it is our solemn duty to share our captures both rare and beautiful, if for no other reason than to enhance the human experience and educate the masses of this world within a world living just below that blue horizon line. Whether you are attracted to warm tropical waters with whales, dolphins and turtles, muck dives

filled with fascinating little creatures, dramatic caves, wrecks, and that list goes on and on, there comes a time in every underwater photographer's life where we crave more. Let's face facts... some of us are artists in the making, others adrenaline junkies, and some just have an unquenched thirst for knowledge.

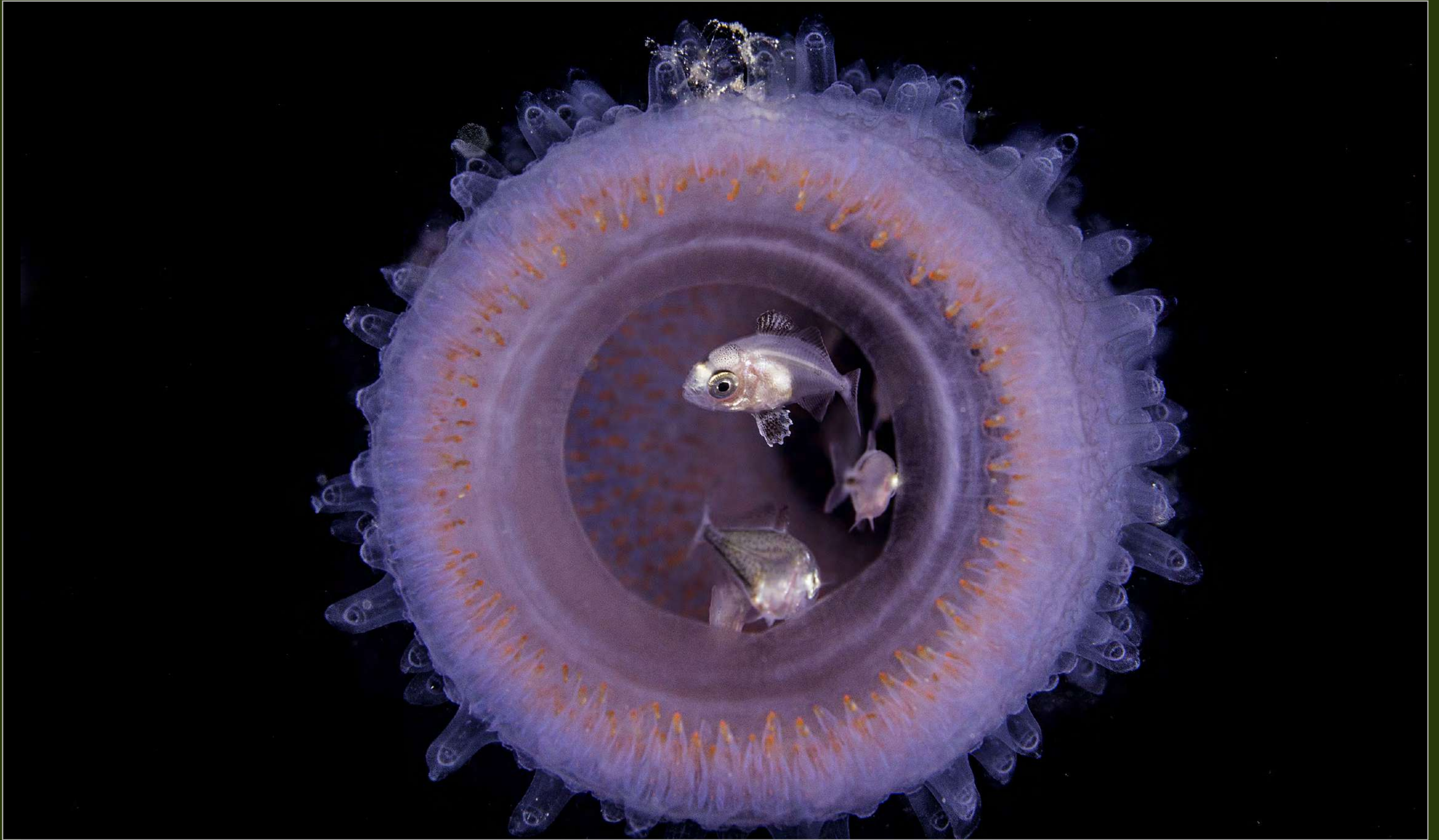
In the last few years, black water diving is taking the underwater photography world by storm - all over the world! Why? Just look at some of the images. We are documenting some of the coolest creatures ever seen on the planet! We are photographing in-situ that which marine scientists have dreamed of. But more importantly, we are documenting our world underwater - for us and for science. And it's been there all along.

The world's largest migration on Earth occurs every single night...in every ocean ...in every lake. Perhaps, even in any body of water. It is called a Vertical Migration. Also referred to as the Diel vertical migration, it is the journey of phytoplankton from the depths to the shallows. Every night organisms move up from the mesopelagic zones to the epipelagic zones. But in fact we're discovering larval creatures that will eventually reside in even deeper depths once matured.

Here, we are diving in the Gulf Stream Current. Just a few miles off the coast of Riviera Beach, Florida, we find ourselves in about 150-200 mt/500-650 ft. of

*continued on page 84* ➤





Fish in a Pyrosome. Pyrosomes, genus *Pyrosoma*, are free-floating colonial tunicates that live usually in the upper layers of the open ocean in warm seas.





Left, jellyfish *Orchistoma* sp with an amphipod on top; right, the larval stage of a Candy basslet *Liopropoma carmabi*.





Left, a so-called Sea Angel - Sea angels are a large group of extremely small, swimming sea slugs. Right, a jellyfish belonging to the family *Pandeidae*.





The stunningly beautiful larval stage of the Tripodfish *Discoverichthys praecox*.





Top, a juvenile Filefish; bottom, the larval stage of a Flying fish. Top right, Acorn worm *Enteropneusta* sp.



water. We are not diving that deep, of course, but drifting in it, to perhaps 12-15 mt/40 or 50' depth. We avoid going deeper because there are cross currents, not wanting to be whisked away and we need to stay relatively close to our boat. The Gulf Stream Current primarily travels from the Gulf of Mexico, through the Straits of Florida up the east coast of the USA up to Iceland, Greenland, the British Isles and back again somewhere around the Tropic of Cancer meridian.

So what is black water Diving? It is diving over depth, in the open ocean at night. This is not for the faint of heart. You should be at least advanced certified or better. You must be very comfortable with several night dives under your belt and your equipment must be in top condition. Our set up: here we follow a large illuminated ball with a float line that is 12-15mt/40-50' long, with lights as markers every

3mt/10 feet. At the ceiling there are 3 bright lights shining on the super large ball, at the midpoint is an orange ball, and at the end of that line are 3 blinking lights. Visually this is very helpful to gauge your depth by simply looking up as there is nothing but the blackness around you for a reference. Our job as underwater photographers is to follow the ball. The dive boat follows the float line and visually keeps track of the divers. This downline also tends to attract the photosensitive creatures, and is there to enhance safety, as anyone can hold onto the line if they feel the need. Plus, several light sensitive creatures tend to cluster closer to the light, while others shy away. There are other operations that handle this as a tethered dive, but here we prefer the freedom to be untethered, and we are all very experienced divers and underwater photographers. Also, there

*continued on page 89* ➤





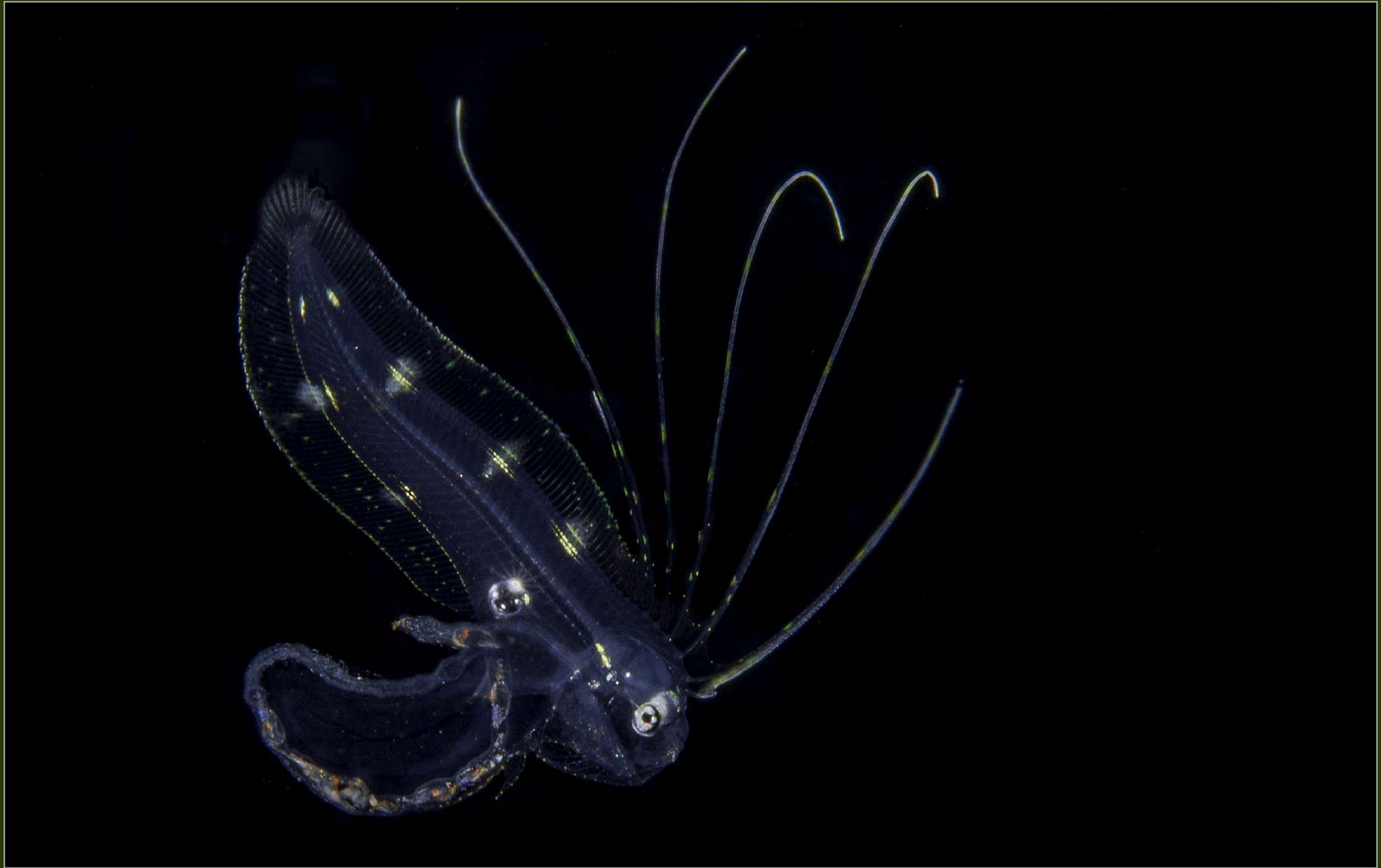
Scaly tailed Mantis shrimp *Lysiosquilla scabricauda* larval stage.





Left, larval stage of a Ceriantharian tube anemone; right, larval stage of another tube-dwelling anemone.





Larval stage of Tonguefish, a flatfish in the family *Cynoglossidae*. They are distinguished by the presence of a long hook on the snout overhanging the mouth.





Sea Butterfly *Corolla spectabilis*. Sea butterflies, scientific name *Thecosomata*, are a taxonomic suborder of small pelagic swimming sea snails.





Left, *Exocoetidae* Flying fish larval stage. Bottom, Ring jellyfish *Aequorea* sp.

are other locations where folks are creating "bonfire dives", which is basically the same theory although not in deep water, but rather in shallow inshore dive water. Your diving skills and buoyancy abilities are paramount while drifting in the darkness. The environment is filled with gelatinous flimsy creatures. Every time you kick, it sends a shock wave through the water column sending subjects into a spin. Controlled breathing helps too, because you can't blow bubbles heavily or you blast all your gelatinous subjects to smithereens. Your whisper is their Category 6 hurricane! It is very important to not dive under your buddies, as your bubbles might blow one of their subjects out of sight. Stay calm and relaxed and focused. Check your gauges regularly and always maintain

an extra reserve of air in case of emergencies. In Florida the weather can change in an hour. As a side note, keep a snorkel handy, in case it is flat calm, you might want to go for some of those delicious reflection shots at the surface while waiting for the boat to pick you up. At the end of the day, we are documenting life on our planet, which may reflect the balance of nature or be an introduction to things we just never imagined. Something previously reserved for science expeditions is now becoming a "new thing" without the lab, but merely a camera and an underwater housing. We can use our photography to impact the rest of the world because what we are photographing is important... important for education, science and also as art. ●







*Aequorea* jellyfish with - presumably commensal - fish.





Top left, larval stage of Scrawled filefish; top right, juvenile Flying gurnard *Dactylopterus volitans*. Bottom left, Reef squid feeding on fish prey; bottom right, *Leptocelus* sp. Snake eel larva.



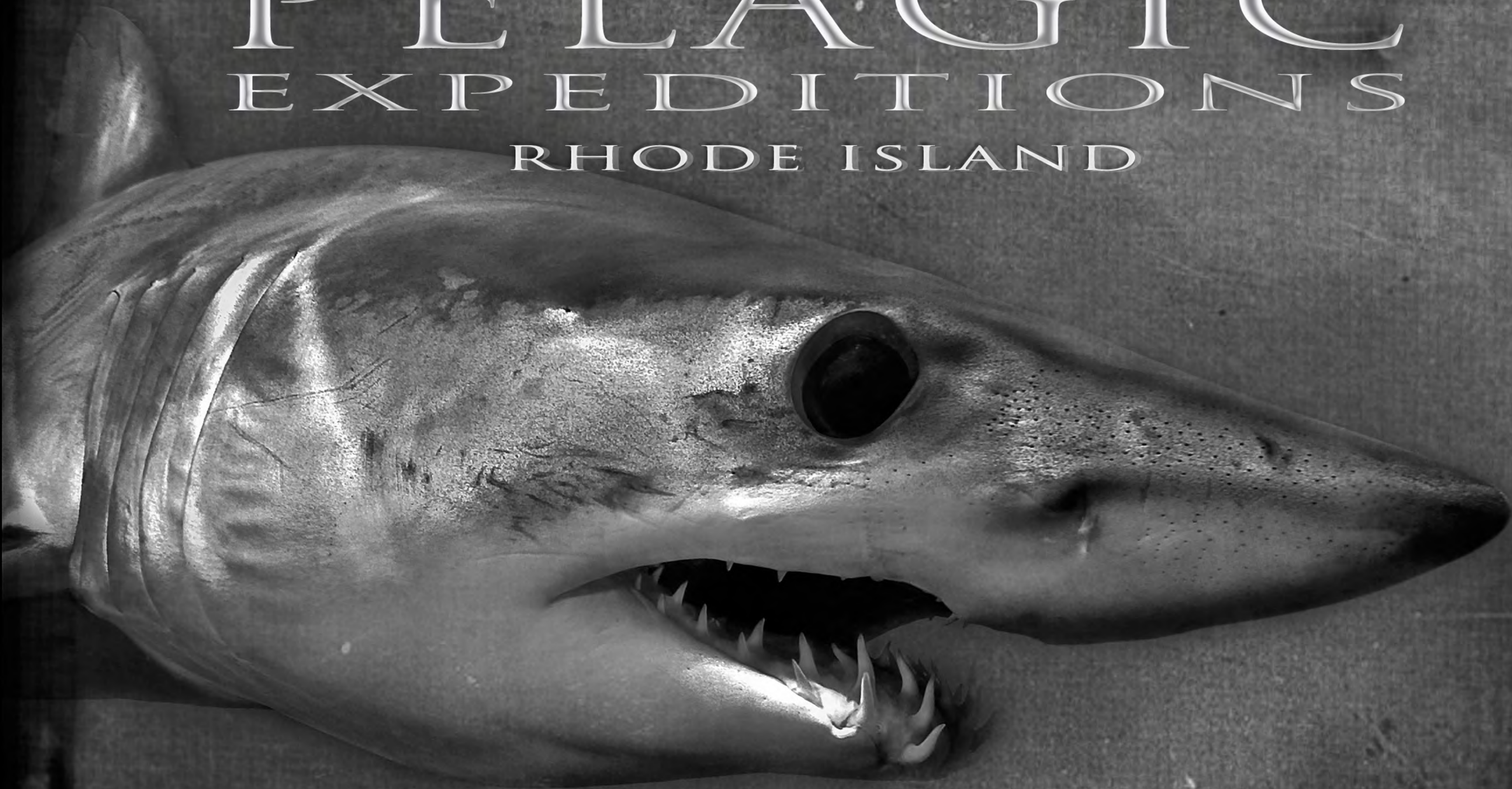




Juvenile fish - possibly trevallies - in a salp. This is a barrel-shaped, planktonic tunicate. It moves by contracting, thus pumping water through its gelatinous body.



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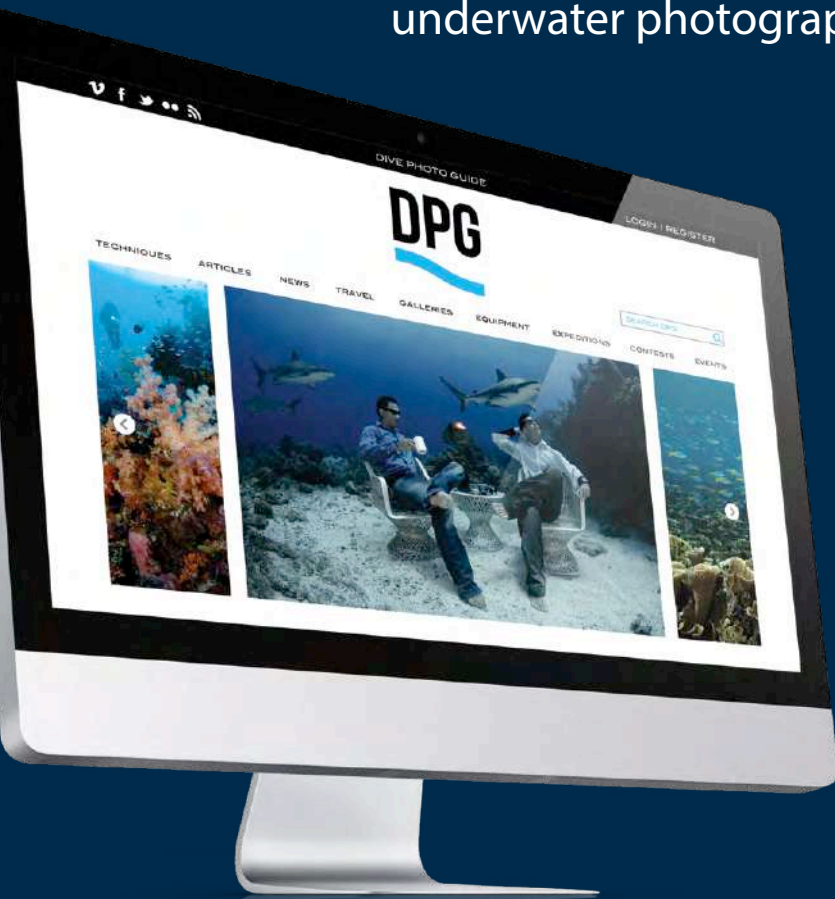
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## The Parting Shot



Mexican herpetologist and photographer **Juan Manuel Gonzalez Villa** tells us the story behind this spectacular image: "This is a beautiful *Agkistrodon bilineatus*, which is encountered in the tropical areas of Michoacán, in México. This snake belongs to the family Viperidae, meaning it has a solenoglyph dentition and a potent venom it uses to hunt, being of extreme medical relevance as it can put to high risk a person if bitten. It shows a wonderful

camouflage which allows it to blend with dead leaves and the surrounding forest substrate - these are terrestrial snakes with mainly nocturnal life habits which mostly feed on small mammals, birds and even other reptiles such as iguanas. The photo was taken on a cloudy day and in the shadows of the forest's thick vegetation, using a Laowa 15mm f/4 and a separate flash positioned vertically; a long exposure was obtained with settings of 5secs, ISO

100 and f/32, using a Nikon D5600. The flicking of the tongue was frozen by the strobe at the beginning of the exposure, all in a single click. It is very important mentioning that handling of such specimens must be left to experienced persons, as an accident can be extremely dangerous. At the same time, the appreciation of such beautiful and imposing creatures can lead to sensibilizing people towards the environment and the species living in it". ●



# IN ANIMA MUNDI'S NEXT ISSUE No.37, 1st Quarter, January 2020

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## THE YELLOW DART FROG

World's most  
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## SUBANTARCTIC EXPEDITION

Between Australia  
and New Zealand





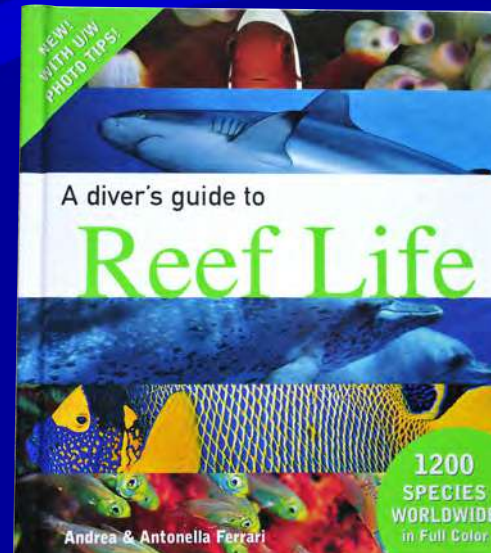
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## A Diver's Guide to the Art of Underwater Photography

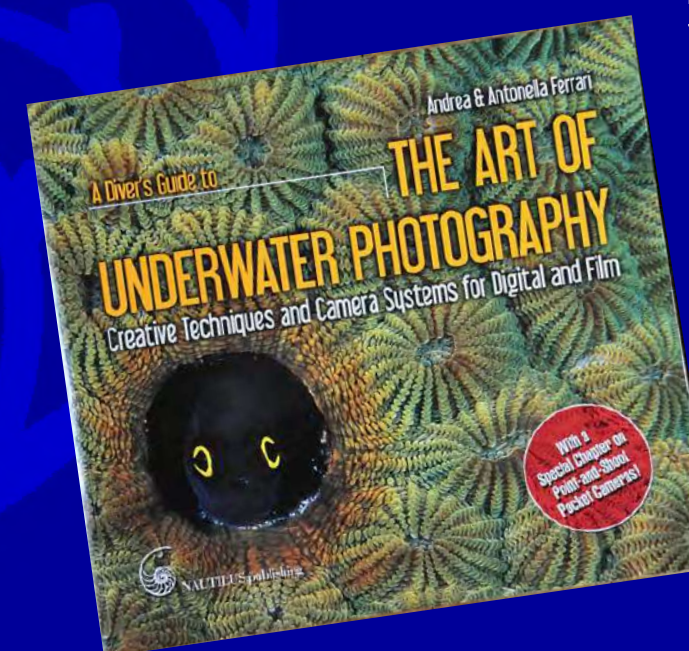
Creative Techniques and Camera Systems for Digital and Film

A highly-readable, technically-accessible, step-by-step guide in eight chapters to the secrets and wonders of underwater photography - featuring dozens of stunning, inspiring images by several of the world's most brilliant authors

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ALEX MUSTARD, WETPIXEL.COM: This book gives us a rare insight into the mindset, dedication and imagination involved in creating magnificent underwater images. I sat down and read this enjoyable book from cover to cover. The lack of techno-talk makes it a very accessible method to improve your photography. The images are some of the finest you will see in a guide to underwater photography. All the images are very well reproduced, which will not come as a surprise to anyone who owns any of the other books by the authors. A large format 360 page feast of fabulous images and thought provoking and enjoyable writing on taking pictures in the ocean. • UNDERCURRENT: This book is filled with spectacular images, designed not only to offer great technical guidance, but also help the underwater photographer discover and develop the artist within. Clearly the best and most beautiful "how-to" book ever produced. • JOHN BANTIN, DIVER MAGAZINE: With an enviable reputation for authoring fine books on underwater photography, the Ferraris have laced the pages of their new book with juicy pictures.

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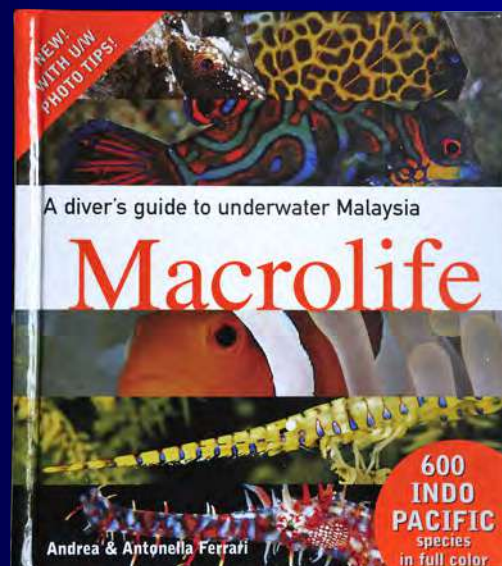
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