

# CLOSER

THE OUTDOOR AND BIRDING MAGAZINE FROM  
SWAROVSKI OPTIK

## SOUTH GEOR GIA

A MAGICAL DAY  
IN ANTARCTICA

## OUR VISION

LIVING IN THE  
MOMENT, WORKING  
ON THE FUTURE

## ENCHANTING EC UAD OR

FROM THE AMAZON  
TO THE ANDES

4.50 EUROS



SWAROVSKI  
OPTIK





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# “LOVE IS THE ACTIVE CONCERN FOR THE LIFE AND THE GROWTH OF THAT WHICH WE LOVE.”

— Erich Fromm



## Dear readers,

Yellowstone National Park in the United States (page 66), enchanting corners of Ecuador (page 26), the magical world of Antarctica (page 18) – all the stories in this magazine inspire us to open our eyes and hearts to this beautiful planet. Whichever wildlife we love to observe – mammals, birds, or reptiles – every time we head outdoors, we are reminded how important it is to respect our environment. When we have a close connection to nature, we gain a heightened awareness of our surroundings and experience unforgettable moments.

We are so lucky to live on this colorful, vibrant, and incredibly beautiful planet! Mother Nature gives us so much abundance and diversity. It is vital to preserve this treasure, this wealth of different species that we call biodiversity, because every living creature is an essential element of the ecosystem (page 54) – often in ways that we are only just beginning to understand.

In the interplay of life, every species has its job to do and forms part of the greater whole.

If one of the cornerstones breaks off and species disappear, we are left with a major imbalance and the consequences can be devastating. As nature lovers, we are fascinated by the beauty and diversity of its flora and fauna. I urge you to encourage others to share this fascination every day. The more that people discover a love of nature, the more they will be inspired and motivated to preserve our planet. Because every single one of us can play our part. Once the spark ignites, more and more people will see the world through fresh eyes and find new ways to express their love of nature and all its creatures.

*Carina Schiestl-Swarovski*

CARINA SCHIESTL-SWAROVSKI  
Chairwoman of the Executive Board  
SWAROVSKI OPTIK.  
FOR THE LOVE OF NATURE.





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A magical day  
in Antarctica



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**BIODIVERSITY**  
Quality of life



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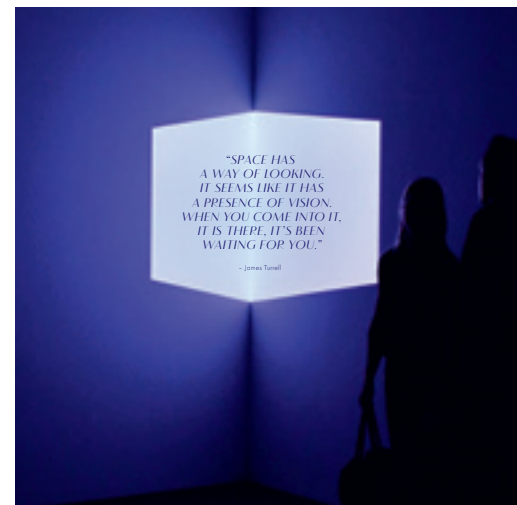
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Wildlife from the Amazon  
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**KING PENGUIN**  
(*APTENODYTES PATAGONICUS*)

Did you recognize it? South Georgia is the only place where you can get so close to these immaculate birds (see our travel report on page 18). This shot was taken on the long beach at Salisbury Plain, home to a penguin colony that is the second largest in the region and one of the biggest in the world.







**HONEY BEE**  
(*APIS MELLIFERA*)

Find out more about how this small insect has come to symbolize the importance of biodiversity on page 38. Its importance is immense, and its loss would be fatal. That's why, for every one of us, wildlife conservation begins on our own doorstep, in our own backyard.





**BROAD-BILLED MOTMOT**  
(*ELECTRON PLATYRHYNCHUM*)

Their rarity increases their fascination: motmots prefer to lurk in the shadows, which makes them extremely hard to spot. This beautiful broad-billed motmot was discovered in Costa Rica.





**JULIA BUTTERFLY ON  
A SPOTTED TURTLE**  
(*DRYAS IULIA*, *CLEMMYS GUTTATA*)

"Here's looking at you, kid!" It may look like a beautifully staged shot, but in fact the butterfly is there for a very practical reason. "Lachryphagy" is a phenomenon whereby butterflies drink the nutrient-rich tears of turtles or alligators. Discover more fascinating facts about Ecuador, where this amazing picture was taken, on page 26.





**BLACK-MANTLED TAMARIN  
(SAGUINUS NIGRICOLLIS)**

In Ecuador (see page 26 for more about this extraordinary destination), a Black-mantled Tamarin samples the fruit of the Cecropia tree, delicately using the white moss as a napkin.





# SOUTHERN

# GEORGIA

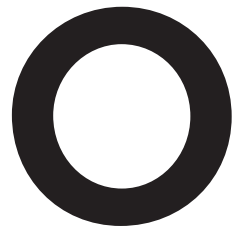
A  
MAGICAL  
DAY

Text: Sylvia Stevens

# GLA



## THE KING PENGUIN COLONY AT GOLD HARBOUR HAS SOME 30,000 BREEDING PAIRS.



UR SHIP LEFT THE SOUTH ATLANTIC SOME TIME AGO. BUT ON BOARD THE HANSEATIC NATURE, EXPERT SYLVIA STEVENS STILL HAS FOND MEMORIES OF HER VISIT TO GOLD HARBOUR. THE SMALL BAY AT THE EASTERN END OF SOUTH GEORGIA PROVIDED HER WITH SOME TRULY MEMORABLE MOMENTS.

Amazing! Awesome! Spectacular! Incredible! Fascinating! Phenomenal! These are just some of the superlatives we hear from our passengers when they step ashore. Gold Harbour reveals itself in all its beauty, and they fall in love with South Georgia. It is early morning, and the weather is perfect as we board the Zodiacs and head for the landing stage. The water is teeming with penguins swimming alongside us, swooping in and out of the waves. On land, they greet us in their thousands. We don't know where to look first.

And now the noise is overwhelming - the trumpeting of the adult penguins, the whistling of the chicks, the grunts and snorts of the Elephant Seals, the screech of the Skuas. Something is happening everywhere you turn. Gold Harbour's King Penguin colony has around 30,000 breeding pairs. Many of them are hatching their eggs and raising the next generation. Last year's chicks look like little tea cozies with their fluffy brown down. They are about a year old now, but they are still a few weeks away from being ready to plunge into the waves and hunt for their own food.





**SOME OF THE PENGUINS LOOK LIKE THEY ARE IN A PUNK HAIRSTYLE COMPETITION**  
It's hard to imagine that these rather weird-looking, awkward chicks turn into elegant, majestic King Penguins once they have molted. Some of them are not just fluffy but look like their whole bodies are competing to have the best punk hairstyle. It seems the chicks are just as curious as we are, waddling over to inspect us giant penguins with our blue "plumage" and our strange legs and rubber boots.

Some of the adults are performing their courtship displays. Others are mating, while the fluffy, molting adolescents beg for food from their parents as they return from the hunt. Skuas glide above the colony in search of penguin eggs to steal, and the Giant Petrel, the "vultures of Antarctica," scour the beach for injured birds. Now and then, a little Gentoo Penguin wanders past, heading for the sea from its colony way further back up the valley. It looks tiny in the midst of the huge King Penguins.

The South Georgia archipelago is a must-see when taking an Antarctic cruise on the HANSEATIC nature. This is the first ship in the new expedition class – small, agile, equipped with the highest ice rating for passenger ships, and sporting a range of features to ensure a trip to these regions is truly unforgettable. Stand up front on the Nature Walk and watch the bow cutting through the ice or take a selfie on the glass balcony. You can also discover more about the world you are sailing through at the Ocean Academy.

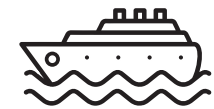
We learned all about Gold Harbour before going ashore, but now that we are standing here, we're overwhelmed. Some strange noises are emerging from the tussocky grass. Southern Elephant Seals are lounging here, shedding their fur and on the lookout for a buddy to tussle with. Some of these massive, 4.5-tonne (10,000-pound) Elephant Seals are also lying around on the beach. Two of them suddenly rear up and start fighting. It's quite a spectacle.

But it's the young Elephant Seals that are really impressive. Their mother abandoned them weeks ago and now they are living on their fat reserves as they ready themselves to head out into the ocean for months on end to hunt for food. Our hearts melt as they gaze at us with eyes like saucers – we just want to cuddle them, but of course that's not allowed!

It's wonderful to see so many babies. By the beginning of the last century, Elephant Seals had been hunted to the brink of extinction. The nutrient-rich waters around South Georgia are one of the reasons why their populations have recovered.



**SOME OF THESE 4.5-TONNE (10,000-POUND) ELEPHANT SEALS ARE ALSO LYING AROUND ON THE BEACH.**



The small, agile expedition ships HANSEATIC nature, HANSEATIC inspiration, and HANSEATIC spirit (after May 2021) from Hapag-Lloyd Cruises promise a blend of adventure and comfort. The expedition ships can accommodate a maximum of 230 guests – 199 for trips to the Arctic or Antarctic. The cabins are equipped with everything you could need: large windows, wall heating, Nordic walking poles, rubber boots, and expedition parkas. And SWAROVSKI OPTIK takes your experience to the next level by providing a set of CL Companion binoculars. Thanks to these 8x30 binoculars, you'll never miss a thing. They give you the freedom to experience more.







South Georgia, an island with no permanent human inhabitants, is located in the South Atlantic Ocean, 1,900 kilometers (1,180 miles) east of the southern tip of Argentina. Gold Harbour, a small bay on the east of the island, is home to a wide variety of Antarctic wildlife. South Georgia is an important breeding area for the majestic King Penguin and also home to the Macaroni Penguin. The author also describes how South Georgia is a vital habitat for Elephant Seals and Fur Seals.

#### **IN THE DISTANCE, SURROUNDED BY SNOWY PEAKS, IS THE BERTRAB GLACIER**

The smaller Antarctic seals – Fur Seals – are playing and frolicking on the edge of the surf. It's funny to see them being scared off by the much smaller penguins. Towering above it all, surrounded by snowy peaks, is the Bertrab Glacier.

Gliding a little further out to sea are the magnificent, elegant albatrosses who are our constant companions. They never seem to flap their wings as they follow our ship, the HANSEATIC nature. As I write this, we have enjoyed many incredible days and seen some amazing sights in gorgeous weather here in Antarctica. But the magical day in Gold Harbour on South Georgia is one that I will never forget. 🌱



Gray-headed Albatross  
(*Thalassarche chrysostoma*)

**GLIDING A LITTLE FURTHER OUT TO SEA ARE THE MAGNIFICENT, ELEGANT ALBATROSSES WHO ARE OUR CONSTANT COMPANIONS.**





ENCHANTING

# Ecuador

WATCHING WILDLIFE FROM THE AMAZON JUNGLES  
TO THE SNOW-CAPPED ANDES



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Ecuador is one of the most incredible wildlife watching destinations on the planet. It has huge appeal for people looking to dip their toe into the art of observing animals in their natural habitat for the first time. Straddling the equator, it is deeply rooted in the tropics and is at the epicenter of the world's biodiversity. The tropical jungles of the Amazon basin seethe with life, where enormous Scarlet Macaws cruise past Giant Otters and Amazon River Dolphins. Rising up to the west of the Amazon are the cloud forests holding 80+ spectacular species of hummingbird and the reclusive Andean Bear. High in the Andes, however, the climate is cool with wide open grasslands, very lightly sprinkled with 250-kilogram (550-pound) woolly Mountain Tapirs and the 3-meter (10-foot) wide Andean Condor. Off shore, at least 17 species of whales cruise the 1,000 kilometers (600 miles) between the mainland and the Galapagos Islands, where some of the world's largest Whale Sharks can be seen – at 18 meters (60 feet) they are even bigger than a Megalodon.

Ecuador has an impressive species diversity, but it is the number of bird species that has made it such a popular destination for wildlife watchers and birders. While the tropics wrap around the

entire world like an imaginary ribbon, not all of the tropics are equal. South America commands the nickname of the "Bird Continent," for it is there where bird diversity reaches stratospheric numbers: more than 3,700 species – that's one third of all bird species on the planet! The tropical countries of northern South America form an elite group (Ecuador, Colombia, Brazil, and Peru) with unrivaled species diversity on both the continent and planet. Standing proof of this is the extraordinarily high number of bird species in Ecuador: 1,620 in a country that's just a little smaller than Italy.

One of Ecuador's most appreciated groups are the hummingbirds, known as "colibris" to locals. Though hummingbirds are not confined to the tropics, they are never as varied or conspicuous elsewhere. North America has only 19 regularly occurring hummingbirds, while Ecuador is home to more than 130 species (more than one third of the world's species). Adorned with fanciful names like Gould's Jewelfront, Golden-tailed Sapphire, and Gorgeted Sunangel, these fairies of the forests are all routinely seen at the right place. It is not just the species diversity that makes the hummingbirds in Ecuador exciting, but the experience of being surrounded by hundreds of hummingbirds at sites like Tandayapa Bird Lodge or Buenaventura Reserve is truly enchanting!



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# THE GALAPAGOS

The Crown Jewels of Ecuador – the Galapagos Islands are the ultimate bucket list destination. One reason for this is that much of the wildlife that has evolved there is unique, and without any indigenous human populations or natural ground predators, remains preposterously tame and nonchalant to human approach. Quite simply, it is some of the easiest wildlife viewing anywhere.

The Galapagos Islands are indelibly linked with Charles Darwin and evolution too. His ship, the Beagle, first docked there in 1835, and the researcher swiftly cultivated his simmering theories of evolution by natural selection. The Charles Darwin Foundation has a center located on Santa Cruz Island, and displays the excellent conservation work achieved to help species like the famous giant tortoises, for which the archipelago is named. Indeed, while the islands can be considered a haven for unique bird species, with some 25 only occurring there, it has often been coined the Land of Reptiles, for this fauna is typically most conspicuous. On many islands, lava lizard species only occurring on that individual island scamper underfoot, while along the shore Marine Iguanas, the world's only marine lizard, line up in packs, regularly blowing saltwater out of their nostrils.

The islands are extensive, comprising 61 islands and islets, of which 13 could be considered "main islands." While they are all protected, only a small portion of these are open to tourists.

The islands span 430 kilometers (267 miles) from northwest to southeast, and range from sea level to 1,707 meters (5,600 feet) on the large, seahorse-shaped island of Isabela in the western side of the archipelago. When visiting sites like Punta Moreno on Isabela the ground underfoot is sticky, crusty, crumpled black Pahoehoe lava, and few plants are evident, save for well-named pioneer species like

lava Cactus. However, even in a place so initially barren to the eye, the shoreline holds one of the Galapagos' oddest residents: the Flightless Cormorant. Uniquely for the family, it is the only species that has lost the ability to fly, its stunted vestigial wings ample evidence of this. Furthermore, pools and lagoons provide oases in these stark landscapes, and where this happens bright sparks of pink can be added to the scenery, as flamingoes seek these out.

The majority of tourists visit the shoreline and arid zone, for the most part, as this is where seabirds, like boobies, frigatebirds, and unique gulls rest or nest, as close as arm's length. This is also where the world's only penguin occurs in tropical waters. The sheer volume of individual seabirds, with the ability to observe their behavior up close, make this destination impressive.

One island, Genovesa, has been dubbed Bird Island, as this 14-square-kilometer (5.4 square mile) piece of rock is home to hundreds of thousands of nesting seabirds, e.g. Red-footed Boobies, the endemic Swallow-tailed Gull, or elegant tropicbirds. Another island, Española, shows a dramatic activity of seabird colonies between mid-March to December, as this is when almost the entire world population of 12,000 pairs of Waved Albatrosses come to breed. At sea, they are graceful, flying effortlessly, aided by their immense 2.5-meter (8.2-foot) wingspan, which renders them comedy figures once they touch down.

Much of the Galapagos remains as Darwin saw it. There has been large growth in human populations in designated areas, which has brought its problems. But national park regulations are nowhere as strongly enforced as they are on these islands. The Galapagos can be visited all year round, with a warm wet season running December to May, and a dry season the rest of the year. It is always warm, with daily highs reaching up to 30°C (86°F) in the warm wet season, and lows only dropping to 22°C (72°F) at any time of year.



Waved Albatross  
(*Phoebastria irrorata*)

THE SHEER VOLUME  
OF INDIVIDUAL SEABIRDS,  
WITH THE ABILITY TO  
OBSERVE THEIR BEHAVIOR  
UP CLOSE, MAKES THIS  
DESTINATION IMPRESSIVE.



Marine Iguana  
(*Amblyrhynchus cristatus*)

Sam Woods is a full-time professional tour leader for Tropical Birding tours. During his 15 years with the company, he has been based in Quito, Ecuador. Originally from the UK, he has also guided regularly for Tandayapa Bird Lodge, within the Andes of Ecuador. A sighting of a pair of tits (Great and Blue) in a London park changed his life at the age of 11. He was an instant bird junkie, and took a degree in Environmental Science, which led him to the Andes of Ecuador for the first time in order to study hummingbirds. Since graduating, his desire for birding travel really took off, and after joining Tropical Birding, has led him to all 7 continents. He has written articles for the ABA's *Birder's Guide* magazine and other birding magazines, as well as being a co-author on several field guides to Australian birds and wildlife. He was also the primary photographic contributor to the recently published *Birds of Western Ecuador: A Photographic Guide*.

Tropical Birding and SWAROVSKI OPTIK have recently partnered up to provide an exciting series of easygoing birding tours. Sam will be the guide for some of these upcoming birding vacations. If you would like to discover more details about these trips, please visit:

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

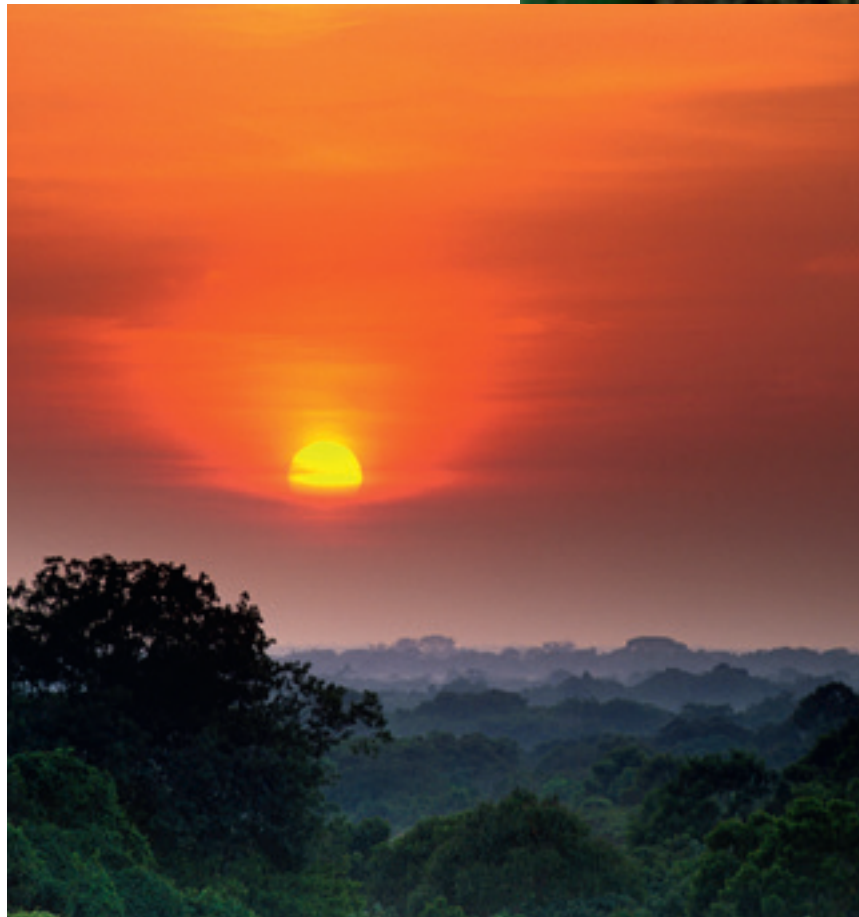




FOR LOVERS OF NATURE, WHAT FOLLOWS THE CALM OF SUNRISE IS THE ADRENALINE RUSH OF DAWN ITSELF, WAKING TIME FOR MOST AMAZONIAN BIRDS.



Pygmy Marmoset  
(*Cebuella pygmaea*)



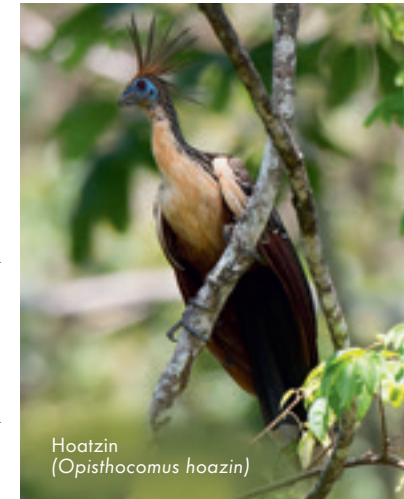
# AMAZONIA

In the east of Ecuador lies part of the vast Amazon Basin, and there is still plenty of this lowland tropical forest remaining. Wildlife documentaries can make this world appear far away and very inaccessible, without considerable travails required to see it. A group of select lodges is based alongside or near the mighty Napo River, a direct tributary of the Amazon River itself. Some of these, like the Napo Wildlife Center, and the Sacha and Sani Lodges, have been there for decades, wonderfully serving an ever-diversifying nature tourism market the entire time. All of these lodges provide well thought-out lodging, in tune with their natural surroundings on the outside, but with modern and comfortable rooms on the inside. Meanwhile that Amazon is just footsteps away from these pleasant quarters.

When publicizing the Amazon, it is all too easy to speak of the amazing diversity of wildlife found within, with images of Red Howler Monkeys and Pygmy Marmosets springing to mind. But for most people, it is how you actually experience the forest that makes the strongest impression. Imagine climbing up a canopy tower in order to see the sunrise over an endless sea of green. For lovers of nature, what follows the calm of sunrise is the adrenaline rush of dawn itself, waking time for most Amazonian birds. A euphony of sound hits the treetops, emanating from within the high canopy or drifting up from the depths of the forest floor. While most of this symphonic bustle is bird sound, such as antbirds announcing they are awake, or toucans yelping for your attention, they have competition with the howler monkeys, due to dawn being the time to announce their presence too. At this time, parrots and macaws take their first flights of the day, often accompanying these with their raucous calls,

while busy feeding flocks pass by at eye level.

A lodge by an Amazonian lake makes for a great setting, particularly at the bookends of the day, when the deep pinks and oranges of an Amazon sun are reflected in the dark, still waters of the lagoon. Flooded forests can be accessed by way of hand-paddled canoes, expertly piloted by one of the local guides. Quietly, the guides gently paddle you through blackwaters, from where you can



Hoatzin  
(*Opisthocomus hoazin*)

seek out wild animals that are special to this habitat from the tranquility of the canoe. If you are lucky, you'll find a family of Hoatzins, an absolutely unique reptile-like bird reminiscent of a Pterodactyl, or a chirping troop of the tiny Ecuadorian Squirrel Monkey. The stillness, the quietness, and calmness of the sound of the paddle gently hitting the water could rightly be used as a sleep aid; it is relaxation personified!

Another recommendation are supervised night walks in search of the frogs responsible for the constant, glorious musical accompaniment. Fascinating exotic insects – taken straight from the scribbles of a sci-fi fan's notebook – rest in the foliage, while elusive Kinkajous and Ocelots sneak through the shadows.

A sense of awe comes out of seeing the Amazon on nature documentaries, but this is extremely amplified when it is felt, smelled, and seen for real. The Ecuadorian Amazon is warm and humid by day (average highs of 25°C (77°F) are constant throughout the year), but surprisingly comfortable and cool at night. It can be visited all year round and heavy showers can come at any time, though the downpours are predominantly short-lived.





# THE ANDES

Few people will ever get to see Mountain Tapirs or Spectacled Bears, but the Andes are teeming with colorful tropical hummingbirds and tanagers. If you are looking for great views and photos of colorful, tropical species, there is an extensive network of reserves and dedicated lodges to choose from. The mountains are varied, with the north-south Andean spine splitting into an eastern and western cordillera characterized by different climates and habitats. For instance, the wet outer slopes traditionally are carpeted in forest, up to around 3,400 meters (11,155 feet), above which páramo grasslands take over. However, the valley between

is dry in climate, with scattered shrubs and cacti, keeping diversity much lower than the out-facing slopes.

On the highest slopes of the Andes is páramo; a picturesque tundra-like landscape of windswept tussock grasses, with a sprinkling of low shrubs and column-like Puya bromeliads. This is a stark landscape where life ekes out an existence. Specialist Bolitoglossa Salamanders creep through the vegetation alongside the Andean

Fox and the smallest deer in the world, the incredibly rare Northern Pudu. The páramo is also home to Ecuador's giant national bird, the Andean Condor, one of the largest flying birds on Earth with a 3.2-meter (10.5-foot) wingspan, while high Andean lagoons

host waterbirds like the Andean Teal, Andean Duck, and Andean Gull.

The diverse forests of the Ecuadorian Andes are found in discreet altitudinal bands, with each altitude/forest type having its own characteristic set of animals. This is most clearly seen in the hummingbirds, where species often occupy slim elevational bands, and very narrow niches. For example, the Blue-mantled Thornbill is a páramo specialist, while the Shining Sunbeam and incredible Sword-billed Hummingbird occur just below at the edge between the páramo and the temperate forest. The Collared Inca would indicate the next level of forest down, the subtropical forest.

The subtropical forests is where many spend much of their time wildlife watching in Ecuador, as the lodges sit within extremely rich forests at comfortable climates, lacking the chill of the higher forests and the humidity of the lower ones. While the crazy-looking Toucan Barbet and the scintillating scarlet Andean Cock-of-the-rock (rightly) attract a lot of attention, it is always worthwhile keeping an eye on the forest floor for the likes of the Little Devil Poison Frog or an Ocellated Tapaculo.

Finally, wedged between the base of the Andes and the Pacific coast are stretches of deciduous dry forest, and a real hotspot for endemism. The enormous black-handed Guayaquil Squirrel can be seen in these forests, as well as a good number of range-restricted bird species such as the Whooping Motmot and White-edged Oriole.

Ecuador is a great place to see, feel, and photograph the tropics, with a series of very comfortable, wildlife watching-focused hotels and lodges. The country is easy to travel around in and made very accessible with a large team of locally based, highly experienced, English-speaking guides. If you visit Ecuador you are highly likely to get a burning desire to return to these tropical regions, or even Ecuador again, as you can see it has a swathe of possibilities for one-off trips, or return trips too. 🌿



THE PÁRAMO IS ALSO HOME TO ECUADOR'S GIANT NATIONAL BIRD, THE ANDEAN CONDOR, ONE OF THE LARGEST FLYING BIRDS ON EARTH.



Ecuadorian Hillstar  
(*Oreotrochilus chimborazo*)

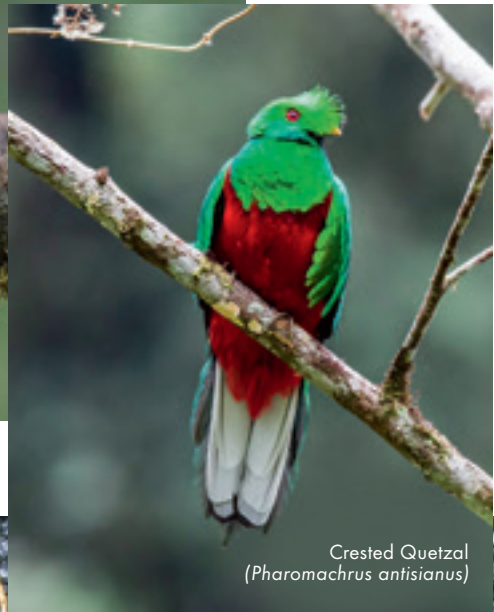


Spectacled Bear or Andean Bear  
(*Tremarctos ornatus*)





Choco Toucan  
(*Ramphastos brevis*)



Crested Quetzal  
(*Pharomachrus antisianus*)

SOUTH AMERICA  
COMMANDS THE  
NICKNAME OF THE  
“BIRD CONTINENT,”  
FOR IT IS THERE WHERE  
BIRD DIVERSITY REACHES  
STRATOSPHERIC NUMBERS;  
MORE THAN 3,700 SPECIES  
– THAT’S ONE THIRD  
OF ALL BIRD SPECIES  
ON THE PLANET!



Chestnut-breasted Coronet  
(*Boissonneaua matthewsii*)



Long-wattled Umbrellabird  
(*Cephalopterus penduliger*)





# PRE-TOUR PREPARATION

1

## CLIMATES AND ALTITUDES:

Ecuador is tropical, and so has a constant year-round climate. However, the great range of altitudes possible means that on a typical trip you would prepare for cold, hot, pleasant, and humid climates, and rain is likely to be experienced everywhere except in the Galapagos. Regular rainfall usually produces the best wildlife activity.

2

## ENTRY REQUIREMENTS:

For most citizens (US, European countries, Australia, New Zealand, South Africa), a visa is not required. Proof of medical insurance may be requested by immigration officials.

3

## PHYSICAL DIFFICULTY:

The Galapagos is easy for the most part; the Amazon requires the most trail walking, and the Andes is steeper, although most tours are designed with a mix of road and reasonably easy trail hiking, with only short steep sections if any.



## CLOTHING

- Warm hat and gloves if visiting high Andean sites
- Lightweight, quick-drying fabrics are recommended
- For humid areas, long-sleeved, lightweight shirts and pants for the field, to reduce the likelihood of insect bites
- Walking boots/shoes, with a waterproof outer layer
- Swimwear for the Galapagos, where snorkeling can accompany wildlife watching
- Broad-brimmed hat and/or baseball cap for shade

## OTHER ESSENTIAL ITEMS

- Binoculars are critical to get the most out of any wildlife observation tour (e.g. NL Pure 42 or CL Companion 8x30)
- Spotting scope. Very useful in Ecuador from roads in the Andes, or from canopy towers in the Amazon, with the compact, lightweight ATX 65 being a fantastic option
- Sunscreen
- Universal plug adaptor

- Insect repellent. Natural products, like lemon eucalyptus, peppermint, or citronella oils are recommended instead of toxic, DEET-based products
- Packet of tissues; there are not always public restrooms close by when in the wild. Please be sure to bury toilet tissue well
- The Ecuadorian government may soon require all visitors to the Amazon to get a yellow fever shot, which is a one-off vaccination for life. You will need to bring the certificate with you
- Regular vaccinations, such as measles-mumps-rubella (MMR), diphtheria-tetanus-pertussis, and varicella (chickenpox), are advisable
- Plentiful specific personal medication
- Personal first aid kit

## OTHER OPTIONAL ITEMS

- Camera – hummingbirds and tanagers make great subjects at lodge feeders in the Andes
- Sunglasses
- Refillable water bottle



## ACCOMMODATION:

Most wildlife watching areas have good lodgings, with constant electricity supply, en-suite options, and many have internet access too. Western toilets are standard. Laundry service is frequently available, but usually only if staying two nights or more.



## MONEY:

Ecuador uses the US Dollar. Getting change for large bills can be difficult, so it is best to carry a selection of small bills (\$1, \$5, \$10, \$20). ATMs are widely available in big cities like Quito and Guayaquil, but can be hard to find at wildlife watching sites.



## ELECTRICITY:

Most areas have 24-hour electricity; this includes most Galapagos boats and Amazon lodges too. Rarely, places use a generator, which is switched off only during the middle of the night.



## WATER:

Never drink the water from the tap. Many birding lodges have large tanks of purified water in which to refill bottles that you have brought with you. A personal UV-light filter is always a good and sustainable option for your water bottle.



Merlin Bird ID by Cornell University

## FIELD GUIDES, BOOKS, APPS, AND MAPS:

1

### MERLIN BIRD ID BY CORNELL UNIVERSITY

is a revolutionary app that helps you identify birds from photos. Highly recommended, there is nothing like it. The field guide section "Explore Birds" includes great bird photos, sounds, and descriptions, and allows you to display only those species likely to be sighted at a specific location, making it arguably the most useful bird app for travelers.

2

### MAINLAND ECUADOR:

*Birds of Ecuador*. Robin Restall and Juan Freile. Helm Field Guides, 2018. The most up-to-date book. Also available as an app, published in 2019 by Sunbird Images.

*The birds of Ecuador*. Robert Ridgely and Paul Greenfield. Cornell Univ. Press, 2001. Available as a book and app. The app was published in 2019, by Birds in the Hand LLC, so is more up to date.

3

### GALAPAGOS:

*Wildlife of the Galápagos*: Second Edition. Princeton Pocket Guides, 2016.

*BirdsEye Galápagos* is an app, published in 2015 by Birds in the Hand LLC.





# SPACE FOR NEW IDEAS

Right from the get-go, SWAROVSKI OPTIK has been fascinated with a very special kind of space – outer space. Wilhelm Swarovski wanted to “be a little closer to the stars,” which inspired him to build his own, improved binoculars. His enthusiasm gave rise to a company that today, more than 70 years later, has built a global reputation.

The world has changed drastically during this time, but one thing remains unchanged: high-precision, long-range optical instruments allow us to immerse ourselves in nature. They multiply the intensity of how we experience the space around us, allowing us to cover large distances without moving an inch. Time to give space the space it deserves.



*“SPACE HAS  
A WAY OF LOOKING.  
IT SEEMS LIKE IT HAS  
A PRESENCE OF VISION.  
WHEN YOU COME INTO IT,  
IT IS THERE, IT’S BEEN  
WAITING FOR YOU.”*

– James Turrell



# CREATE SPACE



Where does the Earth end – and the sky begin?  
This question has occupied theologians, philosophers,  
and scientists over the years – and artists too.  
Artist James Turrell works with light to capture this  
moment between spaces in his Skyspace series – more  
than 75 installations that are open to the public.





# EXPLORE SPACE

In the early 17th century, Galileo Galilei was the first person to invent a telescope that could be used to observe the skies. His visionary discoveries revolutionized the way we see the world – and the stars. Endless vistas of inspiration, from Wilhelm Swarovski to science fiction, from then to now.





# EXPERIENCE SPACE

SWAROVSKI OPTIK's aim is to enable people to enjoy special moments and to inspire a love of nature, the space that we live in. We believe this makes people want to play their part in protecting the planet and preserving biodiversity.  
FOR THE LOVE OF NATURE.



# LIVING IN THE MOMENT, WORKING ON THE FUTURE

**S**WAROVSKI OPTIK is all about helping people to experience special moments. Loving and caring for nature is what we do, indeed it is our *raison d'être*. We want our top-quality long-range optical products to sharpen people's senses and inspire them to be truly in the moment – at one with themselves, at one with nature.

The magic of the moment is at the heart of our company's philosophy, but our strategic focus is firmly on tomorrow – and the day after tomorrow. People have to understand that the decisions they make today determine what

kind of planet they pass on to their children – and only then do they take care to make the right decisions.

At SWAROVSKI OPTIK, sustainable management is a given, and we view it as an investment in the future. In other words, if you want fruit from your tree you shouldn't cut it down but instead just pick the fruit. You have to ensure the tree has the right conditions to grow, thrive, and bear fruit for many years to come.

As a company that cares about the future, sustainability is not our goal, but our way of life. Our 1,000 employees actively support us in this journey.

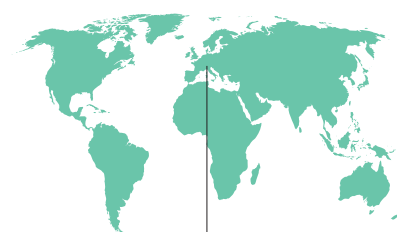
IN THIS ISSUE OF CLOSER, SWAROVSKI OPTIK EMPLOYEES INTRODUCE YOU TO SUSTAINABILITY PROJECTS THAT ARE PARTICULARLY IMPORTANT TO US FROM A SOCIAL OR ENVIRONMENTAL PERSPECTIVE.

Find out more at: [sustainability.swarovskioptik.com](https://sustainability.swarovskioptik.com)



# IT IS PEOPLE WHO ARE AT THE HEART OF OUR BUSINESS

SWAROVSKI OPTIK employs more than  
**980** people worldwide.



Around **770\*** at Absam in Tyrol.



Since 2008, 178 of our employees' children have been attending the company kindergarten.

**178**

“WE ARE PARTICULARLY PROUD OF THE ‘WICHTELWALD’ COMPANY KINDERGARTEN THAT WE OPENED IN 2008. IT’S HARD TO DESCRIBE HOW ENRICHING IT IS TO HAVE CHILDREN WITH US IN THE COMPANY.” – THOMAS SALLER, MEMBER OF THE BOARD FINANCE & ADMINISTRATION

“THE FACT THAT WE SPEND SO MUCH OF OUR LIVES AT WORK MAKES IT ALL THE MORE IMPORTANT THAT PEOPLE FEEL HAPPY TO GO TO WORK AND ARE SATISFIED WHEN THEY LEAVE. SWAROVSKI OPTIK DOES EVERYTHING IT CAN TO ACHIEVE THIS – CREATING A PLEASANT, HEALTHY WORKING ENVIRONMENT, OFFERING HEALTHY FOOD, AND SETTING UP A WIDE RANGE OF PROJECTS TO PROMOTE EMPLOYEE HEALTH. EVERYONE APPRECIATES THIS.” – CLAUDIA MITTERECKER, HEAD OF SALES OPERATIONS



Every year, the company kindergarten chooses a special theme that is part of the children's life – and hence the company's life – throughout the year. The kids are also out and about in the company as *Wichtel* (pixies) – perhaps as energy pixies or trash pixies – and have fun telling us about what they have learned.

## CORPORATE HEALTH



100% of baked goods, dairy products, and sausages come from Austria, along with the majority of meat.



100 e-bikes are available for employees to use.



Every year, some 230 hours of yoga, spine training sessions, and Tae Bo classes are held at the company.

**347** **24** **100%**

347 people have completed apprenticeships with us since 1948.

In 2020, we trained 24 young people in three occupations.

We are proud to say that every one of them is staying on at SWAROVSKI OPTIK after completing their training.

\*As at 2019

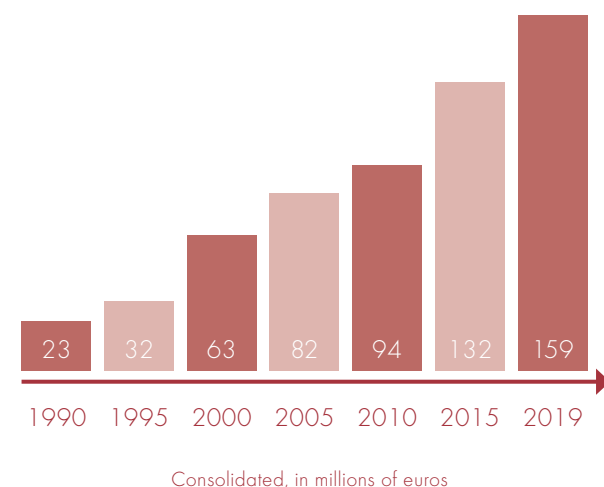




# SUSTAINABLE MANAGEMENT FOR THE BENEFIT OF ALL

## TURNOVER DEVELOPMENT

SWAROVSKI OPTIK runs its business in a sustainable manner, as is also reflected in its business performance in recent years. The growth in sales highlights the long-term success of our focus on innovation and quality, and also indicates that our strategy of concentrating on sustainable business growth is bearing fruit.



## FACTS

**39,000** **12,066**

The factory covers an area of 39,000 m<sup>2</sup> (420,000 ft<sup>2</sup>).

Around 12,066 m<sup>2</sup> (130,000 ft<sup>2</sup>) of this is production space.

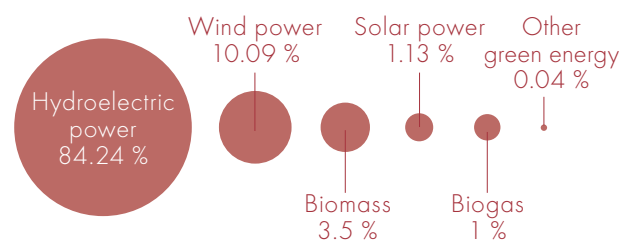
**125** **9,800**

125 machines are used in production, including 90 CNC machines.

The product range consists of some 9,800 active parts (excluding spare parts).

## CONSERVING RESOURCES

Carbon emissions from electrical energy are zero, as no CO<sub>2</sub> is emitted when generating the electricity supplied to SWAROVSKI OPTIK.

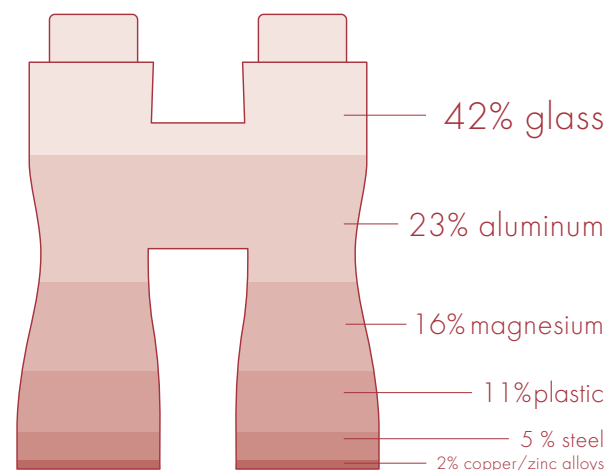


“BETWEEN 2018 AND 2020, THE COMPANY HAS INVESTED 29 MILLION EUROS IN THE CONSTRUCTION OF PRODUCTION AND OFFICE BUILDINGS AND AROUND 13.3 MILLION EUROS IN NEW MACHINERY AND FACILITIES AT THE ABSAM SITE IN TYROL.”

– STEFAN SCHREINER, HEAD OF MANUFACTURING

## MATERIAL COMPONENTS OF NL PURE BINOCULARS

Total weight: 850 g (30 oz)



## PACKAGING AND ACCESSORIES

Since 2015, all packaging for our long-range optical products has been climate neutral. We attach great importance to using sustainable and recyclable materials that can almost all be used without plastic or additional protective film. We have also optimized the size of our packaging in order to save material and cut carbon emissions during transportation.

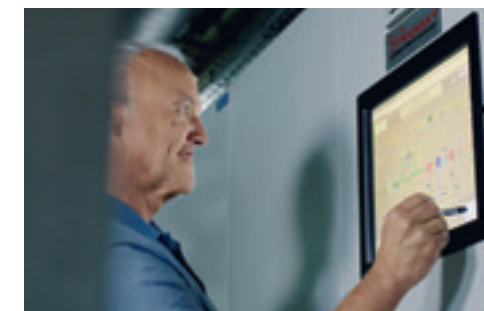
In September 2020, we launched the new soap & brush set for cleaning the protective housing. The new set contains a palm oil-free soap made with coconut oil, olive oil, and shea butter with no colorants or fragrances. It is biodegradable, free of preservatives, microplastics, and nanoparticles. The set is rounded off with a brush with beech wood handle.

We are also aiming to make all our binocular field bags out of 100% rPET, and we should be more than halfway to our goal by 2021. We also use natural materials such as leather.

“WHEN YOU UNPACK A SWAROVSKI OPTIK PRODUCT, IT’S AN EXCITING MOMENT. OUR PRODUCTS ARE HIGH QUALITY AND LOCALLY PRODUCED – SO OF COURSE OUR PACKAGING IS TOO.” – MICHAELA LEEB, PRODUCT MANAGER



One example of SWAROVSKI OPTIK’s principle of “constantly improving what is good” is the new packaging machine that was commissioned in November 2018. We worked with the supplier to adapt and convert the original machine so that it meets our precise requirements. A scanner identifies, weighs, measures, documents, and records the individual products to be shipped. The automatic carton-cutting machine then produces the correct transport packaging for each product on a just-in-time basis. This reduction in volume means fewer cartons, less filling material, less warehousing space, and lower transport costs.



“WE PURCHASE TECHNOLOGY AS WELL AS HVAC PRODUCTS AND THEN ADAPT THEM TO OUR COMPANY’S SPECIFIC NEEDS.” – GERARD MOSER, HEAD OF ENERGY MANAGEMENT AND MAINTENANCE



# APPRECIATING THE GIFTS OF NATURE

“WE ARE USING NATURAL MATERIALS SUCH AS WOOD, CLAY, FELT, SHEEP WOOL, AND HEMP IN OUR NEW BUILDING PROJECTS. BY INSTALLING LARGE WINDOWS, IT FEELS AS IF WE ARE BRINGING NATURE INTO THE WORKPLACE.”  
- BERNHARD ÖLZ, HEAD OF BUILDING MANAGEMENT

Our buses shuttle around 80 people to and from the plant every day, which reduces carbon emissions.



24 company flats



50



460 m<sup>2</sup> (4,950 ft<sup>2</sup>)  
of wildflower meadows

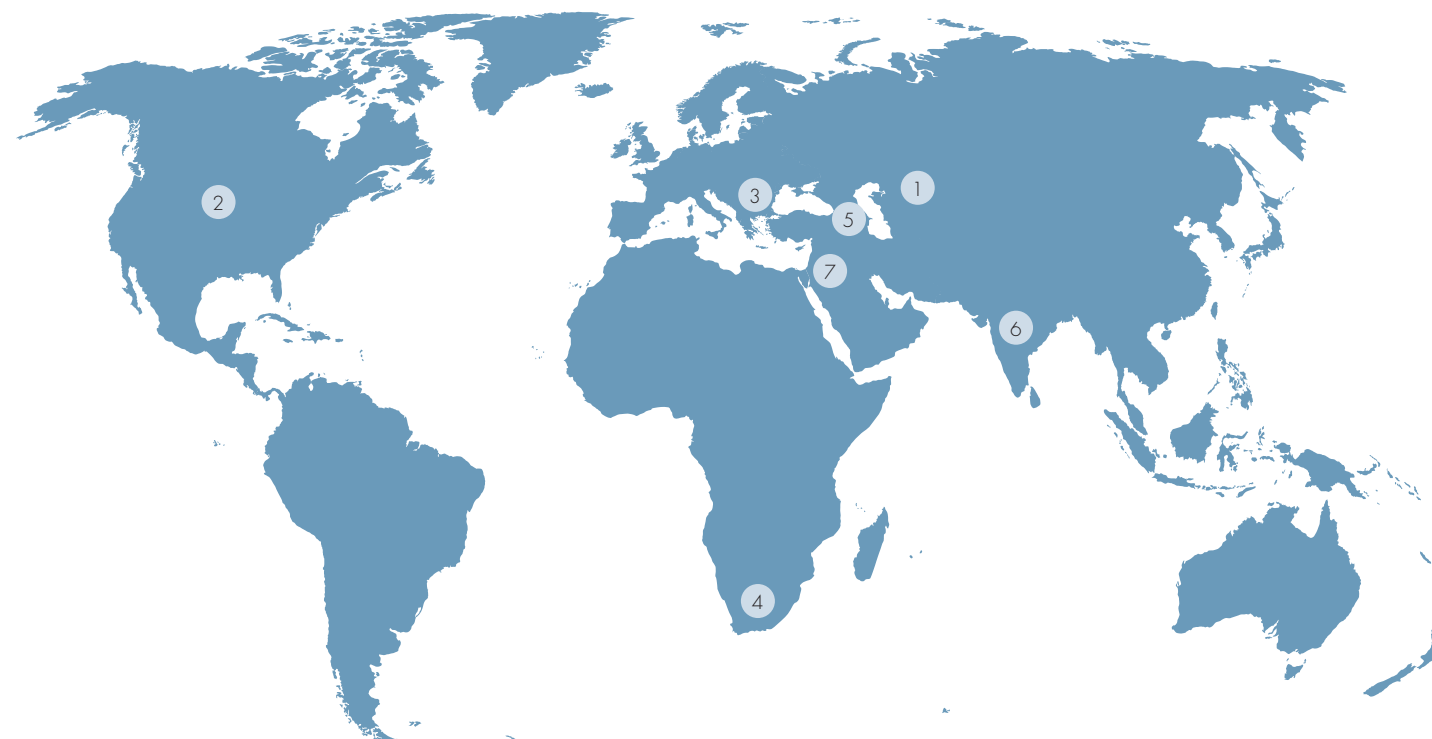
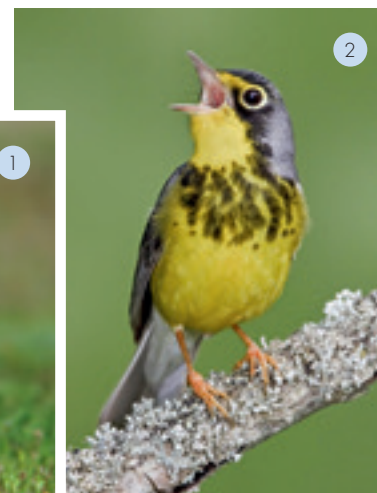
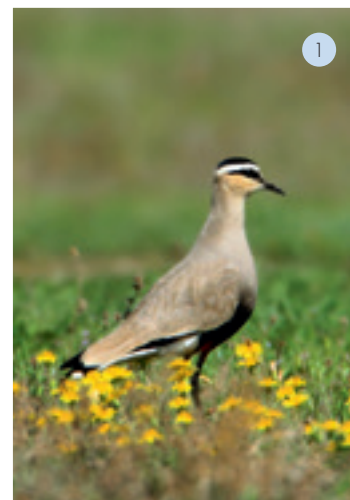


Good neighbors – responsible construction in a densely populated residential area, State Prize for Architecture 2010



## NATURE CONSERVATION PROJECTS

“THE BIOLOGICAL DIVERSITY OF THE PLANET IS THE WEB THAT HOLDS OUR EXISTENCE TOGETHER. EVERY LOST SPECIES – NO MATTER HOW SMALL OR INSIGNIFICANT – WEAKENS THIS NETWORK. IT IS NOT ONLY OUR DUTY TO PRESERVE OUR NATURAL WORLD, BUT ALSO CRUCIAL FOR US AS INDIVIDUALS AND AS A SOCIETY. OUR APPROACH CONSISTS OF DIRECT AND LONG-TERM PARTICIPATION IN SELECTED PROJECTS AROUND THE WORLD.” - DALE FORBES, HEAD OF STRATEGIC BUSINESS DEVELOPMENT



- 1 **Sociable Lapwing Species Champion**  
Middle East Asia
- 2 **Canada Warbler Species Champion**  
North America, Colombia
- 3 **Dalmatian Pelican breeding site**  
Bulgaria

- 4 **Community Guides**  
South Africa
- 5 **Batumi Raptor Count**  
Georgia
- 6 **Snow Leopards, Ladakh**  
India
- 7 **Champions of the Flyway**  
Israel



51



OUTSTANDING OPTICAL  
QUALITY, COMPACT, AND  
LIGHTWEIGHT: WITH THE  
*CL POCKET* YOU'LL ALWAYS  
BE READY TO MARVEL AT  
THE WONDERS OF NATURE.



# BIO DIVERSITY



WHEN WE THINK ABOUT BIODIVERSITY, WE MIGHT THINK ABOUT THE BIRDS OF COSTA RICA, THE FANTASTIC REPTILES AND INSECTS OF MADAGASCAR, OR THE UNIQUE MAMMALS OF AUSTRALIA. AS A DESCRIPTION OF THE ENORMOUS VARIETY OF LIFE ON EARTH, HOWEVER, BIODIVERSITY ENCOMPASSES ALL LIVING THINGS INCLUDING PLANTS, ANIMALS, BACTERIA AND, OF COURSE, HUMAN BEINGS. IN FACT, IT IS ESTIMATED THAT THE VAST MAJORITY OF SPECIES ON THE PLANET HAVE YET TO BE DESCRIBED BY SCIENCE!

## THE VALUE OF BIODIVERSITY

Biodiversity is important to all aspects of human life. The estimated 9 million species on Earth play an immeasurably important role on our planet and act as an indicator for the health of individual ecosystems and the world as a whole.

Many people value the benefits of biodiversity without being actively aware of its critical importance. A healthy planet is essential to every aspect of our lives, from obtaining food to discovering new medicines, sources of fuel, or shelter and protection from the elements. Healthy, bio-diverse ecosystems provide essential natural services such as pollination, seed dispersal, water purification, nutrient cycling, environmental cleanup, and climate regulation.

Beyond purely utilitarian aspects, the value of biodiversity for cultures, religions, spirituality, and connection may be harder to put a price tag on, but are no less relevant to humanity. When we dream of a holiday at the ocean, we depend on the natural systems that maintain these environments. Places with a particularly high degree of biodiversity are called hotspots. When we long for adventure in the rainforests of Borneo, biodiversity is just another word to describe the natural treasures we hope to see and discover, such as orangutans, pygmy elephants, or clouded leopards.



# QUALITY OF LIFE



## RAISING AWARENESS

**R**For decades, scientists have warned about the effects of climate change. No less pressing or dramatic is the human-caused crisis of mass extinction.

Biodiversity represents the knowledge and adaptive power of evolving species over millions of years. When species are lost, this knowledge dies with them. Some have said that this loss is akin to "burning the library of life." Because each species is a small part of an interconnected puzzle that underpins all life on Earth, the loss of individual species has a domino effect on the food chain. The consequence of a loss in biodiversity and species extinction is ecological collapse. The good news, even in spite of a lack of public awareness, is that it's not too late and many positive steps are being taken!



## FOR THE LOVE OF NATURE

**F**In focusing on the value of natural systems, the environment, and biodiversity, both practically and intrinsically, it is possible to reorder and prioritize the value that biodiversity has in our lives. After all, when we say biodiversity, what we really mean is quality of life!

In his speech to the IUCN, Senegalese Forestry Engineer Baba Dioum famously concluded, "In the end we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught." 🌱

At SWAROVSKI OPTIK, it is our mission to inspire people to love and care for nature. By bringing people closer to the preciousness of the moment, our long-range optical equipment sharpens the observer's senses and unravels the beauty of the natural world around us.

## HOW YOU CAN HELP:

Better inform yourself about the loss of biodiversity. After all, an issue that is underreported and not well understood will not be addressed.

### PROMOTE CONSERVATION

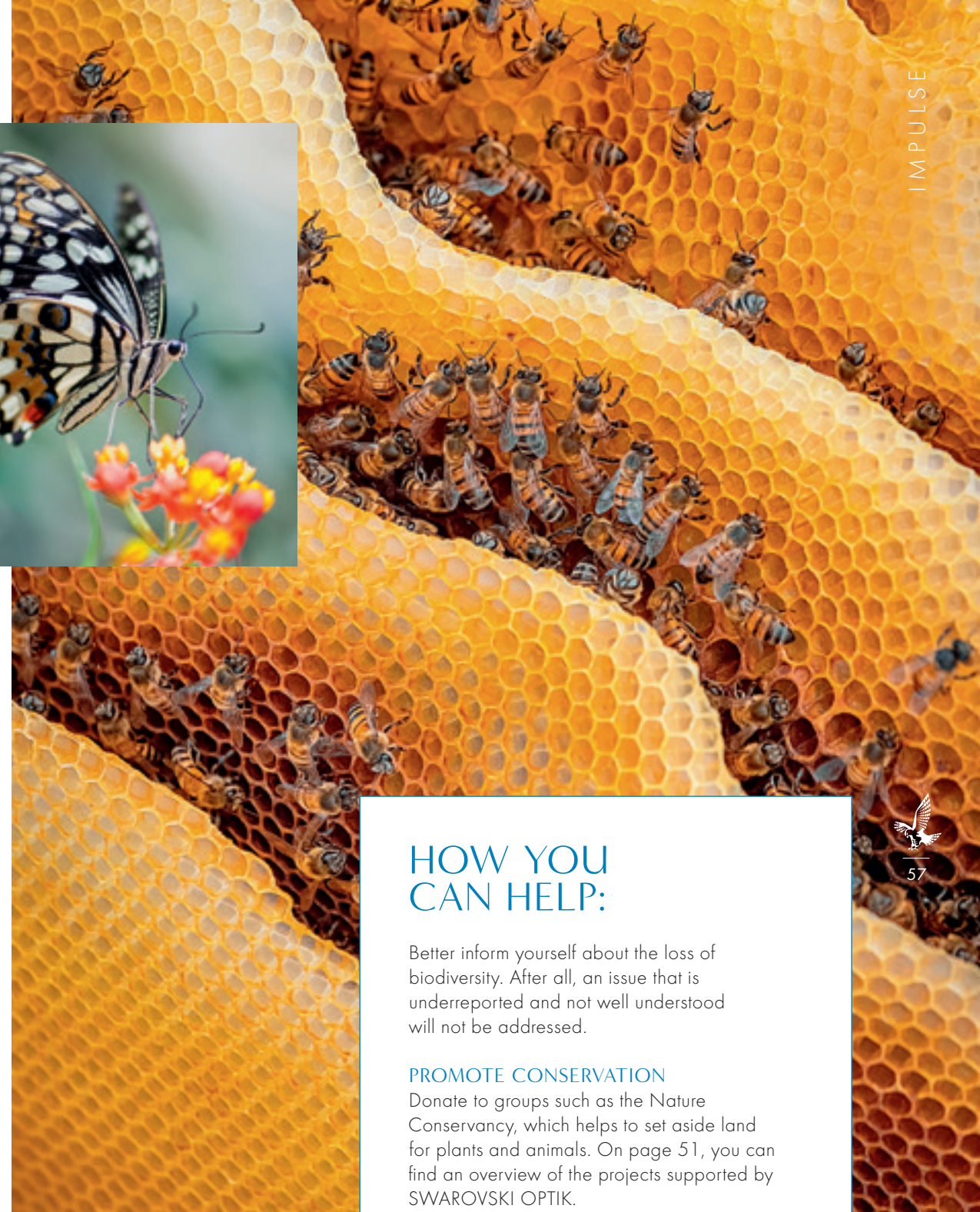
Donate to groups such as the Nature Conservancy, which helps to set aside land for plants and animals. On page 51, you can find an overview of the projects supported by SWAROVSKI OPTIK.

### TOURISM MATTERS

Visiting biodiversity hotspots encourages governments and local people to preserve these places.

### SUPPORT ORGANIZATIONS

such as BirdLife International that are trying to give a voice to birds and animals affected by human behavior. More details about their groundbreaking proposals are available on the following page.





# ONE PLANET

TEXT: ALEX DALE, HEAD OF COMMUNICATIONS,  
BIRDLIFE INTERNATIONAL

**BIODIVERSITY ENCOMPASSES THE WONDERFUL DIVERSITY ON EARTH IN ALL ITS VIBRANT AND VIVID FORMS. BUT MORE THAN JUST BEING SOMETHING INTERESTING TO LOOK AT, BIODIVERSITY IS INSEPARABLE FROM HUMAN EXISTENCE AND ESSENTIAL FOR OUR HEALTH – WHICH IS WHY ACCESS TO IT SHOULD BE A HUMAN RIGHT.**



global bird conservation organization, the feedback I sometimes receive from those outside the birding bubble is that conservation is a selfishly human conceit; that saving a Pink Pigeon on a remote island serves no purpose beyond giving birders something pretty to look at. This type of thinking needs to be tackled head-on.

So, perhaps a different group of statistics are required. How about: 16% of human deaths worldwide are as a result of environmental harm. That's over nine million a year. Pollution alone is responsible for three times as many deaths globally as AIDS, tuberculosis, and malaria combined. And 15 times as many as war and violence. We are humans, yes, but we are also animals. In short, we are biodiversity, and biodiversity is us. We depend on the natural world for our sustenance and sanity, and our poor stewardship of the planet is killing us. In our millions. Not in the future: now. And while nature may have enjoyed the briefest of respites during the COVID-19 lockdown, the UN still warns

that we only have ten years left to act before we do irreversible damage to our natural world. But that's where we differ from other extinction events. A meteor can't change its course – but we can.

That's the thought process behind BirdLife International's latest, and most ambitious campaign – to petition the United Nations to amend the Universal Declaration of Human Rights, to make the first change since the document was formed in the ashes of World War II: to make access to a healthy natural environment a universal human right.

Far from a publicity stunt or a symbolic gesture, this is the level of action we feel is needed to wake the world's governments up to the gravity of the situation. Once a human right is ratified through the UN policy machinery, it's a powerful catalyst for international action, compelling countries to bolster their environmental laws and freeing up resources to assist developing countries, many of whom are the hardest hit by the ills of environmental harm, whether it be through droughts, wildfires, or rising sea levels.

"The right to a healthy planet, as a universally recognized human right, would be a powerful addition to the toolkit for saving the planet," says Dr. David Boyd, United Nations' Special Rapporteur on Human Rights and the Environment and part of the One Planet One Right campaign. "What we need



BirdLife International is the world's largest nature conservation partnership, connecting and coordinating the work of national conservation organizations in over 100 countries. BirdLife is grateful to SWAROVSKI OPTIK for its ongoing support of our Preventing Extinctions program, in particular becoming a long-term Species Champion and supporting the Sociable Lapwing since 2008 and Canada Warbler since 2013. To find out more, visit [www.birdlife.org](http://www.birdlife.org)

to do now is seize this moment of global eco-crisis to secure United Nations recognition of this right so that everyone, everywhere benefits. The human right to a healthy planet, if recognized by all nations, could be the most important human right of the 21st century".

Big problems require big solutions. And what once seemed impossible is now feasible. To achieve recognition from the UN would be a massive leap forward in acknowledging that we are tearing the strands of the web of life that holds this planet together. Beyond saving the one million species, on every continent and every ocean, threatened by our unsustainable habits, it would also restore our connection with the natural world and improve the quality of life for millions. After all, where there's a will... 🌱



**W**here there's a will, there's a way – so the proverb goes. The international response to the COVID-19 pandemic was at first sluggish, and then it was historic: factories ground to a halt and high streets went into hibernation as half the world's population went into lockdown. It was a staggering, unprecedented response that should spur us all to reconsider what is and isn't possible when tackling the big, overarching issues that have long been thought unsolvable.

Underreported and yet looming on the horizon is another crisis, one that if we don't start battening the hatches now, threatens to tear us all asunder. The biodiversity crisis, which, entwined with the climate crisis, is without a word of hyperbole the greatest threat facing humanity in its future.

We'll get to why in a second. But first, let's clarify exactly what we mean by "biodiversity." More than a contraction of "biological diversity," this term covers the entirety of what we know as the natural world including the billions of species on Earth. It also describes the delicately balanced interactions between species that have evolved over time to coexist with one another.

Our planet's weird, wonderful, and bounteous variety of life

is under threat. We are currently living through a sixth mass extinction event: the Anthropocene extinction, the only such event by a living species – humans. Whether through intensive agriculture, overconsumption, or pollution, our activities have caused extinctions on every land mass and in every ocean, many before we have even had a chance to discover the species. Overall, human impact has resulted in an extinction rate between 100–1,000 times that which would normally be expected. Statistics that underpin this come thick and fast; since 1970, the number of animals on the planet has halved. The latest IPBES report indicates that as many as a million species are at risk of disappearing forever, unless we change our damaging habits and move to a more sustainable way of living. But to do so would require a level of international cooperation that was (until very recently) thought impossible.

So why isn't there the same political will to tackle the biodiversity crisis (and its twin sister, climate change) as there was for the pandemic? The answer seems obvious at a surface level: COVID-19 presented a very immediate threat to humanity, whereas the loss of a meadow or a species of frog does not. But this line of thinking only highlights how completely we humans have distanced ourselves from nature. Such detachment can make it difficult to join the dots as to how the fate of other species is entwined with ours.

As the Head of Communications for BirdLife International, a



# ONE RIGHT



## NL PURE

ONE  
WITH

NATURE

HOW DO NATURE LOVERS FEEL WHEN THEY LOOK THROUGH A NEW PAIR OF BINOCULARS FOR THE FIRST TIME? CLOSER WANTED TO FIND OUT, SO WE ASKED FOR THEIR THOUGHTS AND IMPRESSIONS ABOUT THE NEW NL PURE.



When creating a new product, SWAROVSKI OPTIK always turns to nature for inspiration. This was particularly true with the NL Pure, as we wanted to create binoculars that make you feel at one with what you are observing. For our diverse team of experts, the desire to design a revolutionary binocular with a 70° field of view without compromising on ergonomics and handling became an irresistible challenge.

Achieving the extraordinary means forging new paths. At SWAROVSKI OPTIK, this can also mean reinventing the laws of physics.

In developing the new binocular concept, the two key questions they had to answer were: How do we combine the best optics in the perfect package? And which binocular shape is the most ergonomic, including in terms of weight? These questions fueled the process of innovation, and the initial answers immediately brought some extraordinary ideas. However, they were accompanied by concerns that the

desire for maximum optical performance would make the binoculars too big and clunky.

But SWAROVSKI OPTIK is nothing if not bold. The whole team was excited about the project and believed in the product. Of course, everyone wanted to play their part in achieving the impossible. Read on to find out what our product managers wanted from the new binoculars and why the NL Pure allows you to immerse yourself even more deeply in the moment.

#onewithnature





**OUR AIM:**

TO PRODUCE A BINOCULAR WITH A GROUNDBREAKING APPEARANCE AND REVOLUTIONARY ERGONOMIC SHAPE THAT FITS PERFECTLY IN YOUR HAND. THIS PROVIDES THE OPTIMAL CONDITIONS FOR SMOOTH, EFFORTLESS OBSERVATION, EVEN FOR LONG PERIODS AND IN TOUGH CONDITIONS. THE VIEWING EXPERIENCE IS FURTHER IMPROVED BY THE ADDITION OF A COMFORTABLE FOREHEAD REST.



"The NL Pure's ergonomic grip, forehead rest, stunning clarity, and field of view is going to make every observation more personal, which is the whole reason I am in nature to begin with. For me, nature is more of an escape and a place to forget all of the troubles and stressors of life." Ben Knoot (professional birding and photography tour guide) on the first time he used the NL Pure in the forest at Mount Lemmon in Arizona.



"Nature is my natural surroundings, it is where I feel most at home. I love the thrill of nature, the chance of the unexpected. Every day you go out you see something new. It is also the only place where I can truly relax and forget about the stress of everyday life." Arjan Dwarshuis – world record-holder for the most bird sightings in a year – tells us how observing nature with the NL Pure helps him to decompress.





**OUR AIM:**

YOU CAN LOOK THROUGH THEM WITH OR WITHOUT SUPPORT AND AT DIFFERENT ANGLES TO THE OBJECT YOU ARE OBSERVING. IN ALL THESE POSITIONS AND WITH DIFFERENT PUPIL DISTANCES THE BINOCULARS HAVE TO FIT PERFECTLY IN YOUR HAND.

**OUR AIM:**

WHEN YOU USE THE NL PURE FOR AN EXTENDED PERIOD, YOU REALIZE IT REALLY IS A TECHNICAL MASTERPIECE. THE LARGEST-EVER FIELD OF VIEW WITH ALMOST INDISCERNIBLE EDGES ALLOWS YOU TO TOTALLY IMMERSE YOURSELF IN YOUR SURROUNDINGS. YOU CAN SWITCH OFF FROM WHAT IS AROUND YOU AND FIND YOURSELF IN THE HEART OF THE ACTION. THE CRYSTAL-CLEAR OPTICS OF THE NL PURE PROVIDES THAT ADDED SECURITY TO ENSURE YOU CAN QUICKLY AND CORRECTLY IDENTIFY ANIMALS.



"For me, binoculars are my tool for life and work. The better the binocular, the more I see and the more I enjoy. So, the NL Pure is going to dramatically improve my nature observations." This is how James Lees, nature guide and conservation ranger in Ontario, Canada, describes his experiences with the NL Pure in a cedar forest in Canada.

"The wide field of view makes for a completely different birding experience than I've had before. And I love the way the NL Pure fits in my hands," says biologist and long-time birder Sarah Toner. 🐦







W I L Y  
COMMON  
RAVENS  
O P P O R T U N I S T S



T

HE EARLY BIRD  
CATCHES THE...

It's dark and cold. In the distance the coyotes are howling. For a moment, I think they're wolves, but the howls are more high-pitched and shorter than those of their larger relatives. Finally, the first rays of light appear over the mountain ridge, but it will still be hours before the sun is strong enough to warm us up. A herd of bison lumbers along the road in search of patches of grass that have been blown clear by the wind. At least the car shelters us from its icy blast, but the cold is still slowly and steadily creeping up our legs.

Suddenly we hear a teasing "weer weer wock wock wock" and again "weer weer wock wock wock" from another direction. Black-billed Magpies - a species closely related to the Eurasian Magpie that is native to Europe - are flying straight toward an animal carcass, just as if they know the food awaited them. But they couldn't possibly know, because we only laid out the dead mule deer as bait an hour before, when it was still pitch black. Clearly magpies are adept at tracking down food through their sense of smell. Perhaps they can help us to lure the shy creatures that we are actually waiting for? Will today be the day? Will they show up and unsuspectingly perch on our bait? Or will it be just another day like the rest, a day of endless waiting and hoping that turns to feverish excitement before we realize once again that it's a false alarm, followed by disappointment and resignation - all out in the freezing cold! We continue waiting patiently. Half an hour goes by, and we watch more and more magpies gathering at the carcass. They peck out lumps of flesh and fly off with them, returning with empty beaks a short time later.



Like many other birds of the crow family, magpies store food to tide themselves over when nutrition is scarce. At least 20 magpies are now helping themselves to this rich source of food. Where have they all appeared from? We didn't see any yesterday. How many of their food caches do they remember, and how many of their hiding places are plundered by other creatures, such as coyotes? And, the million dollar question, what makes two biologists lay out a dead animal 2,000 meters (6,500 feet) up in the Rocky Mountains in the depths of winter, long before sunrise? At least this question has a clear answer - Common Ravens! But first let's take a look at the backstory.



## TALES AND LEGENDS

**T**Certain creatures have always sparked people's imagination, and our relationship with them is often quite ambivalent. Tales and legends reveal our interest and wonder, but also our fear and hatred. Even in today's supposedly enlightened times, positive or negative emotions are quickly stirred up when wolves or ravens start to encroach on our cultural landscape.

But what is the relationship between these two species? According to legend, the Norse god Odin was accompanied by a pair of ravens and two wolves. Odin sent out the two ravens, Huginn and Muninn ("thought" and "memory") every day at dawn to bring back news of what was happening in the world. The wolves, Geri and Freki ("ravenous" and "greedy"), had to eat all the food that was brought to Odin in Valhalla because the god himself drank only mead. We don't know whether the ravens occasionally snatched food from the wolves to eat themselves.

In the wild, wherever there are wolves – and particularly wolf kills – ravens are never far away. Many decades ago, wolf researchers observed that ravens sometimes accompany wolves, following their tracks in the snow and responding to their howls.

After wolves were reintroduced in Yellowstone National Park in the mid-nineties, this area has become one of the best places in the world to observe wolves in the wild, and they are often accompanied by ravens. Keen wildlife watchers and scientists soon came to different conclusions about the relationship between the two species. Some think that ravens use wolves in order to live off their food, almost like parasites, while others see it as more of a symbiotic relationship between two species who co-exist for their mutual benefit. Theories and anecdotes began to spread under the guise of facts, for example, that ravens will draw the attention of wolves to prey animals or look after their young in the wolf den. But what lies behind these stories? Do these two species actually need each other or are ravens simply experts at using wolves to provide their food?



### DID YOU KNOW? Yellowstone National Park

Yellowstone National Park was founded in 1872 and is the oldest national park in the world. It is located in the Rocky Mountains in the US and is about the size of Cyprus with a surface area of almost 9,000 square kilometers (3,500 square miles). The park is also famous for its volcanic landscape with geysers, mud pots, and hot springs, and for its geothermal features with the supervolcano that lies beneath. UNESCO declared it a World Heritage Site in 1978.

## NEW RESEARCH

**N**These and many other questions are being addressed by our current research project in Yellowstone National Park. In collaboration with Professor John Marzluff of the University of Washington, a leading expert in ravens, and the researchers of the Yellowstone Wolf and Cougar Projects, we are studying the relationship between ravens, wolves, and other species using state-of-the-art GPS trackers and by observing them in the wild. Detailed studies of the behavior and food ecology of wolves and cougars have been conducted here for some time. Every year, a few of these animals are caught, measured, fitted with a GPS collar, and released again. This allows us to track their movement patterns, find their kills, and identify their prey. This long-term project is also an ideal opportunity to conduct parallel research into the behavior of the most common scavenger in this area, the Common Raven. The plan is to capture ravens and fit them with miniature GPS trackers. These GPS backpacks are adapted for each bird and – like the GPS collars worn by wolves and cougars – record the raven's position, transmitting the data via the cell phone network. For the first time, this will allow us to investigate whether ravens deliberately follow wolves in order to live off their kills in winter, or whether they are opportunists when it comes to finding food and use cougar kills and human food sources in the same way.





## HOW DO YOU CATCH A RAVEN?

Back to the field work: after waiting in the car for hours we suddenly hear a repeated “rap rap rap” – the territorial call of a raven. Once again, we are filled with hope. There are even two of them, probably a territorial pair. Will they land on the carcass, or to be more precise, will they land in the exact spot where we can trap them in our hidden cannon net? Or do these wily birds suspect there is something wrong? Ravens are curious birds, but they are also neophobic, meaning they are afraid of new things and react violently to the smallest change or anything unusual. This behavior is particularly pronounced in areas where ravens have a history of being shot and poisoned by humans, such as Central Europe or New England in the US. But even in Yellowstone National Park, where ravens are protected from humans, they have to be constantly on their guard when scavenging a carcass to avoid falling victim to an eagle or even the wolf itself. This latter fact rather goes against the idea that ravens and wolves co-exist peacefully for their mutual benefit. It helps ravens to overcome their neophobia if they see magpies or other creatures already scavenging the carcass.

This time too, these unwitting decoys attract the attention of the ravens, because the pair of ravens initially concentrate on their smaller relatives. It almost seems as if the ravens want the magpies to do the work – when the magpies fly off to hide their food, they are pursued by the ravens who either steal the food directly or plunder their store later on. It’s a good half hour before the first raven approaches the food itself. It hops around nervously, finally goes up to the carcass, pecks out a piece of meat, and is gone in a flash.



Much too fast to catch it. We have to continue being patient, maybe for hours, until the ravens start to relax when feeding in a certain area. We have to wait for the perfect moment, and then it all boils down to a few seconds. A single mistake means the ravens escape, and then they are aware of the cannon net, so they are likely to be even more wary in future. Finally, the ravens seem to be feeding in the right place. I take a last look through the binoculars, hands shaking with excitement, finger hovering over the remote control. With a loud bang, a net shoots out of an inconspicuous pile of grass and snow and covers the carcass. I rush over to it. All those hours of waiting were worth it! One raven is in the net, though the other managed to fly off before it descended. We immediately free the raven from the net, measure and ring it, and fit it with a GPS backpack. Soon we will be getting information about its territory and typical food sources, and later discovering more about its nest, its breeding pattern, and how it rears its young.

Fortunately, there were days when we caught several ravens at once, so after two months of painstaking effort we achieved our aim of equipping 60 ravens with GPS trackers.







## THE WILDLIFE

Yellowstone National Park is also renowned for its wildlife, including Bison, Grizzly Bears, and Wolves. Bison, Elk, Wapitis, Pronghorns, and Bighorn Sheep are particularly common in the northern part of the park, and with a little luck you might spot Mountain Goats, Wolves, Grizzly and Black Bears. Mule Deer, Cougars, and Lynx are native to the lower areas of the park.



## INITIAL FINDINGS

Our study is still in its infancy, but even these early findings show that ravens in Yellowstone National Park cover an area many times larger than the range of individual wolf packs. A direct comparison of the movements of the two

species suggests that ravens do not follow wolves. But ravens are experts at finding wolf kills, and they do it with amazing speed. Sometimes they fly many miles to find these food sources. Ravens are also good at finding cougar kills and animals that have died from other causes.

As researchers, we use the GPS data transmitted by the ravens to locate the carcasses and observe ravens from a distance, along with a wide variety of scavengers, from magpies and eagles to coyotes, wolves, and Grizzly Bears. The question of how ravens find these food sources remains unresolved for the time being. To what extent do they rely on their senses in their search for food? And how much attention do they pay to the behavior of other birds and animals, such as the conspicuous back-and-forth of magpies or the wolf howls that are often heard after a successful hunt?

Ravens are also experts at finding anthropogenic food sources, i.e. human food sources such as landfills, sewage treatment plants, or popular hunting grounds outside the national park. Surprisingly, in winter many ravens leave their territory in the national park almost daily to look for anthropogenic food sources outside the protected area, often flying more than 100 kilometers (60 miles) from their territory.

Ravens up to the age of four and those that have been unable to establish a territory with a partner despite sexual maturity often cover even greater distances. Two ravens are currently living in Canada, more than 700 kilometers (400 miles) from where they were tagged.

The free animal tracker app (<https://www.icarus.mpg.de/4331/animal-tracker-app>) developed at the Max Planck Institute of Animal Behavior is available to anyone who is interested in tracking the flight movements of ravens in and around Yellowstone National Park, along with the movements of other animals wearing GPS transmitters. We are expecting the project to deliver more surprises and a wealth of new findings in the years to come. 🐾



## MATTHIAS-CLAUDIO LORETTO

is an Austrian behavioral scientist. As part of his PhD at the Konrad Lorenz Research Center at the University of Vienna, he was the first person to equip ravens with GPS transmitters in order to study their movement in the Alps. In 2019 he moved to the Max Planck Institute of Animal Behavior in Radolfzell, Germany, where he is currently working on an EU-funded research project to study the relationships between ravens, wolves, and other species in Yellowstone National Park.





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