Terre Sauvage
VIVRE LA NATURE!

DECEMBRE 2014 - N°311

SOS Sauvons Nos Espèces ! - UICN, La Liste Rouge Des Espèces De 50 Ans


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EDITORIAL

BY JEAN-JACQUES FRESKO
Editor

WHAT ABOUT THE RACOON?

You’ve got to be a nutcase, or perhaps utterly Italian, to write a highly erudite book (406 pages, no less) entitled *The Infinity of Lists*. In it, Umberto Eco explains that there are lists and lists: those of the practical sort, and of the poetic variety. The former category covers such things as shopping lists, library inventories, restaurant menus and telephone directories. Those lists contain things that exist and are truly known; they are exhaustive, finite, and coherent. And they are orderly too: you won’t store the tiramisu with the vegetables, or Modiano with the humorists. The poetic list is quite the opposite: to hell with exhaustiveness, classification and coherence. In this category can be found Jacques Prévert’s poem *Inventaire* (“Inventory”) and its racoon; the enumeration of the ships in the Greek fleet (350 lines in *The Iliad*!), the litanies of the saints, and the stars in the sky. Here, the aim is not to draw up a finite inventory, but, conversely, to open a window onto the infinite, the incommensurable. The purpose of such a list is the explicit or implied et cetera to which it leads.

CAUTIOUSLY—or perhaps with just a hint of cowardice—, Eco did not find room to state in which category he would place the Red List of Threatened Species, to which we devote this issue, coinciding with its fiftieth anniversary. Is it a practical list? Definitely: the species it surveys actually exist; they are known and perfectly described by the 10,000 experts (do you want the list?) who continually supply data for it worldwide, coordinated by IUCN (the International Union for Conservation of Nature), our partner in producing this issue. It contains animals and plants neatly arranged in rigorous categories, from the most alarming (Critically Endangered) to the most reassuring (Least Concern). But the Red List is a long way from recording all living things. It teems with et cetera’s; the list suggests more than it says. It suggests the infiniteness of life, the fascinating plasticity of species, their ability to move between categories. Practical or poetic, or both at once, the Red List is above all a tremendous working tool for all the—increasingly numerous—people for whom conserving nature is a priority objective. Under the leadership of Julia Marton-Lefèvre, its Director General for the past eight years and still for a few more weeks, IUCN and its partners have launched the SOS—Save Our Species initiative to translate the Red List’s sometimes depressing information into concrete actions and mobilisations on the ground; to transform the sorry observation that biodiversity is wilting into momentum that inspires hope. Behind Marton-Lefèvre, whose obstinate work *Terre Sauvage* applauds, and behind IUCN and its experts, whole swathes of our societies are swinging into action. In this issue you will find out about unexpected and often little-known actions led by, among other parties, large corporations (BNP Paribas, Kering, Klorane) – out of conviction, economic realism, or both at the same time.

Come to think of it, which Red List category does Prévert’s racoon fall into? “Least concern”. So: no worries for that species. It’s one of the lucky ones...

PS: *Terre Sauvage* dedicates this issue to Christophe Sidamon-Pesson.
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AN EPIC CHRISTMAS TOUR!

BY DENIS CHEISSOUX, journalist and producer of the “CO2 mon amour” radio programme on France Inter

Let’s go, reindeer! It’s time for our 24-hour Christmas delivery round! And without a jet engine on the back or injections of EPO. I’ve checked with the IUCN Red List, and the outlook for reindeer is upbeat. For everything else, it’s a disaster.

This year there’s been heavy demand for videos and books about threatened species. People are fascinated by the ambient chaos. How many friends on “Face bok”? 22, 413 – which is how many species, give or take, we’ll soon see stuffed in museums. We’re expanding the world, but shrinking nature. And there are even whole cities on the Red List: Beijing, Mexico City, Shanghai… The reindeer are struggling to breathe. And then you’ve got local specificities: when I fly over Brittany, they think I’m a red-capped protester and want me to help wreck an eco-tax gantry! Ah, come on, reindeer – you can’t stop four hours in! Don’t tell me you’re working a shorter week – and anyway, we do the job in one night and one day. If you’re not happy, I’ll call the employers’ union! When I look at all the stuff I lug around, I’m appalled, frankly. Alongside the sleigh, I should tow a plastic-sorting bin, or look for reindeer is upbeat. For those that stay on the tree longer, it appears, a simple reason for this: predators live. The researchers think that protecting raptors’ nests could be an effective, inexpensive way of safeguarding an ecosystem’s biodiversity.

Evolution

GRIPPING STUFF

Generally speaking, evolutionary mechanisms occur over millions of years. But an American team has been fortunate enough to observe a small lizard, the Green Anole (Anolis carolinensis), evolving over a mere 15-year span. The factor that prompted this change is the Brown Anole (Anolis sagrei), an invasive species that occurs in the same habitat and attacks the Green Anole’s young. The latter species therefore began to perch higher in trees, and natural selection logically favoured the individuals best adapted to change. In the space of 20 or so generations, the species has evolved into lizards with wider suction cups on their feet, which deliver more grip.

Biomimetics

MASTERS OF LIGHT

Giant clams? They’re nothing less than underwater solar energy plants. That’s the discovery made recently by an American team studying these huge shellfish with the colourful mantle. And it is the mantle – especially its iridescent cells – that has attracted interest from scientists. To pamper the algae that live inside the clams, and in symbiosis with them, these cells uniformly direct rays of light towards the algae, while protecting them from burns. The cells also “sort” the wavelengths of the light, reflecting those that play no role in photosynthesis. According to the researchers, this system could inspire the photovoltaic panels of the future.

Botanics

THE INFLUENCE OF ENDEMISM

Endemic species – those that live in one place only – are far more important for biodiversity than was previously thought, according to a study conducted on 15 eucalyptus species in Tasmania. The endemic species of eucalyptus are thought to possess unique characteristics, such as leaves that stay on the tree longer, compared to those of their cousins growing elsewhere. The researchers reckon that these species represent a pool of rare genes and unique ecological niches.
Près + Sain + Juste : c’est meilleur pour tout le monde !

France, Afrique, Amérique du Sud, Asie, même combat ! Partout, des paysans sous-payés n’arrivent pas à vivre d’une agriculture confrontée à la mondialisation des échanges. C’est pourquoi dans 20 pays du Sud, l’association Agronomes et Vétérinaires Sans Frontières soutient la production agroécologique de petits paysans et les aide à s’organiser pour retrouver leur autonomie alimentaire et économique.

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THE WOLF
“Wolves in Paris? Are you mad!”, comes the rejoinder from a character in the film *La Traversée de Paris* (English title: *Four Bags Full or Pig Across Paris*).
Well no, actually, he wasn’t mad! There was a time when wolves could be found in the French capital: at the zoo of the Jardin des Plantes, to be precise. And from time to time they would howl – perhaps in desparation at being held captive. In films or in zoos, we have all heard the king of the Canidae lamenting his lot. But rare are those fortunate enough to have heard the wolf in the wild. In France, however, it is possible. Though discreet, the Grey Wolf (*Canis lupus*) returned to French territory in 1992, after a decades-long absence. Globally rated in the Least Concern category of the IUCN Red List of Threatened Species™, it is considered Vulnerable in France. Though protected, wolves fall victim to battue hunts and authorised culls, not to mention poaching… May its powerful voice resonate through our forests for a long time to come; and may its call, like an incantation to the stars, continue to thrill us.

Listen and look…

You can listen to the wolf with this flashcode.
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DECEMBER

VULNERABLE

VULNERABLE
Advent snows are bitingly cold.
MY LETTER TO FATHER CHRISTMAS: A MINK, A VIOLET, AN EIDER...

All of these species are on the IUCN Red List of Threatened Species in France – the document that assesses the risk of extinction at country level (also see p.26), whereas the global Red List does likewise for the whole planet. These species are irreplaceable gifts, and I beg the kindly old man with the white beard to save them!

BY CATHERINE PERRIN - ILLUSTRATIONS VALENTINE PLESSY

Listen...
It’s the Eurasian Eagle-owl (Bubo bubo). At twilight, at the foot of a cliff in the Alps, Pyrenees or Massif Central, you might surprise Europe’s largest nocturnal bird of prey. If a warlike “ooo-hu” rings out, then it’s definitely what you’re after! Feel its worrying cry, chanted over and over, slice through you. Be discreet and patient, and maybe you will see its majestic silhouette outlined against the moon. Unforgettable!

Touch...
the ice bells on the banks of a river or torrent. These crystalline decorations appear at the end of branches that hang over the river and are splashed by the water. When it’s very cold, the water freezes, creating these pretty iced cuffs. Remove a glove to pick one of the small bells in your hand, and you’ll feel as if you have clasped the Snow Queen’s heart. It will send shivers down your spine!

Look...
at the Red Crossbill (Laxia curvirostra), which lives in conifer forests and in the gardens of mountain regions. This large passerine, which looks like a miniature parrot, catches the eye with its ruby plumage. But what’s really amazing is the way it shells spruce seeds using its curved mandibles with their crossed tips. Sheer artistry!

Taste...
squashes, and first of all savour them with your eyes, such is their multitude of varieties. There are round ones, oblong ones; some are shaped like pears, or spinning-tops, or even turbans. And as for their colours, it’s festival time! Yellows, reds, greens and the occasional blue. Their faintly sweet flesh is delicious, and, perfumed with a hint of nutmeg, makes for magical soups and gratins all winter long. Handsome and flavourful, squashes are also packed with vitamins. So give yourself a treat!

Smell...
the musky fragrance of the Red Fox (Vulpes vulpes). Winter is the season of love: the males mark their territory, alerting the ladies to their presence. How is this done? By urinating! Not the most romantic of messages, granted, but fiendishly effective. They leave their scented billets doux on trunks and shrubs; and leave visible yellow traces in the snow. The smell is so strong that even we humans perceive it. Just follow your nose...
There it is, lurking on the stony bed of fast-flowing waters in the Rhône River Basin. In its gravel-hued scales, this maestro of camouflage waits quietly for nightfall to feed on insect larvae. In deep winter and spring, it breeds... though perhaps to no avail, because the Asper may soon be extinct. Does the little fish know that? Of course not, but man knows. So he should do what it takes – in particular by razing certain dams and not polluting the water – so that the Asper continues to wriggle cheerfully!

This triangular-headed seabird is one of the waterbird species that winter in France. A few thousand individuals from Nordic climes find refuge here, from Picardy to Brittany. Does this species also nest in France? Yes – well, after a fashion! In the late 1990s, 25 couples were counted, but they disappeared after the oil slicks caused by the tanker *Erika* off the western coast. Then in 2008, three couples were observed, offering a glimmer of hope – a flickering flame that must be shielded from ill winds, so they don’t snuff it out.

Everyone knows this lively little bird, with feathers the hue of a monk’s cowl. It has long had ties with man, whom it followed into towns, finding board and lodging. At some time or other, we have all given them food, and they will readily scrap over a few crumbs of bread. Some people even manage to attract these perchers into their hand! The bird that La Fontaine nicknamed Pierrot (“Pete”) in his fable *Le Chat et les Deux Moineaux* (“The Cat and Two Sparrows”) seems so familiar that it feels eternal. But in Europe it is declining. We must remain vigilant, so that Pete can ruffle his feathers for a long time to come.

These are some of the species to be found in Mainland France.
EUROPEAN MINK
*Mustela lutreola*

With its cute face and infinitely soft fur, the European Mink is one of France’s five most threatened mammals – a rarefied status it could happily do without. Fairly widespread at the turn of the 20th century, this mustelid has since seen its range shrink drastically. The culprit? Destruction of wetlands, trapping for its pelt, and competition from its American cousin, which escaped from farms... A few remain on the Atlantic seafront, bravely hunting the Muskrat (*Ondatra zibethicus*) despite the chilly weather. Let’s save the European Mink!

---

**DWARF MOUNTAIN PINE**
*Pinus mugo*

In a few Alpine mountain ranges, you might spot this small shrub-like species with its grey-brown bark and intensely green needles. Also known as the “mugo pine”, it forms dense scrub on cliffs and scree, on the upper fringe of forests. It is very similar to the Mountain Pine (*Pinus uncinata*), a cousin with which it sometimes cross-breeds, at the risk of losing its genetic identity. Its rarity warrants our protection, which could be assured by restricting certain practices: forestry operations, ski-run development, and intensive pastoral farming.

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**In the garden**

**LA VIOLETTE DE ROUEN**
*Viola hispida*

As charming as its cousin, the Sweet Violet (*Viola odorata*), with amethyst and sometimes amber-toned petals, the Violette de Rouen is more precious because it is very rare. Endemic to France, this discreet species only grows on some limestone hillsides in the Seine Valley near Rouen, hence its name. Under pressure from vegetation succession, urbanisation, and picking too, this pretty flower came very close to extinction. Protected since 1982, it is now pampered by the Natural Spaces Conservatory in Normandy, and by a very special garden: that of the National Botanical Conservatory in Bailleul, north-east France. Seeds are kept there, and the plantlets produced in greenhouses during winter are planted out in spring to strengthen existing populations and create new ones.
PETERS’ BRIGHT SNAKE
*Liophidium mayottensis*

In the dry forest on Petite-Terre, one of Mayotte’s main islands, a chocolate-coloured snake about a metre long slithers silently along the ground. Peters’ Bright Snake has spotted a lizard. It becomes quite still, then suddenly lunges and smothers it. In a trice, the hapless prey ends up in the jaws of this beautiful scaled creature. Non-venomous, this snake is not a danger to man, yet some are hell-bent on killing it – here as elsewhere, idiotic traditions die hard! A pity for this animal, which exists nowhere else…

ANTILEAN EUPHONIA
*Euphonia musica*

In Guadeloupe, there lives a little prince with a turquoise crown and a golden seal on its forehead, like a hallmark indicating great value. The glow of its lemony belly is matched only by its shrill, sparkling song. In the rainforests, this delightful passerine flits from branch to branch, seeking the Mistletoe (*Viscum album*) berries of which it is so fond. Soon, amid the tall trees and flowers, it will be time for the nuptials of the birds which the French nickname “le roi-bois”, or “king of the woods”. May their wedlock be fruitful; and may their lineage forever grace this beautiful West Indian island.

Herbarium

**WYDLER’S DANCING LADY ORCHID**
*Oncidium altissimum*

Martinique well deserves its nickname, “the island of flowers”. Among its plant-world wonders are a number of orchids, including Wydler’s Dancing Lady Orchid, named by a Swiss botanist after its eye-catchingly suggestive shape. An epiphytic species, it grows on other plants. Its long inflorescence, which can reach two metres in length, is covered by hundreds of flowers in spring. So it isn’t yet the season to admire these dazzling little gems on the orchid’s host trees, but the wait is part of the pleasure... However, this orchid is paying a high price for its beauty, alas! Too many people have plucked it to plant it in their garden or to sell it. It is one of the 162 plant species threatened by extinction in Martinique. Monitoring required!!
Three millions years ago, the Indian Ocean’s turquoise waters began to bubble in awesome turmoil. Some way off the coast of Madagascar, the Earth was giving birth to a volcanic island, spitting the fire of nascent life. An island that was later named Reunion. Plants gradually covered it. Then animals settled there, having journeyed from other climes on makeshift rafts. Evolution did its work, yielding species which, in isolation, acquired specific characteristics that distinguished them from their ancestors and distant cousins. These are called “endemic” species. There was, for example, the Reunion Ibis (Threskiornis solitarius), an ibis that had lost the ability to fly; and the easy-going Reunion Giant Tortoise (Cylindraspis indica). Both lived a quiet life on their island, fearing no predator… until the 16th century. Man, that compulsive coloniser, disembarked on their garden of Eden. The Portuguese, and then the French, who named it “Ile Bourbon” after the king’s family name. Soon, this paradise became hell for numerous native species. The Reunion Ibis died out in the early 18th century; and of the two million giant tortoises that populated the island before humans came ashore, only one remained by 1840. Unfortunately for them, they had been marked down as “good to eat” by the invaders, who didn’t hold back. These are two examples of extinct species, lost because they only lived on Reunion. During the following centuries, the situation did not improve on the island, which is covered with tropical forest and home to a unique wealth of biodiversity. The IUCN Red List of Threatened Species™ published in 2010 revealed that 165 animal species on the island face extinction, such as the Reunion Cuckoo Shrike (Coracina newtoni), a small forest bird that has suffered from the introduction of rats and cats. Facing the same predicament are 275 plant species, 82 of them endemic to the island. The causes are well known – urbanisation, introduction of invasive species, degradation of natural habitats, etc. - so action is possible. Protecting part of the island, with the national park and nature reserves, should help limit the damage, as should conservation plans for certain species, such as a beautiful small tree, Dombeya populnea. Whoever forgets history is condemned to relive it – so let us not forget what became of the Reunion Ibis and the Reunion Giant Tortoise!
With my black eye band, I have to say that I look just like a masked bandit! And that, some would probably say, is quite suitable. It’s true that I’m what’s called a “predator”. In our family, that’s just the way it is. Although we’re only passerines, we behave like little birds of prey – me especially. After all, I do measure almost 25 centimetres in length. My feet could be a blackbird’s, but my beak gives the game away about my eating habits. Hooked and fairly strong, it’s a precious tool for finishing off my prey. Which is just as well, because a House Sparrow (Passer domesticus) or a Water Vole (Arvicola terrestris) are quite a decent size! When lying in wait, I can hover as well as a Common Kestrel (Falco tinnuculus). But my usual hunting technique means I dot the i’s, if you like. Most often, you’ll see me perched in clear view, on the end of a small branch rising from the top of a large hedge or an isolated tree. A convenient vantage-point for spotting a large insect, a small rodent, or a fledgling bird. Then, all I have to do is whoosh down onto my target, revealing the beautiful mixed markings on my wings. After that, I just need to dismember my prey. I might do so right away, or secure it in a bush larder, the better to focus on it, especially if it’s a bulky specimen. Impaled on a thorn or lodged in a fork of branches, it’s easier to tear limb from limb – and, lastly, another advantage is that once I’m full up, I can leave it hanging there, away from all sorts of robbers. This winter, I’ll mainly devote myself to finding food in my territory of meadows, hedges and copses. In March, and maybe as early as February, I’ll need to seduce a partner. It won’t be easy, because they are fewer and further between. Fewer thick hedges means less prey and more chemical pesticides – and that’s not good for us! To achieve my aim, I won’t hesitate to adopt flattering stances and exercise my voice. I often let out whistles – some strident, some melodious – and they certainly attract attention, I can tell you. Once we’ve paired up, it’ll be time for work! I help with the lengthy job of building the nest, though I’m not the main contributor. Imagine a large platform of twigs. It’s not very neat, but it’s welcoming, with its lining of feathers and hair. Our home is located quite high up in a tree, and is often well hidden in a ball of mistletoe. In April or early May, my partner will lay five to seven eggs, which she must sit on for two weeks. After being raised for three weeks, the brood will be ready for their maiden flight. Then, during the summer, the kids will fly the nest and leave us in peace at last.
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First published in 1964, the International Union for Conservation of Nature’s (IUCN) Red List of Threatened Species has established itself as the barometer of life, delivering the undeniable truth about the conservation status of thousands of species. At the same time, it provides reasons to sustain our hope in man, who is capable of acting for the common good.
A weather map to locate areas of rough conditions at a glance. An encyclopaedia that brings together the best available knowledge. A website that lists the options for repairing the repairable. A wealth of data that relies on the commitment of volunteer contributors. A high-calibre think tank that gathers the finest experts in their field... Clearly, the Red List is much more than a list. Now 50 years old, but stemming from at least a century of field research, of theoretical progress in conservation biology, and of international cooperation, this incredible sum of knowledge about wild species, although little known to the general public, has become essential to everyone fighting to protect biodiversity.

One of the 9,000 experts from across the world who contribute to this vast resource is Blair Hedges, an amphibian specialist. In his laboratory at Temple University in Philadelphia, Pennsylvania, he is an affable, self-composed scientist. But once out in the field, he turns into a formidable frog catcher, as deftly skilful as the local village kids.

FROM AMPHIBIANS TO PLANTS

For more than 30 years, Blair Hedges has been making expeditions to the most inaccessible hills of Haiti. On foot or by helicopter, he and his small team of naturalists travel to corners of forest spared by the deforestation that is blighting this steep and rugged island, in order to seek rare and often endemic specimens. His purpose is to map their habitats in order to protect them; set up conservation programmes; and, above all, establish the degree of threat these species face. “Of all Haiti’s endemic amphibians, a frog from the Tiburon torrents, the Foothill Robber Frog (Eleutherodactylus semipalmatus), was among those causing me most concern,” he says. “In nearly 30 years of field research, I had never spotted it. Then finally, in July 2011, I found it in a small torrent, on the edge of a forest that’s still very well preserved, on Grand-Bois hill. With the team, we were clambering upriver, over pebbles, when I brushed a frog with my hand. I can still hear myself shouting “Frog in water!” in the hope that someone would catch it, which fortunately they did. When I examined the highly characteristic webbing of its feet, I felt truly relieved. After 30 years of fruitless searching, I honestly thought the species was extinct.”

In 2004, seven years before Blair Hedges found this specimen, IUCN published its first Global Amphibian Assessment. “As Coordinator of the Caribbean Reptile and Amphibian Specialist Group, I was tasked with writing a first version of the IUCN status of the region’s amphibian species,” he explains. “This work provided the basis for a workshop held in the Dominican Republic, which brought together 25 experts. It took us a week’s intensive work to arrive at a definitive assessment of the region’s amphibians. We then sent it to the IUCN’s Amphibian Specialist Group, who sent it to the Red List Unit, whose job it is to check that the criteria are properly applied.” This laborious protocol guarantees the quality of the information on the Red List.

In this first complete assessment of the planet’s frogs, newts and salamanders, the Foothill Robber Frog was rated as Critically Endangered. “Even though I hadn’t found it at the time, I hadn’t searched sufficiently to conclude it was Extinct,” explains Hedges. But in view of the collections kept in museums, which testified to the species’ fairly extensive past presence in Haiti, the researcher was able to assume that the frog’s habitat was deteriorating fast, and that its natural range had shrunk to next to nothing in just a few years... In short, the little amphibian met all the criteria for belonging to the Red List’s highest category of risk of extinction in the wild. “The fact that we found a specimen later on didn’t alter this status,” he points out.

Thanks to IUCN, the Foothill Robber Frog was found to have a point in common with the Fregate Island Giant Tenebrionid Beetle (Polposipus herculeanus), in the Seychelles; the Giant Kangaroo Rat (Dipodomys ingens), endemic to California; the African Wild Ass (Equus africanus); the Indian Vulture (Gyps indicus)… What they have in common is not a talent for
Only in the early 20th century, with the first visible damage to the environment, did people start talking about the risk of extinction amid the beginnings of the nature-conservation movement. One of the few books published on the subject at that time, *Our Vanishing Wild Life*, is a stirring plea to protect America’s flora and fauna. In this 400-page tome from 1913, author William T. Hornaday condemns the ongoing destruction of North American wildlife, and calls for urgent legislation to protect it. “Except within our conservation areas, an earthly paradise is being turned into an earthly hades,” wrote Henry Fairfield Osborn, president of the New York Zoological Society, in his dreadfully premonitory foreword. “And it is not savages nor primitive men who are doing this, but men and women who boast of their civilization. Air and water are polluted, rivers and streams serve as sewers and dumping grounds, forests are swept away and fishes are driven from the streams. Many birds are becoming extinct, and certain mammals are on the verge of extermination.”

*Our Vanishing Wild Life*, from which the above illustrations are taken, was published in the early 20th century in America. The book forcefully condemned the devastation caused to fauna by human activities, especially hunting, and called for legislation.
The Red List covers 4% of the planet’s known biodiversity.

and excessive hunting. For until the early 19th century, there were contests that rewarded the first hunter to kill more than 20,000 doves... However, between the two world wars, there was a fine line between naturalists and hunters. Westerners who went off on expeditions to study animals in Africa and Asia often carried a rifle on their shoulder. One of them was Hal Coolidge, a relative of America’s 30th president and a primatology pioneer. He soon laid down his arms and then in 1948 helped to found the International Union for Protection of Nature (which a little later became the International Union for Conservation of Nature). He went on to set up the World Wildlife Fund (WWF), originally created to raise money for IUCN. “IUCN is the only organisation of mixed composition, comprising non-governmental organisations (NGOs) and countries,” explains Hilton-Taylor. “This gives it official permanent observer status at the UN General Assembly. Its role is to give governments an independent opinion, and to act as a mediator between them and NGOs. Unlike NGOs, we will never tell a government, ‘Here’s what you must do to protect this species’; instead, we will say, ‘Here’s what must be done, and here are your options’.” When you claim the ability to advise governments, you need irrefutable information.

A year after the IUCN was founded, a dedicated service was set up with the purpose, said its president Hal Coolidge, of “gathering, assessing and disseminating information and studies relating to all species of fauna and flora under threat of extinction, in order to assist governments and the agencies concerned with ensuring their survival”. This service became the Species Survival Commission (SSC), which today comprises more than 9,000 volunteer experts, split into 130 specialist groups, who contribute their expertise to the Red List. “In 1949, a first red data book on threatened species was published,” says Craig Hilton-Taylor. “It contained 14 mammal species and 13 bird species – mainly large animals and game.” A few years later, IUCN realised that the book’s information had quickly become obsolete. “By way of modernisation, the book became a card index system, which made it easy to update data and gradually add new entries,” says Hilton-Taylor. The number of cards expanded...
slowly: in 1958, 10 years after IUCN was created, only 26 mammals were listed. Meanwhile, IUCN delegated the job of updating the bird data to the International Council for Bird Preservation (ICBP)*.

FROM INDEX TO DATABASE
“Starting the card index was an important step. It might have been viewed as the starting-point of the Red List story,” says Craig Hilton-Taylor. “But the main event identified was the publication, in 1964, of a list of rare birds and a preliminary list of rare mammals.” These two documents, 10,000 copies of which were distributed to the organisation’s members, were the most complete list of threatened species produced thus far by IUCN, and also the most widely distributed. Two years later, in 1966, the “Red Data Book of Threatened Species” was published for the first time. It comprised two volumes in binders: one for mammals, one for birds.

Back then, Russell A. Mittermeier – a long-time president of NGO Conservation International with azure eyes, silver mane and Hollywood good looks – was still at high school. The memory moves him, even now. “I don’t know how I got to hear about these books, or how I ordered my first copy of the Red Book of Mammals. But as soon as I received it, I remember falling into a state of fascination: I spent whole days reading it, right to the last page. These first red data books were as austere as administrative documents, but they collated the best data then available. They soon became an encyclopaedia and a bible for everyone with a passion for saving species.” A few years later, Mittermeier began working as a field primatologist, embarking on the path that would see him become a leading nature-protection figure. At that time, he began contributing to the Red List himself. “I can picture myself back in October 1973, in Tijuca National Park in Rio. With my friend Ademar Faria Coimbra-Filho, a pioneer of primatology in Brazil, we were just returning from an expedition to the Brazilian Amazon to study uakaris and sakis. We were sitting on the ground filling in new data sheets for these species, and while doing so, we realised that the information in the first red data books was actually second, or even third hand! In fact, it came from 19th-century European explorers who had obtained it from the local people, or from observing captive specimens they’d seen in towns. So I was very proud of supplying this new information. Having said that, the revelations Coimbra and I provided were of very minor importance.” Card after card, binder after binder, the red book of threatened species gradually grew thicker. Craig Hilton-Taylor picks up the story again. “Updates and new cards were produced until 1981, but no complete data set, with all the updates, has been found,” he says regretfully. “When updated cards were sent in, the user’s manual recommended tearing out the previous versions.” In the 1980s, the information on the cards was computerised. “Today, the IUCN Red List’s huge database is stored in Cambridge, England,” says the Red List Unit Manager.

UNIVERSAL, IRREFUTABLE CRITERIA
There was a hitch, though. In fact, two hitches. First, the cost of printed publication prevented wide distribution of the information, which affected the efficiency of the endeavour. “This problem was solved by deciding to only publish summaries, updated every two years, which contain the species’ name and Red List category, and the countries where its natural range is located,” explains Hilton-Taylor. The second problem – the system of categories was deemed too hazy and heterogeneous. “Between 1949 and 1968, the experts who produced the Red Data books used their own vocabulary to describe species’ status,” he says. Subsequently, attempts at standardisation were made, but as there was no precise criterion for judging whether a species was Vulnerable or Endangered, the species’ conservation status could depend on whether the observer was an optimist! And this made checks and comparisons impossible... Defining universal criteria to estimate a species’ risk of extinction was a complex matter, and it took a long time to resolve the issue. In 1991, two specialists in conservation biology, British Georgina Mace and American Russell Lande, proposed a new assessment system; and based on their work an “IUCN Red List of Threatened Species” was presented in Montreal in 1996. “For the first time, the conservation status of all the world’s birds and mammals was listed in one volume, using one method,” says Craig Hilton-Taylor. “And it also included the status of some commercial marine species,” which caused...
THE IBERIAN LYNX, listed as Critically Endangered, made the cover of the Red List.
trouble. “The fishermen weren’t happy seeing IUCN assessing their target species. They pressured governments to get the Red List criteria revised, to take better account of the specificities of ocean ecosystems and fishing practices.” This led to a new system being published in 2001. In use since then, it comprises nine categories, each corresponding to data that are quantitative and therefore measurable, verifiable and comparable, on population size, a species’ geographical range, and its probability of extinction. This assessment method will be used for a long time to come. “If you keep changing the status allocation criteria,” explains Craig Hilton-Taylor, “you can’t track the actual progress or regression of species over time.”

THE ENDLESS EFFORTS OF THE RED LIST VOLUNTEERS

Mace and Lande’s remarkable work gave the Red List’s criteria the value of an international standard. Pete Lowry, a botanist at the Missouri Botanical Garden in the United States, and a research associate at France’s National Museum of Natural History (MNHN), comments: “Botanists are increasingly applying the criteria systematically, every time they discover or name a new species. And when they publish a description of it, they also publish its conservation status. We volunteer to do this because we think it’s a worthwhile process.” And with good reason: “I’ve seen mining companies send colleagues out in the field to ascertain the conservation status of all the plants potentially under threat on the site they’re looking to mine, then send them back again, and again, until the area’s flora are sufficiently well known for them to be sure that no species within the potential mine perimeter is Critically Endangered according to the Red List,” says Lowry. Scientists, researchers, industrial companies, governments… “Everyone has an interest in getting reliable information on species’ risk of extinction,” concludes the botanist. “In fact, that’s why New Caledonia is currently setting up an IUCN Red List authority for its rich local flora, which has a high level of endemism.”

Assessing a whole group – as has already been done for mammals, birds, amphibians, cycads (palm-like plants), conifers, warm water reef-building corals, cartilaginous fish (sharks and rays), etc. – provides another perspective on biodiversity. “Before the conservation status of amphibians was published in 2004, many specialists were reporting a meteoric decline in their populations. But without the big picture, it was impossible to gauge the rate of decline and its geographical extent,” explains Simon Stuart, who chairs the IUCN Species Survival Commission. “Through group assessment, we have realised that some populations of amphibians, especially in America, were falling too quickly for the cause to be trafficking or habitat destruction – which are also very real threats.” The suspected cause of this rapid decline is a series of diseases due to viruses, bacteria and fungi, some of which may be spread by human activities. On the basis of this assessment, a coalition of NGOs, the Amphibian Survival Alliance (ASA), formed around the IUCN Amphibian Specialist Group. “They’re developing a new strategy to protect these species, primarily through seeking remedies to these diseases,” explains Stuart. Such advances could never have been achieved without the Red List. But the Red List is endless: “The usual plan is for each group to be re-assessed every 10 years,” admits Jennifer Luedke, Deputy Coordinator of the SSC’s Amphibian Red List Authority. “The amphibian re-assessment should have been published in 2014, but we’re going to be at least a year late. Primarily because we need to include the 916 newly-described species, which were discovered thanks to the mobilisation that followed publication of the first edition!”

POOLING EFFORTS AND COLLECTING DONATIONS

With 76,199 species having been assessed at least once using the new criteria, the IUCN Red List now covers 4% of the planet’s known biodiversity. “We aim to reach 160,000 species by 2020,” says Craig Hilton-Taylor. But it will not be possible to completely assess some groups, such as plants, within a reasonable timescale. “With the Plants for People programme,” he adds, “we’ve decided to prioritise assessment, by 2016, of 6,000 plant species that are important for human populations – whether they’re medicinal plants, trees used for their wood, palm
trees, or wild relatives of cultivated plants. This will enable us to identify the priority regions for protecting wild plants that are useful to man.”

Once listings have been made, coming to the aid of biodiversity requires not just goodwill, but resources too. And these are often scattered. This is why, in 2010, IUCN set up the Save Our Species (SOS) initiative with the Global Environment Facility and the World Bank. The idea: pool resources to enable joint actions and attract new sources of funding. “Our mission is to collect money from public authorities, private-sector companies and civil society to give concrete support to field projects,” explains Jean-Christophe Vié, Director of SOS. “Thanks to the Species Survival Commission’s expertise, we select the most effective projects for the species that objectively need most help.” In its four-year existence, SOS has given $9 million in support to nearly 90 projects that directly target threatened species. Some of these species are charismatic, like the Snow Leopard; others, less so, such as the Golden Mantella Frog (Mantella aurantiaca) of Madagascar, the Sulawesi Babirusa (Babyrousa celebensis), and the Asian freshwater turtles. But all of them need help.

According to the Red List, 4,635 species are Critically Endangered. But the good news is that conservationists now know how to set up effective programmes to protect biodiversity. One example is the Arabian Oryx (Oryx leucoryx). This magnificent antelope, the last wild specimens of which was killed in 1972, is back in the desert following a successful captive breeding programme. Its Red List status has thus changed from Extinct in the Wild to Vulnerable. Just one piece of proof that, day after day, it is entirely up to us whether this list edges closer to a picture of disaster or that of a wonderful rescue.

* The ICBP has since become Birdlife International, one of the world’s leading federations of wildlife protection bodies; one of its members is the Bird Protection League (LPO) in France.

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**Websites**

- To coincide with the Red List’s 50th anniversary, IUCN has created a website devoted to the event. You can sign a petition and make a donation so that more species can be assessed. 50.iucnredlist.org
- Blair Hedges, amphibian specialist, has created the Caribnature/Haiti website, a wealth of information about Caribbean ecosystems, their species, and threats to them, especially in Haiti. www.caribnature.org
- In 2004, the first publication of the IUCN Red List’s chapters on amphibians revealed this group’s alarming decline: one third are threatened with extinction. As a result, the IUCN Amphibian Specialist Group set up the Amphibian Survival Alliance (ASA). Together, they have launched a dedicated website (in English). www.amphibians.org
- To find out all about the Save Our Species - SOS initiative and the projects it funds: www.sospecies.org
Did you know that 9% of the mammals and 21% of the amphibians in France could die out in the near future? And how do we know that? Thanks to the Red List of Threatened Species in France.

The global Red List measures the risk of a species becoming extinct worldwide, while a national list assesses this risk in a country. And the risk is not necessarily the same in both cases. The Brown Bear (Ursus arctos) is rated as Critically Endangered in France because there are only 20 or so individuals remaining in the Pyrenees; but the estimated global population is 200,000, hence its listing in the Least Concern category on the global Red List. But for species endemic to France, the risk of extinction is the same nationally and globally. For example, the Reunion Cuckoo-shrike (Coracina newtoni), a small bird from this French island in the Indian Ocean, is Critically Endangered on the Red List both nationally and globally: if it died out in France, it would quite simply be extinct.

A LONG, VAST AND LABORIOUS ENDEAVOUR

In our country, the first Red List – on reptiles and amphibians – was published in 2008. Does this mean nothing had been done previously? Of course not, but the two reference works, published in 1995, were incomplete, based on cross-sections of species and not compiled using the methodology of the global Red List. “The findings relied on experts’ statements, which are important, but the current consensus is for any assessment to be backed up by an objective methodology, with the results then approved by experts,” explains Florian Kirchner, Species Programme Officer with IUCN-France. Besides, this French inventory was no longer current and needed updating. Following discussions with wildlife associations and the Ministry of Ecology, IUCN-France thus decided to produce an exhaustive national Red List, in conjunction with the National Museum of Natural History (MNHN), based on the model of its global counterpart. This is a vast undertaking, because the objective is to assess all the species in every animal and plant group. Numerous experts are involved in this long and laborious endeavour. Out of the 50 or so countries to have already published one or more Red Lists, France, together with Switzerland, is most advanced, having assessed the largest proportion of species. Nevertheless, much still needs to be done. Assessing the 5,000 plants and 40,000 arthropods in mainland France will not be easy and will take time – not to mention the marine species. Such is the effort demanded of a country with particularly rich biodiversity, especially overseas, where there are hundreds of species under global threat. France therefore bears a heavy responsibility.

AN ESSENTIAL TOOL FOR ACTION

What exactly is France doing? A national Red List is essential to help NGOs shape their strategy; and governments, their public policies on nature protection. But it is not in itself a list of priority species. “Once lists have been published, half the work’s been done,” says Florian Kirchner. “Priorities must then be identified so we can define the actions to be carried out. To do this, other criteria must be taken into account: a nationally threatened species is all the more urgent a priority if it is also threatened worldwide and if the country hosts a large percentage of its population – and even all its population in the case of endemic species.” This is the case, for instance, of the Aran Rock Lizard (Iberolacerta aranica), a reptile endemic to the Pyrenees that only exists in France and Spain. After being rated Endangered nationally and globally, it was subject to a national action plan in conjunction with Spain. France has drawn up other action plans for threatened species, such as bats and the Atlantic Sturgeon (Acipenser sturio). A Red List also assesses the factors giving rise to concern that animals and plants will become extinct. “In France, 25% of nesting bird species are threatened,” says Florian Kirchner. “And they are proportionally more threatened here than they are worldwide. The main reason for this is our method of intensive farming, which consumes high levels of pesticides and produces standardized landscapes.” And bringing about a shift in French agricultural policy is no small matter.

For more details on France’s national Red List (in French): www.uicn.fr/liste-rouge-france.html
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THE RED LIST: A PRIMER

To determine the risk of a species dying out, experts apply scientific criteria. This is how we know that nearly one third of the species assessed worldwide are threatened. Some of them are the focus of conservation programmes.

BY CATHERINE PERRIN
INFOGRAPHICS PHILIPPE MOUCHE

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<thead>
<tr>
<th>THREATENED SPECIES</th>
<th>EXTINCT (EX)</th>
<th>EXTINCT IN THE WILD (EW)</th>
<th>CRITICALLY ENDANGERED (CR)</th>
<th>ENDANGERED (EN)</th>
<th>VULNERABLE (VU)</th>
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<td>Exhaustive studies, adapted to a species’ biology, make it possible to state that the last individual has died.</td>
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<td>Dodo <em>Raphus cucullatus</em></td>
<td>Scimitar-horned Oryx <em>Oryx dammah</em></td>
<td>Sumatran Orangutan <em>Pongo abelii</em></td>
<td>Grandidier’s Baobab <em>Adansonia grandieri</em></td>
<td>Galapagos Giant Turtle <em>Chelonoidis nigra</em></td>
<td>Philippine Tarsier <em>Tarsius syrichta</em></td>
<td>European Bee-eater <em>Merops apiaster</em></td>
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<td>Not enough data to assess the risk of extinction.</td>
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<td>A species that has not yet been examined with the assessment criteria.</td>
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<th>Assessment criteria</th>
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<td>Small population size and continuing decline</td>
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<td>Very small or restricted population</td>
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<td>Quantitative analysis</td>
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INFOGRAPHICS PHILIPPE MOUCHE

USER’S GUIDE
According to the global Red List published in 2014, some 22,413 species are under threat. However, this assessment only covers 76,199 species, whereas nearly 1.9 million have been identified across the globe! So: much work remains to be done, especially on invertebrates, plants, and fungi. It is hoped that, by 2020, the conservation status of 160,000 species will have been assessed.

One quarter of the world’s mammals face extinction in the coming years, succumbing to the destruction of their habitats and to being used by man for food or medicine. Of the top 12 countries with the greatest number of threatened mammals, half are in Asia.

This tool monitors the status of biodiversity. Produced at the request of NGOs, managers and governments, it enables them to design conservation programmes for threatened species. A programme is effective if a species is downgraded to a lower Red List category, for example from Endangered to Vulnerable.
SUMATRAN TIGER
*Panthera tigris sumatrae*

**ONLY 500 INDIVIDUALS** of this tiger sub-species are thought to remain. Its decline is due to deforestation, especially to allow planting of oil palms, and to poaching. A number of programmes, one of them IUCN led, aim to increase the number of tigers and reduce conflict with local populations, by involving them in this big cat’s protection.

**CR CRITICALLY ENDANGERED**
HOW ARE YOU DOING?

The Humpback Whale, the Lady’s Slipper Orchid, and the White-tailed Eagle are managing fairly well. But for the Sumatran Tiger, the Gorilla, and the Siamese Crocodile, the picture is gloomier... Let’s run a health check on some Very Important Species on the IUCN Red List of Threatened Species™.

BY CATHERINE PERRIN - PHOTOS EBPHOTO/NATUREPL
PORTFOLIO

CHINESE GIANT SALAMANDER

*Andrias davidianus*

**THE WORLD’S LARGEST AMPHIBIAN**, which can measure more than a metre in length, used to be common. But in the past 30 years, it has become dramatically rarer. The culprit? Habitat degradation and overexploitation, as the animal is a delicacy in China.

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DYEING POISON FROG

*Dendrobates tinctorus*

**THIS SMALL FROG** lives in the tropical forests of the Guyana Plateau in Brazil. Unlike many amphibians, it is not under threat, though illegally traded. Its large populations remain stable. It is common in French Guyana, where it is protected.

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GOLDEN POISON FROG

*Phyllobates terribilis*

**THE POISON OF THIS MOST TOXIC OF FROGS**, endemic to Colombia, is being studied to create new drugs. Its range, covering less than 5,000 square kilometres, is constantly shrinking due to deforestation, so protecting its habitat is a priority. This poison frog is also trafficked.

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GOLDEN MANTELLA

*Mantella aurantiaca*

**THIS HIGHLY LOCALISED SPECIES** occupies less than 10 square kilometres of habitat in eastern Madagascar. The forests where it lives are being destroyed by logging and fires; and the ponds where it spawns, by illegal artisanal gold-mining. Breeding programmes exist, but for this species to survive, protecting its habitat must become a priority.
AMPHIBIANS AND REPTILES

LEATHERBACK TURTLE
Dermochelys coriacea

WATER POLLUTION, ESPECIALLY BY PLASTICS, and being accidentally caught in fishing nets are the main causes for this large sea turtle's decline. It is also being affected by urbanisation along the coasts where it lays its eggs, as well as egg-poaching. The Atlantic population is doing better, but the one in the Pacific is on the verge of extinction.

SIAMESE CROCODILE
Crocodylus siamensis

IN THE EARLY 1990s, this reptile was thought to be extinct in the wild, due to excessive hunting to obtain its skin. But then it was rediscovered in Cambodia in 2000. Its highly fragmented relic populations are affected by egg collection and hydroelectric dams. To save the animal, release programmes are in progress.

LANCE-NOSED CHAMELON
Calumma gallus

ENDANGERED

THIS PINOCCHIO OF CHAMELEONS lives in the forests of eastern Madagascar, which have been heavily impaired by forest use and fires. Specialists estimate that its population has fragmented severely and is falling.

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HUMP SNOUT LIZARD
Lyriocephalus scutatus

ENDEMIC TO SRI LANKA, this reptile has already lost a large proportion of its habitat: rainforest which has been cleared and turned into plantations. Individuals are captured to supply the pet trade. Nevertheless, this lizard is not considered to be rare in its range.

USAMBARA EYELASH VIPER
Atheris ceratophora

VULNERABLE

THIS VENOMOUS SNAKE is found in the forests on certain mountains in Tanzania. Its restricted range and fragmented population, and the continual deterioration of its habitat, which is subject to deforestation, contribute to its rating.
INK CAP
 *Coprinus atramentaria*

**WIDESPREAD IN THE NORTHERN HEMISPHERE,** this mushroom is found in low-density woodland, on the edge of forests and in gardens, from spring to autumn. Is it doing well, or struggling? We don’t know: like most fungi, it has not yet been assessed, despite giving cause for concern that the species could be in trouble.

DOUBLE COCONUT PALM
 *Lodoicea maldivica*

**THE WORLD’S LARGEST SEED,** nicknamed the “bum seed”, is produced by a palm tree in the Seychelles. Current levels of use, including (partly illegal) harvesting of the nuts, are considered unsustainable. Recurrent fires are having a dramatic impact too, especially as this tree has a limited range and grows slowly.

LADY’S SLIPPER ORCHID
 *Cypripedium calceolus*

**IN TEMPERATE REGIONS,** nearly 80% of orchids with slipper-shaped lips are threatened by excessive picking and by habitat destruction. But the Lady’s Slipper Orchid, which is found in France among many other countries, is better off than others, which face far more serious threats.
GIANT SEQUOIA
Sequoiadendron giganteum

ONCE OVEREXPLOITED, this North American tree is found, in its natural state, almost exclusively in protected areas. Alas, it is not safe from fires caused by past forestry management, which favoured flammable conifer species that compete with the sequoia.

FANGED PITCHER PLANT
Nepenthes bicalcarata

THIS SPECTACULAR CARNIVOROUS PLANT is endemic to Borneo. The tallest species in its genus, it grows up to 20 metres in height. Like the other tropical nepenthes (or pitcher plants) it is threatened by habitat destruction and excessive picking.

ATLAS CEDAR
Cedrus atlantica

FOUND IN THE MOUNTAINS OF NORTH AFRICA, this tree used to suffer from overexploitation and overgrazing, but the current causes of its decline in some areas are the repeated droughts of recent years, linked to climate change. Attacks by pests, such as the pine processionary caterpillar, and by diseases are aggravating the situation.
HUMPBACK WHALE
*Megaptera novaeangliae*

**FOUND IN ALL OCEANS,** this species was subject, like a number of cetaceans, to intensive hunting from the 16th to 20th centuries, which reduced its population by 90%. The introduction of a hunting moratorium in 1966 saved this giant of the seas from extinction.

LEAST CONCERN
MADAME BERTHE’S MOUSE LEMUR
*Microcebus berthae*

**THE WORLD’S SMALLEST PRIMATE**, less than 10 centimetres in length, has a very small range in western Madagascar. This fragmented area is continuing to deteriorate because of illegal logging and slash-and-burn agriculture. And populations of this lemur are shrinking.

RING-TAILED LEMUR
*Lemur catta*

**WIDELY RESIDENT IN ZOOS**, this pretty lemur is found less frequently in nature. Its population density is very low, and most groups occupy increasingly isolated fragments of forests. But hope is being sustained by conservation programmes involving local communities.

AYE-AYE
*Daubentonia madagascariensis*

**LOOKING DECEPTIVELY LIKE A GREMLIN**, this animal could die out, like 94% of lemurs. They are one of the most threatened groups of vertebrates on the planet as their natural habitat, the tropical forest of Madagascar, has largely been destroyed. The Aye-aye is killed for its meat, and also because plenty of Malagasy people still think it brings bad luck.

INDRI
*Indri indri*

**THE LARGEST SPECIES OF LEMUR**, which lives in northeast Madagascar, is also a victim of deforestation, even in protected areas. Illegal hunting has increased considerably during the political crisis that has rocked the country, becoming a major threat for this species and others.
OUT OF THE 101 LEMUR SPECIES, 22 are Critically Endangered, including this rare species that lives in the rainforests of eastern Madagascar, and mainly in three national parks. A victim of deforestation, the Diademed Sifaka is also hunted for its meat and fur, even in protected areas.
SOMALI OSTRICH

*Struthio molybdophanes*

Distinct from the common ostrich, this recently identified species lives in northeast Africa. It is hunted for its meat, hide and feathers; its eggs are collected; and its habitat is being degraded. As yet, little information is available on the size of its populations – data which are needed to improve protective measures.

VULNERABLE

LEAR’S MACAW

*Anodorhynchus leari*

In 1983, only 60 individuals of this gorgeous Brazilian parrot remained. A target of traffickers, it was also persecuted by farmers who accused it of damaging corn crops. Thanks to a conservation drive, its population has been multiplied 20-fold, and its rating downgraded from Critically Endangered to Endangered.

EN ENDANGERED

SAPPHIRE-VENTED PUFFLEGG

*Eriocnemis luciani*

This pretty hummingbird lives in the high-altitude tropical rainforests of Colombia and Ecuador, where it feeds on flower nectar. Although the exact size of the overall population is not known, the species seems fairly common, and as such is not considered Vulnerable.

LEAST CONCERN

PASSERGER PIGEON

*Ectopistes migratorius*

A SYMBOL OF MAN-MADE EXTINCTION. At the beginning of the 19th century, there were billions of this North American bird, by some estimates. But 100 years ago, the last individual, a female named Martha, died alone in her cage at Cincinnati Zoo.

EXTINCT

PORTFOLIO
BLACK-BROWED ALBATROSS
*Thalassarche melanophrys*

Like many sea birds, this albatross is a victim of collateral damage caused by industrial fishing, which not only makes its prey rarer but also kills considerable numbers of the birds themselves, caught accidentally by trawl nets and longlines. In South African waters, more than 5,000 individuals are killed each year.

MACARONI PENGUIN
*Eudyptes chrysolophus*

Totalling 6.3 million pairs, the population of this penguin may seem very large, but it's decreasing. Like many Antarctic Ocean animals, it is affected by industrial fishing and by rising water temperatures due to climate change. Most of its breeding sites are protected.

YELLOW-BREASTED BUNTING
*Emberiza aureola*

Though abundant locally, this perching bird of northern Europe and Asia has been upgraded from Vulnerable to Endangered, as it is declining very quickly. Considered a delicacy in China, it is subject to lucrative smuggling: in one market, up to 10,000 birds are sold per day…

RED-COCKADED WOODPECKER
*Leuconotopicus borealis*

This north American bird has been downgraded: good news. However, it remains highly sensitive to loss of its habitat: old conifer forests. Conifer overexploitation for timber and to create farmland, which began in the early 19th century, had caused this woodpecker's decline.

WHITE-TAILED SEA EAGLE
*Haliaeetus albicilla*

This large bird of prey, which lives in coastal areas, is enjoying a slight rise in numbers due chiefly to protection measures in Europe. However, loss of wetlands, chemical pollution, collisions with wind turbines and poisoning remain real threats. It still does not nest in France.
AFRICAN ELEPHANT
*Loxodonta africana*

HUNTED INTENSIVELY, the world’s largest land mammal saw its numbers collapse during the 20th century. Protection schemes are helping it recover in places, but it is continuing to decline where poaching is intensive. It also faces another problem: habitat loss due to man’s expanding presence.

WESTERN LOWLAND GORILLA
*Gorilla gorilla gorilla*

LIKE ALL ANTHROPOID APES, this one is at risk of extinction due to expanding exploitation of African forests, coupled with an increase in poaching, even in protected areas. Then there is the Ebola virus, which is also having a devastating effect on our cousin. In the space of three generations, its population could fall by 80%.
ATLANTIC BLUEFIN TUNA  
*Thunnus thynnus*

**SUBJECT TO INTENSIVE FISHING,** this tuna, which has high economic value, has seen its numbers collapse since the 1970s. Because of its long breeding cycle, populations are taking a long time to recover. Only a reduction in catches, which are strictly controlled, will replenish its stocks.

BANGGAI CARDINAL FISH  
*Pterapogon kauderni*

**THIS PRETTY MARINE FISH,** endemic to Indonesia’s Banggai Archipelago, is very popular among aquarium enthusiasts. It suffered heavily from wild collection (in some years, more than 900,000 fish are removed), resulting in the species’ decline, even though it breeds readily in captivity.

SCALLOPED HAMMERHEAD SHARK  
*Sphyra lewini*

**LIKE A QUARTER OF SHARK AND RAY SPECIES,** this animal, which lives in tropical and temperate seas, faces extinction by overfishing. The only part harvested is the fins, which Asians eat in soups. A massacre is going on, and numbers caught are probably underestimated.
BELUGA  
Huso huso  
LIKE 85% OF STURGEON SPECIES, this one, the largest freshwater fish in the world, is under severe threat. It is overfished and poached for its highly coveted caviar. As the beluga doesn’t breed every year, stock replenishment may take many years.

CR CRITICALLY ENDANGERED

DANUBE SALMON  
Hucho hucho  
THIS SPECIES’ DECLINE BEGAN about 100 years ago, due to severe overfishing. Today, it is impacted by hydroelectric dams and pollution. Breeding in farms enables reintroduction programmes, but there is no population data available.

EN ENDANGERED

GIANT MANTA RAY  
Manta birostris  
THE LARGEST RAY SPECIES, which can measure up to nine metres, is a harmless animal. It is mainly fished to supply the traditional Chinese medicine market. Other pressures are pollution by plastic bags, climate change, and irresponsible tourist habits. Rays and sharks are among the most threatened of all animals.

VU VULNERABLE
CONUS MUSTELINUS
*Conus mustelinus*

**THIS GASTROPOD**, which looks like an ice cream cone, is fairly abundant in the Indian and Pacific Oceans. It is sought by collectors for its pretty shell and for its venom, which is used in pharmaceutical research. Although some species are threatened, this one is not.

LEV LEAST CONCERN

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MEDITERRANEAN BLUET
*Cœnagrion caerulescens*

**RARE IN FRANCE, THIS DAMSELFLY** is found in southern Europe and North Africa. It is not under threat in the Mediterranean as a whole, but in other parts of Europe it appears more vulnerable to the draining and polluting of wetlands.

LEV LEAST CONCERN

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CERAMBYX LONGICORN
*Cerambyx cerdo*

**RESIDENT IN OLD TREES**, this large beetle is still quite common in southern France, Spain and Italy, but is declining in northern Europe. Loss of its habitat – original and semi-original forests – is its chief threat. Another problem is lack of ecological continuity.

VU VULNERABLE
PEACOCK TARANTULA
*Poecilotheria metallica*

**THIS MAGNIFICENT TREE-DWELLING SPIDER** is endemic to Andhra Pradesh, a state in southern India. Known to exist in a single locality, covering 100 square kilometres, this very rare species is much coveted by collectors. In addition, its forest habitat has been heavily degraded by lopping for firewood and cutting for timber.

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STAGHORN CORAL
*Acropora cervicornis*

**LIKE A THIRD OF REEF-BUILDING CORALS**, this Caribbean species is under threat. In the past 30 years it has declined by more than 80%, the victim of bleaching linked to global warming and of white-band disease, which both cause the coral to die.

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COMMON SPINY LOBSTER
*Palinurus elephas*

**POPULAR FOR ITS TASTY FLESH**, this Atlantic and Mediterranean shellfish has been overfished, and in decline since the 1960s. To better manage the resource, several measures have been taken, such as banning fishing during part of its breeding period.

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LARGE BLUE
*Phengaris arion*

**NINE PER CENT OF GRASSLAND BUTTERFLIES** in Europe face extinction, the main factor being intensive agriculture. This species is not yet one of the threatened ones, but could become so in the near future. Extinct in the United Kingdom in 1979, it has been successfully reintroduced.

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The Common Marigold (*Calendula officinalis*) may be doing well, but its Italian cousin the Sea Marigold (*Calendula maritima*) is one of the most threatened plants in the Mediterranean Basin. To protect this endemic species, the Klorane Institute has begun a conservation programme in partnership with organisations including IUCN.

**BY CATHERINE PERRIN**

**PLANT HERITAGE IN PERIL!**

What exactly are these snags? The first is undeniably urbanisation, which has already wiped out several of this species’ populations and continues to cast a shadow over the sunny shorelines of this part of Sicily. Port extensions, new hotels – property developers are not short of ideas, and in Italy there is no coastline protection body to keep an eye on things. “The Iceplant, a native of South Africa, was introduced to the Mediterranean coasts, where it has become invasive. It is competing with local plants and taking their place, and the Sea Marigold is one of the casualties,” adds de Montmollin. Another problem – and a considerable one – is genetic pollution. A species similar to the Sea Marigold also grows in these parts. “By transforming natural environments, man has unwittingly promoted this relative, which has invaded the habitat of *Calendula maritima*,” explains Salvatore Pasta, a botanist with the National Research Council (CNR) in Palermo. “The two species have crossbred, and now, half of the populations of *Calendula maritima* are seriously threatened by hybridisation.” Each species has its own specific genome: when two neighbouring species mix, they risk losing their genetic integrity and thus being replaced by the hybrid.

Once this had been observed, action was needed. A conservation programme was launched in 2011, bringing together Italian and French scientists; France’s National Botanical Conservatory in Brest, which has a long tradition of protecting species from around the world; and the Klorane Institute, the business foundation behind the project. For the past 20 years, this institute has been conducting actions to promote and protect the world’s plant heritage,
and especially threatened species. Why is it interested in this Italian species? For about 50 years, the Klorane brand has used the Common Marigold in its baby-care range. “We know this plant well for its anti-inflammatory and soothing properties. We felt it made sense to get involved in protecting a threatened neighbouring species,” says Florence Guillaume, the Institute’s Director. In concrete terms, what is being done? Seeds are collected out on the ground for keeping in a seed bank in Italy and France, and for supplying a conservation nursery at the Agronomic Institute in Marsala, western Sicily. Flower and leaf fragments are also being harvested. “First of all, we check that they come from pure plants, not hybrids, then we cultivate them in vitro in the laboratory to produce plantlets,” explains Salvatore Pasta. “These are then planted out, with the aim of strengthening the existing populations and creating new ones.”

**CONSTANT AWARENESS-RAISING**

But reintroducing a species, be it plant or animal, is scarcely meaningful if its habitat continues to suffer deterioration. And protecting natural environments is the hardest thing of all. “Half of the populations are on Natura 2000 sites, except that here in Italy, Natura 2000 is mainly a theoretical concept – out on the ground, it’s quite another matter!” notes Pasta. His colleague Bertrand de Montmollin adds, with a hint of irony: “During the Berlusconi era, environmental protection wasn’t always a priority, and anything that hindered construction on the coastline was quite bad form. Let’s hope that’s now changing.” Fortunately, some Sea Marigold populations are in nature reserves such as the Trapani and Paceco salt marshes, run by WWF-Italia. Another focus is raising awareness among adults and children, an activity wholeheartedly subscribed to by all those worried about the plant’s fate. This includes explaining relentlessly that nature is not a dump, that you mustn’t go trail-biking just anywhere, that installing fences stops people trampling on these pretty flowers. And of course, explaining why this marigold contains the word gold in its name! “It’s quite simple. Without plants, we can’t breathe, we can’t eat, and we can’t look after ourselves,” argues Florence Guillaume. “This Sicilian marigold is part of our biodiversity. Like other species, it plays a role in ecosystems, and we’re duty-bound to protect it.” It’s certainly an easy message to grasp. As Groucho Marx once said: “A four-year-old child could understand that! Run and fetch me a four-year-old child!”
The Saiga Antelope (*Saiga tatarica*) has come to us from the mists of time. For millennia, it has withstood climate change and the assaults of formidable predators such as the Sabre-toothed Tiger, before meeting a far more formidable opponent: man. Today, it’s under threat in the Eurasian steppe. Down, but not out...

*BY RONAN ROUSSEAU - PHOTOS KLAUS NIGGE*
AMONG SAIGA ANTELOPES, only the males have horns. This attribute has seen them relentlessly persecuted by criminal gangs, who are increasingly well organised.

FACED WITH THE FLAT and endless horizon of the steppe, gaining height is a good way of spotting antelopes… or poachers.
Klaus Nigge has set up his hide near one of the few water holes that break up the landscape’s monotonousness. Whichever way you look, the steppe stretches to the horizon. Nigge is all alone. The day before, Kazakh rangers had dropped him in this no man’s land of dry grasses. They noted his GPS location and then just headed off, promising to come back and fetch him. Nigge watched the old Russian SUV as it bumped along, shrinking amid the steppe, then vanished over the horizon. At his feet: photographic gear and a small portable hide. Hardly very reassuring. A dot in the disquieting vastness of the steppe, he now felt a bit like a shipwreck survivor. All he had to cling to was the rangers’ promised return. And the photographer’s slender hope: that he would spot and immortalise a most singular and elusive animal.

The Saiga Antelope is nowadays glimpsed only fleetingly. Slim are the chances of detailing its slender body, which contrasts strongly with its fleshy proboscis. Some might poke fun at this facial feature, compared to the sleek and delicate looks of more photogenic antelopes. But when it comes to the elegance of its gait and its pace over the ground, this ungulate can easily hold a candle to its African cousins. At peak speed, it can reach 80 kilometres an hour!

A Eurasian antelope, and the sole species of its genus, the Saiga Antelope is a relic of the Ice Age. It already existed during the final glacial periods, and back then captured our ancestors’ imagination; its distinctive outline can be found in many caves, carved in the rock. At the end of the last glaciation it survived, whereas the Woolly Mammoth (Mammuthus primigenius), the Woolly Rhinoceros (Coelodonta antiquitatis) and the Sabre-toothed Tiger (Smilodon populator) – though far more intimidating – died out, more than 10,000 years ago. The Saiga Antelope’s survival is probably due to its adaptability, but also, perhaps, to its extremely timid character.

In days gone by, the thunderous clatter of a million Saiga Antelopes or more echoed between Russia, Kazakhstan and Mongolia

A SHY ANIMAL

With Coveted Horns

“Never in my life have I experienced a more timid animal than the Saiga Antelope,” says German photographer Nigge. And with good reason! “As soon as you spot these antelopes on the horizon, they take flight. They always see you first, and always run off if you get closer than a kilometre to them.” It has to be said that Saiga Antelopes have learned not to trust man. Hunted since time immemorial, this prehistoric antelope has paid a heavy price. “During the Soviet era, up to 200,000 individuals were killed each year,” notes Steffen Zuther, a German expert on secondment to the Association for the Conservation of Biodiversity of Kazakhstan (ACBK). Back then, more than a million Saiga Antelopes roamed the Eurasian steppe, particularly in Kazakhstan. Despite great pressure from hunting, the population managed to stay relatively stable thanks to its extremely high fertility. From one year onwards, a female can give birth to a calf. When older, she produces litters of two.

But the equilibrium was disturbed in the aftermath of the Soviet empire’s break-up. “The authoritarian, communist control exercised by the State over hunting was lost,” explains Zuther. And the farming sector fell into decline. With food supplies scarcer, the hungry population, who had already devoured cows and sheep, turned to the Saiga Antelope. And hunting inevitably intensified, especially as the Russian-Chinese border was now more porous and this ungulate became attractive not only for its meat. The horns, sported by the males only, were drawing covetous looks. In traditional Chinese medicine, Saiga Antelope horn powder is said to work wonders against many complaints. “A kilo of these horns can fetch thousands of dollars,” reckons Zuther. Tempting indeed for a rural population in the grip of poverty. A kilo of horns equates to the death of two or three
animals – a relatively easy haul for poachers accustomed to life on the steppe. Recently, poaching took a radical turn for the worse, expanding to an industrial scale as criminal networks moved in. “Perched on motorbikes or powerful SUVs, they chase the herds and pick off the males one by one,” says the expert, who’s on secondment from the Frankfurt Zoological Society. “After killing all the animals they come back to cut off their horns, then leave the carcasses on the steppe.” With their limited resources, most often Russian SUVs from another age, the rangers struggle to intercept the poachers, despite their best efforts. Like shadows, the gunmen vanish into the vast expanse of land. The upshot? In about 15 years since the 1990s, the total population plummeted by 95%, to 50,000 individuals. A collapse that prompted the International Union for Conservation of Nature (IUCN) to sound the alarm. In 2002 the Saiga Antelope joined the IUCN Red List of Threatened Species™, rated as Critically Endangered.

The scarcity of males makes the situation even more worrying. The sex ratio is already naturally against them. More impetuous in temperament than the females, the males live shorter lives as a result. Selective poaching has aggravated this imbalance, so that males account for just 1% to 10% of the total. “So far, reproduction seems to be continuing as normal,” suggests Zuther, tempering the stark data. “But it’s hard to know what will happen in the future if poaching continues…” Especially as another Damoclean sword, albeit a more insidious one, is hanging over the species. Saiga Antelopes are sometimes hit by a mysterious affliction that kills them en masse. In May 2010, more than 12,000 carcasses – mostly females and their young – were found in western Kazakhstan. Zuther recalls the macabre spectacle. “The steppe was literally strewn with dead animals!” Inexplicably, further episodes of mass mortality occurred in the following years. The ACBK is currently working with the Royal Veterinary College in London to try to shed light on the causes of these sudden deaths.
A KEY ROLE IN THE STEPPE’S ECOSYSTEM

Klaus Nigge is still full of wonder at a delightful scene he had the privilege to witness. Camouflaged in his hide near a water hole, he watched, incredulous, as a herd moved peacefully towards him in the gathering dawn light. He soon found himself amid a hundred or so individuals, unaware of his presence. Captivated by their grace, he still can’t quite believe it. “I’ve been to Kazakhstan six times in various seasons, spending four months there in total. And I’ve only been close enough to photograph them on four occasions! During these brief moments, I understood that these animals perfectly reflect the spirit of the steppe.” Saiga Antelopes are true nomads that travel long distances – northward in summer, and the other way in the cold season.

But the Saiga Antelope is more than just a symbol; it plays a key role in the steppe’s ecosystem. “It spreads many seeds that stick to its fur, and by keeping vegetation cropped, it promotes greater plant diversity,” explains Steffen Zuther. The Saiga Antelope also keeps the steppe fertile by returning nutrients to the soil in its droppings. Of course, it also provides a larder for predators like the wolf. “You really get the impression that the steppe is more alive in the parts frequented by antelopes,” notes the project coordinator. “You see a greater diversity of plants, but also more animals, such as foxes, eagles, etc.” The futures of the steppe and of the Saiga Antelope are therefore closely entwined. Today, the Saiga Antelope is only represented by five populations. One in Russia (Kalmykia), one in Mongolia (a sub-species) and three in Kazakhstan, where some groups occasionally journey south into Uzbekistan during their winter migration.

In Kazakhstan the ACBK, which leads the protection of Saiga Antelopes, is on the case! In 2005 it launched the Altyn Dala (“Golden Steppe”) Conservation Initiative (ADCI), a programme that aims to set up a network of protected areas in an area, the size of France, in the centre of the country. The Kazakh government, which is determined to protect the animal, is a stakeholder in the initiative. Ranger patrols have been beefed up to

RANGERS play it clever to catch an antelope in their nets. It will be fitted with a GPS tracker, an essential tool in giving herds better protection.
Long-distance nomads through the seasons, Saiga Antelopes migrate to the southern steppe in winter

fight poaching more effectively. The populations are counted regularly from the air, and a special effort is being made to study the ecology and migratory routes of these little-known animals. In 2009, 68 antelopes were fitted with GPS trackers. The findings have made it possible to identify herd breeding areas and migrations more accurately. These are precious data to help better protect the species. Extensive work has also been done to raise awareness among rural people. Rangers go into schools to tell the children how important the animal is for the steppe – with the underlying hope that the younger generations will convince their elders that the iconic ungulate must be saved.

After a few years, these efforts paid dividends. In 2003, 2,000 individuals were counted from a plane in Betpak-Dala, central Kazakhstan. Today, there are 200,000. “This population’s stunning growth highlights the great resilience of the species – if protected, it can recover its numbers very
quickly,” comments E. J. Milner-Gulland, Chair of the Saiga Conservation Alliance, a network of scientists and conservationists fighting to save the antelope.

**RESTRICTED MIGRATION: A THREAT TO SURVIVAL**

Unfortunately, not all the populations are enjoying such a revival, because not all of them are so well protected. Some are still on the verge of extinction, like the one on the Ustyurt plateau. Given a rough ride by poachers, and by a fence between Kazakhstan and Uzbekistan that hinders their migration, fewer than 2,000 individuals are struggling to keep going. In Russia, fewer than 10,000 antelopes remain, compared to a population in 1980 of nearly 380,000. It is a concern for Milner-Gulland, who is also Professor of Conservation Biology at Imperial College, London. “There’s a real danger that one or two populations will die out. If that were to happen, it would be a serious blow! It’s not healthy for the species to have all its genetic diversity and ecological variations concentrated in a single population.” At present, there are thought to be fewer than 300,000 Saiga Antelopes left – and more than two-thirds of them belong to the Betpak-Dala population.

While the species is safe from extinction for now, the prospect of it regaining past population levels seems unlikely. “The world is changing,” stresses Philippe Chardonnet, Co-Chair of the IUCN Antelope Specialist Group. “Man is now encroaching far more into natural environments and hindering saigas’ migration, which is very important for their survival.”

But the fact remains that “if the species were adequately protected throughout its natural range, it would grow to reach half a million individuals within five to 10 years,” reckons the Chair of the Saiga Conservation Alliance. And that would do nicely for starters.

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**TO GO FURTHER**

- A network of scientists and conservationists who are fighting to protect the species: [http://www.saiga-conservation.com/](http://www.saiga-conservation.com/)
- The IUCN page on the species’ conservation status: [http://www.iucnredlist.org/details/19832/0](http://www.iucnredlist.org/details/19832/0)
INTERVIEW

JEAN-CHRISTOPHE VIE

A UNIVERSAL CAUSE

“Protect nature and you work for the community”. Although the IUCN Red List of Threatened Species™ has become a reference tool for conservation, it is still necessary to change mentalities, involve governments, and encourage funding. The Deputy Director of the IUCN Global Species Programme explains why.

INTERVIEW BY CATHERINE PERRIN

Terre Sauvage: The ICN Red List of Threatened Species is celebrating its 50th anniversary. How do you feel about that?
Jean-Christophe Vié: I feel very humble with regard to the people who began this work – they were visionaries! The Red List has become vital for nature conservation. It’s used by researchers, governments, NGOs and the media. But it’s still difficult to keep on updating it, because we’re perpetually forced to justify its usefulness to get the funding that’s essential for producing it.

Why?
J.-C. V.: It’s odd, because the Red List isn’t a very expensive tool considering the benefits it can deliver. This nervousness is perhaps linked to the fact that the Red List is about species, while more attention is paid to ecosystems and the services they provide to people. In addition, decision-makers want quick results, whereas analysing the status of biodiversity is a long-term job. A colossal amount has been achieved in the past 15 years, but there are still many gaps – in plants, for instance. Despite support from a foundation, we’re struggling to secure extra funding. And that’s particularly surprising because we’re focusing first on plant species that are useful to man. A number of governments are backing us, but it’s still not enough.

It’s paradoxical… Could it be because assessing species takes time, and political decision-makers operate to a short timescale?
J.-C. V.: Donors typically don’t want to commit for decades. Which means that our funding cycles are very short, lasting just a few years, and this doesn’t enable us to study all the animal and plant groups in all the world’s regions. Between 2000 and 2004, we assessed all the world’s amphibians, and observed that more than 40 per cent of them are threatened with extinction. This operation needs to be repeated for other groups.
INTERVIEW

It can’t have been easy to raise funding for amphibians. They’re less charismatic than mammals or birds, even though they’re just as important.

J.-C. V.: Definitely, and even for birds and mammals it wasn’t an easy task, but we did it! I’m not sure we’d manage to do that today… Even for fish, which are widely used by man, we’re having trouble completing the global assessment due to a lack of money. France is helping us for the Caribbean and Oceania, as is the European Commission for Europe, but that’s still inadequate considering how many other regions exist.

Are some species harder to assess than others?
J.-C. V.: Sometimes, the more data, experts and issues there are, the more complicated it is. The value of the Red List is recognised, because IUCN has taken the time to draw up stringent criteria, put in place information-quality checks, held workshops with people who sometimes have divergent views – as was the case for commercially used species. Sometimes, there are stormy debates between those who use these species and those trying to protect them – as happened in the case of tuna. These people don’t have the same interests, but the strength of the Red List process is that it achieves a consensus. The scientific data drive decisions, and we have to make sure that no one derails the process. The Red List doesn’t have the force of law, and it’s not linked to any binding document, so it restricts nothing. But because it influences lots of political mechanisms, it must be irrefutable.

PROTECT SPECIES AND YOU ALSO HELP PEOPLE ON THE GROUND

Slightly more than 76,000 species have been assessed to date, and IUCN aims to assess 160,000 by 2020. Is this really achievable?
J.-C. V.: It all depends on funding. Technically speaking, we’re already able to assess thousands of species a year, and we could do much more, but it takes human resources – which means financial resources. All of the mammals, amphibians, and birds have been assessed. Now we are focusing on assessing selected plants, invertebrates, and fungi. And that will require people and take time.

The public authorities aren’t doing enough to provide funding, but what about the private sector?
J.-C. V.: So far, there’s been little engagement. Some brands try to limit their impact on nature or to make sure that their sources of procurement adhere to sustainability principles, but the majority consider that supporting work to assess or protect a threatened animal isn’t their responsibility, even if they’ve chosen the animal as a logo or use it in their advertising.

Brands that use threatened animal species as a logo or in advertising do so free of charge. Could they not be made to pay a tax to fund conservation programmes?
J.-C. V.: Some people have had that idea, but it would be very complicated, without a doubt. For the time being, we’re relying on goodwill only. Some brands invest large sums of money to sponsor sports, such as Formula One, because there’s a good return on investment. If the general public attached greater importance to nature, then companies would make a bigger commitment in this area. When you protect species, you also help men and women who are taking action on the ground and who sometimes face huge risks. Hundreds of rangers having been killed in African parks while protecting elephants, rhinos and great apes, for example. And yet we can come up against special interests and suffer intimidation – I’ve seen it for myself. In my view, people who fight to protect the living world are modern-day heroes, and we must help them!

Is it SOS’s role to involve the private sector more closely in protecting threatened species?
J.-C. V.: Yes, the SOS – Save Our Species initiative was set up to give companies the chance to commit to a universal cause, which speaks to their potential customers and their employees. We try to do this in simple terms, by capitalising on the attractiveness of species. We then explain what conservation
work is – and it’s not about paying hippies to run around in the wild – which is how the work still is caricatured all too often! Protecting a species means preserving its habitat, helping local communities to develop, and resolving disputes. This overarching work includes the human and economic aspects. We’re a point of entry into the conservation world. Thanks to our 9,000 experts and the knowledge in the Red List, we’re able to select the best projects. The usefulness of SOS also lies in the flexibility of its mechanisms: we can decide to quickly change geographic areas or species depending on the threats out there, as we did for vultures (see p.64) or the Saiga Antelope (see p.50). The idea is also to get governments involved, as they have all pledged to reduce biodiversity loss. France is the only country to partner with SOS so far, and I hope that others will follow its example.

What are the big successes in threatened-species conservation?
J.-C. V.: There are many, such as the Arabian Oryx, which was Extinct in the Wild and which we’ve managed to reintroduce back into the wild; the California Condor, the White Rhino, the Humpback Whale... In Europe, the otter, the beaver, and the wolf have returned to areas where they had died out. I often hear it said that the Red List is depressing, but we always try to highlight the success stories in order to give people hope. But the successes are sometime patchy: although elephants are doing better in southern and east Africa, despite poaching, their situation is still catastrophic in central and west Africa. The White-tailed Eagle is no longer under threat globally, but it’s still not breeding in France... And these are fragile victories, because they sometimes take years to achieve, and all the progress can be wiped out in a few months.

The Convention on Biological Diversity most recently met in October in South Korea. As is often the case, it felt like a grand ceremony – commitments were made, but will they be respected?
J.-C. V.: These are very long processes. For things to move forward more quickly, what’s really needed is for citizens to engage more strongly and for the media to give greater coverage to environmental topics. These aren’t necessarily topics that cause anxiety, as I’m sometimes told. Nature feeds our dreams, it stirs emotions, and it can’t be boiled down to anecdotes about such and such an animal’s biology or the birth of a cute little bear in a zoo! The erosion of biodiversity is an extremely serious reality, and it’s forcing us to rethink the ways we operate. The undertakings made in the strategic plan of the Convention on Biological Diversity adopted in 2010 are useful, but they all still need to be implemented – protected areas must be created, and it mustn’t just all stay on paper.

It always feels a bit like it stays on paper...
J.-C. V.: There have been advances. The more optimistic people say, “A lot has been done already!”, while the more pessimistic ones say “What a disaster – is that all?” The Red List highlights problems that can’t be swept under the carpet to give a false impression of security. We have more bad news than good news, unfortunately.

Such as?
J.-C. V.: Some species have become extinct recently, there's been a phenomenal decline in some species of vulture, and so on. The Vaquita, a small porpoise from the Gulf of California, is becoming extinct. SOS has funded a conservation project, but in recent years, illegal fishing of a species of fish – which is also under threat – has soared. This fishing, which supplies the Asian market, is having an impact on this porpoise, and is likely to result in the extinction of both species.

Is trafficking, through fishing and poaching, the main threat to threatened species?
J.-C. V.: It certainly affects many of them, but the main cause is still habitat destruction. Intensive agriculture causes more damage than trafficking. Growing oil palms, for instance, generates considerable profits, and there’s a strong temptation for farmers to keep on clearing forests and replace them with palm monocrops. This is disastrous for biodiversity and doesn’t meet the long-term needs of local populations.

Isn’t the crux of the problem that the world of nature conservation has little influence compared to big lobbies such as industrial agriculture or fisheries?
J.-C. V.: For sure. These lobbies only serve special interests, whereas if you protect nature, you’re working for the common good – it’s humanitarian aid in the broadest sense of the term. Nobody questions emergency humanitarian aid, and rightly so, but the same should apply to the environmental cause. The perception of nature conservation is changing, yet the people who work on it are still criticised all too often.

IUCN should be awarded the Nobel Peace Prize!
J.-C. V.: That would be tremendous! Protecting nature is a universal cause, like education or health. That should never be negotiable. Environmental problems are killing more people than the Second World War. Denying the atrocities of this episode in history is a crime, which is normal. Denying climate change, the extinction of living beings, and the reality of millions of people who suffer the consequences should also be a convictable offence.

The utilitarian argument is often put forward to justify protecting species: they must serve man. What about the ethical argument: recognising their right to exist for their own sake?
J.-C. V.: I totally agree with the argument of recognising that nature has an intrinsic, non-measurable value. The nature-conservation community is constantly being told to demonstrate that such and such a species is important to man, and that nature delivers an economic benefit. And we do demonstrate it, because we have to provide the decision-makers with arguments. But now and again we should turn the tables and say to the decision-makers: prove that such a species or such a natural area is absolutely useless and can be wiped off the face of the earth!

**Is man on the Red List?**

J.-C. V.: Yes, mankind has a Least Concern rating, which means that preserving the species isn’t a conservation challenge. In fact, the challenge is more to do with controlling human expansion! Human population growth is a very important subject, but it’s taboo. According to a very recent report by UNICEF, there are more and more poor children, even in the developed countries of the OECD. As well as being the underlying cause of environmental problems, demographic growth produces poverty. Is that really what we want? As there’s no obvious solution, people prefer to avoid the subject.

**Although he has a Least Concern rating, man is ultimately under threat as well. If he continues to destroy nature, is he not doomed to extinction?**

J.-C. V.: Yes, but perhaps beyond the period used by the Red List, which is three generations. Humans are put in this category because the number of adult individuals is growing and so is their natural range, because man is colonising more and more habitats. In view of our environmental impact, if another civilisation were to assess Homo sapiens, it would doubtless describe us as an invasive species! Fortunately, there are men and women who are trying to change the world, such as those striving to protect living beings. Through SOS, I’m fortunate enough to track the tremendous field work done by people from all backgrounds. Their enthusiasm and energy will make the difference. And I hope we’ll be able to give them even stronger support.

**BIOGRAPHY**

- **1962:** born in Algiers
- **1986:** graduated as a vet
- **1987-1988:** first contact with great apes
- **1990:** first trip to French Guiana, where he spent eight years
- **1993 to 1998:** ran the wildlife research programme on the Petit-Saut dam site in French Guiana
- **1994:** set up the Kwata non profit and ran it until 2000
- **1998:** wrote an ecology PhD thesis on two species of ape in French Guiana
- **2000:** joined IUCN in west Africa, then Switzerland
- **Since 2001:** Deputy Director of the IUCN Species Programme
- **Since 2010:** Director of SOS – Save Our Species; and since 2014, of a tiger protection programme

Author of: *Le jour où l’abeille disparaîtra* (“The day the last bee dies”), Éditions Arthaud, 2008.

REPORT

VULTURES UNDER THREAT
WHO WILL DO THE DIRTY WORK?

As nature’s vital clean-up crew, vultures prevent the spread of diseases and epidemics caused by animal corpses. And yet these fragile scavengers are declining all over the world, sadly in some cases at a spectacular pace. It is becoming increasingly urgent to protect these raptors...

BY YANN CHAVANCE - PHOTOS NATUREPL
A BLACK VULTURE, one of the world’s largest vultures, tussles with a Griffon Vulture, a Himalayan Griffon and an Indian Vulture.

A SLENDER-BILLED VULTURE (left) perched on the ramparts of Mehrangarh Fort (Jodhpur, Rajasthan).
The figures are stark: of the 23 species of vulture on our planet, 12 are thought to be under threat, according to the International Union for Conservation of Nature (IUCN), and five of these are Critically Endangered. In other words: one out of two species is fighting for survival... The figures would doubtless have amazed naturalists of yesteryear, for these winged scavengers seemed to thrive wherever they settled.

Although the causes of their decline are multiple, including habitat loss and hunting, they vary from species to species. One specific threat appears however to have quickened their demise: poisoning. Evolution may have equipped vultures to resist the toughest bacteria and viruses, but they have proved particularly sensitive to the various poisons in the carcasses they feed on – whether it’s lead from hunting ammunition or toxic substances used to kill small mammals that are treated as pests. This established fact has ushered plenty of species to the edge of extinction, sometimes at bewildering speed, and taking all observers by surprise.

The starkest example is definitely in Asia, where a new poison came close to finishing off all of the continent’s vultures. This invisible killer is diclofenac, an anti-inflammatory drug mainly prescribed for painful joints. In the early 1990s, this drug began to attract the interest of livestock farmers in India, Pakistan and Nepal, who administered it en masse to their cattle. But the thing is, the diclofenac in the carcasses, once ingested by the vultures, causes acute kidney failure that kills them in a matter of days. As a result, the vulture populations of the Indian sub-continent were dramatically affected in the space of just a few years.

**AN UNPRECEDENTED DECLINE**

Between 1992 and 2007, the Slender-Billed Vulture (*Gyps tenuirostris*) and the Indian Vulture (*Gyps indicus*) saw their populations plummet by 97%. In the same period, populations of White-Rumped Vultures (*Gyps bengalensis*), the species worst hit by the phenomenon, fell by 99.9% – practically a mass extinction of unprecedented scope, especially as this vulture was once considered the world’s most abundant large raptor, numbering several tens of millions of individuals.

“It’s precisely because these vultures were so common in the early 1990s that no one realised something was up,” points out Chris Bowden, one of the two Co-Chairs of the IUCN Vulture Specialist Group, and Programme Manager for SAVE (Saving Asia’s Vultures From Extinction), a consortium set up in 2011. “At the time, there were no survival programmes – in fact, there was no warning system. It was only in the late ’90s when we realised that populations were severely depleted, but the decline had started six or seven years before that.” Noticing a problem, especially late in the day, is not enough to solve it – the source must be found. And only in 2003, more than 10 years after this mortality of epidemic proportions began, did studies finally prove the link between the poisoning of Asian vultures and diclofenac. “It was a unique situation, and we knew that getting rid of diclofenac would be a huge challenge,” explains Chris Bowden. “Fortunately, governments reacted relatively quickly to enforce a ban on the substance.”

In 2006, diclofenac for veterinary use was discontinued on the Indian and Pakistani markets, leaving a chance to save the species ravaged by the drug. Although vulture populations have since continued to fall, specialists are still hopeful, having seen the rate of decline slow in the past few years, with some populations even beginning to stabilise, thanks to huge conservation efforts. But now, diclofenac has recently been authorised for cattle in Italy and Spain, two countries of capital importance for European vultures... Truly a time bomb, this move has been unanimously condemned by raptor conservationists.

**A NATURAL CARCASS DISPOSER**

Besides revealing the extreme fragility
of these scavengers to poisoning, the Asian vulture crisis has also highlighted the central role of vultures in their ecosystems. The digestive system of these birds of prey is considered an “epidemiological dead-end”, able to destroy most pathogens, viruses and bacteria. In nature, it plays a key role in preventing the spread of numerous diseases originating in animal corpses. In Asia, the near-extinction of vultures has given rise to serious public-health problems, especially through the contamination of drinking water. But above all, vultures have been replaced by other gravediggers that, by contrast, are able to spread plenty of diseases. In India, stray-dog populations have nearly doubled in recent decades, carrying, among other diseases, rabies – the country holds the unwelcome world record of 20,000 cases a year. The Indian sub-continent, which has been fighting these problems for years, is, in IUCN’s view, concrete proof of vultures’ paramount importance in running nature’s carcass-disposal operations. In Africa, for example, where diclofenac is still being sold in some countries, IUCN is working vigorously to make people more aware of these scavengers’ importance. “We’ve been working for many years to inform livestock farmers and the general public about the problems of poisoning and its impacts,” says André Botha, Co-Chair of the IUCN Vulture Specialist Group. “In many African countries, vultures still aren’t viewed as a priority, and even specialists prefer to concentrate on large mammals.”

If specialists are so afraid at the prospect of an African crisis similar to the diclofenac crisis in Asia, it is because African vultures are already having a very rough time: seven of the continent’s 11 species are considered under threat by IUCN; and some, such as Rüppell’s Vulture (Gyps rueppelli), have seen their populations slump by 85% in the past few decades. But unlike their Asian neighbours, African vultures are facing multiple threats. “Africa is a vast continent and the threats there are very diverse,” explains Botha. “In west Africa, there’s a big trade in vultures, they’re used for their meat or in traditional medicine. In east Africa, the biggest threat is poisoning: farmers try to protect themselves from large predators by poisoning carcasses, but at the same time they kill lots of vultures.” What is more, farmers are not alone in causing casualties among the scavengers. Poachers tracking elephants or rhinos have also acquired the habit of poisoning their carcasses after removing the tusks. Why? To kill the vultures, which, by flying in numbers above the crime scene, risk attracting attention to their act. In Namibia, more than 600 vultures perished in 2013 around a single poisoned elephant carcass. In the face of such incidents, the Vulture Group Co-Chair prefers to remain hopeful. “It’s likely that populations will keep on falling in the near future, but there are lots of positive energies, and work is being done on the ground to measure the scope of the problem and find the right solutions.” But, as the South African-based specialist concedes, the African challenge is immense.

THE LONG ROAD TO PROTECTION
If specialists in each country are fighting to protect vultures, it’s because they know that once a species is no longer present in an area, re-introduction programmes are particularly long and complex. Though never completely extinct, the California Condor (Gymnogyps californianus), for example, with just nine surviving individuals in 1985, is today still Critically Endangered after a 30 year fight to save it from a continued decline caused largely by lead poisoning. But the prize for the longest conservation campaign goes to a French programme, one of the first of its type, in the Grands Causses Regional Park, south of the Massif Central. In this vast patchwork of limestone plateaux, the last vultures died in the 1940s, as happened almost all over the country; only a few pairs survived in the Pyrenees. In 1968, a handful of naturalists, eager to see these birds of prey fly once more in the Causses, released four young Griffon Vultures (Gyps fulvus) virtually in secret, or at least amid utter indifference. “It was an outright failure,” recalls Raphaël Néouze, current Head of the Grands Causses Unit at France’s Bird Protection League (LPO). “One was shot, another died from electrocution. And the other two just disappeared, which was actually
WHITE-RUMPED VULTURES, Kenya.

RÜPPELL VULTURES, Tanzania.

EGYPTIAN VULTURES, Yemen.

LAPPET-FACED VULTURE, Kenya.

CAPE VULTURES, South Africa.

HOODED VULTURE, Kenya.
SUMMER 2014: AT POURTALET PASS, watched by hikers, this colony of Griffon Vultures based in the Pyrenees lose no time tucking into a dead cow.
quite logical: we now know that they’re an erratic species, whose young travel a great deal before they’re able to breed.” In the early 1970s, they structured their initiative and took it in a different direction. A large aviary was built, and in 1971, the first Griffon Vultures moved in. The idea being that they would breed there, after being given the time to make themselves at home. “It was a technique that we invented, it had never been done anywhere else,” says Néouze. In the 1980s, even the Americans came to the Grands Causses to see this method in regard to the California Condor.” The technique proved particularly effective: after the aviary had been in service for 10 years, the first vultures were released in 1981, and in the following spring, a first pair was already breeding in local gorges.

**WORKING WITH LOCAL FARMERS**

Today nearly 450 pairs are flying free in the skies of the Cévennes Mountains. “The population is doing fairly well, and now, most of our attention is focused on the Black Vulture (*Aegypius monachus*), a species which is particularly threatened,” says the ornithologist. For this vulture, reintroduced in the area from 1992 onwards, only 21 pairs are living in the Grands Causses – most of France’s Black Vultures, in fact. To drive the success of these various programmes, ornithologists have been able to rely on the support of local livestock farmers, who are delighted to have a free, natural carcass-disposal service on hand. In 2001, the first on-site feeding spots – where a farmer can leave, in an enclosed space, the ewes in his flock that die “normally” – are beginning to replace the feeding stations that centralised the fallen stock of several local farmers. But in recent years, this harmonious relationship has been troubled by discordant voices, claiming there are now too many vultures, which are growing bolder and attacking animals that are still alive. This stance arose in the 2000s in Spain, when the country set up an industrial carcass-disposal system that deprived most of the country’s 25,000 Griffon Vultures of food. For Raphaël Néouze, the situation cannot be compared with France. “These strong concerns, relayed by the media, have crossed the Pyrenees and come to the attention of French farmers. In the Grands Causses, we’ve proposed a procedure to observe if vultures are deemed to be aggressive, with a single hotline farmers can call.” In recent years, this scheme has made it possible to work with farmers and study the reported cases: it turned out that in less than three per cent of cases, the vultures, which are opportunistic animals, had indeed attacked animals that were still alive, albeit very weak. So: a minority, which mustn’t distract us from the many environmental benefits of these natural carcass disposers... and the opportunity to once again behold their giant outline in French skies, like in times gone by.

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**FIND OUT MORE**

**Websites**

- rapaces.lpo.fr/grands-causses/ (in French) general information on French vultures and the conservation programmes in the Grands Causses.
- www.save-vultures.org Site of the SAVE consortium, presenting the problem of diclofenac in Asia.

**Books**

- *Le vautour fauve*, by Bertrand Eliotout, Delachaux and Niestlé, 2007. A detailed study, in French, of the most common French raptor.

**Documentaries**

- *Le bal des charognards*, by Michel and Jean-François Terrasse. A 1984 film by two brothers who initiated the first re-introductions of vultures.
SAVING THE CROCS’ SKIN

After being ravaged by uncontrolled hunting for nearly a century, the crocodilians have rebounded in the past 30 years. Conservation actions such as the introduction of suitable farming methods and regulated trading have proved effective. And this approach could soon be helping pythons too.

BY FLORIANE DUPUIS
To protect crocodiles, nothing beats selling their skins, right? Is that a joke? Or a provocation? Actually it’s pragmatic, the IUCN Crocodile Specialist Group (CSG) would say. One of its members, Charlie Manolis, Regional Chair for Australia and Oceania, and a zoologist specialising in crocodilians, explains the principle: “As crocodiles are large predators that attack human beings and their livestock, they’re not terribly popular... Giving them a commercial value is an effective incentive to protect them.” As paradoxical as it may seem, the skin trade has boosted many crocodilian species in the past 30 years.

**Egg-Collecting Operations**

After the Second World War, the sharp rise in demand for crocodile leather caused populations worldwide to collapse. Unmanaged and unregulated, crocodile hunting brought many species to the verge of extinction, as highlighted by the first IUCN Red List, in 1963. Faced with these facts, the CSG, set up in 1971, first endeavoured to give crocodiles complete protection. Then they changed focus. During the 1980s, the CSG realised that trading could actually be a very powerful lever in protecting crocodilians. It thus decided to support the rollout of a legal, sustainable trade in conjunction with CITES (see p.75). And the results are highly convincing: many populations are currently back to their original levels of abundance, such as the Salt-water Crocodile (*Crocodylus porosus*) in Australia, the American Alligator (*Alligator mississippiensis*) in the USA, the Nile Crocodile (*Crocodylus niloticus*) in many African countries, the Broad-snouted Caiman (*Caiman latirostris*) in Argentina, Morelet’s Crocodile (*Crocodylus moreletii*) in Mexico, and so on. “We owe this success to the protection and management measures implemented in many countries, but also to the huge role played by CITES since it came into force in 1975,” points out Manolis. One significant advance is ranching, which involves collecting eggs or juveniles in the wild and then raising them on farms. This practice is authorised by CITES on condition that it is non-detrimental to wild populations. “And that’s definitely the case!” the specialist confirms. “In Australia, hundreds of thousands of eggs have been collected since 1983, which hasn’t stopped wild...
populations of Salt-water Crocodiles from recovering. Elsewhere, as in Argentina, monitoring schemes have shown that this method has no significant impact on wild-crocodile populations. The advantage of ranching is that it provides local people with a source of income when they collect the eggs or juveniles – and a reason, consequently, to protect the crocodiles’ habitats. And protecting habitats is ultimately the crux of the matter. In the USA, the Louisiana swamps might have been converted into paddy fields if an income hadn’t been available from alligators, among other things...” In Asia, this is a crucial issue. Habitat loss due to human pressure and activities has led to critical situations for some species, such as the Chinese Alligator (*Alligator sinensis*) or the Gharial (*Gavialis gangeticus*) in India. The Siamese Crocodile (*Crocodylus siamensis*) has become extremely rare in the wild, whereas there are nearly a million in breeding farms in Thailand, Cambodia and Vietnam. “In this case, closed-circuit farming is the only solution, but the skin trade is totally separated from work to protect wild populations.” Meanwhile, hunting is still happening, on a regulated basis, in Louisiana, Florida, Indonesia, Papua New Guinea, and, on a smaller scale, in Australia and many African countries. Out of the crocodilians – a group of 23 species of alligators, gharials, caimans and crocodiles – only 10 species are involved in the trade. “Naturally we’re interested in all the species, even though, besides biologists, our Specialist Group includes all the stakeholders involved in skin trading, as well as zoos,” explains Charlie Manolis. “It was essential to have everyone on board so that together we could achieve significant change in wild crocodile populations and the skin trade. There have been some great successes, but we still face challenges.” Such as improving the lot of six Critically Endangered species and resolving human-crocodile conflicts, which arise where management efforts have restored healthy populations of wild crocodiles...

**THE KERING EXAMPLE**

In some African countries, it is proving necessary to improve crocodile monitoring. Especially in Madagascar, where, for want of proper management, international trading was suspended by CITES for four...
years. In July 2014, the CITES Permanent Committee recommended lifting this suspension, in light of the introduction of specific national legislation on managing the island’s one crocodile species. What prompted lifting the ban was the creation of an action plan to conserve and sustainably use crocodiles from Madagascar. University research has been conducted and a crocodile management unit has been put in place: the programme will receive backup from the IUCN Crocodile Specialist Group (CSG), with technical and financial support from French apparel and accessories group Kering (formerly called Pinault-Printemps-Redoute, and the owner of brands such as Gucci, Saint Laurent and Balenciaga). “Backing these initiatives, by investing in research and in introducing standards and monitoring, help us ensure that the precious skins we stitch are produced in a humane, sustainable way,” explains Dr. Helen Crowley, Conservation and Ecosystem Services Specialist at Kering. “But above and beyond the issue of sustainable sourcing, from our Group’s perspective, it’s all about helping to create a more responsible market.”

Kering committed to a sustainability programme more than 10 years ago, and in 2012 set itself a series of measurable targets to achieve by 2016. One of these is to sustainably source all of its precious skins – especially its python skins, which have become increasingly popular in the past 20 years. “For pythons, international trade is less advanced than for crocodiles,” continues Helen Crowley. “That’s why we’re supporting the introduction of a system to ensure traceability and help make this trade more responsible, with no negative impact on biodiversity or local communities.” With this aim, Kering formed a partnership in late 2013 with the IUCN Boa and Python Specialist Group and the International Trade Centre to conduct a three-year research programme. The findings and recommendations should help make progress on the issue. “This knowledge will enable CITES, the government authorities and the luxury goods industry to create a better system for monitoring trade with regard to sustainability, traceability and animal wellbeing,” says Tomas Waller, Chair of the IUCN Boa and Python Specialist Group. “Even so, the international skin trade is not jeopardising the survival of the three python species in question – the Reticulated Python, Burmese Python and Sumatran Short-tailed Python [Python reticulatus, Python bivittatus, Python curtus]. The direct threats to these species are primarily habitat loss and human expansion. Paradoxically, in some cases, such as this one, regulated trade increases species’ value and acts as an incentive to do research and promote the conservation and management of species which are viewed as a natural resource that benefits local communities.” Another case of pragmatism winning the day...

**WHAT IS CITES?**

Also known as the Washington Convention, CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement that came into force in 1975 and now has 180 parties. It aims to ensure that the trade in specimens of animals and wild plants does not threaten the survival of species in the wild.
NATURE’S CUSTODIANS

Protecting life is the objective shared by numerous species conservation programmes. From Myanmar to Greece, from Fiji to China, and from Indonesia to Belize, people are mobilising to implement exemplary projects.

BY JEAN-BAPTISTE POUCHAIN - ILLUSTRATIONS HEIDI JACQUEMOUD

Okapi

Okapi johnstoni

EARNING ITS STRIPES

It may have zebra-like stripes on its legs, but it’s actually more similar to a giraffe. Discovered in 1901, this mammal is endemic to the Ituri Jungle in the Democratic Republic of Congo. Its population, now estimated at 10,000 individuals, has fallen by 50% in the space of 15 years, a casualty of traps laid by poachers to catch other animals and the destruction of its habitat by deforestation and illegal gold mining. Since 1987, the Okapi Conservation Project (OCP), in partnership with the Congo Institute for Nature Conservation (ICCN), has carried out up to 20 deterrent patrols a month in the Okapi Wildlife Reserve (RFO). The OCP also promotes sustainable agroforestry methods, teaching local people alternatives to slash-and-burn, which destroys the environment. But in a country where the political/military situation is impacting deeply on nature protection, the way forward is very bumpy. After the gorillas in Virunga National Park, now the Okapis of Ituri are bearing the brunt of armed fighting: in June 2012, poachers murdered six rangers and 14 captive Okapis at the RFO headquarters. The death of the rebel chief, killed by the Congolese army in April 2014, heralds better times for the okapi.

Fiji Acmopyle

Acmopyle sahniana

PUTTING IT ON THE MAP

“The Fiji Acmopyle embodies one of the major problems of nature protection in Fiji: little is known about species, and little is done to raise their profile,” regrets Dick Watling, Executive Trustee of nonprofit NatureFiji-MareqetiViti (NF-MV). The presence in Fiji of this small conifer, a relic of the Gondwana supercontinent, is unexplained. The species was described in 1927, but has never been the subject of a conservation plan. On Viti Levu Island, fewer than 100 trees were recently counted. NF-MV has decided to break this inertia by working with the owners of three sites that host Acmopyle populations. “A team of four landowners will confirm the identity of each new tree, and agree on monitoring the sites and identifying new populations.” Two months later, the sites will be revisited by an NF-MV scientist, who will describe, photograph and record the GPS coordinates of the trees found. “This process will be taught to landowners so they become self-sufficient before the project ends,” explains Watling. “We’re trying to instil a sense of responsibility and stewardship, making sure that the landowners really understand the species’ importance in conservation terms.”
**Northern Bald Ibis**  
*Geronticus eremita*

**THIS WAY FOR MIGRATION!**  
The Egyptian pharaohs made it the country’s sacred bird, because it migrated towards Mecca, accompanying pilgrims. Today, Europe has made the bird its big challenge. Although Morocco is protecting its 450 wild, but sedentary, individuals in Souss-Massa-Draa region, and Syria has discovered a small migrating colony whose fate is now uncertain, it is in Europe – where the northern bald ibis has not set foot for 400 years – that the Förderverein Waldapp TEAM nonprofit has undertaken the “Reason for Hope” re-introduction programme. Thanks to juveniles raised in captivity and to extensive anti-hunting measures in the relevant countries, the objective is to develop a migration corridor to ensure the species’ survival. Breeding colonies have been established in Germany and Austria, and human-led migrations will create three autonomous populations by 2019. In August 2014, 14 ibis, accompanied by 16 people, successfully migrated to their wintering grounds in Tuscany. Project Director Johannes Fritz says: “We owe the fantastic outcome of the migration to adoptive mothers Corinna and Anne. They did their work with joy, and built a strong relationship with all the birds.”


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**Jaguar**  
*Panthera onca*

**FOR A FREE-RANGE HABITAT**  
When a man enjoys telling a story, it speaks volumes about his own. This mythical aura surrounds the life of American zoologist Alan Rabinowitz. Voices are central to it: the voice that a young boy with a severe stutter could summon, facing an old jaguar at the zoo; and the voice of which the big cat was deprived, prompting the young lad to become his spokesman. Rabinowitz has since controlled his stutter and set up a nonprofit, Panthera, because he wanted to start protecting his favourite animal before it became endangered. After discovering that the Americas’ largest feline was the only one in the world with no subspecies, i.e. its populations had not undergone any fragmentation, he set up the Jaguar Corridor, a transnational project that aims to create a continuum of protected habitats, so that jaguars in Mexico can continue to mix their genes with jaguars in Argentina. Having been given a voice, these big cats must now keep finding their way through forest, plantation or ranch, helped by 13 governments and local populations.

[www.panthera.org](http://www.panthera.org)  

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**Eastern Hoolock Gibbon**  
*Hoolock leuconedys*

**CONNECTED FORESTS**  
From the far side of the River Chindwin, in Myanmar, the Eastern Hoolock Gibbon has lulled the forest with it vocalising since time immemorial. The country is home to 99.9% of the total population, which used to spread into China. “The species is increasingly threatened by fragmentation of its habitat,” explains Fernando Potess, Co-Founder of the People Resources and Conservation Foundation, which in 2007 kicked off a rescue plan to reduce the damage caused to the forest by traditional agriculture and armed conflicts. Most of the work is being done in the Ker Shor Ter community in Karen state. “We’re working with the local people to maintain wide gibbon-friendly habitat corridors, and establishing connections with the other forests,” says Potess. Initiatives such as managing forests in accordance with ancestral rules, replacing building timber by other materials, and monitoring gibbons all strongly involve local communities. As their culture forbids hunting primates and venerates the beauty of their singing, who better to become their guards?

[www.prcfoundation.org](http://www.prcfoundation.org)

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[LYNN M. STONE/NPL](http://www.npl.co.uk)  

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**CRITICALLY ENDANGERED**

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[FORDER VEREIN WALDRAPP TEAM](http://www.waldrapp.eu/index.php/en)
**Loggerhead**

*Caretta caretta*

Laying the Foundations

“I’ll never forget the first time I saw a loggerhead giving life. It was dark, and we were lying near it, waiting for it to finish laying its eggs so we could tag it. Its prehistoric shell shone golden in the full moon, and I could not imagine anyone harming such a beautiful animal.”

But if Freya Cohen has become a station head for Archelon (the Sea Turtle Protection Society of Greece), it is because the loggerheads’ millennia-old laying ritual is now threatened by fishing and uncontrolled development of the Greek coastline. In the crisis-hit country, illegal constructions are mushrooming along the turtles’ protected habitat, and their interactions with humans are often fatal. For more than 30 years, Archelon’s many international volunteers have been identifying, protecting and monitoring the nests through to laying. Their work is bearing fruit: more and more female loggerheads are emerging each summer. It now remains to introduce eco-tourism activity that benefits both the turtles and local communities.

“Everyone owns these sites,” says Cohen, “and they will give us far greater rewards over the long term than some ephemeral real-estate complex!”

**Sawfishes** *Pristidae*

Cutting-edge conservation

Along the west African coast, the sawfish family, which have cartilaginous skeletons similar to those of sharks, are threatened by fishing activities and illegal trading. This is why they are the subject of a conservation programme: AfricaSaw. “The core of our project is working with Africans,” says Armelle Jung, Scientific Project Leader for nonprofit Des Requins et des Hommes, also an SOS grantee. “We’ve set up a warning network across several countries – including Senegal, Sierra Leone and Guinea-Bissau – so we can react quickly if a sawfish is captured. The network is based on local intermediaries – a village chief, or a person in charge of fishing – who communicate frequently to maintain the link after we’ve run an operation, and thus present their community as ‘friends of the sawfish’. This sustained energy, as well as several educational projects, is increasing awareness. In a small village in southern Sierra Leone, I remember some fishermen who, after a long and stormy debate, had decided to throw back a sawfish. It was a strong statement from these people, who have plenty of other everyday concerns. Ultimately, we hope to see them sensibly managing their fish resources on their own.”


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**Zamia Prasina**

Zamia prasina

Cultivating a Wild Future

It almost seems as if, to live happily, *Zamia prasina* kept a very low profile. Not content with being endemic to the Maya Mountains in south-west Belize (Central America), this cycad – which may be reclassified as a new species called *Zamia decumbens* – only grows at the bottom of dolines, sinkholes formed by the collapse of underground rock. Ironically, it is the rarity of the plant, which looks like a fern crossbred with a palm, that has made it precious to collectors. Hit hard by unsustainable commercial use, it is down to just a hundred or so individuals across 10 square kilometres of forest. On expeditions cofunded by SOS – Save Our Species, the Montgomery Botanical Centre (MBC) brings precious wild cycad seeds back to the United States for horticultural purposes. “Ex situ collections are needed to supplement the wild cycad populations,” explains Tracy Magellan, MBC Outreach Manager. “If nursery-grown cycads are widely available, this will discourage collectors of wild plants.” With a 1,000 seed propagation plan yielding a germination rate above 50%, *Zamia prasina* seems set for a brighter future.

http://www.sospecies.org/sos_projects/plants/cycads/belizean_sinkhole_cycads/
ECOTOURISM TO THE RESCUE

After shark fin soup, which harms animals more than it helps humans, the fashion is now to harvest Manta Ray gills for pseudo-therapeutic purposes. A few years ago, ecologists from nonprofits WildAid and Shark Savers tracked down this illegal trade to the dried-seafood markets of Guangzhou, southern China, where 99% of the gills harvested are sold as the basic ingredient for health tonics. To halt the decline of Manta Ray populations, due to overfishing of the species driven by demand for the gills, the two nonprofits have created the Manta Ray of Hope programme.

Besides introducing measures to give the rays legal protection and an awareness-raising campaign in China, it is promoting ecotourism activities related to the species, such as scuba diving. “This trade is depriving the local economies of one of the most charismatic ocean creatures, which could earn them millions of dollars each year,” says Team Leader Shawn Heinrichs. The deadly trafficking of Manta Rays, which generates USD11 million a year versus a potential USD100 million in ecotourism activities, certainly seems the less sensible option.

http://www.sospecies.org/sos_projects/fish/sharks_and_rays/manta_rays_in_mobulid_fishing_nations/

CRITICALLY ENDANGERED

Javan Rhinoceros Rhinoceros sondaicus

NOT A LONE RANGER

In the Ujung Kulon National Park in Indonesia, Pak Sorhim and Pak Tisno are members of a Rhino Protection Unit (RPU). For the past 20 years, these teams of four rangers have been operating for the International Rhino Foundation and the Yayasan Badak Indonesia nonprofit to protect the last population of Javan Rhinoceroses, estimated recently at approximately 60 individuals. “We patrol the forest and raise awareness among the communities that live around it,” explains Pak Sorhim. The species is coveted by poachers for its horns, which are sold on the Chinese market. “As well as preventing human disturbance, we identify the areas where the rhinos live and monitor the state of their habitat,” adds Pak Tisno, Head of an RPU since 2007. Monitoring of the species, based on its faeces and tracks, is primarily aimed at stopping the proliferation of invasive species that crowd out the grass the rhinos feed on. “If the park and local communities work well together, it will improve the villagers’ lives,” stresses Pak Sorhim, who’s keen to also offer them a better life. As for an unlikely encounter with a rhinoceros, Pak Tisno simply says: “I’ve seen them twice in thirty years, and it was just incredible!”

www.badak.or.id/home

CRUNCH TIME

Are the fruit forests of Central Asia a paradise (nearly) lost? For they too contain their forbidden fruit: the Niedzwetsky Apple Tree, a wild ancestor of our cultivated varieties. Robin Loveridge, Programme Officer for the Global Trees Campaign (GTC), a conservation programme for threatened trees set up by Fauna & Flora International, travelled in June 2014 to the Sary-Chelek Reserve in Kyrgyzstan to supervise protection of the last population of Niedzwetsky Apple Trees: “Each spring, the young plants push out their first shoots, which are eaten by herds of livestock. And this silent population is in the process of collapsing.” To offset the lack of regeneration – which, coupled with the fragmentation of populations, has reduced the species to 117 individuals – GTC is training local communities and government departments to manage the apple trees across extensive pastureland, while also developing nurseries to reinforce the wild populations with cultivated trees. The species’ survival would provide “genetic diversity and potential resistance to diseases that are threatening domesticated apple varieties”.

http://globaltrees.org

CRUNCH TIME

Niedzwetsky Apple Tree Malus niedzwetskyana

ENDANGERED
**Corroboree Frog**
*Pseudophryne corroboree*

**GOLDEN EGGS**

In recent years, a number of amphibians worldwide have been decimated by the infectious chytrid fungus. One of these is the Corroboree Frog, endemic to the wetlands of Kosciuszko National Park in the Australian state of New South Wales. Only six males were counted in January 2014. Thanks to a conservation project, there is now hope that this amphibian, with its spectacular yellow and black markings, has improved prospects. “But there’s a wider challenge, because this pathogen is threatening all frog species globally,” says David Hunter, Threatened Species Officer at the state’s Office of Environment and Heritage, which is hopeful that its protection scheme will spawn others elsewhere. Four Australian zoos and parks manage breeding in captivity, in conditions that duplicate the Corroboree Frog’s natural habitat. The eggs are then re-introduced into artificial ponds in Kosciuszko National Park. “The ponds are slightly raised, which rules out the presence of the Common Froglet (*Crinia signifera*), the amphibian that carries chytrid,” explains Hunter. And it’s working: 60% of the eggs hatch and several individuals are reaching maturity and managing to mate.

www.corroboreefrog.com.au

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**Mediterranean Monk Seal**
*Monachus monachus*

**SMILE, YOU’RE ON CAMERA**

Hunted excessively in days gone by, the Mediterranean Monk Seal is one of the most threatened marine mammals, with only about 500 animals spread between the Aegean Sea and the North African coast. Spanish foundation and SOS grantee CBD-Habitat has begun a programme to protect the species off Mauritania, in the “Seal Coast” reserve. “Around the Cabo Blanco peninsula, we’re protecting nearly half of the global population,” says biologist Mercedes Muñoz Cañas, “and it’s the only population that has retained the original colony structure. So we’re basically protecting its best hope of survival.” As seals the suffer from human disturbance in their three resting and breeding caves, the programme’s technicians use surveillance cameras and, more rarely, abseil down to check on the animals’ activities. They are also working with the inhabitants of the neighbouring town of Nouadhibou to prevent any intrusive fishing. Their efforts have enabled the colony to double in size in 14 years, says Muñoz Cañas, and the seals thank them in their own way: “It’s incredible when you’re climbing and suddenly feel something tugging on the rope – you look down, and there’s a baby seal nonchalantly playing with it!”


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**Timneh Parrot** *Psittacus timneh*

**POACHERS TURNED GAMEKEEPERS**

“The Timneh Parrot’s intelligence explains both its survival and its decline.” The old timers from the Bijagós Archipelago in Guinea-Bissau told Mohamed Henriques, a biologist with SOS grantee World Parrot Trust (WPT), how this parrot, which is endemic to west Africa, has declined in the past 30 years: its ability to mimic human words has made it a popular pet in Europe. But the creation of protected areas, such as the João Vieira-Poilão National Marine Park, and the start of conservation operations, have begun to discourage parrot hunters. “This year we had proof of this, when we managed to recover and re-introduce a chick that had been poached,” says Henriques happily. To protect the breeding colony on the João Vieira and Meio Islands, the WPT took the bold step of recruiting six parrot hunters to help count the populations. “The idea is not just to offer them an economic alternative, but to make them more aware of the implications of the Timneh Parrot’s extinction.” Thanks to their knowledge, the ex-poachers have become precious project colleagues, and are restoring hope for this bird, which, in Henriques’ eyes, embodies the true meaning of freedom.

http://www.sospecies.org/sos_projects/birds/timneh_parrots/
**Violet Copper**  
*Lycaena helle*

**COMING BACK HOME**
The Violet Copper’s French name, *Cuivré de la bistorte*, refers to the plant on which it depends: the common bistort. Populations of this insect, a relic of the last Ice Age, are declining and increasingly fragmented, deep in the valleys of the Belgian Ardennes and Lorraine areas. In 2009, the Belgian region of Wallonia set up a five-year conservation programme with European funding, coordinated by nonprofit Natagora. Work has focused on rehabilitating 110 hectares of land, including 40ha purchased especially and numerous Natura 2000 sites, to once again provide an environment friendly to this butterfly: a network of wet grasslands where bistort grows, as it needs the plant to breed. For example, selective logging and the creation of clearings in the Semois River Basin, which had previously been overrun by spruce, attracted the Violet Copper back two years later. The project has been granted a one-year extension to supervise the eco-responsible management of the re-opened sites, which the Violet Copper has successfully recolonised despite high rainfall in the past two spring seasons and a steady decline in its overall numbers.  

[www.life-papillons.eu](http://www.life-papillons.eu)

**White-clawed Crayfish**  
*Austropotamobius pallipes*

**RUN FOR SHELTER!**
There are few organisations devoted to protecting “thankless” species such as invertebrates. Yet they are “the key to maintaining a healthy environment”, stresses Joanne Gilvear, Conservation Officer at Buglife. This nonprofit, whose motto is “Saving the small things that run the planet”, aims to save the White-clawed Crayfish in south-west England. Populations of this pollution-intolerant species, which acts as a bio-indicator, have halved since the 1970s, mainly because of a “plague” carried by an invasive species, the Signal Crayfish (*Pacifastacus leniusculus*). To fight this disease, Buglife and several partners have initiated the South West Crayfish Partnership, which aims primarily to set up Ark sites. “These are safe havens devoid of the invasive crayfish that threaten the threatened native populations,” explains Gilvear. After capturing White-clawed Crayfishes, the officers move them to these isolated sites where they are carefully monitored. Twelve such sites have been created, and Buglife, using a participatory-science method, is encouraging everyone to identify new ones, using criteria that can be downloaded from its website.  

[www.buglife.org.uk/uk-crayfish](http://www.buglife.org.uk/uk-crayfish)

**Maleo Bird**  
*Macrocephalon maleo*

**LOOKING FORWARD, NOT BACK**
Marcy Summers runs the Alliance for Tompotika Conservation (AITo), set up in 2006 to protect the Maleo, a bird endemic to Sulawesi and Buton Islands in Indonesia. Threatened by illegal collection of the single egg laid by the females on a beach near the village of Taima, in Tompotika province, the species has seen its population grow continually since AITo introduced patrols with the local community. “We’ve proved that if humans can change their behaviour towards nature, it can be mutually beneficial.” Protecting the beach, which pays better than selling the eggs, has also shown Indonesians the tangible consequences of their actions. “The hardest part is to change people’s mentalities... It takes time. But increasingly, the villagers are talking proudly about their natural heritage!” According to Summers, this invitation to change is being extended by the Maleos themselves, which, having buried their egg, return to the forest without looking back, leaving the future baby to fend for itself. “It’s the ultimate act of trust. They rely on the world to be kind to their child. As a human being, that inspires me not to betray their trust.”  

INTERVIEW

FINANCE, YES
DEGRADATION, NO

The BNP Paribas Group’s commitment to responsibility? It helps to conserve biodiversity by strictly controlling its financing and investment activities.

Terre Sauvage: For some years now, BNP Paribas has been displaying its pro-active commitment to protecting biodiversity... Where does this concern stem from?

Élisa Vacherand: The general management made a public commitment to fight climate change in 2011, as part of its positioning as a responsible bank. A bank is responsible if it provides financial products that match its customers’ needs and has a clear vision of the social and environmental impacts of its investments. So after identifying the business sectors that pose big challenges in terms of climate change and biodiversity, we defined strict criteria which dictate how we invest in and finance these sectors, and which are applied in the same way in the 74 countries where the group operates.

An example?

É. V.: Take mining. Before we finance a project, we check that the future mine and its related facilities are not located in sensitive areas: UNESCO world heritage sites, Ramsar wetlands, protected areas in IUCN categories 1 to 4. Categories 1 and 2 areas are often protected by the public authorities, but those in categories 3 and 4 rarely are. We therefore go further than international regulations. To check where a future operating site is located, we use a tool developed by IUCN called IBAT (Integrated Biodiversity Assessment Tool), a database of information on the world’s protected areas.

BNP Paribas has invested in a gold-mine project in Peru (the Conga project), led by American company Newmont Mining. Some NGOs have highlighted a risk of contaminating local people’s water resource...

É. V.: The mine’s not in service yet, it’s still at the planning stage. The evidence does not substantiate the controversies around water management, and the government has asked Newmont to propose measures to minimise these impacts. Newmont’s most recent assessment shows that it respects the mandatory criteria of our sector policy, which was published in March 2013 and anyone can read on our website. We have also established a dialogue with the company.

Do you finance companies that use threatened species?

É. V.: We rule out any relationship with companies that don’t respect the regulations set by CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and might be involved in trafficking protected species. And companies that have been convicted for trafficking protected species are put on an exclusion list that our bankers must check. This “black list” is compiled using data from TRAFFIC, the wildlife trade monitoring network. If we exclude a company, we also exclude its parent and its subsidiaries, so there’s little risk of working with a company in the same group. We’re also particularly vigilant with companies based in countries that are not CITES signatories. And if a potential customer has a business importing and exporting protected species from or to these countries, we systematically ask to see its CITES permits.
Growing oil palms is very harmful to biodiversity.

**Do you have a policy on this subject?**

É. V.: Yes, we’ve had one since 2011. The palm-oil sector has a heavy environmental impact, but it employs millions of people in developing countries, which is why we want to promote responsible palm oil instead of seeing it banned. This activity must be subject to fairly strict controls. As well as banning it in the most sensitive areas, we invite our customers to maximise output from existing plantations rather than clearing forests to create new ones. We work with The Forest Trust (TFT), an NGO with close ties to Greenpeace. In particular, BNP Paribas is strongly involved with palm-oil producers in Southeast Asia. One of the biggest producers, a Nestlé supplier, was a customer of ours. Following a Greenpeace campaign that condemned the damage this farming activity was causing to orangutan populations, we decided that if it didn’t change its practices we would no longer finance it. We worked with the producer on a programme of commitments, and it is now one of the leading responsible growers of oil palms in Southeast Asia.

**What other problems are you interested in?**

É. V.: Overfishing and undifferentiated catch, through the production, trade and use of trawl nets more than 2.5 kilometres in size. These are banned in many countries, especially in Europe, but not others, such as Thailand. Before we finance a fishery in such a country, we check that it doesn’t use these nets. We are also fighting mountain top removal (MTR), the surface mining of summits or summit ridges to extract ore or coal, as in the Appalachians. It completely alters the landscape, and the mined earth and rock is discarded into waterways. BNP Paribas has ceased all dealings with the mining companies that are most active in MTR, having tried to dissuade them from continuing.

**BNP Paribas financed the Tata Mundra coal-fired power plant in India, which is criticised for polluting rivers and destroying the mangrove forest with its CO₂ emissions!**

É. V.: This investment dates from 2008, before we introduced our environmental policy in 2011, and we couldn’t have pulled out mid-project. It’s worth noting that this plant’s emission levels are far lower than those of any other coal-fired power plant in India, and it supplies electricity for 16 million Indians.

**Who takes your decisions on environmental policy?**

É. V.: The group’s top-management team leads these actions, and all members of the Executive Committee and the Board of Directors are informed of sector policies. Part of the bonus of the group’s 5,000 most senior managers is linked to achieving a number of social and environmental responsibility targets.

**Why do you not communicate more on your environmental commitments?**

É. V.: We talk about them a great deal to our investors and biggest customers. Indeed we sometimes have very lively meetings, because some of them think it’s not enough to respect local regulations. But we actually go further. They don’t always understand that a banker can have such stringent requirements. However, it’s quite hard for us to tangibly illustrate the link between banks and environmental protection to the general public. In France, our fellow citizens are generally interested in banks’ social utility, given that the environmental aspects of the projects we finance are already very tightly regulated.
Siamese Rosewood is a trafficked commodity that generates huge black-market revenues. The rangers of Thailand’s national parks are waging a war against mafia gangs to save it from extinction.

BY ANN & STEVE TOON
WINNERS OF THE 2013 TERRE SAUVAGE-MELVITA NATURE IMAGES AWARDS GRANT
THE FOREST COMPLEX of Dong Phayayen-Khao Yai covers more than 6,000 sq km. With its heavy annual rainfall, it is a vital watershed for Thailand.

WATERFALLS and streams, richly diverse flora and fauna, and spectacular wooded landscapes are the hallmarks of this complex.
A red mud track cuts a single thin line between two impenetrable walls of dizzyingly tall, dark forest. We’re penned in on each side by a twisted, tangle of damp undergrowth.

Huge trees, fighting to break free from the stranglehold of snaking vines, reach skyward. Way up in the canopy their leaves greedily steal our daylight.

Down here at ground level it’s sticky, oppressively hot and claustrophobic. Thousands of tiny, prickly grass seeds like small, sharp spears have planted themselves in our socks and trousers while ravenous mosquitoes have begun feasting on our arms. The maddening buzz of cicadas in our ears is broken by strange hoots, screams and ear-piercing screeches. We’re told they’re the calls of gibbons and forest birds, but we can’t see anything. Handfuls of butterflies, some the size of small birds, dance around the forest edges, their wings edged with neon blues and acid yellows. This richly-green, densely-vegetated, seemingly endless forest landscape is awe inspiring and beautiful, but it’s also eerily forbidding and alien.

We’re deep in the Dong Phayayen-Khao Yai Forest Complex, a UNESCO World Heritage Site comprising five national parks and more than 6,000 sq km of rugged tropical forest in the east of Thailand, stretching to the Cambodian border. It’s an internationally important biodiversity hotspot, home to many threatened and endangered species, including Asian Elephant, Siamese Crocodile and Banteng, and a vital watershed for five of Thailand’s major rivers.

Today we’re looking for signs of one creature in particular. Eric Ash of the Thai-based anti-wildlife trafficking organisation Freeland Foundation has invited us along to check some of the camera traps he’s placed along the forest trails. The monthly task is a highlight for him; his excitement is palpable as, before even reaching the first camera, we find a perfect tiger pug mark on the wet earth.

Soon we’re poring over his computer, flicking through images caught by the first camera. We’re amazed at the sheer wealth of wildlife that shows up: Leopard Cat, Pig-tailed Macaque, Large-spotted Civet, Dhole, Hog Badger, Elephant, Asiatic Black Bear. And tiger. A huge, muscular male fills the screen. Eric checks the stripe pattern. “This is male number two...”

CAUGHT IN THE ACT

He’s not alone. Over the next couple of days we check a dozen or more cameras, identifying five individuals. Only a few years ago some conservationists dismissed suggestions that the area could still harbour tigers, but Freeland’s research has proved that far from locally extinct, there remains a significant population of these elusive Indochinese tigers living deep in these forests.

Freeland’s cameras not only provide valuable information for Thailand national parks about the endangered species and wildlife that exist here. In recent months these camera traps have shed light on an altogether more sinister and deadly forest secret. It’s the reason we’re accompanied everywhere by an armed forest guard. For these forests have become a war zone. Gangs of armed criminals are laying siege to the forest in search of a natural commodity that fetches hundreds of thousands of dollars on the international black market. It’s not the tiger they’re hunting out, but a tree.

The tree in question is the Siamese Rosewood (*Dalbergia cochinchinensis*), a rare forest hardwood with a distinctive red-coloured timber that for centuries has been sought after for the manufacture of highly-prized furniture and religious statues in China. In recent years, as China’s affluent middle class has rapidly increased, there’s been a boom in demand for high status reproduction ‘Hongmu’ rosewood furniture. A single chair can sell for $1 million, and the price of Siam rosewood has correspondingly skyrocketed, reportedly fetching as much as $100,000 per cubic metre. In just a few years the forests of Laos, Cambodia and

“We saw the number of poachers in the forest increase by 950 per cent in three months!”

...
Vietnam have been virtually stripped of rosewood, and the poachers have turned their attention to Thailand.

Since 2008 Thai forest parks have seen a steady escalation in poaching, with the last two years reaching crisis proportions. Poaching gangs with as many as one hundred men, mainly Cambodians who cross the border illegally, often paying off border officials, are guided into the park by local Thais. They are armed with chainsaws, motorcycle wheels with which they improvise hand carts to carry out the wood, and weapons – anything from home made shotguns to AK47s. The felled timber is cut into rough planks, carried to the edge of the forest and loaded into vehicles, often adapted with hidden compartments, to be smuggled back across the border and ultimately to China.

“We saw from our camera traps that the number of poachers in the forest increased by about 950 per cent within the span of a three month period,” Eric tells us. “The poachers are financed by large criminal organisations. They also poach local wildlife for food, and clear large areas for their camps: if we can’t protect the Siamese rosewood, it’s going to have significant implications for some of the other endangered species in the forest complex.”

**RAPID RESPONSE**

Faced with these large, armed gangs, the park’s anti-poaching rangers are outnum-bered, out-gunned and out-resourced. In the past two years several rangers have been wounded in confrontations with poachers, and one has been killed.

To rebalance the odds, Freeland Foundation applied for and received a grant from SOS Save our Species, to build on the work they were already doing in training and equipping rangers. “We reached out to SOS Save our Species for an emergency rapid response project to increase the capacity of the park to interdict some of these large poaching groups,” explains Eric. “This included a training programme to improve the skills of the rangers, providing equipment and field provisions, and implementing park-based monitoring systems, so they can understand the problem a bit more and coordinate resources to go after the poaching groups more efficiently. We’ve also engaged with other government organisations so that they are brought in and they can exercise their mandates to go after poaching groups and criminal organisations.”

At a substation in Thap Lan national park, Sayan Raksachart, a long-serving ranger who now works for Freeland doing community outreach work, shows us the fruit of the anti-poaching units’ recent endeavour. It’s a ghostly timber yard of confiscated rosewood logs and rough hewn planks, marked with individual case numbers, heavily fenced with barbed wire. There are hundreds of motorcycle wheels, a shed full of chainsaws and outboard motors (some poachers smuggle timber across a lake that adjoins the park), and a parking lot with two dozen confiscated vehicles: clapped out pick-up trucks, minibuses with tinted windows, even an old school bus. Sayan points out how the insides of vehicles have been completely stripped so the felled rosewood can be smuggled out. Two cool boxes in an innocent-looking mobile grocery van have been customised to hide the illegal wood. The tons of timber represent seizures from only the last two years – and this is only one of several evidence stores that we see over the next few days. We start to appreciate the sheer scale of this poaching epidemic.

We’re interrupted by the arrival of a truck, loaded with rangers, rosewood and three freshly apprehended poachers. They are bundled out and made to squat on the

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**CHAINSAWS, outboard motors and motorbike wheels used by the poachers are seized, as are chopped-down tree trunks.**

**THE PRECIOUS**

Siamese Rosewood (*Dalbergia cochinchinensis*), considered sacred by the Chinese, is subject to illegal, deadly logging in Thailand.
HEAVILY ARMED, the anti-poaching patrols wage a merciless war against the traffickers and sometimes manage to catch them (below).
AFTER ARRESTING the poachers, the rangers unload the rosewood that they have just confiscated.
REPORT SIAMESE ROSEWOOD

The largest rosewood trees have mostly already vanished, and poachers are resorting to digging up roots!

ground, humiliated, as we take photographs. Two are just teenagers and it’s hard not to feel sorry for them. These are the people taking the risks, but they’re not the ones making big money. Rosewood poaching has close ties to the illegal drugs trade: many of the poachers are addicted to “yaba”, a methamphetamine/caffeine cocktail, and some are even paid in the drug. Taking it gives them the energy to work all night in the forest hauling the timber out.

At Thap Lan park headquarters we meet ranger team leader Chaloaw “Doi” Kotud, who has worked in the park for 20 years. He’s wearing a cool khaki photo-vest with Korean lettering that he snaffled from a poacher he arrested and a camouflage face mask he wears rolled up on his head. You wouldn’t want to mess with him. “The most important thing the rangers doing this job need to have is heart and passion and they need to be fully prepared to sacrifice themselves for the job,” he tells us.

During our time in the forest we speak to many rangers about the dangers they face and why they would do such a job. They remind us of the anti-poaching rangers we’ve met in South Africa, protecting rhinos. Quietly spoken, determined men, doing a dangerous job with limited resources and little thanks. Every one of them expresses their gratitude for the training and equipment provided through Freeland and SOS – Save Our Species: they talk of improved morale and self confidence, better patrol tactics for apprehending large gangs, the value of GPS and compass training, rangers’ lives saved.

Most are optimistic that they will ultimately win this bloody war with the poachers. But will it be too late for the Siamese Rosewood? Already the largest rosewood trees have all but vanished from the forests, and poachers are resorting to digging up roots. It will be 50 years or more before the surviving saplings mature into the forest giants that are now so rare. Tougher sentences for poaching, some recent success in seizing the assets of criminals higher up the chain, a promise from Thailand’s military government to clamp down on corruption, reinforcement from the army - these are all encouraging signs for the future. But the poachers are already turning to other rare hardwood species to meet the insatiable demand from China.

Before leaving Thap Lan, park superintendent Taywin Meesap tells us he has an important message for the Chinese. “Many Chinese believe Siam rosewood is a holy tree. That’s why they want to have furniture made from it in their house, because they believe it will bring luck to their life,” he says. “I want to tell them this rosewood is not holy, it will not bring luck to their life, because this rosewood is obtained through the lives of rangers and criminals. It is wood that is stained through with blood.”
CONSERVATION: HOW YOU CAN HELP

Each one of us can take action to brighten, or at least not darken, the future of threatened species, whether they live in France or beyond. Here are some avenues to explore. BY ETIENNE HURAULT

Be a smart consumer...

BY SELECTING YOUR EVERYDAY PURCHASES
• Prefer woods that are grown locally and/or carry the PEFC or FSC labels (the latter’s more stringent) that guarantee sustainably managed forests.
• Avoid products containing palm oil: its production is the main factor driving forest clearances in Southeast Asia, home to the Sumatran Orangutan, Elephant and Tiger.

BY BEING A RESPONSIBLE TOURIST
• Don’t buy just anything. Before purchasing an animal, plant or by-product, check whether the species in question is protected by CITES (the convention on international trade), which regulates border transit of more than 30,000 wild species threatened with extinction. If it is, demand a CITES permit, the only document that proves the sale is legal. If in doubt, don’t do the deal! cites.ecologie.gouv.fr or www.wwf.ch/souvenir
• Watch whales respectfully.
In France, this is only assured by operators who display a label (High Quality Whale Watching in the Mediterranean, and O2CR in Reunion Island) or have signed a charter (they operate on the islands of Guadeloupe and Mayotte, and in the Iroise Sea off Brittany).

Contribute to the Red Lists...

BY TAKING PART IN A PARTICIPATORY SCIENCE PROGRAMME
Whether you’re a novice or an expert, your biodiversity observations are precious… as long as you share them with the scientific community! Collected data, which offer insights into how species populations change in space and time, are useful in helping produce the IUCN Red Lists. The best-known programme in France is Vige Nature (“Nature Watch”), developed by the National Museum of Natural History (MNHN), which includes monitoring of common birds over time, a bat observatory, and a flower watch. vigienature.mnhn.fr

Help a nonprofit...

BY PUTTING YOUR PAWPRINT ON THE FOLLOWING PETITIONS
• “3 200 tigres”: to help the World Wildlife Fund double the current global tiger population by 2022, a commitment made by the 13 tiger range countries in 2010. 3200tígres.wwf.fr
• “Le pangolin n’a rien à faire dans une assiette”: launched by French nonprofit Sauvons la Forêt to save the Pangolin (aka the Scaly Anteater) family from poachers who hunt them for food. www.sauvonslaforet.org

BY MAKING A DONATION
• To IUCN: enable it to reach the milestone of 160,000 assessed species, or help it develop conservation projects via SOS – Save Our Species. 50.iucnredlist.org and www.sospecies.org/fr
• To Aves France, which supports two nonprofits in Ecuador: AmaZOOnico, which manages a refuge for wild animals, and Andean Bear Foundation, which runs a study and rehabilitation centre for the Spectacled Bear. aves.asso.fr
• To France’s Bird Protection League (LPO), active in conserving the Atlantic Puffin, and, in mainland France, the Comorake. This body also works in French overseas territories, which host more endemic birds than all of mainland Europe. www.lpo.fr
• To Awely, which specialises in resolving human-wildlife conflicts in Africa and Asia. www.awely.org
• To Noé Conservation, for its international programmes. www.noecconservation.org

BY ADOPTING AN ANIMAL
• Giant Panda, Common Chimpanzee, or one of three other WWF protégés. www.wwf.fr
• A gibbon taken in by nonprofit Kalaweit in Borneo or Sumatra. www.kalaweit.org
• A Hermann’s, African Spurred, or Radiated Tortoise taken in by nonprofit SOPTOM in southern France, Senegal or Madagascar. www.villagetortues.com
• A Yellow-Tailed Woolly Monkey, a Great Green Macaw and 15 other species are tracked closely by nonprofit CoEco and its partners. www.coeco.asso.fr

BY LENDING A HAND
• Help French shepherds to protect their flocks from the Grey Wolf in the PastoralLoup programme. Or promote acceptance of the Brown Bear in the Pyrenees via the “Bears’ Voices” programme set up by Ferus. www.ferus.fr
• Protect the Fin Whale, the Utila Spiny-tailed Iguana, the Leatherback Turtle, the Tapir, and more… Find a species for you among the eco-volunteering missions on offer worldwide with the nonprofits listed below. www.participefutur.org; www.apasdeloup.org; www.planete-urgence.org; www.cybelle-planete.org
Safe in the saddle
CUSTOMISABLE DANDY HORSE
BY NATURE & DÉCOUVERTES

Very much in vogue, this pedal-free bike helps tots (aged three and over) to find their balance on two wheels – and avoid the need for rollers later on. The one sold by Nature & Découvertes stands out with its retro wood build (wheels excepted). Even so, the seat is adjustable (three positions) and, best of all, it can be customised. Get the kit as well (screw-on and stick-on accessories, for an extra €19.95) and jazz up the design: red with white polka dots, motorbike, Vespa or cow.

Price: €69 - www.natureetdecouvertes.com

Hot on their trail
ANIMAL PRINT GUIDE
BY THE LPO

Do prints in mud or snow leave you scratching your head? Then pull out your print guide, fan out, place the transparent cards directly on the ground, and compare! Handmade in France, this handsome leather item helps you identify 17 wild animals – mainly forest/mountain mammals. Another design, devoted to birds (20 tracks categorised by habitat type), is also available from the online shop of the LPO, France’s bird protection body.*

Price: €32 each - www.lpo.fr
* Profits go to fund the charity’s work.

It’s your turn!
DEFIS NATURE / CONTINENTS
BY BIOVIVA ÉDITIONS

This enhanced version of the card game war looks fairly basic, but don’t be fooled. Available in three versions (Asia, Americas, and Africa), it lets children (aged 7+) discover the animals of these three continents and their conservation status, while having plenty of fun. To win the game, players bet on the species’ strong points out of five biological characteristics (length, weight, lifespan…) and try to turn the tables with the help of the threatened species. Simple, instructive and enjoyable!


Nice and seedy does it
HANGING FEEDER
BY HAMIFORM,
AT BOTANIC

While nice and snug at home, spare a thought for those of our feathered friends which haven’t flown south for winter. This elegant hanging seed feeder, in black metal andplexiglass, will do the trick. Common birds are sure to be regulars. And if they’re round and about, other species – such as coal tits, Eurasion tree sparrows, Eurasion bullfinches and other threatened passerines – will soon pay a visit! Just be sure to remove the feeder in early spring, after the last frosts.

Price: €31.90 - boutique.botanic.com

Looking at nature
BUDGETING FOR BINOCULARS

It’s Christmas, so why not give someone else (or yourself) a treat. But what price-tag should you be looking at? It’s tricky, because the models on offer range so widely – from 50 to... 3,000 euros! For occasional observation – such as a bit of annual boat-gazing at the Semaine du Golfe du Morbihan festival, in Brittany in May – €300 for a pair sounds very reasonable. Conversely, demanding and/or regular users, especially if weather or light conditions are poor, are unlikely to derive much satisfaction without high-grade gear. But to get quality, you’ll need to splash some cash. There’s a whole set of criteria – lens and objective cutting precision (their dimensions and surface must be perfect) and treatment (vacuum applied corrective microlayers); the use of materials that are lightweight yet resistant (to pressure, temperature differentials, water…) or more eco-friendly (bye-bye, lead); the assurance of real know-how (for optics, Europe’s best) or good after-sales service – that justify higher prices, often hundreds of euros more than a pair that look identical on paper but deliver inferior performance.

* From 13-19 December, Swarovski Optik is staging a digiscoping exhibition in its gallery (9, rue du Faubourg Poissonnière, 75009 Paris, 11am-6pm). Exhibits will include the winning photos from the last four international digiscoping competitions. Invitations to the opening (12 December, 8pm) are available by request: info@swarovski-optik.fr

Price: €19.95
Were you ready to “accept the improbable”? To be filled with wonder at “the overgrown elegance and monumental complexity of virgin forests”? To regret that deforestation is the prerequisite of our civilisation? To understand that “the biggest trees that the world has ever seen have been kept for the end, for us”?

If you are ready for all of this, then embark on this book’s adventure! You will discover the Queen Charlotte Islands, off British Columbia: by virtue of the wealth and originality of their landscapes, they are the Canadian Galapagos; but, beautiful yet devastated, they also show “this part of the world before the Europeans came, and a glimpse of what the future could look like”.

With the Haida people, who inhabit this place where “everything is myth”, you will love the golden tree which “raises the temporal towards the divine”, and you will weep like “one of our ancestors”. You will weep because, in 1997, Hadwin, a logger and tree lover, despaired by their destruction, had wanted to raise the alarm about “the abominations towards nature, the only tree on the continent capable of uniting natives, loggers and environmentalists, not to mention scientists, foresters and ordinary citizens, in sorrow and outrage”. With his act, Hadwin, a logger and tree lover, drove to its end, for us...

The photo on page 12 of this issue is taken from the book.

JOHN VAILLANT

**ENFANT D’ÉLÉPHANTS**
Prajna Chowta and Stéphanie Ledoux, Elytis édition, €23

“The elephants could fly wherever they wanted, according to the legend.” Born among them, “the wise man Palakapya fed on the same plants, and drank from the same springs, as if he were one of them.” Inspired by this wise man, the author, an Indian woman, settled in the forest in the south of her country: she engaged with his culture and lived with the Kurubas people, amid the elephants. Alone at first, then with her daughter, Ojas. With this narrative, illustrated by Stéphanie Ledoux’s amazingly powerful and beautiful watercolours, the book – for children and adults – celebrates the elephants, the forest and its inhabitants. But will Ojas have to leave again, and rejoin the human society that her mother had wanted to leave behind?

**À LA RECHERCHE DES FÉES DES FLEURS**
 Cicely Mary Barker, Gründ, €20

Here’s a book that is not meant to be leafed through or skim-read. But then again, is it actually a book? When you open it, nature spreads out in three dimensions, “for real”, as children say! You take a stroll in the treetops, where “fairies often choose to hide their homes”. You will discover the rich profusion of plant life where they conceal themselves. In the garden, you will breathe the flowers that they imitate to “fly about as they please, without being seen”. Alongside the path you’ll count butterflies, without imagining that they are in reality fairies “whose wings are reminiscent of butterflies”. And in the marshland, you will gain access to their hallowed place. Read this book – and never again doubt that fairies exist!

**AU NOM DU VIVANT**
Robert Barbault, Éditions Buchet/Chastel, €14

A young philosopher recently explained that his studies had taught him that there is no such thing as nature: only man exists. A woman politician was saying that her colleagues could not accept that humans and nature are interdependent – they found the notion humiliating! What a pleasure it is, in this “plea to reconcile man and nature”, to be re-acquainted with the clear, simple tone that you used in your writing, Robert. Your argument is full of convincing examples that show us nature does indeed exist, that we are an integral part of it, and that it is “the very foundation of our existence”. You remind us of Élisée Reclus’s words: “Man is nature growing aware of itself”. To us, you still seem very much alive...

**JURA AU FIL DU TEMPS**

A wild cat advancing amid falling snow: the cover photo is well chosen. It invites you to discover the pictures of a contemplative young photographer who loves the Jura, his home region. In this, his first book, Guillaume François lays bare his wildlife encounters and the beautiful landscapes of a discreet and rugged land. An author to keep an eye on. The foreword is by photographer Michel Loup, a connoisseur of the region. *The photo on page 12 of this issue is taken from the book.*
Madeira
Pearl of the Atlantic

You’ve finally reached the top of Pico Ruivo, at nearly 1,900 metres altitude, the highest point of the imposing ridge that stretches across the island of Madeira. On the horizon, all is calm and the view is clear: several hundred kilometres separate you from the Canary Islands, the nearest inhabited land. You decide to walk back down along paths on the levadas, ancient irrigation canals that drain the island’s hillsides. These small cobbled waterways gradually lead you, through the mist, into a very old forest of laurel and tree heathers. As you pass, handsome Trocaz Pigeons (Columba trocraz) take flight. They are endemic to the island, as are the glimmering gold streaks in the undergrowth: Madeira Firecrests (Regulus madeirensis), their heads ringed with gleaming crowns.

Back in Funchal, the capital, you are greeted by the clamour of a festival day. And multi-coloured parades stream through the main avenues, acclaimed by the crowd’s applause: it’s carnival time. And your feeling of wonderment is just beginning...

*Peaks, levadas and wild coastline* trip, 8 days, with the Chamina-Voyages agency, from €995.
More details: www.chamina-voyages.com / +33 (0)4 66 69 00 44.

France
The Languedoc highlands on a donkey

Winter is closing in, and you’re already thinking about your next summer vacation, in the heat of a dazzling sun. You yearn for the great outdoors, and hikes through the herby fragrance of garrigue scrubland. But the mere thought of carrying a pack brings you out in a sweat...

Help is at hand: the Balladanes agency provides you with exceptional porters – strong-minded, for sure, but ever so kind, and with soft hairy ears. Yes indeed: they are donkeys, those magnificent members of the Equidae family, smart yet stubborn, which have been man’s companions on trails for a very long time. You’ll head off into the Upper Languedoc Regional Park, south-west France, between Cahors, Béziers and Millau. Wander the Black Mountains, the Upper Orb Valley, the Héric Gorge and Douch, its ghost village. The park’s forests are home to a wild community of Common Genets (Genetta genetta), Long-fingered Bats (Myotis capaccinii), and rare Spanish Pond Turtles (Mauremys leprosa). And the donkeys, once relieved of their packs and fed, will stand guard for you overnight.

*The grand crossing* bivouac trek, 3 possible packages (5-7 days), with the Balladanes agency, from €400 per adult.
More details: www.balladanes.fr / +33 (0)4 67 23 10 53.
**United States**

**All that jazz in Louisiana**

From New Orleans to Baton Rouge to Lafayette, you’ll travel in a jazzy atmosphere as you explore Louisiana with Terres d’Aventure. Welcome to this former French colony: along your way, some of the Americans you’ll meet are Cadiens, or Cajuns, and will speak an old French lingo that you’ll struggle to understand. The beguiling atmosphere begins with the cooking: gumbo, jambalaya, sauced stews, shrimp and grilled meat cuts. Meals segue into music, and each year several celebrations, including the famous Mardi Gras, punctuate people’s lives in this vast delta formed by the Mississippi’s meanders. The bayou wetlands and their cypress trees, over a hundred years old, are the roots of old local legends. But it’s after nightfall that you’ll have your most enjoyable encounters. The fleeting glimmering of an alligator’s eyes; a twitching branch bearing opossums; and then, right beside you, a rustling bush – it’s a Nine-Banded Armadillo doing the rounds.

*“Rhythm ‘n’ Bayous” trip, 10 days, with Terres d’Aventure, from €1,010. More details: www.terdav.com / 0 825 700 825.*

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**France**

**Studying cetaceans as an eco-volunteer**

Are you a big fan of wildlife documentaries? Well, now you’re in one! You’ll push off from the Côte d’Azur on board one of the yachts operated by a charity called Cybelle-Planète. Alongside an eco-guide, a skipper and a team of eco-volunteers, you’ll help to conduct a scientific study of cetaceans. Your job is to count all the animals you see, focusing on the marine species. This will refine the knowledge we possess about cetaceans, thus enabling us to better protect them. You’ll sail in the Pelagos Sanctuary, a protected area of sea that stretches from the Giens Peninsula in France to Fosso Chiarona in Italy, and also encompasses Sardinia. It’s home to a remarkable ecosystem.

This wonderful adventure will involve extensive observation of iconic Mediterranean species: the three species of Dolphin – Short-beaked Common, Striped, and Risso’s (*Delphinus delphis, Stenella coeruleoalba, Grampus griseus*); the mysterious Cuvier’s Beaked Whale (*Ziphius cavirostris*, which lives in deep waters, below 1,000 metres); the Long-finned Pilot Whale (*Globicephala melas*), all three handsome tons of it; and the imposing Sperm Whale (*Physeter macrocephalus*); and – the highlight of your trip, if you’re lucky enough to spot it – the Fin Whale (*Balaenoptera physalus*), a cool 22 metres in length. And that’s not to mention the sea birds, the Mediterranean Monk Seals (*Monachus monachus*), the jellyfish...

*Cetaceans and biodiversity in the Mediterranean*, 7 days, with Cybelle-Planète, from €1,100. More details: www.cybelle-planete.org / +33 (0)4 67 60 30 15.

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**India**

**Yoga, beaches and butterflies**

To truly understand a discipline, nothing beats journeying back to its origins. This certainly applies to yoga – and also to India, with which it is inextricably linked. With Vision Éthique, you head off in the company of Didier Dozias, a qualified teacher with the French Yoga Federation (FFY), to the small towns of Munnar and Varkala, in Kerala state. The setting, akin to paradise, will deeply influence your meditations. To clear your mind, take advantage of the quiet beaches and the surf. Or wander the terraces of tea plants, absorbed in your thoughts. Or seek quiet contemplation in one of the millennium-old Hindu temples dotted here and there. But if the call of the wild grows irresistible, you’re never far from one of the famous backwaters, expanses of lagoons and mangroves that host rich biodiversity. You can also go for a trek in Eravikulam National Park, where 85 species of butterfly await you. And 33 species of reptile too – but don’t expect them to give you a massage...

*“Back to Yoga’s Roots”, 13 days, with Vision Éthique, from €1,380. More details: www.vision-ethique.com / +33 (0)6 50 71 66 41.*

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**VOYAGEZ NATURE**

**OIE IN BULGARIE**

31/1-1/2

€ 1380

**LOUPS IN BULGARIE**

7-14/2

€ 1380

**BALEINES IN BASSE-CALIFORNIEN**

6-20/2

+/- 4900

**SUR LA PISTE DU TIGRE IN INDE**

27/2 AU 19/3

3850

**JUNGLLE, VOLCANS IN GUATEMALA**

20/2 AU 15/3

3850

**MIGRATION IN BULGARIE**

11 AU 18/4

+/- 1380

**RAPACES IN ESTREMADURE**

18 AU 25 /4

1380

**LES MIGRATEURS DE LESBOS**

19/4 AU 26/5

1650

**AIGLES, PYGARGUES IN CROATIE**

25/4-2/5

+/-1180

**LE LYNX IN SIERRA MORENA**

26/4-3/5

1195

**ET PLUS**: Pologne, Hongrie, Port leucate, Cantabriques spécial ours, Maures, Bresse, Vercors ...

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contact@nature-terroir.com

**N°311 Terre Sauvage 97**
A

nimal and plant species are threatened by extinction. Biodiversity is tending to diminish, through a sort of entropy that is so depleting the world that it will ultimately be handed back to us like an apartment wrecked by dastardly kids. For it is well established that we humans are, at best, not at all to blame; or, at worst, bear complete responsibility. What is disappearing is the beauty of the world, and even the possibility of surviving in it, because, among other effects, we are at the same time exhausting our energy reserves. We’ve been told this ad nauseum—it’s certainly one of the most constant themes in our daily life, and you cannot turn on your computer without one of your correspondents sticking in your face a slide-show of coral dwellers so beautiful that, right from the first picture, you know it won’t end happily. And so, once the last clownfish has taken refuge in the last sea anemone, written across the screen will be the terrible accusation that you, with your irresponsible behaviour, are the one who is destroying so many wonders. We are saturated by this message; it is surely necessary; and some effects are starting to take shape. But it is also pretty inadequate.

FOR HERE IS ANOTHER MYSTERY: this issue, the most serious and complex of our age, is extremely well known and widespread (albeit with the inevitable parade of negationists), yet it is not at the top of the media agenda, which is one thing; and nor is it top of the public agenda (especially in parliament), which is quite another. How is this so? Why do the books currently selling in the hundreds of thousands not address this issue? Why do political parties, which even in their names affirm that their purpose is to take an interest in these matters, not do so—or, if they actually do, take such an oblique interest that they are pitiful to listen to? It’s all the more despairing because most decision-makers in civil society are not any better equipped to address the environment issue; and because explaining to a business chief that this is today’s big issue often prompts such courteous bafflement that it calls to mind a hen finding a knife, or a coati when asked what it thinks about remarkable identities. The cause is the same: instruments to grasp the issue are entirely lacking. Nothing, in how a company operates, provides a handle merely to understand what it is all about. And that is just one case among many.

I KNOW THREE FORMS of rationality at work in our world. First, instrumental rationality: this provides the indivisible link between a cause and its effect, and has presided over the deployment of modern technology. For a very long time (since 6 August 1945 in Hiroshima, let’s say), this rationality has been criticised by those terror-stricken by technicians’ immoderation. Next, communicative rationality: this holds a proposition to be true when “different participants overcome their initially subjective views” because they attribute “the rationality of an expression to its ability to be critiqued and justified.” It is this rationality that has ensured the success of politics and democracy, but it stumbles on the ecology block. Finally, hermeneutic rationality: this knows that “simply by understanding, one understands differently”; and that distance, be it cultural or temporal, “is therefore not an obstacle to be overcome.” It is this rationality that helps us understand other cultures without yielding to either Eurocentrism or to the explosion of meaning. An immense, incredible, thrilling challenge awaits: we must invent a new form of hermeneutic rationality to escape both anthropocentrism and the exaltation of nature without man. It cannot be detached from spirituality—and Terre Sauvage is in the vanguard.

(1) A French expression – Translator’s Note.
(3) Ibid.
(5) The Bayard group, which owns Terre Sauvage, started out as a religious publisher in the 1870s and still is today – Translator’s Note.

ET AUJOURD’HUI,
QUE SE PASSE-T-IL
SUR TERRE ?

ZOOM ON EARTH
by Disney nature

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ET ORDINAIRES DE NOTRE PLANÈTE

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