

A detailed illustration of an adult orangutan and a young orangutan in a lush forest. The adult orangutan is on the left, looking towards the right. The young orangutan is on the right, looking up at the adult. They are surrounded by green leaves and brown tree branches.

ATLAS *of Endangered* ANIMALS

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ATLAS *of Extinct* ANIMALS

Albatros

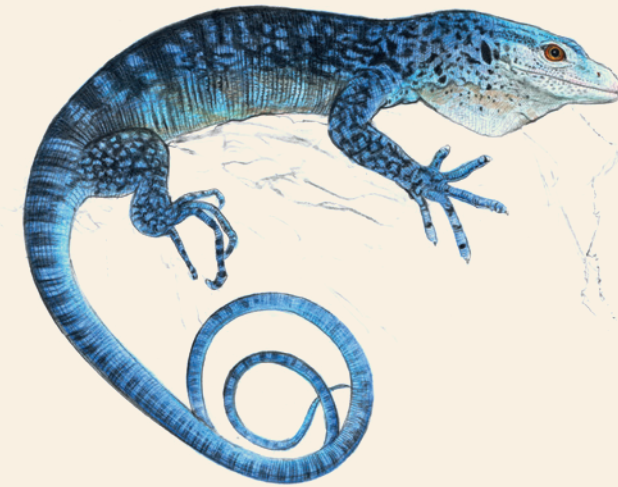




THE KOMODO DRAGON

Varanus komodoensis

Blue tree monitor—one of the smallest monitor lizards



The Komodo dragon—adolescent



The Komodo dragon—a newborn in an egg



OCCURRENCE: *Lesser Sunda Islands*

Practically everyone has heard of Komodo dragons. Allegedly, there is an island inhabited by large reptiles with poisonous breath... In fact, these are not mythical creatures, but real animals of flesh and blood. The largest and mightiest lizards of the contemporary world.

They are named after the Indonesian island of Komodo, but they can also be found in the other four adjacent islands on the Lesser Sunda Islands. The Western world discovered them only in 1912, when the Dutch biologist Peter Ouwens published a paper on a topic based on the observations and trophies of Lieutenant Jacques Karel Henri van Steyn van Hensbroek, who had been appointed to examine reports of local dragons two years earlier. For a long time, scientists attributed the large size of Komodo dragons to "island gigantism," in which animals, on islands like Madagascar and New Zealand grow larger than their mainland relatives. Recent research, however, suggests that they are a relict population of Australian megafauna from the Quaternary, which means that monitor lizards, as such, appeared about a million years ago. Their much larger relatives once inhabited extensive areas and in Australia, for example, could have been encountered by the first human settlers, who subsequently contributed to their extinction.

The largest specimens of this species can be 7 to 10 feet long and weigh over 330 pounds. They feed on various animal food, including carcasses. They sometimes venture to hunt deer or buffalo, and humans have even been attacked in the past. The Komodo dragon is a surprisingly swift hunter and kills its prey using its sharp teeth, taking

advantage of its enormous weight. It was long unknown that this lizard has another weapon—the venom contained in its saliva. These animals like swimming, they can even swim from one island to another. They are able to eat food corresponding to 80 percent of their weight in one sitting, which is impressive, indeed. Moreover, Komodo dragon skin is reinforced by extraordinary scales that function as a sort of natural chain mail. Due to its considerable predacity, young Komodo dragons actually climb up trees to protect themselves against other members of their own species.

Such fascinating animals could not escape human attention for long. After Ouwens published his paper, trophy hunters invaded the island, causing massive slaughtering. Fortunately, the Dutch administration quickly realised the imminent danger of extinction and adopted the first measures to protect Komodo dragons in 1915. The American expedition of 1926, which brought several trophies and two live Komodo dragons to the United States, inspired the famous film *King Kong*. It is therefore unsurprising that Komodo has become a popular destination for thousands of tourists from all over the world. In order to preserve it, Komodo National Park was established in 1980, but the extent of tourism was so enormous that the unique biotope was jeopardised.

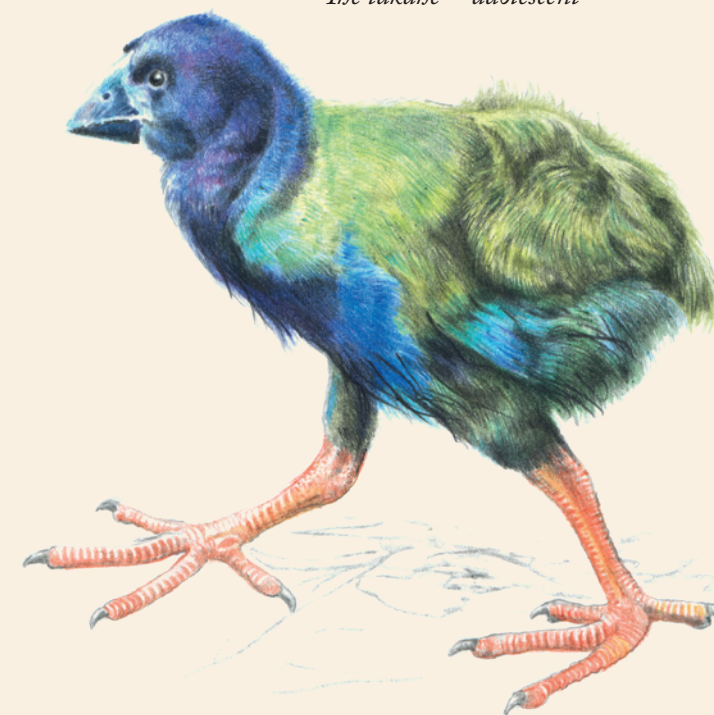
The Indonesian government therefore considered closing the entire island for visitors in 2020. They eventually abandoned the idea, but an entrance fee of \$1,000 is now charged. This is undoubtedly a reasonable decision, as it is estimated that no more than 500 Komodo dragons are living in the wild today.



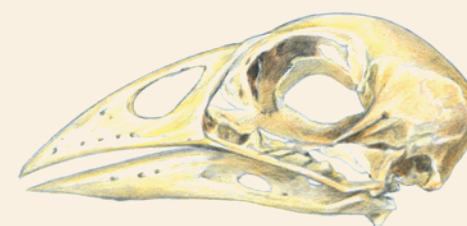
TAKAHĒ

Porphyrio hochstetteri

The takahē—adolescent



The takahē—fossil skull



Weasel—predator



OCCURRENCE: *New Zealand*

Birds of New Zealand are not only remarkable but also endangered. The takahē holds a special record among New Zealand fauna: it was considered extinct for an incredible 50 years.

The takahē, which is the Māori name for this bird, is the largest member of the rail family—being up to two feet long. Much like other New Zealand birds, it has lost the ability to fly. Its body is covered with dark plumage with a blue-green gleam. It has conspicuous red-colored legs and a powerful beak. It inhabits alpine grassland with tufts of grass, which form the main component of its diet.

Fossil records prove that it once inhabited both the North and South Islands of New Zealand. Based on fossil findings from 1848, it was presumed to be another extinct species like the moa. Two years later, a group of sealers hunted and subsequently ate a quick-running, flightless bird on the South Island. They kept its skin, based on which the bird was identified as a new living bird species. Several more specimens were hunted later, but findings were scarce. It was thus considered an extinct species as of 1898. The causes of extinction were obvious: competition for food due to imported cervids and the introduction of predators, such as weasels.

The takahē was rediscovered, however, by the New Zealand doctor and adventurer Geoffrey Orbell. In 1948, an expedition led by him discovered a small population of this species in the New Zealand Alps on the southern tip of the South Island. A challenging rescue program could begin—in particular, the population had to be protected from external influences. Individuals bred in fenced territories were then gradually released on small islands without alien mammals. In the 1980s, there were no more than a hundred of these birds left, but thanks to rescue measures, the number is progressively increasing. The steps have been successful to such an extent that a second wild population of takahē was established in the Kahurangi National Park in the north of the South Island in 2018. Today, there are more than 300 takahē in total.

You can currently take a closer look at two specimens of this species in the urban sanctuary Zealandia on the edge of Wellington. They serve as living proof that the efforts of rescuers make a difference. For that matter, New Zealand has undertaken to eliminate non-native predators on the largest islands by 2050. If this plan succeeds, unique local animals have a chance of surviving.



THE WHITE-TAILED SABREWING

Campylopterus ensipennis

The giant hummingbird



The bee hummingbird



Mantis religiosa—predator



OCCURRENCE: *Tobago and Venezuela*

Thanks to their brightly colored feathers, hummingbirds are nicknamed flying jewels. In many ways, they are record holders of the bird kingdom, so it would be a shame if their numbers in nature decreased. Due to their variability, though, we do not even know exactly how many species there are.

Hummingbirds form a separate family that currently exclusively inhabits the American continent. According to recent discoveries, however, hummingbirds actually once inhabited the Old World—as evidenced by the adaptation of some local plants to pollination by hummingbirds and by unique palaeontological findings. The uniqueness of hummingbirds lies mainly in their special flight mechanisms, as they are the only birds that only use the strength of their muscles and wing movements to fly. All other birds rely heavily on gliding. Hummingbird wings run on a similar principle as state-of-the-art helicopters but are still much more powerful. They can fly backwards, sideways, or hover in place for a long period of time. They are persistent and extremely fast pilots that actually take the place of butterflies in many ways—and it is unsurprising that even predatory mantises sometimes feed on them.

There are currently approximately 330 recognized hummingbird species. The position of the smallest bird in the world is occupied by the bee hummingbird from Cuba, which is about two inches long, while the giant hummingbird measures about eight inches. An organism as perfect as the body of a hummingbird requires a very fast metabolism driven by a heart whose rate can reach as

high as 1,260 beats per minute. Their way of life is perfectly adapted to collecting nectar from flowers, which, unfortunately, also poses a potential threat to them. Hummingbirds are dependent on specific species of plants, and these plants are also dependent on them. Nectar does not, however, provide the necessary nutrients, so hummingbirds occasionally feed on insects. Unlike insect pollinators, hummingbirds can discern the color red, so it is red flowers they are attracted to.

Those that inhabit the Caribbean islands are especially endangered. The loss of native plant species poses a risk, especially to dietary-specialized species from mountain forests. Additionally, island bird species are generally known to be more vulnerable. Among the most endangered species are the white-tailed sabrewing inhabiting the Caribbean island of Tobago, as well as a small piece of land in Venezuela. This species of hummingbird reaches a size of about five inches. The greatest threat to the existence of this species was the devastating hurricane Flora, which severely decimated its population in 1963.

Only recently have scientists figured out why male hummingbirds have longer and sharper beaks than the females. It is not because of dietary specialization. They use the beaks as a weapon in bloody fights for females during mating rituals. At that moment, these tiny birds turn into aggressive attackers, with whom even a medieval knight would not want to meet in a tournament...



THE TASMANIAN DEVIL

Sarcophilus harrisii

The Tasmanian devil—skull



The Tasmanian devil—adult



The Tasmanian devil—adolescent



OCCURRENCE: *Tasmania*

The English and scientific name of this animal (loosely translated as “meat lover”) and its well-known nickname “Tasmanian devil” are frightening. We now know, however, that the creature’s actual behavior does not correspond to its bad reputation. If we add the fact that its numbers are currently declining due to illness, a quite different, much sadder, story emerges.

After the extermination of the Thylacine, no large predatory marsupials exist. The Tasmanian devil used to be found in Australia, but was exterminated by the dingo and the natives prior to the arrival of European settlers. Therefore, today it lives only on the more remote island of Tasmania. It is an animal that resembles a smaller strong dog. The Tasmanian devil typically has a black coat with a white stripe on its chest, a large head allowing it to generate strong bites, and a longer tail, where it stores fat reserves. It has an excellent sense of hearing and smell, thanks to sensitive tactile whiskers. When it gets angry, its earlobes turn red.

When the Tasmanian devil digs its burrows, its pouch opens backwards so that no dirt finds its way in. The Tasmanian devil is a solitary creature active at dusk and at night, but when it comes to food, a group of them can gather around one carcass. Dead animals comprise their main source of food. They can eat the found carcass very quickly and completely. No leftovers.

This speed, as well as the extraordinary noise of their eating, during which they open their jaws menacingly,

can terrify the observer—but the Tasmanian devil is not a threat to man. The devils, however, don’t only eat carrion; they diversify their diet by eating smaller mammals they catch, and at times they even prey on sheep.

Tasmanian devils are good swimmers and the young can climb trees, but the adults can’t, due to their stout bodies.

Before people arrived in Tasmania, the Tasmanian devil was at the top of the food chain. The first settlers hunted it for meat, and later colonists systematically killed it because they were worried about their cattle. Killing them with traps and poisons almost eradicated the entire species. Only after the extermination of the Thylacine did people realize their mistake, and as of 1941, the Tasmanian devil has been protected by law. This led to the gradual strengthening of the population before another disaster struck. In 1995, the devils began developing facial cancer, a contagious disease caused by mutated cells. The affected individual dies of starvation because it cannot eat due to the disease. People have tried to help—for example, by segregating the infected and uninfected populations—but it is not easy.

If the Tasmanian devil disappears from nature, it would be a great tragedy. The invasive red fox, which was introduced to Tasmania around the year 2000 and which competes with the Tasmanian devil, would only further multiply, and following the Thylacine, this remarkable island would lose yet another of its symbols.



THE GARDEN DORMOUSE

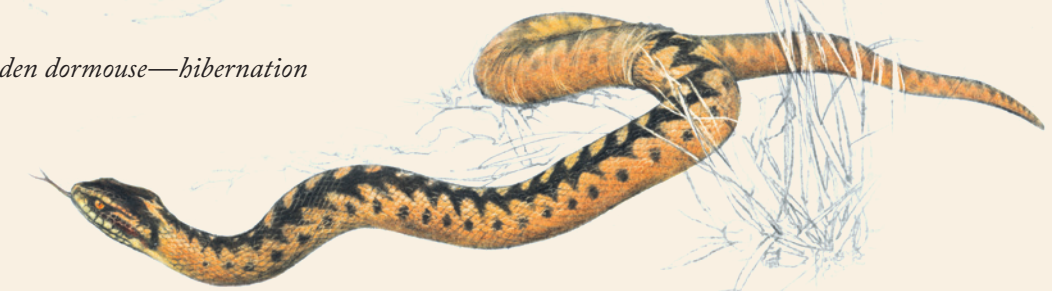
Eliomys quercinus



The garden dormouse—hibernation



The hazel dormouse



The common European viper—predator



OCCURRENCE: *Europe*

You do not have to visit jungles and remote islands to hear about reports on the alarming decline of interesting animals species. A number of these cases can also be found on “the old continent,” as Europe is called. A typical representative of these animals is, for example, the elegant and shy rodent called the garden dormouse.

In fact, shyness is a typical feature of all dormice—small rodents related to squirrels, of which 28 species have been described, almost all of which inhabit the territory of Eurasia. Their anatomy is well adapted to climbing in trees and bushes. Dormice are private and nocturnal, feeding on berries and nuts, but also would not say no to insects. The behavior of species living in the north is atypical, considering they are rodents—they hibernate for a long time in the winter. They spend it curled up in their nests padded with leaves, grass, and moss. How fortunate for us and dormice that the era of Ancient Rome is over—at that time, hibernating dormice were stored in special clay pots in cellars as a source of fresh meat!

The coloration of the garden dormouse in particular is quite striking due to its dark eye markings. The tail ends with a white tassel. This dormouse can be up to 10 inches long, with the tail constituting almost half of its

length. Its diet is mainly animal-based and, in addition to invertebrates, consists of chicks and eggs. It prefers rocky areas, walls, and vineyards—the same territory as the common European viper. This is probably why it is much more resistant to viper poison than other rodents. Like other dormice, it loses nearly half of its total weight while hibernating in wintertime.

The population of garden dormice, limited to Europe, has been decreasing considerably in recent decades. The environment inhabited by this animal has reduced by roughly half over the last 30 years, and is already completely gone in some countries. The rate of its decline in the wild is higher than that of any other rodent. Even more concerning, though, is that the actual threat is unknown. It is probably the loss of its habitat, in connection with its natural shyness. In the Czech Republic, for example, it is currently the rarest mammal.

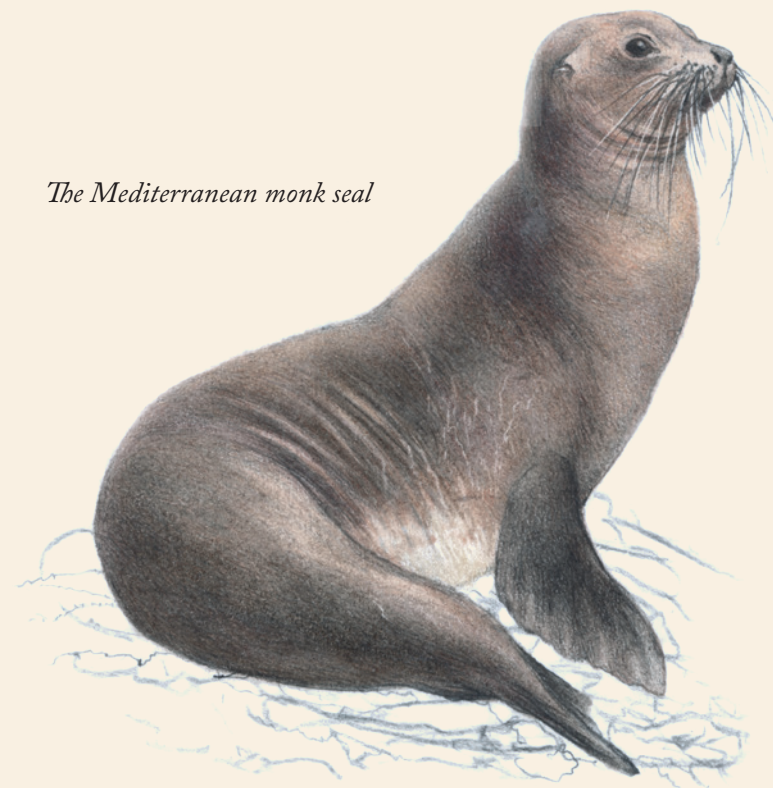
The rareness of the garden dormouse is no match, however, for its relative, the *Dryomys niethammeri*. This species occupies a small territory in the mountains of central Pakistan and was only first described in 1996. Only three specimens have been documented, though, and we know virtually nothing about its lifestyle...



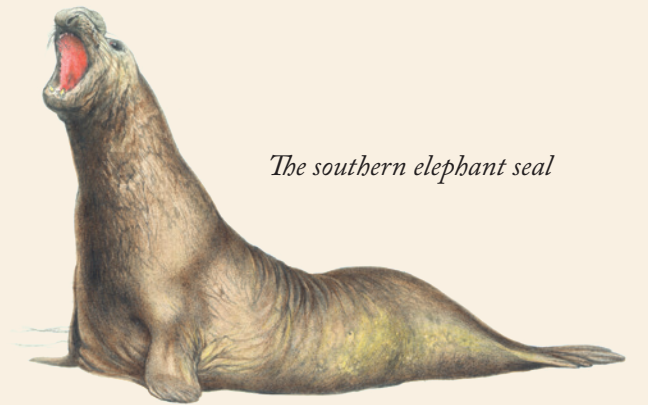
THE MEDITERRANEAN MONK SEAL

Monachus monachus

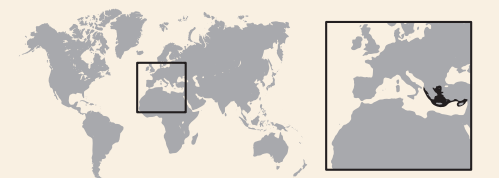
The Mediterranean monk seal



The southern elephant seal



The leopard seal



OCCURRENCE: *Mediterranean*

These pinnipeds used to be common in the waters of the Mediterranean and Black Seas. In ancient times, people had a high opinion of them—they appeared on coins and in Homer's description of sea beaches in *The Odyssey*. Yet, there are probably only a few hundred Mediterranean monk seals still remaining on islands inaccessible to people.

Pinnipeds are perfectly adapted to life in the water. Unlike cetaceans, they have never left the shore, which is why evolution provided them with features for both smooth swimming underwater and rather clumsy movement on land. They are great swimmers due to their aerodynamic body shape, and they are also excellent divers due to their closable body orifices. They are also feared hunters—using their whiskers, seals can track down flounders hiding on the seabed. While sea lions have most likely evolved from animals related to dogs, seals have relatives among mustelids and are closely related to equally extraordinary walruses.

The Mediterranean monk seal grows up to 10 feet in length and weighs over 660 pounds. Like all pinnipeds, they have a thick layer of fat to protect them against the cold. They excel over other seals in their ability to move efficiently on land using the massive claws on their fore flippers. These seals prefer to stay close to shore and do not

dive to great depths. Their hair is dark brown, with a white spot on their bellies. Their Latin name is derived from the Russian term for monks, whose robes have similar coloration as seals. They used to inhabit a vast territory stretching from the Black Sea to the islands of Madeira, a Portuguese archipelago off the northwest coast of Africa.

This species is currently, however, the most endangered of approximately 30 species of pinnipeds. Like its relatives, it has always been killed by hunters for fat and hides and by fishermen, who saw seals as competition. In the 20th century, it has been brutally affected by the development of mass tourism, careless fishing, and unregulated shooting. Due to intensive fishing, European waters cannot meet the food requirements of the seals, but the damage caused by tourism is much worse. Seals, as shy animals, have begun to hide in caves and have gradually disappeared from the coast. Despite the efforts of rescuers, it is estimated that only the last few hundred individuals survive in small colonies on remote Greek islands, the location of which scientists keep strictly confidential.

It seems that the Mediterranean monk seal has not yet learned to live with humans. Or perhaps humans have not yet learned to live with seals?



THE NORTHERN SPORTIVE LEMUR

Lepilemur septentrionalis



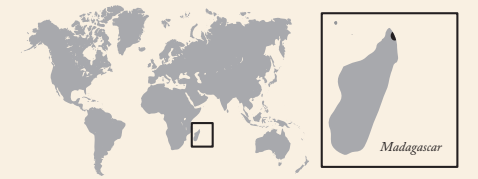
The golden bamboo lemur



The ring-tailed lemur



The red-tailed sportive lemur



OCCURRENCE: *Madagascar*

For a good reason, Madagascar, the fourth largest island in the world, is nicknamed the “Eighth Continent.” Unique plant and animal species can be found there. This distinctive biodiversity is a result of Madagascar’s geographic isolation. Undoubtedly, the most famous inhabitants of Madagascar are lemurs—*strepsirrhini*, whose ancestors probably found their way to the island aboard primitive natural rafts.

The lemurs thus had no natural enemy on the island. They have therefore adapted to various environments and include both ground species and climbing and jumping species. Human have become their enemy, despite the fact that for most indigenous tribes, lemurs are taboo—that is, untouchable. The people of Madagascar have respect for these mostly nocturnal creatures and believe that the souls of their ancestors reside in them. They used to hunt lemurs only during times of famine, which remains the case. Despite federal laws, certain renowned restaurants unfortunately still feature lemur meat on the menu. This is no longer an emergency, but a cruel extravagance. The loss of the natural environment, deforestation, and the stress of expanding human civilization, however, pose a much greater threat.

Practically all of the 45 or so lemur species are currently endangered, but some of them actually hang by a thread. Among them is the northern sportive lemur, which now inhabits what is left of the deciduous forests in the northern part of the island. It is a dark-colored nocturnal tree

animal that is about a foot long and weighs about 15 pounds. It jumps through the trees and, like all nocturnal lemurs, has large dark eyes. It is a herbivore, but not a very picky one—which, of course, cannot be said of its other endangered diurnal relative, the greater bamboo lemur. This species, which was long thought to be extinct, feeds almost exclusively on bamboo. It inhabits a very limited area of two national parks, but suitable habitats continue to decline due to logging and the construction of roads dividing the individual populations. The number of both the northern sportive lemur and the greater bamboo lemur in the wild ranges up to only a few hundred.

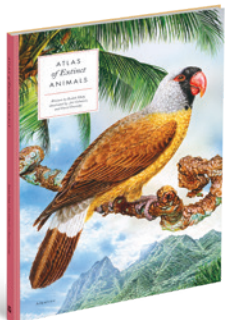
It came as a huge and sad surprise to scientists that there has recently been an unexpected decrease in the numbers of the most famous of all of Madagascar’s lemurs, the ring-tailed lemur, which has a characteristic striped tail. This popular zoo inmate was relatively common 20 years ago and was even the most abundant lemur species ever. It is characterized by great adaptability, thanks to which it was able to inhabit different habitats. According to research from 2017, however, these primates are currently bred more in captivity than in the wild. Over the last 17 years, their numbers in Madagascar appear to have decreased by 95%! And if the ring-tailed lemur is unable to cope with the changes in the environment, it is highly unlikely that other lemur species will be able to fare any better.

True stories of critically endangered species.

The world into which we were all born is moving at a dizzying pace. While at the beginning of the 20th century only 2 billion people roamed the Earth, now a century later we have an unbelievable 7.6 billion. We are born, we live, we die—and we loot our planet. We pollute it, mine it, cut down forests, and transform them into arable land. We pump out supplies of groundwater as well as mine raw materials. We fish sea animals on a large scale and beat our chests with pride at our accomplishments. Entire lines of threatened species, however, are dying in front of our very eyes. Do we want to continue like this? In this narrative book, which maps out the fates of examples of threatened species, the writer Radek Malý attempts to help people, the supposed lords of creation, think about our next steps. Will we continue to just take everything for ourselves? Or will we begin to give back and protect? This ambitiously conceived atlas is accompanied by remarkable full-page illustrations by the renowned book illustrator Pavel Dvorský and supplemented by scientific illustrations by his wife Pavla Dvorská. We hope you enjoy reading the stories of these 41 unique species, whose continued existence rests in our hands...



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