

Hello & Goodbye

MEET SOME OF THE ANIMALS WE HAVE KILLED FOREVER
AND SOME OF THE ONES WE HAVE A CHANCE TO SAVE

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The word “endangered” has allowed humans to feel detached from effects we’re having on other animals. A particular species is endangered. It’s something that has happened to another animal, not something humans have done to them.

But the reality is that humanity has killed 60 percent¹ of the animal population in the past 50 years. Even as just 1 percent² of all living things, there’s barely a species or a habitat that hasn’t been affected by our activity. Ninety-nine percent³ of the threatened species became that way because of humans. Pollution, climate change, habitat loss, large-scale commercial hunting, and overfishing are killing our fellow animals forever.

Central and South America have been hit the hardest. Massive deforestation and climate change have wreaked havoc on the fragile ecosystems near the equator, where 10 percent⁴ of all species on Earth reside. Estimates suggest that by 2030, more than a quarter⁵ of the Amazon will be without trees if the current rates continue. The loss of habitat has resulted in an 89-percent loss of vertebrate populations.

The International Union for Conservation of Nature (IUCN) keeps the Red List: a running tally of every endangered and extinct species. Scientists also realized that thousands of species with decreasing populations aren’t even considered en-

dangered, and therefore have little to no protection from human interference.

Even worse, currently the U.S. government is removing some existing protections. In July 2018, the Trump administration introduced a proposal that would roll back several key points of the Endangered Species Act, which allows the Interior and Commerce departments to decide on a case-by-case basis if they should protect a species, rather than protect all species, threatened or not, by default. Federal agencies would no longer be required to consult scientists and wildlife experts before approving oil and gas drilling projects.

The future of Earth’s biodiversity is not a pretty picture. Nature isn’t something to just marvel at during a hike: It’s vital for our health, our economy, and our food and water sources. But we shouldn’t need a selfish reason to protect the other inhabitants of Earth. These animals have endured for hundreds of years; in a short amount of time, we have put their futures in peril while eliminating others entirely.

(Sources: 1. “A Warning Sign From Our Planet: Nature Needs Life Support”, World Wildlife Foundation, wwf.org.uk. 2. “Humans just 0.01% of all life but have destroyed 83% of wild mammals – study” The Guardian, theguardian.com. 3. “The Extinction Crisis”, Center for Biological Diversity, biologicaldiversity.org. 4. & 5. National Geographic, Giant Pandas nationalgeographic.com/animals/mammals. 6. “Humanity has wiped out 60% of animal populations since 1970, report finds” The Guardian, theguardian.com.)



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STORIES BEHIND 5 RECENTLY-EXTINCT SPECIES

We are in the middle of the sixth mass extinction on Earth, almost entirely caused by humans. The extinction rate is 100 times faster¹ than previously. One-hundred-eighty-seven species² have already become extinct since records began, and each story is unique, tragic, and fascinating. Here are just a few.

(Source: 1. "The misunderstood sixth mass extinction" by Gerardo Ceballos and Paul R. Ehrlich, *science*. sciencemag.org, 2. "These 8 Bird Species Have Disappeared This Decade" by Sarah Gibbens, National Geographic, nationalgeographic.com)

WESTERN BLACK RHINOCEROS

Rhinos are one of the most threatened animals on the planet. Large mammals disappear quickly and, since bigger and more complicated bodies develop more slowly than smaller ones, take more time to recover. At the beginning of the 20th century, almost one million rhinos¹ of all types roamed Africa. But between 1960 and 1995, 98 percent of black rhinos were poached because of the demand for a popular Chinese medicine that included rhino horn powder. In 2011, the western black rhino was declared extinct², and the white rhino is currently down to its last two females.

(Source: 1. "How the Western Black Rhino Went Extinct" By John R. Platt, *scientificamerican.com*, 2. "Human-caused extinctions have set mammals back millions of years" by Christie Wilcox, nationalgeographic.com)

PYRENEAN IBEX

This Iberian wild goat used to roam the French and Spanish mountains, but became extinct in 2000. In 2009, the Pyrenean ibex became the first extinct animal ever to be cloned¹. Using frozen skin samples from a decade earlier, scientists were able to implant an embryo into a similar species of ibex and bring the Pyrenean to full term. But even though the clone died shortly after birth, scientists are still excited about the prospect of bringing it back through genetic engineering.

(Source: 1. "First Extinct-Animal Clone Created" by Charles Q. Choi, nationalgeographic.com)

PASSENGER PIGEON

In 1914, the world's last passenger pigeon died at Ohio's Cincinnati Zoo¹. A species that used to cover the United States' eastern and midwestern states had been reduced to one lone bird named Martha, after George Washington's wife. Passenger pigeons made up 40 percent of North America's bird population, some estimating as many as five billion at one time. But, as the bird's traditional forest habitats were cleared for farmland, they had trouble adapting or were aggressively hunted, and their population declined rapidly.

(Source: 1. "100 Years After Her Death, Martha, the Last Passenger Pigeon, Still Resonates" by William Souder, *Smithsonian Magazine*, smithsonianmag.com)

MALAYAN TAPIR // ONLY 2,499 ALIVE IN THE WILD



UTAH LAKE SCULPIN

Unique to Utah Lake, this fish has not been seen since 1928¹. One theory suggests a drought caused Utah Lake to dry up², its waters becoming so shallow that most of the lake froze one winter. With water quality worsening due to agriculture, the sculpin in unfrozen areas may have died after being pushed into overcrowded conditions.

(Source: 1. International Union for Conservation of Nature's Red List, iucnredlist.org. 2. State of Utah Natural Resources, dwr.ec.nr.utah.gov)

SPIX'S MACAW

While the IUCN has classified the Spix's macaw as critically endangered¹, how many currently survive is unknown. Birds often occupy very specific niches in our environment, making them vulnerable: They eat specific insects and nest in particular trees and are unlikely to adapt. Unfortunately, the habitat of the Spix's macaw is the Brazilian Amazon, where deforestation cleared 3,050 square miles rainforest between August 2017 and July 2018².

(Source: 1. International Union for Conservation of Nature's Red List, iucnredlist.org. 2. "Deforestation in Amazon rainforest hits worst rate in 10 years", by Justin Wise, thehill.com)

8 OF THE SPECIES HUMANS ARE ENDANGERING

The IUCN has accessed 93,577 species, concluding that over 26,000 are endangered. Of those assessed, 40 percent of amphibians, 25 percent of mammals, 14 percent of birds, and 33 percent of coral reefs are threatened with extinction. Below are just a few of the species being killed.

(Source: iucnredlist.org)

MALAYAN TAPIR // ENDANGERED

Only 2,499 Malayan tapirs are left to roam the forests of Indonesia, Myanmar, Malaysia, and Thailand. Their long nose, called a proboscis, grabs roots and food underwater. Adult tapirs are black and white, but babies are born beige and speckled, similar to watermelons. The stripes and spots help the tapir blend into the forest floor's dappled sunlight. Threats to the tapir include hunting and habitat destruction, as their homes are cleared to make space for palm oil plantations.

(Source: International Union for Conservation of Nature's Red List, iucnredlist.org)

GIANT PANDA // VULNERABLE

Giant Pandas are one of the few animal conservation success stories. While they were originally classified as endangered, they have been bumped down to vulnerable after intervention. Their population is increasing even as only

1,000 mature pandas are left in the wild. They live in bamboo forests of China, with 99 percent of their diet dependent on the plant. Bamboo is such a poor source of energy and nutrients that pandas spend half their day eating. They depend so entirely on it that any threat to the plant by climate change and human industry is a risk to panda survival.

(Source: National Geographic, Giant Pandas nationalgeographic.com/animals/mammals)

WHITE-RUMPED VULTURE // CRITICALLY ENDANGERED

The white-rumped vulture scavenges cattle across its native homeland of India, Afghanistan, and Cambodia. But its population severely declined in the 1990s due to widespread poisoning. A veterinary anti-inflammatory vaccine, diclofenac, was used to treat domestic livestock. As birds fed on cattle carcasses, they indirectly consumed the drug, which vultures are unable to process, leading renal failure and death. To save the dwindling population of 2,500-10,000 vultures, alternative, non-toxic veterinary drugs like meloxicam should be implemented.

(Source: International Union for Conservation of Nature's Red List, iucnredlist.org)

INDRI LEMUR // CRITICALLY ENDANGERED

The indri lemur is the largest lemur in the world and the only lemur with a short, stubbed tail. Yet, even without a

tail, they spend most of their lives balancing on branches in Madagascar. IUCN has classified them critically endangered, and their population is decreasing due to deforestation. Indri lemurs mate for life and don't reproduce annually, which has been a difficult challenge for conservation efforts.

(Source: Primate Info Net, University of Wisconsin, [pin.primate.wisc.edu/factsheets](http://primate.wisc.edu/factsheets))

VAQUITA // CRITICALLY ENDANGERED

Vaquitas are one of the most mysterious sea creatures. Extremely rare and shy, vaquitas have only been known to exist since 1958. Found off the coast of Baja California, there are only 18 of these porpoises left. Pesticides and runoff from the Colorado River threaten the species, but illegal fishing of another critically-endangered sea dweller, the totoaba, is the more pressing issue. Vaquitas get caught in the nets and drown, or get killed by propellers on boats. Since 2016, the world's population of Vaquitas has dropped 40 percent.

(Source: International Union for Conservation of Nature's Red List, iucnredlist.org)

HUMPHEAD WRASSE // ENDANGERED

This 400-pound, six-foot-long fish is named for the prominent bulge on its forehead. It's native to the coral reefs in the Indo-pacific waters of Australia and Japan, and can live as old as 30 years. Overfishing for the live food trade and the

decline of coral reef habitats has caused their population to continually decline for the past century.

(Source: International Union for Conservation of Nature's Red List, iucnredlist.org)

MOUNTAIN GORILLA // ENDANGERED

The IUCN estimates that 50 percent of primates, our closest ancestors, are endangered. Mountain gorillas are no exception. There are only 600 left in the Congo forest, but their population is slowly increasing. Major threats to the mountain gorilla include habitat loss and poaching. Tourist attractions, like gorilla viewings, have increased the human disturbance issues and human-to-primate disease transmission.

(Source: Center for Biological Diversity, The Extinction Crisis, biologicaldiversity.org)

CUBAN CROCODILE // CRITICALLY ENDANGERED

The Cuban crocodile is juggling a unique and multi-layered threat to its survival. The American crocodile has moved into the Cuban crocodile's territory as the Cuban habitat became increasingly salty due to agriculture activities. As a result, the two croc species are mating, creating a hybrid that's causing the Cuban lineage to die out. There are currently about 3,000 to 4,000 mature Cuban crocodiles left.

(Source: International Union for Conservation of Nature's Red List, Crocodile Specialist Group, iucnredlist.org)

FROM HURTING TO HELPING

The first step to solving any problem is acknowledging one exists. It's cliché, but educating yourself by reading this article was an important first step to helping these animals survive. Next, and most critically, you should work to reduce your environmental footprint. Take shorter showers, bike rather than drive, and decrease your food waste. By conserving energy, food, and water, the commercial industries lessen their expansion into the habitats of endangered species.

Protest with your wallet. Don't buy from companies that are known polluters and avoid supporting the wildlife black market. Popular travel souvenirs like ivory, coral, and tortoiseshell are illegally poached, and many tourists buy them without understanding the harm they inflict. Try decreasing consumption of products containing ingredients that harm wildlife

habitats. Lipstick, chocolate, soap, detergent, and many other everyday products contain palm oil from tropical rainforests, which are being torn down, killing the Malayan Tapir. Logging for wood products like fuelwood and paper is causing problems for the indri lemur, who spend most of their life in trees.

Finally, call your local representative to push for policy change and donate to or volunteer for an endangered wildlife protection group. Five of the best conservation nonprofits are listed below:

**THE INTERNATIONAL UNION FOR
CONSERVATION OF NATURE // IUCN.ORG
THE WORLD WILDLIFE FUND // WORLDWILDLIFE.ORG
PROJECT AWARE // PROJECTAWARE.ORG
THE JANE GOODALL INSTITUTE // JANEGOODALL.ORG
DEFENDERS OF WILDLIFE // DEFENDERS.ORG** 