FACTSHEET



Endangered Animals of the World

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Introduction









Endangered means to be under threat or near extinction. When a species/animal is endangered it means that they are disappearing fast or have a very small population - not large enough to survive. Extinction means the end of existence for a species.

The IUCN (International Union for the Conservation of Nature and Natural Resources) have compiled a <u>Red List</u>. This red list is a guide to how endangered a species is - animals are measured on a scale from 'Least Concern' to the worst, 'Extinct';

Least Concern - Near Threatened - Vulnerable - Endangered - Critically Endangered - Extinct in the Wild - Extinct

Endangered Animals

Greater Horseshoe Bat: Rhinolophus ferrumequinum

IUCN Status: least concern

Population trend: increasing



There are eighteen species of bat in Britain and all of them are endangered - though globally they are listed as 'Least concern' as numbers in other countries remain higher - though the IUCN's Red List has marked their population as 'declining'.

The greater horseshoe bat is one of the rarest in Britain and is confined to south-west England and south Wales. One reason for their decline is the destruction of suitable roosting sites, such as old buildings and hollow trees. Changing land use from woodland and small fields to large scale agriculture has also had an effect. They have also suffered from the use of insecticides (poisonous chemicals sprayed on to crops to kill harmful insects) which have deprived the bats of their insect food. Due to conservation efforts its population in the UK has slightly increased in recent years to about 6,600.

Siberian (Amur) Tiger

Panthera tigris ssp. altaica

IUCN status: Endangered

Population trend: stable

Population: 540

Cold, snowy Siberia, Russia, is home to the largest of all the tigers, the Siberian tiger. They were once found across the far east of Russia,

northern China and the Korean peninsula. It is now found in the Khabarovsk and Primorski provinces of Russia and in small areas of northern China and possibly North Korea.

Population: It is highly endangered although its numbers have increased from since hunting brought it to an all time low of around 40 individuals in the 1940s. There are now an estimated 540 Amur tigers in the wild, according to WWF. Hunting and loss of habitat have reduced their numbers and there is little genetic diversity in the remaining population, increasing their vulnerability.



Caretta caretta

IUCN Status: Endangered

This threatened reptile lives in the Mediterranean Sea, as well as the Black Sea and Atlantic Ocean. In the past its main dangers were hunting for its shell and meat. Now it is being disturbed by



tourists populating the sandy beaches where it lays its eggs. In Turkey, hotels have been built right on its breeding sites. Out at sea, the turtles sometimes become entangled in fishing nets and drown. A possible new threat to them may be the increase in sand temperatures which determines the sex of the turtle. Warmer temperatures could result in an excess of females! There are currently estimated to be 40,000 to 50,000 nesting females.

Northern Bald Ibis

Geronticus eremita

IUCN Status: Critically endangered

Population trend: decreasing

Population: Morocco is home to 95% of the truly wild colonies of the ibis where populations are increasing and now number over 500 birds. Syria also has a small and declining population with only 5 mature birds (IUCN; 2006). Parts of North Africa and the Middle East are visited by these migrating birds. Turkey also have a healthy semi-wild population of

reintroduced birds, numbering 91 in 2006 (IUCN). However, the use of pesticides on the marshes and grasslands where it lives is reducing the numbers.

Part of the ibis' decline is due to natural causes. It nests high above the ground and its eggs are so round that some of them roll out of the nest and break. However disturbance of nesting sites and feeding grounds is a more significant factor. The Ancient Egyptians used to depict this bird in their heiroglyphic writing, but it no longer lives in Egypt.

Black rhino: Diceros bicornis

IUCN Status: Critically endangered.

Population trend: increasing.

Population: 4,880 in 2010 (IUCN).

This species has seen its numbers drop from an estimated

70,000 in the 1960s to an estimated 2,410 in 1995. It has been declared extinct in West Africa in 2011. Rhino horn is used as an ingredient in Chinese medicine. As a result of this, poaching is the biggest threat to the black rhino's survival. Poachers kill rhinos, then saw off their horns for sale to countries like China and Vietnam. There are less than 5,000 of them left alive in Africa. Monitoring and protection, along with anti-poaching measures are being undertaken to protect this extremely endangered species.

Photo by Geoffrey Oddie

Lion-Tailed Macaque

Macaca silenus

IUCN Status: Endangered

Population trend: decreasing.

Population: Less than 4,000.



This small monkey is only found in south-west India's tropical rainforests. Many of these forests have been cleared and replaced with tea and coffee plantations. Unlike some other animals, the lion-tailed macaque has not been able to adapt to these new habitats. Poachers have also captured baby macaques, often killing their parents in the process, for illegal export to collectors.



Mandarin Duck

Aix galericulata

IUCN Status: Least concern

Population trend: decreasing.

The mandarin duck (the brightly coloured male is illustrated) may often be seen on ponds and lakes in Britain, but its native home is across eastern Asia, in Russia, China, Korea and

Japan. It may be found on water which is near forests, but the forests are being felled and the water drained, making the duck more and more endangered.



Mountain Gorilla

Gorilla beringei subspecies beringei.

IUCN Status: Critically endangered

Population trend: unknown

Population: 880

Mountain gorillas are to be found in the Virunga range of extinct volcanic mountains on the borders of the Democratic Republic of Congo, Rwanda and Uganda and in the Bwindi Impenetrable National Park in Uganda. Only discovered in



1902, mountain gorillas have suffered considerably because of human activities, including war, habitat destruction, hunting and capture for the illegal pet trade. There were just 620 mountain gorillas left in 1989, but since then, successful conservation efforts mean that the population is gradually increasing again.

Jackass Penguin (African penguin, Black-footed penguin)

Spheniscus demersus

IUCN Status: Endangered

Population trend: declining

Population: around 80,000 mature individuals

The jackass penguin is the only penguin to be found in Africa, and it was once the country's most common sea-bird. It lives off the coast of Namibia and South Africa, and the waters here have been over-fished by humans, depriving the birds of their food supply. Oil pollution also threatens them, as does the taking of their eggs for food.



Blue Whale Balaenoptera musculus

IUCN Status: Endangered

Population trend: increasing

Population: An estimated 10,000 -



25,000 (3-11% of the 1911 population). (IUCN)

The largest animal ever to have lived on our planet, the blue whale, lives mainly in the cold waters of the Arctic and Antarctic, where it finds enough plankton to sustain it. It migrates to tropical seas to breed. The blue whale has been a protected species since 1966, but thousands were killed up until then. During the whaling season of 1930 to 1931 alone, 30,000 blue whales were killed by Antarctic whalers. It will take more than one hundred years of protection before we can be sure that it will not become extinct.

Numbat (Banded anteater)

Myrmecobius fasciatus

IUCN Status: Endangered

Population trend: declining

Population: under 1000

Sometimes called the banded anteater, the numbat was once common in the bush and forest of north-eastern and southern Australia. It is now only found in the most western part of eastern Australia. When man introduced predatory animals such as cats, dogs and foxes, these animals ate many numbats. Their numbers



are still declining for the same reasons and also because their habitat is being cleared for farming and mining. Frequent fires destroy the logs which the animals use to shelter.

Komodo Dragon

Varanus komodoensis

IUCN Status: Vulnerable

Population trend: stable (National Geographic)

Population: 3,000 - 5,000 (National Geographic)



The Komodo dragon is the largest lizard in the world and lives on a few small Indonesian islands. It is a powerful predator and can measure as much as 3 metres in length. There are about 3,000 Komodo dragons in total, but they seem to be slowly declining. They live mainly on uninhabited islands, so are in no great danger from humans. Scientists think that natural causes are to blame. There are more males than females alive, and also the natural plant life seems to be changing and the lizards are not adapting well to their new environment.

Golden Lion Tamarin

Leontopithecus rosalia

IUCN Status: Endangered

Population Trend: stable

Population: Over 1000.

This tiny monkey is one of the most endangered of all animals in South America. The few that are left, are restricted to the only remaining coastal rainforest, southwest of Rio de Janeiro, Brazil.



Forest destruction is the main reason for the tamarin's decline, but it is also in danger of being captured alive and sold as a pet - a strictly illegal practice which still goes on in secret. At their worst, numbers declined to as low as 250 but due to a captive breeding and reintroduction programme they have increased to a healthy 1000 and live in a protected area of forest. The problem they face now is that they do not have room to expand due to the fragmention of their habitat. Fires started by cattle farmers are a continued threat.

Spectacled Bear (Andean bear)

Tremarctos ornatus

IUCN Status: Vulnerable

Population trend: decreasing



Population: no sufficient data; estimates of fewer than 3,000 (National Geographic)

This bear gets its name from a yellowish mask which makes it appear to be wearing a pair of spectacles! It lives in the forest-covered mountains of several South American countries. As the forests are cleared for farming, the bear's numbers fall. Even though it is protected by law, the spectacled bear is still killed by poachers for its fur, meat and fat. It is likely to meet IUCN's criteria for Endangered status by 2030, because of an increasing human population and the habitat destruction this will bring in the areas where it lives.

Californian Condor

Gymnogyps californianus

IUCN Status: Critically endangered

Population trend: increasing

Population: 104 adults, but currently only 44 are producing

offspring.

During the nineteenth century this large bird of prey lived in the mountains of many areas of North America. It started to decline last century when it was killed by gold diggers who collected its



long black feathers. Disturbance of its habitat by tourists, pesticides and low-flying aircraft also contributed to its downfall. In 1987 the last remaining wild Californian condors were taken into captivity. They have since been reintroduced to the wild with some success, but they are still at great risk.

Black-Footed Ferret

Mustela nigripes

IUCN Status: Endangered

Population trend: declining

Population: 500 (breeding adults).



The black-footed ferret is America's rarest mammal. It was considered extinct in the wild in 1987. Its decline was due to the decline of its primary prey, prairie dogs. Prairie dogs were regarded as pests by farmers and many were killed as a result, meaning that black-footed ferrets lost their main food source. Canine distemper and plague also affected black-footed ferrets. Since 1987 as a result of captive breeding programmes, over 8,000 kits have been born in captivity and over 3,900 have been reintroduced into the wild. The wild population is in decline again, and 2015 estimates suggest there are less than 300 breeding adults in the wild.

Beginning of Life

Life began on our planet about 3,500 million years ago. The first living things were found in the sea, and over the course of millions of years, from these early life forms, a rich variety of animals has descended. Through the process we call **evolution**, animals have become adapted to enable them to live in all parts of the world, sometimes in the most hostile environments.

Almost 600 million years ago, the **invertebrates** appeared i.e. those animals without backbones insects and other minibeasts. The earliest **vertebrates** i.e. animals with backbones, were in the form of primitive fish and appeared around 500 million years ago. From these, all other fish descended, as well as amphibians, reptiles, birds and mammals.

The animal kingdom is enormous and we do not know for certain how many species there are in the world. Around 1.5 million species of animal have been named and described by scientists - and over a million of these are insects. Though scientists in 2011 estimated that there are about 8.7 million species on the planet. It is known that there are about twice as many animals in tropical rainforests than in any other habitat, and it is here that there are likely to be countless numbers of species yet unknown to science. It has been estimated that the total number of insect species alone could be around 30 million!

It is just possible, but unlikely, that there are a few large animals remaining to be discovered, but what we can be sure of is that the most numerous large animal on Earth is Homo sapiens - the human! Modern humans appeared about 30,000 years ago and has increasingly come to dominate the planet. The steady increase in population was speeded up by advances in civilization such as the Industrial Revolution and better health and medical care.

This population explosion means that millions of people suffer from hunger and disease, and more and more wild places are taken over, causing animals and plants to suffer too.

Extinction is Forever!

To become extinct is to be gone forever. Even before the arrival of humans on Earth, species became extinct quite naturally. Natural extinction happens when a species declines in numbers gradually but steadily at the end of its evolutionary period on Earth. The length of this period depends on how well a species can adapt to changes in climate and changes in other animals and plants around it. This process of extinction can take a very long time - sometimes several million years - and the extinction of one species is immediately followed by the appearance of another in a continuous cycle.

The case of the dinosaurs is the most well-known example of natural extinction. These reptiles appeared on Earth about 200 million years ago and dominated both land and sea for almost 100 million years. It is not certain why the dinosaurs became extinct, but their disappearance was a natural one and new species of animals evolved to replace them.

The rate of extinction has speeded up unnaturally over the last 400 years, rising sharply since 1900.

This increase in the rate of extinction is directly related to the increase in the human population over the same period of time. Humans have caused great damage to the planet, as wild habitats have been taken over, forcing animals and plants into smaller and smaller areas, until some of them have become extinct. We have also polluted some habitats with chemicals and refuse, making them unfit for wildlife. These causes of extinction are known as **indirect destruction**.



Animals may also become extinct through **direct destruction**. This includes the hunting and capturing of animals. Humans have always hunted and killed wildlife but early humans lived more in harmony with nature, they killed animals for essentials like food and clothing. When guns were invented mass destruction of species was possible. Animals have been, and still are, killed for meat, clothing,medicines, feathers, eggs, trophies, tourist souvenirs - and sometimes just for amusement. Some species are still captured in the wild for the live pet trade, even though their numbers are dwindling.

The extinction of at least 500 species of animals has been caused by humans, most of them in the 20th century. Today there are about 5,000 endangered animals and at least one species dies out every year. There are probably many more which become extinct without anyone knowing.

The main threats to species then can be cited as poaching, habitat loss and climate change. The International Union for Conservation of Nature has its own "Red List" of endangered species ranging from "least concern" through to "critically endangered". It is their assessment which we'll refer to here.

"Dead as a dodo"

The dodo has become a symbol of extinction. It was a turkey-sized flightless pigeon which lived on the island of Mauritius. When sailors landed on the island for the first time in the sixteenth century, they killed the helpless bird for food. The dodo's eggs and young were eaten by dogs, cats, pigs, rats and monkeys which man had introduced to the island. The dodo, unused to predators, very quickly declined in numbers - and it was extinct by 1681.



Is it Important to Save Animals from Extinction?

Some people may ask "why bother with conservation?" We now realise that it is important to maintain the planet's biodiversity, that it is the richness (variety) of animal and plant life, its abundance and wild habitats that keeps us all healthy and happy. The more species disappear, the more entire eco-systems become vulnerable and would eventually fall apart as the links in the food

chains become broken. For example certain animals only eat certain plants and those plants may need that animal to pollinate it or spread its seed. Without one, the other is also likely to die out.

From a selfish point of view, we humans never know how valuable a species of animal or plant may be for us in the future, perhaps as food, medicines (particularly plants) or for specific information such as for biomimicry.

Saving Endangered Animals

People all over the world are working to help save endangered animals from extinction. There are conservation organisations which try to make people aware of the problems facing wild animals. Some of the ways in which they are being saved include habitat protection, captive breeding, setting up nature reserves and parks and using alternative products in place of products from rare animals.

Governments can help by making international agreements between countries to protects animals (many countries, for example, have agreed to stop hunting the blue whale) and their habitats. There has been agreement from a number of countries in June 2010 to protect the rainforests and prevent deforestation through financial backing.

Scientists are setting up gene banks in which they keep an animal's genetic material (the 'building blocks' of a living thing) in suspended animation. This technique may make it possible in the future to 'grow' a new animal of the same species. Kew Gardens, London has a seed bank in case plant species become extinct in the wild.

You Can Help Too!

The first step towards saving animals is to learn as much as possible about them. If we know where and how they live, and what they need to survive, then it will be easier to help them. It is also a good idea to learn from our mistakes of the past, such as destroying too much rainforest and overhunting animals. To ensure the survival of the world's animals we must learn how to keep 'sustainable populations' alive i.e. populations with enough numbers for the animals to survive on their own. The dodo and all the other which man has made extinct became so because their populations fell below a sustainable level. It is worth keeping in mind that those animals may well become the endangered animals of tomorrow.

Here are Some Ideas for Research Projects

1. British Endangered Animals.

Sometimes we forget that we have quite a number of endangered animals in our own country that need protection. We may even be able to help a few of them by providing a suitable habitat in our own back gardens!

Choose one species of British endangered animal and find out as much as possible about its life and the reason for its rarity. What conservation measures are being carried out to prevent its extinction?

2. Extinct Animals.

Since 1600 about 500 species of animals have become extinct. As well as the dodo, we used to have the quagga, tarpan, great auk, passenger pigeon, and many others.

Choose any three extinct animals. What did they look like? Where did they live? Why did they become extinct?

3. Helping to Save Endangered Animals.

As we have seen, there are several ways in which people are trying to save threatened animals from extinction.

Imagine you are setting up a new conservation organisation to help a particular endangered animal. Which animal are you targeting? Where does your animal live? Why is it endangered? Explain in detail how you intend to save it from extinction.

4. Humans in Danger

Remember that humans can become endangered too! Many native tribes have become extinct because of the interference form so-called "civilized Man". Choose a native tribe, perhaps a rainforest one that you've heard about, which is under threat today. Describe the people's lives and the pressures on them.

Habitat destruction

A habitat is any natural region where wildlife lives undisturbed e.g. forest, pond, marsh or desert. Most animals and plants which are endangered have become so, not because they have been killed on purpose but because their habitats are being destroyed.

Human activities have changed or destroyed habitats for thousands of years. The natural habitats in almost every country in the world have been affected in some way. Let us take Britain as an example. Nowadays most of the British countryside consists of fields of grass grown specially for cattle and sheep or cereal crops for humans. If you had lived about a thousand years ago, the countryside would have looked very different for most of Britain was covered with forest, made up of broadleaf trees such as oak, ash and beech.

Now there are only relatively small pockets of woodland scattered across the country, one of the largest areas being the New Forest in Hampshire. Throughout the centuries humans have steadily cut down the trees to make room for the human population which has increased enormously particularly during the past 200 years or so. The trees have been replaced by houses, factories,

schools, roads, farmland etc. Hedgerows which were planted by humans as boundaries around fields have, to some extent, replaced woodlands, providing homes for many animals and plants. However, even many of these have been destroyed, mostly during the last forty years, and are now regarded as a threatened habitat. Natural heathlands, chalk downlands, marshes, water meadows, hay meadows and ponds are also examples of Britain's disappearing habitats.

As you may imagine, this vast loss of habitats has affected the wildlife that lives in them. Large mammals such as the Brown Bear and the Auroch (wild ox) became extinct in Britain during the 10th Century mainly due to destruction of their forest habitat. Other British species of animals and plants have become extinct during the last few hundred years and many more are endangered today. Although conservation groups are working to protect wildlife, natural habitats are still being destroyed.

Chemicals and Pollution

Where humans have planted crops for food, unless they are organic, poisonous chemicals have been sprayed on them; **insecticides** are used to kill insect pests and **herbicides** are used to kill weeds. **Fungicides** fight off fungal diseases. **Artificial fertilizers** are added to the soil to increase the yield of the crops. If these chemicals are used in excess, some of them dissolve in rainwater and drain into rivers, streams and ponds, polluting the water and killing the wildlife.

The "weeds" competing with the farmers' crops include wild flowers and many of these have become endangered through the use of herbicides. Insects rely on plants for food and breeding sites so the number of these are affected by a reduction in the number of plants. Many birds depend on insects for food so the numbers of birds may be affected by the use of both insecticides and herbicides. One of the reasons why the Barn Owl is endangered is due to a shortage of insects and it may also be poisoned by eating insects affected by chemical sprays.

The case of **DDT** and other chemicals known as **organo-chlorines** is well known. These were first used extensively in the 1950s, sprayed onto crops to kill insect pests.

Unfortunately, after a few years it was noticed that birds of prey were rapidly declining in numbers and thousands of seed-eating birds were dying. By the 1960s the once common sparrow hawk was a rare bird in Britain. The sparrow hawk's prey were the seed-eating birds which were carrying the poisonous insecticides in their bodies.

Consequently many sparrow hawks and other birds of

prey were being indirectly poisoned by the chemical sprays. The organo-chlorines also caused many birds to lay thin shelled eggs, which cracked easily.



Research showed that the chemicals were entering the **food chains** and being stored in the fat of the animals' bodies. For example, a thrush may eat snails which have eaten a sprayed cabbage plant. The thrush may not have eaten enough poison to be actually killed but a sparrowhawk eating

several thrushes accumulates so much of the poison that it is killed. The chemicals become more concentrated as they travel up the food chain. Even most humans still have small amounts of organo-chlorines in their fatty tissues although these chemicals had been withdrawn from use by 1976. They are still used, however, in some Third World countries. By the 1980s the sparrowhawk population had recovered dramatically and it is once again a common bird.

This example shows just how dangerous the use of chemicals in the environment can be.

As mentioned earlier, some plants are endangered through collectors such as the Venus fly-trap and some tropical orchids, but most threatened plants have become so through the destruction of their habitat. Once very common plants have almost disappeared because of the way humans have changed the land. For example, the Egyptian Papyrus, a type of reed, had been used for thousands of years for all sorts of things such as paper, medicine, boats, baskets, food etc. Then, when changes in the irrigation methods on the river Nile were introduced, this valuable plant almost completely disappeared. It was thought to be extinct until 1968 when a few plants were found in an undisturbed waterway.

Orchids have been also collected from rainforests to become household favourites, causing many species to become endangered.

Credits

Information sourced from:

The IUCN Red List of Threatened Species (2015), [online], available from: http://www.iucnredlist.org/search [accessed 04/06/2015].

World Wildlife Fund (2015), *Species Directory* [online], Available from: https://www.worldwildlife.org/species/directory? direction=desc&sort=extinction_status [accessed 04/06/2015].



The Young People's Trust for the Environment is a charity which aims to encourage young people's understanding of the environment and the need for sustainability.

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