

New Red List paints bleak picture of extinction

- 16:25 02 May 2006
- From New Scientist Print Edition. [Subscribe](#) and get 4 free issues.
- Duncan Graham-Rowe

Two out of every five species on the planet that have been assessed by scientists face extinction, according to the latest World Conservation Union (IUCN) Red List of Threatened Species.

Overall, 16,119 animal and plant species are in danger of extinction, including 1 in 8 birds, 1 in 4 mammals and 1 in 3 amphibian species. Since records began, 784 species have been declared extinct. From the poles to the deserts, "biodiversity loss is increasing, not slowing down," says IUCN director-general Achim Steiner.

The main cause, as ever, is people, as humanity impacts the world's fauna and flora both directly and indirectly. While hunting and habitat loss continue to have a disastrous effect on species numbers, global warming is emerging as another threat.

This trend is not irreversible, Steiner says, and conservation can work. Efforts in Europe in the 1990s have led to a doubling in the numbers of white-tailed eagles (*Haliaeetus albicilla*). On Christmas Island in the Indian Ocean, the Abbott's booby (*Papasula abbotti*), a native seabird, was in decline because of both habitat loss and the introduction of the yellow crazy ant, *Anoplolepis gracilipes*. Its numbers are now recovering, and the booby's status has been revised from critically endangered to endangered.

Steiner emphasises that environmentalists alone cannot save the world's biodiversity, however. "It must become the responsibility of everyone with the power and resources to act."

The polar regions

Polar bears are such strong swimmers that many biologists consider them to be as much a marine mammal as a land one. Yet large numbers of them will starve or drown as global warming melts the Arctic's ice sheets.

The summer sea ice that polar bears depend on is rapidly disappearing, and the latest estimates suggest that the ice will be at least halved in area over the next century, and possibly disappear completely. The effect on the bears will be disastrous, says Craig Hilton-Taylor of the IUCN's Red List office in Cambridge, UK. "Most of the year they are on the ice hunting." Without the ice their population is expected to fall over the next 45 years, from as many as 25,000 today to 17,500.

There are already warning signs: in a recent aerial survey of the Alaskan Arctic coastline, four dead polar bears were spotted floating in the Beaufort Sea. This is the first time dead bears have been spotted among more than 350 sightings of swimming bears recorded over 16 years of surveying the area, says Charles Monnett of the US Department of the Interior's Minerals Management Service in Anchorage, Alaska (*Polar Biology*, DOI: 10.1007/s00300-005-0105-2).

The dead bears were presumed to have drowned, Monnett says, but he doubts this was simply the result of exhaustion from having to swim further from ice to shore. More likely, weather conditions are becoming more severe in the growing expanses of open water, making swimming more difficult. The fate of the polar bear (*Ursus maritimus*) appears inextricably linked to that of the sea ice.

The deserts

The world's deserts may be expanding, but the animals that live in and around them are not faring well. Several species of gazelle and antelope that have specially adapted behaviours, physiologies and metabolisms to survive arid conditions are now facing extinction.

According to the IUCN's Red List, fewer than 300 dama gazelles (*Gazella dama*) remain, their numbers having crashed by 80% over the past decade. The species, which is classified as critically endangered on the new list, was once widespread in 12 countries in the Sahel

and beyond.

The scimitar-horned oryx (*Oryx dammah*) is now extinct in the wild, while numbers of the goitered gazelle (*Gazella subgutturosa*) are also in sharp decline, despite it once being the most widespread of all gazelle species, roaming the fringes of deserts from Mongolia through central Asia to Turkey and the Arabian peninsula. Hunting and habitat loss on the desert edges are the main causes, says David Mallon of Manchester Metropolitan University in the UK, who co-chairs the IUCN's antelope specialist group.

While some of the hunting is for subsistence, trophy hunting is increasing. "An exceptionally pernicious influence across north Africa and parts of central and south-west Asia are mass hunting parties from the Gulf states that arrive with massive logistical support and obliterate wildlife over entire areas," he says. The extreme habitat means that many species occur in low densities, he says, making it particularly difficult for them to recover their numbers.

Rivers and oceans

Our increasing appetite for fish and thirst for water is placing our planet's aquatic species under unprecedented pressure.

As shallow-water fish stocks dwindle, fishers dropping nets and lines into deeper waters are taking their toll on species there. The IUCN's new list includes 547 species of shark and ray, of which at least 20% are in danger of extinction, including the common skate (*Dipturus batis*). The angel shark (*Squatina squatina*), once a common sight in the fish markets of Europe, is now extinct in the North Sea and has been declared critically endangered elsewhere.

"Sharks and rays are particularly vulnerable because they grow slowly and are slow to mature," says Sarah Valenti of the IUCN's shark specialist group. Female gulper sharks (*Centrophorus granulosus*), for example, can take 16 years to reach maturity, and as a result of overfishing their numbers have dropped by 95% in some areas.

Freshwater fish are faring little better. In Mediterranean countries, extraction of water for drinking and irrigation, along with the introduction of invasive species, is destroying the habitats of many native creatures. Some 53% of endemic species are threatened with extinction: "It's a staggeringly large number," says Will Darwall of the IUCN's freshwater biodiversity assessment programme.

Demand for clean drinking water in Africa is expected to put further species at risk. Unless this is taken into account, the continent's fisheries and the vital food they supply could suffer, says Darwall.