



Endangered Species

General Information

What is an Endangered Species?

According to the federal Endangered Species Act, an endangered species is "any species which is in danger of extinction throughout all or a significant portion of its range." Nearly 900 native plants and animals are currently designated as endangered on the federal list of *Endangered and Threatened Wildlife and Plants*. More than 500 foreign species are listed as endangered.

What is a Threatened Species?

A threatened species is defined as "any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range." More than 200 native plants and animals are currently listed as threatened, as well as about 40 foreign species.

The Endangered Species Act of 1973

Animals and plants have come and gone since life on earth began. However, habitat destruction and other causes of species' decline have accelerated the extinction rate. What used to take millions of years now can happen in decades.

In the past, solutions often seemed easy. When an animal or plant needed protection, the federal government passed laws to prohibit killing or destroying it, established a refuge for it, or made provisions to feed it

through the winter months. The American buffalo, elk, pronghorn antelope and trumpeter swan were brought back from very low numbers to at least viable populations.

Now, far more complex factors threaten plant and animal life. In many areas, eagles are electrocuted when they perch on power transmission poles and bridge transmission wires. In Florida, hatching sea turtles are lured toward cities because they mistake the reflected city lights for the starlit sky over the ocean. Migrating salmon die from nitrogen saturation created below dam spillways.

Congress passed the Endangered Species Act in 1973 to help save species facing the risk of extinction, giving two federal agencies, the U.S. Fish & Wildlife Service and the National Marine Fisheries Service, responsibility for administering the law.

How Does the Endangered Species Act Protect Species?

The act prohibits "taking" listed species, which includes killing, harming or harassing the species. It also provides species protection by requiring federal agencies to ensure activities they conduct, authorize or fund do not jeopardize the continued existence of listed species. Federal agencies consult with the Fish & Wildlife Service or

the National Marine Fisheries Service to allow their projects to go forward at the same time species are protected.

To provide the same flexibility to private developers, two provisions of the act—habitat conservation plans and special 4(d) rules—can be used to avoid or resolve conflicts between private development projects (or other activities) and the protection of endangered or (in the case of 4(d) rules) threatened species. Both of these measures may allow development (or other activities) to proceed as long as steps are taken to ensure long-term protection of a species.

What Causes Species to Become Endangered?

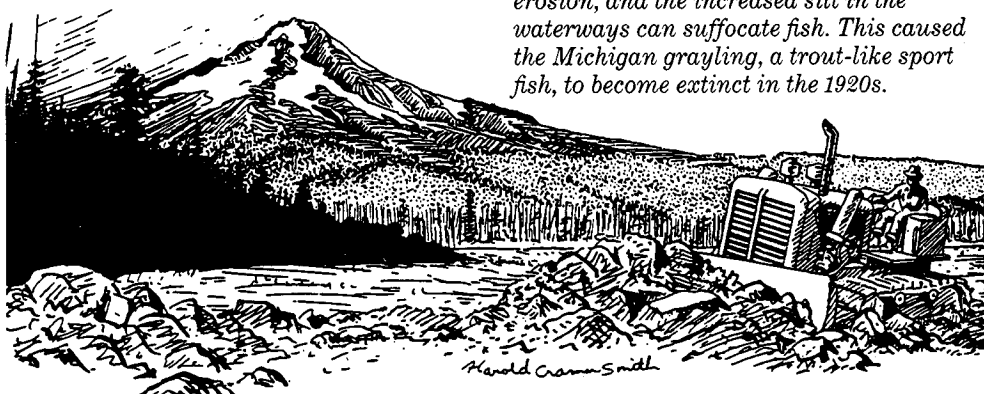
Habitat Destruction, Degradation and Fragmentation. Once abundant throughout the Southeast, the red-cockaded woodpecker rapidly declined as humans altered its pine forest habitat for a variety of uses, primarily timber harvest and agriculture. It nests and roosts exclusively in cavities of older, living pine trees.

The species was listed as endangered in 1970 under a precursor to the 1973 endangered species law. The current red-cockaded woodpecker population, estimated to be 10,000 to 14,000 birds, is fragmented into isolated islands of populations ranging from Florida to Virginia and west to eastern Texas.

Destruction and degradation of habitat are currently the leading causes of extinction for both plants and animals. Clear-cutting forests near rivers can cause excessive erosion, and the increased silt in the waterways can suffocate fish. This caused the Michigan grayling, a trout-like sport fish, to become extinct in the 1920s.

Habitat protection on federal and private lands may enhance recovery efforts for the red-cockaded woodpecker. The U.S. Forest Service is working closely with the Fish & Wildlife Service to preserve red-cockaded woodpecker colonies in national forests. And in 1993, the Georgia-Pacific Company established a landmark conservation agreement with the Fish & Wildlife Service to help save the woodpecker on approximately 4 million acres of company land.

Pollution. Endangered species often serve as indicators of environmental problems that may also affect people. A good example is freshwater mussels. Several mussels are endangered in large part due to pollution of



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the waterways where they live. Contamination commonly results from agricultural pesticide runoff, municipal sewage disposal and industrial waste discharge.

Of course, people rely on the nation's waterways, too. For example, healthy rivers are sources of food and water as well as popular places for recreational activities. Therefore, our own health and well-being are in jeopardy when these areas become polluted.

Introduction of Exotic (Non-Native) Species. Introduced species can, if uncontrolled, increase and become a threat to other species of wildlife. Foxes released by Russian and American fur traders in the Aleutian Islands of Alaska nearly destroyed the Aleutian Canada goose.

Rats introduced by sailing ships to the Hawaiian Islands played havoc with nesting birds. Mongooses were imported to control the rats; but they turned on nesting birds instead and were a serious factor in bringing the nene goose near extinction.

In addition, diseases and parasites, introduced by international trade, have caused such disasters in America as Dutch elm disease and chestnut blight which have driven two native trees nearly to extinction.

Commercial Exploitation. Many early laws passed to protect animals and plants were poorly written and inadequately

enforced. They made it relatively easy for rare, native plants such as some cactus, carnivorous plants, orchids and others to pass into commercial trade.

The demand for exotic pets, such as parrots and other wild birds, has caused many of these species to become endangered.

Also, some Asian cultures consider animal parts, such as those of bear species, rhinoceros, and tiger, to have medicinal powers. The illegal wildlife trade is a very lucrative business, and the demand for these animal parts is a growing threat to their very survival.

Elephants and sea turtles are also endangered due in large part to the demand for ivory and turtle shell for jewelry and other wildlife products.

Natural Factors

No one knows exactly why some animals and plants flourish for thousands of years while others vanish within a relatively short time. But those species that do survive exhibit a common trait: adaptability. The animal or plant that is able to change its requirements to fit changes in its environment holds the vital key to survival. An endangered species' ability to adapt profoundly affects the likelihood of recovery.

Conversely, animals and plants that are highly specialized can be more vulnerable to extinction. The Everglade kite, for instance, feeds only on the apple snail; and the

black-footed ferret of the Great Plains feeds almost entirely on the prairie dog. The Tobusch fishhook cactus, in Texas, lives only along the bottoms of intermittent streams, or *washes*, that remain dry for long periods of time. All these species are precariously dependent on extremely narrow resources or habitats. They are comparable to people who have only one skill in a job market that is constantly changing.

The Human Factor

Some plants and animals will become extinct for reasons not yet fully understood by science. Some may die out regardless of what we can do for them. Extinction remains a fact of life on this earth. But a disregard for the many manmade factors contributing to the destruction of our natural world could soon cause us to find our own survival in question.

The fact is we do not know all of the functions of each species in our ecosystems and their effects on and potential benefits to man. That is why the Endangered Species Act is designed to protect all species in danger of extinction, not only those that we know a lot about and understand—otherwise we might discover their value only after it is too late.

Inevitably, attempts to judge which species are worth protecting and which are not would be pointless, as we may never know enough information about the intricate web of life. Once a species is extinct there is no way to correct past actions and bring it back but endangered means there's still time.

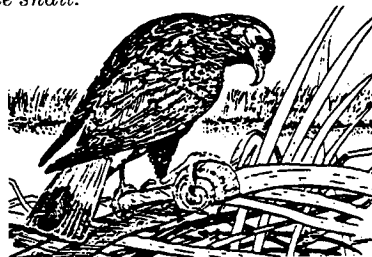
Gray Wolf

The gray wolf is one of more than 60 native mammals on the federal list of Endangered and Threatened Wildlife and Plants.



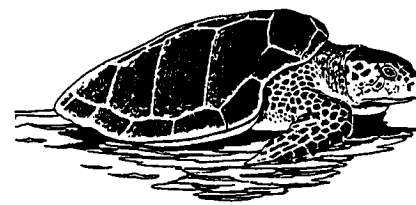
Everglade Kite

Among some 90 North American birds on the list is the Everglade kite, a raptor (hawk-like bird) that feeds solely on the apple snail.



Loggerhead Sea Turtle

The loggerhead sea turtle, which weighs from 300 to 900 pounds when full grown, is one of the 50 native reptiles and amphibians on the list.



Socorro Isopod

Nineteen native crustacean and 37 native insect species are included on the list.



Knowlton Cactus

More than 650 plant species are listed as endangered or threatened.



Birdwing Pearly Mussel

Among the 84 listed native snails and clams is the birdwing pearly mussel.



Humpback Chub

The humpback chub is one of several species of fish in the Colorado River system whose populations are suffering because of habitat destruction. More than 100 native fishes are currently listed as endangered or threatened.

