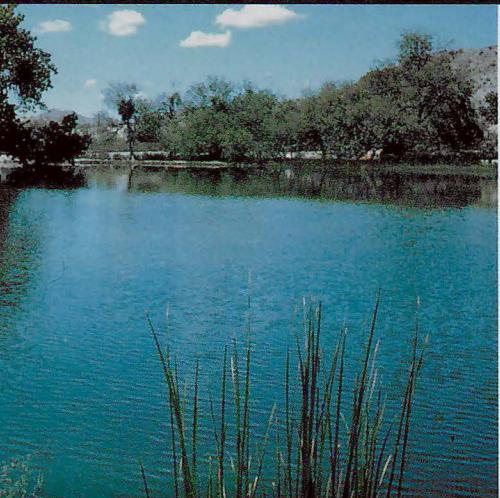


# Endangered Species in the National Parks

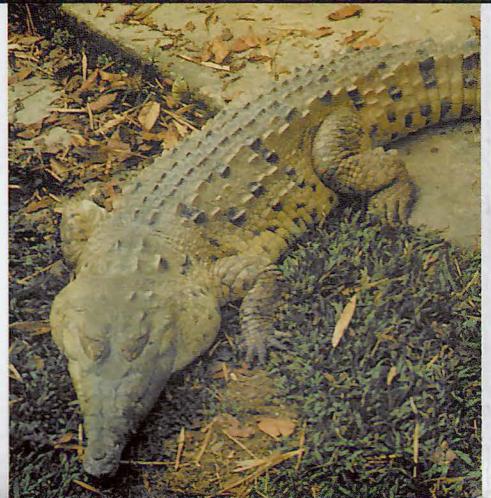
U.S. Department of the Interior  
National Park Service



Quitoquito Pond, home of Desert Pupfish, Organ Pipe Cactus National Monument, NPS



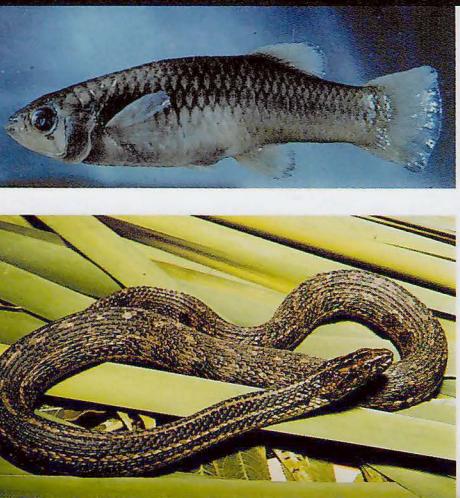
Bald Eagle, U.S. Fish & Wildlife Service, Ermanno Vanino



American Crocodile, U.S. Fish & Wildlife Service, J. D. Williams



Piping Plover nesting area, Gateway National Recreation Area, NPS, Don Riepe



Big Bend Gambusia (above), U.S. Fish & Wildlife Service, James E. Johnson  
Atlantic Salt Marsh Snake, U.S. Fish & Wildlife Service, Robert Simmons



Peregrine Falcon, U.S. Fish & Wildlife Service, Mike Smith

We humans are too successful. In expanding over the earth, we have extinguished many forms of life and threatened the existence of still others, greatly accelerating the natural rate of extinction. This weakens the system on which all life depends and impoverishes the quality of our life. Fortunately, many countries and groups are taking steps to stop this loss. The National Park Service role is to provide undisturbed habitat in the U.S. where all species, including endangered ones, can continue to exist, subject only to the forces of nature. There have been successes, in parks and elsewhere, and this is a symbol of hope. For it signifies that we can stop the worldwide slide of extinction that we started.

## What Are Endangered Species?

The effort to halt human-caused extinctions in the United States is guided by the Endangered Species Act of 1973. This Act defines an endangered species as any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A "threatened species" is one that is likely to become an endangered species within the foreseeable future throughout all or a significant

portion of its range. The goal of the Act is to restore all federally listed endangered and threatened species to the point where they are again viable, self-sustaining members of their ecological communities. In September 1990 there were over 1,100 species, subspecies, and populations on the list worldwide. About half of these were in the U.S.

## Why Should We Save Them?

There are many reasons, some purely practical, for preventing the extinction of species. They may have important scientific, medical, agricultural, or industrial uses, known or as yet unknown. They each play an ecological role, and we do not know what the consequences may be if they are lost: other species dependent on them might be lost as well. Endangered species, like all species, are unique genetic combinations, never to be created again. If they are lost, the genetic resources of Earth are diminished. Furthermore, they may be sensitive to environmental change and can warn us of threats to the environment. The decline of peregrine falcons, bald eagles, and other species alerted us to the dangerous effects of DDT. Endangered species have symbolic importance—they tell us that all species may

become threatened, including ourselves, if we do not preserve a healthy environment. And we may simply enjoy them as interesting or beautiful living things that share the planet with us. Finally, since many species are endangered because of human action, we must consider a moral question: Is it just plain wrong to cause the extinction of another form of life?

## How Can We Save Them?

The main reason species become endangered is human destruction of their habitat. Many now occupy small areas in a restricted type of habitat. Such habitat must be conserved. The Kirtland's warbler, for instance, nests only in young jack pines in northern Michigan. The U.S. Forest Service conducts periodic burning in these forests to maintain the needed stage of growth. Other species, like the gray wolf and some cactuses, have been severely reduced by hunting or collecting. These need well enforced protective laws. Still others are threatened by pesticides, introduced species that compete with them, or other human-caused dangers; these threats must be removed.

The Endangered Species Act gives legal protection and requires a recovery plan for each listed species, unless such a plan will not promote the conservation of the species. A recovery plan identifies, describes, and schedules the action necessary to restore these plants and animals to a more secure condition. This may include captive propagation and reestablishment, such as the whooping crane program, as well as protection and management of habitat.

Endangered species need the help and cooperation of individuals and organizations at all levels: in research to understand the problems, action to address them, and public support for all these activities. The U.S. Fish and Wildlife Service is the lead agency in administering the Endangered Species Act. Among its main responsibilities are coordinating the listing process and developing and administering recovery plans. The Endangered Species Act requires all federal agencies to conserve listed species and avoid any actions that would jeopardize their existence.

Reprinting of this publication was funded by a grant from the National Park Foundation.

## The NPS Program

The National Park Service is unique among federal agencies in that its prime mission, in natural areas of national parks, is to maintain nature in all its diversity undisturbed by human activity. This especially benefits many endangered species, which are particularly vulnerable to human influences. The Service makes an effort to identify these species on its lands (and state-listed species as well), and take steps to improve their lot.

Parks from Alaska to the Virgin Islands and Guam are protecting threatened and endangered species ranging from small plants and crustaceans to grizzly bears and whales. In 1988 a survey revealed that over 120 endangered or threatened species were known or suspected to occur in more than 140 units of the National Park System. Some species are found in many parks. The bald eagle nests, migrates, or winters in 71 parks, the

peregrine falcon in 59. But most of the species are very restricted. Seventy-four are found in only one or two parks.

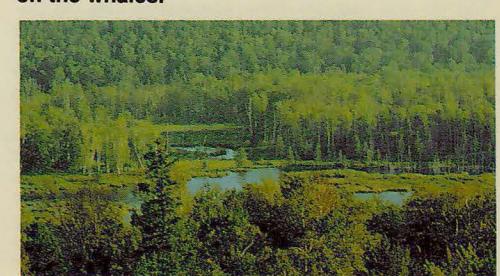
Many parks contain "critical habitat." Critical habitat, under the Endangered Species Act, is an area that has been designated by the Fish and Wildlife Service as essential to the conservation of an endangered species. Critical habitat has been designated in one or more parks for each of some two dozen endangered or threatened species.

When a park has an endangered species, the staff tries to learn how many individuals there are, what areas they inhabit, and whether special management is required to maintain or increase the population. Park managers also consider the species that formerly occurred in the park and whether they can be reestablished.

### Protection

In some cases, management consists largely of recording the locations of endangered species, monitoring their well-being, and protecting their habitat. Some endangered plants are treated this way. Many endangered mussels and fish in the East mainly need clean, clear, naturally flowing streams, which parks strive to maintain through appropriate regulations. The gray wolves in Voyageurs and Glacier national parks thus far are simply given the protection afforded all wildlife in national parks.

Some species, however, need more active protection. Research showed that cruise ships and other boats were disturbing the humpbacked whales that summer in Glacier Bay National Park and that commercial fishermen were taking some of the species the whales feed on. So the Park Service issued regulations that limited the numbers and activities of boats in the Bay, and prohibited the harvest of certain fish and crustaceans. Research continues in order to refine our understanding of human impacts on the whales.



Gray wolves find sanctuary and prey (moose) in the forests of Isle Royale National Park, Michigan, NPS

### Habitat Restoration

Sometimes it becomes necessary to restore the habitat to maintain an endangered species. The red-cockaded woodpecker, for instance, needs large open stands of mature southern pines for nesting, roosting, and feeding. Such stands have become scarce because of logging and the suppression of fire, which allows young hardwoods to fill in the stands of pine. Park managers at Big Cypress National Preserve in Florida and Congaree Swamp National Monument in South Carolina have carried out prescribed burning to maintain these nesting areas.

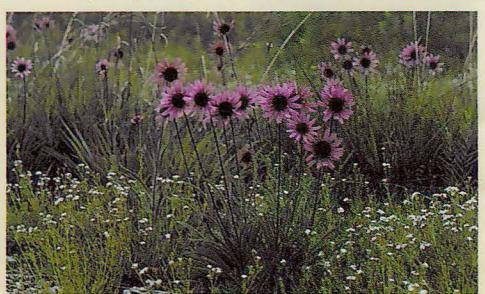


In parts of Big Cypress National Preserve, Florida, the understory is periodically burned to maintain the open pine stands red-cockaded woodpeckers require. NPS, James Snyder

### Species Restoration

The most dramatic step is to restore a species that has been lost from a park. Such efforts are underway all across the country, with a variety of species. More than a dozen parks are reestablishing peregrine falcons, for instance, which were decimated by the effects of pesticides in the 1950s and 1960s. Young falcons are raised and released from "hack boxes" near potential nest sites on cliffs. After several years of this, often pairs of mature birds begin breeding naturally in the area. Acadia, Shenandoah, Isle Royale, Dinosaur, Rocky Mountain, and Yosemite are among the many parks that have successfully "hacked" peregrines.

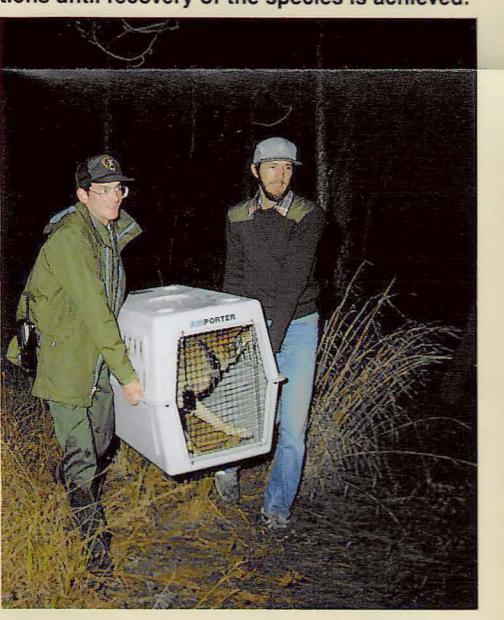
The Tennessee coneflower is a tall, purple-flowered plant found only in cedar glades in north central Tennessee. To establish a new population within the species' historic range, a botanist planted coneflower seeds in Stones River National Battlefield. One group of over 100 plants has survived and spread and now gives hope for long-term success.



Tennessee coneflowers have been restored to Stones River National Battlefield. Paul Somers

### Captive Propagation

A different approach is the use of parks as sites to propagate species for eventual release elsewhere. Horn Island, a part of Gulf Islands National Seashore 8 miles off the mainland of Mississippi, is serving as a site for captive rearing of red wolves, in cooperation with the U.S. Fish and Wildlife Service. That agency's biologists believe that captive-born pups should be released to the wild as soon as possible to develop survival skills. Islands are well suited for this because of the isolation and ease of recapture, and Horn Island was one of the first selected. Here, an adult pair of red wolves lives in a large acclimation pen until pups are born. After several weeks all are released and run free. When mature enough, the young can be captured and taken to a mainland site in the Southeast for release, while the adults are taken back to the pen for breeding again. Such island propagation sites may assure a continuing supply of healthy young wolves to the mainland populations until recovery of the species is achieved.

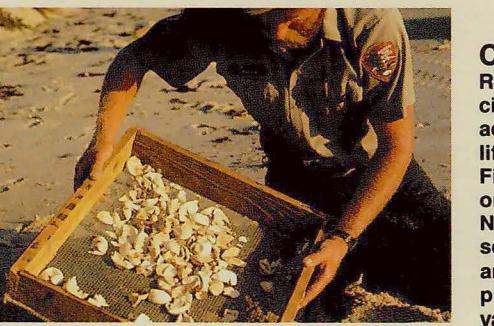


When a species is close to extinction, captive propagation may be its last hope. Here an adult red wolf is brought to Horn Island at Gulf Islands National Seashore for captive propagation. The young, when mature enough, will be released at a mainland site in the Southeast. NPS, Ted Simons

### Multiple Measures

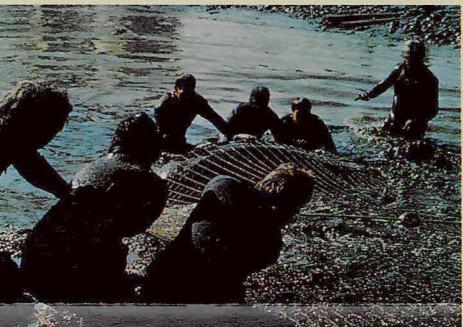
In some cases, an endangered species needs several kinds of help. Coastal parks in the Southeast, for instance, are safeguarding the future of endangered sea turtles through patrols, protecting the eggs from predators and human disturbance, nest relocation, and even through caring for the hatchlings. At Canaveral National Seashore in Florida, rangers put screens around the nests of loggerhead, green, and occasional leatherback turtles to keep out raccoons. At Fort Matanzas National Monument, also in Florida, loggerhead turtle eggs are relocated in hatcheries to avoid off-road vehicle damage and the hatcheries are screened against raccoons. The mongoose, which was introduced to the Virgin Islands National Park area before park establishment, is a serious threat to that park's native animals. Mongooses are trapped near the sea turtle nesting beaches to reduce predation on eggs.

At Padre Island National Seashore in Texas, an 11-year program was carried out to try to restore the extremely endangered Kemp's ridley sea turtle to this former nesting area. Eggs were brought from the turtle's only known remaining nesting beach, in Mexico, were hatched, and a total of 15,000 young were raised for a year and released offshore. It is hoped the females, when mature, will return to nest.



A ranger at Canaveral National Seashore counts egg shells after baby sea turtles have hatched and crawled into the ocean. NPS

population must be studied to determine whether a danger from inbreeding exists. Telemetry studies, such as those conducted on West Indian manatees near Cumberland Island National Seashore, Georgia, give information on seasonal movements and habitat use. Food-habit studies, such as those on grizzly bears at Yellowstone, indicate the critical food items at different times of the year. Long-term studies on Isle Royale have helped to explain trends in gray wolf and moose numbers and added importantly to the understanding of predator-prey relationships elsewhere.



A West Indian manatee is captured for radio-tagging at Fernandina Beach, Florida. Georgia Department of Natural Resources, Herb Cawthron

### Cooperation

Research and management of endangered species in national parks are usually cooperative activities. For instance, the U.S. Fish and Wildlife Service and Florida Game and Fresh Water Fish Commission have major roles in the work on Florida panthers, which live in Everglades National Park and Big Cypress National Preserve and also on state and private lands around these parks. Park visitors, too, can help protect endangered species by reporting observations of these species and any threats to them. Endangered species, in the end, are everybody's business.

### For More Information

To learn more about endangered species in national parks, write to: Chief, Wildlife and Vegetation Division, National Park Service, P.O. Box 37127, Washington, D.C. 20037-7127. For general information about endangered species, write to: Publications Unit (725 ARLSQ), U.S. Fish and Wildlife Service, Washington, D.C. 20240.

