

## Gray Wolf

Gray wolves were once common throughout most of North America. But by 1930, they had been all but wiped out in the United States outside of Alaska due to predator-control efforts. In 1967, the Gray wolf was listed as endangered in the 48 contiguous states, except for Minnesota, because of the very low numbers and threats from continued hunting and habitat loss. In 1990, a committee was established by Congress to address reintroduction of wolves into Yellowstone and central Idaho, where the largest blocks of wolf habitat remained. The reintroduction effort required the cooperation of many groups, including the Service, the U.S. Park Service, the U.S. Forest Service, the States of Montana, Wyoming and Idaho, environmental interests, timber, mining and grazing organizations, and local communities. Their efforts culminated in 1995 in the first releases of wolves into Yellowstone National Park and Idaho wilderness areas.

In 1995 and 1996, 31 Canadian wolves were released into Yellowstone National Park, and 35 were released into central Idaho. Although a few of these wolves were lost to accidents and interactions with humans, most immediately adapted to their new homes. They are doing so well that the Service recently announced that no further introductions should be necessary. In 1996, five Yellowstone packs are known to have denned, with at least 22 pups produced. And in 1997, 10 pairs are maintaining dens. The central Idaho wolves also have had great breeding success, with at least seven litters in 1996 and nine or more dens expected in 1997.



Service Director Mollie Beattie and Interior Secretary Bruce Babbitt participate in a wolf release.  
USFWS



A wolf gets a radio collar and health check before being released.  
USFWS

### *Facing Page:*

The gray wolf once again roams free in Yellowstone National Park after a 50-year absence.  
Tracy Brooks/Mission Wolf



*Thirty-seven percent  
of the freshwater  
fish species are at  
risk of extinction,  
and 35 percent of  
amphibians that  
depend on aquatic or  
wetland habitats are  
rare or imperiled.*

## *Abrams Creek Threatened and Endangered Fish*

A major recovery effort is underway in Abrams Creek, Tennessee, for the endangered smoky madtom and duskytail darter and the threatened yellowfin madtom and the spotfin chub. An alliance of numerous agencies and the private sector is coordinating recovery activities in this creek. This alliance includes the Service, Trout Unlimited, National Park Service, U.S. Forest Service, Tennessee Valley Authority, North Carolina Wildlife Resource Agency, Tennessee Wildlife Resource Agency, Conservation Fisheries Inc., University of Tennessee, and private citizens. One of the recovery activities began in 1986 as a project to restore native fish to Abrams Creek. The project is being funded by grants from the government, in-kind services, and private donations. For the first two years, the recovery activities were directed at collecting individuals from three of the four fish species in their natural habitats for use in captive breeding. Collection of the duskytail darter started in 1992. The captive breeding programs continue to produce individuals that can be stocked into their native habitats. These reintroduced fish then are monitored within the streams by biologists using snorkels.

In 1993, the National Park Service initiated another cooperative effort with the help of numerous other agencies to improve water quality in Abrams Creek and promote species recovery. Riparian vegetation has been planted, cattle have been fenced from streams, and water quality has been improved and now is monitored regularly along with the aquatic community.

After all of these efforts, the fish are showing signs of recovery. During the summer and fall of 1995, surveys showed that individuals from all four of the reintroduced species are surviving in Abrams Creek, and at least three of the four reintroduced species are reproducing!



The duskytail darter is part of the Abrams Creek ecosystem.  
Dick Biggins/USFWS



*Nearly 20 percent (168 species in 1996) of the species federally listed in the United States are found on the Service's National Wildlife Refuges. A total of 55 refuges have been established to support threatened and endangered species.*



Cleaning vegetation from the sides of the creek allows the native aquatic vegetation to grow. This helps recover the listed species, because this vegetation is the food source for some of them.

D. Ledig/USFWS

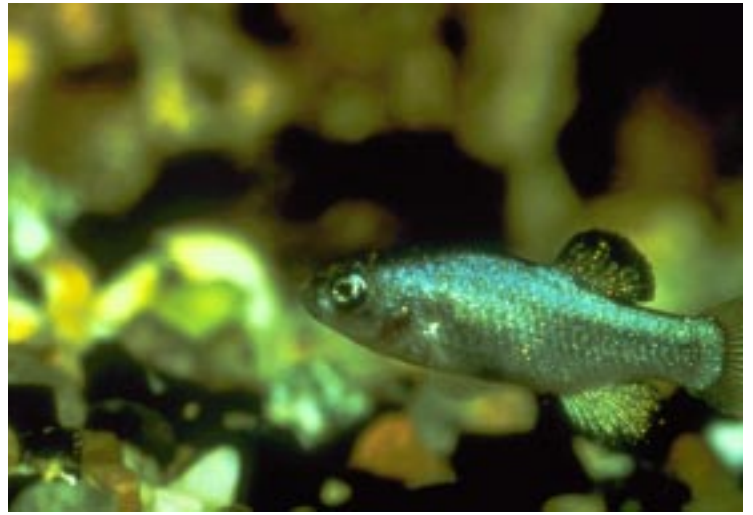


Measuring stream flow at Ash Meadows National Wildlife Refuge helps to determine if there is enough water for the listed species.

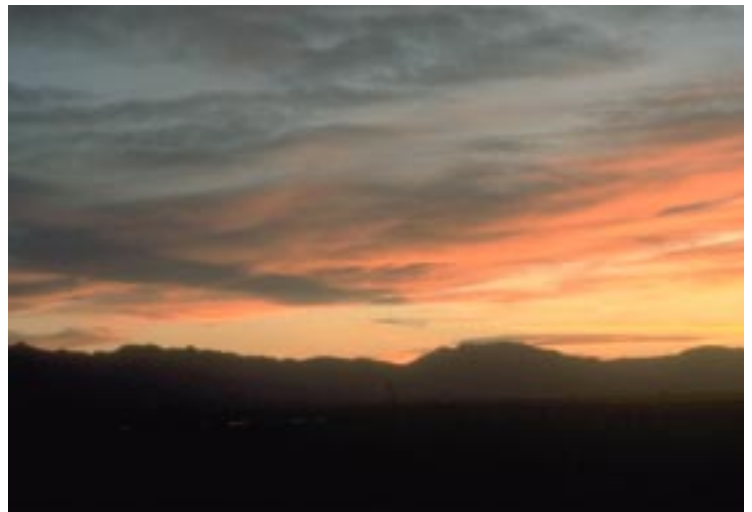
Beth St. George/USFWS

## *Ash Meadows National Wildlife Refuge*

One of the ways that the government assists with the recovery of listed species is to secure and protect habitat that is essential to a species' existence by establishing National Wildlife Refuges (NWR). Ash Meadows NWR is one of these protected areas. This specific refuge is a wetland ecosystem, which contains a system of natural seeps and springs in the Mohave Desert on the California/Nevada border. These seeps and springs enrich the desert environment and provide an excellent example of a desert oasis, which is extremely uncommon. The most significant benefit provided by Ash Meadows NWR is the protection of a truly unique environment that endangered and threatened species and a variety of other wildlife depend upon for habitat. This refuge provides habitat for at least 24 plants and animals found nowhere else in the world; 12 of these are listed species. The listed species include: four species of fish, seven plants, and one aquatic insect.



The Devil's Hole pupfish has been protected by establishing the Ash Meadows National Wildlife Refuge.  
Tom Baugh/USFWS



The Ash Meadows ecosystem is home to 24 species found nowhere else, such as the Ash Meadows speckled dace and the Ash Meadows milk-vetch.  
USFWS



*Since passage of  
the Act, 1,090  
species have been  
listed in the United  
States as either  
endangered or  
threatened, and, for  
all but seven,  
extinction has been  
prevented.*

## *Karner Blue Butterfly*

The fate of this azure blue butterfly is tied to natural fires that, prior to European settlement, periodically swept through dry, sandy pine and oak-pine forests creating sunlit openings just right for an explosion of the butterfly's food plant, the equally blue, wild lupine. Recovery efforts for this butterfly are occurring in numerous States. The range of the Karner blue butterfly spans several States and the Canadian Province of Ontario, with the majority of the butterfly populations occurring in Wisconsin and Michigan. Other States with butterfly occurrences include Minnesota, Indiana, New York, and New Hampshire. Locations include private and public lands, forests, power lines corridors, and road rights-of-way. Historically, the butterfly also was found in Illinois, Massachusetts, Ohio, and Pennsylvania, although these populations are likely extirpated.

The Wisconsin Department of Natural Resources has taken the lead on developing a statewide Habitat Conservation Plan that will help conserve the Karner blue butterfly. It will allow for ecosystem planning to recover the species, while helping other species that depend on the same habitat. Forestry practices have had a great impact upon the

butterfly. Harvesting of some diseased trees is being delayed because of the possible threat to the butterfly. The Wisconsin DNR, various county foresters, Georgia Pacific Corp., Consolidated Papers Inc., utilities, and private landowners currently are working on a plan to help recover the species and allow timber harvesting to occur.

The Service also is working with a number of partners on projects and activities to protect and manage habitat for the Karner blue butterfly in New York and New Hampshire. Partners in these efforts include the New York State Department of Environmental Conservation; the New Hampshire Fish and Game Department; The Nature Conservancy; the Albany Pine Bush Preserve Commission; other State, Federal, and local agencies and governments; private companies; and private landowners. Ongoing management activities include tree and brush removal, mowing, prescribed burning, planting wild lupine and other plant species that provide nectar sources for the adult butterflies, and collection and storage of lupine and nectar species seeds. A Karner blue butterfly captive rearing program also has been undertaken in New Hampshire to attempt to increase the size of its population.



Recovery efforts for the swamp pink include habitat protection and pollution control.  
USFWS

### Swamp Pink

Cleaning up polluted groundwater at a landfill site in New Jersey could have posed a threat to the swamp pink, because this could have dried up the wetlands upon which this threatened wildflower depends. But with help from the Service, the cleanup design was altered to protect habitat for 25,000 clumps of the swamp pink, while still allowing for capture of the contaminated water.

### West Indian Manatee

Radio- and satellite-tracking of manatees continues to provide information on migration routes and essential manatee habitat. Researchers also are conducting studies related to the reproductive rates for manatees. In addition, the Manatee sanctuaries at the Crystal River and Merritt Island National Wildlife Refuges have been expanded as a sanctuary for these gentle sea-cows, and sick, injured, and orphaned manatees continue to be rescued.



Research on migration routes and reproduction rates of the West Indian manatee will help alleviate those problems that affect this species.  
USFWS



# *Can Private Individuals Become Involved in Recovering Species?*

**Y**es! Everyone can make a difference in the conservation and recovery of plants and animals. Many private landowners are helping to recover species through habitat improvement projects on their land. The Service helps in these efforts by providing technical assistance and through "safe harbor" agreements with landowners. A safe harbor agreement assures landowners that improving habitat for species will not restrict land-use options on their land in the future. Your State's natural resources or fish and wildlife agencies also should be able to help you determine if there are threatened or endangered species in your area and what you can do to help conserve or recover the species. Ordinary citizens, whether or not they own land, also may be able to become involved in the recovery of a listed species through activities sponsored by non-governmental groups in their area. There is usually a wide range of recovery activities, requiring diverse talents and interests, that need to be implemented, from field work (e.g., planting native plants) to office work (e.g., helping with public outreach) to assist in recovering listed species. Before beginning a new recovery project, individuals and groups should check with the appropriate State or Federal agency to ensure that their efforts are part of a coordinated strategy.

You can make a difference when it comes to recovering threatened and endangered species! To find out more about partnership opportunities for threatened and endangered species recovery, contact a Service office in your area.

## Green Pitcher-plant

**Because of recovery efforts, the numbers of endangered green pitcher-plants recently have increased at several locations. Several populations also now receive permanent protection, because the land has been set aside through a land acquisition program by The Nature Conservancy. Additionally, 13 other populations have short-term security through voluntary Conservation Agreements between private landowners and conservation groups, State natural resource agencies, and local land trust organizations.**

## Gray Wolf

Gray wolves in Minnesota, as well as in nearby Michigan and Wisconsin, are doing well under the protection of the Act. A program monitoring the numbers and range of these animals indicates that they are well on their way to recovery. Minnesota's wolf population is estimated to be around 2,000 animals. The population of wolves in Michigan and Wisconsin has been increasing in recent years. In late winter 1995-1996, state wolf biologists estimated a population of 102 to 110 wolves in Michigan's Upper Peninsula. This number does not include another 22 wolves found within Isle Royale National Park in Lake Superior.



The California condor was reintroduced into the wild, thanks to recovery efforts from many partners.  
Jeff Foott/USFWS

### California Condor

As late as the mid-1980's, the California condor teetered on the brink of extinction. By 1987, the Service had collected the few remaining wild condors as an emergency measure to save the species from extinction through captive propagation. Through the recovery program, 26 captive-bred condors are now flying freely in the skies of southern California, Utah, and Arizona.



Tagging bald eagle chicks are part of ongoing recovery monitoring efforts that are conducted to check the status of the populations.  
Alan Jenkins/USFWS

## *How Can I Get More Information About Endangered Species?*

The Service's Division of Endangered Species maintains a Home Page on the Internet's World Wide Web, designed to offer exciting graphics, comprehensive information on threatened and endangered species, and specific geographic information from the Service's Regional and Field Offices. The Endangered Species's Home Page can be found at <http://www.fws.gov>. Once there, within the list of contents, click on "Nationwide Activities," then "Endangered Species Home Page." This Internet address provides some of the most current information available on threatened and endangered species and related programs.

You also can find additional information in the publication, *The 1994 Report to Congress: Endangered and Threatened Species Recovery Program*, which can be purchased from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328. The cost of the report is \$4.50 and the order number is S/N02401000712-5. Additionally, *The 1996 Report to Congress* should be out in the Fall of 1997.

Also, the University of Michigan publishes the *Endangered Species Update*, a newsletter that includes reprints of the Service's *Endangered Species Bulletin*. For more information write the Endangered Species *Update*, School of Natural Resources, University of Michigan, Ann Arbor, Michigan 48109-1115, or call (313) 763-3243.

*Right:* The golden-cheeked warbler is one of seven species protected by planning efforts in Travis County, Texas.  
Steve Maslowski/USFWS



#### Golden-Cheeked Warbler

Through habitat conservation planning activities for the golden-cheeked warbler in Texas, 4,600 acres of habitat are being protected. Travis County, the City of Austin, the Nature Conservancy of Texas, Texas Parks and Wildlife Department, Audubon Society, the Service, and others worked together on a comprehensive habitat conservation plan for a total of seven endangered species in the Austin, Texas, area.

#### Myrtle's Silverspot Butterfly

One population of Myrtle's silverspot butterfly is protected on Point Reyes National Seashore. Management at the seashore includes control of introduced plants that crowd out native plant species needed by the butterfly.

## *Summary*

**H**abitat degradation and destruction over three centuries have brought many plants and animals to the brink of extinction, but successful recovery efforts can reverse these declines when everyone works together. One of the key ingredients to recovery is the cooperation of many partners working together to develop innovative conservation and management actions that benefit the species, while accommodating socioeconomic goals. For species after species, this collaborative approach to the recovery process has brought together partners as diverse as State and foreign governments, major corporations, grassroots conservation organizations, and private landowners to improve the habitat for imperiled plants and animals and for ourselves. We have

been largely successful in meeting these challenges. Both the species and the people involved in recovery benefit from conserving and restoring habitat.

Thanks to cooperative recovery programs, the bald eagle once can again be seen soaring over much of our country, and gray wolves again can be heard howling in the Northern Rockies. With persistence and time, it is possible to reverse the decline of many more species and to support them along the road to recovery. When we all participate in conservation, our precious natural environment can be protected in ways that benefit everyone.

# U.S. Fish & Wildlife Service

## WASHINGTON D.C. OFFICE *Washington, D.C. 20240*

---

Jamie Rappaport Clark, *Director*  
Sam Hamilton,  
*Acting Assistant Director for Ecological Services*

E. LaVerne Smith, *Chief, Division of Endangered Species* (703)358-2171  
Ren Lohofener, *Deputy Chief, Division of Endangered Species* (703)358-2171  
Lesli Gray, *Acting Chief, Branch of Information Management* (703)358-2390  
Jay Slack, *Chief, Branch of Conservation and Classification* (703)358-2105  
Richard Hannan, *Chief, Branch of Recovery & Consultation* (703)358-2106

<http://www.fws.gov>

## REGION ONE *Eastside Federal Complex, 911 N.E. 11th Ave, Portland OR 97232*

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*California, Hawaii, Idaho, Nevada, Oregon,  
Washington, American Samoa, Commonwealth  
of the Northern Mariana Islands,  
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Michael J. Spear, *Regional Director*

(503)231-6118

<http://www.r1.fws.gov>

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<http://www.fws.gov/~r3pao/r3home.html>

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Dale Hall, *Acting Regional Director*

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<http://www.fws.gov/~r4eao>

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(303)236-7920

<http://www.r6.fws.gov/www/fws>

## REGION SEVEN *1011 E. Tudor Rd., Anchorage, AK 99503*

---

*Alaska*

Dave Allen, *Regional Director*

(907)786-3542

<http://www.fws.gov/~r7hpirm>



*“This is the legacy I would like to leave behind: I would like to stop the ridicule about the conservation of snails, lichens, and fungi, and instead, move the debate to which ecosystems are the most recoverable, and how we can save them, making room for them and ourselves.”*

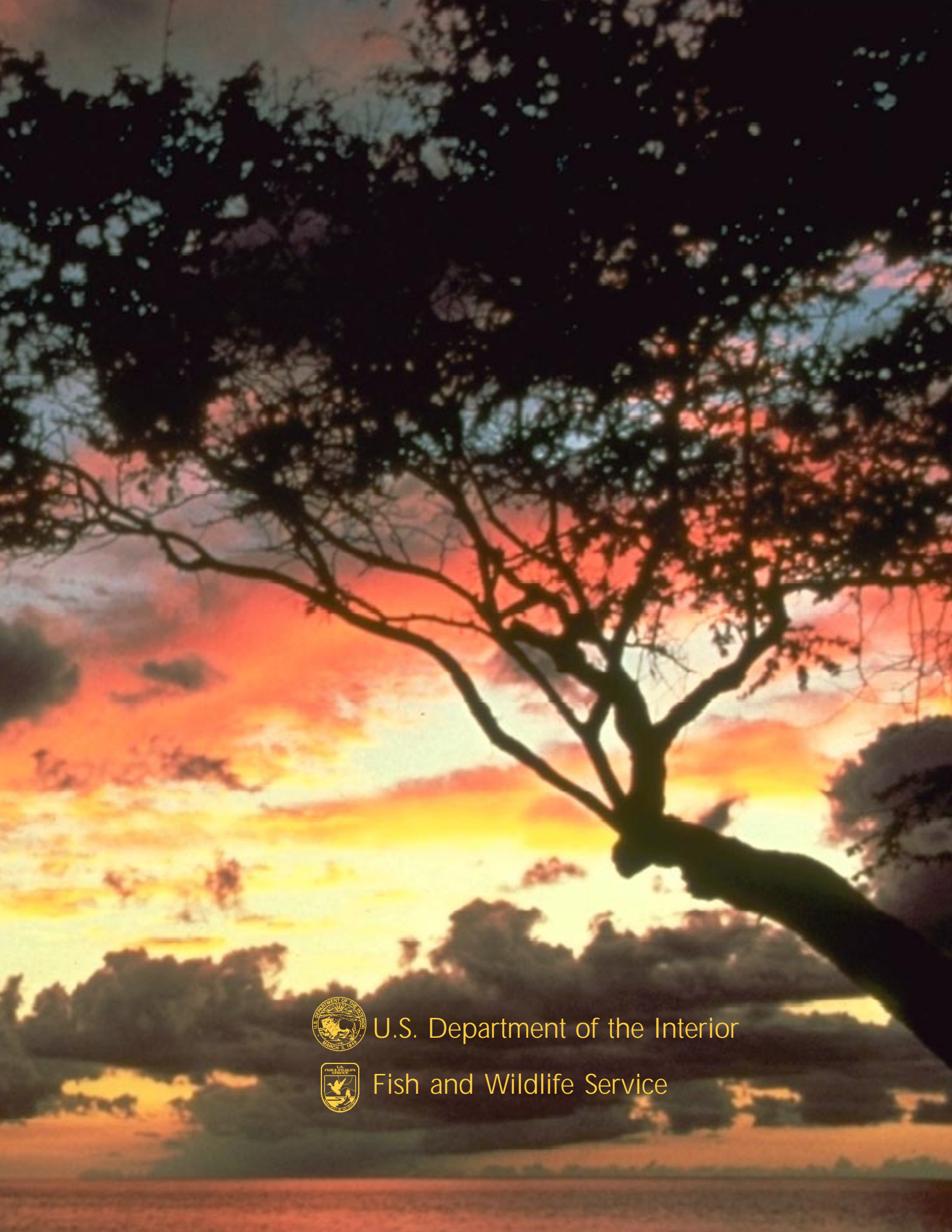
Mollie H. Beattie  
Director, U.S. Fish and  
Wildlife Service  
1993-1996

*Below:*  
Wood Stork chicks  
USFWS



*Back Cover:*  
Sunset on Pacific  
Paul Benvenuti/USFWS





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Fish and Wildlife Service