

by Charlie Scott

Restoring Our Wildlife Legacy



Bald eagle
Corel Corp. photo

Recovery of endangered species involves many scientific and societal challenges. The continued success of our recovery program in meeting these challenges will require research, innovation, partnerships, sufficient resources, and time.

Focusing this edition of the *Bulletin* on the Fish and Wildlife Service's endangered species recovery program is appropriate when we consider the significant accomplishments achieved over the past year. A fitting place to begin is the delisting of the American peregrine falcon (*Falco peregrinus anatum*) in 1999. Recovery of the peregrine across North America epitomizes what is typically needed to bring a species back from the brink of extinction. Protection of this magnificent bird and its habitat under the Endangered Species Act (ESA), research, environmental restoration, and captive breeding and reintroduction required a commitment by numerous agencies, organizations, and individuals for more than 25 years. Similar cooperative efforts were needed to recover two other bird species proposed for delisting in 1999, the bald eagle (*Haliaeetus leucocephalus*) and Aleutian Canada goose (*Branta canadensis leucopareia*).

We met another important recovery milestone on July 13, 2000, when we proposed to reclassify the gray wolf (*Canis lupus*) in the lower 48 states from endangered to the less critical category of threatened (except for wolves in the southwest, which remain endangered). Gray wolves once ranged over most of the lower 48 but were nearly eliminated by eradication efforts that spanned more than 200 years. By the time the gray wolf was listed as an endangered species in the conterminous U.S., its breeding range had been reduced to a small corner of northeastern Minnesota and Isle Royale, Michigan. Recovery efforts have since restored the wolf in two key areas, the Rocky Mountains and the western Great

Lakes region, and reintroduction efforts are underway for the Mexican gray wolf (*C. l. baileyi*) in the southwest. A key factor in the success of the wolf program involved the adoption of a flexible management strategy that controlled problem wolves preying on domestic livestock. The depredation of livestock by wolves is a learned behavior, and removing those few wolves in a population that have learned to kill livestock promotes the recovery of the remaining population that relies on native prey, such as deer and elk. Restoration of the gray wolf is just one example of how using the flexibility of the ESA to apply adaptive management can be effective in achieving recovery.

Incentives and Partnerships

The recovery of listed species cannot be accomplished solely on our national wildlife refuges, national forests, national parks, and other federal lands; many species occur primarily or solely on private lands. Achieving recovery for most threatened and endangered species therefore requires cooperative conservation efforts on private lands. The Service is committed to enhancing opportunities for private landowners to participate in the conservation of imperiled species. Over the past year, we have initiated two important programs to help meet this challenge. In June 1999, we finalized our "Safe Harbor" policy, setting in motion a program to provide regulatory assurances to non-federal landowners who voluntarily implement measures that contribute to the conservation of listed species. Safe Harbor agreements eliminate landowners' concern that



"Wolves are a living symbol of the regard Americans have for things wild," said Interior Secretary Bruce Babbitt recently. "We as a people have made the choice to do the right thing and bring these animals back from the brink of extinction. We have weighed the cost of saving an irreplaceable part of our world and found it to be worth our effort."

Corel Corp. photo

restoring habitat and allowing the return of listed species to their property might result in future land use restrictions under the ESA.

The ESA Landowner Incentive Program, also initiated by the Service in 1999, provides financial assistance to private property owners that are interested in starting conservation projects for listed, proposed, and candidate species. After only two years in operation, the program has provided funding for over 57 projects on private lands across the nation. Ranchers, farmers, and other landowners, in cooperation with the Service and other partners, will use these funds to implement conservation actions benefitting a wide variety of species. Our ability to provide targeted technical and financial assistance to private property owners through the ESA Landowner Incentive Program has generated new and

important recovery opportunities while gaining the support of landowners.

Over the past year we cultivated many new recovery partnerships. For example, a new national partnership was forged when we signed a Memorandum of Understanding with the Center for Plant Conservation in June 2000 at the World Botanic Gardens Congress in Asheville, North Carolina. Founded in 1984, the Center is supported by a consortium of 29 botanical gardens and arboreta throughout the United States. With approximately one out of every 10 plant species in the United States facing potential extinction, the Center is the only national organization dedicated exclusively to conserving rare U.S. plants. The expertise and resources provided by the growing network of recovery partners like the Center will be essential to for restoring

the more than 1,200 listed plant and animal species in the U.S.

Reintroductions

The ability to propagate threatened and endangered species in controlled environments for later release into the wild continued to grow during the past year, resulting in major contributions to species recovery. Our national fish hatcheries, fish technology centers, and fishery assistance offices play a critical recovery role in producing, stocking, and developing new aquacultural techniques for threatened and endangered aquatic species. As of July 2000, there are 43 listed aquatic species (fish, freshwater mussels, and amphibians) being held in national fish hatcheries, where Service biologists are investigating methods for species propagation or are already producing individuals for release into the wild. An increasing



The Oregon silverspot is just one species that is being propagated in zoos for reintroduction into the wild.

Photo by Paul Opler

number of zoos and aquariums have propagation/reintroduction programs for many listed species, such as the Wyoming toad (*Bufo hemiophrys baxteri*), Puerto Rican crested toad (*Peltophryne lemur*), Karner blue and Oregon silverspot butterflies (*Lycaeides melissa samuelis* and *Speyeria zerene hippolyta*, respectively), desert fishes, and American burying beetle (*Nicrophorus americanus*). An added benefit of these recovery projects is the ability to educate millions of zoo and aquarium visitors about endangered species.

The reintroduction of listed species, which is promoted under a special provision of the ESA, has become an increasingly important recovery tool. Section 10(j) of the ESA allows us to reintroduce species as "experimental populations" into specific areas of their historic range while providing increased management flexibility. This flexibility often involves exempting certain activities that would normally be prohibited with listed species, resulting in reduced regulatory burdens and greater community support for reintroduction. So far, we have established experimental populations for 12 species. Some of these, like the California condor (*Gymnogyps californianus*), Mexican wolf, red wolf (*Canis rufus*), and black-footed ferret (*Mustela*

nigripes), were on the brink of extinction and were being maintained only in captive breeding facilities before they were reintroduced back into historical habitats. One of the best known and most successful experimental populations to date involved the reintroduction of the gray wolf into Yellowstone National Park and central Idaho in 1995. In 2000, we will complete plans for several additional experimental populations, including one for the grizzly bear (*Ursus arctos*) in the Selway-Bitterroot Wilderness in Idaho and Montana and another for the black-footed ferret on the Cheyenne River Sioux Reservation in South Dakota (the species' seventh experimental population).

Recovery Planning

Recovery plans provide the comprehensive recovery strategy for a listed species, including a prioritized list of conservation measures needed to identify and address threats, reverse declines, and achieve recovery. Over the past year, we've made significant progress in improving our recovery planning process. In 1999, we began a collaborative effort with the Society for Conservation Biology to conduct a comprehensive review of our recovery plans. The Society selected more than 180 plans for in-depth analysis and is expected to complete its evaluation in 2001. We expect that this study will provide us with valuable information to improve the efficiency and effectiveness of our recovery plans. We continue to increase the integration of state-of-the-art conservation biology, ecosystem management, and innovative restoration actions into our recovery plans and are expanding the use of multi-species plans. In accordance with our 1994 policy on recovery planning, we are broadening the participation of stakeholders in the preparation of virtually every new plan. Many recovery teams drafting new plans now have members that bring unique perspectives and expertise to the recovery effort, such as private landowners, representatives from

local communities, agricultural organizations, corporations, water management agencies, public utilities, and conservation organizations.

The Road to Recovery

We continue to make steady progress in the recovery of listed species. However, some critics of the ESA disagree with this assessment and claim that the law has failed because we have not delisted many species due to recovery. Although we have delisted only 11 species so far due to recovery, this number alone is neither an accurate nor fair measure of our success. The recovery of critically imperiled plants and animals is one of our nation's most difficult natural resource challenges. In many cases, restoration activities must reverse declines that have occurred over centuries. Years of scientific research, restoration, protection, and active management are generally needed to achieve successful recovery. For many listed species, it will take a minimum of 50 to 100 years before their survival is secure. This is especially true for species that need a decade or more to reach sexual maturity and have high juvenile mortality, such as sea turtles, or those that have a naturally low reproductive rate, such as grizzly bears.

Since enactment of the ESA, only seven species have been removed from the list of threatened and endangered species due to extinction. Some of these species, such as the blue pike (*Stizostedion vitreum glaucum*) and Santa Barbara song sparrow (*Melospiza melodia graminea*), were probably extinct prior to being listed but were added to the list in the hope that some survivors might be found. Preventing the extinction of the remaining 98 percent of listed species is perhaps the ESA's biggest success. Indeed, a recent independent scientific analysis¹ suggests

¹ "Choosing the Appropriate Scale of Reserves for Conservation," Mark W. Schwartz of the Department of Environmental Science and Policy, University of California-Davis, in *Annual Review of Ecological Systematics*, 1999.



that without the protection and recovery programs of the ESA, 192 species might have become extinct between 1973 (when the ESA was passed) and 1998.

While recovery takes time, we are seeing tangible results. A steady number of listed species are moving from the status of declining to stable or improving. We anticipate preparing several additional delisting or downlisting actions due to recovery in the coming year. These include species like the Gulf Coast population of the brown pelican (*Pelecanus occidentalis*), the Douglas County population of the Columbian white-tailed deer (*Odocoileus virginianus leucurus*), and the Tinian monarch (*Monarcha takatsukasae*).

Growing challenges that face the Service's recovery program will require innovative approaches, expanded use of partnerships, and increased funding if we are to increase the progress achieved so far and ensure a future for all listed species.

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Habitat conservation, restoration, and protection are restoring the Missouri bladderpod (*Lesquenella filiformis*) and other plants to a more secure status.

Photo by Jim Rathert/Missouri Department of Conservation