



Achieving Recovery; Preventing Extinction

by Johnna Roy and Debby Crouse

A male Attwater's prairie-chicken performs on booming grounds at the Attwater Prairie Chicken National Wildlife Refuge in Texas. The species once numbered at least one million along millions of acres of the coastal prairie of Texas and Louisiana. Photo Credit: Noppadol Paothong

The Endangered Species Act (ESA) provides a safety net for native fish, wildlife, and plants, with a focus on the recovery of species that have been listed as endangered or threatened. When a species is listed, a recovery plan is developed using the best science to identify the management actions necessary to achieve recovery. Recovery is the process by which the decline of a listed species is arrested and threats are removed or reduced, ensuring the long-term survival of the species in the wild. To stabilize, recover, and ultimately delist a species, the U.S. Fish and

Wildlife Service (Service) works with many stakeholders and partners, including other federal agencies, State and local governments, Tribes, non-governmental organizations, academia, and private landowners. This collaboration and sharing of resources is critical to the conservation of imperiled species.

The process of recovering listed species involves overcoming complex challenges. The decline of most listed plants and animals occurs over decades and centuries. When they are listed, the majority of species have declined

to such precariously low numbers that the first order of business is to slow the rate of decline and to then stabilize the population. The actual stabilization and recovery of listed species may take years and even generations to achieve, which we dutifully monitor. This allows us to assess the effectiveness of our program and determine where modifications may improve its success.

Some achievements under the ESA are well-known, such as the recovery and delisting of the peregrine falcon (*Falco peregrinus*) and the bald eagle (*Haliaeetus leucocephalus*).

Other, lesser-known species that have been recovered and removed from the federal list of endangered and threatened include the Maguire daisy (*Erigeron maguirei*), a perennial herb that grows in southeastern Utah; the Lake Erie watersnake (*Nerodia sipedon insularum*), an innocuous, non-venomous snake native to Ohio; and, the Tennessee purple coneflower (*Echinacea tennesseensis*), a showy wildflower found only in central Tennessee. The Magazine mountain shagreen (*Mesodon magazinensis*) – a tiny, secretive snail that is unique to Alabama – may be the next species to secure its place in history and join the growing list those recovered under the ESA. It is the first invertebrate to be proposed for delisting due to recovery.

Conservation actions carried out under the ESA have improved the status of a number of species, leading to their reclassification from endangered to the less critical threatened status. But the success of the ESA is not measured solely as a function of species that have been delisted or reclassified; success also includes stabilizing species to avoid extinction. The short-tailed albatross (*Phoebastria albatrus*) – the largest and once the most abundant of the three albatross species in the north Pacific – was nearly decimated by feather hunters during the late 1800s, and thought to be extinct by the turn of the 20th Century. The future is brighter now for this magnificent bird thanks to some creative conservation efforts on the part of Service biologists and Japanese partners at the Yamashina Institute for Ornithology. Similarly, the Attwater's prairie-chicken (*Tympanuchus cupido attwateri*) was once abundant throughout Texas' tallgrass prairie. The species declined to just 50 individuals by 2003, however, after 99 percent of its habitat was developed. An intensive recovery program involving a diverse group of partners has given this bird a fighting chance.

In many ways, the true measure of the ESA's success is the number of species that it has kept from going extinct. In 2006, researchers calculated that 262 listed species could have been expected to go extinct in the 30 years since the ESA was enacted by Congress in 1973, but 227 of those have survived and have arguably been prevented from extinction. Indeed, 98 percent of the species protected by the ESA are still extant.

We have learned a great deal over the last four decades. Through our experiences, we know that our recovery planning and implementation have become more effective. Although significant progress has been made in safeguarding the nation's rarest species and their habitats, we face continuing challenges. Our growth into a nation of more than 300 million people inevitably creates more threats to fish, wildlife, and plants, and their habitats. In addition to increasing human populations and associated pressures on the landscape, there are new threats we are still learning how to address, such as invasive species.

Climate change promises to affect entire landscapes as well as individual species in ways we are still trying to predict and understand.

To make recovery efforts for listed and candidate species more efficient and effective, we are working to strengthen our partnerships with States and local governments, other Federal agencies, Tribes, non-governmental organizations, industry, academia, and private landowners. Together, we will find new and innovative solutions to invigorate and modernize the implementation of the ESA, using not only our current conservation tools but also creatively developing new ones. This shared responsibility will help ensure that our imperiled species will be protected and ultimately recovered.

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A translocated short-tailed albatross chick begs a decoy for food on Mukojima Island.

Photo Credit: Greg Balough, USFWS

