A Timeline of Trials and Triumphs

EXPLORING KEY MOMENTS IN ESA HISTORY

By Divya Abhat

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The year 2013 marks the 40th anniversary of the Endangered Species Act (ESA)—a landmark law established "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." The 1973 Act came on the heels of two notable predecessors: the Endangered Species Preservation Act of 1966, designed to protect vulnerable species native to the United States, and the Endangered Species Conservation Act of 1969, which expanded on the 1966 Act to cover a larger number of species, including animals threatened with worldwide extinction. The 1973 ESA that we celebrate today went further, providing greater protections to listed species along with the ecosystems on which they relied.

Since passage of the ESA, the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS)—the two federal agencies that administer the ESA—have enjoyed notable successes in rescuing dwindling species like the bald eagle and the peregrine falcon. Yet these agencies have also endured steep challenges, such as criticisms over listings and de-listings, frequent litigation, inadequate funding, and struggles with states over jurisdiction.

Despite such challenges, the Act is destined to endure as an imperfect but vital safety net for wildlife and habitats at a time of mounting pressures on the nation's natural resources. Today it offers protections for more than 1,400 plant and animal species in the United States that are listed as threatened or endangered, with close to 200 species categorized as "candidate" species under consideration for inclusion on the endangered species list. Those labels are significant, as they result in the following actions or protections:

Endangered. This designation applies to species currently in danger of extinction. Endangered species are protected from "take"—which includes being killed, wounded, trapped, or moved—and they cannot be traded or sold.

Threatened. This term applies to species that could become endangered in the foreseeable future. It results in many, but not all, of the same protections as are given to endangered species.

Candidate. A candidate species is one being considered for protection under the ESA. Although FWS has enough information on a candidate species' biological status to propose listing, higher priority listing activities keep the listing process from going forward. These species do not receive statutory protection under the ESA.

Credit: USFWS

1966

1996: Congress passes the Endangered Species Preservation Act of 1966, designed to protect animal species native to the United States.

1967

1967: U.S. Interior Secretary Stewart Udall announces the first list of endangered species, which includes 78 birds, mammals, reptiles, amphibians, and fish.

1969

1969: The Endangered Species Conservation Act of 1969 builds on the 1966 Act and authorizes protection of animals threatened with worldwide extinction.

1973

1973: Biologist David Etnier discovers the snail darter in the Little Tennessee River, increasing controversy over construction of the Tellico Dam.

1973: Eighty nations sign the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)—a treaty to protect certain plant and animal species by regulating international trade.

Courtesy of CITES

1973: On December 28, President Richard Nixon signs the Endangered Species Act of 1973, designed to protect vulnerable species and their native habitats.

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Such pat definitions belie the political, social, and logistical complexities that arise in the wake of a listing. Nevertheless, during this 40th anniversary year, it's worth reflecting on some of the milestones that have helped define the ESA as one of the most significant environmental laws of our time (see timeline) and explore a few key species, issues, and incidents that encapsulate its journey.

When Industry Impacts Species

Although the key purpose of the ESA is simply to protect wildlife species and their habitats, actual execution of the Act has been anything but simple. For decades, wildlife biologists and researchers have been at odds with some industries and landowners over protections of listed species. While the former will highlight the risk of extinction of a particular species, the latter may express concern that protection measures could restrict development and result in financial loss. Two landmark cases from ESA history highlight this complex struggle.

Snail Darters. In August 1973, David Etnier discovered the snail darter (*Percina tanasi*) in the Little Tennessee River. At the time, Etnier, a biologist and professor at the University of Tennessee, was embroiled in a lawsuit against the Tennessee Valley Authority over construction of the Tellico Dam and Reservoir Project along the same river. Etnier and other experts were concerned that construction could result in the extirpation of a number of fish species, and discovery of the three-inch snail darter only added pressure to protect it and other fish in the region.

Etnier and colleagues began by taking stock of the new species: They estimated that there were probably about 5,000 snail darters in the Little Tennessee River and determined that construction of the dam would almost guarantee the species' extinction. Still, despite lawsuits and appeals to stop the project, TVA continued to build the dam. In 1975, the snail darter was listed as endangered under the ESA, and in 1978, a U.S. Supreme Court ruling made it clear that the ESA forbade completion of projects that would likely jeopardize survival of a particular species. In 1979, however, then Senator Howard Baker (R-TN) and Representative John Duncan (R-TN) pushed through an appropriations rider overruling the ESA and other laws. By November of that year, the reservoir was completed and the river impounded.

Credit: Credit: U.S. Geological Survey

A costumed technician uses a whooping crane puppet to encourage a whooper chick to swim at the USGS Patuxent Wildlife Research Center in Maryland. FWS declared the whooping crane endangered in 1967 under the Endangered Species Preservation Act of 1966. Since then, state and federal management efforts have resulted in an increase in crane numbers from fewer than 20 birds in the 1940s to more than 400 today.

Credit: USFWS

1977: San Clemente Island species of Indian paintbrush (right), larkspur, broom, and bush-mallow become the first plants listed for protection under the ESA.

1978: A Supreme Court ruling related to construction of the Tellico Dam in Tennessee finds that the ESA shows a "plain intent" to "halt and reverse the trend toward species extinction, whatever the cost."

1982: Congress introduces Habitat Conservation Plans (HCP) to protect critical habitat. An amendment to the ESA allows permit holders to "take" protected wildlife if the take is incidental and if the permit holder has an HCP for the species.

1983: FWS approves the nation's first HCP for the protection of species such as mission blue and callippe silverspot butterflies at California's San Bruno Mountain.

1977 1978 1982 1983

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Credit: Karyn Rhode/USFWS

A biologist with the U.S. Fish and Wildlife Service works with a tranquilized polar bear in Alaska. In 2008, FWS listed the polar bear as threatened under the ESA largely because of a rapid decline in sea ice—the species' primary habitat.

A recovery team consisting of Etnier, biologists from TVA and FWS, and others then hatched a plan to save the fish. "It looked like about the only thing we could do—assuming that TVA would eventually win and the Tennessee population would be gone—was try to reintroduce them [elsewhere]," says Etnier. The plan worked. Though the snail darter was extirpated from the Little Tennessee River, reintroductions established populations that now exist in the Lower French Broad, the Lower Holston, and Little River. Further, researchers have found what appear to be naturally occurring populations in five additional Tennessee River tributaries. In 1984, the listing designation of the snail darter changed from endangered to threatened. "I suspect it will be eventually moved from the list without much fuss," says Etnier.

Northern Spotted Owl. In 1973, the U.S. Forest Service (USFS), Bureau of Land Management (BLM), FWS, and Oregon's fish and wildlife agency collaborated to form the Oregon Endangered Species Task Force, which began working to protect Oregon's northern spotted owls and their old forest habitat. At that time, however, federal agencies were eliminating "decadent" old forest stands and replacing them with vigorously growing younger trees as part of a forest management plan. The Task Force faced a dilemma: how to maintain the species and its habitat on a changing landscape. By 1977, BLM and USFS agreed to protect spotted owl habitat in accordance with guidelines from the Task Force, which recommended maintaining 400 pairs of spotted owls in Oregon and providing each pair with at least 300 acres of old timber.

Seeing that the spotted-owl habitat problem wasn't restricted to Oregon, the effort was expanded to address owls in California and Washington. The issue heated up as the timber industry expressed concern over the loss of jobs and income because of reduced logging, while environmental and animal activists called for the protection of old-growth forests and spotted owl populations that relied on them. "The more we learned, the worse the situation looked," says FWS/Oregon State University researcher Charles Meslow. Eventually, environmentalists filed lawsuits challenging USFS and BLM timber sales.

By 1987, FWS had received a petition to list the spotted owl, and in 1990 it listed the species as threatened. Within a year, a federal court order halted old forest logging in northwest federal forests. Then, in 1994, the Clinton administration adopted the Northwest Forest Plan, which still forms the basis for forest management for federal lands in the Northwest. Though significant, the plan "hasn't been effective in stopping the decline of the northern spotted owl," says Meslow, likely because of another factor at play: barred owls. Scientists have found that an increase in barred owls has coincided with a decline in spotted owls (USFWS).

Despite decades of efforts to protect the northern spotted owl, its numbers continue to decline, especially in the northern part of its range (southern

Credit: Phil Armitage/Wikipedia

1985: Authorities begin a California condor captive-breeding program in San Diego and Los Angeles zoos and bring the last nine remaining wild condors into captivity.

Credit: Tracy Brooks/USFWS

1995: U.S. Fish and Wildlife Service releases gray wolves into Yellowstone National Park and Idaho, ending a 70-year absence in the area.

1985 | **1990** | **1994** | **1995** | **1999**

Credit: John and Karen Hollingsworth/USFWS

1990: FWS lists the northern spotted owl as threatened under the ESA.

1994: The California gray whale is removed from the endangered species list, making it the first marine mammal to be delisted under the ESA.

1999: The American peregrine falcon (listed as endangered in 1970) is delisted, largely because of a DDT ban in the 1970s that allowed bird populations to recover.

Credit: Frank Doyle/USFWS

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British Columbia and Washington). Scientists had hoped that as younger forests matured they would bolster the role of the old forest that these owls rely on. "It's been almost 25 years now and the decline of the spotted owl has not stopped," Meslow says.

Balancing Science and Politics

Like industry, politics can play a significant role in ESA policy and planning. In 2011, for example, legislators from Montana and Idaho attached a rider to an approved federal budget deal, with the rider requiring FWS to remove protections for wolves under the ESA in Montana, Idaho, eastern Oregon, eastern Washington, and north-central Utah, and prohibiting further judicial review.

Far more common than such interventions are questions involving climate science. Climate change was barely a blip on the radar of science or politics back in the 1970s, but today the ESA increasingly considers global-warming impacts on species. In May 2006, for example, the NMFS listed two corals—elkhorn and staghorn—as threatened. The listing was prompted by research showing a significant decline in coral populations over the previous 25 years, largely because of warming oceans. More recently, FWS proposed to list the wolverine (*Gulo gulo*) as threatened under the ESA, largely because of the threat of climate change on the species' snow-pack habitat in the northern Rockies.

Such climate-related listings can pit science against political agendas, oftentimes independent of FWS and NMFS. Consider the polar bear. In 2008, FWS listed it as threatened because of the projected loss of its sea ice habitat due to warming oceans—a controversial listing still on appeal. Some scientists went on to argue that this was one reason to limit greenhouse gas emissions, considered a factor in global warming. But both the Bush and Obama administrations have ruled that the government should not invoke the ESA to curb such emissions. Instead, Interior Secretary Ken Salazar said that the global risk of greenhouse gases had to be tackled by comprehensive policies rather than as a collection of agency efforts implemented for particular species (*New York Times* 2009). In another climate-related case, in 2010 the FWS ruled that although the American pika (*Ochotona princeps*) was potentially vulnerable to the impacts of climate change, it did not warrant ESA listing (FWS 2010) because some research suggested that the species could survive at higher elevations—a ruling that drew much criticism from environmental groups.

Clearly, the ESA will remain a lightning rod, drawing praise and blame. Among its critics, Doc Hastings, Chairman of the U.S. House of Representatives Committee on Natural Resources, wrote in 2012 that the ESA "is failing to achieve its primary purpose of species recovery and instead has become a tool for litigation that drains resources away from real recovery efforts and blocks job-creating economic activities" (U.S. House of Representatives 2012). Conversely, many commend the ESA for protecting vulnerable species. "The Act is a safety net for species in real trouble," says Gary Frazer, FWS's Assistant Director for Endangered Species, "and it's been remarkably successful in focusing attention and preventing extinction of species that desperately need our help." Now 40 years and counting, the ESA will continue to fight for species and their habitats in the face of an ever-shifting world. ■

This article has been reviewed by subject-matter experts.

Comment on the ESA, read about NMFS-FWS sea turtle work, and learn about Canada's endangered species law at news.wildlife.org/twp. Read more about the history of the Endangered Species Act at http://www.fws.gov/endangered/laws-policies/timeline.html.

Credit: Susanne Miller/USFWS

2000: A State Wildlife Grants program allows states to develop State Wildlife Action plans to manage and protect vulnerable species.

2005: Birders in Arkansas report seeing the ivory-billed woodpecker—a bird that many thought to be extinct.

2007: FWS removes the bald eagle from the endangered species list. ▶

◀ **2008:** FWS lists the polar bear as threatened largely because of habitat loss in the Arctic.

2013: FWS proposes to list the wolverine as threatened.

2013: FWS releases a four-year-old Mexican gray wolf into the Arizona wild as part of the Mexican Gray Wolf Recovery Program.

Credit: Ron Holmes/USFWS

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