

by Gerry Jackson

“Nothing is more priceless and more worthy of preservation than the rich array of animal life with which our country has been blessed.”

With these words, on December 28, 1973, President Richard Nixon signed the Endangered Species Act (ESA), a law that has proven to be one of the strongest and most foresighted efforts ever made to protect the delicate web of life.

Backed by a groundswell of public support, Congress, in enacting the ESA, committed the Nation to reversing the alarming trend of extinctions that threatened the biological integrity of our country's natural resources. Fervor for the law was spurred by the knowledge that over 500 species of native plants and animals had become extinct since Colonial days. Furthermore, half of these extinctions had occurred during the previous 50 years, from 1922 to 1972. Projections were that, within 25 years, an additional 40 mammals and birds and 25 fish species would become extinct if the trend were not halted.

Congresswoman Leonore K. Sullivan, who at that time chaired the House Committee on Merchant Marine and Fisheries, summarized the need felt by many for an ecological safety net. “Man's presence on the Earth is relatively recent and his domination over the world's life-support systems has taken place within a few short generations. Our ability to destroy, or almost destroy, all intelligent life on the planet became apparent only in this generation. A certain humility, and a sense of urgency, seem indicated.”

While earlier endangered species laws passed in 1966 and 1969 raised public awareness about the plight of rare animals, it was the 1973 act that provided the real tools to help wildlife and plants facing extinction.

Under this law, endangered species conservation has built an impressive track record. In 25 years, the ESA has proven remarkably effective at preventing extinctions and slowing the decline of imperiled species. Nearly half of all species listed for a decade or more are now either stable or improving in status. Only seven, or less than 1 percent, have been found to be extinct. Preventing the extinction of the remaining 99 percent of listed species is one of the ESA's greatest successes.

Furthermore, since 1973, 11 species have been removed from the list due to recovery. Another 18 species (all but 3 of which are native to the United States) have been reclassified from endangered to the less critical category of threatened, including the American peregrine falcon (*Falco peregrinus anatum*), bald eagle (*Haliaeetus leucocephalus*), and gray wolf (*Canis lupus*). Last June, Secretary Babbitt announced that these three species, and nearly 20 others, are now being considered for delisting or downlisting due at least in part to recovery progress.

Certainly, the ESA's first 25 years have not been without controversy—at times, intense controversy. Although protection of most species has gone without much public attention, a few, such as the snail darter (*Percina tanasi*) and northern spotted owl (*Strix occidentalis caurina*), have been lightning rods for contention.

But in examining the facts, we find that economic development can be compatible with the goals of the ESA. Of more than 145,000 Federal actions reviewed formally and informally between 1979 and 1992, only 69—or

less than one-tenth of one percent—resulted in a jeopardy decision where there was no reasonable and prudent alternative for protecting the species. This is an average of 2 of 11,000 projects reviewed annually.

Despite some controversy, the incremental knowledge gained through a quarter century of experience with the ESA has enabled the Fish and Wildlife Service to review, validate, fine-tune, and implement creative reforms designed to improve the ESA's effectiveness, while easing regulatory burdens on landowners and businesses, and encouraging the development of partnerships to conserve species. As we look back over the last 25 years of endangered species protection, we can see that implementation of the ESA has evolved in a very positive way. The approaches of the early days of the ESA—single species management, confrontation, and rigidity—have given way to a multi-species/ecosystem focus, landscape approaches to management, increased regulatory flexibility, and a new sense of partnership.

As we approach the Year 2000, citizens all over the globe are taking the time to reflect on the significance of the new millennium to each of us as individuals and to society as a whole. In keeping with this spirit, the *Endangered Species Bulletin* will carry a special feature in 1999, “The ESA at 25,” that will look back over the last quarter century of endangered species conservation to measure our progress, celebrate our accomplishments, and report on the work yet to be done.

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During October and November 1998, the Fish and Wildlife Service (FWS) published the following proposed and final Endangered Species Act (ESA) listing actions in the *Federal Register*:

Listing Proposals

Short-tailed Albatross (*Phoebastria albatrus*) Although the short-tailed albatross has been listed by the FWS as endangered since 1970, an administrative error led to its listing only as a foreign species. At present, it breeds only on several Japanese islands, but this bird ranges throughout the northern Pacific Ocean and north into the Bering Sea during the non-breeding season. Although there currently are no known breeding populations in the United States, the short-tailed albatross has been sighted in Alaskan waters, at Midway in the Hawaiian Islands, and along the west coast of North America as far south as the Baja Peninsula, Mexico. Originally numbering in the millions, the worldwide population of the short-tailed albatross has declined to fewer than 1,000. On November 2, 1998, the FWS published a proposal to extend ESA protection to this species within U.S. territory.

(photo removed)

'Elepaio (*Chasiempis sandwichensis ibidis*)

Once one of the most common endemic forest birds on the Hawaiian island of O'ahu, the 'elepaio has been eliminated from over 90 percent of its range. The most recent population estimate for this subspecies indicates that only 200 to 500 birds remain. The 'elepaio's decline was caused by: habitat loss and degradation; predation by non-native mammals; introduced avian disease; competition from alien birds; and the spread of exotic plants, which dramatically altered the structure and diversity of native forests. Because of these continuing threats, the FWS proposed on October 6, 1998, to list the 'elepaio as endangered.

Two Aquatic Snails Two species of aquatic snails found only in Limestone County, Alabama, were proposed on October 28 for listing as endangered. The armored snail (*Pyrgulopsis* (= *Marstonia*) *pachyta*) and slender campelona (*Campeloma decampi*) are in a particularly precarious position, being restricted to a few isolated sites along two or three short stream reaches. Threats to the quality of their aquatic habitat include siltation, agricultural runoff, and other changes in water chemistry. The slender campelona already has been eliminated from at least three-quarters of its historical distribution.

Dismal Swamp Southeastern Shrew (*Sorex longirostris fisheri*) In 1986, the FWS listed the Dismal Swamp southeastern shrew as threatened, based on information that this small mammal was restricted in range and reduced in numbers by habitat loss. Since that time, however, the FWS has received new data indicating that this subspecies has a wider distribution in Virginia and North Carolina than originally known and is not in danger. Accordingly, on October 21, 1998, the FWS proposed to remove the Dismal Swamp southeastern shrew from the threatened species list.

Final Listing Rules

Five California Desert Plants Five plant taxa in the pea family (Fabaceae), all restricted to the Sonoran, Mojave, and Great Basin deserts of California, were given ESA protection on October 6, 1998. The three considered most vulnerable to extinction were listed as endangered:

- Lane Mountain milk-vetch (*Astragalus jaegerianus*),
 - Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), and
 - triple-ridged milk-vetch (*Astragalus tricarlinatus*).
- Because the danger facing the other two plants is not as immediate, they were listed as threatened:
- Fish Slough milk-vetch (*Astragalus lentiginosus* var. *piscinensis*) and
 - Peirson's milk-vetch (*Astragalus magdalенаe* var. *peirsonii*).

The remaining habitat of all five plants is threatened by mining, urbanization, off-road vehicle use, pipeline maintenance practices, and wetland alteration.

Four California Wetland Plants Four plant taxa native to vernal pools and certain other wetlands in

southwestern California and northwestern Baja California, Mexico, received ESA protection on October 13, 1998. The two in greatest peril were listed as endangered:

- Munz's onion (*Allium munzii*), a perennial herb in the lily family (Liliaceae) and
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), an annual in the goosefoot family (Chenopodiaceae).

The other two wetland plants were listed as threatened:

- thread-leaved brodiaea (*Brodiaea filifolia*), a perennial herb in the lily family, and
- spreading navarretia (*Navarretia fossalis*), an annual herb in the phlox family (Polemoniaceae).

All four plants face habitat loss, degradation, and fragmentation resulting from: urban and agricultural development, pipeline construction, alteration of wetland hydrology, off-road vehicle use, livestock grazing, weed abatement, and competition from non-native plants.

Four Southwestern California Plants Another suite of plants native to southwestern California and northwestern Baja California, Mexico, also received ESA protection on October 13. One plant was listed as endangered:

- willow monardella (*Monardella linoides* ssp. *viminea*), a perennial herb in the mint family (Lamiaceae).

The three other plants were listed as threatened:

- San Diego thornmint (*Acanthomintha ilicifolia*), an annual herb in the mint family,
- Laguna Beach dudleya (*Dudleya stolonifera*), a succulent perennial in the stonecrop family (Crassulaceae), and
- Otay tarplant (*Hemizonia conjugens*), an annual in the sunflower family (Asteraceae).

These four plants occur in coastal sage scrub, chaparral, and other grassland habitats. They are threatened by habitat loss, competition from non-native plants, off-road vehicle use, mining, grazing, and trampling by hikers.

Three California Chaparral/Scrub Plants A separate listing package, also published on October 13, extended ESA protection to three plants that are native to scrub and chaparral plant communities and are, in some cases, endemic to specific types of clay soils. Two of the taxa were listed as endangered:

- *Nevin's barberry* (*Berberis nevinii*), an ever-

green shrub in the barberry family (*Berberidaceae*) and

- *Mexican flannelbush* (*Fremontodendron mexicanum*), an evergreen shrub or small tree in the cacao family (*Sterculiaceae*).

The third plant was listed as threatened:

- *Vail Lake ceanothus* (*Ceanothus ophiochilus*), a shrub in the buckthorn family (*Rhamnaceae*).

These three species are threatened by habitat loss, non-native plants, off-road vehicle use, and the disruption of natural fire cycles. The original listing proposal for these plants also recommended ESA protection for a fourth plant, but this species was found not to need listing protection (see WITHDRAWALS below).

Virginia Sneezeweed (*Helenium virginicum*)

This perennial in the aster family is restricted to seasonally inundated sinkhole ponds and meadows within Augusta and Rockingham counties in Virginia's Shenandoah Valley. Residential development, incompatible agricultural practices, filling and ditching of wetlands, and other threats to the plant's habitat led the FWS to list the Virginia sneezeweed as threatened on November 3, 1998.

Six Aquatic Snails Six species of aquatic snails found only in localized portions of the Black Warrior, Cahaba, Alabama, and Coosa rivers or their tributaries in central Alabama received ESA protection on October 28. Three of these species were listed as endangered:

- cylindrical lioplax (*Lioplax cyclostomaformis*),
- flat pebblesnail (*Lepyrium showalteri*), and
- plicate rocksnail (*Leptoxis plicata*).

The other three snails were listed as threatened:

- painted rocksnail (*Leptoxis taeniata*),
- round rocksnail (*Leptoxis ampla*), and
- lacy elimia (*Elimia crenatella*).

All six of these aquatic snails depend on clean, free-flowing stream habitats for their survival. Impoundments and water pollution have eliminated the snails from 90 percent or more of their historic range. The surviving populations are threatened by sediments and excess nutrients that wash into the streams.

Arkansas River Shiner (*Notropis girardi*) The Arkansas River shiner is a small fish found in the Canadian River in New Mexico, Oklahoma, and Texas and the Cimarron River in Kansas and Oklahoma. Both rivers are within the Arkansas River drainage, which gave this species its common name. Modifica-

tion or destruction of habitat due to water diversions, groundwater pumping, construction of impoundments, and water pollution, along with competition from a non-native fish, originally led the FWS to propose listing the Arkansas River shiner as endangered. Additional data gathered since publication of the listing proposal indicate that the danger to this fish, while serious, is not as immediate as originally thought; therefore, the November 28 final listing rule classified the shiner as threatened rather than endangered. An introduced, non-native population of Arkansas River shiners in the Pecos River, New Mexico, is not protected under this decision.

Withdrawals

Two California Plants On October 6, 1998, the FWS withdrew a 1992 proposal to list two plant taxa native to California deserts, the shining milk-vetch (*Astragalus lentiginosus* var. *micans*) and Sodaville milk-vetch (*Astragalus lentiginosus* var. *sesquimetralis*). Subsequent to publication of the listing proposal, important habitat for both species gained protection after being transferred to wilderness management at Death Valley National Park.

San Xavier Talussnail (*Sonorella eremita*) In 1994, the FWS proposed to list this land snail, which is known only from a single hillside in Pima County, Arizona, as an endangered species. Since that time, the FWS has entered into a conservation agreement with the landowner that should ensure the long-term protection of this site and the snail. With potential threats to the habitat removed, the FWS withdrew the listing proposal on October 6, 1998.

Dehesa Beargrass (*Nolina interrata*) The original proposal to list the "three California chaparral/scrub plants" (see FINAL RULES above) included a proposal to list a fourth species, the Dehesa beargrass, as threatened. However, after a review of additional data, FWS biologists found that ESA protection for this species is not warranted, and the proposal for the Dehesa beargrass was withdrawn on October 13.

The Internet is a great source of environmental contaminant-related information. Here are some Web sites to get you started:

U.S. Fish and Wildlife Service, Environmental Contaminants Program

<http://www.fws.gov/r9dec/ecprog.html>,

or select the "Environmental Contaminants" block from our main page at <http://www.fws.gov>. From this site, you can find a program overview, information on contaminant identification and assessment, and our role in Natural Resources Damage Assessment on the cleanup program under the Comprehensive Environmental Response, Compensation, and Liability Act.

The National Irrigation Water Quality Program

<http://www.usbr.gov/nwqrp/irrgwat2.html>

The National Irrigation Water Quality Program is an inter-bureau program managed by the Department of the Interior. This site documents an on-going investigation of the contaminating effects of irrigation drainwater in the western United States.

Contaminant Information Management and Analysis System (CIMAS)

<http://orion.cr.usgs.gov/cimas-old/CIMAS>

This site contains textual and spatial contaminant-related data for U.S. Fish and Wildlife Service trust lands and species. The data is available for interfacing with DBMS and GIS software.

Biomonitoring of Environmental Status and Trends

<http://www.best.usgs.gov/>

The primary goals of the Biomonitoring of Environmental Status and Trends Program are to: (1) determine the status and trends of environmental contaminants and their effects on biological resources, (2) identify, assess and predict the effects of contaminants on ecosystems and biological populations, and (3) provide information in a timely manner.

Environmental Protection Agency, Office of Pesticide Programs, Endangered Species Protection Program














<http://www.epa.gov/espp/>

This page describes the program and its goals to protect endangered species from harmful pesticides and minimize impacts on pesticide users.

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BOX SCORE

Listings and Recovery Plans as of February 28, 1999

GROUP	ENDANGERED		THREATENED		TOTAL LISTINGS	U.S. SPECIES W/ PLANS**
	U.S.	FOREIGN	U.S.	FOREIGN		
 MAMMALS	60	251	8	16	335	49
 BIRDS	75	178	15	6	274	77
 REPTILES	14	65	21	14	114	30
 AMPHIBIANS	9	8	7	1	25	11
 FISHES	70	11	40	0	121	88
 SNAILS	18	1	10	0	29	20
 CLAMS	61	2	8	0	71	45
 CRUSTACEANS	17	0	3	0	20	12
 INSECTS	28	4	9	0	41	27
 ARACHNIDS	5	0	0	0	5	5
ANIMAL SUBTOTAL	357	520	121	37	1,035	364
 FLOWERING PLANTS	539	1	132	0	672	493
 CONIFERS	2	0	1	2	5	2
 FERNS AND OTHERS	26	0	2	0	28	26
PLANT SUBTOTAL	567	1	135	2	705	521
GRAND TOTAL	924	521	256	39	1,740*	885

TOTAL U.S. ENDANGERED: 924 (357 animals, 567 plants)
 TOTAL U.S. THREATENED: 256 (121 animals, 135 plants)
 TOTAL U.S. LISTED: 1180 (478 animals***, 702 plants)

*Separate populations of a species listed both as Endangered and Threatened are tallied once, for the endangered population only. Those species are the argali, chimpanzee, leopard, Stellar sea lion, gray wolf, piping plover, roseate tern, green sea turtle, saltwater crocodile, and olive ridley sea turtle. For the

purposes of the Endangered Species Act, the term "species" can mean a species, subspecies, or distinct vertebrate population. Several entries also represent entire genera or even families.

**There are 517 approved recovery plans. Some recovery plans cover more than one species, and a few species have separate plans covering different parts of their ranges. Recovery plans are drawn up only for listed species that occur in the United States.

***Nine animal species have dual status in the U.S.

ENDANGERED Species BULLETIN

U.S. Department of the Interior
 Fish and Wildlife Service
 Washington, D.C. 20240

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