

Regional endangered species staffers have reported the following news:

Region 1



Contra Costa wallflower

Photo by Paul Opler

Rare Plant Propagation The Fish and Wildlife Service's San Francisco Bay National Wildlife Refuge (NWR) Complex has completed a new greenhouse facility next to the refuge's existing native plant nursery. The new greenhouse is dedicated to the propagation of endangered plants of Antioch Dunes NWR, the Antioch Dunes evening primrose (*Oenothera deltooides* ssp. *howellii*) and Contra Costa wallflower (*Ersimum capitatum* var. *angustatum*). With its increased capacity, the refuge will be able to meet its endangered plant restoration needs in-house.

Reported by LaRee Brosseau of the FWS Portland Regional Office.

Region 4

Spring Creek Bladderpod (*Lesquerella perforata*) The FWS Cookeville, Tennessee, Field Office, state of Tennessee, and city of Lebanon have signed a cooperative management agreement for the protection of a Spring Creek bladderpod population occurring on property recently acquired by the city. The city purchased approximately 3.5 acres (1.4 hectares) adjacent to a road construction project for the perpetual protection of Spring Creek bladderpods occurring on the property. This site is one of only 17 known locations harboring this endangered species and is the first to receive this level of protection.

By providing for the perpetual protection of this species while allowing for the road construction, this agreement represents a cooperative approach to resolving issues between development and habitat protection. We have been able to secure similar management agreements for the Spring Creek bladderpod with two Lebanon-based corporations, Cracker Barrel Old Country Store, Inc., and TRW Automotive. All 17 occurrences of this plant are located on private property and efforts are underway to encourage the other landowners to follow the city's lead.

Reported by Tyler Sykes of the FWS Cookeville Field Office.

Region 5

American Burying Beetle (*Nicrophorus americanus*) The largest American burying beetle reintroduction effort in the 12-year history of the species' recovery program took place recently on Nantucket Island off the Massachusetts coast. The Roger Williams Park Zoo in Providence, Rhode Island, raised well over 300 of the endangered beetles for release on Nantucket Island, a historic locality for the species. On June 11 and 12, 320 American burying beetles (160 pairs) were given dead quail for food (the beetles require carrion to reproduce) and released at the Massachusetts Audubon Society's Sesachacha Wildlife Sanctuary. With each pair of beetles capable of raising 10-20 larvae, the 2001 release may result in thousands of beetles on the island by late fall.



American burying beetle

Photo by Andrea Kozol

This effort is probably one of the largest reintroductions ever undertaken for an endangered insect species.

Present to document the work was a film crew from the TV program, *Wild Moments*, and the *Providence Journal* newspaper. Partners in the work include the Rhode Island Division of Fisheries and Wildlife, Massachusetts Division of Fisheries and Wildlife, Roger Williams Park Zoo, Massachusetts Audubon Society, University of Massachusetts' Boston Field Station, University of Rhode Island, Maria Mitchell Natural History Museum, and Nantucket Conservation Foundation.

Indiana Bat (*Myotis sodalis*) As a result of a multi-agency partnership, endangered Indiana bats have been documented to migrate to the Lake Champlain Valley in Vermont from a hibernaculum in New York. Biologists tagged five Indiana bats (four females and one male) with radio transmitters as the bats left their hibernaculum (hibernation site) in early May. Three females were located by air and subsequently by land in Vermont within one to six days after release. Multiple roost trees for two of the females were identified; most of the roost trees were shagbark hickories. Evening counts of bats leaving the roosts ranged from 4 to 120 bats (probably more than one species roosted together). All of the Indiana bats were found on private land and all landowners granted permission for field staff to locate the bats.

The success of this study was due to a substantial cooperative effort by state and federal agencies and concerned citizens. Staff and equipment were provided by our New England and New York Field Offices, the New York State Department of Environmental Conservation (which also provided the airplane and pilot), the Green and White Mountain national forests, and the Vermont Agency of Natural Resources. The West Virginia Department of Natural Resources loaned additional equipment. High school and college students also volunteered their time.

Karner Blue Butterfly (*Lycaeides melissa samuelis*) In early May, Partners for Fish and Wildlife (PFW) staff from our New York Field Office restored 24 acres (9.7 ha) of habitat at the Albany Pine Bush, an unusual pine barrens ecosystem located in Albany, New York. This property will provide valuable habitat for the endangered Karner blue butterfly. A PFW Biological Science Technician operated a Hydro-Ax to remove unwanted vegetation on approximately 20 acres (8 ha). Additionally, 4 acres (1.7 ha) degraded by an invasive stand of black locust (*Robinia pseudo-acacia*) were restored to native grasslands. After the locust were removed, the site was prepared and seeded with a mixture of warm season grasses/forbs. A PFW Biological Science Technician provided technical assistance to Albany Pine Bush staff who seeded the site. Prescribed fire will be used regularly to maintain the 20-acre Hydro-Ax site, as well as the 4-acre seeded site. The two restored sites will provide habitat for the Karner blue butterfly and furnish educational opportunities for the Albany Pine Bush Commission.

Piping Plover (*Charadrius melodus*) Four students from the Ross School in East Hampton, New York, are involved in a plover protection effort on the town's beaches. They will be using two video surveillance cameras to monitor nesting sites plagued by chick mortality. This study is a continuation of a prior school project that demonstrated fencing off nesting sites provided almost total protection from predators and boosted productivity. East Hampton beaches have been the preferred nesting location for about 22 pairs of threatened piping plovers in the last several years, but chick mortality has been around 60 percent.

Roseate Tern (*Sterna dougallii dougallii*) Roseate tern productivity in Long Island may get a boost from the combined efforts of private organizations and state, county, and federal government agencies to restore Warner's Island in Long Island's Shinnecock Bay. Warner's Island historically provided habitat for the endangered roseate tern, which prefers nesting on small islands under or adjacent to objects that provide cover. Erosion has gradually reduced the elevation of the island to the point where it is being overwashed and inundated. This has resulted in a decrease in the number of nesting pairs from 30 pairs several years ago to three pairs last year.

The island has been restored using sand barged to the site and off-loaded with an amphibious excavator purchased by the FWS Long Island Refuge Complex and our New York Field Office's Partners for Fish and Wildlife program. Other cooperators included the New York State Department of Environmental Conservation, Southampton Town Trustees, National Audubon Society, New York Fish Trade Tackle Association, Long Island Beach Buggy Association, and Suffolk County Department of Parks, Labor, and Public Works. The restoration team, using sandbags and sandfill, raised the profile of the island to protect tern nests from disturbance and inundation. The team was successful in its cooperative efforts and the island is being monitored to assess nesting success. Volunteers are planning to make decoys and place them on the island to attract roseate terns in time for next year's nesting season.

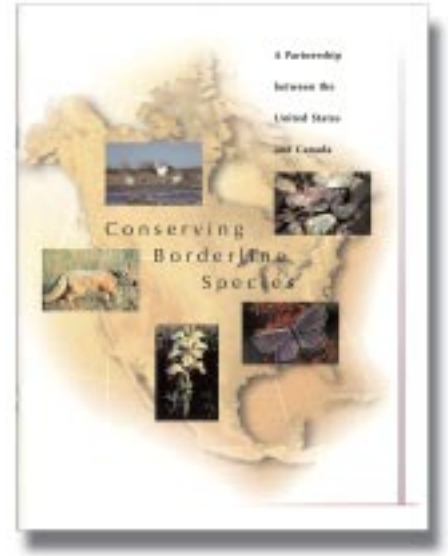
Reported by Mark Clough of the FWS New York Field Office.



Roseate tern
Photo by Michael Bender

National Office

International Outreach The Canadian Wildlife Service and the FWS Endangered Species Program have completed a 28-page joint publication, "Conserving Borderline Species—A Partnership Between the United States and Canada."



The booklet highlights 10 species considered at risk that range or migrate between the two countries and for which both countries have cooperated on recovery efforts. These species are the black-footed ferret, swift fox, woodland caribou, grizzly bear, whooping crane, piping plover, marbled murrelet, Lake Erie water snake, Karner blue butterfly, and western prairie fringed orchid. The publication may be obtained by calling 703-358-2390 or by going to this website: http://www.speciesatrisk.gc.ca/species/sar/publications/cbs/index_e.htm

Reported by Susan Jewell of the Endangered Species Program in the FWS Arlington, Virginia, headquarters office.

From November 2000 through August 2001, the Fish and Wildlife Service published the following proposed and final Endangered Species Act (ESA) rules in the *Federal Register*. The full text of each action can be accessed through our website:

<http://endangered.fws.gov>.

Proposed Listing Rules

Smalltooth Sawfish (*Pristis pectinata*)

The National Marine Fisheries Service, which has ESA jurisdiction for most marine species, has completed a comprehensive status review of the smalltooth sawfish and found that North American populations are in danger of extinction. On April 16, NMFS proposed to list the distinct population segment (DPS) of smalltooth sawfish in waters of the southeastern coastal United States as endangered. Extensive degradation or loss of coastal habitats, water pollution, and incidental capture during commercial fishing in coastal and estuarine areas are believed to be responsible for the population's decline.



Smalltooth sawfish

Photo by Colin Simpfendorfer/Mote Marine Laboratory

Twelve Hawaiian Insects Twelve species, from what biologists believe is one of most remarkable cases of habitat-specific evolution in any group of animals, were proposed on January 17 for listing as endangered. Known as Hawaiian picture-wings, these insects are part of the intensely studied Drosophilidae family, which is found throughout the main islands of the Hawaiian archipelago.

Hawaiian picture-wings are known for the elaborate markings on their otherwise clear wings. They also have been called the "birds of paradise" of the insect world because of their spectacular courtship displays and defense of their territories.

As many as 1,000 species of Hawaiian picture-wings may exist, each one adapted not only to a particular island but also to a specific habitat type. Individual species have adapted to a wide diversity of ecosystems ranging from desert-like habitats to rain forests and swamplands. In many cases, a species requires a specific native plant host during portions of its breeding cycle.



Picture-wing fly

USFWS photo

Each of the 12 Hawaiian picture-wing species proposed as endangered is found only on a single island, and each breeds only on a single or a few related species of plants, some of which are also listed as threatened or endangered species. Threats to the survival of the picture wings include habitat degradation caused by feral animals and alien plants, habitat loss from fire, biological pest control, and predation from alien ants and wasps.

Dolly Varden (*Salvelinus malma*) On January 9, we proposed to protect the fish known as the Dolly Varden in the Coastal-Puget Sound region of Washington under the "similarity of appearance" provision of the ESA, because the Dolly Varden so closely resembles the bull trout (*Salvelinus confluentus*), which is listed as a threatened species.

Under the ESA, a species may be treated as if it were endangered or threatened when it so closely resembles a protected species that law enforcement personnel would have substantial difficulty in distinguishing between the two species. If the proposal is finalized, it will help eliminate situations where people mistakenly "take" bull trout when they believe they are taking Dolly Varden. Take is defined in the ESA as killing or harming a protected species or destroying or substantially altering its habitat.

Dolly Varden would only be treated as a listed species where its range overlaps with that of the Coastal-Puget Sound population of bull trout in Washington state. In the Coastal-Puget Sound areas, Dolly Varden occupy the same habitat as bull trout and are so similar that the two species cannot easily be told apart in the field. We are proposing protection for Dolly Varden to increase the chances that bull trout will be able to recover.

Under the proposal, Dolly Varden would be covered by the existing special rule for bull trout, which exempts certain activities from the ESA's prohibition on take. These exemptions include fishing activities authorized under state, National Park Service, or Native American tribal laws. Fishing for Dolly Varden in other areas, outside of the Coastal-Puget Sound area covered by the bull trout listing, would not be affected.

Dolly Varden have light-colored spots on a darker background, just the opposite of the pattern on salmon and most trout, which have dark spots on a light background. Creamy to pale yellow spots cover the back, and red or orange spots cover the sides. The fins have white or cream-colored margins. This unique coloration is particularly striking in the male during spawning and led to the common name Dolly Varden, in reference to a colorfully clothed character in the Charles Dickens novel *Barnaby Rudge*.

Scotts Valley Polygonum (*Polygonum bickmanii*) The Scotts Valley polygonum, a small annual in the buckwheat family (Polygonaceae), has linear-shaped leaves and produces white flowers. As its name indicates, this plant species is endemic to Scotts Valley, which falls within Santa Cruz County, California. Its known distribution is restricted to two sites. Threats to the survival of this species include habitat loss resulting from urbanization and displacement by nonnative grasses. On November 9, we proposed to list the Scotts Valley polygonum as an endangered species.

Final Listing Rules

Ventura Marsh Milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) The



Ventura Marsh milk-vetch

USFWS photo

Ventura Marsh milk-vetch, a plant once thought to be extinct, was listed on May 21 as endangered. Until its rediscovery by a Fish and Wildlife Service biologist in 1997, the species had not been seen since 1967. This plant is a perennial in the pea family (Fabaceae) with silvery-haired leaves and clusters of yellowish or cream-colored flowers. The only known population is located on less than one acre (0.4 hectare) of privately owned beach dune in Ventura County that has historically been used for oil field waste disposal. When the species was rediscovered in 1997, 374 plants were counted at the site. In 1998, the population declined to fewer than 200 plants and it has continued downward.

White Abalone (*Haliotis sorenseni*) The National Marine Fisheries Service listed the white abalone on May 29 as an endangered species. This mollusk historically occurred along the west coast of North America from Point Conception, California, south to Punta Abrejos in Baja California, Mexico. Over-harvesting of the white abalone for human consumption caused a decline of approximately 99 percent.

Nine Texas Cave Invertebrates Nine species of invertebrates endemic to caves in northern Bexar County, Texas, were listed on December 26 as endangered. Threats to the survival of these invertebrates include destruction or degradation of their habitat due to construction; filling of caves and loss of permeable cover on the surface; groundwater contamination resulting from septic effluent, sewer leaks, and chemical runoff; predation by, and competition with, nonnative fire ants; and vandalism.

Atlantic Salmon (*Salmo salar*) The Fish and Wildlife Service and the National Marine Fisheries Service, which share ESA responsibility for most rare anadromous fishes, jointly listed the Gulf of Maine DPS of the Atlantic salmon as endangered on November 17. The listing covers native Atlantic salmon found in the Dennys, East Machias, Machias, Pleasant, Narraguagus, Ducktrap, and Sheepscot rivers and Cove Brook. Although the state of Maine's salmon conservation plan has made some progress, threats such as disease and the escape of farm-raised salmon of other strains from Maine's aquaculture industry imperil the native Atlantic salmon stocks.

Proposed Delisting Rules

Robbins' Cinquefoil (*Potentilla robbinsiana*) A partnership between the Fish and Wildlife Service, Forest Service, and Appalachian Mountain Club has restored the Robbins' cinquefoil, an endangered plant native to the White Mountains of New Hampshire, to a secure status. As a result, we proposed on June 8 to remove this wildflower from the federal list of threatened and endangered species.

A member of the rose family (Rosaceae), Robbins' cinquefoil only occurs in the alpine zone of the White Mountain National Forest. It is a small, almost stemless perennial that bears a yellow flower. Prior to its listing, a census revealed that the species' main population numbered 3,700 plants. Today, the population totals more than 14,000 plants.



Robbins' cinquefoil

Photo by Susi von Oettingen/USFWS

At the time of its listing, Robbins' cinquefoil was threatened by plant collectors and disturbance from hikers along the Appalachian Trail. In 1983, the White Mountain National Forest and the Appalachian Mountain Club helped reroute the trail away from the species' critical habitat and built an enclosure to protect the primary population. Signs alerted hikers that no admittance was allowed without a permit. Biologists also successfully reintroduced two additional populations to suitable habitat in the national forest.

Although a final determination to delist Robbins' cinquefoil would remove it from ESA protection, an agreement between the Fish and Wildlife Service and the White Mountain National Forest would protect this species in perpetuity.



Hoover's woolly-star

USFWS photo

Hoover's Woolly-star (*Eriastrum hooveri*) This California plant, listed in 1990 as a threatened species, was proposed March 6, 2001, for delisting. Surveys conducted since 1990 have expanded its known range to Fresno, Kern, Kings, Los Angeles, Santa Barbara, San Benito, and San Luis Obispo counties. Biologists have found that the plant is more resilient to certain activities than once thought, and changes in federal land management have given additional protection to the species' habitat. Hoover's woolly-star is an annual herb in the phlox family (Polemoniaceae).

Final Delisting Rule

Aleutian Canada Goose (*Branta canadensis leucopareia*) Highlighting a successful 35-year conservation effort involving federal and state agencies, conservation organizations, and private landowners, we officially recognized the recovery of the Aleutian Canada goose on March 20 by removing this bird from the list of threatened and endangered species.

A subspecies of the Canada goose, the Aleutian Canada goose nests only on a few of Alaska's remote, windswept Aleutian Islands. It winters in California, stopping along the migration at points on the Oregon coast. The population numbered only in the hundreds in the mid-1970s, but today the estimated population has grown to 37,000 and the threat of extinction has passed.

Since 1967, biologists have worked hard to eliminate nonnative foxes from former nesting islands and to reintroduce geese. The removal of these predators has benefitted many other bird species on the islands, including puffins, murres, and auklets. Besides removing foxes, the federal and state wildlife agencies closed Aleutian Canada goose hunting in wintering and migration areas, banded birds on the breeding grounds to identify important wintering and migrations areas, and released families of wild geese on fox-free islands in the Aleutians. In California's Sacramento and San Joaquin valleys, and along the northern California coast, many private landowners have helped by managing their lands to provide wintering habitat for Aleutian Canada geese.

Experimental Populations

Whooping Crane (*Grus americana*) Whooping cranes will migrate across the skies of eastern North America this fall for the first time in more than a century as part of a bold experiment conducted by a partnership of federal and state wildlife agencies, conservation groups, and other private organizations led by the Fish and Wildlife Service. The project will be facilitated by a June 26 rule classifying the eastern migratory flock as a "nonessential experimental population." Such a designation protects the birds while giving



USFWS photo

natural resource managers a greater degree of flexibility.

Biologists will train a flock of about 10 young whooping cranes to follow an ultralight aircraft across seven states from Necedah National Wildlife Refuge (NWR) in Wisconsin to Chassahowitska NWR in Florida. If all goes as planned, the birds will learn the migration route and return from Florida to Wisconsin on their own next spring, thereby establishing a second migratory whooping crane flock in North America.

The experiment will be conducted by the Whooping Crane Eastern Partnership, a consortium that includes the Service, the U.S. Geological Survey, state agencies, conservation organizations, and private citizens. Private donors are contributing more than half of the \$1.3 million needed to complete the project. More than 40 private landowners have offered the use of their property as overnight sites for the migrating birds.

The whooping crane, named for its loud and penetrating mating call, is one of America's best known and rarest endangered species. Cranes live and breed in extensive wetlands, where they feed upon crabs, clams, frogs, and other aquatic organisms. Whooping cranes stand 5 feet (1.5 meters) tall and are white in color with black wing tips and a red crown.

Seventeen Freshwater Mollusks In an effort to restore populations of a number of endangered Alabama freshwater mollusks, we designated nonessential experimental population status on June 14 for reintroduced populations of 16 mussels and one aquatic snail in the Tennessee River below Wilson Dam.

Our action was taken at the request of the Alabama Division of Wildlife and Freshwater Fisheries. This designation will be applied to species released in the free-flowing reach of the Tennessee River between Wilson Dam and the backwaters of Pickwick Reservoir. The designation will also extend five miles (8 kilometers) upstream of all tributaries that enter the Wilson Dam tailwaters. The Tennessee Valley Authority, operator of the Wilson Dam, supports the proposed experimental population designation and has offered to assist in reintroduction efforts.

Four Southeastern Fish As part of a broad partnership to recover threatened and endangered wildlife in the Tennessee River system, we proposed on June 8 to reintroduce four native fish species into the Tellico River in Monroe County, Tennessee. They would be designated as a nonessential experimental population.

Biologists believe the four fish—the endangered duskytail darter (*Etheostoma percnurum*), the endangered smoky madtom (*Noturus baileyi*), the threatened yellowfin madtom (*Noturus flavipinnis*), and the threatened spotfin chub (*Cyprinella [=Hybopsis] monacha*)—likely inhabited the Tellico River in the past. The Tellico River is a Little Tennessee River tributary that is just downstream from the mouths of Abrams and Citico Creeks, and all four fishes were found in these creeks. Before the construction of reservoirs on the main stem of the Little Tennessee River, no physical barriers prevented the movement of these fish between Abrams Creek, Citico Creek, and the Tellico River.



Duskytail darter

Photo by Richard Biggins/USFWS



Smoky madtom

Photo by Richard Biggins/USFWS

The reintroduction is part of a major initiative by federal and state agencies and private conservation groups to recover native species in the Tennessee River system. Since the mid-1980s, Conservation Fisheries, Inc., a nonprofit fish conservation organization located in Knoxville, Tennessee, has been successfully reintroducing these four species into Abrams Creek with support from the Fish and Wildlife Service, Tennessee Wildlife Resources Agency, National Park Service, U.S. Forest Service, Tennessee Valley Authority, and Tennessee Aquarium. The proposed native fish reintroduction effort into the Tellico River was developed at the request of the Tennessee Wildlife Resources Agency.

Proposed Critical Habitat Rules

Critical Habitat Critical habitat, as defined in the ESA, is a term for a geographic area that is essential for the conservation of a listed species. Critical habitat designations do not establish a wildlife refuge, wilderness area, or any other type of conservation reserve, nor do they affect actions of a purely private nature. They are intended to delineate areas in which federal agencies must consult with the Service to ensure that actions these agencies authorize, fund, or carry out do not adversely modify the designated critical habitat. Within designated critical habitat boundaries, federal agencies are required to consult except in areas that are specifically excluded, such as developed areas within the boundaries that no longer contain suitable habitat. Maps and more specific information on critical habitats are contained in the specific *Federal Register* notice designating each area. For more information on critical habitat designations in general, go to the website for our Endangered Species Listing Program (<http://endangered.fws.gov/listing/index.html>) and click on "About Critical Habitat."

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Carolina Heelsplitter (*Lasmigona decorata*)

Portions of nine rivers and creeks in western North and South Carolina were proposed on July 11 as critical habitat for an endangered freshwater mollusk, the Carolina heelsplitter. This mussel survives only in scattered pockets of suitable habitat remaining in portions of three small streams in North Carolina and six small creeks and one river in South Carolina.

Otay Tarplant (*Deinandra conjugens*)

On June 13, we published a proposal to designate critical habitat for the Otay tarplant, a threatened annual in the sunflower family (Asteraceae), on approximately 6,630 acres (2,680 ha) in San Diego County, California.



'Elepaio

Photo by Eric VanderWerf/USFWS

O'ahu 'Elepaio (*Chasiempis sandwichensis ibidis*)

We proposed on June 6 to designate approximately 66,350 acres (26,850 ha) of critical habitat on the Hawaiian island of O'ahu for the endangered O'ahu 'elepaio, a forest bird once considered the most common native land bird on the island. The five areas proposed for critical habitat are concentrated in the Wai'anae and Ko'olau mountain ranges.

Four Central California Coast Plants

About 25,800 acres (10,440 ha) of critical habitat were proposed on February 15 for the Monterey spineflower (*Chorizanthe pungens* var. *pungens*) and 1,640 acres (665 ha) for the robust spineflower (*Chorizanthe robusta* var. *robusta*). Both species are found in southern Santa Cruz and northern Monterey counties.

Also on February 15, 310 acres (125 ha) in Santa Cruz County were proposed as critical habitat for the Scotts Valley spineflower (*Chorizanthe robusta* var. *bartwegii*) and the Scotts Valley polygonum (*Polygonum bickmanii*). These two plants exist only in small ecologically unique "wildflower fields" on private property in northern Scotts Valley in the Santa Cruz Mountains.



Appalachian elktoe

Photo by Richard Biggins/USFWS

Appalachian Elktoe (*Alasmidonta raveneliana*)

Critical habitat for this endangered freshwater mussel was proposed on February 8. The Appalachian elktoe has been eliminated from much of its range and survives only in scattered pockets of suitable habitat in portions of the Little Tennessee River system, Pigeon River system, and Little River in North Carolina, and the Nolichucky River system in North Carolina and Tennessee.



Quino checkerspot butterfly

Photo by Paul Opler

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

We proposed on February 7 to designate critical habitat on approximately

301,010 acres (121,820 ha) of land in Riverside and San Diego counties, California, for the endangered Quino checkerspot butterfly.



Wenatchee Mountains checker-mallow

Photo by Ted Thomas/USFWS

Wenatchee Mountains Checker-mallow (*Sidalcea oregana* var. *calva*) On January 18, we proposed to designate 6,137 acres (2,483 ha) of seasonal wetlands on state, federal, and private lands in central Washington as proposed critical habitat for the Wenatchee Mountains checker-mallow, an endangered plant native to the Wenatchee Mountains of Chelan County. Most of the plants are found on the state's Camas Meadows Natural Area Preserve. Others are scattered on adjacent U.S. Forest Service land and on a small parcel of private property.

Kootenai River White Sturgeon (*Acipenser transmontanus*) A designation of critical habitat for the endangered Kootenai River population of the white sturgeon was proposed on December 21 for a total of about 11.2 river miles (18 river km) of the Kootenai River in Idaho.

San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*) On December 8, we proposed designating approximately 55,410 acres (22,425 ha) of alluvial sage scrub in San Bernardino and Riverside counties, California, as critical habitat for this endangered mammal.

Hawaiian Plants During November and December 2000, we published the following proposals to designate critical habitat for endangered or threatened plants in the Hawaiian Islands:

- 76 plant species found on the islands of Kaua'i and Ni'ihau (November 7),
- 38 plants found on the islands of Maui and Kaho'olawe (December 18),
- 18 plants found on the island of Lana'i (December 27), and
- 32 plants found on the island of Moloka'i (December 29).

Lists of these plant species and other information are contained in the *Federal Register* notices.

Final Critical Habitat Rules

Piping Plover (*Charadrius melodus*) On July 10, we designated 165,211 acres (66,860 ha) along 1,798 miles (2,892 km) of coastline in eight southern states as critical habitat for the wintering population of the piping plover, a shorebird listed as threatened (except the Great Lakes breeding population, which is listed as endangered). The designation includes shoreline habitat in North and South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Texas.



Spruce-fir moss spider (greatly enlarged)

Photo by Joel Harp/USFWS

Spruce-fir Moss Spider (*Microhexura montivaga*) Portions of Avery, Caldwell, Mitchell, Swain, and Watauga counties in western North Carolina and Sevier and Carter counties in eastern Tennessee were designated on July 6 as critical habitat for the spruce-fir moss spider. This tiny relative of the tarantula has been devastated by an invasion of nonnative insects, which have killed many of the trees in the spider's mountaintop habitat. The resulting increased light and temperature and decreased moisture on the forest floor causes the moss mats on which the spider depends to dry up and become unsuitable habitat for the spider.

Riverside Fairy Shrimp (*Streptocephalus woottoni*) A May 30 rule designated approximately 6,870 acres (2,780 ha) of land in San Diego, Orange, Riverside, Los Angeles, and Ventura counties as critical habitat for the endangered Riverside fairy shrimp, a small aquatic crustacean unique to vernal or temporary spring pools in southern California.

Great Lakes Population of Piping Plover On May 7, we designated approximately 201 miles (323 km) of mainland and island shoreline in eight Great Lakes states as critical habitat for the endangered breeding population of the piping plover. The designation applies to mainland and island shoreline in Michigan, Illinois, Indiana, Wisconsin, Minnesota, Ohio, Pennsylvania, and New York.



Bay checkerspot butterfly

Photo by Paul Opler

Bay Checkerspot Butterfly (*Euphydryas editha bayensis*) On April 30, we designated 23,903 acres (9,673 ha) of critical habitat for the

threatened bay checkerspot butterfly in California's San Mateo and Santa Clara counties. Critical habitat for the bay checkerspot includes grasslands with stands of native plantain (*Plantago erecta*), as well as areas that provide corridors for the butterfly to travel between habitats. Serpentine soils, unusual soils high in magnesium and low in calcium, are a strong indicator of potential habitat for the butterfly.

Arkansas River Shiner (*Notropis girardi*) A total of approximately 1,148 river miles (1,846 km) and 300 feet (91 meters) of adjacent riparian zones were designated as critical habitat on April 4 for the Arkansas river shiner. This small fish occurs not only in stretches of the Arkansas River in Kansas but also in parts of the Cimarron River in Kansas and Oklahoma, the Beaver/North Canadian River in Oklahoma, and the Canadian/South Canadian River in Oklahoma, Texas, and New Mexico.



California red-legged frog
Photo by Mark R. Jennings/USFWS

California Red-legged Frog (*Rana aurora draytonii*) On March 13, we designated 4.1 million acres (1.7 million ha) in 28 California counties as critical habitat for the threatened California red-legged frog. This native amphibian is widely believed to have inspired Mark Twain's fabled short story, "The Celebrated Jumping Frog of Calaveras County."

Arroyo Toad (*Bufo californicus*) On February 7, we designated about 182,360 acres (73,800 ha) as critical habitat for the endangered arroyo toad. These lands encompass portions of Monterey, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside and San Diego counties in California.



Arroyo toad
Photo © Jim Rorabaugh

Morro Shoulderband Snail (*Helminthoglypta walkeriana*) Also on February 7, about 2,566 acres (1,038 ha) of mostly state-owned land in western San Luis Obispo County, California, were designated as critical habitat for the endangered Morro shoulderband snail, a species also known as the banded dune snail.

Zayante Band-winged Grasshopper (*Trimerotropis infantilis*) A final February 7 rule designated about 10,560 acres (4,270 ha) in Santa Cruz County, California, as critical habitat for a rare insect, the endangered Zayante band-winged grasshopper.

Two Alaskan Sea Ducks On February 6, we designated critical habitat in Alaska for two threatened species of sea ducks, the spectacled eider (*Somateria fischeri*) and Steller's eider (*Polysticta stelleri*). Critical habitat for the spectacled eider includes areas on the Yukon-Kuskokwim Delta (Y-K Delta), Norton Sound, Ledyard Bay, and Bering Sea between St. Lawrence and St. Matthew Islands totaling approximately 24.9 million acres (10.1 million ha). Critical habitat for the Steller's eider includes breeding



Male (left) and female Steller's eiders
Photo by Glen Smart/USFWS

habitat on the Y-K Delta and four units in the marine waters of southwest Alaska, including the Kuskokwim Shoals in northern Kuskokwim Bay, and Seal Islands, Nelson Lagoon, and Izembek Lagoon on the north side of the Alaska Peninsula totaling approximately 1.8 million acres (733,300 ha) and 852 miles (1,363 km) of shoreline.



Female (left) and male spectacled eiders
Photo by Glen Smart/USFWS














Mexican Spotted Owl (*Strix occidentalis lucida*) Approximately 4.6 million acres (1.8 million ha) of federal lands in four southwestern states were designated as critical habitat for the threatened Mexican spotted owl on February 1. The designation includes 830,000 acres (335,900 ha) in Arizona, 525,000 acres (212,465 ha) in Colorado, 54,000 acres (21,850 ha) in New Mexico, and 3.2 million acres (1.3 million ha) in Utah. No private, state, or tribal lands are included in the designation.

Peninsular Bighorn Sheep (*Ovis canadensis*) We announced on February 1 the designation of 844,897 acres (341,929 ha) in San Diego, Imperial, and Riverside counties, California, as critical habitat for the endangered Peninsular Ranges population of bighorn sheep. More than half of the acreage is under state jurisdiction and includes portions of the Anza-Borrego Desert State Park. Much of the rest of the land is managed by federal agencies, including the Bureau of Land Management and the U.S. Forest Service, or by local agencies.

Zapata Bladderpod (*Lesquerella thamnobila*) We published a final rule on December 22, 2000, designating 5,158 acres (2,088 ha) in the lower Rio Grande Valley of Starr County, Texas, as critical habitat for this endangered plant, a herbaceous perennial in the mustard family (Brassicaceae).

BOX SCORE

Listings and Recovery Plans as of December 31, 2001

GROUP	ENDANGERED		THREATENED		TOTAL LISTINGS	U.S. SPECIES W/ PLANS**
	U.S.	FOREIGN	U.S.	FOREIGN		
 MAMMALS	64	251	9	17	341	50
 BIRDS	78	175	14	6	273	75
 REPTILES	14	64	22	15	115	31
 AMPHIBIANS	11	8	8	1	28	12
 FISHES	71	11	44	0	126	95
 SNAILS	21	1	11	0	33	27
 CLAMS	62	2	8	0	72	56
 CRUSTACEANS	18	0	3	0	21	12
 INSECTS	35	4	9	0	48	29
 ARACHNIDS	12	0	0	0	12	5
ANIMAL SUBTOTAL	386	516	128	39	1,069	392
 FLOWERING PLANTS	567	1	142	0	710	555
 CONIFERS	2	0	1	2	5	2
 FERNS AND OTHERS	26	0	2	0	28	28
PLANT SUBTOTAL	595	1	145	2	743	585
GRAND TOTAL	981	517	273	41	1,812*	977

TOTAL U.S. ENDANGERED: 981 (386 animals, 595 plants)

TOTAL U.S. THREATENED: 273 (128 animals, 145 plants)

TOTAL U.S. LISTED: 1,254 (514 animals***, 740 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 530 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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