

ENDANGERED SPECIES

Technical Bulletin

Department of Interior, U.S. Fish and Wildlife Service
Endangered Species Program, Washington, D.C. 20240

Wood Stork Listed as Endangered Species

The U.S. breeding population of the wood stork (*Mycteria americana*) has decreased over 75 percent from its 1930 levels, leading the Service to list this large bird as an Endangered species (F.R. 2/28/84). It is the only true species of stork breeding in this country. Without a change in current trends, this wood stork population could become extirpated by the turn of the century. Destruction and alteration of feeding habitat are the main reasons for its decline in range and numbers.

Wood storks are large, long-legged, white wading birds with an unfeathered gray head and a thick, dark bill. They frequent freshwater and brackish wetlands, feeding primarily on small fish

that they locate by groping in shallow water with their long beaks. Wood stork nests are constructed in cypress and mangrove swamps, habitat types that have been steadily reduced in acreage over recent decades. The U.S. breeding population of the wood stork has declined from an estimated 20,000 pairs in the 1930s to fewer than 5,000 pairs each year since 1978. Artificial manipulation of natural water regimes, particularly in the important south Florida area, has decreased prey fish numbers and availability. Losses of nesting habitat also may be affecting storks in central Florida. Disturbance by humans during the nesting season at some rookeries

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Protection Given to Two Rare Hawaiian Plants

Two very rare species of plants that are restricted to the rim of Diamond Head Crater on the island of O'ahu, Hawai'i, have been listed by the Service as Endangered (2/17/84). Each species is known only from a single small population, and both are vulnerable to habitat degradation and accidental brush fires.

Bidens cuneata (cuneate bidens), an herb, and *Schiedea adamantis* (Diamond Head schiedea), a small shrub, are of great scientific interest because they belong to families that have undergone much evolutionary diversification since becoming established in the Hawaiian Islands. Both are members of genera that make excellent models for the study of evolution and adaptive radiation in insular floras. The various species of *Bidens* (generically known as *ko'oko'o-lau* in the Hawaiian language) found in the islands are already being used for such research. Additionally, *Schiedea*, an endemic genus in the carnation family, has an unusual floral structure that makes its reproductive system one of particular botanical interest.

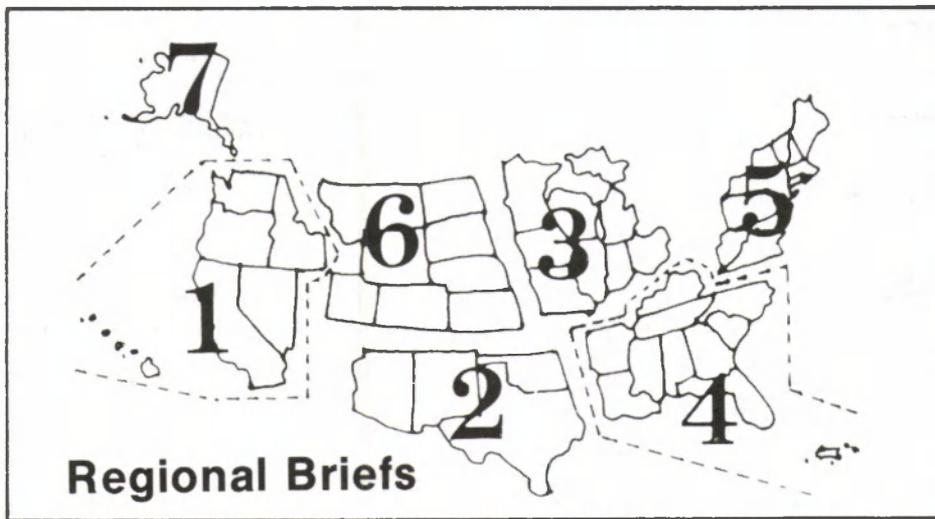
The single populations of both species are located just below a hiking trail that follows the crater crestline. Although the Hawai'i Division of State Parks discourages hiking along the crater rim for safety reasons, except in a few selected places, the presence of the trail does attract use. The result is soil compaction and loss of vegetative cover, leading to erosion of the habitat. Some inadvertent trampling of the plants also could occur since the trail passes through or near both population sites. These threats could intensify because the State intends to make Diamond Head a public park and recreation area. It does not plan to develop those portions of the rim trail near the plants, but the increased number of visitors will necessitate measures for their conservation.

Increased public use could also mean increased danger from fire. Due to the dry conditions in the area, fire is already a significant hazard. A single blaze

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wood stork



Regional Briefs

Region 1—The FWS Boise Field Station's Project Leader attended the recent Yellowstone ecosystem grizzly bear (*Ursus arctos horribilis*) management sub-committee meeting. The Yellowstone area land management agencies have agreed to start a cumulative effects analysis of the entire ecosystem. When completed, this information should give us a much better picture of grizzly recovery potential and assist us in Section 7 evaluations.

ative effects analysis of the entire ecosystem. When completed, this information should give us a much better picture of grizzly recovery potential and assist us in Section 7 evaluations.

The Boise Field Station team botanist met with the Bureau of Land Management (BLM) concerning recovery work on *Mirabilis macfarlanei* (MacFarlane's four-o'clock). A BLM temporary botanist will map and start field studies on the new *M. macfarlanei* site found last season. It has also agreed to make arrangements for Soil Conservation Service scientists to do a complete soils analysis of the *M. macfarlanei* sites in Idaho. A BLM biologist is going to accompany us on the helicopter survey next season.

Updated information on *M. macfarlanei* was presented to Nez Perce National Forest personnel. They are going to look at U.S. Forest Service lands and explore with us the possibility of establishing an experimental population.

Recently, the Great Basin Complex completed an analysis of several hypothetical water management plans under consideration by the negotiation team that is attempting to resolve Truckee-Carson River water use conflicts. The purpose of our analysis was to estimate the impact of seven different plans on the survival and recovery of cui-ui (*Chasmistes cujus*) and Lahontan cutthroat trout or LCT (*Salmo clarki henshawi*). Although the effective habitat/time model is the best approach for assessing the plans, it requires more information than is available. Instead, an abbreviated analysis will be done to compare the monthly hypothetical flows that would have occurred over the past 80 years under a given plan to those flows required for Endangered or Threatened species. The results of this analysis should provide sufficient information on the beneficial and harmful impacts of each plan.

During the last 2 months, the Great Basin Complex staff has been working with the Pyramid Lake Indian Tribal Enterprises (PLITE) to develop a Memorandum of Understanding. Its purpose is to develop a cooperative program for the conservation and restoration of LCT and cui-ui in waters of the Pyramid Lake Indian Reservation by identifying resource management, fish production, and research obligations of the Service and PLITE.

The Bureau of Reclamation has agreed to fund an instream flow study of the lower Truckee River this year. Completion of this study will allow for better evaluation of proposed water management plans and increase the prospects for an equitable resolution of water use conflicts on the Truckee-Carson Rivers. This will also result in improved efficiency of Stampede Reservoir management. In addition to these benefits, survey data will identify the quality of available habitat in proposed areas of major rehabilitation for the cui-ui and LCT.

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Region 2—One of the adult male radio-collared ocelots (*Felis pardalis*) in southeastern Texas was found dead just south of Laguna Atascosa National Wildlife Refuge on January 30, 1984. It appeared to have been dead about 4 days when found. An autopsy performed by the Texas Veterinary Medical Diagnostic Laboratory at College Station, Texas, revealed that the animal probably died of distemper or acute pneumonia. Distemper is known to be present in the south Texas environment; however, the weather conditions for January would have been more conducive to development of pneumonia. A nearby radio-collared male immediately moved into the dead animal's former territory. Nine radio-collared ocelots, three males and six females, are still being followed on the refuge, while two males have been collared on private lands.

A draft Alligator Management Plan has been received from the State of Texas. This plan was part of the agreement that resulted in the alligator in Texas (*Alligator mississippiensis*) being downlisted to Threatened by Similarity of Appearance. After completion and approval of its management plan, the Texas Parks and Wildlife Department plans to initiate an annual limited season for taking alligators.

Personnel changes within the Southwest Bald Eagle Recovery Team have recently been made. The team is now composed of Richard L. Glinski, nongame biologist, Arizona Game and Fish Department, leader; Jennifer Fowler, FWS biologist, Ecological Services Field Office, Phoenix; Dave Busch, wildlife biologist, Bureau of Reclamation, Boulder City, Nevada; and Erwin Boeker, representing the National Audubon Society. Glinski replaces Duane Rubink (FWS) as leader. Boeker returns to the team after having served from 1976 to 1978 as the team leader and the FWS representative. The Southwest Bald Eagle Recovery Team assists in overseeing implementation of the recovery plan, which was signed in 1982.

A working group of the Kemp's ridley sea turtle (*Lepidochelys kempii*) project met in Albuquerque to review 1983 results and plan for the 1984 field season. The Kemp's ridley project protects sea turtle eggs on Rancho Nuevo Beach, Tamaulipas, Mexico, incubates up to 2,000 eggs, and imprints the resulting hatchlings briefly on the beach at Padre Island National Seashore, Texas. The imprinted hatchlings are then "head-started" at Galveston, Texas, to give them a better chance for survival when released. It is hoped that the released female turtles will return to Padre Island to nest when they mature. Included in

the project are biologists from the Service, Instituto Nacional de la Pesca (Mexico), Sub-Secretaria de Ecologia (Mexico), National Park Service (U.S.), National Marine Fisheries Service (U.S.), Texas Parks and Wildlife Department, and the Gladys Porter Zoo (Brownsville, Texas). The 1984 field season will be the seventh year of this 10-year project.

Region 7—A biological assessment examining the impacts of the Red Dog Mine project on the Endangered Arctic peregrine falcon (*Falco peregrinus tundrius*) has been received from the Environmental Protection Agency. Extraction of the estimated 85 million tons of lead, zinc, and silver ore from this remote, roadless area 100 miles northwest of Kotzebue in arctic Alaska, will require the establishment of a complete, self-contained facility necessary to mine the ore, concentrate the metals, transport the metals to a saltwater port, and house 250-500 workers. Construction of small dams and an overland transportation corridor 55-70 miles in length is proposed, as well as an airstrip and coastal port facility.

Consideration was given to the peregrine falcon early in project planning, and recent surveys have identified peregrine use areas. Although there are still concerns about the project's effects on water quality, fisheries, migrating caribou (*Rangifer tarandus*), and the Endangered bowhead (*Balaena mysticetus*) and gray whales (*Eschrichtius robustus*), we are optimistic that impacts on the peregrine falcon will be minimal.

Wood Stork

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has caused adult birds to leave their nests, exposing the eggs to predators and the elements.

Breeding wood storks in the U.S. are now restricted to parts of Florida, southeastern Georgia, and South Carolina. (Formerly, nesting occurred also in Texas, Louisiana, Mississippi, and Alabama.) The remaining U.S. breeding population of the wood stork is separate from the population that breeds from Mexico southward to Argentina. Wood storks from Mexico disperse into California and Texas after nesting; however, only the southeastern U.S. population needs Endangered Species Act protection at this time.

On February 28, 1983, the Service proposed listing the U.S. breeding population of the wood stork as Endangered (see feature in BULLETIN Vol. VIII No. 3). The comments received in response to the proposal from Federal, State, and

local agencies, along with a number of conservation organizations, private companies, and individuals, are summarized in the final listing rule. Among the States that supported Federal listing of the wood stork are Florida and South Carolina; both States already give the species protection from taking and provide for certain conservation efforts under their own endangered and threatened species legislation. The Federal listing under the Endangered Species Act brings additional conservation and recovery benefits.

As an Endangered species, the U.S. breeding population of the wood stork receives all of the protection authorized under the Act. Taking, possessing, transporting, and engaging in interstate or international trade in this species are among the activities prohibited. (Permits are available for certain scientific, conservation, and economic hardship cases.) Although a formal designation of Critical Habitat was not included in the listing rule, the stork and its habitat will receive all of the protection authorized under Section 7 of the Endangered Species Act. Federal agencies are required to ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the survival of the wood stork by directly affecting the birds or by adversely modifying their habitat. The Federal agency primarily affected by Section 7 provisions is the U.S. Army Corps of Engineers, which now must take the wood stork into account in issuing permits for the discharge of dredge or fill material into U.S. waters. Similarly, Environmental Protection Agency permitting activities under the National Pollutant Discharge Elimination System will have to consider the welfare of the species.

Other benefits to the wood stork of the listing are a wider public knowledge of its reduced status, possible Federal funding of State conservation programs for the species, and the development of a recovery plan.

Finding on Alligator Snapping Turtle Petition

After a review of the available biological information on the status of the alligator snapping turtle (*Macrochelys temminckii*), the Service has concluded that a proposal to list this species as Endangered or Threatened is not justified at this time (F.R. 2/29/83). The review was carried out in response to a February 23, 1983, listing petition from Dr. Peter C.H. Pritchard.

The alligator snapping turtle is the largest freshwater turtle in North America. Adult specimens can weigh up to

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Two Foreign Reptiles Listed, One Delisted

Two species of lizards found on islands under Spanish jurisdiction have been listed by the Service as Endangered and Threatened due to threats from habitat destruction, overcollection, and predation (F.R. 2/29/84). In the same notice, the Service removed from the U.S. List of Endangered and Threatened Wildlife a turtle that is now known to occur widely throughout India and Sri Lanka.

The Hierro giant lizard (*Gallotia simonyi simonyi*), now listed as Endangered, is a large (up to 70 cm total length) herbivorous species that occurs only in the Canary Islands. Its known range consists of a single arid cliffside where, in 1975, an estimated total population of 200 lizards survived. Assuming it still exists, the population is threatened by: 1) a proposed stone-breaking plant that could directly affect the lizards and coat their food plants with dust; 2) competition with goats grazing the area; 3) possible overcollecting; and 4) potential predation on juveniles by gulls.

The Ibiza wall lizard (*Podarcis pityusensis*), listed as Threatened, is a small lizard found in the Balearic Islands. Alteration and destruction of the lizard's

habitat by construction of tourist developments are serious threats on some of the islands. Overcollection for scientific and commercial purposes, hybridization of subspecies transported among the islands, and predation by gulls, rats, and feral cats are other factors that have had an adverse impact on the majority of Ibiza wall lizard populations.

The Indian flap-shelled turtle (*Lissemys punctata punctata*) is a 15 to 28 cm brown, soft-shelled species found on the Indian subcontinent and on Sri Lanka. Its original listing as Endangered was based on a recommendation by Bangladesh that the species be included on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). As a result of its inclusion on Appendix I of CITES, the Service subsequently (1976) listed the turtle as Endangered. However, as part of the Service's continuing effort to ensure that the legal status of listed species reflects their true biological status, a literature review on this turtle was recently conducted. No supporting evidence justifying Endangered classification could be found. The Service then contacted a number of scientists to determine what field data

might support the listing, and the unanimous response was that there was no justification for retaining the turtle's listed status. The species in fact may be the most abundant freshwater turtle in India. After studying the data, the Service concluded that the Indian flap-shelled turtle is neither Endangered nor Threatened, and the species has been removed from the list.

As Endangered and Threatened species, both the Hierro giant lizard and the Ibiza wall lizard now receive U.S. protection under the Endangered Species Act. It is illegal for any person subject to U.S. jurisdiction to take, possess, transport, or traffic in these reptiles except under permit. Such permits are available under 50 CFR 17.22-17.23 and 17.32 for certain scientific, conservation, or economic hardship purposes. In addition, the Department of the Interior is authorized by Section 8 of the Act to provide assistance to Spain for the conservation of the species. With regard to the Indian flap-shelled turtle, the provisions of the Act no longer apply; however, the removal from protection under the Act does not affect its CITES status, and it remains subject to Appendix I trade restrictions.

Endangered Classification for Woodland Caribou Becomes Permanent

The temporary protection given earlier to a population of woodland caribou (*Rangifer tarandus caribou*) was made permanent recently when the population was listed in a final rule as Endangered (F.R. 2/28/84). Sometimes known as the southern Selkirk Mountain herd, these animals comprise the only population of caribou that still regularly occurs in the conterminous United States. The herd ranges over parts of extreme northeastern Washington, northern Idaho, and southern British Columbia. Poaching, habitat loss, collisions with motor vehicles, and genetic problems from inbreeding threaten the very small population with extinction. It had earlier been listed as Endangered under two temporary emergency actions (see feature story in BULLETIN Vol. VIII No. 1).

Woodland caribou once occupied nearly the entire forested region from southeastern Alaska, through much of Canada, to the northern conterminous States. Due to unrestricted shooting and extensive habitat alteration, however, only the southern Selkirk Mountain herd survives in the conterminous U.S. (Caribou numbers in Canada, though still substantial, also have been declining.) Only about 30 individuals are thought to remain in the herd, based on recent

radio-tracking studies and other survey work conducted since January 1983. Although this number is slightly higher than previous estimates, it reflects better field data rather than population growth. The southern Selkirk Mountain herd of woodland caribou can still be ranked as one of our Nation's most critically Endangered mammals.

Any additional losses in the population could be disastrous to its survival, yet the potential for such losses is increasing. Timber cutting, if not properly planned, could significantly impact caribou by reducing escape cover, migration corridors, and lichen (food plant) production. Illegal shooting has also been a continuing problem. Poachers killed at least one animal from this population each year from 1980 to 1983, and similar losses also occurred in previous years. Construction of roads through the habitat could aggravate the poaching problem, and increase the chances for caribou/vehicle collisions. Since the very small population is isolated and, therefore, has no genetic exchange with other herds, the southern Selkirk Mountain caribou likely suffer the effects of inbreeding. Such a condition could be responsible for low calf survival in the herd.

The southern Selkirk Mountain herd was first classified as Endangered in a temporary emergency listing published in the January 14, 1983, *Federal Register*. A proposal for a final listing was published on June 22, 1983; however, because a final rule was not completed before the first emergency listing rule expired, a second emergency rule was published on October 25, 1983. The February 28, 1984, final rule gives the herd permanent protection.

Under the Endangered classification, the southern Selkirk Mountain herd of woodland caribou will receive the protection authorized by the Endangered Species Act. Taking, possessing, transporting, and interstate or international trafficking in this mammal are prohibited except under Federal permit for certain scientific, conservation, and economic hardship purposes. A designation of Critical Habitat was not included in the rule because printing the required maps could make the small herd even more vulnerable to poaching; nevertheless, the herd will receive the full habitat protection authorized under Section 7 of the Act. Federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the survival of the species

by directly affecting the animals or adversely affecting their habitat. Most of the habitat of the southern Selkirk Mountain herd is on land managed by the U.S. Forest Service (USFS). The listing is not expected to have substantial effect on timber production since the USFS is already using caribou management guidelines to design timber sales in caribou habitat. Certain logging practices, if properly planned, could even prove to enhance the habitat's value to the caribou by encouraging the growth of food and cover plants. Other benefits to the caribou of the listing include more law enforcement protection, possible funding for State endangered species conservation programs under Section 6 of the Act, and development of a recovery plan to return the herd to a viable, self-sustaining status.

Ash Meadows Becomes Nature Preserve

Ash Meadows, Nevada, a unique desert wetland ecosystem, has been purchased by The Nature Conservancy for protection as a nature preserve. Until recently, this oasis in the Mojave Desert was subject to development that could have resulted in extinction for its unusual wildlife and plant resources. Congress has appropriated funds to reimburse the Conservancy and make Ash Meadows part of the Fish and Wildlife Service's National Wildlife Refuge System.

The Ash Meadows ecosystem is made up of several dozen springs and seeps scattered throughout a valley about 70 miles northwest of Las Vegas (see feature in BULLETIN Vol. VII No. 6). Due to their isolation in a desert where the average rainfall is only about 70 mm (less than 3 inches), the thermal springs of Ash Meadows contain the highest concentration of endemic plant and animal species in the continental United States. Four fishes found nowhere else, the Devils Hole pupfish (*Cyprinodon diabolis*), Warm Springs pupfish (*C. nevadensis pectoralis*), Ash Meadows Amargosa pupfish (*C. n. mionectes*), and Ash Meadows speckled dace (*Rhinichthys osculus nevadensis*), are listed as Endangered. Another, the Ash Meadows killifish (*Empetrichthys merriami*), became extinct a number of years ago, probably due to the introduction of exotic species.

Seven plants in the Ash Meadows ecosystem were proposed on October 13, 1983, for listing as Endangered: the spring-loving centaury (*Centaureum namophilum* var. *namophilum*), Ash Meadows gumplant (*Grindelia fraxinopratensis*), Ash Meadows ivesia (*Ivesia eremica*), Ash Meadows blazing star (*Mentzelia leucophylla*), Ash Meadows



Photo by D. W. Sada

This unnamed pool in southern Ash Meadows is representative of how the valley appeared before human impacts on the fragile ecosystem.

milk-vetch (*Astragalus phoenix*), Ash Meadows sunray (*Enceliopsis nudicaulis*), and Amargosa niterwort (*Nitrophila mohavensis*). At the same time, an endemic aquatic insect, the Ash Meadows naucorid (*Ambrysus amargosus*), also was proposed for listing as Endangered. (All eight proposed species were covered in BULLETIN Vol. VIII No. 11). Ash Meadows also has an extraordinarily diverse endemic freshwater mollusk fauna, including eight species that are candidates for future listing.

The Ash Meadows wetlands are fed by an aquifer consisting in part of "fossil water" that entered the underlying porous limestone more than 10,000 years ago. During the Pleistocene Epoch, an extensive system of interconnecting rivers and lakes covered the region. As the climate changed and surface waters receded, aquatic animals were left stranded in isolated springs and outflows. Adapting to their distinct "island" ecosystems, these organisms underwent rapid speciation in circumstances that some biologists describe as a landlocked Galapagos Islands.

Until recently, a real estate development company, the Preferred Equities Corporation (PEC), had plans to establish a large residential, recreational, industrial, and agricultural community on its holdings in Ash Meadows. Construction and development of the complex would have directly eliminated large sections of essential plant and animal habitat. Even worse, diversion of surface waters and excessive ground water pumping would have destroyed the wetlands system, virtually ensuring the extinction of Ash Meadows' already rare plant, fish, and invertebrate life. When conservation alternatives such as land exchanges, easements, and man-

agement agreements could not be agreed upon, The Nature Conservancy (TNC) stepped in with another approach. TNC exercised its option for a willing-seller purchase of the developers' 12,663 acres in Ash Meadows, with the understanding of Federal repurchase. The final price was \$5.5 million and a \$1 million low-interest loan. Congress has thus far appropriated \$5 million to purchase land at Ash Meadows and establish it as a national wildlife refuge.

TNC is a nonprofit, national membership organization devoted to the conservation of ecologically significant areas. The more than 700 areas it owns or manages total 400,000 acres, making up the world's largest non-government nature sanctuary system.

Two Florida Keys Mammals Proposed as Endangered

Two small mammals that are endemic to part of northern Key Largo, Florida, have been proposed for listing by the Service as Endangered species (F.R. 2/9/84). The Key Largo cotton mouse (*Peromyscus gossypinus aliapaticola*) and Key Largo woodrat (*Neotoma floridana smalli*) are in danger of extinction from destruction of their tropical hardwood hammock forest habitat for residential and commercial development. Both species were listed in fall 1983 as

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Two Florida Mammals

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Endangered under a temporary emergency rule, but this classification is due to expire on May 18, 1984. The February 9, 1984, proposed listing rule, if approved, will give these animals permanent protection under the Endangered Species Act.

Tropical hardwood hammocks are a climax vegetational type that develops a closed canopy when mature, providing a more moderate, humid environment than the surrounding habitats. They support a rich biota, including many rare plant and animal species. For example, the Schaus swallowtail butterfly (*Papilio aristodemus ponceanus*), listed by the Service as Threatened, is associated with hammocks in northern Key Largo. Eight species of native plants found in the area are listed by Florida under its own endangered species legislation. Florida also lists the cotton mouse and woodrat as endangered, but the State law does not authorize habitat protection.

Although tropical hardwood hammocks were originally found from Key West northward into southern peninsular Florida, so many have been destroyed that this is one of the most limited and threatened ecosystem types in the State. The hammocks on northern Key Largo comprise some of the largest remaining tracts. Both the Key Largo cotton mouse and woodrat are rare or absent in areas where habitat modification has occurred. Because of their dependence on undisturbed habitat, they are restricted to only 1,150 acres at the less developed northern end of the island.

Even this remaining habitat is vulnerable. A new water aqueduct to the Florida Keys is being completed, and a spur pipeline now extends into northern Key Largo. The increased availability of water is expected to accelerate the pace of residential, commercial, and recreational development. Further, the Florida Keys Electrical Cooperative has requested a Federal loan for construction of a substation to increase electrical delivery to northern Key Largo, which could hasten development even more. In order to ensure that the conservation of the Key Largo cotton mouse and woodrat would receive consideration in reaching a decision on the loan application, these small mammals were listed as Endangered under an emergency rule on September 21, 1983 (See BULLETIN Vol. VIII No. 10). Subsequently, the Service found that the proposed electrical delivery system would jeopardize the two species. However, if the habitat pro-

tection they now receive lapses, Federal agencies will no longer be required to consult with the Service on such projects in the future.

If the listing rule is approved, both the Key Largo cotton mouse and woodrat will be given permanent protection under the Endangered Species Act. Prohibitions against taking, possessing, transporting, and interstate or international trade in these species are among the conservation measures authorized by the Act. (Permits for otherwise prohibited activities are available for certain scientific, conservation, or economic hardship purposes.) Federal agencies will be required to ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the survival of these mammals or adversely modify their Critical Habitat.

The proposed Critical Habitat of the Key Largo cotton mouse and woodrat consists of approximately 2,000 acres (810 hectares) of fragmented upland hardwood hammock habitat. About 850 of these acres are not currently occupied by the mammals but are considered essential for their conservation and eventual recovery. It should be emphasized that a Critical Habitat designation does not necessarily stop any particular kind of Federal activity; rather, it means that any impact of federally involved activities on listed species will be considered in the planning process. If there would be jeopardy to a species, modification of the proposed activity, not curtailment, is the usual remedy.

Snail Darter Proposed for Reclassification to Threatened

The Service has published a proposal to reclassify the snail darter (*Percina tanasi*), a small fish known only from parts of the Tennessee River drainage, from its current Endangered classification to the less restrictive category of Threatened (F.R. 2/21/84). Recent field surveys have located additional small populations of this species, and the Threatened classification is thought to more accurately reflect its true biological status. Because of habitat vulnerability, however, the Service does not believe that a complete delisting of the snail darter is warranted, and it will continue to receive protection as a Threatened species.

The snail darter was unknown until the first collection in 1973. At that time, the only known habitat for this species was a short section of the Little Tennessee River. Widespread surveys conducted by the Tennessee Valley Authority (TVA) in the 1970s did not find

any other populations. In 1976, the snail darter was listed by the Service as an Endangered Species, and 16.5 river miles of the Little Tennessee River were designated as Critical Habitat. However, in 1979, Congress exempted TVA's Little Tennessee River Tellico Reservoir Project from the provisions of the Endangered Species Act, and the species' shallow, free-flowing habitat was consequently inundated. Since the spawning and feeding areas were flooded, the population was no longer self-sustaining. Some of the fish were captured and stocked into other streams that contained similar habitat, but only the Hiwassee River introduction appears successful.

Since completion of the Tellico Project, isolated populations of the snail darter have been discovered in sections of six Tennessee River tributaries and from the main stem of the Tennessee River near the mouth of three tributaries. Unfortunately, most of these populations are extremely small and their habitat is subject to degradation from water pollution, siltation, dredging, and construction of port facilities. In 1982, the Snail Darter Recovery Team evaluated the new data and recommended that the species' biological status be recognized as Threatened. A reclassification to Threatened, instead of a complete delisting, is thought more appropriate by both the Service and the recovery team since the snail darter's habitat is still vulnerable and in need of some Federal protection. The conservation agencies of Alabama, Georgia, and Tennessee support a reclassification, as does the National Wildlife Federation.

Since there were no special rules included in the reclassification proposal, the snail darter would continue to receive generally the same protection as a Threatened species that it now receives under the Endangered classification. One exception is that a slightly broader range of permits is available for Threatened species under 50 CFR 17.32. Taking, possessing, and trafficking in this species would still be prohibited except by special permit.

Included in the reclassification proposal is a provision that would rescind the snail darter's original designated Critical Habitat in the Little Tennessee River since it has been rendered useless to the fish by the Tellico dam and reservoir. No new designations of Critical Habitat were included in the proposal since publicizing the exact locations could make this controversial species vulnerable to vandalism. Nevertheless, the snail darter's habitat would continue to receive protection under Section 7(a)(2) of the Act, which requires Federal agencies to ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of a species by directly affecting it or adversely modifying its habitat.

Comments on the proposal are invited from all interested agencies, organizations, and individuals, and are due to the Field Supervisor, Asheville Endangered Species Field Station, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801 by April 23, 1984.

Hawaiian Plants

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could wipe out the *Schiedea* and damage the *Bidens* population. Another constant threat to both taxa, as well as much of Hawai'i's other native flora, is competition from aggressive exotic

vegetation. The vulnerability of both plants is magnified by their extremely low numbers; a recent estimate put the *Bidens cuneata* population at only 10 mature plants, and the *Schiedea adamantis* level only slightly higher at 78.

Both species were proposed a second time for listing as Endangered on August 23, 1982. (For a summary of Service efforts since 1976 to conserve these plants, see the *Federal Register* notice or BULLETIN Vol. VII No. 9.) Comments received from the Governor of Hawai'i and several local offices of Federal agencies were all in favor of the listing proposal.

As listed species, *Bidens cuneata* and *Schiedea adamantis* now receive protection under the Endangered Species Act. Among the protective measures

provided under the Act are prohibitions on transporting and interstate or international trade in these plants. A recovery plan will be developed for both species, and funding could be allocated under Section 6 of the Act for State conservation efforts. A formal designation of Critical Habitat was not included in the listing rule because publicizing the exact locations of the populations could make them more vulnerable to vandalism and accidental habitat damage by curiosity seekers. Nevertheless, both species are covered under Section 7 of the Act. All Federal agencies must ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the survival of the two species by directly affecting the plants or by adversely modifying their habitat.

CITES News

The Endangered Species Act of 1973, as amended in 1979, designates the Secretary of the Interior as both the Management Authority and the Scientific Authority of the United States, for the purposes of the Convention on International Trade in Endangered Species of Wild Fauna and Flora

(CITES). Management Authority responsibilities are delegated to the Associate Director—Federal Assistance; Scientific Authority responsibilities are delegated to the Associate Director—Research.

The Service's Wildlife Permit Office (WPO) functions as staff to the U.S. Management Authority for CITES, assuring that wildlife and plants are exported or imported in compliance with laws for their protection and issuing permits for legal trade of these

species. The Service's Office of the Scientific Authority (OSA) functions as staff to the U.S. Scientific Authority for CITES. OSA reviews applications to export and import species protected under CITES, reviews the status of wild animals and plants impacted by trade, makes certain findings concerning housing and care of protected specimens, and advises on trade controls.

Final Export Rules on Certain Appendix II Species

Exports of wildlife and plants listed under Appendix II of CITES may occur only if the country of origin has issued an export document. Two new multi-year export rules on certain Appendix II species in the United States have been published.

A final rule approving the export of American alligators (*Alligator mississippiensis*) lawfully taken in Louisiana and Florida during the 1983-85 seasons was published by the Service in the January 9, 1984, *Federal Register*. This decision was based on the findings by the U.S. CITES Scientific and Management Authorities that such alligator exports will not be detrimental to the survival of the species in either State. Formerly, such findings and rules were developed on a year-to-year basis covering single harvest seasons.

The Service will continue to monitor the status of the American alligator populations in Louisiana and Florida, and will regulate trade in products derived from legally taken animals through tagging of hides and documentation of shipments. General approval for alligator exports from any other States is not granted under the January 9, 1984, rule.

In a *Federal Register* notice published on January 5, 1984, the Service

announced a final rule approving exports of the bobcat (*Lynx rufus*), lynx (*Lynx canadensis*), and river otter (*Lutra canadensis*) legally taken during the 1983-84 seasons from specific United States populations, along with the gray wolf (*Canis lupus*) and brown or grizzly bear (*Ursus arctos*) from Alaskan populations only. Exports from certain States that met Scientific and Management Authority criteria were found to be not detrimental to the survival of the species in these respective States. Compliance with State documentation and CITES tagging requirements will continue to be enforced for exports of these species.

For further information on the States and species involved, consult the January 5, 1984, *Federal Register*.

CITES export documents issued by the Federal Wildlife Permit Office are required to export any CITES species from the United States. Further, CITES documents are required from the country of origin in order to import any CITES species into the United States. For further information, contact the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, P.O. Box 3654, Arlington, Virginia 22203 (telephone 703/235-1903).

Comments Requested on CITES Amendments

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) regulates trade in certain wild animal and plant species, which are listed in appendices to this treaty. Any nation that is a Party to CITES may propose amendments to Appendices I and II for consideration by the other Parties.

The Service has announced plans to develop proposals to amend Appendices I and II for the United States. Comments from the public on animal or plant species that should be considered as candidates for U.S. proposals are invited. Such proposals may concern the addition of species to Appendix I or II, the transfer of species from one appendix to another, or the removal of species from Appendix I or II. The Service will consider all information and comments received by June 1, 1984, in determining whether it should develop proposals on particular species. Please send correspondence to the Office of Scientific Authority, U.S. Fish and Wildlife Service, Washington, D.C. 20240. Copies of the current CITES appendices are available from the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

Alligator Snapping Turtle

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almost 300 pounds with a carapace (shell) length of 80 cm. This species can be distinguished from other snapping turtles by its size, its wedge-shaped head, and the three prominent ridges that extend down the carapace. Alligator snapping turtles are fish-eating ambush predators; a turtle will sit in wait, luring its prey by mimicking a worm with its long tongue.

The species' range extends down the Mississippi River drainage from Iowa, Illinois, and Kansas south to the Gulf of Mexico, and from Texas east to northern Florida. Because of its large range and very secretive behavior, its status is not well known, but there is concern that habitat destruction and overcollecting for human consumption may be having an impact on some populations. The Service has been concerned about the status of the alligator snapping turtle for some time, and the species was included in the Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species (F.R. 12/30/82). Although the information gathered by the Service in response to the vertebrate notice of review and Dr. Pritchard's petition is not sufficient to propose the alligator snapping turtle for listing at this time, the Service will continue to monitor its status.

Guadalupe Fur Seal Petitioned for Listing

The National Marine Fisheries Service (Department of Commerce), which has management jurisdiction over most

BOX SCORE OF LISTINGS/RECOVERY PLANS

Category	ENDANGERED			THREATENED			SPECIES* TOTAL	SPECIES HAVING PLANS
	U.S. Only	U.S. & Foreign	Foreign Only	U.S. Only	U.S. & Foreign	Foreign Only		
Mammals	15	19	233	3	0	22	292	19
Birds	52	14	144	3	0	0	213	42
Reptiles	8	6	60	8	4	13	99	6
Amphibians	5	0	8	3	0	0	16	4
Fishes	30	3	11	12	1	0	57	23
Snails	3	0	1	5	0	0	9	5
Clams	22	0	2	0	0	0	24	1
Crustaceans	3	0	0	1	0	0	4	1
Insects	7	0	0	4	2	0	13	3
Plants	58	3	0	9	2	2	74	10
TOTAL	202	45	449	48	9	37	801	124**

* Separate populations of species, listed both as Endangered and Threatened, are tallied twice. Species which are thus accounted for are the gray wolf, bald eagle, American alligator, green sea turtle, Olive ridley sea turtle, and leopard.

** More than one species may be covered by some plans

Number of Recovery Plans approved: 110

Number of species currently proposed for listing: 22 animals
23 plants

Number of Species with Critical Habitats determined: 59

Number of Cooperative Agreements signed with States: 38 fish & wildlife
12 plants

February 29, 1984

marine mammals, including those that are Endangered or Threatened, has been petitioned to list the Guadalupe fur seal (*Arctocephalus townsendi*) as an Endangered species (F.R. 2/8/84). Since the petition from Mr. Richard T. Tinney, Jr., of the Center for Environmental Education's Seal Rescue Fund, was judged to contain substantial scientific information indicating that the action may be warranted, a status review was initiated. Comments and scientific data on this seal's status are due to the Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Washington, D.C. 20235 by April 9, 1984.

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—The Editor

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ENDANGERED SPECIES

Technical Bulletin

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