

# ENDANGERED SPECIES

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

## San Francisco Peaks Groundsel Proposed as Threatened

The San Francisco Peaks groundsel (*Senecio franciscanus*), an alpine plant known only from one small area in the mountains north of Flagstaff, Arizona, has been proposed by the Service for listing as a Threatened species (F.R. 11/22/82). A Critical Habitat determination for the plant also was proposed. The main threat to the species is trampling from off-trail hiking.

### Background

*Senecio franciscanus* was discovered by Edward L. Green in 1884. It is a dwarf alpine species, 3.2 to 10.2 cm tall, with deeply lobed leaves and small yellow flowers. The one known population is locally common within a total area of less than 2.6 square km between Humphreys and Agassiz Peaks, part of the San Francisco Peaks region of Coconino National Forest. This plant occurs on loose cinder talus slopes over 3,000 m in elevation as a primary successional species.

Very serious disruption to the plants and their habitat occurs when off-trail hikers cross or descend the mountain peaks over the loose talus slopes. A series of numerous parallel paths have been worn along the top and western face of Humphreys peak, destroying all vegetation in their way. The proposed expansion of the Snow Bowl ski area (a private concession on Forest Service land) could affect the habitat of *Senecio franciscanus* through increased numbers of hikers using the trail system. A small percentage of the habitat already has been destroyed by construction of the existing chair lift. Whether or not expansion of the ski area will have a serious detrimental effect on the species depends on the care taken to minimize such effects.

*Senecio franciscanus* was first proposed for listing in June 1976, along with about 1,700 other plants identified on a petition by the Smithsonian Institution. In accordance with the listing schedule deadlines imposed by the 1978 Amendments to the Endangered Species Act, the proposal was withdrawn in 1979. A

1980 status report, along with investigations carried out by Fish and Wildlife Service and Forest Service personnel, confirmed the threats to the species. The Service was again petitioned to list *Senecio franciscanus* on June 18, 1980, this time by the Navajo Medicinemen's Association.



The San Francisco Peaks groundsel (*Senecio franciscanus*) is threatened by trampling from off-trail hiking.

### Effects of the Proposed Rule

Under Section 7 of the Act, Federal agencies are required to insure that any actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of a listed species or adversely modify its Critical Habitat. The potential effects on the Forest Ser-

vice of the proposed rule have already been discussed with that agency, and it supports the listing of *Senecio franciscanus*. Forest management within the proposed Critical Habitat is not expected to be affected in a major way. The private company which operates the ski concession has no facilities in the area, and will not be affected.

The Forest Service has full responsibility for the trails within the proposed Critical Habitat. Development of a management plan would aid habitat conservation by regulating off-trail hiking in the area and by monitoring the plant's population status. Management might include eliminating some existing multiple trails, routing new trails away from the population sites, or posting signs prohibiting off-trail hiking. Such measures are expected to require minimal expenditures by the Forest Service.

Under Section 9(a)(2)(B) of the Act, as amended in October 1982, it is unlawful to remove and reduce to possession Endangered plants from Federal lands. Section 4(d) allows for extending such prohibitions to Threatened species through regulations. Once new regulations are developed, this new provision will apply to *Senecio franciscanus*, in addition to the general prohibitions on interstate trade and import/export.

### Public Comment Requested

Comments on the proposed rule are requested from all interested persons, organizations, and agencies, and should be received by the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103, by January 21, 1983.

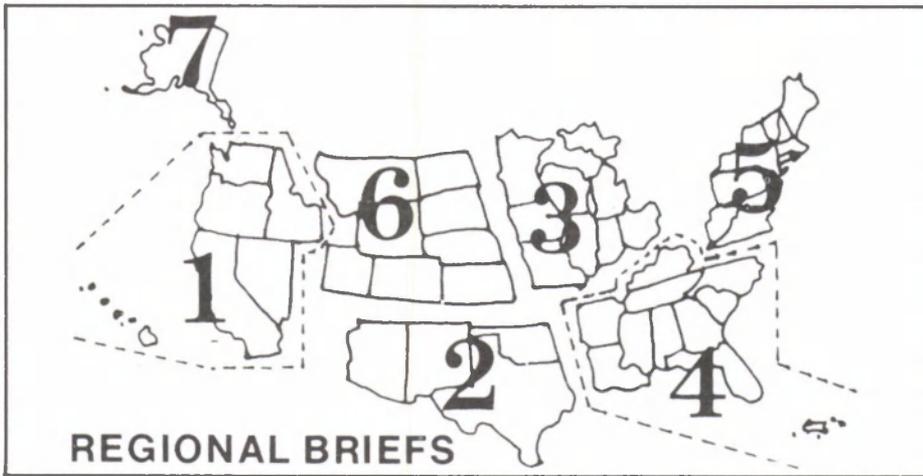
## Malheur Wire-Lettuce Listed With Critical Habitat

A rare southeastern Oregon plant, *Stephanomeria malheurensis* (Malheur wire-lettuce), was listed under the Act as Endangered (F.R. 11/10/82). In addition, Critical Habitat has been determined for this species.

The single known population of the plant, found on 70 acres of Bureau of Land Management (BLM) land in Harney County near the Malheur National Wildlife Refuge, is vulnerable to any

substantial habitat alteration. Recently established mining claims that include the habitat of *S. malheurensis* hold potential threat for the plant. However, the Anaconda Minerals Company, which holds mining rights in the entire Critical Habitat area, has indicated its willingness to cooperate with the Service to conserve the species. The company has further indicated that mining

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**Endangered Species Program regional staffers have reported the following activities for the month of November:**

**Region 1**—Aleutian Canada goose (*Branta canadensis leucopareia*) monitoring was initiated on the Oregon coast through a cooperative effort and funding between Region 1, Research, Suislaw National Forest, and the Oregon Department of Fish and Wildlife. This

monitoring supports State and Federal Canada goose hunting closures in two Oregon coastal areas to protect the Endangered Aleutian subspecies during its fall migration to California.

**Region 4**—The Agency Review Draft of the Green Pitcher-Plant (*Sarracenia oreophila*) Recovery Plan has been completed as stipulated in the court-ordered stay issued by U.S. District Judge U.W. Clemon on November 6,

1981. A 1-year stay in the litigation, *DeKalb County Commission v. Watt*, was granted in order to provide for the establishment of a recovery team and the development of a recovery plan. Recovery actions identified in the plan are geared toward the protection and management of selected extant colonies, efforts to re-establish and manage selected extirpated sites, and transplantation experiments.

Seven young-of-the-year Mississippi sandhill cranes (*Grus canadensis pulla*) produced at the Patuxent Wildlife Research Center are now being held in temporary holding facilities at the Mississippi Sandhill Crane National Wildlife Refuge in Jackson County, Mississippi. The cranes, received on October 21, have been fitted with radio transmitters and will be held until they appear to be well acclimated to their new environment. Current plans indicate a possible release sometime toward the end of November or the first part of December. Exposure and interactions between these new birds and native cranes, as well as those released 2 years ago, have already been noted by refuge personnel. Once released, the movements and behavioral characteristics will be monitored by a graduate student from the Louisiana Cooperative Wildlife Research Unit. This effort, the third straight year that birds from Patuxent have been released on the refuge, is geared toward augmenting the natural population (which now numbers between 30-50) and providing valuable information concerning habitat utilization and movement.

In July of this year, a new maternity colony of the Endangered gray bat (*Myotis grisescens*) was discovered near the Buffalo River National Park in Marion County, Arkansas. The cave, harboring a colony of approximately 10,000 adult female bats, has been tentatively named "Eureka Cave."

New Mammoth Cave in Campbell County, Tennessee, has been gated to prevent human disturbance of hibernating Indiana bats (*Myotis sodalis*). This project was a cooperative effort involving the cave owner and many volunteers who assisted in constructing the gate.

A pair of bald eagles (*Haliaeetus leucocephalus*) nested this year on the White River National Wildlife Refuge. Although eagles have continued to winter in Arkansas, this is the first time that eagles have nested in the State since 1952. The pair successfully fledged one eaglet in late July. Meanwhile, the State of Arkansas Game and Fish Commission has successfully completed its first attempt at hacking eagles. Two young eagles obtained from Minnesota and Wisconsin were successfully released from their hacking site near the Buffalo River this summer, after being main-

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**Region 1:** California, Hawaii, Idaho, Nevada, Oregon, Washington, and Pacific Trust Territories. **Region 2:** Arizona, New Mexico, Oklahoma, and Texas. **Region 3:** Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. **Region 4:** Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the Virgin Islands. **Region 5:** Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. **Region 6:** Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. **Region 7:** Alaska.

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# Plans for Two Butterflies, Puerto Rican Parrot Approved

The following are summaries of recovery plans that were recently approved: Oregon Silverspot Butterfly Recovery Plan (9/22/82), Schaus Swallowtail Butterfly Recovery Plan (11/18/82), and Puerto Rican Parrot Recovery Plan (11/30/82).

## Oregon Silverspot Butterfly

The Oregon silverspot butterfly (*Speyeria zerene hippolyta*), or Hippolyta silverspot, is a Threatened subspecies of fritillary (silverspot) butterfly endemic to a few sites along the Washington/Oregon coastal zone. Of 17 historically known populations once distributed along the coast from Rock Creek/Big Creek, Oregon, to Westport, Washington, only 6 have been documented in recent years and 3 of these consist of only a handful of individuals on deteriorating habitat. Most of the field data on this butterfly have been collected by Dr. David McCorkle and Dr. Paul Hammond, who have been studying it for more than 10 years.



The Oregon silverspot is a medium-sized, orange and brown butterfly with black veins and spots on the dorsal wing surface, and with a yellowish submarginal band and bright metallic silver spots on the ventral wing surface.

The Oregon silverspot is highly specialized and depends for its survival on salt-spray meadows, a habitat type that has never been common within the species' range. Due to habitat modification by human uses of the coastal areas, only three viable populations are still known to occur. One is at the mouths of Rock Creek and Big Creek in Lane County, Oregon. A second population is found at Cascade Head on a Nature Conservancy preserve, and the third is at the meadows of Mount Hebo; both the second and third populations are in Tillamook County, Oregon. (The third site is about 12 miles inland but has ecological characteristics that are analogous to the salt-spray meadows of the immediate coast.)

The habitat element most important to the Oregon silverspot is the western blue violet (*Viola adunca*), which is normally the only plant on which butterfly larva can successfully feed and develop. Although the salt-spray meadow is important as the nursery area for the butterfly, it is a rather harsh environment for the adults. Upon emergence as adults, they generally move out of the meadows into the fringe of conifers or brush where there is shelter for more efficient heat conservation and nectar-gathering flights. This sheltered area also may be used for courtship and mating.

The loss of suitable habitat is unquestionably the main reason for the current Threatened status of the Oregon silverspot. Seaside meadow sites have been used for residential and business developments, lawns, parking, and recreation, along with excessive grazing and off-road vehicle travel. Secondary impacts include the introduction of exotic plants and suppression of naturally occurring fires (which results in succession of the salt spray meadows to brush and stunted woodland).

Initial recovery efforts will be oriented toward conserving the current viable populations and rehabilitating their deteriorating habitat. Additional research on the ecology of the Oregon silverspot will be necessary in order to develop long-term management plans for the butterfly and its habitat. Determining the number of populations and/or the amount of habitat necessary to insure the long-term survival of the butterfly will be key parts of the overall recovery program. Existing habitat should be protected from further degradation, an objective that may involve habitat manipulation to prevent succession of the meadows to brushfields. Controlled burning, scarification, chemical treatment, or other land manage-

ment techniques could be used if it is determined that they would not have any detrimental side-effects on the butterfly or its habitat. It is important that the use of herbicides and insecticides, which could have an obvious potential impact on the butterfly and its habitat, be carefully regulated. Growth of the violet (*V. adunca*) and some of the desirable nectar plants should be encouraged, and exotic plants found harmful to the habitat should be controlled.

Once these objectives are achieved, reintroduction and establishment of additional populations on secure habitat can be explored. A major effort by all those involved in the recovery program, including the Fish and Wildlife Service, Forest Service, Department of Defense, The Nature Conservancy, and other participants, will be necessary to insure consideration of the butterfly in resource planning for public lands. Although the long-term status of the species and its habitat on private lands is not well understood, these lands do hold promise as key butterfly habitat, and the cooperation of local private interests in development of management plans should be encouraged.

Details on the plan and its implementation can be obtained from the Portland Regional Director. (see page 2 for address).

## Schaus' Swallowtail Butterfly

The Schaus swallowtail butterfly is known only from the southeastern tip of the Florida peninsula and the Florida keys, where it has always been considered rare and locally distributed. It was listed as Threatened under the Endangered Species Act in 1976.

Specific habitat requirements for the butterfly are unknown, although its

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Schaus' swallowtail butterfly is known only from the southeastern tip of the Florida peninsula and the Florida keys.

# Threat to California Least Tern Defused by Coordination

by Jack Fancher  
Division of Ecological Services  
Laguna Niguel (California) Field Office

In two successive nesting seasons, the California least tern has abandoned a protected and managed nesting area on Terminal Island, Los Angeles Harbor, in favor of nearby areas used by an Army Corps of Engineers contractor working on the Los Angeles Harbor Deepening Project (LAHDP). Only by close inter-agency coordination, often on short notice, have significant adverse impacts to the least tern been avoided. Significant projects cost escalation, shutdowns, and delays also have been avoided.

The California least tern was listed as Endangered in 1970. At that time, the population had declined to about 600 pairs, primarily due to nest site disruption and loss by human activities. It typically nests in coastal California from April through August, and returns to Central and South America to overwinter. Between 1970 and 1977, the least tern has nested at several locations on Terminal Island, reaching a peak of 85 nests with very good fledgling success in 1977.

The Corps of Engineers plans for the LAHDP included deepening the port's main channel and disposing of the dredge spoil into a 190-acre area of harbor waters to create new land. In a 1978 biological opinion, the Service concluded that the proposed project would jeopardize the California least tern, primarily due to the filling of foraging areas near the nest sites and inadequate pro-

tection of these sites. Project plan revisions and a Corps-Service agreement resulted in a no-jeopardy opinion in 1979. Slight modifications were made in the proposed shape of the landfill and the timing of construction. A harbor water area was also to be altered to improve its value for least tern foraging. In addition, the agreement provided for least tern nesting areas on Terminal Island, and for a 7-year investigation of the bird's nesting and foraging ecology.

The protection and management of a 15-acre nesting area on Terminal Island began in 1979, concurrent with the study, and the actual project construction began in 1980. However, the least tern did not nest on Terminal Island during those 2 years. As allowed for in the agreement, the study then focused on other Los Angeles and Orange County nesting colonies. By 1981, the 15 acres had been fenced, cleared of weeds, covered with a veneer of sand, and arrayed with least tern decoys. That year, the terns did use the site. About 13 pairs were nesting there when, in June 1981, the colony was abandoned. Eggs and small chicks disappeared, indicating that rats and crows were the likely predators.

The California least terns began re-nesting at an unprotected, dusty, weed-dotted area adjacent to the Corps dredge discharge pipe and the landfill construction. This site was being used by the Corps for off-road movement of heavy equipment and dredge pipe sections between the staging area and the work area. It was also used for access to the dredge discharge pipe that ran along

its margin. The Harbor Department operated a gravel stockpile operation at the center of the 45-acre tract, and recreational anglers crossed the area to reach fishing spots.

Immediate action was needed to prevent the destruction of the new least tern nests. An Ecological Services biologist in the Laguna Niguel Field Office began discussions with the Corps' construction manager, the Los Angeles Harbor Department staff, and the California Department of Fish and Game to seek alternatives which would avoid nest site disturbance. As the result of close coordination, heavy equipment was rerouted, the nesting area was posted, and access was curtailed. The nesting area thereby was effectively protected from the gravest threats without interfering with the progress of the construction project. The ongoing open-water discharge of dredge spoil, not far away, offered no apparent impact upon least tern foraging since it occupied a relatively small portion of the bird's known feeding area.

Approximately 46 nesting attempts were made by California least terns at several different sites on Terminal Island in 1981. Some eggs were destroyed inadvertently by vehicles. Many chicks were hatched, but high mortality, due to predation first by crows or rats, then an American kestrel, contributed to poor fledgling success. The powdery dust on the nesting area also may have been a factor. Nevertheless, later observations of banded fledglings at Terminal Island indicated that the site had furnished potential recruits for the adult populations. The third year of the nesting and foraging study documented these events as well as significant findings from other major nesting colonies.

The 1982 California least tern nesting season began with the 190-acre landfill nearly half filled with dredge spoil, but still largely an inter-tidal mud flat with shallow open water. During the preceding winter, the Corps had unintentionally created a sandy knoll within the landfill by overdischarging at one point. This knoll, composed of clean sand and bivalve shell fragments, was above the reach of the tide. The discharge point had later been relocated elsewhere in the landfill, but the tailwaters flowed past the knoll.

Ten pairs of least terns took advantage of the sandy knoll when courtship began. Another ten pairs were observed courting and nest scraping within the 15-acre area, which had again been prepared and decoyed. Simultaneously, a local helicopter manufacturer was mak-

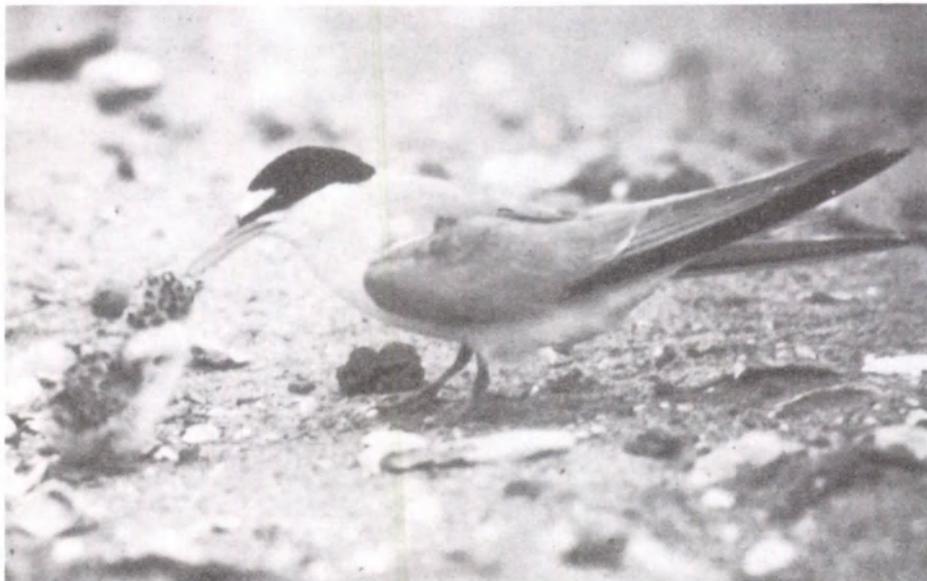


Photo by D. Echols

California least tern feeding its chicks.

## Plans for Butterflies

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dependence on hardwood hammocks is clear. Major factors affecting changes in population size and distribution are unclear, and it is unknown at what levels population numbers and distribution must be maintained to ensure viability. The recovery plan, therefore, emphasizes habitat protection and research on the species' population biology. Its objective is to prevent the extirpation of *Papilio aristodemus ponceanus* colonies and reestablish colonies where suitable.

During 1980 and 1981, known, confirmed and apparently viable breeding colonies of *P. aristodemus ponceanus* were restricted to a group of islands in Biscayne National Park. Colonies may possibly occur in other areas of the keys, although none is currently known.

*Ponceanus* numbers have historically been generally low, but fluctuations apparently do occur in large part due to the fact that the chrysalids may overwinter more than one year. In the early 1970's, the species was relatively common in Biscayne National Park, with numbers being especially high during 1972. Since then, however, the population, especially on Key Largo, has apparently been declining.

Three factors are possibly at fault for the severe range constriction and population decline of *ponceanus* during this century, especially since the early 1930's: (1) disruption and destruction of hammocks; (2) widespread aerial application of insecticides by the Monroe County Mosquito Control District; and/or (3) natural factors (weather, predation/parasitism, etc.). Collecting has not been a factor in the past, but will probably be so at the presently small population size. Insecticidal mosquito control may represent the most important and critical of those factors.

The role that habitat alteration has played in *ponceanus* distribution is difficult to determine. The butterfly apparently is now absent from several areas in which hardwood hammocks remain apparently undisturbed. The species may possess relatively subtle habitat requirements which are not yet understood.

The Schaus' swallowtail's primary host, torchwood (*Amyrls elemifera* L.; Rutaceae) occurs in hammocks throughout the lower and upper keys and on the Atlantic coast of the mainland northward to Volusia County. Wild lime (*Zanthoxylum fagara* (L.) Sarg.; Rutaceae), a secondary host plant, has an even wider distribution. Given these data, it is clear that the historic range of

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Photo by J. Fancher



The Corps Terminal Island landfill construction in 1982 built up around the least tern nesting area.

ing occasional unauthorized test landings on underdeveloped harbor land areas, including the fenced area and drier portions of the landfill. Using aircraft registration information obtained through the Service's Office of Law Enforcement in Long Beach, Ecological Services personnel were able to contact the helicopter operator and secure his cooperation. Unfortunately, the unwitting disturbances that had already occurred apparently were too much for the terns, as nesting was not reinitiated at the fenced area during the 1982 season.

The nesting colony at the sandy knoll, on the other hand, continued to increase in numbers. Many of the adult terns had been banded in previous years, and some had been observed attempting to nest at other colonies earlier in the 1982 season. Predator problems at other traditionally important Los Angeles and Orange County colonies were causing some adults to reinstitute nesting at the sandy knoll. This site assumed even greater significance to overall least tern recovery when some major colonies in San Diego County suffered from reduced nesting success.

Several potential problems at the sandy knoll were brought to the attention of the Corps' construction manager by our Laguna Niguel staff. As the dredge discharged continued, it would wander unconstrained over the landfill and destroy the area where least terns were nesting. Also, rising water levels threatened to inundate nests. Lastly, direct disturbance by persons and vehicles could cause the birds to abandon the site. Through active and frequent coordination among Service, Corps, and California Fish and Game personnel, each problem was successfully addressed. The nesting colony was posted, vehicle access was curtailed, a weir in the landfill dike was constructed

to allow the escape of dredge tailwaters, and training dikes were constructed to divert the discharge away from the knoll. By late July, however, the landfill had been greatly built up and would either encroach upon the nesting area or require sandbagging to protect the nests. Fortunately, the least terns concluded their nesting activities first. Within days of the "all clear" message from the Service, the Corps resumed normal operations, obliterating the vacated nesting area without having incurred any abnormal project delays or expense.

The 1982 least tern nesting activities at Terminal Island were intensively studied by contractors to the Laguna Niguel Field Office. The study recorded more than 70 nests and, although some eggs were lost to one extreme high tide series and some to rats, fledgling success was good.

Banding efforts are yielding results useful in understanding least tern nesting behavior. The studies are also contributing to knowledge of nesting and foraging crucial to the successful management of their nesting areas and, ultimately, to recovery of this Endangered species. Several publications in scientific journals have already resulted from this research. The three remaining years of study called for in the Corps-Service agreement should continue this record of contribution.

Thanks to the consultation framework in Section 7 of the Endangered Species Act, and to the sincere, capable efforts of the people involved, conservation of the Endangered bird was compatible with the harbor project. It is through such efforts that we hope that the California least tern population, estimated at 975 pairs in 1981, will reach the recovery plan goal of 1200 pairs at 20 stable nesting colonies and return from the brink of extinction.

# CITES NEWS—November 1982

*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.*

## CITES Amendments Proposed by Service

Following a review of the status of wildlife and plant species that are native to the United States listed on Appendices I and II of CITES, the Service announced its proposed changes to these Appendices (F.R. 11/17/82). They will be submitted for consideration by the CITES nations at the next regular meeting in Botswana in April 1983.

The Service's review was conducted in coordination with the Canadian Wildlife Service and the Dirección General de la Fauna Silvestre de México. In developing proposals, the Service considered comments and information received in response to earlier notices in the *Federal Register*, and the views of the Central Committee, a group representing various CITES parties organized to appraise and coordinate such reviews.

### Candidate Species

The Service's November *Federal Register* rule presents a discussion of the proposals, comments received following earlier notices, and the reasons for the Service's final decisions. A summary of the proposals follows:

- Gray wolf (*Canis lupus*)—The Service proposes to remove Alaskan and Canadian populations of this species from Appendix II. It does not anticipate that this action will create trade problems

concerning wolf pelts from other populations since both Alaskan and Canadian Provincial game departments have established tagging and documentation systems.

- Bighorn sheep (*Ovis canadensis*)—The Service proposes to delist (remove from Appendix II) the U.S. and Canadian populations, which are now listed only because of similarity of appearance to the Mexican population. The Service anticipates no trade problems given the strict control of sport hunting in all three countries.

- Grizzly and brown bears (*Ursus arctos*)—The Service proposes to remove North American populations

from Appendix II on the grounds that they are listed only for reasons of similarity of appearance, they are protected by State and Federal law in the United States and the Mexican population appears to be extirpated.

- Canadian lynx (*Lynx canadensis*)—The Service proposes to remove the species from Appendix II. The species is under State and Provincial management that should prevent its becoming threatened with extinction by international trade.

- River otter (*Lutra canadensis*)—The Service proposes to list this species in Appendix II for reasons of similarity of

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## Regional Briefs

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tained and fed for 7 weeks. The released birds were followed via radio telemetry for 3 days. They were last located heading in a northerly direction. It is hoped that these birds will return to nest in Arkansas when they reach breeding age (4-5 years old). Following this successful first attempt, more eagles will be hatched in the next 2 summers.

The final report, "Status Survey of the Cahaba Shiner and Goldline Darter in the Cahaba River," has been received from Dr. W. Mike Howell, Samford University. This effort fills a data gap which existed along the Cahaba River from Trussville to Booth Ford, Alabama. This information, along with a recently contracted study with the Alabama Geological Survey for a historical water quality analysis of the Cahaba River and information already on hand, should provide the necessary data to make a decision on listing strategies.

The U.S. Army Corps of Engineers Waterways Experiment Station has completed the concept design for artificial gravel bars in the Tombigbee River. This is part of a conservation plan being developed for the Tennessee-Tombigbee Waterway Project and a number of candidate mussel species occurring in the Tombigbee River. The next step would be engineering design, cost estimates, construction, and evaluation.

**Region 6**—Prior to finding the black-footed ferret (*Mustela nigripes*) population near Meeteetse, Wyoming, in 1981, most research on ferrets had occurred in Mellette County, South Dakota, in the late 1960's and early 1970's. The last confirmed ferret sighting in Mellette County was in 1972. During the summer of 1982, two students from South Dakota State University spent more than 650 man-hours searching for ferret sign in

prairie dog towns in Mellette County. They also logged more than 630 man-hours spotlighting for ferrets at night. No conclusive evidence was obtained to indicate that ferrets still exist there.

The Yellowstone Managers Committee met in Jackson, Wyoming, in early November. The management of grizzly bears (*Ursus arctos horribilis*) was a major item of discussion. There is great concern over the number of grizzlies being lost from the population because of human-induced mortality. The grizzly bear population in the Yellowstone ecosystem is estimated to be +200 animals, and the trend is still downward. There may be no more than 30 adult females in the population. Federal land management agencies and State game and fish departments are starting to work together to greatly reduce annual grizzly mortalities caused by humans.

In an effort to retard any genetic drift in greenback cutthroat trout (*Salmo clarki stomias*) broodstock held at Bozeman Fish Cultural Development Center in Montana, milt was taken from wild greenbacks for use in fertilizing some 20,000 ova. Eight hundred greenbacks obtained from this spawn were retained at the center for future broodstock. The remaining fish from this spawn composed part of the 25,500 greenbacks which were released into 7 areas within the species' native range.

An experimental catch-and-keep angling program for the introduced brook trout (*Salvelinus fontinalis*) and a catch-and-release program for the native greenback cutthroat trout within beaver ponds on Hidden Valley Creek (Rocky Mountain National Park) was opened on August 1, 1982. Initial results indicate that greenbacks are extremely susceptible to angling pressure. Anglers released 60 percent of the brook trout and 99.99 percent of the greenbacks.

# RULEMAKING ACTION - December 1982

## Malheur Wire-Lettuce

Continued from page 1  
(for zeolites) in the habitat area is not imminent.

An immediate threat to the taxon is competition from weedy grasses, especially the introduced cheat grass (*Bromus tectorum*) with which it competes for moisture in the spring when both species are in seeding stage. Cheat grass invaded the area following a controlled burning in 1972 which accidentally swept the habitat area. Grazing by small herbivores, presumed to be black-tailed jack-rabbits (*Lepus californicus*), is also detrimental to the wire-lettuce.

In 1974, the BLM established a 160-acre Scientific Study Area that includes the habitat area. The study area has been completely fenced, preventing grazing of the species by livestock. The BLM has also monitored the status of *S. malheurensis*.

*S. malheurensis* is a member of the sunflower family (Asteraceae) and grows to 5 dm tall. It has a basal rosette of leaves, a much branched stem with scale-like leaves, and numerous pink to white (rarely yellow-orange) flower heads. It is an annual species and the numbers of individual plants vary

greatly from year to year depending on the amount of precipitation prior to and during the spring growing season. It flowers in July and August.

The first discovery of *S. malheurensis* was made in 1966, when seeds of this species were collected along with those from a population of the parental plant, *S. exigua* ssp. *coronaria*. Both taxa are found together, at the northern end of the range of the parental subspecies.

Studies by Dr. Leslie Gottlieb of the University of California, Davis, have demonstrated consistently distinguishable field characteristics, physiological differences, and reproductive isolation between these two taxa, thus recognizing *S. malheurensis* as a new species. It has been considered of significant scientific and educational value in understanding the processes of speciation, especially the sympatric evolution of a diploid species.

### Regulatory History

This plant was first proposed by the Service for protection under the Act on June 16, 1976. Because the Endangered Species Act Amendments of 1978 required that all proposals over 2 years

old be withdrawn, the Service published a notice of withdrawal that included this plant on December 10, 1979.

In August 1980 new field work was carried out at the site of the *S. malheurensis*. It was discovered that the exotic cheat grass had heavily invaded the area. Only fewer than several dozen wire-lettuce plants could be found after a diligent search. Previously as many as 750 individuals of *S. malheurensis* were estimated to have grown at the site in any one year. On October 31, 1980, the Service published a second proposed rule on the plant, advising that sufficient new information was on file to propose the *Stephanomeria*. Critical Habitat was also proposed on October 31, 1980, for the first time.

This listing took advantage of a provision of the Endangered Species Act Amendments of 1982, which extended the deadline for a final rule from October 31, 1982 to October 13, 1983. The 1982 Amendments state that all species in proposed status at the time the new legislation was signed are to be treated as if proposed on the date of enactment of these amendments, October 13, 1982.

## New Series to Clarify Wildlife Permitting Procedures

In recent years the U.S. government seized annually around 2,000 wildlife shipments which failed to meet permit requirements. In an effort to reduce that number, the Association of Systematics Collections (ASC), with the assistance of the Service's Federal Wildlife Permit Office and the Pet Industry Joint Advisory Council, has begun production of a reference series that will provide a simple, streamlined source of permit information for those who routinely deal with wildlife and wildlife products such as furs, leather and ivory.

The series, *Controlled Wildlife*, will serve the need of both industry and government for a single, comprehensive source of information on the regulations, permits and agencies that make up our national wildlife policy. The series is divided into three volumes.

The first volume, *Federal Permit Procedures*, contains detailed summaries of the Federal statutes and regulations that control the use of wildlife and wildlife products; samples of both foreign and domestic permits, with instructions for completing them properly; and addresses of important

agencies, both foreign and domestic.

Volume two, *Federally Controlled Species*, lists the species that are controlled by the Federal government and the laws that govern their use.

*State Permit Procedures 1983*, the third volume in the series, will contain information on State non-game wildlife laws and permit requirements, cooperative agreements between the Federal government and individual States, and lists of species protected by each State.

In addition, an *Updating Service* will be included to keep purchasers advised of changes in regulations and procedures.

The work of compiling and organizing this data is being performed by the ASC, a non-profit association of natural history museums and scientific societies. Work has already begun on the first two volumes, which are scheduled for publication in January 1983. The third volume will be published in April 1983.

For further information write: CONTROLLED WILDLIFE, Association of Systematics Collections, Museum of Natural History, University of Kansas, Lawrence, KS 66045.

## Plans for Butterflies

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*ponceanus* has not been limited by the range of these two host plants.

Nearly all *ponceanus* sightings and collections have been concentrated from late April through mid-July, with most occurring during May, suggesting that the butterfly has but a single annual generation. Occasional adults are found in late July through September.

For more information on the Schaus' Swallowtail Butterfly Recovery Plan, contact the Atlanta Regional Director (see page 2 for address).

### Puerto Rican Parrot

The October 1982 BULLETIN included a feature on the Puerto Rican parrot (*Amazona vittata*). Please refer to this article for information on research and recovery efforts for this bird.

\* \* \*

Copies of these plans, and of all approved recovery plans, will be made available for purchase from the Fish and Wildlife Reference Service, Unit i, 3840 York Street, Denver, Colorado 80205 (800/525-3426). A four-to-six month printing time must be allowed following the date a recovery plan is approved by the Director. Please understand that you might experience a delay when ordering newly approved plans.

# CITES NEWS

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appearance, only. It is now listed because of potential threat to its survival from international trade, as well. Biological data are sufficient to show that the species is not potentially threatened with extinction by international trade.

- Tule white-fronted goose (*Anser albifrons gambelli*)—The Service proposes to remove this subspecies from Appendix II because it is not readily distinguishable from the more common white-fronted goose, *A. albifrons frontalis*, and because it is given as much protection from overexploitation from trade as possible under existing Migratory Bird Treaties.

- Mona Island boa and Virgin Islands boa (*Epicrates monensis*)—The Service proposes to transfer these snakes from Appendix II to Appendix I on the grounds that both subspecies (*E. monensis monensis* on Mona Island and *E. monensis granti* on the Virgin Islands) are threatened with extinction and they are similar in appearance to the Puerto Rican boa (*E. inornatus*), which is listed in Appendix I.

- Blue pike (*Stizostedion vitreum glaucum*)—The Service proposes to remove this subspecies from Appendix I because no specimens have been found since 1965 despite extensive sampling of fish stocks. The Service has proposed to delist the fish under the Act (see June 1982 BULLETIN).

- Longjaw cisco (*Coregonus alpenae*)—The Service proposes to remove this species from Appendix I because it is likely extinct. This fish was also proposed to be delisted under the Act (see June 1982 BULLETIN).

## BOX SCORE OF SPECIES LISTINGS

Category	ENDANGERED			THREATENED			SPECIES* TOTAL
	U.S. Only	U.S. & Foreign	Foreign Only	U.S. Only	U.S. & Foreign	Foreign Only	
Mammals	15	18	223	3	0	22	281
Birds	52	14	144	3	0	0	213
Reptiles	8	6	55	8	4	0	81
Amphibians	5	0	8	3	0	0	16
Fishes	28	4	11	12	0	0	55
Snails	3	0	1	5	0	0	9
Clams	23	0	2	0	0	0	25
Crustaceans	2	0	0	1	0	0	3
Insects	7	0	0	4	2	0	13
Plants	56	2	0	8	1	2	67
<b>TOTAL</b>	<b>199</b>	<b>44</b>	<b>444</b>	<b>47</b>	<b>7</b>	<b>24</b>	<b>765</b>

\*Separate populations of a 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, and Olive ridley sea turtle.

Number of species currently proposed: 3 animals  
6 plants

Number of Critical Habitats listed: 54  
Number of Recovery Teams appointed: 69  
Number of Recovery Plans approved: 71  
Number of Cooperative Agreements signed with States:  
38 fish & wildlife  
11 plants

November 30, 1982

- North American cacti (Family Cactaceae) —The Service proposes to transfer 71 taxa of cacti native to the U.S. or Mexico, or both, from Appendix II to Appendix I on the grounds that their wild populations are so rare or depleted they are actually or potentially threatened by international trade. The original proposal contained 119 taxa to be transferred. However, a number of Mexican taxa were deleted because of insufficient population data or because it appears that the species is more common than initially thought.

- Luquillo Mountains Lepadthes (*Lepadthes eltoroensis* Stinson, Family Orchidaceae)—The Service proposes to transfer this orchid from Appendix II to Appendix I because of taking of this

plant from its very restricted habitat.

- *Solanum "sylvestre"* (family Solonaceae)—The Service proposes to remove this name from Appendix II on the grounds that the name is untraceable in the modern literature and never has been used or validly published as a scientific name.

The Service has decided not to propose changes included in the original proposal concerning the swift fox (*Vulpes velox*) and the pronghorn antelope (*Antilocapra americana*).

Copies of the proposals are available upon request from the Office of the Scientific Authority, U.S. Fish and Wildlife Service, Washington, D.C. 20240. Please send correspondence regarding these proposals to the same address.

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# ENDANGERED SPECIES

## Technical Bulletin

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