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ENDANGERED SPECIES

Technical Bulletin

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

Two Florida Mammals Listed as Endangered in Emergency Rule

An emergency rule listing as Endangered two small mammals known only from one area in the Florida Keys was published by the Service on September 21 and took effect immediately (F.R. 9/21/83). The Key Largo woodrat (*Neotoma floridana smalli*) and Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*) are jeopardized by the loss of their forest habitat to residential and commercial development. An emergency determination was necessary to allow full consideration of the welfare of these animals and their habitat during consultation on a Federal construction loan that could result in accelerated habitat loss. During the 240-day life of the emergency rule, the Service will proceed with development of a permanent listing.

Both woodrat and cotton mouse subspecies are endemic to Key Largo, in Monroe County, Florida. Currently, they are found only on 1,150 acres in the northern section of the key where they depend on tropical hardwood hammocks for their survival. With their floristic affinities to the West Indies, these hammocks support a rich biota, including many rare plant and animal species. Many of the tropical hardwood hammocks in the U.S., which reach the northern limits of their range in southern peninsular Florida, have been lost to development, and this habitat type is now one of the most limited and jeopardized ecosystems in Florida. The hammocks of north Key Largo represent some of the best remaining tracts, but they are the proposed site for a large number of residential tracts. A section of new water pipeline now extends into the area, and is expected to accelerate the pace of residential, commercial, and recreational development. Such intensive development in the Florida Keys generally results in destruction of the hardwood hammock ecosystem, even if individual large trees are left in place. The Key Largo woodrat and cotton mouse are both considered by the State of Florida as endangered, but their habitat is not protected under State law.

On May 19, 1980, Dr. Stephen R. Humphrey of the Florida State Museum petitioned the Service to add the Key Largo woodrat and cotton mouse to the U.S. List of Endangered and Threatened Species. The petition included a status report prepared under contract to the Florida Game and Fresh Water Fish Commission. On July 28, 1980, the Service published a *Federal Register* notice of petition acceptance and status review, and announced its intention to propose listing the two rodents.

Reasons for Emergency Action

In June 1983, the Rural Electrification Administration (REA) requested immediate consultation with the Service on a proposed loan to the Florida Keys Electric Cooperative for construction of a substation that would provide increased delivery of electricity to northern Key Largo. Such consultation is required under Section 7 of the Endangered Species Act because the REA is a Federal

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Photo by Stephen R. Humphrey

Both the Key Largo cotton mouse (above) and woodrat depend on tropical hardwood hammocks, a distinctive ecosystem that is disappearing in the Florida Keys.

Three Plants Proposed as Endangered

The Fish and Wildlife Service recently proposed three additional plants for listing as Endangered species, bringing the total number of plants currently proposed for listing as Endangered or Threatened to 20. An account on each of the newly proposed species follows:

Two Hawaiian Plants

Gouania hillebrandii is a shrub known only from two small sites in the District of Lahaina, Island of Maui. The plants range in size from a few inches to 6 feet tall, with oval leaves 1-2½ inches long and small white flowers borne on branching stalks. This species was proposed for listing as Endangered after population declines caused by the effects of introduced livestock and insects (F.R. 9/7/83).

Of 15 described species of *Gouania* in Hawai'i, 10 are almost certainly extinct and 2 more may be extinct. The remaining 2 species (*Gouania gagnei* and *Gouania faurie*), besides the one just proposed, are candidates for listing. Apparently, all the native Hawaiian *Gouania* species were extraordinarily susceptible to environmental alterations brought by human settlement of the islands.

Feral and domestic cattle and goats probably have been the greatest threat historically to the habitat of *Gouania hillebrandii*, and at least one population will likely become extirpated if the situation continues unchanged. Livestock grazing and trampling remove native vegetation and promote erosion, especially along ridgetops, favoring the sur-

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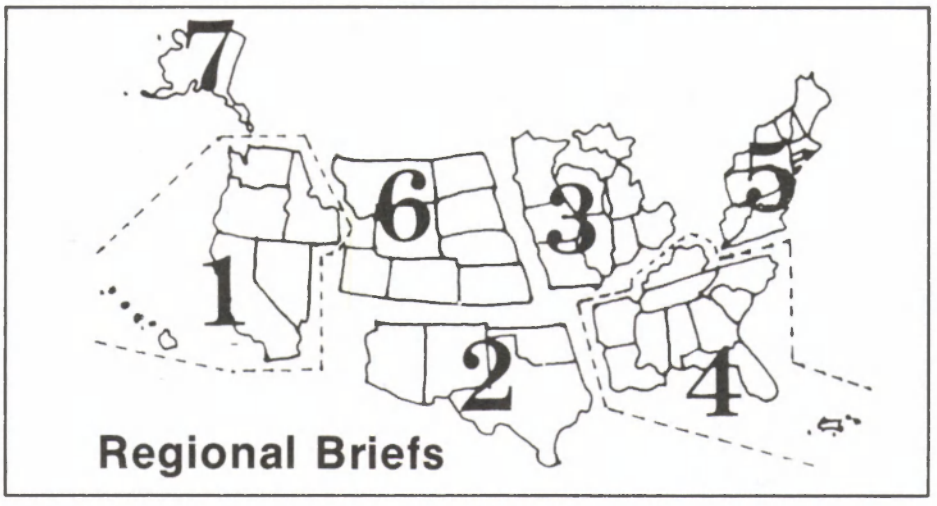
Photo by Derral Herbst

Gouania hillebrandii, *a shrub endemic to Maui, is jeopardized by the effects of grazing and invasions of exotic plants and insects.*



Regional Briefs

Endangered Species Program regional staffers have reported the following items for the month of September:

Region 1—The Nez Perce National Forest has agreed to conduct a peregrine falcon (*Falco peregrinus*) survey along the Salmon River in Idaho next spring. Numerous sightings of adults and young during the past 3 years suggest that peregrines may be nesting in the area.

The Service's Boise Field Station botanist met with Mr. George Swallow in Ely, Nevada, concerning the Monte Neva Hotsprings site where *Castilleja salsuginosa* (an Indian paintbrush) is found. This plant is a Category 1 candidate for listing. Assistance at the meeting was provided by Ann Pinzl from the Nevada State Museum. As a result of the meeting, the Service has a letter of permission to observe and map the location of *C. salsuginosa* over the next 2 years.

Two more southern sea otters (*Enhydra lutris nereis*) have been found which showed evidence of having been killed by humans. The State of California enacted emergency closure of gill net fishing within the 10-fathom line between Pigeon Point and Point Reyes. This action was taken to reduce sea bird and marine mammal mortality.

Oregon agents received a complaint from State officers that a spiked Columbian white-tailed deer (*Odocoileus virginianus leucurus*) buck was killed on August 29 on the Columbian White-Tailed Deer National Wildlife Refuge. With the assistance of Washington game personnel, an investigation was conducted and the alleged perpetrator was located. The suspect was interviewed and a vehicle search turned up fresh summer deer hair. Although circumstantial evidence thus far indicates guilt, the deer hair will be analyzed to determine if it is indeed hair from a Columbian white-tailed deer.

On August 2-4, three Sacramento Endangered Species Office (SESO) staff members assisted Sierra National Forest personnel to begin a comprehensive survey of the range of *Collomia rawsoniana* (the flaming trumpet), a Category 1 candidate for listing. SESO provided the Forest Service with a surveying method to sample the various populations of the plant. This species is restricted to riparian associated habitats along cool perennial streams in Madera County. It is threatened by small hydroelectric plants, recreational development, and logging activities.

At the request of SESO, the Forest Service initiated the survey to determine the significance of the various stands of flaming trumpet. The colonies of the rare plant along Whiskey Creek were of special interest because of the small hydro projects and timber sales proposed for areas in the vicinity of the creek. Preliminary survey work suggests that the Whiskey Creek population contributes significantly to the plant's total population.

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Two Fishes Removed from Endangered Species List

Two fishes once common in the Great Lakes, the blue pike (*Stizostedion vitreum glaucum*) and the longjaw cisco (*Coregonus alpenae*), are now thought to be extinct throughout their range in the U.S. and Canada, and have been removed from the U.S. List of Endangered and Threatened Wildlife and Plants (F.R. 9/2/83).

Historically, the blue pike occurred in Lakes Erie and Ontario, and in the Niagra River. This subspecies was abundant in the Great Lakes commercial fishery of the late 1800s, but by 1915 landings began to fluctuate extensively. Fishery biologists have evidence that overintensive fishing, which disrupted self-stabilizing mechanisms within the population, led to the extreme population fluctuations and ultimate crash of the fishery. The longjaw cisco, which once was found in Lakes Michigan, Huron, and Erie, was another commercially important fish that suffered the effects of overexploitation. Both species may also have been affected by water pollution and by competition and predation from non-native fishes. Hybridization with closely related species may have also contributed to the extinction of these fishes. By 1960, they were all but extinct. The longjaw cisco was listed as Endangered in 1967, and the blue pike in 1970.

An official review of their status was initiated in 1979. No confirmed specimens of the blue pike have been taken since the 1960s, and the last collection of the longjaw cisco was in 1967. Based on the lack of recent sightings, the Service concluded that both fishes are extinct and it proposed on May 25, 1982, to remove them from the list of Endangered species. Twelve comments dealing specifically with the proposal were received, most of them in support of delisting one or both of the fishes. None of those responding provided evidence that either species survives.

The final rule removes both species and their former habitats from the provisions of the Endangered Species Act; however, this action could be reversed if confirmed evidence is ever provided that either species still exists.

Two Foreign Reptiles Proposed for Listing, One for Delisting

Two lizards that occur on islands under the jurisdiction of Spain have been proposed for listing under the U.S. Endangered Species Act due to threats from habitat destruction, overcollection, and predation (F.R. 9/7/83). At the same time, a turtle from India and Sri Lanka was proposed for removal from the provisions of the Act because a review of its status indicates that it is much more common than previously believed.

The Hierro giant lizard (*Gallotia simonyi simonyi*) is a large species, up to 70 cm from the snout to the tip of the tail, and is found only on the Canary Islands. It was one of 18 foreign reptiles included in a notice of review published by the Service on August 15, 1980. Based on information received that the lizard was extinct, the Service decided that no further action was warranted. After the Service subsequently proposed on January 20, 1983, to list 17 foreign reptiles, additional information on *G. s. simonyi* was received. Dr. Brian Groombridge of the International Union for the Conservation of Nature and Natural Resources (IUCN) provided a 1982 article by J.P.M. Rica which states that the lizard survives on a steep, rocky, arid cliff. Reproduction is occurring on this refugium, as about half of the estimated population of 200 lizards in 1975 were juveniles.

Although concerns about the species' extinction appear to have been, fortunately, premature, threats to its survival persist. A stone-breaking facility has been proposed for construction at the cliff. This development would directly impact the lizard and adversely affect its plant food sources through excessive deposition of dust. *G. s. simonyi*, which is entirely herbivorous, also could be in competition for young plant leaves with goats that graze the area. Several European scientists have indicated that overcollection is another problem that has contributed to the precarious status of the species. Predation on juvenile lizards by gulls could also be a factor, although the degree of impact is not known. The lizard is considered a top priority for action and research by the Conservation Committee of the Societas Europea Herpetologica.

The Ibiza wall lizard (*Podarcis pityusensis*) is a small reptile found in the Balearic Islands, mainly on Ibiza and Formentera, and on some parts of Mallorca, in the Mediterranean Sea. Because of the large number of small islands within its range, considerable evolutionary divergence has occurred, and there are 35 described subspecies. In a 1982 report, Rica and A.M.C. Costa reviewed the status of 32 of these subspecies. The vast majority of the lizard populations were found to have been reduced by 1) destruction and alteration of habitat for tourist developments, 2) direct killing by poisoning, 3) overcollection for commercial and scientific purposes, 4) hybridization of some subspecies resulting from transport and release of lizards among various islands by fishermen, and 5) predation by gulls and other animals (thought to be a minor problem).

The Indian flap-shelled turtle (*Lissemys punctata punctata*) is a softshell species found on the Indian subcontinent and on Sri Lanka. Male turtles are usually less than 6 inches in length and females less than 11, and both have a brown, somewhat domed shell. This turtle was listed in 1976 as Endangered after being placed, upon a recommendation by Bangladesh, on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

As part of the Service's continuing efforts to ensure that the U.S. List of Endangered and Threatened Wildlife and Plants reflects the true biological status of the species it includes, a literature review was conducted recently to determine if current evidence justified an Endangered classification for the Indian flap-shelled turtle. No such supporting data could be found. The Service then contacted a number of scientists, and the unanimous opinion was that the turtle is common in India and that there is no justification for listing it under the Act. After considering the currently available information, the Service concurs that keeping it on the list is not warranted.

Effects of Proposal if Adopted

If the proposed rule is approved as published, all prohibitions of Section 9(a)(1) of the Act, as implemented by 50 CFR 17.21 and 17.31, would apply for the Hierro giant lizard and Ibiza wall lizard. These prohibitions, in part, would generally make it illegal for persons under U.S. jurisdiction to import, export, or engage in interstate or international trafficking in these species. Permits to carry out otherwise prohibited activities for scientific, conservation, or economic hardship purposes could be applied for under 50 CFR 17.22, 17.23, and 17.32. All of the above prohibitions would no longer apply for the Indian flap-shelled turtle. This proposal does not affect the turtle's status as a CITES Appendix I species, however, and all CITES restrictions on import and export will remain in effect.

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FLORIDA MAMMALS

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agency whose action may affect two federally listed species in the area, the Threatened Schaus swallowtail butterfly (*Papilio aristodemus ponceanus*) and the Endangered American crocodile (*Crocodylus acutus*). The proposed electricity delivery system, which could serve up to 6,000 new residential units, would probably have even greater adverse effects on the Key Largo woodrat and cotton mouse, which prior to the emergency rule were not federally listed.

If the Key Largo woodrat and cotton mouse were not on the U.S. List of Endangered and Threatened Species, their welfare could not initially be given full consideration during the REA consultation. If instead these two mammals had been only proposed for listing, REA would have been required under Section 7(a)(4) of the Act only to informally "confer" on actions that are likely to jeopardize their continued existence, and the Service would have made recommendations to reduce any adverse effects. Upon a final listing, the REA would have been required to reinitiate consultation if the action may affect the species. This could have resulted in delays and increased project costs.

Effects of the Rule

The Key Largo woodrat and cotton mouse are now listed as Endangered and benefit from the conservation measures authorized under the Endangered Species Act. Taking, possessing, or engaging in interstate/international trafficking in these species are among the prohibitions in 50 CFR 17.21. Certain exceptions apply for agents of the Service and State conservation agencies, and permits for otherwise prohibited activities can be issued, under 50 CFR 17.22 and 17.23, for certain scientific, conservation, or economical hardship purposes.

A designation of Critical Habitat for the two mammals was not included in the emergency rule because the process for making such a determination would have delayed the listing, probably beyond the time needed to give consideration to the species during Section 7 consultation with the REA. However, the Service intends to include Critical Habitat when a permanent listing rule is proposed. In the meantime, the Key Largo woodrat and cotton mouse, along with their habitat, still will receive protection in accordance with Section 7. All Federal agencies (including, but not limited to, the REA) shall ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of the species by directly affecting the animals or by adversely modifying their habitat.

THREE PLANTS

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vival of competing exotic plants. Additionally, at least half of all the *Gouania hillebrandii* are infested by an introduced insect herbivore, the hibiscus snow scale (*Pinnaspis strachani*). Many of the most heavily infested plants have died. Finally, unknown chewing insects have caused extensive leaf damage on populations monitored since 1955.

The proposed Critical Habitat for *Gouania hillebrandii* includes a quadrangle of about 52 acres of encompassing three ridges forming the south wall of Kanaha Stream Valley, and three circular areas of about 20 acres each on the west flank of Lihau Mountain.

Comments on the proposal to list *Gouania hillebrandii* are due November 7, 1983, to the Pacific Islands Administrator, U.S. Fish and Wildlife Service, P.O. Box 50167, Honolulu, Hawai'i 96850.

Kokia drynarioides (hau-hele'ula, or Hawai'i tree cotton) is a small tree with large red flowers, palmately lobed leaves, and three large bracts at the base of the flower and fruit. This attractive plant is one of only four species belonging to the endemic Hawaiian genus *Kokia* and the only one growing on the Island of Hawai'i. (Of the other species, *Kokia cookei* is listed as Endangered, *Kokia kauaiensis* is a candidate for listing, and the fourth is extinct.) These plants are related to domestic cotton (*Gossypium spp.*), but do not produce usable fibers. A red dye extracted from the bark of *Kokia drynarioides* was formerly used to color fish-nets.

Since it was first collected during Captain James Cook's third voyage to the Pacific (1779), *Kokia drynarioides* has suffered a steady decline, due primarily to livestock grazing, habitat damage, and competition from introduced plants. By 1929, the population was down to an estimated 200 trees. Now only 15 are known in the wild, and the species has been proposed for listing as Endangered (F.R. 9/12/83).

The habitat of *Kokia drynarioides* has been greatly modified by many years of management for livestock, and the plants themselves are extremely palatable to cattle and feral herbivores. Cattle browse on the mature trees and graze any seedlings that may appear. Rodents, especially the introduced roof rat (*Rattus rattus*), eat many of the seeds, often before they fall from the trees. The recent invasion of the exotic fountaingrass (*Pennisetum setaceum*) further inhibits regeneration, and increases danger to the population from wildfires.

Critical Habitat proposed for *Kokia drynarioides* includes three areas in the North Kona District, Island of Hawai'i, totalling about 3.86 square miles of private and State-owned lands.

Comments on the proposal to list *Kokia drynarioides* are due December 12, 1983, to the Pacific Islands Administrator (see above address).

Photo: Derral Herbst

Found only on the Island of Hawai'i, Kokia drynarioides *has declined in the wild to only 15 trees.*

Texas Plant

Styrax texana (Texas snowbells) is a shrub growing up to about 10 feet high with smooth bark, rounded leaves, and clusters of showy white flowers. The Service proposed listing this plant as Endangered because of its low population numbers and the lack of recent reproduction (F.R. 10/11/83). In 1982, only 25 plants were known to exist at several locations scattered within Real, Edwards, and Kimble Counties in south Texas. (One historical report from Val Verde County has not been reconfirmed.) Most of the sites are on private lands, but one is on a State-owned roadside park. Botanists are particularly concerned about the lack of known seedlings or saplings, and further studies are recommended to determine if this is due to browsing by cattle or deer.

Fish and Wildlife Service drawing

Only about 25 individuals of Styrax texana *remain at several locations in southern Texas, and botanists are particularly concerned about the absence of young trees.*

A designation of Critical Habitat was not proposed for *Styrax texana* because publication of the required range map would make the plants more vulnerable to collection. This plant has attractive foliage and flowers, and it could be sought for horticulture. However, even without a formal designation of Critical Habitat, the species would receive the protection authorized under Section 7 of the Endangered Species Act.

Comments on the proposal to list *Styrax taxana* are due December 12, 1983, to the Service's Regional Director, Region 2 (see page 2 of the BULLETIN for address).

* * *

All three of the plants newly proposed for listing were first proposed in June 1976, along with about 1,700 other plants identified in a petition prepared by the Smithsonian Institution. As a result of subsequent requirements imposed by the 1978 Endangered Species Act Amendments, this earlier proposal was withdrawn in 1979. On December 15, 1980, the Service published in the *Federal Register* a new notice of review for plants that included the three species in this story.

Effects of the Listing if Approved

If the proposals are approved, all three plants will receive protection under the Endangered Species Act of 1973, as amended. With respect to interstate/international trafficking in these species, all prohibitions of Section 9(a)(2) of the Act, as implemented by 50 CFR 17.61, would apply. Certain exceptions apply for agents of the Service and State conservation agencies, and 50 CFR 17.62 and 17.63 provide for permits for otherwise prohibited activities in certain circumstances. Under Section 7, all Federal agencies would be required to ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of the listed species by directly affecting the plants or by modifying their habitat.

CITES News—Oct. 1983

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.

Proposed Rule on Ginseng Exports

A proposed rule on the export of American ginseng (*Panax quinquefolius*) harvested in the 1983 season has been published by the Service (F.R. 9/9/83). This plant, which is on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), may be exported only if the U.S. CITES Scientific Authority (SA) has advised the permit-issuing Management Authority (MA) that such export will not be detrimental to the survival of the species and if the MA is satisfied that the gingseng was not obtained in violation of State conservation laws.

In 1982, the Fish and Wildlife Service reported it had found that the status of wild ginseng does not vary greatly from year to year within any given State, and that information compiled since 1977 was adequate to justify multi-year SA findings under CITES. The SA determined in 1982 that the export of ginseng from certain States during the 1982-84 seasons will not be detrimental to the species' survival. In turn, the MA announced in 1982 that, beginning with the 1983 season, export approval for wild or cultivated American ginseng would depend on the existence of a legislatively established State ginseng program with examination and certification provisions. On October 4, 1982, the Service granted multi-year export approval for the 1982-84 seasons only to those States that have a current ginseng program and that meet the criteria of both the SA and MA. Approval for export was given also to a number of other States for the 1982 season only, with the understanding that future approvals would not be granted until they had developed an acceptable ginseng conservation program.

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Final Listing and Recovery Priority Guidelines Approved

Final guidelines setting priorities for developing species listings and recovery plans have been published by the Service (F.R. 9/21/83) to implement the 1982 Endangered Species Act Amendments. These guidelines aid in determining how to make the most appropriate use of resources available to implement the Act. The final guidelines are essentially the same as the draft version published in the April 19, 1983, *Federal Register*.

Because assessments made in accordance with these guidelines are subjective to a degree, and because some individual species may not be comparable in all considerations, the priority systems are not intended as inflexible frameworks. Instead, the Service will attempt to use the systems flexibly so that important biological considerations that fall outside the scope of the guidelines can be considered on an *ad hoc* basis.

Listing Guidelines

For listing a species or reclassifying it from Threatened to Endangered, three criteria are used to establish 12 levels of priority:

Table 1.—Priorities for Listing or Reclassification from Threatened to Endangered.

Threat			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies	6
Moderate to low	Imminent	Monotypic genus	7
		Species	8
		Subspecies	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies	12

This system gives emphasis to those species facing the greatest threats, those in most immediate danger, and those representing highly distinctive or isolated gene pools. The Service believes that all listed species derive some benefit from their identification as Endangered or Threatened.

For species being considered for delisting or for reclassification from Endangered to Threatened, the guidelines employ two criteria to establish six priority levels:

Table 2.—Priorities for Delisting and Reclassification from Endangered to Threatened

Management Impact	Petition Status	Priority
High	Petitioned action	1
	Unpetitioned action	2
Moderate	Petitioned action	3
	Unpetitioned action	4
Low	Petitioned action	5
	Unpetitioned action	6

Considerations under Management Impact include determinations of whether or not protection under the Act for a species is still necessary, and whether the listed status 1) causes an unwarranted management burden, 2) unnecessarily restricts human activity, or 3) diverts resources from species in greater need. The system also takes into account whether or not the Service has been petitioned to remove or reclassify the species. It should be emphasized that decisions on listings, reclassifications, and delistings will continue to be based solely on biological factors, as required under Section 4(a)(1) of the Act.

Recovery Guidelines

The guidelines for preparation and implementation of recovery plans use 4 criteria to determine 18 priority levels:

Table 3.—Recovery Priority

Degree of threat and recovery potential	Taxonomy	Priority	Conflict
High:			
High	Monotypic genus	1	1C, 1.
High	Species	2	2C, 2.
High	Subspecies	3	3C, 3.
Low	Monotypic genus	4	4C, 4.
Low	Species	5	5C, 5.
Low	Subspecies	6	6C, 6.
Moderate:			
High	Monotypic genus	7	7C, 7.
High	Species	8	8C, 8.
High	Subspecies	9	9C, 9.
Low	Monotypic genus	10	10C, 10.
Low	Species	11	11C, 11.
Low	Subspecies	12	12C, 12.
Low:			
High	Monotypic genus	13	13C, 13.
High	Species	14	14C, 14.
High	Subspecies	15	15C, 15.
Low	Monotypic genus	16	16C, 16.
Low	Species	17	17C, 17.
Low	Subspecies	18	18C, 18.

In addition to considering Taxonomy and the Degree of Threat, two other categories have been added for recovery planning purposes. One category, Conflict, was required under the 1982 Amendments, and elevates a species in priority if it is, or may be, in conflict with construction, development projects, or other economic activity. On Table 3, the species retains its numerical rank and acquires the letter designation of "C" indicating conflict (e.g., priority 7 would become the higher priority 7C).

The fourth category for recovery priority is Recovery Potential, which gives added emphasis to species or recovery actions that offer the greatest potential for success. The recovery potential of a species will be determined by consideration of the following criteria:

Table 4.—Recovery Potential

	High recovery potential	Low recovery potential
Biological and ecological limiting factors.	Well understood.	Poorly understood.
Threats to species' existence.	Well understood, easily alleviated	Poorly understood or pervasive and difficult to alleviate.
Management needed.[1]	Intensive management not needed, or techniques well documented with high probability of success.	Intensive management with uncertain probability of success, or techniques unknown or still experimental.

[1]When possible and biologically feasible, data pertinent to the recovery of a particular taxon will be extrapolated from known ecological requirements or management techniques for closely related taxa.

A task priority (1-3) is used in conjunction with species recovery numbers (Table 3) in ranking tasks needed for recovery of a species. This combination results in a two-tiered priority system (species recovery number—task priority number), which helps distribute program resources equitably for all listed species. Recovery tasks will be assigned priorities based on the following:

1) Priority 1—An action necessary to prevent extinction or irreversible decline of a species.
2) Priority 2—An action necessary to prevent a significant decline in a species population/habitat quality, or some other significant negative impact short of extinction.
3) Priority 3—All other actions necessary to provide for the full recovery of the species.

Additional details on the listing and priority systems are available in the Sep-

tember 21, 1983, *Federal Register*, pp. 43098-43105. This notice also includes summaries of the comments received in response to the draft guidelines and the Service's responses.

Caribou Comment Period Reopened

The Service has reopened until November 7, 1983, the comment period on the proposal to list a population of the woodland caribou (*Rangifer tarandus caribou*) as Endangered (F.R. 10/6/83). This isolated population, sometimes known as the southern Selkirk Mountain herd, is found in northern Idaho, extreme northeastern Washington, and southern British Columbia, Canada. The species once occurred widely throughout the northern States, but today the southern Selkirk Mountain herd is the only populaton remaining in the conterminous United States, and its numbers have fallen to about 30 individuals. Threats to the population include poaching, habitat loss, collisions with motor vehicles, and genetic problems from inbreeding. The herd was listed under an emergency rule as Endangered (see the January 1983 BULLETIN), but this temporary classification expired September 12, 1983.

The Endangered Species Act of 1973, as amended, spells out notification requirements on proposed listings so that the public has an opportunity to comment. A proposal to list the caribou in final as Endangered was published in the June 22, 1983, *Federal Register*. The notifications on the caribou proposal to affected county governments and the Government of Canada were delayed and newspaper summaries were not published. These oversights had to be corrected and the comment period reopened for 30 days, or until November 7, 1983. Any agency, organization, or individual wishing to comment on the proposal should write to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 N.E. Multnomah Street, Portland, Oregon 97232.

BRIEFS

Continued from page 2

Seal Beach NWR—the California least tern (*Sterna antillarum browni*) breeding season has ended. The season total for NASA Island was four pairs nesting with two young fledged.

* * *

The Service's Great Basin Complex has completed its analyses of cui-ui (*Chasmistes cujus*) age and growth. It found that cui-ui in the nearshore, prespawning aggregate ranged in age this year from 7 to 41 years, with the 1969 year class representing nearly 93 percent of the entire aggregate. Cui-ui entering the Marble Bluff Fish Facility ranged from 7 to 16 years in age. Here again, the 1969 year class dominated the population (97 percent). The primary conclusion from these analyses is that the cui-ui is closer to extinction than originally thought. The Service should acquire the necessary population dynamic data to confirm or reject this conclusion as soon as possible. If this conclusion is confirmed, the Service should take those steps necessary to remedy the cause, so a well balanced population can be restored.

Region 2—This year's last load of razorback suckers (*Xyrauchen texanus*) has been stocked from Dexter National Fish Hatchery into the Verde and Gila Rivers in Arizona. These fish bring this year's stocking total to over 2.6 million. This is the third year of a 10-year program to reintroduce this Colorado River endemic fish back into historic habitats in the lower Colorado basin.

* * *

The fall whooping crane (*Grus americana*) migration has begun. Eight 1983 young of the Wood Buffalo-Aransas flock, including two radioed birds, will be heading south, as well as at least 18 birds of the Grays Lake-Bosque del Apache flock. About 2 weeks ago, one whooping crane was found using the Aransas National Wildlife Refuge "bachelor area." This bird might have spent the summer on some of the remote parts of its winter range rather than migrating to Canada last spring.

* * *

Status surveys were initiated for the following: Mount Graham spruce squirrel, Mount Graham pocket gopher, Hualapai Mexican vole, Texas Botteri sparrow, Sonoran tiger salamander, Arizona yellow mud turtle, 10 species of Texas plants, and 3 New Mexico plants.

Region 4—In early July, four nests of the Endangered brown pelican (*Pelecanus occidentalis*) were discovered on a U.S. Army Corps of Engineers dredge spoil island in Mobile Bay. This is the first documented nesting record for pelicans in Alabama. The four nests contained a total of ten eggs. Corps personnel, in conjunction with the Service, have erected "Do Not Approach" signs and are keeping close tabs (from a distance) on the pelicans' progress. Since their discovery, three of the nests have been abandoned for unknown reasons. The remaining nest produced three chicks in late July, two of which were still surviving as of late August. It was anticipated that these chicks would fledge by early October.

In addition to its unusual location, this nesting effort is atypical in both time of year (pelican nesting season usually ends in June) and the small "colony" size. Thus, the survival to fledging of even two chicks would be a welcome event, as well as a "first" for Alabama.

Region 5—The Service has purchased from The Nature Conservancy 183 acres within the designated Critical Habitat of the Plymouth red-bellied turtle (*Pseudemys rubriventris bangsi*) for conservation of the species.

* * *

The Regional Office is working with the Tufts University Veterinary School in Massachusetts and the Massachusetts Division of Fisheries and Wildlife to set up a raptor rehabilitation facility. The school will accept injured raptors from the six New England States.

* * *

Eight pairs of peregrine falcons (*Falco peregrinus*) nested in Region 5 this year, and 19 young fledged. The status of the bald eagle (*Haliaeetus leucocephalus*) continues to improve also; in Maine, 62 eagles fledged from 74 nests, and 114 fledged from 107 nests in the Chesapeake Bay area.

Region 6—Some 22,500 greenback cutthroat trout (*Salmo clarki stomias*) fry, which were reared at the Service's Bozeman Fish Technology Center, Montana, were stocked-out to 11 different sites in Colorado. In addition, 2,000 larger fry were held back at Bozeman. They will be stocked-out when they reach a length of 5 to 7 inches next July.

* * *

The Peregrine Fund at Fort Collins, Colorado, hatched 95 American peregrine falcons (*Falco peregrinus anatum*) in 1983. In addition to captive production, 19 young were produced from eggs received from wild eyries. A total of 99 peregrines were released into the Rocky Mountain area at 25 sites in Colorado, Idaho, Montana, Wyoming, and Utah. At present, 81 birds are known to have fledged and reached independence.

For the past 2 years, the Peregrine Fund has been examining locations for establishment of a World Center for Birds of Prey. Directors of The Peregrine Fund have now decided to locate both the new World Center and the Rocky Mountain Peregrine Program, currently in Fort Collins, Colorado, to Boise, Idaho. Construction of the new facility will occur over the next 10 months. The Fort Collins facility will not relocate until August 1984.

* * *

A public hearing on the proposal to list *Astragalus montii* (heliotrope milk-vetch)

Continued on page 8

Ginseng Exports

Continued from page 5

In its September 9, 1983, *Federal Register* notice, the Service proposed to continue approval of exports of American ginseng from the following States on the grounds that both the SA and MA guidelines are expected to be met (1982-84 seasons): Georgia, Kentucky, Minnesota, North Carolina, Vermont (artificially propagated ginseng only), and Virginia. The Service also proposed to approve the export of 1983-84 season ginseng from Maryland and West Virginia, as these States recently passed legislation and promulgated rules that satisfy the MA guidelines.

The Service proposed to approve an experimental ginseng export program for the 1983 and 1984 harvest of wild and cultivated ginseng in Wisconsin. A decision will be made prior to the 1985 harvest season on whether to continue approval of the Wisconsin ginseng export program. The Service proposed to approve the export of 1983-84 wild Wisconsin ginseng and 1983 cultivated ginseng legally harvested in Wisconsin.

The Service did not propose at this time to grant export approval for wild or cultivated American ginseng taken from any other State for the 1983-84 seasons. Some States now are working to pass ginseng legislation and regulations acceptable to the MA, and these export programs will be approved as appropriate programs are developed and the supporting State laws are promulgated. Comments on the proposal were accepted until September 24, 1983.

BOX SCORE OF LISTINGS/RECOVERY PLANS

Category	ENDANGERED U.S. Only	ENDANGERED U.S. & Foreign	ENDANGERED Foreign Only	THREATENED U.S. Only	THREATENED U.S. & Foreign	THREATENED Foreign Only	SPECIES* TOTAL	SPECIES HAVING PLANS
Mammals	17	18	223	3	0	22	281	19
Birds	52	14	144	3	0	0	213	40
Reptiles	8	6	55	8	4	12	98	6
Amphibians	5	0	8	3	0	0	16	3
Fishes	29	2	11	12	1	0	56	24
Snails	3	0	1	5	0	0	9	5
Clams	23	0	2	0	0	0	25	1
Crustaceans	2	0	0	1	0	0	3	1
Insects	7	0	0	4	2	0	13	3
Plants	55	2	0	9	1	2	69	11
TOTAL	199	44	444	48	7	36	783	113**

*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.

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

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

Number of Critical Habitats determined: 55
Number of Recovery Plans approved: 112
Number of Cooperative Agreements signed with States: 38 fish & wildlife
11 plants

October 11, 1983

Briefs

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as an Endangered species with Critical Habitat was held on September 12, 1983, in Manti, Utah. There were no comments presented at the public hearing, and only one negative written comment was submitted. The Service anticipates that the species will be listed as Threatened rather than Endangered due to the management efforts put forth by the U.S. Forest Service (Manti-LaSal National Forest).

REPTILES

Continued from page 3

Public Comment Requested

Comments on the proposal are requested from any interested agencies, organizations, and individuals, and should be received by the Director (OES), U.S. Fish and Wildlife Service, Washington, D.C. 20240 by November 7, 1983.

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ENDANGERED SPECIES

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