

# ENDANGERED SPECIES

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

## Recovery Plan Completed For Commanche Springs Pupfish

The Commanche Springs pupfish (*Cyprinodon elegans*), listed as Endangered in 1967, is expected to benefit from the Service's approved Commanche Springs Pupfish Recovery Plan, signed September 2, 1981. The plan identifies three major threats to this west Texas species and prescribes actions to be taken to prevent or mitigate these threats.

Mining of underground waters for municipal and agricultural purposes has severely altered the habitat of the species. The fish occurred historically in two isolated spring-systems 190 km apart in the Pecos River drainage of southwestern Texas; now its habitat consists mostly of irrigation canals near Balmorhea, Reeves County, Texas.

The large flow of Commanche Springs (up to 66 cfs), which the species used to inhabit, was utilized as early as 1875 to irrigate more than 6,000 acres of farmland in Pecos County. The pupfish was extirpated from its type locality when Commanche Springs went



Photo by James E. Johnson

*The Commanche Springs pupfish pictured above is part of the captive population being held by the Service at the Dexter National Fish Hatchery. This species exhibits wide ecological characteristics: (1) it feeds mostly on the bottom, but also at the surface and at other levels in the water column; (2) based on consistent occurrence of small specimens, it apparently breeds during most months of the year; (3) it spawns in areas of flowing water as well as stagnant ponds; and (4) it can survive and reproduce in both stenothermal spring outflows and in eurythermal pools.*



Photo by James E. Johnson

*Cyprinodon elegans survives in the irrigation canal system pictured above which is located near Phantom Cave.*

dry in 1955. Human alteration of the system of artesian springs near Balmorhea began in the early 1900's. The pupfish is sparse in most of the canal system, concentrated into certain optimal or permanent water reaches (up to 200 young-of-the-year and adults in single seine hauls).

### Plan Addresses Threats

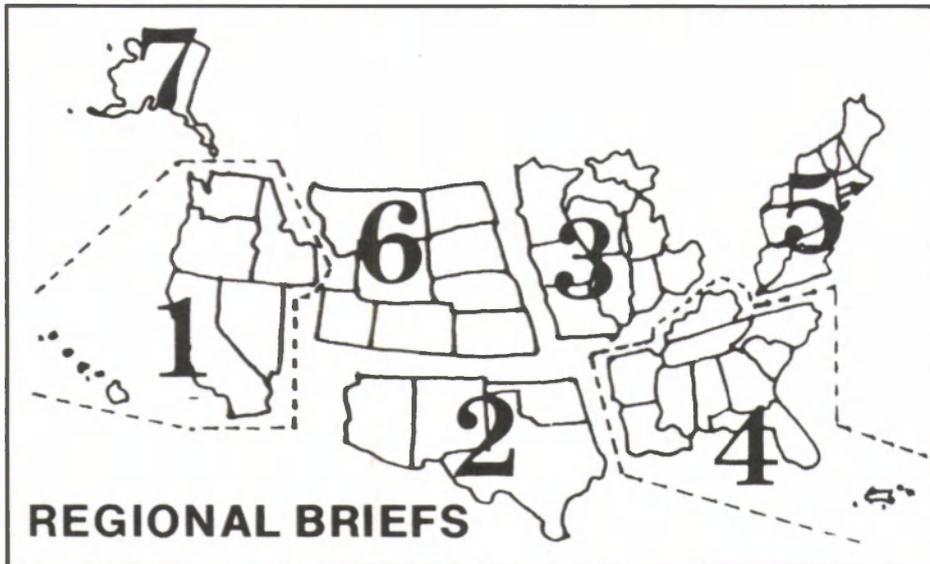
In addition to habitat loss from declining springflow and reduced surface waters, competition with introduced species and degradation of genetic integrity caused by hybridization with introduced congeners are also threats to the species. The recovery plan addresses these problems, outlining ways to improve the quality of presently occupied habitat, to increase the quantity of suitable habitat, and to establish a sound management program.

The existing Commanche Springs

pupfish habitat is principally in private ownership, and proposed improvements must first consider the owners' needs. Construction of a pupfish refugium canal through Balmorhea State Recreation Area has been very successful in producing *C. elegans*, and a second canal through a dry portion of Phantom Lake is recommended by the Plan as a method of expanding existing habitat. The refugium canal would empty water back into the present irrigation canal and thus not reduce the natural flow to the irrigation system.

Effective management of the area will depend on cooperative management agreements with the private landowners and government agencies involved in land ownership. Many diverse interests will have to be consulted in the development and implementation of any comprehensive management plan.

*Continued on page 3*



## REGIONAL BRIEFS

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

**Region 1**—One of the six bald eagles (*Haliaeetus leucocephalus*) transferred

this year from Washington to Santa Catalina Island, California, was found shot. Each of the eagles had been fitted with radio transmitters—the dead bird was located through the radio signal which led researchers to a dumping area on the island. The remaining five birds,

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### U.S. Fish and Wildlife Regions

**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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along with the five out of six eagles translocated in 1980, bring the total number of eagles on the island to ten. A transmitter signal from one of the 1980 birds was recorded near the mainland; neither the bird nor the transmitter has since been found.

The Service has awarded a contract to J. L. Dobbins and Associates to map potential California southern sea otter (*Enhydra lutris nereis*) habitat on the west coast. The maps will be used by Federal and State agencies to implement the Southern Sea Otter Recovery Plan which is now in the agency review draft stage. The maps will include the location of kelp beds and traffic lanes of petroleum carriers—information which could also be helpful for fisheries and other Federal and State programs.

**Region 2**—Recovery teams were formed to direct the preparation of recovery plans for plant species in Arizona, New Mexico, and Texas which are listed under the Endangered Species Act of 1973. These teams will serve as advisory/review boards; the actual plan preparation will be accomplished by scientists under contract to the Service.

The MEX-U.S. Gulf meeting, attended by members of the Fish and Wildlife Service, National Marine Fisheries Service, and the Mexican Fisheries Department, was held in New Orleans in early September. The group reviewed past international cooperative programs and planned future activities, placing special emphasis on sea turtle management and protection.

The Service stocked 8,100 additional razorback suckers (*Xyrauchen texanus*) in Arizona streams, bringing the total to 15,000 individuals.

The Service began moving the endangered fish species being held at Willow Beach, Arizona, in order to concentrate the entire endangered fish propagation program at the Dexter National Fish Hatchery, New Mexico.

**Region 3**—Endangered Species Coordinator, Jim Engel, made on-site visits with U.S. Forest Service personnel to various areas within the region to review their wildlife policies and projects. Cooperative efforts and ongoing Forest Service activities were discussed. The Forest Service has done extensive work in the region with the Kirtland's warbler (*Dendroica kirtlandii*), timber wolf (*Canis lupus*), Indiana bat (*Myotis sodalis*), bald eagle (*Haliaeetus leucocephalus*), and with plant surveys.

**Region 4**—Surveys are presently underway to better determine the status and distribution of the snail darter. On September 9, 1981, a Service crew was seining at approximately river mile 16 of the Paint Rock River in Alabama and found the first snail darter ever collected in that State. In a subsequent trip to the

Paint Rock River, four more of the fish were collected from the vicinity of river mile 19. Present plans call for returning to Alabama in October for a survey of the Flint River, another Tennessee River tributary farther to the west.

In other surveys, the Tennessee Valley Authority checked the status of transplanted snail darter populations in the Hiwassee and Elk Rivers. The Hiwassee population, now about 6 years old, appears to be doing extremely well. No evidence was found of the snail darters that were stocked in the Elk River in July 1980, but additional surveying is planned for early October. Information gathered during these surveys will be used in revising the draft Snail Darter Recovery Plan, and also by the recovery team for making a recommendation relative to the species' appropriate classification under the Endangered Species Act of 1973.

**Region 5**—The first recorded bald eagle nest in recent history was documented in West Virginia this year. It produced two young.

The agency review draft of the Virginia Round-leaf Birch (*Betula uber*) Recovery Plan has been completed and distributed.

The Service has initiated a long-term recovery program for the Furbish lousewort (*Pedicularis furbishiae*) in an effort to establish additional populations of the species on the upper reaches of the St. John River in northern Maine.

**Region 6**—On the night of September 25, 1981, a black-footed ferret (*Mustela nigripes*) was killed by dogs on a ranch 11 miles southwest of Meeteetse, Wyoming, on the Greybull River. This is about 30 miles south of Cody. Prior to this recovery, the last confirmed sighting of a black-footed ferret was in Todd County, South Dakota, on March 27, 1979.

On September 15, 1981, approximately 10,000 to 12,000 greenback cutthroat trout (*Salmo clarki stomias*), hatched in 1981 at the Bozeman Cultural Development Center in Montana, were transplanted into Rocky Mountain National Park. The Park is within the fish's historic range.

On August 3, 1981, the United States District Court for Colorado issued a Memorandum Opinion And Order regarding the lawsuit brought by the Colorado River Water Conservation District and other plaintiffs against the Department of the Interior and Colorado. The Memorandum Opinion And Order ordered that summary judgment be entered for the plaintiff river districts declaring that the designation and listing of the Colorado squawfish (*Ptychocheilus lucius*) and humpback chub (*Gila cypha*) as Endangered species is invalid and void. This was based on the belief that when the two fishes were listed the Secretary of the Interior failed

to comply with the notice and public participation provisions of the Administrative Procedures Act. On August 13, the U.S. Attorney filed a Motion For Reconsideration Of Order, which included new information not previously available to the court. Since then, the plaintiffs have filed a Memorandum In Response To Motion For Reconsideration of Order and the U.S. Attorney has filed a Memorandum In Reply to Plaintiffs' Response To Motion For Reconsideration. No final judgment has been issued.

**Region 7**—Final results have been tabulated for peregrine falcon (*Falco peregrinus*) survey and banding efforts for 1981. Eight rivers were examined in Alaska, including the Colville, Sagavanirktok, and Kogosukruk Rivers in the range of the Arctic peregrine (*F. p. tundrius*) and the Yukon, Kuskokwim, Porcupine, Tanana, and Charlie Rivers in the range of the American peregrine (*F. p. anatum*). A total of 238 young were recorded of which 200 were banded. The upward trend exhibited by most Alaskan populations of peregrines is very encouraging. NOTE: In the August 1981 BULLETIN, we incorrectly reported news of only *F. p. tundrius*, when actually both *F. p. tundrius* and *F. p. anatum* occur in Alaska.

As reported in the August 1981 BULLETIN, 357 Aleutian Canada geese (*Branta canadensis leucopareia*) from the Patuxent and Northern Prairie Wildlife Research Centers were released last month in the western Aleutians. The Service is attempting to reestablish breeding colonies on selected fox-free release islands. A spot-check made during mid-September by Aleutian Island Refuge personnel confirmed that large numbers of geese have thus far survived the release. John Martin, refuge manager and Aleutian

Canada Goose Recovery Team leader, reported 150–250 geese flying strongly both over Alaid-Nizki, the release islands, and nearby Shemya Island. This report is favorable since it confirms that large numbers of geese are now flight capable, that they have successfully reverted to natural food, and that they are exhibiting pre-migration restlessness. It will be important to determine how many of the released birds complete the fall migration to California.

## RECOVERY PLAN

*Continued from page 1*

The Service is maintaining a genetic stock of *C. elegans* at the Dexter National Fish Hatchery, Dexter, New Mexico. The original stock consisted of about 30 individuals from an irrigation ditch fed by Giffin Springs. The pupfish at Dexter are being held there to provide fish for reintroduction efforts should a catastrophic loss of the natural population occur, and as a stock from which research specimens may be taken without affecting the wild population. This species has done extremely well at Dexter, the population reaching tens of thousands of individuals during the summer.

The recovery plan also suggests a public information program to inform the public of the uniqueness of this species. Implementation of the recovery tasks will be initiated by the Service's Albuquerque Regional Director and carried out through the Albuquerque Regional Endangered Species Office. Further information on the Commanche Springs pupfish recovery effort can be obtained by contacting the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103, (505/766-2321).



Barry Reiswig, Assistant Manager of the Aleutian Islands National Wildlife Refuge, and Teresa Mercurio, a volunteer from Anchorage, releasing Aleutian Canada geese on Alaid-Nizki Islands during August.

Photo by Michael J. Amaral

**Endangered Species  
List Corrections  
Published****Leopard Comment Period Reopened**

Because the Service has received new data on the leopard (*Panthera pardus*), the comment period on the Service's March 24, 1980, proposed rulemaking to reclassify the species in sub-Saharan Africa was reopened. The new data, a report by P. H. Hamilton on the status of the leopard in Africa, is summarized in the September 8, 1981, *Federal Register*.

Mr. Hamilton, a Kenyan citizen and recognized authority on both the leopard and cheetah in Africa, was funded by the Service to do the report. Mr. Hamilton was asked by the Service to generalize as far as possible from the Kenya data about the status of the leopard in the rest of sub-Saharan Africa. His report, entitled, "The Leopard *Panthera pardus* and Cheetah *Acinonyx jubatus* in Kenya," was submitted to the Service in August 1981.

**Recommendations**

Hamilton's recommendation is that the United States Government reclassify the leopard in Africa to Threatened status, but continue to insist on retaining the species on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to protect against commercial exploitation. He further recommends that the U.S. lift its present ban on the importation of leopards legitimately shot in Africa by American sport hunters. He states that the ban on importing the legitimately acquired leopard trophies has not served any useful purpose. The number of leopards involved has been relatively small and the ban, he says, runs counter to the concept of giving the leopard monetary value which will help to justify its continued existence in Africa.

**Status Report**

Hamilton reports that leopards have declined generally in Kenya since the 1960's, but that there is evidence that this trend has been halted and reversed now in some areas. He states in his report that he would be surprised if Kenya's leopard population numbers less than 6,000 or more than 18,000 animals. He believes that 10,000 to 12,000 is probably the closest approximation, and feels that, as a species, the leopard cannot be considered Endangered in the true meaning of the word in Kenya or in sub-Saharan Africa at the present time. He does, however, certainly be-

lieve that the leopard should be considered Threatened. The Kenyan experience, he says, has shown what can happen to an abundant leopard population within the short period of 10-years (1965-1975). The virtual elimination of leopards from North Africa and parts of southern Africa should serve, according to Hamilton, as a warning to any who believe that this species can always survive no matter what the impact of man. Hamilton feels there is no adequate system in effect to provide the needed controls and safeguards for resuming commercial trade and is, therefore, strongly opposed to resumption of any sort of commercial trade in leopard skins.

Comments and opinions made pertaining to the reclassification of the leopard in light of the Hamilton report were received by the Service until October 8, 1981. For additional information on the reasons for the species' decline and protection afforded it under CITES and the Endangered Species Act of 1973, consult the April 1980 issue of the BULLETIN.

**Sea Turtle Resuscitation  
Procedures Finalized**

The National Marine Fisheries Service (NMFS) has amended by final rule the resuscitation procedures for Threatened sea turtles (F.R. 9/2/81). This action essentially implements an earlier emergency rule effected to mitigate the loss of Threatened sea turtles (F.R. 10/7/80).

Procedures established in 1979 in 50 CFR 227.72(e)(1)(i) required fishermen to attempt resuscitation of comatose Threatened sea turtles accidentally caught in commercial fishing operations. The technique provided in the 1979 rule consisted of turning the sea turtle on its back and pumping its breast plate (plastron) by hand or foot. The final regulations add an alternative resuscitation technique—placing the turtle on its breastplate and elevating its

A list of 30 technical corrections to the U.S. List of Endangered and Threatened Wildlife and Plants was published by the Service (F.R. 9/30/81). These changes constitute amendments to 50 CFR, Part 17, 11 and 12.

In some instances scientific names have been updated to reflect current usage. In making these determinations, the Service relies to the extent practicable on the *International Code of Zoological Nomenclature* and the *International Code of Botanical Nomenclature*, and the scientific community. In cases in which more than one name are commonly used for a taxon, synonyms have been provided to avoid ambiguity. Historic ranges for some listed taxa have been updated.

The Service is preparing an updated version of the entire U.S. List of Endangered and Threatened Wildlife and Plants which will incorporate the revisions mentioned above. This list will be available in late November 1981 from the Publications Unit, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

hindquarter several inches for a period of up to 24-hours. The new regulations, which became effective immediately upon publication, also allow relocation of turtles to non-shrimping areas and establish a method of releasing the sea turtles from vessels.

**Reference Note**

All Service notices and proposed and final rulemakings are published in the *Federal Register* in full detail. The parenthetical references given in the BULLETIN—for example: (F.R. 9/4/81)—identify the month, day, and year in which the relevant notice or rulemaking was published in the *Federal Register*.

**CITES Conference Report Available**

A notice of availability of the official report of the United States' Representative to the third regular meeting of the conference of CITES parties held in New Delhi, India, February 25-March 8, 1981, was recently published by the Service (F.R. 9/15/81). Copies of the

report may be requested from the U.S. Fish and Wildlife Service, Wildlife Permit Office (WPO), Washington, D.C. 20240. Due to the small quantity of reports produced, requests should be limited to one copy per person or organization.

# CITES NEWS

September 1981

*The Service's Office of the Scientific Authority (OSA)—replacing the Endangered Species Scientific Authority (ESSA)—functions as staff to the U.S. Scientific Authority for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). OSA reviews applications to export and import species protected under the Convention, 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.*

## U.S. Voices Concern Regarding CITES Amendment

Although the U.S. seriously considered entering a reservation on the recent amendment to the CITES Appendix II which now lists all but three species of the order Psittaciformes not otherwise listed, a decision was made against this consideration (F.R. 9/4/81). Instead, the U.S. decided to inform other countries of its displeasure with the listing through diplomatic channels which was done in late August.

At the Conference of Parties in New Delhi, India, where the Psittaciformes amendment was voted on by the CITES parties, the U.S. expressed its concern about the traffic of the species and made proposals for listing a number of the species. However, the U.S. also expressed a great concern with the administrative capability of all parties to issue meaningful permits for the export of these birds, and to enforce the Convention properly in their regard. In addition, the U.S. stated its belief that the "look-alike" listing was not fully justified in many cases. (The Psittaciformes amendment was made largely on the basis of Article II, paragraph 2(B) of CITES—known as the "look-alike" provision.)

The U.S. expressed in its formal communication to the CITES parties that it chose not to enter a reservation on the amendment, believing that better ways are available to resolve the existing different points of view. Entering reservations complicates CITES administration for management authorities and enforcement officers and complicates compliance with CITES by persons involved in legitimate trade. The communication to CITES nations urged consideration of U.S. concerns in the 10-year review of the appendices called for at New Delhi and in the preparation for the fourth meeting of the Conference of parties.

Inquiry regarding the position of the U.S. public on the Psittaciformes

amendment (F.R. 4/7/81) resulted in 1,171 responses, 688 opposing a reservation and 483 requesting that the U.S. enter a reservation. For more back-

ground on the amendment and information on the U.S. decision not to take a reservation, see the September 4, 1981, *Federal Register*.

## Export Findings Proposed For Appendix II Species

Proposed export findings for seven Appendix II species have been issued by the Service (F.R. 9/10/81). Please refer to the *Federal Register* cited above for the complete listing of States to which the Service has proposed to grant, or not to grant, export approval for these species.

If finalized, the proposed findings will affect the 1981-82 harvest of bobcat, lynx, river otter, Alaskan gray wolf, Alaskan brown bear, American alligator, and American ginseng, all species protected in trade by CITES. The Service's findings are based on biological data provided by the States, the existence of various State management abilities, and the criteria described in its earlier notice

of intent (F.R. 5/26/81). Comments on this proposal were received by the Service until September 25, 1981.

## Two New CITES Parties

The number of nations party to CITES now totals 73. The two newest parties are the Republic of the Philippines and the Republic of Columbia whose agreements will enter into force on November 16, 1981, and November 29, 1981, respectively.

A complete list of CITES parties is printed below:

Party Nations	Date of entry into force	Party Nations	Date of entry into force
1. Argentina	4/8/81	38. Monaco	7/18/78
2. Australia	10/27/76	39. Morocco	1/14/76
3. Bahamas	9/18/79	40. Mozambique	6/23/81
4. Bolivia	10/4/79	41. Nepal	9/16/75
5. Botswana	2/12/78	42. Nicaragua	11/4/77
6. Brazil	11/4/75	43. Niger	12/7/75
7. Cameroon, United Republic of	9/3/81	44. Nigeria	7/1/75
8. Canada	7/9/75	45. Norway	10/25/76
9. Central African Republic	11/25/80	46. Pakistan	7/19/76
10. Chile	7/1/75	47. Panama	11/15/78
11. Columbia, Republic of	11/29/81	48. Papua New Guinea	3/11/76
12. Costa Rica	9/28/75	49. Paraguay	2/13/77
13. Cyprus	7/1/75	50. Peoples' Republic of China	4/8/81
14. Denmark	10/24/77	51. Peru	9/25/75
15. Ecuador	7/1/75	52. Philippines, Republic of	11/16/81
16. Egypt	4/4/78	53. Portugal	3/11/81
17. Finland	8/8/76	54. Rwandese Republic	1/18/81
18. France	8/9/78	55. Senegal	11/3/77
19. Gambia	11/24/77	56. Seychelles	5/9/77
20. German Democratic Republic	1/7/76	57. South Africa	10/13/75
21. Germany, Federal Republic of	6/20/76	58. Sri Lanka	8/2/79
22. Ghana	2/12/76	59. Suriname	2/15/81
23. Guatemala	2/5/80	60. Sweden	7/1/75
24. Guyana	8/25/77	61. Switzerland	7/1/75
25. India	10/18/76	62. Tanzania, United Republic of	2/27/80
26. Indonesia	3/28/79	63. Togo	1/21/79
27. Iran	11/1/76	64. Tunisia	7/1/75
28. Israel	3/17/80	65. Union of Soviet Socialist Republics	12/8/76
29. Italy	12/31/79	66. United Arab Emirates	7/1/75
30. Japan	11/4/80	67. United Kingdom	10/31/76
31. Jordan	3/14/79	68. United States of America	7/1/75
32. Kenya	3/13/79	69. Uruguay	7/1/75
33. Liberia	6/9/81	70. Venezuela	1/22/78
34. Liechtenstein	2/28/80	71. Zaire	10/18/76
35. Madagascar	11/18/75	72. Zambia	2/22/81
36. Malaysia	1/18/78	73. Zimbabwe	8/17/81
37. Mauritius	7/27/75		

# Data Support Removing Bobcat From CITES List



Photo by Jack B. Woody

Currently 11 States list the bobcat as protected against taking and 37 States allow a regulated harvest. The above picture was taken in Nevada.

The Service announced in a preliminary notice (F.R. 9/14/81) a proposal to delist the bobcat (*Lynx rufus*) in the United States and Canada since it was inappropriately included in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The notice invites comments from the public which will be considered in determining whether or not the United States should submit, by postal procedures, the proposal for CITES parties to review regarding the bobcat's removal from Appendix II.

The bobcat is found throughout much of the U.S., north to the Canadian border, crossing into British Columbia in the west and Nova Scotia in the east and south into Mexico. The degree of protection now given to the Central Mexican subspecies (*Felis rufus escuinape*), which is listed in Appendix I of CITES and as Endangered under the Endangered Species Act of 1973, would not be affected by this proposal.

## Background

In 1976, at the time of the First Conference of CITES Parties, criteria for listing and delisting CITES species were established. Many species had been placed on the appendices prior to this meeting, however, without having the appropriate supporting evidence which the criteria (Berne, 1976) later called for. The bobcat is among the species listed in this manner.

Inclusion of the bobcat on Appendix II occurred when the parties adopted a

proposal to list all Felidae on Appendix II except those already listed on Appendix I and the common house cat (*Felis catus*). Since the U.S. generally opposes the taking of reservations on any species, it refrained from doing so in this case.

In 1979, the parties adopted a resolution to allow the correction of this situation involving species which have been included on Appendices I and II without having the appropriate supporting data. In an attempt to strengthen the scientific validity of the appendices, the parties decided that species included on Appendices I and II prior to the First Conference of Parties may be proposed for deletion or for transfer from Appendix I to Appendix II, or vice versa, "if a careful review of all available information on the status of the species does not lead to the conclusion that the species would be eligible for retention in its present appendix under the adopted criteria."

## Status of Bobcat

Since 1976, all of the States which allow a bobcat harvest have taken positive steps to determine the status of their respective bobcat populations. At least 5 years of harvest data and population information have been gathered on a national basis. From these studies, it is evident that the bobcat is not a currently threatened or a potentially threatened species. It is further evident that removal of this species from Appendix II will have little adverse effect on its survival or on the effectiveness of CITES in

## Section 6 Funds Cease; State Program Summarized

September 30, the final day of fiscal year 1981, also marked the end of a 5 year grant-in-aid program under Section 6 of the Endangered Species Act of 1973. Termination of this program to assist States in endangered species conservation efforts was effected by Congress as part of the 1982 budget-trimming procedures. A summary of the program is contained in the following text and accompanying chart.

Nearly \$24 million in matching Federal funds was given over the 5 year period to 38 States having Cooperative Agreements with the Fish and Wildlife Service. These dollars were spent on 88 federally listed species and 173 State listed or candidate species. The federal listed species included 17 mammals, 17 birds, 12 reptiles, 3 amphibians, 10 fish, 19 mollusks, and 10 arthropods (insects and crustaceans). The \$11.8 million invested for federally listed species was distributed as follows: 46 percent of the funds were for birds, 23 percent for mammals, 15 percent for reptiles and amphibians, 8 percent for fish, 4 percent for invertebrates (mollusks and insects), and 1 percent for plant surveys. The balance of the grant funds were utilized for State listed species, law enforcement, educational efforts, endangered species surveys, and program planning and administration.

In terms of funds allocated, the 10 top species were 1) peregrine falcon, 2) bald eagle, 3) Kirtland's warbler, 4) blunt-nosed leopard lizard, 5) West Indian manatee, 6) Indiana bat, 7) southern sea otter, 8) American alligator, 9) red-cockaded woodpecker, and 10) loggerhead turtle. The 88 federally listed species which were assisted by the Program are listed in the accompanying chart, along with the amount of funds allocated for them and the States carrying out the projects.

controlling international trade in other Felidae.

Following the inclusion of all Felidae species in Appendix II of CITES, all States allowing a harvest of bobcats have had to meet standards set up by the U.S. Scientific Authority in order to export bobcat pelts. These criteria require the States annually to furnish harvest figures (numbers taken, number of trappers, and prices paid for pelts), population estimates and trends, habitat assessment (trends), and management plans. Population estimates arrived at by the various States having bobcats in-

*Continued on page 8*

# ENDANGERED SPECIES GRANTS

## For Federal Listed Species

Species	Federal Funds (\$1,000's)	States	Species	Federal Funds (\$1,000's)	States
<b>MAMMALS</b>			<b>REPTILES (con.)</b>		
Indiana bat	443.1	AR, IA, MA, MD, MI, MO, NJ, NY, VA, WI	Loggerhead sea turtle	349.6	FL, GA, NC, SC
Gray bat	31.1	AR, MO	Leatherback sea turtle	19.0	VI
Ozark big-eared bat	11.7	AR, MO	Blunt-nosed leopard lizard	556.0	CA
Grizzly bear	60.0	CO, ID, WY	Island night lizard	25.1	CA
Black-footed ferret	124.2	CO, NB, NM, SD, UT, WY	Atlantic saltmarsh snake	7.1	FL
Southern sea otter	410.0	CA	San Francisco garter snake	55.9	CA
Gray wolf	127.8	ID, MI, MN, NM, NY, WI, WY	Eastern indigo snake	66.3	FL, GA
San Joaquin kit fox	188.8	CA	TOTAL	1,614.4	
Florida panther	97.7	FL	<b>AMPHIBIANS</b>		
Eastern cougar	66.6	AR, GA, NY, VA	Desert slender salamander	55.9	CA
Delmarva fox squirrel	137.4	DE, MD, VA	Santa Cruz long-toed salamander	55.9	CA
Utah prairie dog	23.3	UT	Pine barrens treefrog	23.5	FL, NJ, SC
Morro Bay kangaroo rat	226.0	CA	TOTAL	135.5	
Salt marsh harvest mouse	18.2	CA	<b>FISH</b>		
West Indian manatee	518.9	FL	Greenback cutthroat	108.1	CO
Columbian white-tailed deer	109.2	WA	Humpback chub	67.2	CO, UT, WY
Key deer	2.0	FL	Bonytail Chub	5.7	UT
TOTAL	2,596.0		Mohave chub	135.9	CA
<b>BIRDS</b>			Woundfin	7.5	UT
Aleutian Canada goose	49.6	CA	Colorado River squawfish	310.1	CA, CO, UT
Brown pelican	213.2	FL, NC, SC, VA, VI, CA	Owens pupfish	195.9	CA
California condor	185.1	CA	Tecopa pupfish	43.0	CA
Everglade kite	23.5	FL	Okaloosa darter	44.9	FL
Bald eagle	1,468.5	CA, CO, DE, FL, GA, ID, IL, KS, MA, MD, ME, MI, MN, MT, NB, NH, NJ, NM, NY, PA, RI, SC, TN, UT, VA, WA, WI	Unarmored three-spine stickleback	55.9	CA
Peregrine falcon	1,859.8	CA, CO, FL, GA, ID, MA, MD, MI, MT, NB, NJ, NM, NY, PA, RI, SC, SD, TN, UT, VA, WA	TOTAL	974.2	
San Clemente loggerhead shrike	18.2	CA	<b>INVERTEBRATES</b>		
Whooping crane	59.6	CO, FL, KS, NB	<b>Mollusks</b>		
California clapper rail	22.6	CA	Chittenango ovate amber snail	18.3	NY
Yuma clapper rail	16.1	CA	Iowa pleistocene snail	8.6	IA
Light-footed clapper rail	45.5	CA	Curtis pearly mussel	34.0	MO
California least tern	73.1	CA	Fresh water mussels (16 species)	141.0	TN, VA, WI
Red-cockaded woodpecker	369.4	AR, FL, GA, MD, NC, TN, VA	TOTAL	201.9	
Kirtland's warbler	874.6	FL, MI, WI	<b>Arthropods</b>		
Reed Warbler	32.5	GU	El Segundo blue butterfly	37.3	CA
San Clemente sage sparrow	18.6	CA	Lotis blue butterfly	37.3	CA
Dusky seaside sparrow	103.0	FL	Mission blue butterfly	37.3	CA
TOTAL	5,432.9		Smith's blue butterfly	37.3	CA
<b>REPTILES</b>			Palos Verdes blue butterfly	12.9	CA
American crocodile	34.2	FL	Lange's metalmark butterfly	37.3	CA
American alligator	422.9	AR, FL, GA, NC, SC	San Bruno elfin butterfly	37.3	CA
Plymouth red-bellied turtle	14.9	MA	Kern primrose sphinx moth	12.9	CA
Green sea turtle	43.2	FL	Valley elderberry longhorn beetle	12.9	CA
Hawksbill sea turtle	20.2	VI	Delta ground beetle	12.9	CA
			TOTAL	275.4	
			<b>PLANTS</b>		
			Plant Surveys	482.4	CA, CO, GA, OH, RI, SC, WA, WY
			TOTAL	11,713.3	

# BOBCAT

Continued from page 6

icate that currently there are between 725,000 and 1,020,000 bobcats with a mean of 871,000 in the Continental U.S.

Many States have management plans to annually harvest 10 to 20 percent of the bobcat population. Few exceed this percentage in actual take. In the past 5 years, the annual take of bobcats has averaged 91,000—or less than 10 percent of the calculated available population.

## Trade Status and Protection

While trappers take bobcats primarily for the fur trade, which is largely an export market, hunters shoot them for sport and do not regularly sell the pelts. (In addition to commercial and sport harvests, a number of animals are removed annually because of their threat to livestock and poultry.) Available data show that in many States, approximately 55 percent of the bobcats harvested are taken by trappers and 45 percent by hunters. Around 45 percent of the bobcat pelts harvested are exported annually. Therefore, it appears that, even without regulation by CITES, bobcats probably would continue to be harvested in many States at nearly the present level.

Even with the tremendous rise in fur prices, especially in 1978–79, the harvest of bobcats and the numbers of pelts exported did not rise significantly. This is probably because only prime pelts are utilized in trade and the number required by the European market is limited.

Before 1976, the bobcat was listed as a predator by many States which paid a bounty for their removal; few States had closed seasons or management plans for the species. Now, no State pays a bounty and all States manage the bobcat as a game animal, furbearer, or pro-

Category	ENDANGERED			THREATENED			SPECIES * TOTAL
	U.S. Only	U.S. & Foreign	Foreign Only	U.S. Only	U.S. & Foreign	Foreign Only	
Mammals	15	17	224	3	0	21	280
Birds	52	14	144	3	0	0	213
Reptiles	7	6	55	8	4	0	80
Amphibians	5	0	8	3	0	0	16
Fishes	29	4	11	12	0	0	56
Snails	3	0	1	5	0	0	9
Clams	23	0	2	0	0	0	25
Crustaceans	1	0	0	0	0	0	1
Insects	7	0	0	4	2	0	13
Plants	51	2	0	7	1	2	63
<b>TOTAL</b>	<b>193</b>	<b>43</b>	<b>445</b>	<b>45</b>	<b>7</b>	<b>23</b>	<b>756</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: 17 animals  
8 plants

Number of Critical Habitats listed: 50  
Number of Recovery Teams appointed: 68  
Number of Recovery Plans approved: 41  
Number of Cooperative Agreements signed with States:  
38 fish & wildlife  
10 plants

September 30, 1981

ected species. Currently (1980–81 season) 11 States list the bobcat as protected against taking and 37 States allow a regulated harvest. All States allowing a bobcat harvest have the population data and the management ability needed to regulate that harvest by means of seasons, bag limits, and mandatory tagging and reporting.

Since each State that allows a bobcat harvest has established a management program for the species, the Service finds there is no biological basis for establishing additional legal protection. Approximately 55 percent of the U.S. bobcat harvest is utilized within the U.S. and the elimination of CITES export requirements would have little impact on the current or future harvest of species.

The lynx is the only animal whose pelt might be mistaken for that of a bobcat. While somewhat similar in appearance to the Canadian lynx (*Lynx canadensis*), the bobcat differs from it and is sufficiently distinct so that there is no reasonable need to regulate bobcat exports in order to effectively control trade in lynx or other species of cats.

The Service will consider all information and comments received by November 13, 1981, in determining whether it should submit the proposal to the party nations. Correspondence concerning the September 14, 1981, notice should be sent to the Office of the Scientific Authority, U.S. Fish and Wildlife Service, Washington, D.C. 20240. (202/653-5948).

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# ENDANGERED SPECIES

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