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ENDANGERED SPECIES

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Endangered Species Program, Washington, D.C. 20240

Ten Foreign Mammals Listed as Endangered

Ten species of foreign mammals, among them the giant panda and a bat that may be the world's smallest mammal, have been listed by the Service as Endangered (F.R. 1/23/84). Habitat loss is the main cause for their decline, although some suffer from trade, hunting, and other human activities.

• **giant panda** *(Ailuropoda melanoleuca)*—Extensive habitat disruption very early in Chinese history eliminated the giant panda from most parts of its once vast range, restricting it to small, isolated populations in a few remote mountainous areas. Due to its lower numbers, the panda is now more vulnerable to natural threats such as earthquakes and the current cyclical die-back of the arrow bamboo, its primary food. Before the habitat became so limited, pandas were able to forage more widely for other food sources during such bamboo die-backs until the seeds produced new plants. Biologists estimate that fewer than 1,000 giant pandas remain in all of China.

• **Rodrigues flying fox fruit bat** *(Pteropus rodricensis)*—Flying fox fruit bats are the largest of all bats, with some species having a wingspread of over 5 feet. The Rodrigues flying fox fruit bat is found only on Rodrigues Island in the Indian Ocean, where less than 2 percent of its original habitat remains. It has become increasingly vulnerable to the

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Photo by Kojo Tanaka/World Wildlife Fund

giant panda

Regulations Proposed for Experimental Populations

Peter G. Poulos
Office of Endangered Species

A proposed rule to establish procedures for the designation of certain populations of listed species as "experimental populations" has been published by the Service (F.R. 1/9/84). This proposal would implement Section 10(j) of the Endangered Species Act, as amended in 1982.

An experimental population is defined as a reintroduced population (including offspring) of a listed species that is geographically isolated from the non-experimental populations of the same species during specific periods of time. Experimental populations can be classified in two categories, "essential" and "nonessential." An essential experimental population is one whose loss would appreciably reduce the likelihood of the survival of the species in the wild. All other experimental populations would be classified as nonessential.

Prior to the 1982 Amendments, the Service was authorized to reintroduce listed species into unoccupied portions of their historic range in order to aid in their recovery. However, legal prohibitions associated with listed species often resulted in local opposition to reintroductions. In an effort to encourage greater cooperation and therefore enhance the recovery capability of listed species, the concept of experimental populations was developed during the reauthorization of the Act in 1982. It was hoped that this designation would encourage greater State and local participation in recovery efforts by reducing the Section 7 (consultation) and Section 9 restrictions identified in the Act.

Section 9 strictly prohibits the taking of Endangered species. Under the

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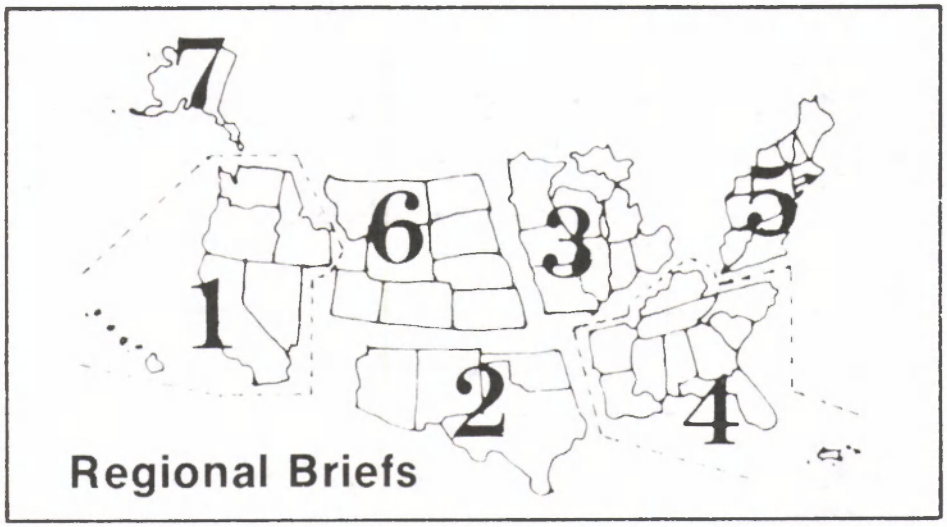

Endangered Species Program regional staffers have reported the following activities for the month of January:

Region 1—The Olympia, Washington, endangered species staff met with the Fort Lewis command to discuss their work on two plants that are Category 1 candidates for listing. They finished their first season surveying *Aster curtus* populations at Fort Lewis and presented a brief outline of work to begin this spring on *Astragalus columbianus* at the Yakima Firing Center.

. . .

The Olympia staff also hosted a one-day working team meeting on the Oregon silverspot butterfly (*Speyeria zerene hippolyta*). The meeting was to inform agencies and concerned individuals of recovery efforts for this butterfly over the past year. It was also an opportunity to receive input on ongoing recovery efforts. The meeting was attended by representatives from the U.S. Forest Service, The Nature Conservancy, Oregon Departments of Fish and Wildlife, Transportation, and Parks, and the local community.

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The Bureau of Land Management (BLM) office in Idaho has postponed land sales in one of its resource areas as a result of our recommendation to conduct botanical surveys on the proposed sites. Candidate species *Allium aaseae* (Aasea's onion) is the plant of concern since it occurs in a rather narrow band of habitat between Boise and Emmett, Idaho. The sites identified for sale were in the vicinity of the plant's range.

. . .

The Great Basin staff has directed much of its efforts toward development of the Environmental Assessment and Land Protection Plan for acquisition of Ash Meadows. It met with the BLM's Nevada State Director and Las Vegas District Manager to present what it thought was required to protect the Ash Meadows ecosystem. As a result of these discussions, the staff changed its acquisition approach recommendations from providing total protection for all wetlands in the area to acquiring only those lands that The Nature Conservancy purchases from the Preferred Equities Corporation. Other methods of ecosystem conservation will be pursued in the future for the remaining lands.

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The Great Basin staff, in cooperation with personnel from the Sacramento Endangered Species Office, has delineated the survey design, equipment needs, and manpower requirements to conduct an instream flow survey of the lower Truckee River. They plan to begin the second stage of the survey, which is to take flow and channel measurements, this spring. Depending upon available funds and the magnitude of the river's discharge, the survey will take from one to three years to complete. These data will be used to predict suitable habitat for cui-ui (*Chasmistes cujus*) and Lahontan cutthroat trout (*Salmo clarki henshawi*) under a wide range of stream discharges. The predictions are essential to a systematic evaluation of different water management options. The result will be more efficient use of Stam-

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Wyoming Toad Listed as Endangered

An extremely rare amphibian, the Wyoming toad *(Bufo hemiophrys baxteri)*, has been listed by the Service as Endangered (1/17/84). This subspecies once was abundant in the Laramie Basin, but it has suffered a precipitous decline in recent times. Although the direct cause for these losses has not been determined, habitat alteration and the use of various biocides have been implicated. The last two known specimens of the Wyoming toad died in captivity last year.

Dr. George T. Baxter of the University of Wyoming has visited known breeding sites of the Wyoming toad each summer for over 30 years. After very few toads were detected from 1975-1979, an intensive survey throughout the Laramie Basin was initiated. A reward offered for information on the toad resulted in one very small population being located on 40 acres of private land in Albany County, southeastern Wyoming. The population was estimated at only about 25 individuals. In 1983, biologists working for the State of Wyoming located only two toads at the site and took them into captivity for further study, but both toads later died.

One factor suspected in the decline of the Wyoming toad is drainage of the plains adjacent to the Little Laramie River due in part to an increasing demand for irrigation water. This may have resulted in the drying-out of former toad habitat before tadpole development was complete. The widespread use of certain biocides could be another threat. Atrazene, an herbicide widely available throughout the Laramie Basin, can kill *Bufo* eggs or tadpoles. Other herbicides, such as Tordon, are more commonly used, but the effects of these chemicals on amphibians are largely unknown. Herbicides are often used for "noxious weed" control along roadside ponds and field edges typically used by the Wyoming toad. The basinwide aerial application of Baytex (Fenthion) mixed with diesel fuel for mosquito control is another practice that may be highly toxic to bufonids, especially when there is little control on the drift of the spray. In fact, there is evidence that diesel fuel alone is toxic to amphibians. Predation by a rapidly increasing population of California gulls *(Larus californicus)*, as well as other animals, could be another factor in the toad's decline.

On January 27, 1983, the Service proposed a rule to list the Wyoming toad as an Endangered species (see BULLETIN Vol. VIII, No. 2). Comments on the proposal were received from the Wyoming Executive Department, Wyoming Game and Fish Department, Colorado Office of The Nature Conservancy, Mr. J.D. Stewart of the University of Kansas Museum of Natural History, and Dr. Baxter. All supported the listing.

As an Endangered species, the Wyoming toad is subject to all of the conservation measures authorized by the Endangered Species Act. Taking and interstate/international trafficking in this species is prohibited, except under permit. (Implementing regulations are found in 50 CFR 17.21-.23.) The toad's habitat also receives protection under Section 7 of the Act, which requires all Federal agencies to 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.

A formal designation of Critical Habitat for the Wyoming toad was not made at the time of listing because, with no population sites known, its Critical Habitat is not determinable. In addition, publication of the required Critical Habitat maps would make any surviving individuals more vulnerable to illegal collecting. Nevertheless, the Wyoming toad will benefit fully from the conservation requirements of Section 7.

Extinct Mussel Removed from List

In formal recognition of its extinction, the Sampson's pearly mussel *(Epioblasma [=Dysnomia] sampsoni)* has been removed from the U.S. List of Endangered and Threatened Wildlife (F.R. 1/9/84). This mussel had occurred in portions of the Wabash River in Illinois and Indiana and in the Ohio River near Cincinnati, but no specimens have been collected in more than 50 years despite repeated sampling. The mussel's gravel and sand bar habitat has been eliminated by siltation, which followed dam construction. Decreases in water quality from chemical pollution also may have played a part in the species' decline.

As part of a continuing review to determine if the legal status of listed species reflects their current biological status, the Service contracted with Dr. Arthur Clark of Ecosearch, Inc., to study *E. sampsoni*. Dr. Clark interviewed many commercial clammers and shell buyers, and surveyed the species' historical range, but was unable to find specimens or recent evidence of the species. Even a substantial reward offered for information on *E. sampsoni* failed to yield results. Dr. Clark concluded that *E. sampsoni* is extinct.

On July 15, 1983, the Service proposed removing *E. sampsoni* from the U.S. List of Endangered and Threatened Wildlife on the grounds that it has become extinct. Three comments dealing specifically with the proposed delisting were received; State conservation agencies of Illinois and Indiana agreed with the proposal, as did Ohio State University's Museum of Zoology. No evidence that the species still exists was received. The final rule removes *E. sampsoni* and its historical habitat from all protective provisions of the Endangered Species Act.

Populations

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experimental population designation, Endangered species would be treated as Threatened. This less restrictive designation can allow for more exceptions to the taking prohibitions by developing special regulations (50 CFR 17.84-.86) for the management of each individual population. The special rule would also include the specific geographical location of the experimental population and any special procedures to be used in its management.

Section 7(a)(2) prohibits Federal agencies from authorizing, funding, or carrying out any activity that would be likely to jeopardize the continued existence of an Endangered or Threatened species. This provision would continue to apply for essential experimental populations and all experimental populations (both essential and nonessential) located on National Wildlife Refuges or National Parks. It would no longer apply to other nonessential experimental populations. However, Federal agencies would still be asked to confer (a nonbinding process) with the Service and to treat nonessential experimental populations as if they were proposed species under Section 7(a)(4). Incidentally, it should be pointed out that before individuals intended to comprise the experimental population are removed from the "donor" population, it must be determined that their removal does not violate Section 7(a)(2) of the Act.

The Service is committed to the recovery of Endangered and Threatened species, and we recognize that, without State and local cooperation, the recovery potential of many listed organisms is severely limited. Reintroducing species into parts of their historical range is often an important part of a recovery plan. The experimental designation offers the opportunity to reintroduce more organisms by increasing management flexibility and involving the States, other agencies, and organizations.

All interested agencies, organizations, and individuals are invited to comment on the proposal. Comments are due to the Associate Director, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (Attn: Experimental Populations) by March 12, 1984.

Two Fishes Proposed for Listing

Two fish species were recently proposed by the Service for listing under the Endangered Species Act: the Ozark cavefish *(Amblyopsis rosae)* and the Modoc sucker *(Catostomus microps)*.

Ozark cavefish

This blind, white, cave-dwelling fish has been proposed by the Service for listing as a Threatened species (F.R. 1/31/84). It has apparently disappeared from more than 40 percent of its historical sites, primarily because of ground water pollution and (possibly) overcollecting. Currently, the Ozark cavefish is known to exist in only 13 caves in 6 counties of the Springfield Plateau of southwest Missouri, northwest Arkansas, and northeast Oklahoma.

A petition to list the Ozark cavefish was received in 1982 from Dr. A. V. Brown, of the University of Arkansas, based on his status survey work on the species in Missouri. Following the Service's acceptance of his petition, studies were conducted in Arkansas and Oklahoma. The findings indicated that the fish was declining in numbers as well as range. Contamination of the subsurface or ground water was probably the main cause of the decline in Greene County, Missouri, with toxic levels of nickel documented in one former cavefish site. Other cave systems are subject to contamination from highway, railroad, and pipeline spills; landfills and dump discharges; human and animal waste disposal; and the use of toxic chemicals.

Overcollection appears to have played a part in the species' decline. Its low numbers and reproductive abilities, confined habitat, and inability to elude captors make it very vulnerable to exploitation. There are documented instances of scientific collectors taking large numbers of the Ozark cavefish. Pet stores often display blind cavefish of various species for sale to aquarists, and offers to purchase cavefish have appeared in various publications. For these reasons, the Service decided that making a formal designation of Critical Habitat is not prudent at this time. Publicizing the caves where the Ozark cavefish survives could jeopardize this easily captured species. Nevertheless, if it is listed as a Threatened species, it will receive the full habitat protection authorized under the Endangered Species Act.

Comments on the listing proposal are invited from all interested agencies, organizations, and individuals, and are due to the Endangered Species Field Station, U.S. Fish and Wildlife Service, Jackson Mall Office Center, Suite 3185, 300 Woodrow Wilson Avenue, Jackson, Mississippi 39213 by April 2, 1984.

Modoc sucker

The Modoc sucker once was found in many small stream tributaries of the Pit River in semi-arid northeastern California (Lassen and Modoc Counties). This small fish (6-8 inches in length) has suffered a rapid decline, however, due to habitat alteration, hybridization with other species, and predation by exotic fishes. It has been proposed by the Service for listing as an Endangered species (F.R. 1/31/84).

A 1978 California Department of Fish and Game survey located the Modoc sucker in eight creeks, which is probably a reduction from its former range. Currently, genetically pure individuals survive in only three small streams in Modoc County characterized by low flows and large, shallow pools with cover, soft sediments, and clear water. Pure Modoc suckers were eliminated from other creeks by hybridization with the Sacramento sucker *(Catostomus occidentalis)* as well as general habitat degradation. Historically, natural instream barriers such as falls and steep gradients prevented the movement of spawning Sacramento suckers into Modoc sucker habitat; however, these natural barriers have been eliminated by siltation, channelization, water diversion, and other effects of intensive agriculture. For example, excessive cattle grazing has compacted and denuded several meadows, resulting in severe erosion and stream incision. Channelization not only allows access to competing species, but further degrades the habitat, to the harm of resident invertebrates and fishes. The vulnerability of the Modoc sucker is compounded by predation from brown trout *(Salmo trutta)*, which have been introduced in parts of the habitat. Studies have shown that the Modoc sucker, in particular, fares poorly in environments that have been degraded by physical alteration of the habitat or the presence of exotic species.

The decline of the Modoc sucker has caused widespread concern in the scientific community. Both the Fish and Wildlife Service and the State of California have been interested in the status of this fish since at least 1966, and California already lists it under State law as an endangered species. The Modoc sucker is also considered endangered by the American Fisheries Society. It was subsequently included in the Service's December 30, 1982, Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species (F.R. 12/30/82). In April 1983, the Service was petitioned to list this species by the Desert Fishes Council.

Included in the Service's recent proposal to list the Modoc sucker under Federal law as an Endangered species was a proposed designation of Critical Habitat. This area comprises nearly all known habitat of the species along five creeks in Modoc County, a total of about 12 miles of stream channel. A 50-foot riparian buffer zone on each side was included in the proposal to protect the stream channel and water quality from potentially harmful activities on adjacent lands. A Critical Habitat designation would not necessarily restrict any type of private activity; rather, it serves as a tool for Federal planners who must take into account any impacts of federally involved actions on listed species.

Comments on the proposal to list the Modoc sucker are invited from all interested agencies, organizations, and individuals, and are due to Mr. Gail C. Kobetich, Endangered Species Office, U.S. Fish and Wildlife Service, 1230 N Street, 14th Floor, Sacramento, California 95814 by April 2, 1984.

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If both listing proposals are approved, the Ozark cavefish and the Modoc sucker will benefit from the conservation measures authorized by the Endangered Species Act. Recovery plans will be developed to outline the steps necessary for returning these species to a secure, self-sustaining status. Included in the regulations protecting listed species are prohibitions on taking, possessing, transporting, and engaging in interstate or international trafficking in these organisms. They will receive further protection under Section 7 of the Act, which requires all Federal agencies to ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of these species by directly affecting them or adversely modifying their habitat.

Evergreen Tree Listed as Endangered

An evergreen tree endemic to the Apalachicola River area of Florida and Georgia, the Florida torreya *(Torreya taxifolia)*, has been listed by the Service as Endangered (FR 1/23/84). The primary threat to this species is a fungal disease, although some of its habitat is vulnerable.

The Florida torreya is a conifer with whorled branches and stiff, sharp-pointed, needle-like leaves. In the past, healthy trees reached heights of up to 18 meters. Since 1962, however, natural populations have been drastically reduced or eliminated by the fungus, which severely defoliates the trees by killing the needles and stems. All that remains of the species in its natural hab-

Photo by E. LaVerne Smith

Disease-free specimens of the Florida torreya, like this one at the National Arboretum, can only be found today in cultivation.

itat are root sprouts that reach less than 3 meters high and die before achieving seed-bearing size. Some uninfected, cultivated specimens exist in botanical gardens, and they can provide seeds for further recovery efforts once the disease problem is solved.

In 1981, the Georgia population of the Florida torreya contained 27 individuals, all on public land administered by the U.S. Army Corps of Engineers (COE) on the edge of Lake Seminole. The COE resource manager for this area is sensitive to the need for conservation of the trees, and continued protection of the species' habitat should not conflict with current recreational use of the lake. In Florida, Torreya State Park was established for the protection of the tree, other associated rare plants, and the unique and diverse Apalachicola River bluff ecosystem. A city park in Chattahoochee also provides some protected habitat. The majority of the torreya populations in Florida are on private lands, however, where there has been no formal habitat protection. In the past, some sites have been lost to construction of housing developments, and damming of ravine habitat for recreational impoundments is a potential threat.

A proposal to list the Florida torreya as Endangered was published in the April 7, 1983 *Federal Register* (see the BULLETIN, Vol. VIII, No. 5). In response, eight comments on the proposal were received, including letters from a number of State and local agencies. All supported with the listing.

Under the Endangered Species Act of 1973, as amended, the Florida torreya now benefits from Federal measures that complement the protection already given the plant by both Florida and Georgia. Interstate and international trafficking in this species is prohibited except under permit. (The implementing regulations are found in 50 CFR 17.61-.63.) It is also unlawful to remove and reduce to possession Endangered plants from lands under Federal jurisdiction. In the case of the Florida torreya, this provision applies to the trees on COE property in Decatur County, Georgia.

A formal designation of Critical Habitat was not included in the listing rule because publication of the required maps and description would increase the threat from collectors and because disease-free habitat is not presently identifiable. Nevertheless, the habitat of the Florida torreya receives the full protection authorized under Section 7 of the Act. This section requires all Federal agencies (including the COE) to 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 plants or by adversely modifying their habitat.

Another benefit of the listing is that it authorizes a recovery effort for the torreya. Treatment of the diseased trees with fungicides may be possible. The healthy trees that still exist in botanical gardens and arboreta can provide seeds and other material for future transplanting into the natural habitat if the fungus can be controlled. Breeding disease resistant strains of the Florida torreya is another recovery possibility. However, extensive research is needed to investigate the feasibility of these approaches.

Petition Findings Announced

Initial findings have been published (F.R. 1/16/84) on the substantiality of information for certain petitions received from September 15, 1983, through November 30, 1983. Two petitions were submitted to list three species for protection under the Endangered Species Act of 1973: the orangefin madtom *(Noturus gilberti)*, Roanoke logperch *(Percina rex)*, and Dolloff Cave spider *(Meta dolloff)*. The Service has judged that the petitions contain sufficient information to begin status reviews on these species.

Section 4(b)(3)(A) of the Act, as amended in 1982, requires that the Service make a finding whether a petition to list, reclassify, or delist a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. To the maximum extent practicable, this finding is to be made within 90 days of receipt of the petition, and the finding promptly published in the *Federal Register.* When a positive finding is made, the Service is required to promptly begin a review of the status of the species, and to decide within 12 months of petition receipt whether the requested action is warranted in accordance with Section 4(b)(3)(D)(ii) of the Act, as amended.

Both fishes were included in a petition received October 6, 1983, from Mr. Noel Burkhead, but the required status review began earlier with the December 30, 1982, notice of review on vertebrate species. The orangefin madtom is currently known from the Roanoke River drainage in Virginia and North Carolina and from a tributary of the James River in Virginia. The Roanoke logperch is known only from scattered sites in the Roanoke River drainage, including the Dan and Chowan Rivers, within Virginia. For the Dolloff Cave spider, the required status review began with the January 16, 1984, *Federal Register* notice. This spider, petitioned by Mr. Thomas S. Briggs, is known from only three neighboring caves in Santa Cruz County, California.

The Service is soliciting data on these three species now under review for listing. Especially sought is information on taxonomy, distribution, threats, and possible Critical Habitat. Comments may be submitted until further notice, and all will be considered in any future actions on these taxa. Address comments to the Associate Director - Federal Assistance, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

Ten Mammals

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destruction of its food sources, the effects of cyclones, and the local human population, which considers the large bats a delicacy. A 1976 estimate of the bat population was 120-125, and it appeared to be declining further.

- **Bulmer's flying fox fruit bat** *(Aproteles bulmeri)*—First known from fossil remains in central Papua New Guinea dating back 9,000-12,000 years, this large bat was thought to be extinct until 1975, when a single individual was killed by a native hunter at a mountain cave. Two years later, an intensive survey for the bat found that a local hunter had driven away nearly the entire colony. This bat is a prized food item in Papua New Guinea, but a few might have eluded hunters in remote, sparsely inhabited parts of the large island.
- **Singapore roundleaf horseshoe bat** *(Hipposideros ridleyi)*—Horseshoe bats are characterized by their peculiar horseshoe-shaped nose leaf. Forty-five species of horseshoe bats are widely distributed throughout Africa, India, and southeast Asia. The already limited low-

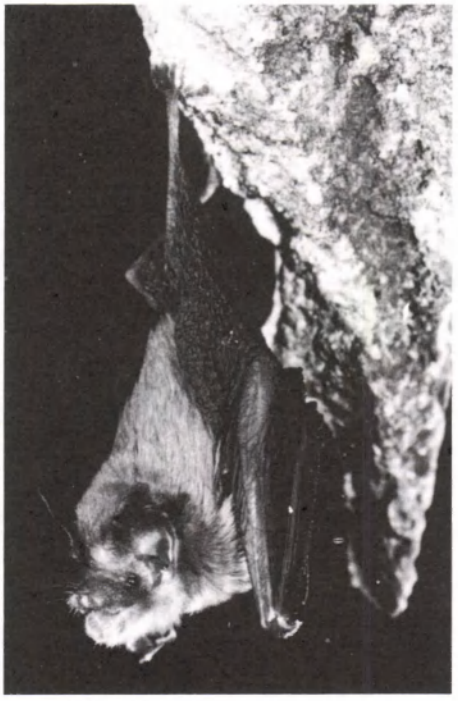

Photo by Merlin D. Tuttle© Courtesy of Bat Conservation International

bumblebee bat

land peat forest habitat of the Singapore roundleaf horseshoe bat has suffered heavy logging in recent years. By 1975, the total population of this Malayan species was estimated at fewer than 50 individuals.

• **bumblebee bat** *(Craseonycteris thonglongyai)*—This bat may be the world's smallest mammal. Its body is slightly more than one inch in length, and its weight is only about 2 grams. Vast areas of teak-bamboo forests, where the bumblebee bat forages for insects, have been lost to logging and land clearing. During extensive surveys in 1982 by the Thailand government, the bats were found in only three caves, and the total known population was 160 individuals.

• **Preuss's red colobus** *(Colobus badius preusii)*—This primate is another mammal whose habitat has been devastated by tropical deforestation. Today, its range has been reduced to a strip of remnant lowland evergreen forest along the Camaroon side of the Camaroon-Nigeria border. In addition to logging, which fragments the forest canopy, these animals are also jeopardized by hunters who take them for food. It is estimated that fewer than 8,000 of the Preuss's red colobus survive.

• **African wild dog** *(Lycaon pictus)*—Widespread persecution as a hated predator has decimated this canid over most of its sub-Saharan range. In 1980, fewer than 7,000 of the dogs were thought to remain in all of Africa. These wild dogs live in packs comprised of males, with only a single female generally being present in any one pack. The female drives her daughters out of the pack when they reach adulthood, and they wander about until they join a male pack which has lost its resident female. Male pups remain in the pack when they become adults. This social system seems to be unique among mammals. In most other social mammals, females comprise the stable element in a herd or pack.

• **buff-headed marmoset** *(Callithrix flaviceps)*—This small tree-dwelling primate was historically distributed throughout the mountains of southeastern Brazil, but destruction of its forest habitat, along with exploitation for biomedical research and the pet trade, extirpated all but a few small, scattered populations. Currently, tropical deforestation is the main threat.

• **Pakistan sand cat** *(Felis margarita scheffeli)*—Relentless exploitation for the fur and live animal trade from 1968-1972 drove this already-rare species to the brink of extinction. A few are thought to remain in northern Pakistani Baluchistan, but since 1972 they have been extremely difficult to find in the wild. There are no known breeding groups in captivity.

• **Vancouver Island marmot** *(Marmota vancouverensis)*—Between 100 and 150 marmots of this species remain in four general areas on Vancouver Island, British Columbia, Canada. Its limited habitat—alpine to subalpine areas characterized by steep slopes, talus debris, and open meadow—has been reduced by construction of ski developments. Logging and additional development proposed for the island could eliminate more habitat. According to the listing rule, "any further reduction must be viewed with alarm."

Photo by A. F. Coimbra-Filho/World Wildlife Fund

buff-headed marmoset

These ten mammals were among the twelve proposed for listing as Endangered on March 1, 1983 (see BULLETIN Vol. VIII No. 4). Comments on the proposal were received from a number of scientific organizations, individuals, a zoo, and wildlife officials of nine countries. Most either gave support to the proposed listing or expressed no opposition. An exception was the Government of Australia, which provided data that the eleventh mammal, the ghost bat *(Macroderma gigas)*, is not as rare as indicated in the proposal and is not in need of listing. The twelfth mammal is the Indus River dolphin *(Platanista indi)*. The National Marine Fisheries Service (NMFS) pointed out that because this mammal is a cetacean, it is legally under NMFS jurisdiction. All data on the threats to this freshwater dolphin have

Photo courtesy of World Wildlife Fund - Canada

Vancouver Island marmot

therefore been turned over to NMFS, which will determine whether or not to proceed with a listing.

As Endangered species, the ten newly listed foreign mammals will receive the protection authorized under the Endangered Species Act of 1973, as amended. All trade prohibitions in Section 9(a)(2) of the Act will apply. These prohibitions, in part, make it illegal for any person subject to U.S. jurisdiction to possess, transport, or engage in interstate or international trafficking in these species. Permits to carry out otherwise prohibited activities involving Endangered species are available under 50 CFR 17.22 and 17.23 for approved scientific or conservation purposes. The Service does not anticipate that listing these 10 mammals as Endangered will hinder or interfere with legitimate conservation activities, such as the current scientific studies that are being conducted on the giant panda. In addition to the protective measures described above, the 10 mammals may benefit from U.S. expertise that could be made available to the resident countries in order to assist in the development of conservation or management programs.

Regional Briefs

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pede Reservoir for fish resources, improved ability to quantify the impact of the Bureau of Reclamation's new Operation Criteria and Regulation for the Newlands Project, and a fish habitat guide to direct the rehabilitation and stabilization of the river channel.

* * *

Cooperative FWS/State patrols at Pyramid Lake, Nevada, resulted in 15 apprehensions of subjects illegally taking the Threatened Lahontan cutthroat trout.

* * *

FWS agents in Santa Maria, California, assisted in apprehending a subject accused of mutilating Endangered brown pelicans (*Pelicanus occidentalis*) in Monterey, California. The subject was tried and convicted on six felony counts of State law violations.

* * *

A Priest River, Idaho, man who had been indicted last October by a Federal grand jury on charges of killing and possessing a Threatened grizzly bear (*Ursus arctos horribilis*) pled guilty in January to the possession charge. (Under a plea bargaining agreement, the other charge was dropped.) The U.S. magistrate sentenced him to a year in jail and a $10,000 fine, but suspended the jail term and reduced the fine to $1,500 after receiving a presentencing report. The guilty man was also placed on federally supervised probation for 3 years, during which time he will not be allowed to hunt, and he must volunteer 150 hours of community service.

The grizzly had been shot with a bow-and-arrow by the guilty hunter, who was perched out of reach in a tree stand over a bait of rotten meat. This bear was taken in the Selkirk Mountains, where only about one-half dozen grizzlies are thought to remain.

Region 2—One of the 30 whooping cranes (*Grus americana*) in the Gray's Lake/Bosque del Apache flock has died of lead poisoning. The bird, a 1½ year old male, was first observed acting strangely on January 5, 1984, at Bosque del Apache National Wildlife Refuge (NWR), New Mexico. By January 20, the bird was in obvious distress and a decision was made to capture it. Service biologists Dr. Rod Drewein and Mike Hawkes netted the crane after dark on January 21. At capture, the bird weighed 9 pounds; a healthy bird at that age would weigh about 15 pounds.

The bird was moved to the excellent facilities at the Rio Grande Zoo in Albuquerque, where x-rays located three lead shotgun pellets lodged in the upper leg. In spite of special care and treatment, the crane died on January 23. An autopsy found 7.5 grams of lead in the gizzard and 5.1 parts per million of lead in the blood, indicating that the cause of death was from ingestion of toxic lead shot rather than the pellets in the leg.

Where the lead shot was ingested and who shot the bird are unknown. Waterfowl and dove hunting are widespread throughout most of the Gray's Lake/Bosque del Apache whooping crane migratory route. Snow goose (*Chen caerulescens*) hunting is allowed at Bosque del Apache NWR, but only nontoxic steel shot is approved for use there. This is the first whooping crane known to have died of ingesting lead shot, although waterfowl often take in shot while picking up grit for their gizzard.

The other whooping and sandhill cranes (*Grus canadensis*) at Bosque del Apache NWR are being carefully watched for the characteristic signs of lead poisoning. As of January 27, no additional sick birds had been noted.

* * *

A meeting of the Lower Colorado River Fish Group was held in Blythe, California, on January 24, 1984. Reintroduction of razorback suckers (*Xyrauchen texanus*), Colorado squawfish (*Ptychocheilus lucius*), woundfin (*Plagopterus argentissimus*), bonytail chub (*Gila elegans*), and desert pupfish (*Cyprinodon macularius*) was discussed, along with the recently published draft regulations for experimental populations (see story in this issue). The unlisted sucker and pupfish are already being stocked, in Arizona waters, but reintroduction of the Endangered squawfish, woundfin, and chub will have to await final approval of the experimental population packages submitted for them last July.

Region 3—The Region 3 Endangered Species Staff met with the National Park Service (NPS) and State of Wisconsin on the second stage of the bald eagle (*Haliaeetus leucocephalus*) study at the Apostle Islands in Lake Superior. The purpose of the NPS-funded study is to determine the causes for the low productivity of eagles in the area.

* * *

The State of Minnesota hosted another meeting, in which the Region 3 staff also participated, to plan next year's bald eagle activities and discuss last year's results.

Region 5—A critical phase in the Virginia round-leaf birch (*Betula uber*) recovery program will be initiated early this spring. Intensive and cooperative efforts among the U.S. Forest Service (USFS), Virginia Polytechnic Institute and State University (VPI&SU), and the Fish and Wildlife Service are underway in the hopes of establishing additional populations of this Endangered tree on USFS lands. Approximately 375 2-year old seedlings will be "out-planted" in early April at five selected sites in Jefferson National Forest. The seedlings have been propagated and generously cared for by private contributions from staff of VPI&SU and the Reynolds Research Center in Critz, Virginia. Although there has been a continued decline in the single remaining natural population, biologists involved in the recovery effort are cautiously optimistic about the prospects for future success.

* * *

Biologists from New York and the Northeastern States met on January 12 in the Service's Region 5 Office to exchange information and discuss the current status of the small whorled pogonia (*Isotria medeoloides*). Based on innovative and improved field survey techniques developed by The Nature Conservancy, several new populations of this Endangered orchid have recently been found. Thirty-one sites are now known to exist in the eastern U.S., 18 of them in New England. Five of the populations consist of over 200 plants each. An ongoing monitoring effort, species biology research, additional field surveys, and recovery plan development also were discussed at the meeting. Persons interested in a summary of the meeting can contact Dick Dyer, Regional Botanist, at 617/965-5100, extension 316.

The running buffalo clover (*Trifolium stoloniferum*) has been rediscovered in West Virginia. This obscure plant historically occurred from Kansas to West Virginia in the Ohio and Missouri River Basins, but the last collection in West Virginia was in 1940. The species was considered possibly extinct in the eight States in which it once occurred until it was found in West Virginia last fall. Only a very small colony of plants was located, but botanists are hopeful that additional field work will result in the discovery of more sites.

Region 6—In October 1983, more than 22,000 greenback cutthroat trout (*Salmo clarki stomias*) fry were transported from the Federal fish hatchery in Bozeman, Montana, for release in Colorado. This is the third year in a row that these releases have taken place. The releases have been a cooperative effort among the U.S. Fish and Wildlife Service, U.S. Forest Service, National Park Service, and Colorado Division of Wildlife for the reestablishment of the Threatened greenback cutthroat trout. To date, over 66,500 have been returned to Colorado waters.

The Region 6 Office was notified in December that a young, male black-footed ferret (*Mustela nigripes*) was picked up on the edge of a road 35 miles east of Cody, Wyoming, on June 13, 1983, by a Canadian couple. Such a find might have indicated the existence of another population of this very rare species. Unfortunately, however, the animal was subsequently identified as a European polecat (*Mustela putorius*) through the cooperative efforts of the U.S. Fish and Wildlife Service and the British Columbia Ministry of Environment.

Region 7—Two of the American peregrine falcons (*Falco peregrinus anatum*) banded as nestlings along the Yukon River in Alaska in 1983 were captured at Padre Island, Texas, last fall. These are the only encounters so far of the 237 young peregrines banded in Alaska in 1983, but they bring to 26 the total number encountered (trapped or found) since the major banding effort began in Alaska in 1979. A total of 891 young peregrines have been banded during the first 5 years of the program. Banded bird encounters have ranged from Alaska to Brazil, with Padre Island alone accounting for nine. Eleven of the encounters have been at nesting sites in interior Alaska.

The Aleutian Canada Goose Recovery Team held its annual meeting in Arcata, California, during November 29-December 1, 1983. Representatives of the States of Oregon, California, and Alaska attended, as well as U.S. Forest Service and U.S. Fish and Wildlife Service personnel. The recovery effort continues to yield encouraging results. Last fall, a peak count of 3,800 Aleutian Canada geese (*Branta canadensis leucopareia*) was made at Crescent City and near Colusa, California, in their California wintering grounds. This is a 9 percent increase over the previous year's high count, and approaches a 5-fold increase in population (up from 790) since hunting closures were first put into effect in 1975.

Dr. Paul Springer reports that 52 of 108 geese transplanted from Buldir to Agattu in the Aleutian Islands last summer have successfully migrated and been observed in California. There is hope that the hatching-year birds among the transplants will return to Agattu to breed, thus establishing a new breeding population.

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	15	18 33	233	3	0 3	22	291	19
Birds	51	14 65	144	3	0 3	0	212	42
Reptiles	8	6 14	60	8	4 12	12	98	6
Amphibians	5	0 5	8	3	0 3	0	16	4
Fishes	30	3 33	11	12	1 13	0	57	23
Snails	3	0	1	5	0	0	9	5
Clams	22	0	2	0	0	0	24	1
Crustaceans	3	0	0	1	0	0	4	1
Insects	7	0	0	4	2	0	13	3
Plants	57	2	0	10	1	2	72	10
TOTAL	200	43	449	49	8	36	796	124**

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

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

Number of Recovery Plans approved: 110
Number of species currently proposed for listing: 25 animals
25 plants

Number of Species with Critical Habitats determined: 59
Number of Cooperative Agreements singed with States: 38 fish & wildlife
12 plants

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ENDANGERED SPECIES

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