



ENDANGERED SPECIES TECHNICAL BULLETIN

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

Critical Habitat Defined for Last Miss. Sandhills

The Service has issued a final rulemaking that determines Critical Habitat for the estimated 40 remaining Mississippi sandhill cranes (*Grus canadensis pulla*) (F.R. 8/8/77).

The Critical Habitat consists of nearly 26,000 acres of land and water as well as airspace in Jackson County, Mississippi, which include all known breeding, summer feeding, and roosting sites of the crane, and flight paths connecting the more important sites.

Background

In its proposed rulemaking (F.R. 9/3/75), the Service identified as possible Critical Habitat a relatively large area lying between the West Pascagoula River and the Jackson-Harrison County line that corresponds roughly with the overall range of the subspecies. This same area had already been identified as Critical Habitat in an emergency rulemaking issued earlier (F.R. 6/30/75).

As delineated in the final rulemaking, however, the crane's Critical Habitat is considerably smaller than originally proposed. This reduction was based on a more thorough assessment of available biological data, particularly that provided by the Mississippi Sandhill Crane Recovery Team.

The Service determined that much of the land within the area first proposed is not used to any significant extent by the crane. As a result, the final ruling excludes certain winter feeding sites scattered over the farmlands to the north of the designated areas. Actual use of these sites by the birds varies according to the crops planted and other factors.

Although these sites are outside the Critical Habitat area, the Service points out that section 7 of the Endangered Species Act requires all Federal agencies to make sure that their actions do not jeopardize the continued existence (continued on page 2)

Strict Hunting Safeguards Ordered To Protect Mexican Duck, Whoopers

The Fish and Wildlife Service has closed the general waterfowl season to duck hunting in parts of twelve counties of Arizona, New Mexico, and Texas this fall to protect the Endangered U.S. population of the Mexican duck (*Anas diazi*).

In addition, the Service has imposed strict controls over the hunting of snow geese (*Chen hyperborea*) at the Bosque del Apache National Wildlife Refuge in New Mexico to prevent the disturbance of an experimental flock of Endangered whooping cranes (*Grus americana*) that winters at the refuge.

The two actions stem, in part, from an examination by the Service of the possible adverse effects of the 1977-78 migratory game bird hunting regulations on the Critical Habitat of seven Endangered bird species. No adverse effects were anticipated for the other five in the review: the Aleutian Canada goose (*Branta canadensis leucopareia*), Florida Everglade kite (*Rostrhamus sociabilis plumbeus*), southern bald eagle (*Haliaeetus leucocephalus leucocephalus*), American peregrine falcon (*Falco peregrinus anatum*), and the Arctic peregrine falcon (*Falco peregrinus tundrius*).

Hybridized With Mallard

Hybridized With Mallard

In closing the duck hunting season, the Service noted that biologists estimate there are only 100 to 200 "pure" Mexican ducks in the southwestern United States, although the duck is still fairly common in Mexico, where there are an estimated 15,000 to 50,000. Protection of the U.S. population is complicated by the Mexican's duck's close similarity of appearance to the female mallard duck (*Anas platyrhynchos*), in addition to its extensive hybridization with the mallard. It is estimated there are now 1,000 Mexican-like ducks in the southwestern U.S. The hybrids are extremely difficult to distinguish from "pure" Mexican ducks and female mallards.

The identification problem, particular-
(continued on page 2)



New Mexico Dept. of Game and Fish photo



Photo by Frank Martin, Shiawassee Refuge, Mich.

Close resemblance of Mexican duck (at left) to female mallard (right photo) has brought about hunting restrictions

of Endangered species, and that this requirement applies to the cranes in terms of their winter feeding sites.

The Service noted that most of the people who commented on the original proposal appeared to be confused regarding the meaning and implications of a Critical Habitat designation. Some of them expressed concern that such a designation would automatically curtail all human activities and development within the area. Others seemed to believe that section 7 provisions applied to all parties, not just Federal agencies. Still others mistakenly thought that the Service could arbitrarily determine or change Critical Habitat boundaries on the basis of nonbiological considerations. (For an explanation of the Critical Habitat concept, see "Critical Habitat: What it is—and is Not," by Endangered Species Program Manager Keith M. Schreiner, in the August 1976 issue of the BULLETIN.)

Interchange Issue

The Mississippi sandhill crane was the subject of the first case involving an Endangered species to reach the U.S. Supreme Court (See Dec. 1976-Jan. 1977 BULLETIN). In upholding the Fifth U.S. Circuit Court of Appeals decision to

halt construction of an interchange on Interstate Highway 10, the high court acted to protect the primary range of the remaining cranes.

Service biologists point out that the interchange itself probably would not have adversely affected the cranes. However, commercial and residential development normally associated with Interstate 10 interchanges would have presented a continuing threat to the survival of this extremely rare subspecies.

Some 1,960 acres in the area of the proposed interchange have been recommended by Mississippi's Governor Clifford Finch for addition to the Mississippi Sandhill Crane National Wildlife Refuge to ensure protection of the land from developers' interests.

A decision is still pending between the State of Mississippi and the Secretary of Transportation as to final disposition of the interchange. However, should the State and the Secretary decide to proceed with construction of the originally planned interchange, and should the Secretary of the Interior concur with the final proposed location within the Critical Habitat area, the 1,960 acres identified would have to be acquired prior to construction. □

ly in the half hour before sunrise, was cited in a suit filed by the Defenders of Wildlife last year against the Fish and Wildlife Service, alleging that these hunting hours prevented the protection of Endangered and Threatened species. The United States District Court for the District of Columbia, in a decision issued March 11, 1977, advised that in the future the Service must be able to show that it was taking proper action to conserve protected species.

Areas affected by closure of duck hunting this fall include all or parts of Cochise County, Arizona; Catron, Dona Ana, Hidalgo, and Luna Counties in New Mexico; and Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, Presidio, and Reeves Counties in Texas.

Whooper Protection

During the 16-day snow goose hunting season starting Nov. 12 (or possibly Nov. 19), the Service will institute a number of precautions—including a radio link between hunters in blinds and refuge observers monitoring the movements of whoopers—to prevent the cranes from being jeopardized or forced off the Bosque del Apache Refuge. The radio link will be used to advise hunters of the proximity of whoopers flying near blinds so that shooting can cease while the cranes pass over the area.

All hunters will be required to undergo a training course which will emphasize the differences between the snow goose and the whooping crane.

Approximately eight whooping cranes are expected to be wintering at or near the refuge. All have been raised by sandhill crane foster parents over the past three summers. They were hatched from eggs transplanted from the flock of whoopers which nests at Wood Buffalo National Park in the Northwest Territories, Canada, and from captives raised at the Service's Patuxent Wildlife Research Center to the nests of the sandhill cranes at Gray's Lake, Idaho, as part of an experiment to create a second flock of wild, reproducing whoopers. The experiment is being conducted jointly by the U.S. Fish and Wildlife Service and the Canadian Wildlife Service. □

New Publication

Endangered Species, A Bibliography containing more than 1,100 entries on the world's rare, endangered, and recently extinct wildlife and plants has been published by the Oklahoma Cooperative Wildlife Research Unit. It is available for \$5 per copy from: Environmental Institute, 203 Whitehurst Hall, Oklahoma State University, Stillwater, OK 74074.

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ENDANGERED SPECIES SCIENTIFIC AUTHORITY

Notices—August 1977

The Endangered Species Scientific Authority (ESSA) is responsible for the biological review of applications to export or import species listed in Appendix I, and to export species listed in Appendix II, of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Notices of ESSA's findings and other actions are published in the Federal Register. Summaries of these notices are reported in the BULLETIN by month of publication.

Export Restrictions Placed On Bobcat, Lynx, Otter, Ginseng

The Endangered Species Scientific Authority (ESSA) has issued a preliminary finding disapproving of the international export of bobcat (*Lynx rufus*) and lynx (*Lynx canadensis*) pelts from the United States taken on or after August 30, 1977.

In addition, ESSA announced it would approve only limited international export of river otter (*Lutra canadensis*) pelts from 17 States, and would allow export of the American ginseng (*Panax quinquefolius*) roots that have been collected only in Michigan (F.R. 8/30/77).

The three animal and one plant species are all listed under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Appendix II species are considered not now threatened with extinction but may become so unless their trade is strictly regulated.

Lack of Data Cited

In issuing its preliminary findings, ESSA noted that a state-by-state analysis revealed that information on the actual biological status of the four species was far from adequate to support an opinion allowing continued unrestricted export. It was primarily a lack of data rather than positive evidence of declining populations that prompted the negative findings, the agency said. The notice added:

"The ESSA strongly encourages the States to establish and enforce biologically justifiable limits on the harvest of these species, and to require tagging of every pelt, and issue documentation on all American ginseng taken in the State. Although in certain instances the ESSA may accept less than this for international export in 1977-78, it is unlikely that less will be accepted in 1978-79. Implementation of these requirements is a

vital component of the Federal-State cooperation essential to the success of the convention."

Ginseng Popularity

Approximately 65,000 pounds of wild ginseng roots were exported from the U.S. in 1975-76, primarily to the Orient, where they are used as an aphrodisiac and a general medicine. Although the plant is cultivated, wild ginseng fetches about double the price, or around \$100 per pound wholesale.

The roots, which are brewed into a tea, also have gained popularity among U.S. health food faddists. As a result, the plant has been extremely depleted by overharvest in many States. ESSA said export of ginseng roots was approved only for Michigan because the State had recently instituted a regulatory program to prevent overexploitation. Such conservation measures are lacking in other States.

Comments are invited on the preliminary finding and are due by October 31, 1977. They should be addressed to: Executive Director, Endangered Species

12 Dealers Indicted for Illegal Trade in Reptiles

A Philadelphia grand jury indicted 12 wild animal dealers August 4 on charges of supplying eight American zoos with a variety of reptiles illegally imported from abroad in 1973 and 1974.

The indictments charge the defendants with violations of the Lacey Act, certain sections of the Endangered Species Act, and U.S. Customs laws. The charges stem from the discovery in May 1975 of a cache of 75 Australian and New Guinean lizards, tortoises, and snakes buried near Medford, N.J.

A subsequent investigation uncovered a worldwide network of illegal trafficking in reptiles, including many listed on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora and one Nile crocodile listed under the Endangered Species Act.

Zoos alleged to have received the illegally imported specimens are: the National Zoological Park, Washington, D.C.; the Philadelphia Zoo; St. Louis Zoo; the Overton Park Zoo in Memphis, Tenn.; Sacramento Zoo; Knoxville Zoo; Dallas Zoo; and the Seneca Park Zoo in Rochester, N.Y.

Scientific Authority, 18th and C Streets, N.W., Washington, D.C. 20240. ESSA intends to publish a revised finding after review of the comments.

High Prices For Pelts

The ESSA survey indicated that the demand for bobcat pelts is growing and the total annual harvest in the U.S. now exceeds 100,000 with most going into the export market. In recent years, the wholesale price of pelts has skyrocketed and now stands at \$90-\$100 per pelt.

Precise data was lacking on the lynx population, which is subject to cyclic changes in response to the density of its major prey, the snowshoe hare (*Lepus americanus*). ESSA said most lynx pelts are exported from Alaska, where approximately 2,000 were harvested in 1976-77. The price per pelt averaged \$350.

While little population data was available on the river otter, ESSA's survey found that the take has been fairly consistent in some States over recent years and that the animal appears to be more closely managed than the cats. On this basis, ESSA is approving the export of limited numbers of otter pelts from Alaska, Delaware, Georgia, Louisiana, Maine, Maryland, Massachusetts, Michigan, Montana, New Hampshire, New York, North Carolina, Oregon, South Carolina, Virginia, Washington, and Wisconsin. □

Appendix I Import Policy

The Endangered Species Scientific Authority (ESSA) has announced its import policy for species listed under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (F.R. 8/22/77).

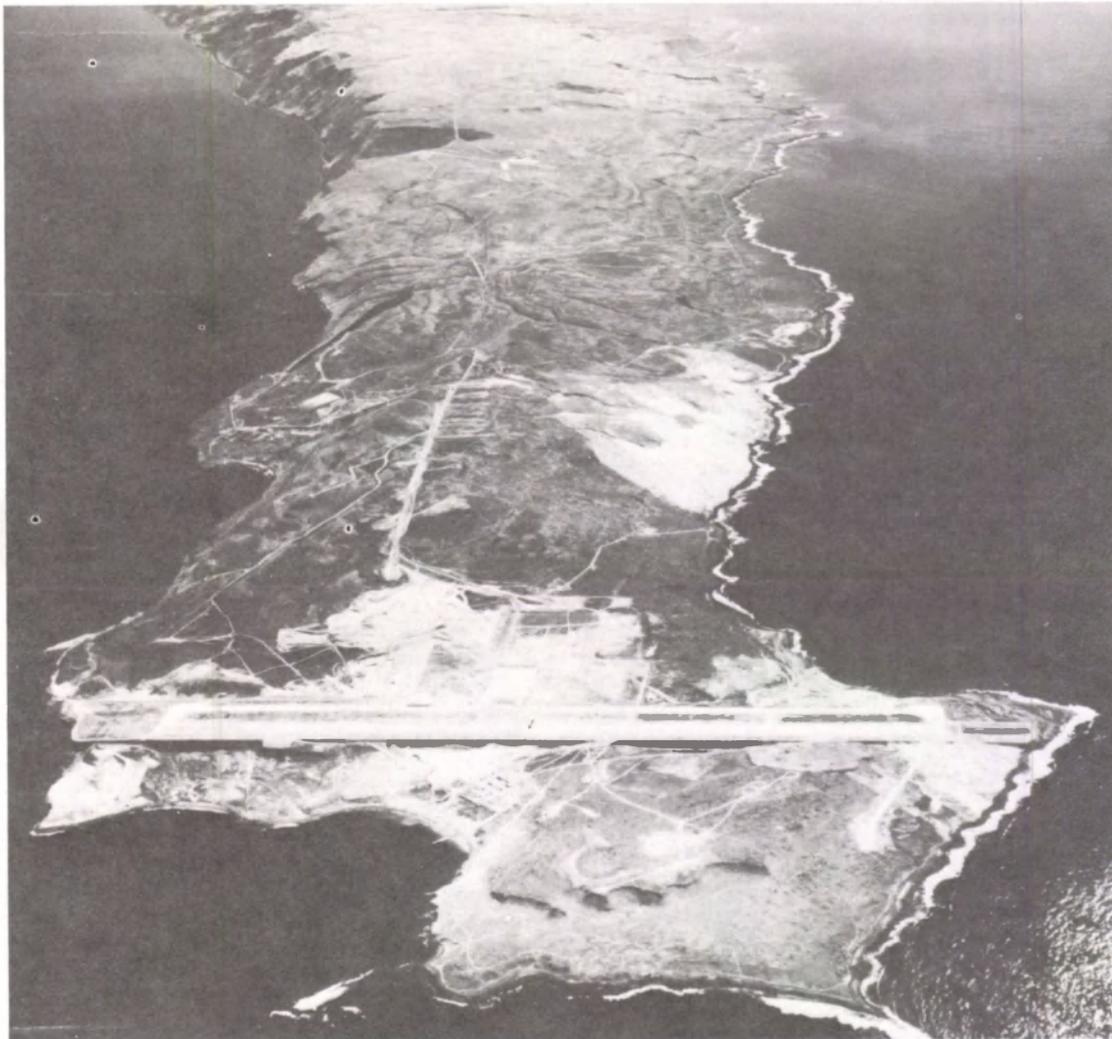
ESSA said it will generally approve the import of Appendix I animals and plants for "essential" scientific research which is not detrimental to the species, or for purposes that would enhance the propagation or survival of the species.

The agency said it would consider research to be essential "only if no alternative species are available and the number of specimens proposed is the minimum that will produce acceptable scientific results." Import of salvaged specimens will be allowed for any bona fide scientific use, providing that use does not contribute to the death of the specimen or its removal from the wild.

Import for other purposes, including amateur collecting, falconry, and trophies, will be disapproved unless clear and convincing evidence establishes that allowing import will benefit the affected populations.

Comments on the policy are due by October 24. □

Rulemaking Actions—August 1977



U.S. Navy photo

U.S. Navy's Naval Ocean Systems Center occupies one end of 21-mile long San Clemente Island off California Coast.

Ecosystem Preservation

Seven of San Clemente Island's Endemic Animals, Plants Listed

In a landmark final rulemaking covering seven San Clemente Island species, the Service has acted to further the preservation of an entire ecosystem and has added the first plants to the U.S. List of Endangered and Threatened Wildlife and Plants (F.R. 8/11/77). The ruling became effective on September 12.

One of the Santa Barbara Islands off the coast of southern California, San Clemente Island has been termed the most biologically distinctive coastal island owned by the United States. Its life forms evolved independent of those on the mainland, and many of its species and subspecies do not occur anywhere else. In past years, the island habitat has been severely modified as a result of man's activities (principally the accidental and intentional introduction of other species), and the island's endemic plants and animals have been seriously threatened.

Consequently, the Service has designated one bird and four plants as Endangered and one bird and one lizard as Threatened on the island. Endangered status has been given to the

- San Clemente loggerhead shrike (*Lanius ludovicianus mearnsi*)
 - San Clemente broom (*Lotus scoparius* ssp. *traskiae*)
 - San Clemente Island bushmallow (*Malacothamnus clementinus*)
 - San Clemente Island larkspur (*Delphinium kinkiense*)
 - San Clemente Island Indian paintbrush (*Castilleja grisea*)
- The Threatened animals are the
- San Clemente sage sparrow (*Amphispiza belli clementae*)
 - island night lizard (*Klauberina riversiana*)

Background

On June 1, 1976, the Service issued a proposed rulemaking in the *Federal Register*, in which Endangered status was considered for seven animals endemic to San Clemente Island. Subsequently, the Service included four San Clemente plants—among more than 1,700 U.S. plants proposed for Endangered status (F.R. 6/16/76).

The Service did not receive any comments directly related to the proposed listing of the four plants, but it did receive a total of 14 responses on the animals from various individuals and institutions, including the California State Department of Fish and Game (responding for the Governor), the U.S. Navy (which now has jurisdiction over the island), and several conservation organizations.

None of these respondents argued against the proposal in its entirety; in fact, most were in favor of it, with the remainder being noncommittal.

After analyzing these responses, the Service modified its original proposal. The key modifications were as follows:

- The proposed status of the San Clemente sage sparrow was changed from Endangered to Threatened on the grounds that the current population of between 200 and 400 pairs of birds is not likely to become extinct in the near future.
- Similarly, it was determined that the island night lizard had a large enough population to warrant Threatened rather than Endangered status.
- The views of the State of California and the U.S. Navy that population levels of three snails proposed as Endangered were high enough to exempt the species from either Endangered or Threatened status were accepted by the Service.
- Endangered listing of the San Clemente coenonycha beetle was omitted from the final ruling on a recommendation from the U.S. Navy and the State of California that insufficient data are presently available on the insect to warrant its listing. Nevertheless, the beetle will remain as proposed until a status survey has been conducted.

American Peregrine Falcon

The Service has issued a final rule-making determining Critical Habitat for the American peregrine falcon (*Falco peregrinus anatum*), an Endangered subspecies of falcon (F.R. 8/11/77). The ruling took effect on August 11.

The designated area consists of three zones in the coastal mountains of northern California. These zones, in Lake, Sonoma, and Napa Counties, all contain many excellent nesting sites and either have or are adjacent to areas of high concentrations of passerine birds that are prey for the falcon.

As published in the *Federal Register* on August 30, 1976 (see the September 1976 BULLETIN), the original proposal included a fourth zone, the Cobb Mountain Zone. The Service's decision to exclude this zone from the final ruling was based on recommendations of the U.S. Energy Research and Development Administration, California State Lands Commission, several private companies, and Kenneth E. Stager of the Los Angeles County Museum of Natural History. Extensive research by Stager and others indicates that the zone has not been a nesting area for the falcon for more than 40 years.



U.S. Navy photo

Large female island night lizard has typical spotted pattern on scales. The species is listed as Threatened on San Clemente



U.S. Navy photo

San Clemente Island bushmallow has been reduced to only two known locations of seven or eight tightly clustered plants

The original proposal was supported in its entirety by the California Department of Fish and Game, the Ecology Center of Southern California, the Napa County board of supervisors, several conservation organizations, and two private citizens. No comments were received voicing major opposition to the proposal.

The California state director of Interior's Bureau of Land Management has

recommended that one zone be enlarged; the Service still has this recommendation under consideration.

The Service continues to emphasize that the areas currently designated as Critical Habitat represent only small segments of what may be the overall habitat that is critical to the survival of the American peregrine falcon, and that additional areas may be proposed in the near future.

Morro Bay Kangaroo Rat

An area along the south side of Morro Bay, in San Luis Obispo County, California, has been designated as Critical Habitat for the Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*), an Endangered rodent, in a final ruling issued by the Service (F.R. 8/11/77). The ruling became effective on August 11.

The designated area is the same as that described in the original proposal as published in the August 30, 1976, issue of the *Federal Register* (see the September 1976 BULLETIN). The Service received no comments in opposition to the proposal.

Palila

To further protection of the palila (*Psittirostra bailleui*), an Endangered member of the Hawaiian honeycreeper family, the Service has issued a final rulemaking, effective immediately, designating the bird's range as Critical Habitat (F.R. 8/11/77).

The bird's range consists of forests of mamane and naio on the slopes of Mauna Kea on the island of Hawaii.

The final ruling is basically the same as the proposed rulemaking published in the December 22, 1976, issue of the *Federal Register* (see the December 1976-January 1977 BULLETIN). The final ruling also specifies an upper elevation limit of 10,000 feet, as part of the palila's Critical Habitat.

Comments received by the Service on the original proposal included supportive letters from the Governor of Hawaii, the State Forester of Hawaii, the U.S. Forest Service, the Golden Gate Audubon Society and other organizations.

Cape Sable Sparrow

The Service has issued a final rulemaking that determines Critical Habitat for the Cape Sable sparrow (*Ammospiza maritima mirabilis*), an Endangered songbird found only in southern Florida (F.R. 8/11/77). The ruling became effective on August 11.

Critical Habitat for the species consists of areas of land, water, and airspace in the Taylor Slough region, which lies within Collier, Dade, and Monroe Counties. These areas contain the largest known concentration of the species, and are the only areas currently known to support a major viable population.

The final Critical Habitat determination for the species differs somewhat from that described in the original proposal, as published in the August 30, 1976, issue of the *Federal Register* (see the August 1976 BULLETIN). Certain areas have been deleted and others added, based principally on recommendations of the National Park Service.

The Environmental Defense Fund, New York Zoological Society, Smithsonian Institution, and three private citizens expressed their support for the original proposal. No opposing comments were received.

Dusky Seaside Sparrow

In a final ruling, effective immediately, the Service has designated two areas in Brevard County, Florida, as Critical Habitat for the dusky seaside sparrow (*Ammospiza maritima nigrescens*), an Endangered species (F.R. 8/11/77).

The two areas, both near Titusville, are the same as those indicated in the original ruling proposed in the December 3, 1976, issue of the *Federal Register* (see the December 1976-January 1977 BULLETIN). Comments received on the proposal included letters of support from the Florida Game and Fresh Water Fish Commission, several conservation organizations, and two private citizens. There were no adverse comments received.

Florida Everglade Kite

Critical Habitat has been determined for the Florida Everglade kite (*Rostrhamus sociabilis plumbeus*), an Endangered subspecies, in a final ruling issued by the Service that is effective immediately (F.R. 8/11/77).

The designated habitat consists of several areas lying west and north of Miami that constitute the best and largest remaining stretches of habitat suitable for the kite. These areas were identified in the original proposal as published in the *Federal Register* on December 3, 1976 (see the December 1976-January 1977 BULLETIN).

The Service received supportive letters on the proposal from the Florida Game and Fresh Water Fish Commission, several conservation organizations, and two individuals. In addition, the Central and Southern Florida Flood Control District recommended the addition of certain areas; the Service still has this suggestion under consideration.

The National Park Service recommended omitting any part of Everglades National Park from the Critical Habitat designation because the park area currently is not known to be used regularly by the kite. However, Service biologists concluded that even limited use of the park is of importance in the case of such a rare bird, and that the park would be of great value to an expanding kite population.

Tan Riffle Shell

The Service has issued a final rulemaking that determines the tan riffle shell (*Epioblasma walkeri*) to be an

Endangered species (F.R. 8/23/77). This ruling takes effect on September 26, 1977.

The tan riffle shell is a pearly mussel that characteristically inhabits riffle areas in medium- to large-sized streams. Formerly occurring rather generally in both the Tennessee and Cumberland river systems, the species now has only a limited range: The lower Red River of the Cumberland river system in Kentucky and Tennessee; the middle fork of the Holston River in Virginia; the Duck River in Tennessee from Wilholte Mill downstream to Columbia; and the Clinch River in Virginia and Tennessee, where it is very rare. It may also still occur in the Stones River in Tennessee, although such a finding would be very rare.

Principal Threats

The Service has determined that the tan riffle shell is in danger of extinction in all or a major part of its present range. The species is endangered primarily by water pollution, channelization, and dam construction.

Because of its large oxygen need, the species is very vulnerable to contaminants. The streams within its range have been subject to accidental spills of fly ash and sulfuric acid, the dumping of untreated packing plant effluent and municipal wastes, and other forms of pollution.

Channelization of the upper Clinch River and construction of the Columbia Dam on the Duck River also are a major threat, because the species requires a voluminous and rapid flow of water.

In addition, over the last two decades, the tan riffle shell has been displaced in some areas within the Tennessee river system by an introduced species, the Asian clam (*Corbicula manilensis*).

Although trade in the tan riffle shell is insignificant compared with that involving thick-shelled mussel species, commerce has nevertheless had a measurable impact on this species.

The tan riffle shell is listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. However, such listing provides protection only against international trade and does not apply to domestic trade. There are no other existing regulations that afford protection to this species. Consequently, the Service has determined that this mussel's status warrants its protection under the Endangered Species Act of 1973.

The final rulemaking is basically the same as the proposed rulemaking published in the *Federal Register* on September 26, 1975.

In response to this proposal, the Service received comments from three States and one individual.

(continued on page 7)

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David H. Stansbery of the Museum of Zoology of The Ohio State University provided a detailed report on the species, summarizing the synonymy, taxonomic status, diagnostic characteristics, distribution patterns, and threats.

STATUS REVIEWS

American Ginseng

The status of the American ginseng (*Panax quinquefolius*) is to be reviewed to determine whether or not the plant should be listed as Endangered or Threatened (F.R. 8/11/77).

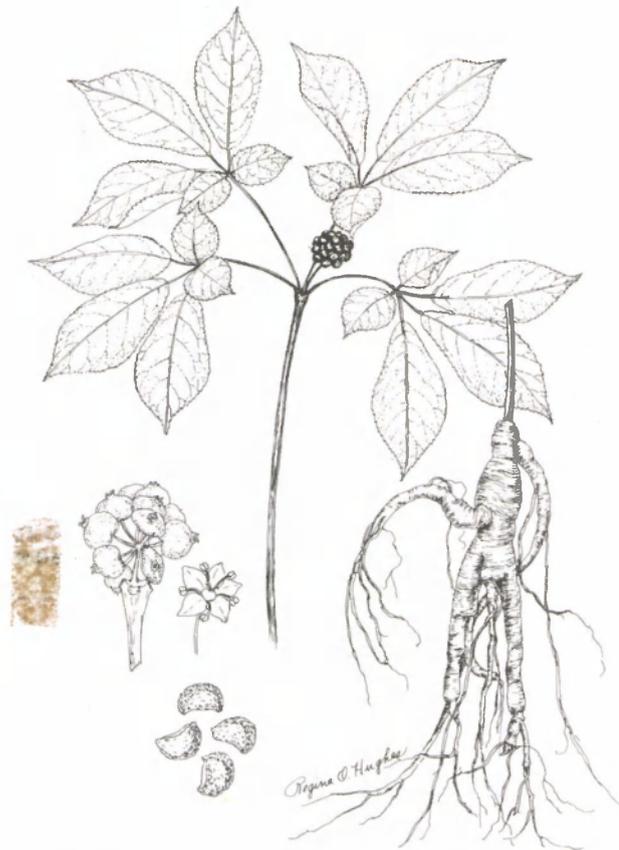
The American ginseng has been observed in the wild in at least 32 States (all in the eastern half of the United States), as well as in the Provinces of Quebec, Ontario, and Manitoba, Canada. In some areas, ginseng has been severely depleted in the wild as a result of both overcollecting and habitat modification. (See related story on page 3.)

The American ginseng currently is listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Although this treaty does provide for control over export of American ginseng, it does not contain specific provisions for conservation of the plant in the wild. Most U.S. States do not have such provisions, nor do they have uniform controls for the harvesting of the plant in the wild. Consequently, the Service believes that it is important to determine whether or not the plant qualifies for protection under the Endangered Species Act of 1973.

Meanwhile, the plant is already included in numerous State lists of endangered, threatened, and rare plants. Furthermore, it is included in the Smithsonian Institution's compilation entitled "Endangered and Threatened Plants of the United States."

In addition to inviting responses from any interested parties, the Service is seeking the views of the Governors of the States where the plant is known to be found, as well as the Government of Canada. All comments are due by October 11, 1977.

Comments received will be used by the Service to determine the proposed status of the plant. In addition, the information will be used by the Endangered Species Scientific Authority (ESSA), in developing its findings concerning exports of American ginseng that have been obtained from the wild. It is emphasized that this is a status review and not a proposed rulemaking.



U.S. Department of Agriculture drawing

American ginseng is subject of trade restrictions and is listed for status review. Drawings show branch, root, seeds, berries, and flower of the plant which is becoming severely depleted in the wild

10 AMPHIBIANS LISTED FOR REVIEW

The Service has announced that it will review the status of 10 species of amphibians to determine whether any of them should be proposed for listing as Endangered or Threatened species (F.R. 8/2/77). The Service would like to obtain the views of the Governors of the ten States and one Territory where the amphibians are known to occur. Responses are also invited from any other interested parties.

Comments should be submitted to the Service by November 1, 1977. The amphibians to be reviewed are listed in the table below.

Common Name	Scientific Name	Distribution
Puerto Rican toad	<i>Bufo lemur</i>	Puerto Rico
Amargosa toad	<i>Bufo nelsoni</i>	Nevada
Pine Barrens treefrog	<i>Hyla andersonii</i>	New Jersey, North Carolina, South Carolina
Vegas Valley leopard frog	<i>Rana onca</i>	Arizona, Nevada, Utah
Neuse River waterdog	<i>Necturus lewisi</i>	North Carolina
San Marcos salamander	<i>Eurycea nana</i>	Texas
Valdina Farms salamander	<i>Eurycea troglodytes</i>	Texas
Larch Mountain salamander	<i>Plethodon larselli</i>	Oregon, Washington
Siskiyou Mountain salamander	<i>Plethodon stormi</i>	California, Oregon
Honey Creek Cave blind salamander	<i>Typhlomolge tridentifera</i>	Texas

20 Appendix I Species

The Service plans to determine whether or not Endangered or Threatened status should be proposed for any of 20 species listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (F.R. 8/11/77).

These species are the only ones not currently recognized as Endangered by the United States of the 46 animal taxa added to Appendix I at the Berne Conference in November 1976 (see the December 1976-January 1977 BULLETIN).

The 20 species are as follows:

- Asiatic black bear (*Selenarctos thibetanus gedrosianus*)
- Spectacled bear (*Tremarctos ornatus*)
- Chinchillas (*Chinchilla* ssp.)
- Bush dog (*Speothos venaticus*)
- Buff-headed marmoset (*Callithrix flaviceps*)
- Pygmy marmoset (*Cebuella pygmaea*)
- White-eared marmoset (*Callithrix aurita*)
- European otter (*Lutra lutra*)
- Black rhinoceros (*Diceros bicornis*)
- Southern white rhinoceros (*Ceratotherium simum simum*)
- Imperial eagle (*Aquila heliaca*)
- White-tailed eagle (*Haliaeetus albicilla*)
- Peregrine falcon (*Falco peregrinus*)
- Aldabra kestrel (*Falco newtoni aldabranus*)
- Mad boas (*Acantophis* ssp.)
- Round Island boas (*Bolyeria* ssp.)
- Round Island boas (*Caserea* ssp.)
- Tree boa (*Sanzivia madagascariensis*)
- Dwarf crocodile (*Osteolaemus tetraspis*)
- Mugger crocodile (*Crocodylus palustris*)

As required by the Endangered Species Act of 1973, the Service is consulting with the foreign countries in which the 20 species are resident.

Comments are due by January 1, 1978.

BOX SCORE OF SPECIES LISTINGS

Category	Number of Endangered Species			Number of Threatened Species		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Mammals	36	227	263	2	17	19
Birds	68	144	212	2		2
Reptiles	10	46	56	2		2
Amphibians	4	9	13	1		1
Fishes	30	10	40	4		4
Snails		1	1			
Clams	23	2	25			
Crustaceans						
Insects	6		6	2		2
Plants	4		4			
Total	181	439	620	13	17	30

Number of species currently proposed: 99 animals
1846 plants (approx.)

Number of Critical Habitats proposed: 38

Number of Critical Habitats listed: 15

Number of Recovery Teams appointed: 59

Number of Recovery Plans approved: 9

Number of Cooperative Agreements signed with States: 19 August 31, 1977

Pending Rulemakings

The Service expects to issue rulemakings and notices of review on the subjects listed below during the next 90 days. The status or action being considered for each final and proposed rulemaking is given in parentheses.

The decision on each final rulemaking will depend upon completion of the analysis of comments received and/or new data made available, with the understanding that such analysis may result in modification of the content or timing of the original proposal, or the rendering of a negative decision.

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- Bald eagle (modification of status in Lower 48 States)
- Leopard darter (T, C.H.)
- 27 snails (E, T)
- 6 butterflies (C.H.)
- Contra Costa wallflower and Antioch Dunes evening primrose (C.H.)
- 13 plants (E, T)
- Grizzly bear (C.H.)
- Gray wolf (reclassification to T in Minn.; C.H.)

- 5 Southeastern U.S. fishes (T, C.H.)
- Florida pine barrens treefrog (E, C.H.)
- Golden coqui (T, C.H.)
- 15 crustaceans (E, T)
- Whooping crane (C.H.)
- Black toad (T, C.H.)

Pending proposed rulemakings*

- Ozark big-eared bat (E)
- Virginia big-eared bat (E)
- African elephant (S.O.A. to Asian elephant)
- 11 beetles (E, T)
- Puerto Rican whip-poor-will (C.H.)
- Laysan duck (C.H.)
- 2 harvestmen (E, T)
- Little Kern golden trout (T, C.H.)
- 3 mussels (C.H.)
- Rocky Mountain peregrine falcon population (C.H.)
- 29 Southeastern U.S. fishes (E, T)
- Humpback chub (C.H.)
- Colorado squawfish (C.H.)
- Woundfin (C.H.)
- Greenback cutthroat trout (reclassification to T)
- Virgin River chub (E, C.H.)

* Abbreviations: E=Endangered, T=Threatened, C.H.=Critical Habitat, S.O.A.=Similarity of Appearance.



ENDANGERED SPECIES TECHNICAL BULLETIN



ENDANGERED SPECIES TECHNICAL BULLETIN

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

'FLEXIBILITY' OF ES LAW DEBATED AT SENATE HEARINGS

Is the Endangered Species Act sufficiently flexible to both protect the habitat of imperiled animals and plants—and yet allow needed resource development to proceed?

This question dominated the testimony of approximately fifty witnesses who appeared before the Senate Environment and Public Works Subcommittee on Resource Protection during four days of oversight hearings in July. The chief point of contention was the decision last January 31 by the U.S. Court of Appeals for the Sixth District to halt closure of the Tennessee Valley Authority's (TVA) Tellico Dam, thereby protecting the snail darter's Critical Habitat on the Little Tennessee River.

Subcommittee Chairman Sen. John C. Culver (D-Iowa) said the subcommittee would review the Tellico case to determine "whether or not a specific exemption for the project, as some have

proposed, or other legislative action is necessary." But Culver noted that publicity surrounding the Tellico case may have obscured the "larger successes" of the Interior Department in resolving nearly 4,500 other potential conflicts through informal and formal consultation with affected Federal agencies.

The senator commented that President Carter's order to Federal agencies to expedite the identification of Endangered species Critical Habitat on Federal lands "will help reduce any irreconcilable conflicts."

Support of the Law

Testifying as the lead-off witness, Council on Environmental Quality Chairman Charles Warren fully supported the workings of the act, particularly the section 7 provisions for the protection of Critical Habitat. "We do not believe that any change is necessary in

the act to accommodate specific instances where the act and other public goals come into conflict," he said.

This position was supported by representatives of other Federal agencies, with the exception of TVA, and by a number of conservation organizations.

Robert L. Herbst, Assistant Secretary of the Interior for Fish and Wildlife and Parks, said: "We believe the 1973 act and its attendant regulations provide us with all the flexibility we need, especially if we are brought onto the scene early in the (project) planning process." As to changing the law, Herbst added: "We have given the act a hard test and we are certain that it works to protect the environment while permitting most developmental programs. To amend the act at this point, before it is fully integrated in natural resource development activities, would be premature and shortsighted."

(continued on page 3)

Chesapeake Bald Eagle Making Strong Comeback



Photo by Jim Freeman

Eaglets being banded by Buck Bradley of National Wildlife Federation project.

Production of Endangered bald eagles (*Haliaeetus leucocephalus*) in the Chesapeake Bay region reached a 41-year high in the 1977 breeding season, indicating the population may be rebounding from a severe decline in the 1960's and early 1970's that was apparently caused by pesticides and other pollutants.

Aerial and ground surveys of 78 active nests by members of the Chesapeake Region Eagle Group (CREG) yielded a total of 71 eaglets hatched, of which 63 fledged. This was nearly double the 1976 production of 39 eaglets hatched in 72 nests, and matched the previous high, recorded in 1936, when 71 eaglets were hatched in 35 nests. Some eaglets were banded during the ground survey.

CREG was formed this year to get a better fix on the status and life history of the bald eagles in the region. Information is being sought as to where the birds are picking up their pollutant loads by studying their migration and dispersal

(continued on page 2)

Eagle (continued from page 1)

patterns; data is also being collected on the population's mortality and longevity.

The studies are supported in part by the U.S. Fish and Wildlife Service's Endangered Species Program and the Delaware, Maryland, and Virginia State Fish and Game and Natural Resources agencies. Other members of CREG include representatives of the Audubon Naturalists Society, the Virginia Society of Ornithology, and the Maryland Ornithological Society. Representatives of the National Wildlife Federation's Raptor Information Center (see box) carried out the banding project.

The Fish and Wildlife Service recently appointed a Chesapeake Bay Bald Eagle Recovery Team headed by Gary Taylor, Maryland Department of Natural Resources, to develop a recovery plan for this bald eagle population and to monitor recovery efforts. Members of CREG are serving either on the recovery team or as advisors.

Gains in Maryland

The active nest survey shows the Maryland population has made a steady improvement since 1970 when 13 eaglets were hatched. The State's 1977 production was 45 fledged, with the biggest gains occurring in southern Dorchester County which includes the Blackwater National Wildlife Refuge. The number of breeding pairs of bald eagles in the county has risen from 8 in 1971 to 16 in 1977; 12 of the pairs produced a total of 22 eaglets this year.

Wildlife biologists note this population increase has taken place in the area having the least human disturbance in the region. There has been a corresponding decline in breeding pairs where the human population is increasing.

Virginia Losses

As recently as 1964, there were 13 breeding pairs along Virginia's James River, which flows past Hopewell—scene of the recent kepone disaster. About 1965, the population began falling precipitously and by 1975 had disappeared, apparently through pesticide contamination of fish in the river.

Despite this loss, Virginia's total eaglet production this year rose to 17, compared to only 7 in 1976 and 13 in 1974. (Not all breeding pairs lay eggs every season, accounting for some variations in year to year totals. Clutch sizes also vary from one to three eggs.)

Two viable eggs from a captive pair of eagles at the Service's Patuxent Wildlife Research Center were transplanted by Stanley Wiemeyer to a nest at the Mason Neck National Wildlife Refuge in northern Virginia. This nesting pair had not produced any young in about five years and at the time of the transplant had been trying without success to incubate an egg of their own. Upon analysis at the Patuxent Wildlife Research Center, this egg was found to have one of the highest concentrations of polychlorinated biphenyls (PCB's) ever found in a bald eagle egg. (One of the two transplanted eggs did hatch and the eaglet was banded.)

Raptor Information Center

The National Wildlife Federation has established a Raptor Information Center to help promote preservation of the bald eagle, golden eagle, and other birds of prey.

The Center is involved in identifying and protecting eagle habitat, monitoring raptor populations, encouraging research, and acts as an information clearinghouse. The Center offers a computerized referral service for scientific data on the bald eagle; publishes bibliographies, manuals, guides, and a newsletter.

For more information contact: Dr. Jeff Lincer, director, Raptor Information Center, National Wildlife Federation, 1412 Sixteenth St., N.W., Washington, D.C. 20036.

Banding Project

Of the 71 eaglets produced this year, one was found dead by the banding team. Due to a late start, the team was unable to visit all of the nests and band all of the young birds before they had fledged or were very near fledging. A total of 37 birds were banded (24 in Maryland and 13 in Virginia).

Maryland eaglets were fitted with numbered orange vinyl tags and the Virginia chicks blue tags supplied by the Fish and Wildlife Service.

CREG found that the eagles prefer old loblolly pines (*pinus taeda*) to nest in, and 73 percent of the nests were found in this tree species. Many of the trees had been left for seed after cutover and the regrowth around them was extremely thick, restricting human intrusion. The trees generally were in areas remote from human habitation on refuges, large estates, and farmland.

Turtle Prey

Eagle egg shell fragments and five eggs were collected for pollutant analysis and evidence of thinning. The surveyors discovered a surprising number of diamond-back terrapin (*Malaclemys terrapin*) and other turtle shells, among the remains of prey at the foot of Maryland nests. Turtles heretofore have not been known to be a common prey of eagles.

Other prey remains included numerous fish species and various waterfowl, a young red-tailed hawk (*Buteo jamaicensis*), muskrat (*Ondatra zibethica*), and rabbit (*Sylvilagus* sp.)

The surveys and banding efforts will be continued for another three or four years. During that time, researchers and advisors to the recovery team will try to pinpoint the sources of pollution which may be inhibiting eaglet production, while attempting to collect other data of value in restoring the Bay area's bald eagle population.

U.S. Fish and Wildlife Service Washington, D.C. 20240

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Jack W. Gehringer, deputy director of the National Marine Fisheries Service, which shares responsibility with the Fish and Wildlife Service for administering the law, said he believes that "most Federal agencies with whom we have consulted go along with our recommendations" and that there had been no "unresolvable conflicts."

International Repercussions

A warning was sounded by Christine Stevens, secretary of the Society for Animal Protective Legislation, that any weakening of the law would "constitute a most serious setback to international progress" among countries looking to U.S. leadership in protecting Endangered species. She said administration of the act "can and should continue to be improved," especially in respect to speeding up the granting of export-import permits, but without making any changes in the law.

Guidelines Needed—TVA

Strong objections that the Endangered Species Act is prohibiting economic growth and development were voiced by Tennessee Valley Authority Chairman Aubrey J. Wagner who said Congress should write new guidelines into the law to give it "balance and flexibility."

Wagner said that, according to his interpretation of the Sixth Circuit Court decision, "the needs of the endangered species must always prevail. The needs of man must always give way. The national impact of this decision could be disastrous." He said that rare species should be listed and protected, but under the following guidelines:

"Consideration should be given to the relative value of the species, including not only its scientific value, but also its ecological, economic, genetic, aesthetic, and social value. The diversity within a particular species, group, or family would also be important as well as the creature's range and numbers affected.

"On the other hand, consideration should also be given to such factors as: the importance of the project or activity; its stage of completion; money invested at the time the affected species is listed and identified as endangered by the project activity; possible modifications in the project or activity to protect the species; the extent to which the species will be affected; and whether action such as a transplant will tend to protect the species."

These guidelines, if written into the law, might allow TVA to complete the Tellico project which to date has cost \$105 million. Wagner noted that the dam was "80 percent completed" when a suit was filed in February 1976 to halt construction on the grounds that impoundment of the reservoir would destroy the Critical Habitat of the snail

dam. The dam, newly discovered in the riffles above the dam site, had been listed as Endangered three months before the suit was filed.

John Thompson, representing the National Forest Products Association, asked the Congress to amend section 7 of the law "to allow Federal agencies to pursue multiple-use objectives while still implementing measures to avoid significant, direct, adverse effects" on Endangered species. He said the law poses "a very real and ominous threat to the practice of scientific forest management on both public and private lands."

The Association, Thompson said, recommended that "those actions carried out on private lands by private parties subject to some Federal controls" be exempt from section 7. In addition, the Association asked that the term "take" as applied to the killing or capture of Endangered species be refined "so as not to preclude normal land management activities on private lands;" and that "inflationary impact statements" be required to accompany the listing or delisting of any species, determination of Critical Habitat, or other conservation measures that involve significant economic costs or curtailment of Federal programs.

State Backing—and Criticism

Preservation of section 7 provisions "intact" was urged by John S. Gottschalk, president of the International Association of Fish and Wildlife Agencies, a voluntary organization whose members include all 50 State wildlife agencies. But Gottschalk was critical of requirements in section 6(c) of the act that have prevented some States from entering into cooperative, grant-in-aid agreements with the Federal Endangered Species Program.

The requirements concern State authority over, as well as acceptable conservation programs for, all resident species of fish and wildlife in the State which the Secretary of the Interior has determined to be Endangered or Threatened. Gottschalk said: "This means that if a State agency does not possess authority to conserve lower forms such as invertebrates like insects, earthworms, or protozoa listed by the Secretary, then all bets are off. We view this 'all or nothing' approach as an outstanding example of the elevation of form over substance."

In his statement, Assistant Secretary Herbst acknowledged that the States were having difficulty entering into cooperative agreements because of the lack of State legislative authority, and also because of the definition of "State agency" in the act. In addition, the act does not allow grant-in-aid funds to protect Endangered plants. He said all these issues should be examined in greater depth by the Congress at a later date.

Rulemaking Actions July 1977

Giant Anole

In a final rulemaking issued by the Service, the giant anole (*Anolis roosevelti*) has been listed as Endangered and its limited range has been designated as Critical Habitat (F.R. 7/21/77).

The giant anole is a rarely seen lizard found only on Culebra Island, a part of the Commonwealth of Puerto Rico lying about 20 miles east of the island of Puerto Rico.

The species is believed to survive only in the canopy of mountain forest occurring on the slopes of Mt. Resaca. Consequently, removal of the fan-leaved palm, the tallest tree in this forest, as the result of man's activities represents a serious threat to the specialized habitat of the giant anole.

Eastern Indigo Snake

Threatened status has been proposed by the Service for the eastern indigo snake (*Drymarchon corais couperi*), one of the largest snakes found in the United States (F.R. 8/1/77).

A subspecies of the indigo snake, *D. c. couperi* presently occurs only in parts of Georgia and Florida, although it was formerly found in Alabama, Mississippi, and South Carolina.

In recent years, local populations of the eastern indigo snake have suffered a major decline, principally because of commercial trade. The snake's large size and extremely docile nature make it highly desirable as a pet, and there has been great demand for eastern indigo's in the pet trade. Prime specimens may sell for as much as \$250 each.

Relevant comments and materials regarding the proposed rulemaking should be submitted to the Service no later than October 30, 1977.

Review of Status

River Otter

The Service has announced that it will review the status of the river otter (*Lutra canadensis*) to determine whether or not the species should be proposed for listing as Endangered or Threatened (F.R. 7/28/77).

The decision to undertake this review was based primarily on the evidence presented in an April 1977 petition submitted by the Fund for Animals, a private organization that recommends adding the river otter to the U.S. List of Endangered and Threatened Wildlife and Plants.

All submittals should reach the Service by November 25, 1977.

Bobcat and Lynx

The status of the bobcat (*Lynx rufus*) and the lynx (*Lynx canadensis*) is now being reviewed by the Service to determine if these species should be proposed for addition to the U.S. List of Endangered and Threatened Wildlife and Plants (F.R. 7/13/77).

According to the Service, the evidence contained in an April 1977 petition from Defenders of Wildlife, a private organization, is sufficient to warrant a status review of the bobcat. In addition, the Service has received substantial information indicating that the lynx, a closely related species, also may have undergone a considerable decline in both numbers and distribution. Consequently, the Service will review the status of both species simultaneously.

All appropriate information should be submitted to the Service by November 10, 1977.

Pending Rulemakings

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Pending Final Rulemakings

- Bald eagle (modification of status in Lower 48 States)
- Leopard darter (T, C.H.)*
- Slackwater darter, Alabama cavefish, spotfin chub, slender chub, yellowfin madtom (T, C.H.)
- 27 snails (E, T)
- 6 butterflies (C.H.)
- Contra Costa wallflower and Antioch Dunes evening primrose (C.H.)

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Number of Critical Habitats listed: 8
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July 31, 1977

- San Clemente Island species (E)
- 13 plants (E, T)
- Florida Everglade kite (C.H.)
- Peregrine falcon, California (C.H.)
- Palila, Hawaii (C.H.)
- Cape Sable sparrow, Florida (C.H.)
- Dusky seaside sparrow, Florida (C.H.)
- Morro Bay kangaroo rat, California (C.H.)
- Mississippi sandhill crane (C.H.)
- 5 Southeastern U.S. fishes (T, C.H.)
- Florida pine barrens treefrog (E)
- Golden coqui (T, C.H.)

Pending proposed rulemakings

- Ozark big-eared bat (E)
- Virginia big-eared bat (E)
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- 3 mussels (C.H.)
- Rocky Mountain peregrine falcon population (C.H.)

*Abbreviations: E=Endangered, T=Threatened, C.H.=Critical Habitat, S.O.A.=similarity of appearance

Trade Convention Nations Holding October Session

Technical experts from the nations cooperating in the control of trade in endangered species are scheduled to hold a special working session October 17-28 at Geneva, Switzerland.

The discussions will cover guidelines for the shipment of live specimens, identification of specimens, exchange of museum specimens, and the care and disposal of confiscated animals and plants. There will be a review of certain species listed in Appendix I and II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Recommendations will be drawn up for action at the next full meeting of the treaty nations, to be held in the fall of 1978 at Quito, Ecuador.



ENDANGERED SPECIES TECHNICAL BULLETIN



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