



ENDANGERED SPECIES TECHNICAL BULLETIN

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

NEW DOCUMENT PRESENTS ASSESSMENT OF NATIVE PLANT VULNERABILITY

Office of Endangered Species
Staff Botanists

The Service recently provided State and Federal agencies, ecological consultants, plant conservationists, botanists, and other interested parties a new document which describes the current vulnerability of U.S. plants to extinction. This most recent notice of review for plants was published in the December 15, 1980, *Federal Register*.

The notice names nearly 3,000 plant taxa native to the U.S. which are being considered for listing as Endangered or Threatened species under the amended Endangered Species Act, and indicates their State distributions. It also provides a list of almost 800 plant taxa which were previously being considered for listing under the Act, but are presently presumed either extinct; not good species, subspecies or varieties; or more abundant or widespread than previously believed, and/or not subject to identifiable threats.

The December notice refines and updates three previous notices, and constitutes a current national assessment of U.S. plant status. It is based on 14 months of intensive collaboration by Service botanists with plant experts across the country, and reflects over six years of active field work and other research on vulnerable plants. It replaces published national assessments from 1975 and early 1978 and, in some cases, reports new State records of these rare species.



Photo by T. Wendt/Smithsonian Collection

Background

Initial endangered species legislation provided protection only for vertebrate animals, the special need to focus on the conservation of plants in danger of extinction not being recognized by legal provision until 1973. The 1973 Act directed the Secretary of the Smithsonian Institution to prepare a report on Endangered and Threatened plant species and to recommend necessary conservation

NOTE ABOUT THE STAFF

Just a few words to update you on the status of old and new members of the BULLETIN staff. Dona Finnley, who has been our editor for the past three years (June 1977), has left that post to pursue further studies in biology. I would like to take this opportunity to thank Dona for the fine work she has done, editing and planning the BULLETIN, and to wish her well with her studies. Although school will occupy most of her time, Dona will contribute occasional articles for the BULLETIN.

Thanks also to Morey Norkin who, as Acting Editor, has kept the BULLETIN together for the past four months. Morey will continue on with the BULLETIN, assisting Clare Senecal who has assumed, with this issue, the responsibilities of Editor. The new editor welcomes your continued interest and comments regarding our official Program publication.

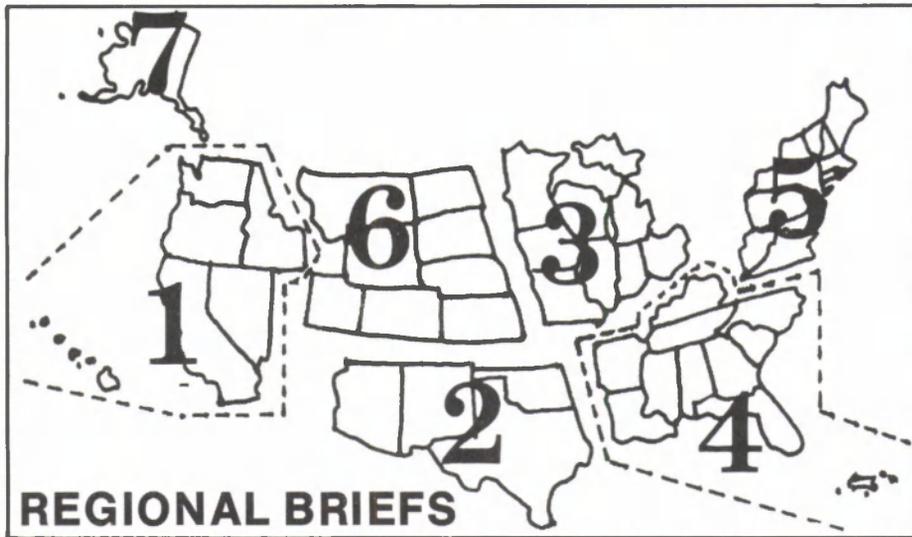
John L. Spinks, Jr.
Chief, Office of Endangered
Species

Greenman's hexalectris (*Hexalectris grandiflora*): This orchid occurs in the Trans-Pecos region of Texas and also in Mexico. The Service requests additional data on this category 2 plant.

measures. The Smithsonian report, published in January 1975 as House Document No. 94-51, included a list of more than 3,000 native plants thought to be extinct, threatened, or endangered.

The Service published a notice on July 1, 1975 (40 FR 27823), announcing that the Smithsonian report had been accepted as a petition under the terms of the Act, and that the plants named in the report were being reviewed for

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Endangered Species Program regional staffers have reported the following activities for the month of December.

Region 1. The Pahrump Killifish Recovery Plan has been printed and is

available from the Fish and Wildlife Reference Service, Unit I, 3840 York Street, Denver, Colorado 80205.

Surveys indicate that 50 pairs of Bell's vireo (*Vireo bellii*) nesting in an area in San Bernadino County, California, pro-

duced 75-100 fledglings. Approximately one-third of the nests have been parasitized by cowbirds (*Molothrus ater*).

Region 2. Service personnel spent 10 days on the northwest coast of Costa Rica working on projects involving the Olive (Pacific) Ridley sea turtle (*Lepidochelys olivacea*) and green sea turtle (*Chelonia mydas*).

A film crew from ABC-TV's 20/20 spent a day filming at Bosque del Apache National Wildlife Refuge for a story on a recent program.

Region 4. An 18-acre site supporting the Endangered bunched arrowhead (*Sagittaria fasciculata*) has been registered with the South Carolina Heritage Trust Program. The bunched arrowhead is known to occur in only two locations, a small area in Greenville County, South Carolina, and a site in Henderson County, North Carolina. The South Carolina site, registered by the trustee for the estate of Dr. T. E. Coleman, harbors possibly one-fourth of all the known remaining plants. Under the Trust Program, the plant will be assured of at least short-term protection.

Divers from the Cave Research Foundation recently observed and verified identification of six specimens of the Kentucky cave shrimp (*Palaemonias ganteri*), a proposed Endangered species. The specimens were found in association with the subterranean Echo River in Mammoth Cave National Park, and were the first to be seen alive in 13 years.

Region 5. After 39 years of trying, the Service has acquired the Snow tract adjacent to Bombay Hook National Wildlife Refuge in Delaware. This 154-acre tract, home for one of the last pairs of nesting bald eagles (*Haliaeetus leucocephalus*) in Delaware, is a combination of hardwood timber and farmland which will buffer the nest.

The annual planning meeting for peregrine falcon (*Falco peregrinus anatum*) releases took place on December 9, 1980, at the Brigantine National Wildlife Refuge. Plans are to increase coastal releases and releases in northern New England at natural sites. Logistical arrangements are proceeding well.

Service personnel met with Army Corps of Engineers staff in Salem, Virginia, to discuss ways to minimize adverse impacts on the Roanoke logperch (*Percina rex*) and the orangefin madtom (*Noturus gilberti*), which might result from a proposed flood control project on the Roanoke River.

Region 6. A complaint has been filed in the United States District Court for the District of Columbia in *Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears, et al. v. Peterson, et al.* The complaint involves a mineral ex-

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U.S. Fish and Wildlife Regions

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

The ENDANGERED SPECIES TECHNICAL BULLETIN is published monthly by the U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

ploration program approved by the Forest Service in the Cabinet Mountains Wilderness/Scotchman's Peak area of Kootenai National Forest in Montana.

The suit alleges that the Fish and Wildlife Service failed in its consultation with the Forest Service to further the purposes of the Endangered Species Act and the conservation of grizzly

bears. The plaintiffs seek a declaration that the defendants violated the National Environmental Policy Act and the regulations of the President's Council on Environmental Quality by not preparing an environmental impact statement prior to approving the drilling plan, and a declaration that approval of the drilling plan violates Section 7 of the Endan-

gered Species Act. The plaintiffs have requested an order enjoining the two agencies from permitting the American Smelting and Refining Company to continue its drilling program, at least until the defendants have complied with the requirements of the Endangered Species Act and the National Environmental Policy Act.

MARINE SANCTUARY CANDIDATES DESIGNATED

Three areas off Puerto Rico have been selected by the Commerce Department's Office of Coastal Zone Management (OCZM) as active candidates for designation as one or more marine sanctuaries. The areas are (1) the waters around Mona and Monito Islands, (2) the area off southwest Puerto Rico known as La Parguera, and (3) the waters around Culebra and Culebrita Islands and the Cordillera reef chain located off northwest Puerto Rico.

According to Edward Lindelof, Sanctuary Program Manager, OCZM, the Department of Commerce is working with the Department of Natural Resources, Commonwealth of Puerto Rico, to develop a management plan for the protection and management of these areas in the event that they are designated as marine sanctuaries. It is not yet known what restrictions on the recreational or other use of these areas will occur if this action is finalized.

The three candidate sites are known to provide important habitats for several Endangered species. The hawksbill sea turtle (*Eretmochelys imbricata*), green sea turtle (*Chelonia mydas*), leatherback sea turtle (*Dermochelys coriacea*),

and loggerhead sea turtle (*Caretta caretta*) are all found within the proposed sites.

On October 22, 1980, the Fish and Wildlife Service proposed to designate several areas in the Commonwealth of Puerto Rico as Critical Habitat for the hawksbill sea turtle (see the November/December 1980 BULLETIN). These areas, which coincide with the OCZM proposal include Mona Island, Culebra Island, Isla Culebrita, and Cayo Norte. Mona Island is already designated as Critical Habitat for the federally protected yellow-shouldered blackbird (*Agelaius xanthomus*), Mona ground iguana (*Cyclura stejnegeri*), and Mona boa (*Epicrates monensis monensis*). On the same date as the hawksbill proposal the Service proposed the Monito gecko (*Sphaerodactylus micropithecus*), a species known only from Isla Monito, as Endangered with Critical Habitat.

It is expected that the marine sanctuary designation will compliment the Critical Habitat designations by providing additional protection and management to these areas. Both designations of marine sanctuaries and desig-

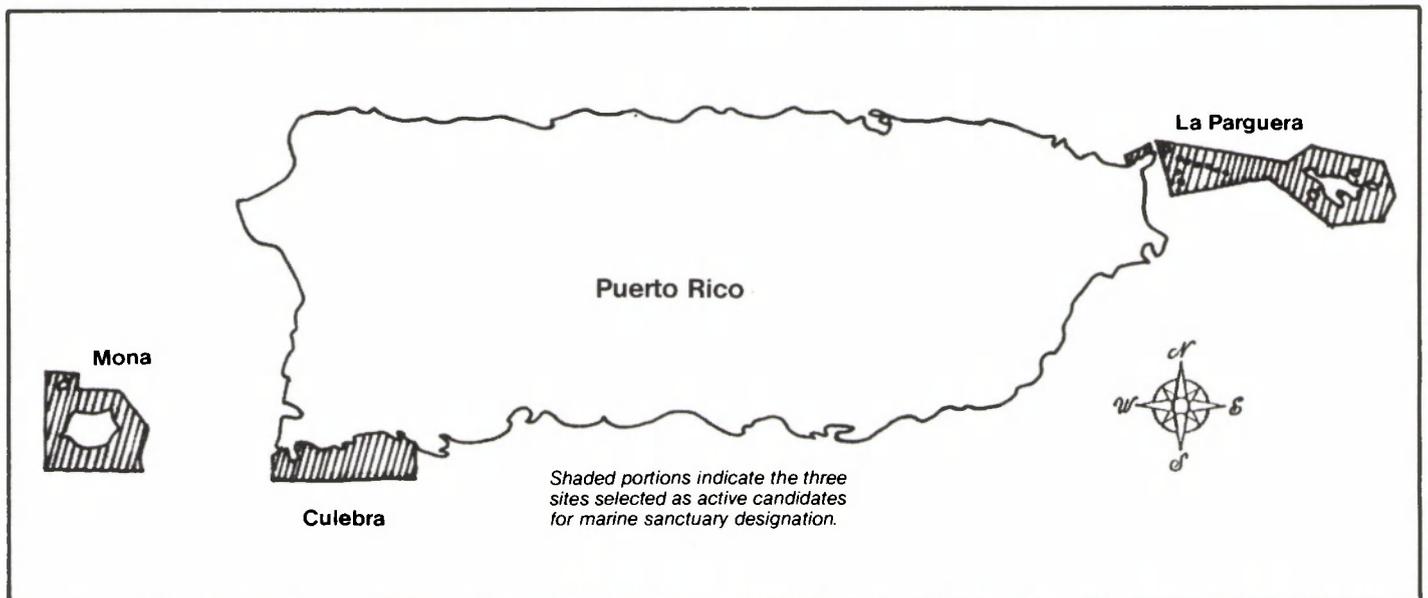
nation of Critical Habitat for these Puerto Rican sites were recommended by the World Conference on Sea Turtle Conservation in November 1979.

To finalize the marine sanctuary designation, OCZM must first prepare an Issue Paper in conjunction with the Commonwealth of Puerto Rico's Department of Natural Resources. Expected to be completed near the end of January 1981, the Issue Paper will describe the distinctive resources of the potential sites, the present and prospective uses, existing government programs for protecting those resources, alternative boundaries, management activities, and activities that might be regulated within a marine sanctuary.

In conjunction with the Issue Paper, workshops will be held to solicit views which will help OCZM determine whether any of the sites should be further considered for designation and whether changes in the recommendations should be made.

OCZM will prepare a Draft Environmental Impact Statement (DEIS) once it has determined that the proposed designation is appropriate. The marine sanctuary designation must be approved by the Governor of Puerto Rico and the President and will then be designated by the Secretary of Commerce.

The process is expected to be completed by November 1981.



NEW PLANT DOCUMENT

Continued from page 1

possible addition to the U.S. List of Endangered and Threatened Wildlife and Plants. One previous notice of review, which named four plants, had been published in April 1975 (40 FR 40823) in response to a petition. About 1,700 of these plants were subsequently proposed for listing under the Act on June 16, 1976 (41 FR 24523). Later, in 1977 (42 FR 40823), a third notice involving one plant was published.

Because of the provision of a 2-year limit for proposed rules in the Endangered Species Act Amendments of 1978 (P.L. 95-632), the 1976 proposal was mandatorily withdrawn in November 1979 (44 FR 70796) when final action had been taken to list only 56 of the plant species originally proposed. Withdrawal was required because of the expiration of the deadline for making such rules final, and was not related to the conservation status of the proposed taxa.

The present notice reflects the Service's current judgment of the probable status of all native plant taxa that were included either in previous notices or the 1976 proposal, as well as other taxa for which information has become available more recently. This action represents a Service commitment to the general Congressional intent of Section 12 of the Act, to continue a broad and detailed evaluation of the vulnerability of U.S. plants to extinction. Such preliminary notice of plant assessment by the Service will be provided to the public regularly so that land use planning can proceed with less surprise and potential conflict than would be the case if only proposed and final rules were relied upon.

1980 Plant Notice

Plant taxa are grouped in several categories in the new notice, in order to accurately reflect the Service's present evaluation of their conservation status. Categories 1 and 2 include those plants considered by the Service to be official candidates for Federal listing. Category 3 includes those plants not under consideration for listing.

Category 1 includes over 1,800 plants for which the Service presently has sufficient information on hand to biologically support their listing as Endangered or Threatened species. It also includes an additional 220 plants which are possibly already extinct, but which still may be located if intensive field work is undertaken. Because of the large number of species in category 1, and



Photo by Donald R. Kurz/Smithsonian Collection



Photo by W.S. Justice/Smithsonian Collection

White-fringed prairie orchid (Platanthera leucophaea): Once widely distributed over much of the mid-West, this category 1 orchid has experienced a serious decline resulting from alteration of its native prairie habitat. Remaining populations tend to be small and scattered. The species appears to depend upon fire to break dormancy in the plants and initiate growth and flowering. Large scale conversion of the mid-Western prairies into agricultural land and modern fire prevention have contributed to the decline of the species.

White-wicky (Kalmia cuneata): This category 1 plant occurs in coastal plain and sandhill wetlands of North and South Carolina. It is threatened by rapid drainage and development of these areas.

because of the necessity of gathering data concerning the environmental and economic impacts of listings and designation of Critical Habitats, it is anticipated that the development and publication of proposed and final rules concerning these species will require some years.

Category 2 includes nearly 1,200 plants for which information now in the possession of the Service indicates the probable appropriateness of listing as Endangered or Threatened species, but for which sufficient information is not presently available to biologically support a proposed rule. Further field study and biological research (in some cases including taxonomic research) will usually be necessary to determine the status of the taxa included in this category. It is hoped that the notice will encourage such research and investigation.

Category 3 includes nearly 800 plants no longer being considered for listing as Endangered or Threatened species. Such taxa are included in one of three subcategories, depending on the reasons for removal from consideration:

Subcategory 3A includes 51 taxa for which the Service has persuasive evidence of extinction. (45 of these were from Hawaii). If rediscovered, however, such species are likely to acquire high priority for listing.

Subcategory 3B contains about 200 names that, on the basis of current taxonomic understanding, usually as represented in published revisions and monographs, are either synonyms or forms and thus do not represent taxa meeting the Act's definition of "species." Such proposed taxa could be re-evaluated in the future on the basis of subsequent research.

Subcategory 3C includes about 550 plants that have proven to be more abundant or widespread than was previously believed, and/or that are not subject to any identifiable threat. Should further research or changes in land use indicate significant decline in any of these taxa, they may be re-evaluated for possible inclusion in categories 1 or 2.

Interim Protection Needed

The plants listed in categories 1 and 2 may be considered official candidates for protection under the Act and they should therefore be considered in environmental planning. Many of these candidate plants may eventually be listed as Endangered or Threatened species. However, the listing process is an extremely lengthy one. In the interim, voluntary protection may prove beneficial to many of these plants. The U.S. Forest Service and other agencies, as a matter of policy, provide consideration



Photo by John Fay



Dwarf iliau (Wilkesia hobbdi): This category 1 plant is extremely local, being confined to a few acres of a steep ridge-side on the lee shore of the island of Kauai. It is potentially threatened by feral cattle and goats as well as the introduced black-tail deer. This species was first discovered in 1968.

Yellow meadowfoam (Limnanthes douglasii ssp. sulphurea): This category 1 plant is found only in seasonally wet areas on Point Reyes, north of San Francisco. Species of *Limnanthes*, or meadowfoams, are being investigated because of their potentially useful seed-oils.

and protection to candidate species as well as to those formally listed. Such efforts are encouraged and commended by the Service.

New Information Solicited

Further biological research and field study will be necessary to determine the status of some plants (particularly those in category 2), and the Service hopes that the notice will stimulate such research. Some taxa included in category 2 require further taxonomic research before their status can be clarified. Additional information concerning such taxa, especially that resulting from recent investigations, is particularly sought by the Service.

In some cases, although adequate data are now available to the Service to support reproposal of species originally included in the expired 1976 proposal, such species cannot be repropoed for listing pending the receipt of sufficient new information warranting such action, as required by Section 4(f) (5) of the Act. The Service has interpreted the "new information" requirement to mean that such information must have been developed and received subsequent to the mandatory withdrawal of the original proposal on November 10, 1979. The Service requests that new information

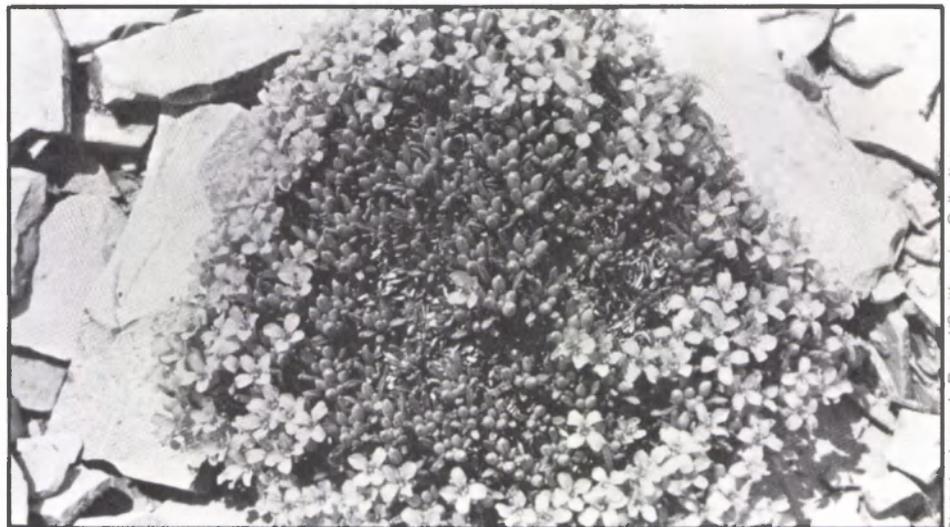


Photo by James L. Reveal/Smithsonian Collection

Kodachrome twinpod (Lesquerella tumulosa): This yellow-flowered perennial is found only on white, bare shale knolls in Southern Utah, on public land managed by the Bureau of Land Management. The major threat to its survival is the removal of the knolls for road building materials. It is classified as category 1.

on the species named in this notice be submitted as soon as possible and on a continuing basis, either to the appropriate regional office or, if desired, to Washington.

Copies of the notice have been provided to a large number of interested parties and are available upon request from the proper regional office or the

Washington Office of Endangered Species. Similar compilations of the plant species treated in the notice, ordered (1) by family, and (2) by State, will be available as Brookhaven National Laboratory Reports. These can be obtained by writing: Dr. John Nagy, Brookhaven National Laboratory, BEAD Bldg. 475, Upton, NY 11973.

PREPARATIONS FOR NEW DELHI MEETING NEAR COMPLETION

Dates for the third regular meeting of the conference of parties to the Convention on Endangered Species of Wild Fauna and Flora (CITES) in New Delhi, India, have been officially set, after two prior schedulings, for February 25 through March 9, 1981. A sizeable provisional agenda, including many proposed amendments to CITES Appendices I and II, will be considered by delegates from 67 party nations.

The United States, by virtue of its membership on the CITES Standing Committee received advanced notice of the New Delhi provisional agenda, as amended to include additional items suggested by Australia, Canada, and the United States. This document appeared in the November 13, 1980, *Federal Register*. Some of the U.S. proposed negotiating positions are summarized in a more recent notice (F.R. 12/8/80).

Provisional Agenda

The current agenda includes 17 items (I-XVII); items I-X are procedural in nature and will not be discussed in this issue of the BULLETIN. Item XVII, elections of new members of the Standing Committee, is also procedural but should be noted because U.S. membership on the Committee expires at the New Delhi meeting. (The terms of the United Kingdom and Australia will also expire). The U.S. proposes to support Canada as its replacement.

Standing Committee Members

The nine-member Standing Committee is composed of a representative from one party country in each of six regions of the world, from the last host country of the regular meeting of the Conference of the Parties (Costa Rica) and from the next host country (India), and from the depository country (Switzerland). In addition to the countries already named, Zaire, Nepal, and Brazil are the other regional members. The only two countries in the North American region that are CITES parties are the United States and Canada.

Comments from U.S. Public

In response to the Service's initial notice (F.R. 5/9/80) and public meeting (F.R. 6/20/80) regarding the agenda for the New Delhi meeting, information and comments on the provisional agenda were provided by: American Ivory Association, Defenders of Wildlife, Fur Conservation Institute of America, International Convention Advisory Commission (ICAC), Natural Resources Defense

Council, Inc., Society for Animal Protection Legislation, Southeastern Association of Fish and Wildlife Agencies, and State of Montana Department of Fish and Game. (A discussion of all U.S. suggestions can be found in the August 11, 1980, *Federal Register*.)

The following items resulted and were transmitted to the CITES Secretariat together with a justification for their inclusion in the provisional agenda:

1. Listings to Control Trade in other Species: Findings of nondetriment are required for export of all Appendix I and II specimens, whatever the purpose of the listing. However, if a species ("C") is listed in Appendix I or II solely in order to control trade in some other species ("P"), then trade in "C" could be controlled so that it is not detrimental to the survival of the species "P", or it could be controlled so that it is not detrimental to the survival of species "C". The Service believes that findings made by scientific authorities on trade in species "C" should take into consideration impacts of that trade on species "P".

2. Appendix I imports: CITES requires the issuance of an import permit for specimens of Appendix I species. As a condition for such permit issuance, the scientific authority must advise the management authority that the import will be for purposes which are not detrimental to the survival of the species. As with the findings of nondetriment concerning "control species," the Service believes that practices of scientific authorities concerning imports of Appendix I species vary from Party to Party. The Service feels that these scientific authorities should consider the impact of proposed imports on the species involved rather than the question of whether particular purposes, as such, are not detrimental.

These topics appear under XVI in the provisional agenda, Interpretation and Implementation of the Convention (F.R. 8/12/80).

Australian Proposals

The Australian Management Authority, the Australian National Parks and Wildlife Service (ANPWS), submitted three proposals for addition to the agenda. The items are: (1) Regulations of Trade in Appendix II Wildlife; (2) Reverse Listing of Species in CITES Appendices; and (3) Interpretation of the Convention with Regard to the Exploitation of Wild Species. These proposals appear in full in the November 10, 1980, *Federal Register*, and are included under XIV, and XV in the provisional agenda.

Canadian Proposals

Items suggested by Canada include (1) a ten year review of the appendices and (2) criteria for addition to and deletion from the appendices of species listed under Article II 2 (b) of CITES. These topics are included in the provisional agenda under XV and are discussed in the November 13, 1980, *Federal Register*.

Development of Agenda

Because it is not possible to detail in this article all events contributing to the development of the provisional agenda and U.S. negotiating positions, we refer you to the following list of six *Federal Register* entries. The Service published each of these notices after receiving them from the CITES Secretariat or pursuant to a public notice or meeting:

- Notice—F.R. 5/9/80—publication of time, place, and provisional agenda for third regular CITES meeting.
- Notice—F.R. 8/11/80—acceptance of suggestions for addition of several items to provisional agenda.
- Notice—F.R. 9/3/80—proposed negotiating positions with regard to certain provisional agenda.
- Notice—F.R. 11/10/80—modification of Service's acceptance of three suggestions for addition of items to the provisional agenda.
- Notice—F.R. 11/13/80—publication of items added to the provisional agenda; change of meeting time; cut off date for receipt of requests for observer status; and report on formation of U.S. delegation to the meeting.
- Notice—F.R. 12/8/80—proposed negotiating positions for third regular meeting.

Discussion of XVI, Consideration of Proposals for Amendment of Appendices I and II, is contained in another article in this issue of the BULLETIN.

MANATEE FOUND IN CHESAPEAKE BAY VIRGINIA

William Gill

On October 22, 1980, the remains of a male West Indian manatee (*Trichechus manatus*) weighing nearly 740 pounds (335 kg) and measuring over 9½ feet (295 cm) was found by Sue Black, a local resident, in Buckroe Beach, Virginia. Buckroe Beach lies on the Chesapeake Bay just north of the mouth of the James River. The apparent cause of death was starvation compounded by pneumonia.

This occurrence marks the northernmost documented range for manatees in Service files. The previous authenticated record was from Ocean View,

Virginia, in 1908. Ocean View is just south of the mouth of the James River in Norfolk. [*The Journal of Mammology* (February, 1950; Vol. 1; pg. 98) reported an account of what appears to be a manatee sighted in the Rappahanock River, Virginia, by Thomas Glover on June 20, 1676. The Rappahanock River lies just south of the Potomac River and north of the James River.]

Generally during the winter months the U.S. population of the West Indian manatee is restricted to peninsular Florida, congregating around natural and industrial warm-water discharge sources. (Winter distribution has apparently expanded because of warm-water discharges from industrial and power-generating plants.) Summer distribution is more widespread, occurring along the Gulf and Atlantic coasts from western Florida to Georgia. Occasionally, sightings are reported from southern Texas to North Carolina. The principle distribution of the U.S. manatee population, however, is in Florida. It occurs in the St. Johns River from Brevard County to Jacksonville; along the Atlantic coast from Merritt Island to Key West; along the Gulf coast from Key West to Tampa Bay; horizontally across the State, along the Caloosahatchee River; Lake Okeechobee and the St. Lucie Canal; and in Bernardo and Citrus Counties from Chassahowitzka National Wildlife Refuge to Crystal River (also on the Gulf Coast).

The Denver Wildlife Research Center's Laboratory at Gainesville, Florida, serves as the Service's focal point for rescue and salvage operations. The rescue and salvage effort is conducted in cooperation with and the assistance of the Florida Department of Natural Resources, the University of Miami, the Miami Seaquarium and Sea World in Orlando. A toll free telephone number is in operation to report injured and/or dead manatees (800/342-1821). (See the September 1980 BULLETIN.)

PUBLIC PARTICIPATION RULES FINALIZED

Even though procedures for public participation and agency consultation in the development of U.S. negotiating positions at CITES regular meetings were not finalized until recently (F.R. 12/18/80), a series of *Federal Register* notices and public meetings conducted by the Service during the past nine months have, by following the regulations in proposed form, essentially implemented the regulations as now set. With the exception of publishing in the *Federal Register* a proposed schedule of

public meetings and notices related to the preparation of negotiating positions for the CITES meeting, all new regulatory requirements have been or will be, met with regard to the 1981 regular meeting in New Delhi. The Service believes that such a schedule will assist all concerned with the preparation of U.S. positions for future CITES meetings.

In response to the proposed public participation rules (F.R. 5/20/80), the Defenders of Wildlife requested that opportunity be given the public to comment on modified or additional agenda items submitted by the U.S. or by foreign parties subsequent to the initial agenda published in the *Federal Register*. This opportunity is provided in the new rules; a public meeting follows the publication of an initial agenda, and a second public meeting will follow a public notice on proposed negotiating positions of the

Service. Defenders also suggested the publication of a proposed schedule of public meetings and notices mentioned above.

As of January 26, 1981, six public meetings were held in preparation for the upcoming CITES meeting. Each meeting followed a notice published in the *Federal Register* which requested comments on various aspects of the provisional agenda. A seventh public meeting will be conducted following the return in mid-March of the U.S. delegation from the New Delhi meeting.

It should be noted that the Service's participation in projects, studies and committee work commissioned by the Conference of Parties is not subject to these new regulations. However, if such work is related to agenda items of future CITES meetings, it will be subject to public comment as part of the development of negotiating positions.

PUBLIC MEETINGS — HEARINGS

Species/Action	Affected States	Location of Meeting/Hearing	Date	Time
Kentucky cave shrimp: proposed C.H.	K ^v	Hearing: Horse Cave Theater, Main and Maple Streets, Horse Cave, Kentucky	2/25/81	7:00 p.m.
*Heliotrope milk-vetch (<i>Astragalus montii</i>): proposed, C.H.	UT	Meeting: County Courthouse, 160 North Main St., Manti, Utah	3/18/81	7:00 p.m.

CANCELLED

* A summary of the proposed rulemaking on this plant will be included in the February 1981 BULLETIN.

STATE MEETINGS

The Pennsylvania Biological Survey announces a "Conference on Species of Special Concern—Threatened and Endangered Species of Pennsylvania." It will be held at the Carnegie Museum of Natural History, Carnegie, Institute, 4400 Forbes Avenue, Pittsburgh, Pennsylvania (15213) on March 7, 1981, from 10:00 a.m.-4:00 p.m. For additional in-

formation, write the above address or call 412/622-3283. Registration fee is \$12.00

The Center of Environmental Research at Stockton State College, Pomona, New Jersey (08240) will sponsor the "Second Symposium on Endangered and Threatened Plants and Animals of New Jersey" on February 28 and March 1, 1981. The symposium will be on Stockton State campus, Rooms B-115 and 116. Saturday hours are from 8:30 a.m.-5:00 p.m.; Sunday hours are from 1:00-5:00 p.m. For additional information call Dr. Wm. J. Cromartie (609/652-1776).

SERVICE COMMENTS ON PROPOSALS TO AMEND APPENDICES

Any party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) may propose changes to the lists of animal and plant species included in Appendices I and II for protection by this treaty. The Office of the Scientific Authority, staff to the Service as the U.S. Scientific Authority for CITES, announced in a notice (F.R. 11/6/80) a list of proposals for consideration at the upcoming CITES meeting in New Delhi.

The list contains proposals submitted by both U.S. and foreign governments (Australia, Austria, Federal Republic of Germany, France, Panama, Peru, South Africa, and the United Kingdom). Many proposals suggested earlier (F.R. 7/21/80) were not submitted for consideration at New Delhi, either because the available information was insufficient to meet the parties' criteria for including or delisting species, or because the information indicated that a proposal was not appropriate under the terms of the CITES.

We regret that space limitations preclude our publication of the entire list of proposals, although we will attempt to carry final amendments in the April 1981 BULLETIN. In lieu of the complete list, we have printed below selected portions of comments on them sent by the Service to the CITES Secretariat.

Sea Turtles/Iguanas

The U.S. strongly favors Australia's proposal to transfer the flatback sea turtle (*Chelonia depressa*) and the Australian population of the green sea turtle (*Chelonia mydas*) from Appendix II to Appendix I. While the population status of these animals does not qualify them for inclusion in Appendix I on biological grounds, it is evident that effective control of trade in other sea turtles requires such listing. *Chelonia mydas* populations are protected as Endangered and as Threatened under the Endangered Species Act of 1973 (see August 1978 BULLETIN).

Both Australia and the U.S. proposed listing of the Fiji banded iguana (*Brachylophus fasciatus*) and the Fiji crested iguana (*Brachylophus* sp.) on the Appendices (Appendix I by the U.S. and Appendix II by Australia). The Service believes that the Fiji banded iguana, despite its wider distribution, is threatened with extinction. Both iguanas are listed as Endangered under the Act (see April 1980 BULLETIN).

Whales

The U.S. proposed to transfer the sperm whale (*Physeter macrocephalus*), Sei whale (*Balaenoptera borealis*), and Fin whale (*Balaenoptera physalus*) from Appendices I and II to Appendix I, with exceptions for certain stocks. The U.S. suggests that its proposal to include in Appendix I certain stocks of each of these three species be modified as follows. Instead of specifying certain stocks, the listing of each species in Appendix I could be followed by the statement "all stocks for which the International Whaling Commission allows no commercial catch, as specified in the 1980 schedule."

The Federal Republic of Germany proposed to transfer all stocks of the same three whale species to Appendix I. While the U.S. continues to seek a moratorium on commercial whaling, which would be supported by the German proposal, the U.S. withheld comment pending resolution of issues concerning the relationship of CITES to the Convention for the Regulation of Whaling and concerning satisfaction of the Appendix I listing criteria for these species. (All three whale species are protected as Endangered under the Act.)

Psittacines (Parrots and Allies)

Both the United Kingdom and the U.S. proposed listing all species of the order Psittaciformes in Appendix II, except for those species included in Appendix I. There is evidence of extensive international trade involving many species in this order. The results of a recent study by TRAFFIC (USA) on U.S. imports of psittacines show that during nine months, from October 1979 to June 1980, the U.S. imported over 200,000 psittacines originating from 50 countries. They included 133 species (73 Old World and 60 New World), almost 40 percent of all psittacine species, representing 44 of the 81 genera.

The U.S. agreed with the United Kingdom that the budgerigar (*Melopsittacus undulatus*) should be excluded from the appendices. For the same reasons, the Service also now believes that the cockatiel (*Nymphicus hollandicus*) should be excluded from the appendices.

With respect to the U.K. proposal to include all species of the order Psittaciformes in Appendix II, the Service com-

mented that it is important to distinguish between species listed because of current or potential threat of extinction, and those listed in order to effectively control trade in other currently or potentially threatened species. Many species of psittacines are in international trade, but evidence of threat exists only for certain species. The listing of the order as a whole can only be justified under Article II.2 (b) of the CITES, while those individual species for which there is sufficient evidence of current or potential threat can be justified under Article II.1 or II.2 (a), respectively.

Southern White Rhinoceros

The Service commended the Republic of South Africa for their notable success in restoring populations of the southern white rhinoceros (*Ceratotherium simum simum*), and recognized the problems of managing this species in a limited habitat.

However, the Service noted that transfer of this subspecies to Appendix II should not occur because it would allow commercial trade in rhinoceros products, which is otherwise prohibited for all species of rhinoceros. Even if the subspecies in question does not enter such trade, products of other species might enter trade under the name of this subspecies. This would have serious consequences for the other species, which are in peril of extinction because of trade.

Other Comments

U.S. proposals to list on Appendix I both the Marianas fruit bat (*Pteropus marlannus*) and the little Marianas fruit bat (*Pteropus tokudae*) are in line with a petition made by the Government of Guam for the Service to review the status of 12 species from that island. A notice of review to determine whether they should be listed as Endangered or Threatened, and their Critical Habitats designated, was published over a year ago (F.R. 5/18/79). The Marianas fruit bat, highly prized as food, is reportedly imported to Guam from other islands (Saipan, Tinian, and Rota). This, along with other debilitating factors, contributes to its declining populations.

All populations of the American crocodile (*Crocodylus acutus*) have been proposed by the U.S. and Panama to be transferred from Appendix II (except I for Florida) to Appendix I. This species is protected as Endangered under the Act.

The U.S. has proposed that the Central American river turtle (*Dermatemys mawli*) be listed on Appendix I and that the West Indian rock or ground iguanas (*Cyclura* spp.) and Gray's monitor lizard (*Varanus grayi*) be transferred from Appendix II to Appendix I. All three of the above reptiles are included in a notice of review on the status of 18 species of

foreign reptiles (F.R. 8/15/80). The San Esteban Island chuckwalla (*Sauromalus varius*), proposed by the U.S. to be placed on Appendix I, is listed as Endangered under the Act (See the April 1980, BULLETIN).

Four native plants listed in the Serv-

ice's recent plant notice (see page 1) are proposed for addition to the appendices: California pitcher plant or cobra lily (*Darlingtonia californica*) and Venus flytrap (*Dionaea muscipula*) to Appendix II; Alabama canebrake pitcher plant (*Sarracenia alabamensis* ssp *alaba-*

mensis) and red pitcher plant (*Sarracenia jonesii*) to Appendix I. The U.S. also proposed the green pitcher plant (*Sarracenia oreophila*), which is protected as Endangered under the Act (see October 1979 BULLETIN), for addition to Appendix I.



NOAA/NMFS Photo

With the exception of certain stocks, the U.S. has proposed to transfer the fin whale from Appendices I and II to Appendix I of CITES.

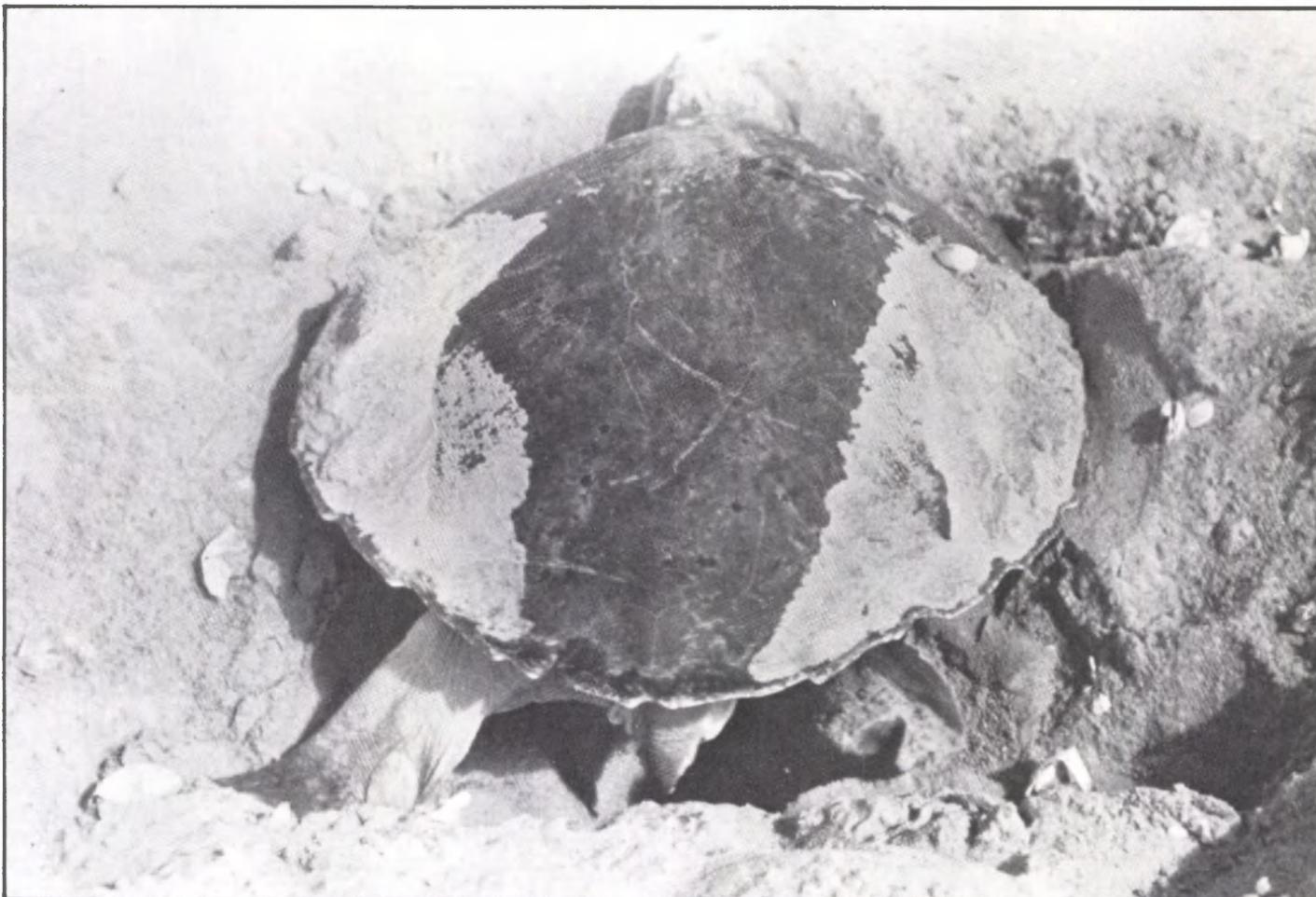


Photo by Colin Limpus

The Commonwealth of Australia has proposed to place the flatback sea turtle (*Chelonia depressa*) on Appendix I of CITES. This action, which was also recommended by the World Conference on Sea Turtle Conservation, would assist in the control of trade in other sea turtles.

SERVICE ISSUES 1980-81

EXPORT FINDINGS

The Service has issued final findings for the export of bobcat (*Lynx rufus*), lynx (*Lynx canadensis*), river otter (*Lutra canadensis*), Alaskan gray wolf (*Canis lupus*), and Alaskan brown bear (*Ursus arctos*) for the 1980-81 season (F.R. 12/4/80). As with earlier findings issued for export of American ginseng (*Panax quinquefolius*) and American alligator (*Alligator mississippiensis*—F.R. 10/21/80), States must meet criteria used by the Service acting as both U.S. Scientific Authority and Management Authority for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in order to qualify for export of these species. All of these species are listed on Appendix II of CITES.

Scientific Authority criteria requires a State to provide information on population trend, total harvest of the species, distribution of the harvest, and habitat evaluation. The States must also demonstrate a controlled harvest, that pelts are registered and marked, and that a harvest level objective has been determined. States that do not meet all of these criteria may be able to satisfy Scientific Authority concerns by providing reasonable assurance that export will not be detrimental to the survival of the species through their efforts to improve information on populations and harvests.

Management Authority criteria for export requires an ongoing State tagging program to assure that specimens were legally taken. Tags must (1) be made of metal or some other permanent material, (2) be permanently attached to the pelt, (3) accompany finished products to the port where they will be collected by U.S. Fish and Wildlife officers, (4) be applied within a specified time of taking, (5) show State of origin, (6) show year of taking, (7) show species, and (8) be serially unique.

The Service has concluded that both Scientific Authority and Management Authority criteria have been met for the export of bobcat, lynx, and river otter taken in the 1980-81 season for these States:

1. Bobcat—Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, Navajo Nation.

2. River otter—Alabama, Alaska, Arkansas, Connecticut, Delaware, Florida, Georgia, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, New Hampshire,

New York, North Carolina, Oregon, South Carolina, Vermont, Virginia, Washington, Wisconsin.

3. Lynx—Alaska, Minnesota, Montana.

Both Scientific and Management Authority criteria have been met for the export of Alaskan gray wolf and Alaskan brown bear taken in the 1980-81 season with the condition that pelts are tagged as required by the State of Alaska.

IMPORT/EXPORT LICENSE REQUIREMENT RELAXED

To relieve the burdensome demands that the import/export license requirement would impose on small entities, particularly small businesses and individuals who only occasionally import or export wildlife for gain or profit, the Service has amended the rule to except persons if the value of the wildlife they import or export totals less than \$25,000 a calendar year (F.R. 12/31/80). Persons who may qualify for the exception, and have submitted an application to the Service for an import/export license, should contact as soon as possible the Special Agent in Charge to whom the application was sent. (See September 1980 BULLETIN for an explanation of the import/export license requirement.)

SERVICE ALLOWS NATIONWIDE SALE OF ALLIGATOR MEAT

The Service has revised the special rule on the American alligator (*Alligator mississippiensis*) allowing the nationwide sale of meat and other parts, except hides, from lawfully taken specimens (F.R. 11/25/80). Under the revised rule, fabricators who manufacture products from American alligator leather

are no longer required to obtain a permit. After reviewing public comments on the proposed rule (F.R. 8/8/80—see the August 1980 BULLETIN), the Service decided that no substantive changes to the proposed rule were necessary.

Although fabricators are no longer required to obtain a permit, buyers and tanners engaging in trade in American alligators remain highly regulated. This is to insure that only lawfully taken specimens enter the market. Basically, American alligator meat and other parts, except hides, may be sold nationwide if the sale is in accordance with the laws and regulations of the State in which the taking occurs and the State in which the sale occurs.

A number of conditions must be satisfied in order for harvested alligators to reach the market place: (1) the untanned hide may be sold or transferred only to a person holding a valid Federal permit to buy hides, (2) the hide must be tagged by the State where the taking occurs with a noncorrodible, serially numbered tag which identifies the State, (3) the tag number, length of skin, type of skin, and date and place of taking must be recorded with the State, and (4) packages or containers for shipping American alligator must have an identifying tag or label on the outside.

Any person wishing to engage in the activities of a buyer or tanner must first apply for a Federal permit from the Fish and Wildlife Service. The Service will issue a permit based on, among other things, the applicant's reliability and apparent ability and willingness to keep an accurate inventory and records of all American alligator hides, and all hides of any other species of the order Crocodylia handled by the applicant.

Because fabricators are no longer required to obtain a permit or attach labels to manufactured products, the Service is offering to refund, at the original cost of 30¢ each, for a period ending 90 days from December 22, 1980, their unused labels (F.R. 12/22/80). To receive the refund, return unused labels, arranged in numerical sequence and accompanied by an inventory of labels being returned, to the Federal Wildlife Permit Office, P.O. Box 3654, Arlington, Virginia 22201.

Rulemaking Actions

December 1980

ENDANGERED STATUS: CRITICAL HABITAT PROPOSED FOR CHIHUAHUA CHUB

The Service has proposed the Chihuahua chub (*Gila nigrescens*) as an Endangered species with Critical Habitat (F.R. 12/15/80). Populations of the chub have been significantly reduced because of recent modifications in the aquatic habitats of the Guzman Basin, including the Mimbres River of New Mexico and the Rio Casas Grandes, Rio Santa Maria, and Laguna Bustillos drainages of Mexico.

Adult chubs average about six inches in length and are usually found in pools (greater than three feet in depth) or associated with some type of cover (such as undercut banks, submerged trees or shrubs) in small and medium size streams. The chub's preferred habitat, however, has been virtually eliminated through a combination of factors associated with agricultural and flood control developments.

The effects of flood reclamation work, maintenance of push-up irrigation diversions, channelization, and development of flood control levees on the habitat have restricted the present chub population, probably fewer than ten adult chubs, to one small section of the Mimbres River. Continuation of these activities will severely threaten the continued existence of the species in the United States.

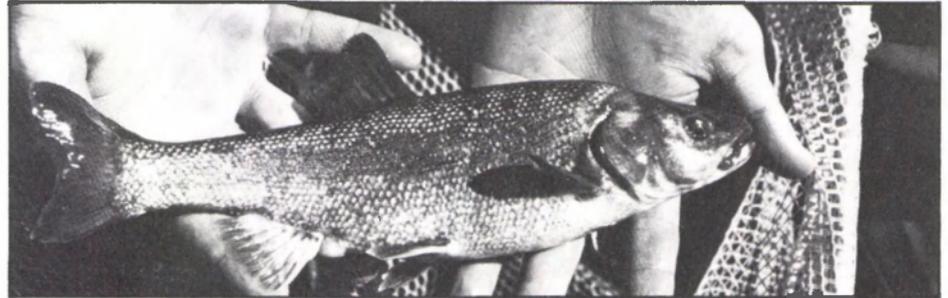
However, with appropriate modifications, some of the activities described above could be carried out without adversely impacting the chub population. Channelization in any form within the Critical Habitat would likely be detrimental to the chubs, but incentive to modify stream channels would probably not exist if adequate flood protection was available for local property owners. In addition, any future excessive ground water pumping or surface water diversion in the vicinity of the Critical Habitat could be detrimental to the chub.

No known current or proposed Federal action should impact the proposed Critical Habitat. However, the U.S. Army Corps of Engineers, the Soil Conservation Service, and the Federal Disaster Assistance Administration are authorized to provide Emergency Levee Rehabilitation (Public Law 84-99) for private flood control structures damaged by high waters. Consequent-

ly, a future flood on the Mimbres River may necessitate such Federal flood control improvement projects in the proposed Critical Habitat area.

The Service has received support for listing the chub as Endangered from: the Albuquerque District of the U.S. Army Corps of Engineers, the American Fisheries Society Endangered Species Committee, the New Mexico Wildlife

Federation, and the Desert Fishes Council. A public meeting on this proposed rule was held in Silver City, New Mexico, on January 6, 1981. Additional comments from the public on this proposal must be received by March 16, 1981. They should be submitted to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.



Probably fewer than ten adult Chihuahua chubs exist today in one small section of the Mimbres River in New Mexico.

New Mexico Department of Game and Fish Photo

Critical Habitat Proposed for Stickleback

Based on recommendations made by the Unarmored Threespine Stickleback Recovery Team, the Service has proposed to designate Critical Habitat for this subspecies (F.R. 11/17/80). The unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), federally listed as Endangered on October 13, 1970, is presently known only from the headwaters of the Santa Clara River in northwestern Los Angeles County, and one creek in Santa Barbara County, California.

According to the recovery team, stickleback populations have been eliminated in some river systems because of large-scale impoundments, stream channelization, increased water turbidity, introduction of non-native competitors and predators, and water pollution.

Quantity and quality of water are important factors in the survival of the subspecies. Survival of the unarmored threespine stickleback is dependent on a continuity of spring-fed water flow. However, evidence suggests that genetic integrity of the population also depends on an absence of surface flow in some segments of the lower watercourse during dry periods of the year. Therefore, there are maximum and minimum long term water levels beyond which the survival of this subspecies

could be adversely affected.

Streams where the fish still occurs are characterized by clear water with a slow to moderate current, shallow pools, minimal pollution, and a good diversity of algae and higher plants. The stickleback's survival could be adversely affected by activities which greatly modify water current, depth, or vegetation, or by the introduction of non-native species.

Considerable portions of the areas being proposed as Critical Habitat are under direct responsibility of the U.S. Forest Service and the U.S. Air Force. In the event that this proposal is published as a final rule, these agencies (as well as other Federal agencies) would be required to insure that activities they authorize, fund, or carry out are not likely to result in the destruction or adverse modification of these Critical Habitats.

The Critical Habitat designation includes three stream zones of the upper Santa Clara River watershed in northwestern Los Angeles County, California (including a zone near Del Valle, one in San Francisquito Canyon, and one in Soledad Canyon), and the lower segment of San Antonio Creek on the Vandenberg Air Force Military Reservation in Santa Barbara County, California.

Comments on this proposal are due by February 17, 1981, and should be submitted to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

BACK ISSUES OF BULLETIN AVAILABLE

Back issues of the *Endangered Species Technical Bulletin* (July 1976-November/December 1980) are now available from the Fish and Wildlife Reference Service in Denver, Colorado. This service is an agency of the Denver Public Library and is funded by the U.S. Fish and Wildlife Service, Division of Federal Aid. Available "hard copy" issues will be sent free of charge upon request for as long as the supply lasts. A complete set of back issues is available on microfiche for \$2.00. New issues will be added to the set at regular intervals. Please state clearly which "hard copy" issues (month and year) you wish to receive and/or send money for microfiche copy to Fish and Wildlife Reference Service, Unit I, 3840 York Street, Denver, Colorado 80205 (800/525-3426).

CORRECTION

In the November/December 1980 BULLETIN we incorrectly identified Ben Sanders, in a photo appearing on page 3, as a Fish and Wildlife Service botanist. He is a U.S. Forest Service wildlife biologist. Nora Murdock, also in the same picture, should have been identified as a Fish and Wildlife Service biologist. We regret the errors.

BOX SCORE OF SPECIES LISTINGS

Category	Endangered		Threatened		Species Total
	U.S.	Foreign	U.S.	Foreign	
Mammals	32	241	3	21	279
Birds	66	159	3	0	214
Reptiles	13	61	10	4	75
Amphibians	5	8	3	0	16
Fishes	34	15	12	0	57
Snails	2	1	5	0	8
Clams	23	2	0	0	25
Crustaceans	1	0	0	0	1
Insects	7	0	6	1	13
Plants	51	2	8	3	60
TOTAL	234	489	50	29	750

Number of species currently proposed: 18 animals
10 plants

Number of Critical Habitats listed: 48
Number of Recovery Teams appointed: 68
Number of Recovery Plans approved: 39
Number of Cooperative Agreements signed with States:
37 (fish & wildlife)
8 (plants)

December 31, 1980

NEW PUBLICATIONS

Proceedings of the 1979 Symposium of the Desert Tortoise Council are now available. To order, send \$5.00 to the Desert Tortoise Council, 5319 Cerritos Avenue, Long Beach, California 90805.

Copies of the *Proceedings of the Symposium on Endangered and Threatened Plants and Animals of Virginia* are available at \$12.00 per copy from Mrs. Yvonne Holmes, Sea Grant at Virginia Tech, P.O. Box 369, 102 South King

Street, Hampton, Virginia 23669.

A list of *Endangered and Threatened Wildlife and Plants Native to the United States* is available from the Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240. The list is current as of October 1, 1980, and is free of charge.

The Forest Service has published a booklet entitled *Rare and Endemic Trees of Puerto Rico and the Virgin Islands*, Conservation Research Report No. 27. For further information on the cost and availability of this publication, contact the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.



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



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U.S. DEPARTMENT OF THE INTERIOR
Int 423

January 1981 Vol. VI, No. 1