



ENDANGERED SPECIES TECHNICAL BULLETIN

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

ENDANGERED SPECIES ACT EXTENDED AND AMENDED

New Scientific Authority and Commission Among New Provisions

On December 28, 1979, President Carter signed into law, for the second consecutive year, substantial amendments to the Endangered Species Act of 1973. Pointing to reauthorization of the Act (for a 3-year period) as one of his highest legislative priorities, the President also approved revisions to the listing, Section 7 consultation, and exemption provisions under the Act, and—perhaps most significantly—the

creation of a new commission to advise on scientific policy under the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Calling the Act "one of the most far-reaching and progressive laws ever enacted by any nation to protect wildlife and plant resources," the President said, "I look forward to and will continue to support the implementation of a vigorous endangered species program."

Listing and related provisions

Among other things, Public Law

96-159, in the words of President Carter, "strengthens our endangered species protection program by including plant as well as animal species in the emergency listing and international cooperation provisions."

Other revisions follow:

- A summary of proposed regulations (rather than the complete text) and, where applicable, a map of the proposed Critical Habitat, must be published in local newspapers within or adjacent to the habitat.

- Public meetings and hearings on

Continued on page 3

SERVICE WITHDRAWS PROPOSALS TO LIST 1,876 SPECIES

In line with 1978 Amendments to the Endangered Species Act, the Service has published a notice of withdrawal of five expired proposals to list as Endangered or Threatened 1,876 plants and animals (F.R. 12/10/79).

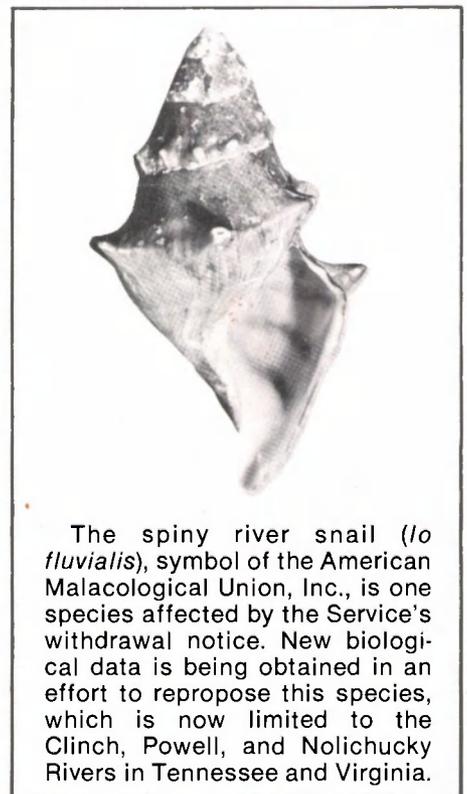
As enacted on November 10, 1978, Section 4(f)(5) of Public Law 95-632 requires the Service to officially withdraw all outstanding listing proposals not finalized within two years of their first publication in the *Federal Register*. The amended legislation authorized a one-year grace period following its enactment before affected proposals must be dropped, however, thus mandating the withdrawal of pending proposals published prior to November 10, 1977, (see October 1978 BULLETIN).

Most of the proposed species affected by the withdrawal (some 1,726)

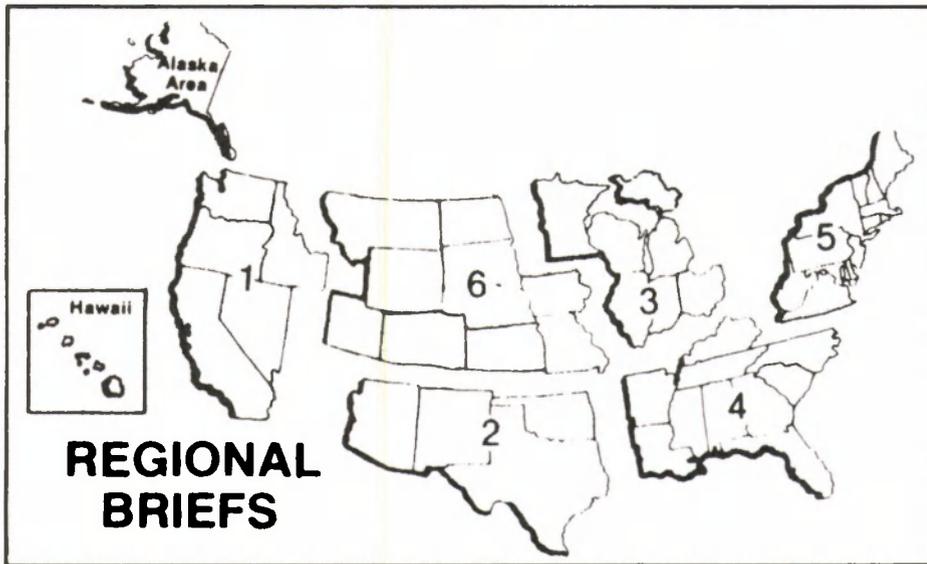
are native plants, while another 87 foreign plants and 63 invertebrates had to be dropped from immediate listing consideration. Affected proposals—including species ranging in portions of 46 States and some 27 foreign countries—are as follows:

| | |
|---|----------------|
| Proposed rule | |
| Proposed Endangered status for 216 species appearing on Convention on International Trade | Sept. 26, 1975 |
| Proposed Endangered or Threatened status for 32 U.S. snails | Apr. 26, 1976 |
| Proposal to determine 2 birds, 1 lizard, 3 snails, and 1 insect, all indigenous to the | |

Continued on page 3



The spiny river snail (*Ilo fluvialis*), symbol of the American Malacological Union, Inc., is one species affected by the Service's withdrawal notice. New biological data is being obtained in an effort to repropose this species, which is now limited to the Clinch, Powell, and Nolichucky Rivers in Tennessee and Virginia.



REGIONAL BRIEFS

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

Region 1. The final report on the 'Ewa Botanical Survey of Threatened and Endangered Plants (Hawaii) has

been published. Questions on availability should be directed to the regional office.

A contract has been completed for a status report on Washington's Threatened and Endangered plants.

Region 2. Clear Creek Dam has been rebuilt to protect the Clear Creek gambusia (*Gambusia heterochir*). The dam had been deteriorating and it was feared that a washout would destroy the species.

Region 3. Regional personnel briefed Senator David F. Durenberger's staff on the status of the gray wolf (*Canis lupus*) in northern Minnesota.

Region 4 and 5. The Columbia Dam Coordinating Committee, set up to provide guidance for the Tennessee Valley Authority in implementing the the Columbia Dam Biological Opinion and insuring the continued existence of Endangered mussels, met to discuss the group's goals and aspects of the dam project and the biological opinion.

Region 6. In 1979, 57 American peregrine falcons (*Falco peregrinus anatum*) reared by the Peregrine Fund (Ft. Collins, Colorado) were released into the wild in six western States. Thirty-one of the birds survived to the point of being self-sufficient.

Last year (1979) was the first year it was documented in the western

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

Lynn A. Greenwalt, *Director*
(202-343-4717)
Ronald E. Lambertson
*Associate Director and
Endangered Species Program Manager*
(202-343-4646)
Harold J. O'Connor
Deputy Associate Director
(202-343-4646)
John Spinks, *Chief,
Office of Endangered Species*
(703/235-2771)
Richard Parsons, *Chief,
Federal Wildlife Permit Office*
(703/235-1937)
Clark R. Bavin, *Chief,
Division of Law Enforcement*
(202-343-9242)

TECHNICAL BULLETIN STAFF
Dona Finnley, *Editor*
Morey Norkin, *Editorial Asst.*
(703/235-2407)

Regional Offices

Region 1, Suite 1692, Lloyd 500 Bldg.,
500 N.E. Multnomah St., Portland, OR
97232 (503-231-6118): R. Kahler Mar-
tinson, *Regional Director*; Edward B.
Chamberlain, *Assistant Regional Di-
rector*; David B. Marshall, *Endangered
Species Specialist*.

U.S. Fish and Wildlife Service 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, Michigan, Minnesota, 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, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. **Alaska Area:** 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.

Region 2, P.O. Box 1306, Albuquerque,
NM 87103 (505-766-2321): W. O. Nel-
son, *Regional Director*; Robert F. Ste-
phens, *Assistant Regional Director*;
Jack B. Woody, *Endangered Species
Specialist*.

Region 3, Federal Bldg., Fort Snelling,
Twin Cities, MN 55111 (612-725-3500);
Harvey Nelson, *Regional Director*;
Daniel H. Bumgarner, *Assistant Re-
gional Director*; James M. Engel, *En-
dangered Species Specialist*.

Region 4, Richard B. Russell Federal Bldg.,
75 Spring St., S.W., Atlanta, GA 30303
(404-221-3583): Kenneth E. Black, *Re-
gional Director*; Harold W. Benson,
Assistant Regional Director; Alex B.
Montgomery, *Endangered Species Spe-
cialist*.

Region 5, Suite 700, One Gateway Cen-
ter, Newton Corner, MA 02158 (617-
965-5100): Howard Larsen, *Regional
Director*; Gordon T. Nightingale, *As-
sistant Regional Director*; Paul Nick-
erson, *Endangered Species Specialist*.

Region 6, P.O. Box 25486, Denver Fed-
eral Center, Denver, CO 80225 (303-
234-2209): Don W. Minnich, *Re-
gional Director*; Charles E. Lane, *As-
sistant Regional Director*; Don Rodgers,
Endangered Species Specialist.

Alaska Area, 1101 E Tudor Rd., Anchor-
age, AK 99503 (907-276-3800, ext. 495);
Keith M. Schreiner, *Area Director*;
Jon Nelson, *Ass't Area Director*; Dan
Benfield, *Endangered Species Specialist*.

Endangered Species Act Extended and Amended

Continued from page 1

Critical Habitat proposals are to be held separately (with a hearing to be held if requested within 15 days of a public meeting).

- The time period for which emergency listing and Critical Habitat designations are effective (now applicable to both animals and plants) has been extended from 120 to 240 days.

- A new provision requires the development and notice (with opportunity for public comment) of guidelines for the handling of petitions for listing, for priority systems for listing, and for priority systems for developing and implementing recovery plans.

- A "status review" is now required prior to the preparation of proposals for listing.

- Foreign nations—with the help of Department personnel—are encouraged under a new subsection to develop programs for the conservation of listed plants.

Section 7 Consultations/Exemptions

Necessary changes in language have been made throughout the Act to revise the jeopardy standard under Section 7 from "would jeopardize" to "is likely to jeopardize."

Other new provisions:

- All Federal agencies are required to "confer" with the Secretary on any action likely to jeopardize a proposed

United States that a peregrine released in a prior year (1978) returned to its release site.

Alaska Area. A wintering population of 1,750 Aleutian Canada geese (*Branta canadensis leucopareia*) has been estimated by observers in California. This is the highest wintering population recorded for the species since it was listed as Endangered (F.R. 3/11/67). An estimated fall flight of 1,700 was predicted from this year's nesting survey of Buldir Island, a survey conducted every three years to monitor the island's wild nesting population.

In the second year of propagation-release efforts to restore nesting populations on Agattu Island, no propagated geese have been sighted on the California wintering grounds. This summer the Service experimented by trapping 21 adults and 15 goslings from Buldir Island and releasing them with the propagated geese. Fourteen adults and four goslings from the Buldir Island population have been sighted on the wintering grounds.

species. (The intent is for agencies to begin informal discussions at an early stage). No "irreversible or irretrievable commitment of resources" requirement is imposed for *proposed* species impacts.

- Biological assessments (as required prior to filing for an exemption from Section 7) must be conducted in cooperation with the Secretary and under the supervision of the appropriate Federal agency. (Completion of an adequate assessment then qualifies the applicant for a possible permanent exemption under the Act.)

- An exemption application from a permit or license applicant must be filed within 90 days of final agency action (such as permit denial, which may follow issuance of a biological opinion).

- With regard to exemption applications initiated subsequent to the issuance of negative biological opinions by both the Secretary of Interior and Commerce for the same agency action (such as that involving sea turtles, for which jurisdiction is shared), the two Departments will jointly convene a review board.

- Regarding exemptions under Section 7, threshold requirements shall apply to both the Federal agency and the exemption applicant. (I.e., the applicant must carry out all consultation requirements, conduct any necessary biological assessment, and refrain from making a commitment of resources in order to qualify for exemption consideration, regardless of the applicant's identity.)

Service Withdraws

Continued from page 1

| | |
|---|---------------|
| California Channel Islands, to be Endangered species | June 1, 1976 |
| Proposed Endangered status for some 1700 U.S. vascular plant taxa | June 16, 1976 |
| Proposed Endangered or Threatened status for 41 U.S. species of Fauna | Jan. 12, 1977 |

It should be noted that all animals and plants subject to withdrawal may be repropounded under provisions of the 1978 Amendments if sufficient new information is available to warrant a new proposed listing.

Catch 22

Listing animals and plants to boost their protection and recovery under the Act's provisions is the most basic function of the Endangered Species Program. Why the delay?

Faced with the many complex procedural requirements brought with the new amendments (intertwined with other applicable laws), in addition to recent Presidential directives affecting all Federal regulatory processes, our Service's listing functions were slowed almost to a halt in 1979.

- An exemption granted by the Endangered Species Committee shall be permanent with respect to all listed species regardless of whether the species was included in the biological assessment (and only if the assessment was conducted), *unless* a listed species not so identified will become extinct. (In this case, the Committee, which must meet within 30 days of such a finding by the Secretary, has 60 additional days to determine permanence.)

New Commission/Scientific Authority

Under a new section, the Secretary of the Interior (acting through the Fish and Wildlife Service) has been designated as both the U.S. Management Authority and the U.S. Scientific Authority for purposes of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). (Director Greenwalt has placed the Scientific Authority function under the Service's Associate Director for Research, while the Management Authority function will continue under the Associate Director for Federal Assistance.)

While abolishing the existing En-

Consider the requirements:

- "To the maximum extent prudent," Critical Habitat must now be specified at the time a species is listed (with certain exceptions). Thus, all available data on habitat essential to the conservation of the species must be compiled preparatory to a listing and Critical Habitat proposal or, in cases where the species has been proposed, in a separate Critical Habitat proposal prior to final listing.

- As mandated under Section 4(b), we are now required to consider the economic impact of designating any particular area as Critical Habitat. If it is found that the benefits of excluding an impacted area from the designation outweigh the benefits of specifying the area, then the proposed Critical Habitat area may be so modified (so long as extinction of the species would not result). Thus, even before a listing and Critical Habitat proposal may be readied for publication, we must now consider biological as well as economic and other pertinent information before the extent of economic impacts on any given area can be measured. (Only then can we determine what, if any, area should be excluded from consideration.)

- In addition to the economic analyses required under the 1978 amendments, Executive Order 12044 requires

Continued on page 4

dangered Species Scientific Authority (ESSA)—established previously under Executive Order 11911 as the U.S. Scientific Authority—within 90 days of enactment, the new law also creates an independent International Convention Advisory Commission (ICAC) to advise on scientific policy under CITES. Similar in structure to the existing ESSA, ICAC is to be composed of at least six (and possibly seven) members: with one member each appointed by:

- the Secretary of the Interior
- the Secretary of Agriculture
- the Secretary of Commerce
- the Director of the National Science Foundation.

One member (to serve a 2-year term) shall also be appointed by the Secretary of the Interior from among officers and employees of State fish and wildlife agencies, and the Secretary of the Smithsonian Institution is invited to appoint a seventh member.

A Chairman is to be elected annually by the members. All members must be scientifically qualified.

Speaking of the new Commission

Continued on page 4

Endangered Species Act Extended and Amended

Continued from page 3

upon signing the 1979 amendments, President Carter said, "that scientific integrity of the Convention will be preserved by the Commission's advice on the effects of trade, the listing of species on Convention appendices, and the interpretation and implementation of the Convention." Under the new provisions, the Commission will make recommendations (by majority vote) on all matters pertaining to the responsibilities of the Scientific Authority under the terms of the Convention.

As set forth in the new law, the new Commission will "to the extent practicable, ascertain the views of, and utilize the expertise of, the governmental and nongovernmental scientific communities, State agencies responsible for the conservation of wild fauna and flora, humane groups, zoological and botanical institutions, recreational and commercial interests, the conservation community, and others as appropriate" in discharging its responsibilities.

The public will have an opportunity to comment on all Management and Scientific Authority decisions, and the Scientific Authority must also provide, upon publication of final notices, an explanation of its reasons for any decision not consistent with the Commission's recommendations.

Until such time as the Chairman and members are appointed (or no longer than 90 days after enactment), the current ESSA will carry out the functions of the newly-created Commission.

Appropriations

Reauthorizing administration of the Endangered Species Act for an additional three years, the 1979 amendments allow appropriations to implement the Act's provisions (except as authorized under Section 6 and as discussed below for portions of Section 7) not to exceed the following amounts:

| | |
|------------------|--------------------------|
| Interior: | \$23,000,000 for FY 1980 |
| | 25,000,000 for FY 1981 |
| | 27,000,000 for FY 1982 |
| Commerce: | \$ 2,500,000 for FY 1980 |
| | 3,000,000 for FY 1981 |
| | 3,500,000 for FY 1982 |

Additional appropriations of \$600,000 are also authorized to support Endangered Species Committee and review board functions (under Section 7)

for each of Fiscal Years 1980, 1981, and 1982.

For the first time, the amendments also authorize appropriations for the Department of Agriculture to facilitate enforcement of the Act and the Convention with regard to the importation and exportation of terrestrial plants. Amounts not to exceed \$1,500,000 for FY 1980, \$1,750,000 for FY 1981, and \$1,850,000 for FY 1982 have been

allowed.

Scrimshaw

Finally, the deadline for the sale of scrimshaw has been extended under the amendments. Section 10(f) now provides for one last renewal of certificates of exemption, allowing the sale for three more years *only* of whale parts and products held in stock prior to 1973.

Service Withdraws

Continued from page 3

a "determination of significance" prior to the publication of any proposed ruling. Among other things, this involves an assessment of economic, recordkeeping, and other impacts on Federal, State, and local programs. (A rule is generally considered "significant" if it has an economic effect of more than \$100 million.) If a proposal is found significant, then a work plan, notice of intent, and regulatory analysis would be required prior to publication of the proposal.

- Once finalized and published in the *Federal Register*, all Critical Habitat and listing proposals must be offered to scientific journals for publication; the substance of proposals must be published in affected area newspapers; and, notice must be given to local governments in affected areas (in addition to State Governors). Moreover, a public meeting must be held (and, when requested, a public hearing) *prior* to designation of Critical Habitat.

- As a separate stipulation, all proposed rulemaking packages must contain an Environmental Impact Assessment (in compliance with the National Environmental Policy Act) outlining the environmental impacts of listing the animal or plant. Should significant impact be discovered during the proposal process, then a full-blown Environmental Impact Statement may be required prior to final listing.

- Finally, as always, public comments are solicited and reviewed (and incorporated as appropriate in the final rulemaking document) prior to final listing and Critical Habitat determination.

At first, it seemed a no-win situation for the Program's listing biologists. Not only would it be a miraculous feat to compile and commit to paper all the

biological, habitat, and economic data required by the 1978 provisions, *with available staff*, but it had to be done within given deadlines. Even more frustrating was the knowledge that—despite the emergency appointment of special task forces to speed compliance—the painstaking procedures for analyzing the economic impacts of a Critical Habitat determination were not yet completed. Without economic data, no determination on the appropriateness of Critical Habitat (in most cases) could be made. Without Critical Habitat, no listing.

This "catch-22" has not only forced the withdrawal of possibly hundreds of species which could have otherwise received protection; it has also now required staff specialists to spend valuable time pouring over new biological data on which to base listing consideration *prior* to repropounding many of these same jeopardized species.

Outlook for '80

While procedures are not yet fully developed, prospects for proposal and final listing actions in 1980 are somewhat brighter.

With help from Department solicitors, guidelines to assist regional and Washington Office specialists in conducting economic analyses are being finalized. Final regulations guiding compliance with all Section 4 (primarily listing) provisions—inclusive of changes brought with December 1979 amendments (see story on page 1)—should be published soon.

Several economists are joining our staff to assist in the necessary economic assessments. Critical Habitat specialists have been hired. At least six additional biologists will soon be employed by the Washington and regional offices to assist in listing and data gathering—responsibilities now shared by the regions.

Together, the regional and Washington Offices hope to propose more than 200 species for protection (and to list as many of these as possible) during 1980.

Houston Toad Propagation Project

Under contract to the Service, researchers at the Houston Zoological Gardens have been working to perfect methods for raising Endangered Houston toads (*Bufo houstonensis*) in captivity. It is hoped that successful propagation will help boost the recovery of this small, secretive toad, whose total numbers are estimated at less than 1,500.

Of 3,600 eggs collected from Bastrop County, Texas, in March 1978, and maintained at 24°C, 91

percent survived to metamorphose. Of 4,875 eggs laid by two pairs of *B. houstonensis* collected in amplexus in February 1979 (and maintained at 27°C), 95 percent of the tadpoles survived. Experiments with tadpole diets were conducted, and data on growth, thermal preference, and ultraviolet treatment were gathered.

Toadlets were more difficult to maintain in captivity, however, with only 2 percent and 5 percent

survival rates reported for 1978 and 1979, respectively.

Five hundred sixty-four metamorphosing toads were released into the wild in 1978, and a stepwise release plan for adults has been devised.

The researchers will intensify their propagation efforts over the next two years, under contract to the Service, and plan to monitor the survival of sexually mature toads upon their release in the spring of 1981.



Photo by C. Kenneth Dodd

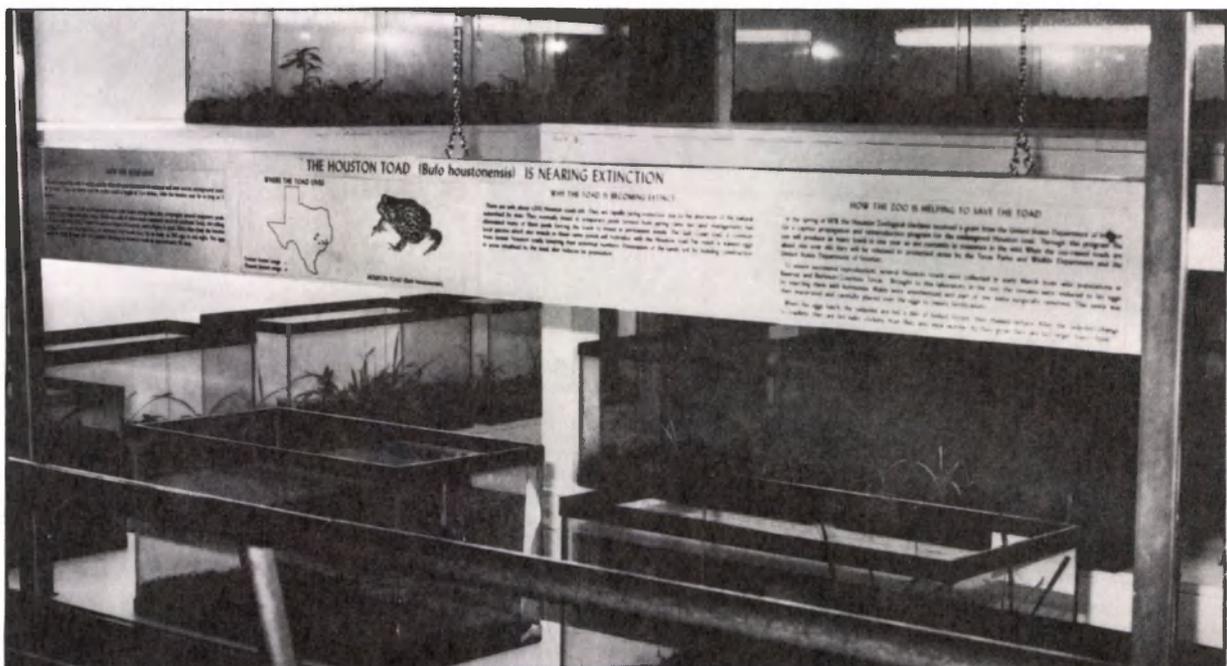


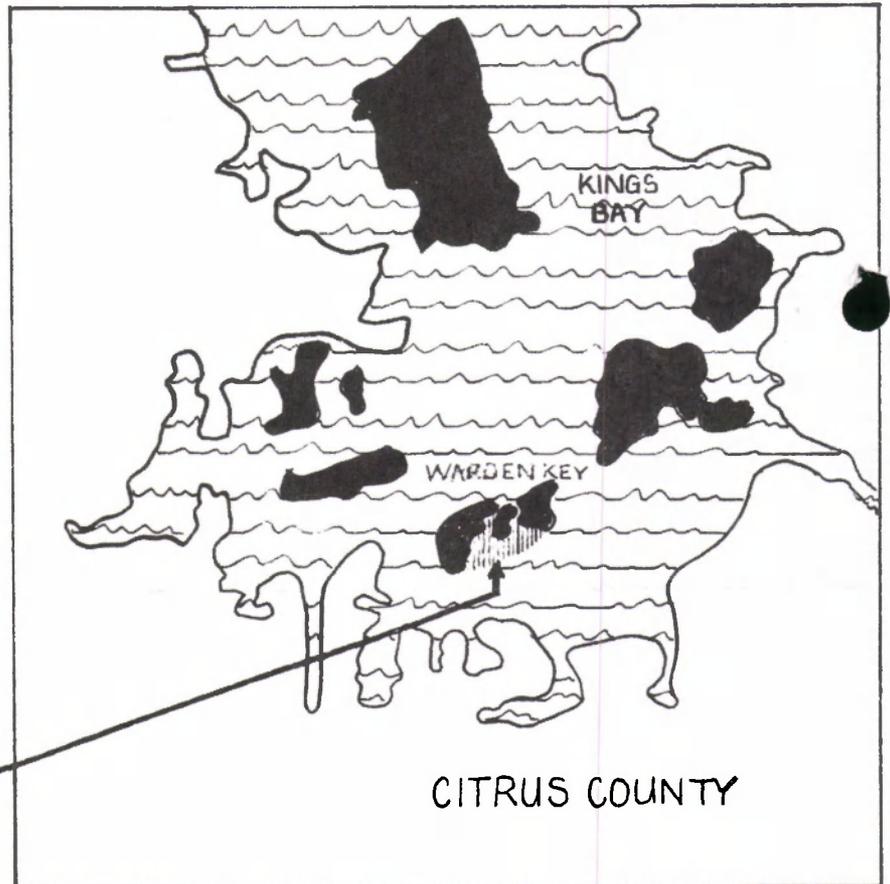
Photo by C. Kenneth Dodd

Emergency Protection Area For The Manatee

Acting to protect one of the most critically Endangered marine mammals, the Service has designated a portion of Kings Bay in Florida's Crystal River as a protected "refuge" for the manatee.

West Indian manatees (*Trichechus manatus*) are known to congregate in the natural warm-water springs of Kings Bay during the winter months, where they are safe from otherwise debilitating temperatures (below about 70 degrees F). Recent studies show that as many as 100 manatees, or one-tenth of the total estimated population, use the warm waters of Crystal River in the winter. (As many as 79 of the animals have been counted in a single survey of Kings Bay.)

Unfortunately, the presence of manatees is an added attraction for SCUBA divers and snorkelers who are



The shaded area (approximately 2 acres) adjacent to the U-shaped shoreline of Warden Key has been designated as a special manatee refuge, where all diving, snorkeling, and swim-

ming is unlawful. This measure—effective through March 31, 1980—will afford protection to these mammals during winter months when the warm-water spring is essential to their survival.

also drawn to the clear, warm waters of Kings Bay in the winter. Manatees are gentle creatures, and some seem to enjoy friendly contact with humans. The majority of animals, however, are fearful of aggressive swimmers, and will often retreat into colder waters where they may not survive.

Increasing human presence is now causing manatees to abandon their favorite resting areas close to the Bay's larger springs in favor of a tiny, 2-acre spot in the lee of Warden Key. Under its new regulations, the Florida Department of Natural Resources recently designated this a "motorboats prohibited" zone (imposing less restrictive controls over boat operations in other portions of Kings Bay). Once posted, however, Federal and State officials soon learned that manatee protection signs were actually attract-

ing divers to this very location where the animals are most vulnerable.

In view of this critical disturbance problem, and in cooperation with Florida's protection efforts, the Service has established this same 2-acre area as an emergency refuge (not to be confused with a National Wildlife Refuge), where all swimming, diving, and snorkeling are prohibited for a limited time. (Federal "back-up" regulations authorizing the establishment of manatee protection areas, and prohibiting the violation of State laws protecting manatees, became effective last November (F.R. 10/22/79)—see the November 1979 BULLETIN.)

The emergency designation—effective through March 31, 1980—was advertised in local newspapers, and the area was posted as of January 11, 1980. The Service will soon publish

notice in the *Federal Register* of its intent to propose this same area for permanent designation as a (seasonal) manatee protection area.

Manatees are gentle creatures, and some enjoy friendly contact with humans. The majority fear aggressive swimmers, however, and may be driven into colder waters where they cannot survive.



U.S. Fish & Wildlife Service Photo

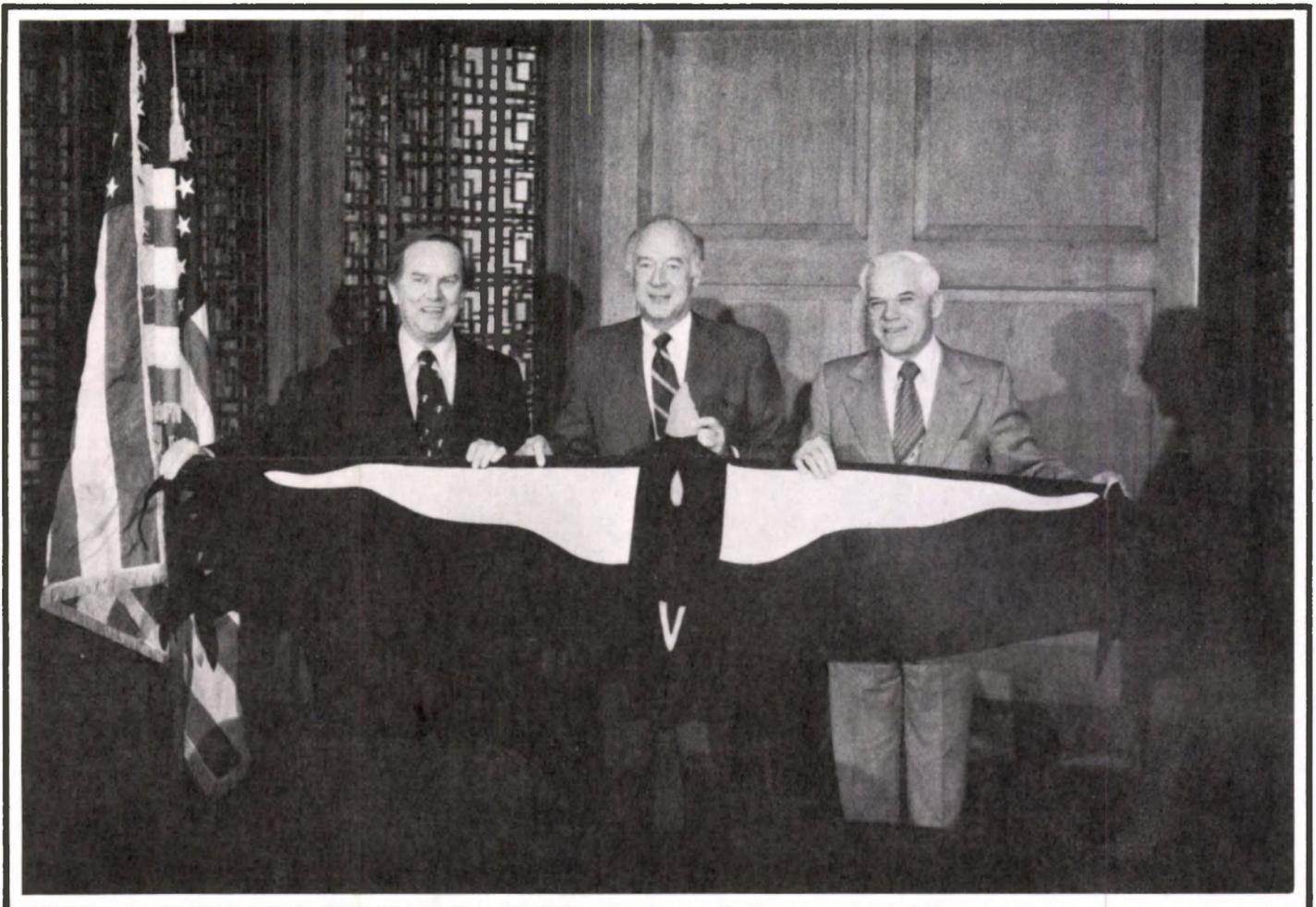
Cooperative California Condor Program Signed

A desperation attempt to save the Endangered California condor (*Gymnogyps californianus*) was given official sanction on December 17 as the Cooperative California Condor Conservation Program was signed by representatives of the Fish and Wildlife Service,

National Audubon Society, California Department of Fish and Game, U.S. Forest Service, and Bureau of Land Management.

Speaking at the signing ceremony, Interior Secretary Cecil D. Andrus said it was necessary to choose between

continued consumption of our natural resources, or saving a species which has dwindled to a population numbering 20 to 30 individuals. "We are determined to duplicate the growing success of the whooping crane, which continues to demonstrate that human



U.S. Fish and Wildlife Service Photo

Pictured from left to right: Russell Peterson, president of the National Audubon Society, Secretary Andrus, and Charles Fullerton, Director of the California Department of Fish and Game hold a cloth replica of a California condor at ceremony formalizing a multi-agency agreement to rescue this Endangered species.

SURVEY EXAMINES ATTITUDES ON ENDANGERED SPECIES

intervention can mean the difference between survival and extinction."

The multiagency agreement was made possible, in part, by a \$500,000 special appropriation approved by Congress in November. A like amount will be supplied by the National Audubon Society over the next 5 years. The program calls for research, protection of present habitat and identification of new habitat, the trapping, telemetering and tracking of remaining wild condors, and captive propagation aimed at reintroducing captive-bred condors into the wild over the next two to four decades.

This coming fall, John C. Ogden of Audubon and Noel F. R. Snyder of our Service's Patuxent Wildlife Research Center will begin direct examination of some of the condors. These birds will be captured in an effort to determine their ages, sex, and general health using blood, fecal, and feather pulp samples. Soon after their capture, the condors will be released, equipped with wing tags and radio transmitters. (The two research biologists will work in conjunction with Sanford R. Wilbur, who was recently selected as California Condor Coordinator. Wilbur, who also leads the California Condor Recovery Team, will be supervised by the Service's Sacramento Area Office for this new effort.)

The Forest Service and Bureau of Land Management will provide manpower and equipment for field research, conducting inventories, and special habitat studies.

In the meantime, biologists have begun field studies and experiments with similar species. In cooperation with the California Department of Fish and Game, the researchers are measuring pesticide levels in surrogate species such as the turkey vulture (*Cathartes aura*) in an attempt to pinpoint the effects of environmental contamination.

At the Service's Patuxent Wildlife

What do Americans think of saving Endangered species? A three-year study conducted by Dr. Stephen Kellert of the Yale School of Forestry and Environmental Studies, under contract to the Service, provides some interesting answers.

According to the study, which is based on 3,107 interviews conducted nationwide, people tend to be more supportive of an Endangered species that is either attractive, has a close biological relationship to humans, or is important in American history or folklore. That means that people generally favor protecting the bald eagle (*Haliaeetus leucocephalus*), eastern cougar (*Felis concolor cougar*), American crocodile (*Crocodylus acutus*), and the blue-black silverspot butterfly (*Speyeria nokomis nigrocaerulea*), a candidate Threatened species.

However, most people draw the line when it comes to protecting species like the furbish lousewort (*Pedicularis furbishiae*) or eastern indigo snake (*Drymachron corais couperi*).

Fish and Wildlife Service Director Lynn A. Greenwalt said, "The results of this study are significant because,

Research Center, a captive breeding program for Andean condors (*Vultur gryphus*) has produced 11 healthy chicks. Also at Patuxent, wing tags have been tested successfully on Andeans, and radio transmitters under consideration for use on California condors are being tried.

This spring, captive-reared Andean condors fitted with radio transmitters will be released in South America, in their native habitat. Observations made during this experiment should provide important information for similar attempts with California condors.

without a doubt, people's opinions and behavior can influence the success or failure of conservation programs as much as any wildlife technique." Noting that the study results will be useful in developing policy guidelines and determining areas for education, Greenwalt was quick to add, "wildlife management can never be a popularity contest."

Specific findings of the study, the first to analyze overall public opinion on wildlife issues as opposed to polling special interest groups, include:

- Two-thirds of those asked approved of killing whales for a useful product as long as the species was not Endangered.

- Only 34 percent of the respondents had some knowledge of the Endangered Species Act and only 17 percent of those polled were familiar with the snail darter/Tellico Dam controversy.

- Most people, when asked, favored protecting wildlife at the expense of jobs, housing, and development projects.

This report is the first of four Dr. Kellert is preparing for the Service. The others will deal with characteristics of wildlife users, socioeconomic effects on attitudes, trends in wildlife attitudes and uses over the last 75 years, and how children's attitudes toward wildlife are formed.

Single copies of the report are available from the Publications Unit, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

Propagation facilities for California condors are now being built at the San Diego Zoo and Wild Animal Park. (A second facility will soon be underway at the University of California at Santa Cruz.) At present, the only California condor in captivity, a male named Topatopa, is housed at the Los Angeles Zoo. Biologists hope a mate can be found for this bird.

For more details on the condor recovery program, see our *Special Report*, "Last-ditch Contingency Plan Seen as Only Hope for California Condor," in the May 1979 BULLETIN.

Rulemaking Actions

December 1979

CRITICAL HABITAT REPROPOSED FOR ILLINOIS MUD TURTLE, DESERT TORTOISE POPULATION

Complying with new procedural requirements under amendments to the Endangered Species Act, the Service has repropoed Critical Habitat for the Illinois mud turtle and the Beaver Dam slope population of the desert tortoise (F.R. 12/7/79).

Background

The Illinois mud turtle (*Kinosternon flavescens spooneri*) and Beaver Dam slope population of the desert tortoise (*Gopherus agassizii*) were respectively proposed for protection as Endangered with determination of Critical Habitat on July 6 and August 23, 1978 (see the August and September 1978 BULLETINS). However, before final action could be taken on these proposals, President Carter signed into law the Endangered Species Act Amendments of 1978, significantly modifying procedures to be followed in designating Critical Habitat (see story on Service withdrawals on page 1 and October 1978 BULLETIN). Among other things, the new provisions call for public meetings (or hearings when requested), economic impact analyses, and summaries of activities likely to be affected prior to the final designation of Critical Habitat.

Turtle

Described in 1951, Illinois mud turtles are known to occur in a few localities in Missouri, Illinois, and Iowa. Major threats to the subspecies include habitat modification or destruction of ponds, wetlands and adjacent nesting sites, overcollection, predation, and pollution of water sites. The mud turtle is highly susceptible to changes in water quality and pond levels within its limited habitat.

Any significant alteration of water levels (from ground water dumping or

drainage of ponds or wetlands) or reduction in water quality (from siltation, land clearing, or ground water pollution) that would reduce or eliminate vegetation and aquatic prey could adversely modify the turtle's Critical Habitat. Shoreline modification, dredging, filling, agriculture, real estate development, and other similar activities could also affect shoreline levels, water quality, nesting, and hibernation sites for the species.

A circular area (with a one-mile radius) in Illinois' Mason County and a roughly rectangular area (including Spring Lake, its shores, and Monsanto Bay) within Iowa's Louisa and Muscatine Counties have been proposed as Critical Habitat for the mud turtle.

Tortoise

On August 8, 1977, Dr. Glenn R. Stewart petitioned the Service to list as Endangered the Utah desert tortoise population and recommended areas for designation as Critical Habitat.

This unique population is threatened primarily by habitat modification by grazing animals (including competition for, and destruction of, feed plants, shelter and overwintering sites, and trampling). Overcollection, predation, and habitat destruction by off-road vehicles are also threats.

To protect its habitat, the Service proposes designation of a 35-square mile area of land in southwestern Utah's Washington County (administered by Interior's Bureau of Land Management) as Critical Habitat for the Beaver Dam slope population of the desert tortoise. Activities such as unregulated grazing, development that would destroy burrows and overwintering sites, overcollection and harassment by humans, and the unregulated use of ORVs could adversely impact the tortoises or their habitat.

Public Meetings/Comments Solicited

The public was invited to attend public meetings on the proposal on January 10, 1980, (for the desert tortoise) and on January 30 and 31 (for the mud turtle). We regret that we were unable to provide advance notification of these public meetings to BULLETIN readers.

Comments, as well as biological and

economic data, in response to this proposal should be submitted no later than February 5, 1980, to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

The Service has drafted an impact analysis, and believes at this time that economic and other impacts of this proposed action are insignificant (under provisions of the 1978 Amendments and other applicable Federal laws). Upon completion, a final impact analysis will serve as the basis for a determination as to whether exclusion of any area from Critical Habitat designation is warranted (for economic impact or other reasons).

MUD TURTLE COMMENT PERIOD EXTENDED

During public meetings on the reproposal of Critical Habitat for the Illinois mud turtle, additional technical information on the status of this species was presented. To allow full submission and consideration of all available data on the turtle, the Service has extended the comment period on its reproposal to March 7, 1980.

TWO CROCODILES ENDANGERED

Because of increasing exploitation and habitat loss, populations of the American crocodile (*Crocodylus acutus*) and the saltwater crocodile (*Crocodylus porosus*) outside of Papua New Guinea have been listed by the Service as Endangered (F.R. 12/18/79).

The American crocodile occurs on islands and coastal areas throughout the Caribbean Sea and on the Pacific Coast of Central and South America from Mexico to Ecuador. The saltwater, or estuarine, crocodile ranges throughout Australia and Southeast Asia, where it occurs in Papua New Guinea, Indonesia, Malaysia, Thailand, Burma, Bangladesh, India, Cambodia, Vietnam, Sri Lanka, and the Philippines. This species may be the largest of reptiles, with lengths reported at well over 20 feet.

Loss of much available habitat throughout their ranges has made these species especially vulnerable to the ever-increasing human presence. Crocodylians do not tolerate much human disturbance, especially while nesting, and human harassment as well as the destruction of suitable nesting and basking sites are major factors in the decline of both *C. acutus* and *C. porosus*.

Crocodylian hides are extremely valuable in the production of fashionable leather items, and poaching constitutes a primary threat to the saltwater and American crocodile even in areas where restrictions are imposed on taking and commerce in these species. In countries where the species are unprotected, some populations have been virtually eliminated.

Malicious killing has also taken its toll on crocodylians—especially involving *C. porosus* near populated areas, where the species has earned a reputation as a person eater.

Populations of *C. porosus* and *C. acutus* are protected under appendices to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), a 54-nation treaty designed to monitor trade in imperilled species.* While many countries also have their own laws protecting these crocodylians, they are often ignored, or are impossible to enforce due to a lack of manpower and funds.

Commercial farming schemes have also impacted populations of crocodiles, as they often rely on young collected from the wild. In some cases, *C. porosus* has been hybridized with protected species in an attempt to circumvent trade restrictions, with detrimental effects to both species involved.

Because of assurances from the Government of Papua New Guinea that its wild populations are not now jeopardized and that it will strictly regulate crocodile farming and other potentially exploitative activities in that country, the Service has excluded the Papua New Guinea population of *C.*

* *C. acutus* is listed on Appendix II (except for the Florida population, which is on Appendix I), and *C. porosus* is listed on Appendix I (except for the Papua New Guinea population, which is on Appendix II).

porosus from the Endangered classification.

Both the American and saltwater crocodile (exclusive of the Papua New Guinea population) had been proposed for listing as Endangered on July 24, 1979 (see the August 1979 BULLETIN), subsequent to a status review (F.R. 2/5/79). The Florida population of American crocodile was already listed as Endangered on September 25, 1975, and its Critical Habitat has been designated (F.R. 9/24/76).

The protection afforded these reptiles under the Endangered Species Act will supplement that now provided under CITES by further restricting commercial trade in their parts and products.

STATUS OF VIRGIN ISLANDS BOA CLARIFIED

A boa by any other name is still Endangered. In the course of reviewing the status of various animal species listed before 1975 (F.R. 5/21/79), the Service discovered that a change in the scientific name of the Virgin Islands tree boa may cause confusion over its Endangered status.

The Virgin Islands tree boa was listed as Endangered under the name *Epicrates inornatus* (the "Puerto Rican" boa) on October 13, 1970. At that time, the Virgin Islands population was classified as a subspecies, *Epicrates inornatus granti*. The data used to list this snake was supplied by Dr. James A. Peters of the U.S. National Museum and included the British Virgin Islands in the range of *E. inornatus* as well as mentioning problems this snake encountered in the Virgin Islands. It is clear then that the Virgin Islands boas were included as Endangered under the name *Epicrates inornatus*.

However, in 1974, the Virgin Islands population was relegated to the species *Epicrates monensis*, inclusive of *E. m. monensis* from Mona Island in Puerto Rico, and *E. m. granti* from the U.S. and British Virgin Islands. The name change never made the *Federal Register* or 50 CFR 17.11, so it has been generally overlooked that boas in the Virgin Islands are protected as Endangered.

Because this rule is only a technical correction to the Endangered species list, notice and comment are being waived and the rule became effective upon publication (F.R. 12/7/79).

FEDERAL CRITICAL HABITAT RECOMMENDATIONS DUE

We would like to take this opportunity to remind all Federal agencies of the deadlines for the submission of recommendations for Critical Habitat designations.

In his May 1977 Environmental Message, President Carter directed all Federal land-managing agencies to survey their lands and make Critical Habitat recommendations according to timetables established by the Secretary of the Interior (see January 1978 BULLETIN). Because of additional procedural requirements imposed by the Endangered Species Act Amendments of 1978 affecting both listing and formal Critical Habitat determination, Federal agencies have also been asked to supplement necessary biological information with data on economic and other anticipated impacts of Critical Habitat designation on their lands.

In line with species priority categories previously provided to affected agencies, deadlines for the submission of biological (and if possible economic and other data) are:

High priority species*: January 1, 1980,

Medium priority species: July 1, 1980,

Low priority species: January 1, 1981.

* If specific reference lists have not been provided, or for additional guidance on data required, kindly contact Dr. Paul Opler, Office of Endangered Species, 703/235-1975.

Rulemaking Actions

Continued on page 12

—Rulemaking Actions—

Continued from page 11

PLANT DATA SOLICITED

A majority of the U.S. plants affected by the December 10, 1979, withdrawal notice (see story on page 1) were also included in a July 1, 1975, notice of review soliciting data on the status of, and threats to, 3,187 vascular plant taxa (considered by the Smithsonian Institution as endangered, threatened, or extinct). The Service continues to welcome data on the 3,131 plants that remain subject to this review, for possible listing consideration. (These plant taxa should be considered in environmental planning.)

In addition, to incorporate new information on these and other vulnerable plant taxa, the Service plans to publish an updated notice (to supersede the 7/1/75 notice) of candidate plants that may qualify for listing under the amended Act. In this regard, substantive data on the status, population numbers, distribution, and threats to rare plants are hereby solicited, to be forwarded to the Office of Endangered Species, Attn: Plant Notice, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240, by March 15, 1980.

BOX SCORE OF SPECIES LISTINGS

| Category | Number of Endangered Species | | | Number of Threatened Species | | |
|--------------|------------------------------|------------|------------|------------------------------|-----------|-----------|
| | U.S. | Foreign | Total | U.S. | Foreign | Total |
| Mammals | 35 | 251 | 286 | 3 | 21 | 24 |
| Birds | 67 | 145 | 212 | 3 | | 3 |
| Reptiles | 11 | 50 | 61 | 10 | | 10 |
| Amphibians | 5 | 9 | 14 | 2 | | 2 |
| Fishes | 29 | 11 | 40 | 12 | | 12 |
| Snails | 2 | 1 | 3 | 5 | | 5 |
| Clams | 23 | 2 | 25 | | | |
| Crustaceans | 1 | | 1 | | | |
| Insects | 6 | | 6 | 2 | | 2 |
| Plants | 49 | | 49 | 7 | 2 | 9 |
| Total | 228 | 469 | 697 | 44 | 23 | 67 |

Number of species currently proposed: 45 animals
(no plants)

Number of Critical Habitats listed: 35
 Number of Recovery Teams appointed: 66
 Number of Recovery Plans approved: 30
 Number of Cooperative Agreements signed with States:
 33 (fish & wildlife)
 3 (plants)

December 31, 1979

New Publications

Status of Endangered and Threatened Plant Species on Tonopah Test Range—A Survey, written by William A. Rhoades, Susan A. Cochran, and Michael P. Williams for the Department of Energy, provides information on

proposed endangered and candidate threatened plant species either present or suspected to be present on the Tonopah Test Range in Nevada, a test site for weapons ballistics, rocket and gun firings, chemical explosives, and nuclear ordnance for the U.S. Government. The report is available from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161, at \$5.50 per printed copy or \$2.25 for microfiche.



ENDANGERED SPECIES TECHNICAL BULLETIN

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



POSTAGE AND FEES PAID
U.S. DEPARTMENT OF THE INTERIOR

Int 423

January 1980, Vol. V., No. 1