

# ENDANGERED SPECIES

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

## President Signs Amendments To Endangered Species Act

On Wednesday, October 13th, President Reagan signed "The Endangered Species Act Amendments of 1982," reauthorizing and further amending the Endangered Species Act of 1973. The Amendments specify shorter time periods to complete listing functions (Section 4) and the exemption process (Section 7), and they also affect other important provisions of the Act.

### Listing Made More Efficient

Changes affecting the listing and delisting of species are intended to ensure that decisions in every phase of the processes are based *solely* upon biological criteria, and to prevent nonbiological considerations from affecting these processes. The legislative history accompanying the amendments specify that the economic considerations applying to Critical Habitat designations have no relevance to determinations regarding the status of species. The listing process has been streamlined by reducing the time periods for rulemaking, consolidating public meeting and hearing requirements, and providing for the separation of Critical Habitat designations from the listing process when appropriate.

After receiving a petition to list or delist, the Service must now act "to the maximum extent practicable" within a 90-day period, publishing a finding on whether or not the petition presents substantial scientific or commercial data to support the proposed action. The requirement to act on petitions within 90 days will be waived only in the event that devoting staff resources to petition responses would interfere with actions needed to list other species in greater need of protection. The amendments require that any selection of one action before another must be made on the basis of a scientifically based priority system to be published by the Service.

Within 12 months of receiving a "substantial" petition, the Service must publish a proposed rulemaking, determine

that the petitioned action is not warranted, or determine that the action is warranted but that other listing or delisting actions currently preclude undertaking new actions. In any case, notice of all findings must be published in the *Federal Register*. If the Service makes a negative judgment on any petition, the determination will be subject to judicial review.

The 12-month time period can be waived only if the Service is actually working and making progress on other listings and delistings. Delayed petitions are treated as if resubmitted and an additional year is allowed for the Service

to make its required determination. The Service's inability to propose an otherwise warranted petitioned species will be subject to judicial review. Petitions to revise Critical Habitat are not required to present economic information relevant to the proposed revision, and will be handled by the Service in the same manner as other petitions. The amendments also apply to now pending petitions.

Final action on listing, delisting, or Critical Habitat proposals must now be accomplished within 1 year, instead of 2 years as previously allowed. A 6-month

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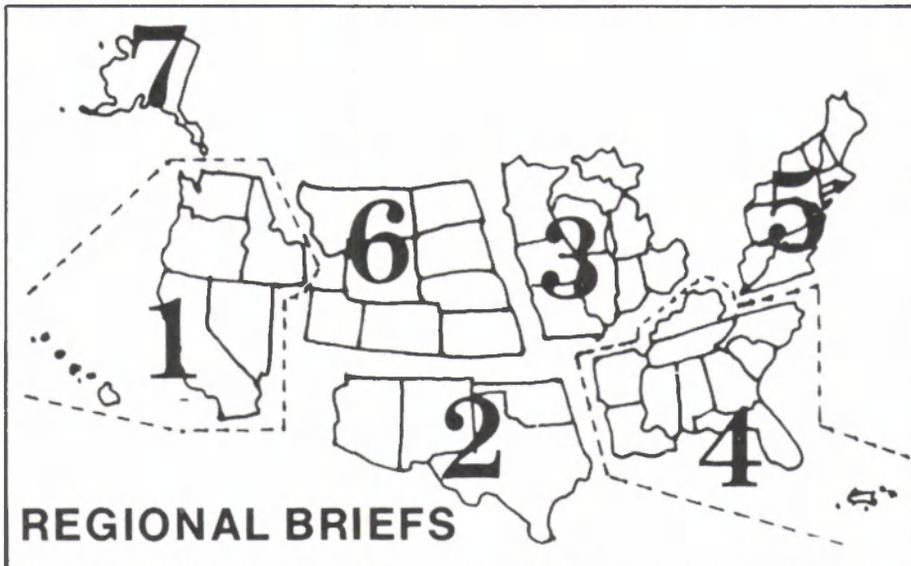
## Important Condor Habitat Discovered By Radio Telemetry

A free-flying California condor (*Gymnogyps californianus*) was captured for the first time by the Service on October 12 in the mountains northeast of Ventura, California. As authorized by the California Fish and Game Commission, biologists with the Condor Research Center have been attempting to trap a prospective mate for Topa Topa, a male condor at the Los Angeles Zoo. The condor was netted as it fed on a calf carcass, and was held near the site while a blood sample was rushed to the San Diego Zoo for a chromosome analysis to determine the bird's sex. When the condor proved to be a male, it was fitted with two small (approximately 40-gram), solar-powered radio transmitters attached at each patagium along with two relatively inconspicuous numbered tags for visual identification, and released nearby.

Telemetry data gained since the bird's release have already provided valuable information on previously unknown condor habitat. The condor has shown no apparent reaction to the tags or transmitters. It remained in the release

area for several days and was observed feeding; later, the bird was tracked from the north to the Greenhorn Mountains in Sequoia National Park. The bird has roosted in the forest or in the foothills of the southern Sierra Nevada since that time. The condor research team is pleased with the data gathering so far, especially the valuable information on the condor foraging patterns and roosting areas. Some of these areas show signs of long-term condor use but little was known about them until now. At least one important roosting site appears vulnerable at this time because of access roads and nearby hunting. The new information should help in the conservation of these habitats.

The condor research team has resumed attempts to trap an immature female condor as a prospective mate for Topa Topa, the male condor in captivity at the Los Angeles Zoo. Meanwhile, the condor chick taken into captivity on August 13 due to parental neglect is doing well and is making its first short flights.



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

**Region 1**—Update: California Channel Island Bald Eagle Reintroduction Project—Of the bald eagles (*Haliaeetus*

*leucocephalus*) released thus far (6 in 1980, 6 in 1981, and 4 in 1982, all on Santa Catalina Island), a population of 12 to 14 eagles still resides on the island. The known losses were: 1) one of the 1980 birds left the island; and 2) a 1981 eagle was shot. These results are consi-

dered quite successful, and we hope they will lead to natural reproduction on the island.

*Euphorbia skottsbergii* var. *kalaeoana* Sherff, also known as the 'Ewa Plains 'akoko, was officially listed as Endangered on August 24, 1982 (see September 1982 BULLETIN). The plant was believed to have a major portion of its population situated in an area destined to become the center of a major Federal-State of Hawai'i development project, the Barbers Point Deep Draft Harbor. A botanical survey of the area was completed in late 1979, and it was estimated that 4,000 individuals existed throughout its range on the 'Ewa Plains, O'ahu. In anticipation of possible Section 7 conflicts if and when the plant was listed, the U.S. Army Corps of Engineers began informal consultation with the Service early in the project planning stages. In April 1979, it appeared that construction might have a significant impact on the plant; therefore, the Service recommended that additional surveys and continued transplantation experimentation be pursued. The Corps cooperated fully with our suggestions and did fund additional surveys. An October 1981 survey revealed that the area originally believed to contain only perhaps 500 plants contained over 5,000. As a bonus, the plants were located in the Naval munitions storage area, a site well protected from fire and vandalism and situated beyond the area to be affected by the harbor development. Largely as a result of this find, when the plant was listed in August as an Endangered species, the loss of the approximately 50 individuals existing in the area of the harbor-to-be was no longer crucial to the survival of the 'akoko. Early cooperation on an informal basis between the Service and the Corps eliminated what could have been a major development/endangered species conflict.

Contract work was completed by Dr. Paul Hammond and Dr. David McCorkle on the 1982 status and distribution of the Oregon silverspot butterfly (*Speyeria zerene hippolyta*). Twenty-four areas of known, historic, and potential habitat was surveyed. Three vigorous populations and three weak populations were found. Only one small population occurs in Washington; the others are along the Oregon coast. Habitat was assessed, as were management recommendations that appear to be reasonable and implementable. Based on this work and the guidance in the recovery plan, the Service can now move ahead with a workable program to recover this species.

**Region 2**—The ocelot (*Felis pardalis*) survey initiated in south Texas in the autumn of 1981 has been expanded to include Laguna Atascosa National Wild-

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

Robert A. Jantzen, *Director*  
(202-343-4717)

Ronald E. Lambertson  
*Associate Director and  
Endangered Species Program Manager*  
(202-343-4646)

John L. 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**  
Clare Senecal Kearney, *Editor*  
Michael Bender, *Assistant Editor*  
(703-235-2407)

**Regional Offices**

**Region 1**, Suite 1692, Lloyd 500 Bldg., 500 N.E. Multnomah St., Portland, OR 97232 (503-231-6118): Richard J. Myshak, *Regional Director*; William F. Shake, *Assistant Regional Director*; Sanford R. Wilbur, *Endangered Species Specialist*.

**Region 2**, P.O. Box 1306, Albuquerque, NM 87103 (506-766-2321); Michael J. Spear, *Regional Director*; Conrad A. Fjetland, *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*; John S. Popowski, *Assistant Regional Director*; James M. Engel, *Endangered Species Specialist*.

**Region 4**, Richard B. Russell Federal Bldg., 75 Spring St., S.W., Atlanta, GA 30303 (404-221-3583): James W. Pulliam, *Regional Director*; John I. Christian, *Assistant Regional Director*; Alex B. Montgomery, *Endangered Species Specialist*.

**Region 5**, Suite 700, One Gateway Center, Newton Corner, MA 02158 (617-965-5100): Howard Larsen, *Regional Director*; Stephen W. Parry, *Assistant Regional Director*; Paul Nickerson, *Endangered Species Specialist*.

**Region 6**, P.O. Box 25486, Denver Federal Center, Denver, CO 80225 (303-234-2209): Galen Buterbaugh, *Regional Director*; John D. Green, *Assistant Regional Director*; Don Rodgers, *Endangered Species Specialist*.

**Region 7**, 1101 E. Tudor Rd., Anchorage, AK 99503 (907-276-3800, ext. 495): Keith M. Schreiner, *Regional Director*; Jon Nelson, *Assistant Regional Director*; Dennis Money, *Endangered Species Specialist*.

**U.S. Fish and Wildlife Regions**

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

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# RULEMAKING ACTIONS — October 1982

## Monito Gecko Listed as Endangered

The Monito gecko (*Sphaerodactylus micropithecus*), a small lizard known only from tiny Isla Monito in the Commonwealth of Puerto Rico, has been listed as Endangered, and the uninhabited island has been determined Critical Habitat (F.R. 10/15/82). Predation by introduced rats is the main threat to the reptile.

Dr. Howard W. Campbell discovered the Monito gecko in May 1974, and gathered several specimens from which the species was described in 1977. During his 2-day visit to the island, Dr. Campbell observed a dense population of introduced black rats (*Rattus rattus*), and he expressed concern about their impact on two genera of lizards on Monito, *Ameiva* and *Sphaerodactylus*. Rats are known predators of lizards and their eggs.

In August 1982, personnel of the U.S. Fish and Wildlife Service and the Puerto Rico Department of Natural Resources conducted a survey to look for the Monito gecko. The entire island was covered thoroughly using transect techniques, and 18 geckos were discovered in two small populations. A total of 24 rats also was observed. The survey confirmed that geckos are indeed rare on Monito.

On October 22, 1980, the Service proposed listing the Monito gecko as Endangered and determining Isla Monito as Critical Habitat. Informal public meetings on the proposal were held in Mayaguez, Puerto Rico, on December 2, 1980, and in San Juan on December 3, 1980. A total of 12 comments were received. Governor Carlos Romero took no position on the proposal, but the Puerto Rico Department of Natural

Resources endorsed it. The U.S. Navy stated no objections, and indicated that the small island is not being considered for use in bombing practice like some other islands around Puerto Rico. Most of the other comments were supportive of the proposal. One individual did express opposition, asserting that the gecko's scarcity and danger from rat predation were not proved, although he acknowledged that he was not familiar with the gecko habitat or the ecology of Monito. In its response, the Service pointed out that the August 1982 survey, which was conducted to address these questions, left no doubt about the gecko's rarity.

### Effects of the Rule

As an Endangered species, the Monito gecko will receive protection under Section 9 of the Endangered Species Act, including the prohibitions on taking, interstate trade, and import/export. Federal agencies are directed to insure that their actions will not degrade the gecko's Critical Habitat, as outlined in Section 7. The listed status also will authorize a recovery program, a significant part of which is expected to address rat predation on the lizard.

Monito is a very small (about 300 meters x 500 meters) island almost midway between Puerto Rico and the Dominican Republic. It is surrounded on all sides by nearly vertical cliffs which make the island virtually inaccessible. (The 1982 survey team had to be taken to the island by helicopter.) Monito is owned by the Commonwealth of Puerto Rico and managed as a seabird reserve. No federally authorized or funded development projects are planned for the island.

## Two Small Mammals Under Status Review

The Service has accepted a petition to add the Perdido Key beach mouse (*Peromyscus polionotus trissyllepsis*) and the Choctawhatchee beach mouse (*Peromyscus polionotus allophrys*) to the U.S. List of Endangered and Threatened Wildlife and Plants (F.R. 10/6/82). The Service has determined that the petition presents substantial evidence warranting the listing of these two small mammals and now is assembling needed supporting information.

According to the petition, these two mammals occupy very restricted areas of dunes along the Gulf Coast of Alabama and Florida. Most suitable habitat has recently been lost because of resi-

dential and commercial development, beach erosion, and vegetation succession. Competition from introduced house mice (*Mus musculus*) and predation by domestic cats (*Felis catus*) also seems to be a problem.

The Perdido Key beach mouse originally occurred on much of Perdido Key, which extends along the Gulf Coast of Baldwin County, Alabama, and Escambia County, Florida. The Choctawhatchee beach mouse inhabited the Gulf Coast of Florida from the East Pass of Choctawhatchee Bay, Okaloosa County to Shell Island, Bay County. Remnant populations of beach mice are fragmented and declining. The total number of surviving individuals is estimated at only 78 for *P. t. trissyllepsis* and 515 for *P. t. allophrys*.

The petition to list these animals was submitted on June 9, 1982, by Dr. Stephen R. Humphrey, Associate Curator in Ecology, Florida State Museum, University of Florida, Gainesville, Florida 32611. The Service will issue a proposed rulemaking as soon as possible.

## Recovery Meetings Held

Recovery plan coordinators from each of the Service's seven regions met October 26-27. Representatives from each of the Service's five bald eagle recovery teams also participated in a 2-day gathering, the Bald Eagle National Recovery Team Leaders' Meeting, on October 27-28. Both meetings were held in the Washington, D.C., area.

The recovery team coordinators discussed past recovery planning operations and procedures and explored areas of needed change. As a result of the meeting, revisions will be made in the recovery plan guidelines.

During the second meeting, the five plans developed for various U.S. geographical areas of bald eagle habitat were compared and contrasted in an effort to assure unity of approach to recovery activities. Other matters of significance which were discussed included the Departmental Solicitor's Opinion on the Bald Eagle Act, the feasibility of satellite telemetry, survey techniques and terminology, and the National Bald Eagle Color-Marking Protocol. The latter is being developed by the working group headed by Dr. Paul Frenzel of the University of Minnesota. On the second day of the meeting, the bald eagle team leaders met with the Service's regional recovery team coordinators to discuss the bald eagle plans in light of Service policy regarding implementation of the five plans.



Photo by C. Kenneth Dodd

The Monito gecko is a grayish-brown lizard with dark spots, and a 1982 survey found individuals up to about 60mm in total length. It is endemic to tiny Monito Island.

# Tax Check-offs Bolster State Nongame Programs

Since 1977, 20 States have successfully passed income tax check-off legislation designed to raise funds for nongame wildlife conservation. In these States, taxpayers have the option of designating all, or part, of their tax refunds to a State fund earmarked for specific conservation needs.

Colorado passed the first nongame "check-off" bill in 1977 and has raised over \$2.9 million during the 5 tax years that it has been in effect (1977-1981). Minnesota's check-off program began in 1980; during that year the State received \$569,277—the largest amount received by any State in the first year of its program. (See accompanying chart for funding results in other States.)

Forty-nine States carry out some sort of nongame program within their respective wildlife agencies. Recently, many States have experienced budget cuts brought about by Federal and State fiscal cutbacks, and funding for many nongame programs has been greatly reduced. Consequently, the search for alternate funding sources has gained considerable impetus — 18 States have passed check-off bills during the past 3 years.

The State programs are not identical. Most are designed to create funds solely for nongame species conservation. Other programs, such as those in Louisiana, New Mexico, and New York, are established to benefit all wildlife, including nongame and endangered species. Kentucky's legislation provides that the tax refund proceeds be used both for nongame and habitat acquisition, whereas, Louisiana's funds are earmarked entirely for land acquisition.

## Problems on the Horizon

The check-off programs are quite successful and are "turning the heads" of many special-interest groups. Feeling the squeeze of our nation's current economic situation, these groups, too, are anxious to get on the "check-off bandwagon." In fact, four States already have income tax check-off programs for causes other than wildlife conservation: Alabama has a fine arts fund; Arkansas, a fund to rebuild a football stadium; Idaho, an Olympic fund; and Oregon, a continuing arts fund.

States that already have programs are aware, of course, that multiple check-offs will dilute the funds now going to wildlife programs. States that are seeking programs fear that their respective legislatures will not be receptive to a wildlife check-off, anticipating the clamor from many other groups also wanting a tax check-off program. Rather than clutter the tax form with multiple check-off boxes, most legislators, they feel, will choose to deny all check-off seekers.

How, they ask, can State lawmaking bodies be convinced to say "yes" to wildlife check-offs and "no" to all others? Pennsylvania was recently successful in doing just that. Pennsylvania's legislation prohibits the establishment of any other check-off line on the State income tax form. Other States will probably be looking to Pennsylvania for advice.

## Natural Resources — a Public Trust

The role of governments as public trustees in the task of wildlife conservation has been an integral part of U.S. Supreme Court decisions and of American wildlife laws since the late 19th century. Court actions have clarified the principle that wildlife is the collective property of all the people — not the private property of individuals or groups.

Picking up on this theme, Pennsylvania wildlife biologist, Jerry Hassinger, helped prepare the groundwork for his State's check-off program. Hassinger distributed letters to all State legislators, capsulizing the public trust concept and its foundation in American law and tradition. The letter promoted a wildlife check-off as unique from all other possible check-off programs. "Other causes," he said, "are not public trust resources to be passed on to future generations... Wildlife does not belong to any interest-specific public."

"It is certainly appropriate," Hassinger

continued, "to use a public document—the state income tax form—to solicit donations for a public trust fund for the care and conservation of the public's *collective property*." Pennsylvania will collect its first-year funding in 1983—dollars from 1982 tax refunds.

## Programs are Working

In several States, officials in the departments of revenue initially opposed the check-off concept, stating as their reason the administrative costs such programs would incur. However, most States have been pleasantly surprised by the low price ticket associated with their programs.

New Jersey, for instance, anticipated high administrative expenditures but had quite minimal expenses in 1982—along with great financial success. Utah's tax commission is handling the administration of their program without finding it necessary to assess the Nongame Wildlife Fund at all.

A number of States, including Arizona, Idaho, Kansas, Minnesota, New York, and South Carolina, have written their check-off legislation and have designed their tax form so that anyone — whether a refund is due them or not — can make a donation on their tax return. Persons with no refund can fill in an especially provided line and add any amount to "dollars owed" for the wildlife fund. Many other States have made it



Publicity materials for Minnesota's nongame wildlife check-off campaign include posters, television and radio public service announcements, informational cards, gummed labels for birdseed bags, and public service ads on milk cartons. These materials have helped generate more than \$1 million in donations during the past 2 years.

possible to donate directly to the check-off fund by mailing a check payable to the various funds. In several States (Iowa and Kentucky) persons can donate to the check-off fund only if they have a refund.

The development of public relations materials has played an important role in the success of most of the State programs. Many States have developed tools such as radio and television spots, news releases, magazine and newspaper articles, slide/tape programs, and information cards to be tucked into correspondence and tax forms.

Idaho printed their check-off logo and information on their program on State hunting and fishing regulations. Minnesota negotiated with bird seed distributors to place gummed labels advertising their program on sacks of bird seed, and with local dairies to print the check-off

logo on the sides of milk cartons. Minnesota also succeeded in getting the telephone company to use their logo and some check-off data to decorate the cover of their telephone books.

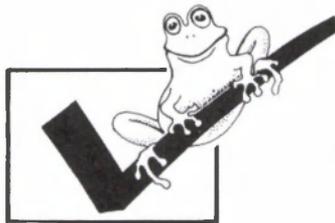
Oregon negotiated with the State government and with private businesses to insert information cards into employees' payroll check envelopes. Virginia was able to get private businesses to donate paper, and design, typesetting, and printing services to produce an endangered species booklet. The Department of Revenue in West Virginia incorporated the check-off into the tax preparation booklet issued in their State.

The U.S. Internal Revenue Service has been very helpful in providing to the States names of certified tax preparers. Many States contacted the tax preparers by letter and sent information about the

check-off donation which is tax deductible during the next tax year for those itemizing deductions. Utah's Director of Internal Revenue also included an article on the check-off program produced by the Utah Fish and Game Department in the State's monthly bulletin to tax preparers.

The programs are proving to be unifying forces within conservation communities, appealing to the generosity of both hunters and non-hunters. Whereas hunters and anglers have for many years supported game management activities through sales taxes on support equipment and through license fees and stamps, the check-off program is the first vehicle to be established which allows non-consumptive wildlife "users" to contribute directly to wildlife conservation.

Illustration by Permission of New Jersey Nongame Wildlife Fund.



## STATE INCOME TAX CHECK-OFF PROGRAMS

### FUNDING RESULTS

| States* with Programs | Year Bill Signed | Tax Year | Totals  | Contributors | % of Persons Having Refunds Contributing | Average Contribution |
|-----------------------|------------------|----------|---------|--------------|--|----------------------|
| Alabama               | 1982             | ----     | ----    | ----         | ----                                     | ----                 |
| Arizona               | 1982             | ----     | ----    | ----         | ----                                     | ----                 |
| Colorado              | 1977             | 1977     | 350,000 | 90,000       | 9.0%                                     | \$3.89               |
|                       |                  | 1978     | 501,000 | 118,600      | 12.0%                                    | 4.22                 |
|                       |                  | 1979     | 647,200 | 129,300      | 11.9%                                    | 5.00                 |
|                       |                  | 1980     | 740,000 | 139,850      | 12.7%                                    | 5.30                 |
|                       |                  | 1981     | 692,000 | 124,000      | 12.4%                                    | 5.60                 |
| Idaho                 | 1981             | 1981     | 102,500 | 22,000       | ----                                     | 4.43                 |
| Indiana               | 1982             | ----     | ----    | ----         | ----                                     | ----                 |
| Iowa                  | 1982             | ----     | ----    | ----         | ----                                     | ----                 |
| Kansas                | 1980             | 1980     | 128,788 | 21,786       | 3.6%                                     | 4.87                 |
|                       |                  | 1981     | 130,193 | ----         | ----                                     | ----                 |
| Kentucky              | 1980             | 1980     | 85,619  | 13,611       | 1.2%                                     | 6.29                 |
|                       |                  | 1981     | 80,000  | 11,038       | 1.3%                                     | 7.20                 |
| Louisiana             | 1981             | 1981     | 344,198 | 35,858       | 2.5%                                     | 10.42                |
| Minnesota             | 1980             | 1980     | 569,277 | 170,177      | 9.8%                                     | 3.39                 |
|                       |                  | 1981     | 624,899 | 195,503      | 11.4%                                    | 3.20                 |
| New Jersey            | 1981             | 1981     | 403,000 | 100,000      | 4.8%                                     | 4.05                 |
| New Mexico            | 1981             | 1981     | 256,000 | 24,000       | 4.6%                                     | 10.68                |
| New York              | 1982             | ----     | ----    | ----         | ----                                     | ----                 |
| Oklahoma              | 1981             | ----     | ----    | ----         | ----                                     | ----                 |
| Oregon                | 1979             | 1979     | 347,000 | 94,848       | 11.5%                                    | 3.42                 |
|                       |                  | 1980     | 359,981 | 97,803       | 11.1%                                    | 3.68                 |
|                       |                  | 1981     | 272,152 | 65,916       | 8.1%                                     | 4.13                 |
| Pennsylvania          | 1982             | ----     | ----    | ----         | ----                                     | ----                 |
| South Carolina        | 1981             | 1981     | 100,000 | 20,500       | 2.0%                                     | 4.85                 |
| Utah                  | 1980             | 1980     | 216,594 | 55,366       | 16.0%                                    | 3.91                 |
|                       |                  | 1981     | 204,726 | 47,942       | 14.1%                                    | 4.27                 |
| Virginia              | 1981             | 1981     | 371,000 | 61,692       | 3.4%                                     | 5.92                 |
| West Virginia         | 1981             | 1981     | 164,649 | 37,340       | 7.9%                                     | 4.41                 |

Total Contributions for 1981 = \$3,745,317

\* Delaware, Illinois, Maryland, Massachusetts, Michigan, Nebraska, and Wisconsin have all attempted to get check-off bills through their respective legislatures.

## REGIONAL BRIEFS

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life Refuge near Rio Hondo, Texas. Preliminary ocelot captures led to radio-collaring of an adult male, two adult females (one lactating), and a 7-pound female kitten. The capture efforts will continue and be expanded to other parts of the refuge during the remainder of 1982.

Little Creek, in the Gila Wilderness Area of New Mexico, was sampled during October to determine the success of the stream renovation carried out earlier this year. No salmonids were found, indicating the successful removal of exotic brown trout (*Salmo trutta*) and the effectiveness of the fish barriers. Gila trout (*Salmo gilae*) stocking is scheduled for November 1982.

Dexter National Fish Hatchery participated in the last 1982 stocking of razorback suckers (*Xyrauchen texanus*). About 13,000 were involved, bringing the year's total to over 600,000. In addition, Dexter supplied Region 6 with over 30,000 juvenile Colorado River squawfish (*Ptychocheilus lucius*) for stocking in the upper Colorado River Basin near Grand Junction, Colorado.

Technical review drafts of recovery plans for the following plants have been sent out for review: gypsum wild buckwheat (*Eriogonum gypsophilum*), Nichol's Turk's head cactus (*Echinocactus horizontalis* var. *nicholii*), Brady pincushion cactus (*Pediocactus bradyi*), Knowlton cactus (*Pediocactus knowltonii*), Peebles Navajo cactus (*Pediocactus peeblesianus* var. *peeblesianus*), and the Mesa Verde cactus (*Sclerocactus mesae-verdae*).

**Region 3**—Endangered species

staffers provided training on Section 7 consultation procedures to personnel at the Service's Ecological Services field stations.

**Region 5**—A new booklet, *New England's Rare, Threatened, and Endangered Plants*, is being finalized under the direction of regional endangered species botanist Richard Dyer. It will focus on 101 of the region's rarest plants, and will include detailed scientific illustrations, distribution maps, color plates, and species narratives. Details on availability and cost will be announced in next month's BULLETIN.

Another book, *Endangered and Threatened Wildlife of the Chesapeake Bay Region: Delaware, Maryland, and Virginia*, is now available (see advance announcement in the July 1982 BULLETIN, "New Publications," for details on ordering). The 147-page book was a cooperative effort of the Chesapeake Bay Foundation and Region 5 personnel. Martha Carlisle Tacha and Andrew Moser of the Annapolis Field Office provided substantial information and editorial support.

Regional Endangered Species Specialist Paul Nickerson attended a peregrine falcon recovery meeting in Minnesota on September 22-23. Among the topics discussed were an expansion of the peregrine (*Falco peregrinus*) release program into other geographical regions as called for in the recovery plan.

**Region 6**—The greater Yellowstone Ecosystem Bald Eagle Working Team met in late August. Information collected by the team indicates that there were 38 occupied bald eagle territories in the ecosystem in 1982. Data from the 35 territories where production success

was known show that 23 young fledged, which is 0.66 young per territory. The team intends to have a management plan drafted by December 1.

The Northern Grizzly Bear Ecosystems Steering Committee met in August. They approved a charter and elected Ed Schneegas, U.S. Forest Service, Missoula, Montana, as chairman. The group reviewed Priority 1 Recovery Tasks in the Grizzly Bear Recovery Plan, establishing research priorities for the northern ecosystems, and reviewed ongoing research projects.

Biologists with the Service's Colorado River Fishery Monitoring Program assisted with the microtagging of 31,000 young-of-the-year Colorado squawfish (*Ptychocheilus lucius*) produced at Dexter National Fish Hatchery in Region 2. About 30,000 of the fish were then transported in two trucks to Grand Junction, Colorado. About 10,000 squawfish were placed into each of two gravel pits for predation studies. The remaining 10,000 were released into four backwater areas of the Colorado River to obtain information on their movements.

The Peregrine Fund in Fort Collins, Colorado, induced 33 captive female American peregrine falcons (*Falco peregrinus anatum*) to lay 223 eggs in 1982. Of 125 (56 percent) which were fertile, 97 (78 percent) hatched and 85 (88 percent) of the chicks survived. The Fund also received 26 eggs from 7 peregrine eyries in Colorado. Of 22 (85 percent) which were viable, 20 (91 percent) hatched and 19 (95 percent) chicks survived. Of these, 86 were released in the wild in the following States: Colorado (49), Wyoming (14), Montana (8), Idaho (8), Utah (6), and California (1). These releases met the commitments established in the 1982 peregrine falcon reintroduction plan. Of the 86 released, 60 (70 percent) are known to have reached independence.

**Region 7**—Five recent peregrine falcon (*Falco peregrinus*) band encounters highlight this month's news from Alaska. A 1981 hatching-year (HY) American peregrine falcon (*F. p. anatum*) from an upper Yukon River eyrie was recovered in north-central Brazil in February 1982. A 1982 HY American peregrine from an eyrie along the Kuskokwim River was trapped by Ken Riddle in October 1982 at Padre Island, Texas. Also trapped by Riddle and his team were three 1982 HY Arctic peregrines (*P. f. tundrius*) from the Colville River system. These are the first Texas encounters from the Colville system since the Service began its peregrine banding program in 1979. The encounter from the Kuskokwim was the first ever from that region. In the past 5 years, Service biologists and contractors have banded 662 peregrines in Alaska and, to date, 22 encounters have been reported.

U.S. Fish and Wildlife Service Photo by Paul Gertler



A survey for the ocelot has been expanded to include Laguna Atascosa National Wildlife Refuge.

## ACT A MENDMENTS

*Continued from page 1*

extension will be permissible only if there exists substantial disagreement among specialists regarding the sufficiency or accuracy of the required biological data. Extensions to allow additional time to conduct economic or other analyses relating to Critical Habitat designations are not permissible. A determination to withdraw a listing or delisting proposal will be subject to judicial review. Existing proposals are now treated as though proposed on October 13, 1982.

The new amendments restate the general requirement of concurrent listing and Critical Habitat designation but authorize listing without the latter in certain circumstances. If a Critical Habitat designation is found "not prudent," the listing can become final at any time during the new 1-year (or 18-month) period. When scientific and commercial information indicates that prompt listing of the species is essential to its conservation, but the analysis necessary to designate Critical Habitat has not been completed, the listing must be finalized within or upon expiration of the 1-year period (or the 18-month period) without designating Critical Habitat.

When Critical Habitat determinations have been deemed *not determinable* within the 1-year (or 18-month) period, the 1-year period may be extended by not more than 1 additional year. At the end of the second year or sooner, the species must be listed and Critical Habitat must be determined to "the maximum extent determinable." Revisions may be made as new information becomes available.

### Consultation/Exemption Changes

Section 7 of the Act requires Federal agencies to use their authorities to conserve Endangered and Threatened species and prohibits them from taking actions that are likely to jeopardize the continued existence of such species or destroy or adversely modify their Critical Habitat. If a Federal agency determines that its activities may affect an Endangered or Threatened species, it must consult with the Fish and Wildlife Service (or with the National Marine Fisheries Service). This consultation is held to identify how the agency's activities would affect the species and, in cases where the activity is likely to jeopardize the species, to identify reasonable and prudent alternatives that would allow the activity to proceed without harmful consequences.

The 1982 Amendments provide a new component to the consultation process, allowing consultations between Federal agencies responsible for issuing permits or licenses for a project and the Service

to be initiated at the request of prospective license or permit applicants. This provision will allow such applicants to receive the Service's biological opinion regarding their proposed activity earlier in the course of their planning. The amendments call for guidelines to be written by the Service which will define the types of projects eligible for early consultation and exclude projects of a speculative or tentative nature.

A written statement from the Service, received by the consulting agency and applicant promptly after the conclusion of the early consultation, will be viewed as the Service's biological opinion. This document will provide the same counsel as a biological opinion issued upon the completion of a consultation under Section 7(a)(2), provided the Secretary finds before the permit is issued that both the project and the available information remain essentially the same. Consultations initiated at the request of applicants will be concluded within a mutually agreed upon period of time.

The usual consultation process under Section 7(a)(2) is amended to allow an extension of the normal 90-day consultation period of up to 60 days without the agreement of any involved permit appli-

by the Secretary of the Interior (or Commerce) will be accomplished within 20 days of receiving the application; the report of the Endangered Species Committee within 140 days; and a final decision by the committee within 30 days after receipt of the report. The amendments also delete the requirement that representatives of the Endangered Species Committee be Presidential appointees subject to Senate confirmation.

When exemptions are sought, the Secretary that issued the biological opinion will provide a report to the Endangered Species Committee discussing the availability of reasonable and prudent alternatives to the action for which the exemption is sought and other considerations set forth in the law. To ensure that reports are nonbiased, a formal adjudicatory hearing will be held, conducted by an administrative law judge within the time-frame allocated for preparation of the report.

### Amendments Offering Flexibility

The amendments give greater flexibility in the treatment of Endangered and Threatened species that are introduced into areas outside their current range.

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**"The amendments give greater flexibility in the treatment of species that are introduced into areas outside their current range."**

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cant. The Service must, however, notify the applicant in writing before the close of the 90-day consultation period, explaining the reasons for the extension, stating the information required to complete the consultation, and giving the estimated date for completion of the consultation. Extensions for longer than 60 days require the consent of any involved permit applicant. The 180-day period allowed for biological assessments under Section 7(c) may not be extended unless a written notice giving the reason for such an extension and an estimated length of the extension is presented to the applicant, if one is involved.

The amended Act allows permit applicants to enter the exemption process only after being denied a permit. Persons denied permits may seek administrative review of the denial prior to applying to the Endangered Species Committee for an exemption if they choose. However, an applicant denied a permit may not seek administrative review and begin the exemption process simultaneously.

Time-frames for the three stages of the exemption process have also been shortened. Threshold findings made

Regulations to further the conservation of each of these "experimental populations" will determine whether the population is *essential* to the continued existence of the species. If the population is determined to be *essential*, then it will be treated as a Threatened species and will receive all the protection afforded such species under the Act. If the population is determined to be *not essential*, the population will be protected in the same manner as species proposed for Endangered or Threatened status and will not receive the full protection of the Act unless it occurs on a National Wildlife Refuge or a National Park.

Another provision of the amendments allows for more flexibility in regulating the incidental taking of Endangered and Threatened fish and wildlife. Under the old Act, even though the Service issued a non-jeopardy opinion or a jeopardy opinion with reasonable and prudent alternatives, the taking of species incidental to the action consulted upon could still be considered a violation of the Act's taking provision [Section 9(a)(1)]. Under the new amendments, when a jeopardy or non-jeopardy opinion has

*Continued on page 8*

## ACT AMENDMENTS

*Continued from page 7*

been issued, the Service must provide the consulting Federal agency and the permit applicant with a written statement concerning incidental take on the species, the reasonable and prudent measures deemed necessary or appropriate to minimize such impact, and the terms, conditions, and reporting requirements to ensure that those measures are taken. If the action agency complies with these measures, the agency will not be held liable for any incidental taking that occurs.

In addition, the amendments establish a procedure whereby individuals whose actions may affect Endangered or Threatened species may receive permits for the incidental taking of such species, provided the action will not jeopardize the continued existence of the species. This provision addresses the concerns of private landowners who are faced with having otherwise lawful actions not requiring Federal permits prevented by Section 9(a)(1) prohibitions against taking.

developers to provide for the conservation of the habitat of three Endangered species and other unlisted species of concern within the San Bruno Mountain area of San Mateo County.

Section 9(a)(2)(B) of the Act is added, to provide a taking prohibition for Endangered plants on Federal land, whose removal and reduction to possession is now prohibited without permit.

### Other Amendments

Other 1982 amendments affect the United States' implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Section 8A of the Act now clarifies that the Secretary is required to base export determinations upon the best available biological information derived from professionally accepted practices used in wildlife management and that population estimates are not required as part of the data needed by the Service to authorize export of Appendix II species. This change overrules the decision of the U.S. Court of Appeals for the District of

exempt from CITES regulations. An amendment to Section 10 changes the time frame for antique exemptions from "made before 1830" to "not less than 100 years old." With the new language, the Act now conforms to existing custom tariff regulations.

Section 11 of the old Act authorizes the seizure and forfeiture of any fish or wildlife or plant that has been imported in violation of the law. Under the new amendments, however, if no indication of fraud, negligence, or intent to violate the law exists, certain non-commercial transshipments of fish or wildlife will be considered lawfully imported. Such exceptions do not authorize the importation for purposes of processing wildlife products or mounting of trophies in the United States and subsequent exportation without proper permits. Rather, they simply allow passage through the United States of non-commercial imports when these objects were lawfully exported from the country of origin and of re-export, and when they may be lawfully imported into the country of destination. Passage through the country is also allowed when the exporter or owner gave explicit instructions or did all that could have reasonably been done to prevent transshipment through the United States. Other new law enforcement provisions allow the Attorney General the authority to seek injunctive relief under Section 11 of the Act. The citizen suit provisions of the Act were amended to authorize actions against the Department of the Interior (or Commerce) for failure to perform the acts and duties that are imposed by Section 4, as amended.

Other amendments include 1) a resolution of conflict between two Federal circuit court opinions regarding the applicability of the prohibition of Section 9 of the Act to pre-Act wildlife held in the course of a commercial activity after December 28, 1973, and 2) the substitution of the word "recreational" for the word "sporting" in the summary of factors that are to be considered under Section 4 of the Act when determining whether a species is Endangered or Threatened.

### Appropriations

The new legislation authorizes appropriations through fiscal year (FY) 1985 for the Departments of the Interior, Commerce, and Agriculture. These appropriations are not to exceed an annual \$27 million, \$3.5 million, and \$1.85 million, respectively. Appropriations for cooperative agreements with the States (Section 6) were also authorized through FY 1985 not to exceed \$6 million annually. Appropriations of the Western Hemisphere Convention [Section 8A(e)] were also authorized through FY 1985, at a 3-year total of \$600,000.

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## **"Changes affecting the listing . . . of species are intended to ensure that decisions are based solely upon biological criteria."**

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The new amendments authorize the Service to permit any taking otherwise prohibited by Section 9(a)(1)(B) of the Act if the taking is incidental to, and not the purpose of, an otherwise lawful activity. Applicants for such permits must submit a conservation plan that specifies the impacts which will likely result from such taking, what steps the applicant will take to minimize and mitigate those impacts, what other alternatives that would not result in the taking were analyzed, and why these alternatives were not adopted. The decision whether to grant a permit or not will be based on whether the taking will appreciably reduce the likelihood of the survival and recovery of the species in the wild.

Conservation plans developed in compliance with the above provision would be developed jointly between the appropriate Federal wildlife agency and the private sector or local or State government agencies. This provision is modeled after a habitat conservation plan that has been developed by three Northern California cities, the County of San Mateo, and private landowners and

Columbia in *Defenders of Wildlife, Inc. v. Endangered Species Scientific Authority*, 659 F. 2d 168 (D.C. Cir. 1981). The Amendments abolish the International Convention Advisory Commission, and specify that if the United States delegation to CITES votes against the inclusion of a species in Appendix I or II, but the listing occurs, the Secretary of State must submit a report to Congress in the event that no reservation is entered by the United States.

The Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere is much more fully implemented by Section 8A(e) of the new amendments. In particular, steps are required in developing personnel resources and programs, and in conservation of migratory birds and wild plants. By October 1985, a report to Congress is required on the steps that have been taken in this regard, and identifying actions still necessary for comprehensive implementation of the Western Hemisphere Convention.

A change in Section 9 of the Act clarifies the scope of raptor exemptions, making it clear that raptors are not

## CITES NEWS - October 1982

The Endangered Species Act of 1973, as amended in 1979, designates the Secretary of the Interior as both the Management Authority and the Scientific Authority of the United States, for the purposes of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Management Authority responsibilities are delegated to the Associate Director—Federal Assistance; Scientific Authority responsibilities are delegated to the Associate Director—Research.

The Service's Wildlife Permit Office (WPO) functions as staff to the U.S. Management Authority for CITES, assuring that wildlife and plants are exported or imported in compliance with laws for their protection and issuing permits for legal trade of these species. The Service's Office of the Scientific Authority (OSA) functions as staff to the U.S. Scientific Authority for CITES. OSA reviews applications to export and import species protected under CITES, reviews the status of wild animals and plants impacted by trade, makes certain findings concerning housing and care of protected specimens, and advises on trade controls.

### Ginseng Export Findings Announced

The Service announced final findings on the export of American ginseng (*Panax quinquefolius*) taken in the 1982-84 harvest seasons (F.R. 10/4/82). Findings were made on a State-by-State basis.

Guidelines used this year in determining if exports will be detrimental to the survival of the species are identical with those used last year. Findings were issued for some States for a 3-year period.

The Service strengthened the "Certification of Legal Take" requirement for ginseng moved from the State of origin. Recognizing that certain States might not be able to implement such a certification program this season, the Service will accept, for the 1982 harvest season only, other forms of State certification that were approved for the 1981 harvest season.

On the grounds that both Scientific Authority and Management Authority criteria have been met, export of ginseng lawfully taken during the 1982-84 seasons has been approved from Georgia, Kentucky, Minnesota, North Carolina, Vermont (artificially propagated only), and Virginia. The Service approved export of ginseng lawfully taken during the 1982 (only) season

## Alaskan, Pacific Coast Peregrine Recovery Plans Approved

The Service recently approved the last two in a series of four recovery plans to help restore United States populations of the peregrine falcon (*Falco peregrinus*). The Alaskan Population Peregrine Falcon Recovery Plan and the Pacific Coast American Peregrine Falcon Recovery Plan were signed by the Director last month; plans for the Rocky Mountain/Southwest population (1977) and the Eastern population (1979) were approved earlier.

The most significant factor influencing the decline of peregrines, both in Alaska and along the Pacific coast, was undoubtedly the use of organochloride pesticides, especially DDT and its principal metabolite DDE. DDE causes eggshell thinning resulting in egg breaking during normal incubation or embryo deaths. Eggshell thinning substantially lowered the breeding success of the peregrine and led to the listing in 1970 as Endangered of two United States subspecies, the Arctic peregrine falcon (*F. p. tundrius*) and the American peregrine falcon (*F. p. anatum*).

Both listed subspecies occur in Alaska, *F. p. tundrius* in the tundra region and *F. p. anatum* in the boreal forest region of the State. Since 1977, numbers in the tundra population have increased and reproduction has improved. However, no more than 60 percent of the historical sites in the tundra area have been reoccupied and production has remained low. Past trends and current status of boreal peregrines have varied from area to area, declines being less severe on the Yukon River, for example, than on the Tanana River. Current trends are generally favorable for the boreal population.

The Pacific coast population includes peregrines found in California, Nevada, Oregon, and Washington with California hosting by far the largest number of birds. Until 1950, California peregrine reproduction was generally successful but, between that time and 1970, the population had dwindled to only 2 confirmed active sites and probably not more than five active pairs. Recent data indicate that 50 to 60 pairs occur in the State—a rise in numbers due both to increased field observation and limited recovery of the population.

from Arkansas, Illinois, Indiana, Iowa, Maryland, Ohio, Missouri, Tennessee, West Virginia, and Wisconsin.

Beginning with the 1983 harvest season, all States seeking export approval for wild or cultivated American ginseng will be required to have a legally mandated ginseng inspection and certification program.

In spite of intense searches in Nevada, only one peregrine adult has been observed there recently during the breeding season. There have been several reports of active eyries in the Cascade Mountains and in eastern Oregon, but only one active site has been documented in recent years. In Washington, only three sites were known to be occupied in 1980 and 1981.

The objective of both recovery plans is to restore the peregrine to a secure status throughout its former range and, ultimately, to consider the species for delisting. Recovery actions for both populations will include the study of habitat needs and habitat protection; monitoring of population trends; monitoring of pesticide levels in principle prey species; and public information/education programs. The Pacific coast plan calls for the establishment of potential nesting locations. The Alaskan plan calls for the exploration of artificial restocking, to be employed only if natural production is insufficient to recover the species.

Implementation of the two plans will be initiated by the Service's Portland Regional Director and the Alaska Regional Director. Further information on these plans can be obtained by contacting the endangered species staffs of the regional offices.

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U.S. Fish and Wildlife Service Photo by Tom Smylie

Reduced to precarious lows, the American and Arctic peregrine falcons were listed for protection as Endangered species in 1970, when the effort to assist their recovery was begun in earnest.

# More Recovery Plans Approved

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Three more recovery plans, the Puerto Rico Plain Pigeon Recovery Plan, the Painted Snake Coiled Forest Snail Recovery Plan, and the 'Alala Recovery Plan were approved by the Service last month. Implementation of the first two plans will be initiated by the Service's Atlanta Regional Director and the third by the Portland Regional Director. For further information about the plans, contact the endangered species staff of the respective regional office.

## Puerto Rican Plain Pigeon

Little is known about the historic range and abundance of the Puerto Rican plain pigeon (*Columba inornata wetmorei*). Available literature indicates that the species was probably abundant in Puerto Rico at one time, and that habitat destruction and shooting are the probable reasons for its decline.

The only confirmed populations of the species now occur in the municipality of Cidra and surrounding municipalities in east-central Puerto Rico. Current estimates (March 1982) are that 75-85 pigeons still occur in the Cidra-centered population. Continued habitat destruction and disturbances to the nesting birds are likely to further limit pigeon population increases at Cidra and the surrounding areas.

The Puerto Rican plain pigeon is a large bird (38 cm; 15 in), about the same size as a domestic pigeon (*C. livia*). At a

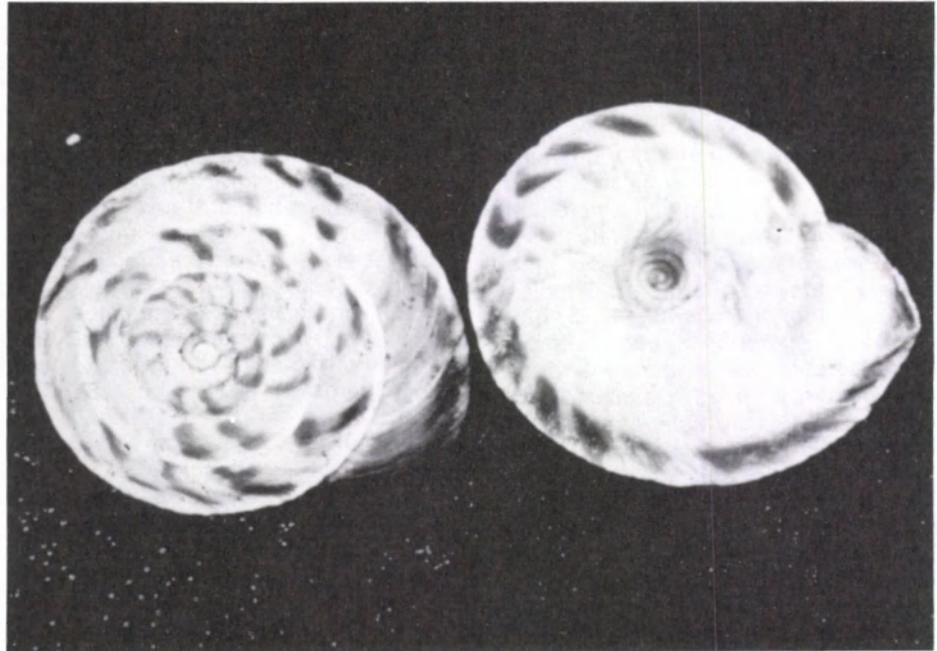


Photo by Amy Shrader Van Devender

distance the species appears pale blue-gray. The species is called "paloma boba" ("fool pigeon") in Cuba because of its lack of wariness. Because of this quality, and also because it sometimes nests in loose colonies, the bird is quite vulnerable to hunting. Despite a Commonwealth regulation (1967) closing the municipality of Cidra to hunting, plain pigeons are still being shot.

Recovery plan goals include the establishment of a minimum of two distinct wild Puerto Rican plain pigeon

populations, each consisting of at least 250 nesting pairs, and the securing of the existing pigeon habitat of the Cidra-centered population. After these goals have been achieved, the plain pigeon could be considered for delisting.

## Painted Snake Coiled Forest Snail

The painted snake coiled forest snail (*Anguispira picta*) is a geographically restricted species of a widespread and quite successful land snail genus. It was discovered in 1906 (Clapp, 1930) at Buck Creek Cove, Franklin County, Tennessee, and apparently has not been reported from any other locality.

It is considered threatened because of its limited known habitat and because the entire habitat could be easily destroyed by lumbering, forest fires, or quarrying. Information on the species' ecology and history is almost completely lacking. It is believed to live only on limestone outcrops in areas of the cove having sufficient forest cover to maintain high moisture conditions. It seems to feed on lichens growing on the rock faces.

1974 studies on the species reported the snail to be restricted to areas of the cove between 750-800 feet in elevation. Later studies, however, show that the snail is not nearly as restricted in elevation as previously thought. The now known appropriate habitat, which includes elevations up to 1500 feet, covers about 324 acres. The 1974 studies estimated the snail population at 2000 individuals; the actual population may be 10 or more times that numerous. A survey of undisturbed areas within Buck

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U.S. Fish and Wildlife Service Photo

The decline of the Puerto Rican plain pigeon came in the early nineteenth century, at a time of almost total habitat destruction in Puerto Rico. Poorly regulated hunting probably occurred and contributed to the rate of decline.

## Recovery Plan Update

The following recovery plans have been approved by the Director, but have not yet been featured in the BULLETIN: Eastern Cougar Recovery Plan (8/2/82), Mexican Wolf Recovery Plan (8/9/82), Desert Slender Salamander Recovery Plan (8/12/82), Morro Bay Kangaroo Rat Recovery Plan (8/18/82), and Oregon Silver-spot Butterfly Recovery Plan (9/22/82). A story on each plan will be included in coming issues.

## Updated Microfiche of BULLETIN, Recovery Plans Available

Microfiche copy of the *Endangered Species Technical Bulletin* (July 1976-June 1982) is available from the Fish and Wildlife Reference Service in Denver, Colorado, for \$3.00 per set. Back issues of the BULLETIN are also available and will be sent free of charge upon request for as long as the supply lasts. 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 (FWRS), Unit i, 3840 York Street, Denver, Colorado 80205 (800/525-3426).

FWRS is also the official supplier of

all the Service's approved endangered species recovery plans. FWRS does not have standing inventories of the printed recovery plans; all orders for plans are filled with photocopy or microfiche duplicates made on demand. Fees (as indicated below) are charged for every order received. (The *Cooperator Discount* does apply to recovery plan orders.)

A four-to-six-month printing time must be allowed following the date a recovery plan is approved by the Director; please understand that you might experience a delay when ordering newly approved plans. Orders should be placed with FWRS at the above address.

## RECOVERY PLANS

*Continued from page 10*

Creek Cove revealed several size classes of snails (from 20mm down to 4mm) indicating that reproduction has been occurring and the present existence of a viable populations.

Immediate dangers to the species are those threats to its small, specialized habitat. Unless significant populations of *Anguispira picta* are found outside Buck Creek Cove and preclude the need for further protection of the species, a number of recovery goals would need to be met before this population could be considered recovered. The actions, listed in the recovery plan, include habitat protection, population monitoring, plans for continued periodic monitoring, and the control of collecting for scientific or other purposes

### 'Alala (Hawaiian Crow)

The recovery plan for the 'alala or Hawaiian crow (*Corvus tropicus*) is designed to identify the requirements for promoting the recovery of the species. The bird has not been studied in detail and there are many unknowns regarding its behavior, population structure, habitat requirements and needs for survival.

Within historic times the 'alala has lived only on the Island of Hawai'i, and as a breeding bird has been restricted to the forest of the western and southern sectors of the island. Around 1900 the 'alala apparently still occupied all of its originally known range and was described as "numerous." By the 1930's and 1940's it was greatly reduced in numbers. Recent surveys indicate an apparently discontinuous 'alala population distribution involving up to four subpopulations of breeding pairs. The

*Continued on page 12*

| TITLE /region/                                     | PAPER COPY | MICROFICHE |
|--|------------|------------|
| Aleutian Canada Goose /1/                          | \$ 4.10    | \$ .50     |
| American Crocodile /4/                             | \$ 3.00    | \$ .50     |
| Arizona Trout /2/                                  | \$ 4.20    | \$ .50     |
| Black-footed Ferret /6/                            | \$15.70    | \$ 2.00    |
| Blue Pike /5/                                      | \$ 5.90    | \$ .50     |
| Blunt-nosed Leopard Lizard /1/                     | \$ 9.30    | \$ 1.00    |
| California Condor (revised) /1/                    | \$ 8.10    | \$ .50     |
| California Least Tern /1/                          | \$ 6.40    | \$ .50     |
| Clay Phacelia /6/                                  | \$ 1.90    | \$ .50     |
| Clear Creek Gambusia /2/                           | \$ 3.70    | \$ .50     |
| Colorado River Squawfish /6/                       | \$ 6.90    | \$ .50     |
| Columbian White-tailed Deer /1/                    | \$ 7.00    | \$ .50     |
| Comanche Springs Pupfish /2/                       | \$ 3.10    | \$ .50     |
| Cui-ui /1/   | \$ 6.10    | \$ 1.00    |
| Delmarva Fox Squirrel /5/                          | \$ 3.10    | \$ .50     |
| Devil's Hole Pupfish /1/                           | \$ 7.50    | \$ .50     |
| Dusky Seaside Sparrow /4/                          | \$ 2.10    | \$ 1.00    |
| Eastern Brown Pelican /4/                          | \$ 5.20    | \$ .50     |
| Eastern Timber Wolf /3/                            | \$10.20    | \$ 1.50    |
| Florida Panther /4/                                | \$ 3.80    | \$ .50     |
| Gila Trout /2/                                     | \$ 5.10    | \$ .50     |
| Greenback Cutthroat Trout /6/                      | \$ 3.00    | \$ .50     |
| Grizzly Bear /6/                                   | \$20.30    | \$ 1.50    |
| Hawaiian Waterbirds /1/                            | \$12.50    | \$ 1.50    |
| Humpback Chub /1, 2, 6/                            | \$ 7.40    | \$ .50     |
| Indiana Bat /3/                                    | \$10.60    | \$ 1.00    |
| Key Deer /4/                                       | \$ 5.60    | \$ .50     |
| Kirtland's Warbler /3/                             | \$ 8.90    | \$ 1.00    |
| Light-footed Clapper Rail /1/                      | \$ 5.60    | \$ .50     |
| Maryland Darter /5/                                | \$ 2.30    | \$ .50     |
| Masked Bobwhite /2/                                | \$ 3.20    | \$ .50     |
| Mississippi Sandhill Crane /4/                     | \$11.40    | \$ 1.00    |
| Mississippi Sandhill Crane (revision) /4/          | \$ 2.70    | \$ .50     |
| Northern Rocky Mountain Wolf /1/                   | \$ 7.20    | \$ .50     |
| Okaloosa Darter /4/                                | \$ 2.30    | \$ .50     |
| Palila /1/   | \$ 5.00    | \$ .50     |
| Pahrump Killifish /1/                              | \$ 4.80    | \$ .50     |
| Peregrine Falcon (East) /3,4,5/                    | \$15.40    | \$ 1.00    |
| Peregrine Falcon (West) /6/                        | \$19.20    | \$ 1.50    |
| Plymouth Red-Bellied Turtle /5/                    | \$ 1.90    | \$ .50     |
| Red-cockaded Woodpecker /4/                        | \$ 4.50    | \$ .50     |
| Santa Cruz Long-toed Salamander /1/                | \$ 5.40    | \$ .50     |
| Socorro Isopod /2/                                 | \$ 2.00    | \$ .50     |
| St. Croix Population of the Leatherback Turtle /4/ | \$ 2.40    | \$ .50     |
| Southern Sea Otter /1/                             | \$ 7.00    | \$ .50     |
| Unarmored Threespine Stickleback /1/               | \$ 6.30    | \$ .50     |
| Virginia Round-leaf Birch /5/                      | \$ 6.70    | \$ .50     |
| Warm Springs Pupfish /1/                           | \$ 2.70    | \$ .50     |
| Watercress Darter /4/                              | \$ 2.70    | \$ .50     |
| West Indian Manatee /4/                            | \$ 3.80    | \$ .50     |
| Whooping Crane /2/                                 | \$21.40    | \$ 1.50    |
| Woundfin /2/                                       | \$ 7.10    | \$ .50     |

## RECOVERY PLANS

Continued from page 11

total population is probably about 130 birds.

Land settlement in the Kona Districts and subsequent conflict with farmers' interests have been cited as a cause for the decline of the 'alala. No single factor, however, is totally responsible. Forest fires have reduced habitat available to breeding pairs and have reduced the availability of foods customarily used by the 'alala. Even today there are undoubtedly instances of shooting of this species. Introduced rats, mongoose, feral cats and dogs, as well as the Endangered 'io or Hawaiian hawk (*Buteo solitarius*) have been suggested as possible predators on the 'alala or its eggs and young. The occurrence or extent of such predation is, however, generally undocumented.

Recent studies indicate that the productivity of the 'alala is low, averaging 0.5 to 0.9 birds fledged per nest. Post fledging survival (2 weeks) is even lower.

While long term management cannot be a major part of this recovery plan, it recognizes that all attempts must be made to reduce disturbances to nesting birds, to maintain habitat suitability, and to determine the impact of avian diseases on both adult and nesting 'alala. The plan calls for supplementing the wild population to a minimum level of over 400 birds. At this population level, the species could probably sustain itself naturally without intensive management.

## New Publications

*Why Save Endangered Species?* is now available from the Publications Unit, U.S. Fish and Wildlife Service, Washington, D.C. 20240. This 8-page

## BOX SCORE OF SPECIES LISTINGS

| Category     | ENDANGERED |                |              | THREATENED |                |              | SPECIES* TOTAL |
|--------------|------------|----------------|--------------|------------|----------------|--------------|----------------|
|              | U.S. Only  | U.S. & Foreign | Foreign Only | U.S. Only  | U.S. & Foreign | Foreign Only |                |
| Mammals      | 15         | 18             | 223          | 3          | 0              | 22           | 281            |
| Birds        | 52         | 14             | 144          | 3          | 0              | 0            | 213            |
| Reptiles     | 8          | 6              | 55           | 8          | 4              | 0            | 81             |
| Amphibians   | 5          | 0              | 8            | 3          | 0              | 0            | 16             |
| Fishes       | 28         | 4              | 11           | 12         | 0              | 0            | 55             |
| Snails       | 3          | 0              | 1            | 5          | 0              | 0            | 9              |
| Clams        | 23         | 0              | 2            | 0          | 0              | 0            | 25             |
| Crustaceans  | 2          | 0              | 0            | 1          | 0              | 0            | 3              |
| Insects      | 7          | 0              | 0            | 4          | 2              | 0            | 13             |
| Plants       | 55         | 2              | 0            | 8          | 1              | 2            | 68             |
| <b>TOTAL</b> | <b>198</b> | <b>44</b>      | <b>444</b>   | <b>47</b>  | <b>7</b>       | <b>24</b>    | <b>764</b>     |

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

Number of species currently proposed: 3 animals  
6 plants

Number of Critical Habitats listed: 53  
Number of Recovery Teams appointed: 69  
Number of Recovery Plans approved: 69  
Number of Cooperative Agreements signed with States:

38 fish & wildlife  
11 plants

October 31, 1982

illustrated (black and white) pamphlet is free.

*The Proceedings of the Freshwater Mussels Workshop*, held in St. Louis, Missouri, October 26-27, 1982, will soon be available. Major topics discussed at the meeting included techniques for impact assessment, habitat creation, relocation to new areas, and the collection and identification of common and endangered mussels. Copies of the proceedings may be requested by writing Andrew C. Miller, Research Limnologist, Waterways Experiment Station, Corps of Engineers, P.O. Box 631, Vicksburg, Mississippi 39180.

## Call for Papers

A Snag Habitat Management Symposium will be held June 7-9, 1983, in Flagstaff, Arizona. This notice is a call for papers (15 minutes) relating to: 1) history and policy, 2) current and new research, or 3) management practices. A field trip is being planned during the last afternoon. Abstracts are due by February 15, 1983. Refer questions and send abstracts to Jerry W. Davis, Program Chairperson, Tonto National Forest, P.O. Box 29070, Phoenix, Arizona 85038 (602/261-4229).

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# ENDANGERED SPECIES

## Technical Bulletin

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