



## ENDANGERED SPECIES TECHNICAL BULLETIN

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



Photo by Noel Snyder

A California Condor is seen here incubating an egg in its sandstone nest. The subsequent hatching was the first such event observed in the wild in over three decades

## CALIFORNIA CONDOR CHICK HATCHES

For the first time in over three decades, scientists have observed the hatching of a California condor (*Gymnogyps californianus*) in the wild. Biologists at the Condor Research Center in Ventura, California, say the chick began "pipping" its way through its greenish white, 5-inch egg on Sunday, May 11, and hatched sometime before dawn on Wednesday, May 14.

A 9-member team of Fish and Wildlife Service and National Audubon Society researchers had been surveying historic condor nesting sites in the southern mountains of California when

they discovered the mated pair inspecting suitable nesting sites the first week in March. Observers spotted the solitary egg—laid sometime between the 15th and 16th of March—in a sandstone pocket on a cliff ledge several hundred feet high.

Biologists monitoring incubation of the egg through a telescope more than a quarter of a mile away noted that both birds took turns sitting on the nest. The actual incubation period (documented for the first time at about 59 days) appears very close to that of the Andean condor (*Vultur gryphus*),

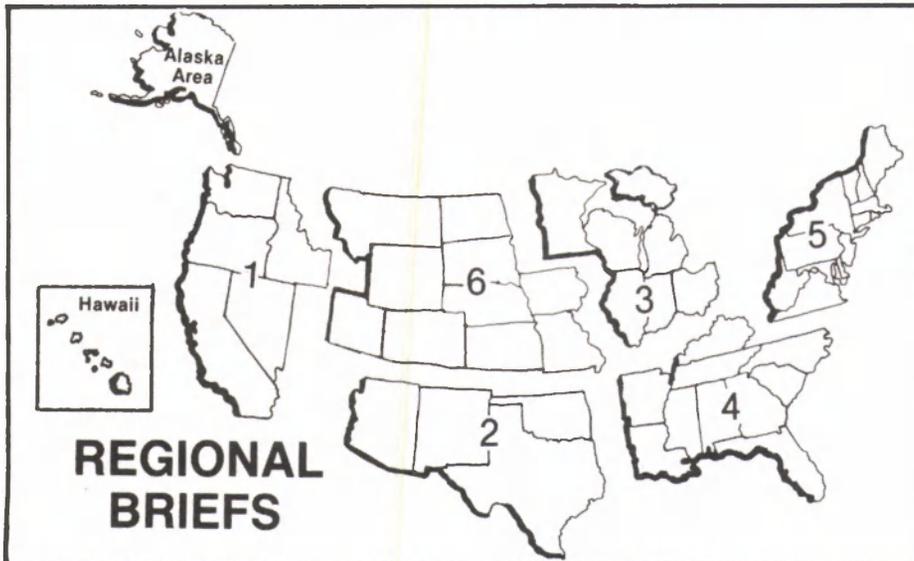
also an Endangered cathartid that has been successfully bred in captivity at the Service's Patuxent Wildlife Research Center and other locations.

Dr. Noel Snyder, who coordinates Service research activities on behalf of the condors as part of the overall Service/National Audubon Society program based at the Ventura center, reports that the adults are very attentive to the nest, with both taking turns feeding their newborn. The researchers will keep the site under constant surveillance, and will attempt to follow the chick through to the point of independence from its parents. (The young bird should leave the nest in October-November, but will remain dependent on the adults for about another 6 months.)

The U.S. Forest Service has sealed off the nesting site and posted a guard in the area to prevent human disturbance, a serious problem throughout the condors' extensive range.

Although scientists are anxious to witness the activities of the newly hatched chick, Snyder cautions that this new breeding and behavioral knowledge will still not give us sufficient information to save the California condor. "We need so much more data on the problems now facing the condor and direct causes of its precarious status before we can ever hope to help the species recover. I'm afraid we must now depend on radio telemetry and other research to help us answer those questions." (See accompanying story.)

The research team is now also following the activities of a 1-year old condor discovered about the same time as the egg. The bird has left its nesting site, and is becoming increasingly independent.



Endangered Species Program regional staffs have reported the following activities for the month of April.

**Region 1.** Five sub-adult whooping cranes (*Grus americana*) have returned to Idaho from their New Mexican wintering grounds.

Four of the whoopers are at Grays Lake National Wildlife Refuge and one is reported near Bear Lake National Wildlife Refuge.

At Hawaii Volcanoes National Park, eight captive Nene geese (*Branta sandvicensis*) were killed by a dog

which managed to dig its way under a protective fence. The eight geese represented approximately a third of the captive breeding stock.

**Region 2.** Kemp's Ridley sea turtles are nesting in Mexico with 3,000 eggs expected to be brought to the U.S. for hatching and release or grow-out studies (involving radio tracking, tagging, monitoring of environmental factors, and protection). Two hundred yearlings from 1979 stock, weighing about 3 lbs. each, will be returned to Mexico. The remainder will be released off the west coast of Florida in June.

The Service has begun trapping peregrine falcon spring migrants on Padre Island in cooperation with the U.S. Army. Over 100 birds have been trapped, banded, and had blood samples taken. There will be limited samples for comparison since some birds were previously trapped and had blood analyzed in past years.

A Houston toad (*Bufo houstonensis*) brochure has been published and copies are available from the Albuquerque Regional Office.

**Region 4.** As an update and correction of the report on snail darter (*Percina tanasi*) propagation on this page in the April 1980 BULLETIN, the Tennessee Valley Authority (TVA) has reported little success with ongoing efforts. The 1,662 eggs taken during March yielded only 30 larvae, none of which survived. The larvae generally succumbed at the rate of a few each day for no discernable reason. An additional 100 eggs obtained late in April, just as the spawning season was coming to a close, produced only 11 larvae. These have been placed into a more "natural" substrate in the lab in the hopes of obtaining better results.

TVA personnel sampled the Holston River transplant area on April 28 and 30 and turned up seven snail darter males in excellent spawning condition. Unfavorable water flow is expected to preclude further sampling this spring. A summer survey is planned to document spawning success.

**Region 5.** A public meeting concerning the proposed listing of Robbins' cinquefoil (*Potentilla robbinsiana*) as an Endangered plant was held in Concord, New Hampshire. Ten persons attended and all endorsed the proposal.

A progress meeting of the Virginia round-leaf birch committee was held in Roanoke, Virginia. The major topic of discussion was the drafting of the recovery plan.

**Alaska Area.** Recent counts of Aleutian Canada geese (*Branta canadensis leucopareia*) on the spring staging grounds in California indicate a population of over 1,400—the highest number ever recorded.

**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*.

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  
Regional 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., Anchorage,  
AK 99503 (907-276-3800, ext. 495);  
Keith M. Schreiner, *Area Director*;  
Jon Nelson, *Ass't Area Director*; Dan  
Benfield, *Endangered Species Specialist*.

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# COMMENTS SOLICITED ON PERMIT TO CAPTURE AND TAG CALIFORNIA CONDORS

As part of a multi-agency campaign to restore the ever-dwindling numbers of California condors (*Gymnogyps californianus*), our Service's Patuxent Wildlife Research Center has submitted a permit application necessary to allow its participation in the capture, marking, and captive propagation of this critically Endangered species (F.R. 5/9/80—pp. 30996-30997).

The permit request represents the initial step in implementing the recovery plan for the condor—a comprehensive cooperative program involving our Service, the National Audubon Society, the U.S. Forest Service, the Bureau of Land Management, and the California Department of Fish and Game. Most experts now look to human intervention—in the form of an emergency habitat protection, tagging, research, and captive propagation effort—as the only hope for saving the estimated 20-30 surviving condors from continued decline to the point of extinction.

Under the proposed program, trapping of condors would begin in September 1980 after capture methods and transmitters tested on Andean condors (*Vultur gryphus*) in Peru this summer are proven successful. Initially, no more than three California condors would be captured and fitted with wing-mounted, solar powered radio transmitters this fall to assess the feasibility of continuing with the tried method of capture. If no unresolvable problems have arisen after one month of evaluation, then trapping would resume until a total of ten birds are fitted with transmitters. (No birds will be captured from February 1, 1981, to the latter part of the summer to prevent harassment during the breeding season.) Movements of the fitted birds would then be tracked throughout their range through an array of fixed antenna towers.

Once captured, all birds will be sexed by one or more methods (laparoscopy seems the most promising at this time), and blood and other tissue samples will be taken for analysis. The long-term objective of the captive propagation plan—intended to supplement the wild population—is to take five unpaired female condors and four unpaired males from the wild to provide a captive breeding stock of five pairs (to be distributed among three raptor propagation facilities).

Project personnel will attempt to capture one sub-adult female between September 1980 and February 1981 to be paired with "Topatopa", the only (male) condor in captivity at the Los Angeles Zoo. (Further taking of captive stock—after the initial female—would not be implemented until the telemetry program demonstrates which birds would qualify as unpaired adults.)

The California Fish and Game Commission voted on May 30 in favor of

authorizing a State permit to allow the taking of condors from the wild in their native California range.

(Permit issuance is conditioned by Service adoption of Fish and Game Department recommendations to promote Federal-State coordination throughout the research program.)

Applicable portions of the program would be initiated only after a thorough review of data received in the Andean condor release, capture, and tagging program this summer.

Interested persons are invited to comment on the Federal permit request by submitting written data, views, or arguments to the Director (WPO), U.S. Fish and Wildlife Service, Washington, D.C. 20240 (reference PRT 2-6563) by June 23, 1980.

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## RECOVERY SCHEDULED FOR CALIFORNIA LEAST TERN, BLUNT-NOSED LEOPARD LIZARD

Recovery plans have been approved by the Service for two Endangered species occurring in California, the California least tern and the blunt-nosed leopard lizard.

### California Least Tern

The California least tern (*Sterna albifrons browni*) is a migratory subspecies with a breeding range usual-

ly described as extending along the Pacific coast from Moss Landing, Monterey County, to San Jose del Cabo, southern Baja California, Mexico. Migration routes and winter distribution of the California least tern are almost unknown. Because several races of least terns are recognized in western Mexico, and most differences in subspecific plumage are observable  
*continued on page 4*



Photo by Luther C. Goldman

Ocean beaches were once common nesting grounds for California least terns, but human activity has made them uninhabitable for the subspecies.



U.S. Fish and Wildlife Service photo

Habitat destruction from agricultural development has been the most serious threat to the blunt-nosed leopard lizard

## RECOVERY FOR TERN, LEOPARD LIZARD

continued from page 3

only in breeding plumage, racial allocation of wintering birds is seldom possible without banding or special markings done prior to migration. From 1954 to 1972, 508 of the birds were banded on their breeding grounds; from 1973 to 1977, 714 least tern chicks were banded. As of 1977, 14 banded terns have been recovered, all in California during the breeding season.

Least tern nesting locations are usually in an open expanse of sand, dirt, or dried mud beside a lagoon or estuary serving as a food source. Ocean beaches were commonly used, but increased human activity on the beaches has made most of them uninhabitable for least terns. Recently, most observed nesting has occurred on mud and sand flats away from the ocean, or on man-made land fills.

A decline in population numbers of the California least tern has occurred since the early 1900's. In 1909, a colony of about 600 pairs along a three-mile stretch of beach in San Diego County was described. Construction of the Pacific Coast Highway along previously undisturbed beach, and the building of summer cottages and beach homes began to displace least tern colonies. At the same time, their bay feeding areas were being developed, filled in, and polluted. By the 1940's, most terns were gone from the beaches of Orange and Los Angeles Counties, and were considered sparse everywhere. Loss of nest-

ing and feeding habitat, and human disturbance continue to threaten this subspecies.

To secure protection of the California least tern, the recovery plan suggests the breeding population be increased to at least 1,200 pairs (about double 1977 levels) in colonies in at least 20 coastal wetland ecosystems throughout their 1977 breeding range. The major limiting factor to the number of breeding pairs, according to the recovery plan, is the availability of suitable nesting habitat. Therefore, habitat protection, management, and acquisition have been given the highest priority in the recovery plan.

In California, only eight currently used colony nesting sites are protected under State, Federal, or other public ownership or jurisdiction. The others are in areas either affected by human disturbance, where land use threatens the suitability of the size, or where management programs are difficult to implement. For some of these areas, the recovery team believes that construction and protection of alternate nesting sites would be preferable to protecting currently used, but vulnerable sites.

The recovery plan also recommends the protection of feeding areas. Especially important are feeding areas used by least tern adults and their young after the nesting season and before their southern migration.

To encourage new colonies of least terns to form in potential breeding habitats and to allow for expansion of existing colonies, the recovery plan

suggests development of new nesting sites and restoration of abandoned nesting and feeding areas. Least terns are receptive to man-made bare ground areas as nest sites as evidenced by the fact that 23 man-made land fills were used as nest sites from 1969 to 1977. In 1975 and 1976, 60 percent of known breeding pairs nested on man-made substrates.

The recovery team calls for the establishment of a Mission Bay Least Tern Coordinating Committee to guide local habitat enhancement and protection efforts in Mission Bay, in San Diego, a major least tern nesting and feeding area. The committee should include representatives from the City of San Diego, California Department of Fish and Game, U.S. Fish and Wildlife Service, Federal Aviation Administration, and California Least Tern Recovery Team. It is recommended that local Fish and Game Department biologists lead this program.

Other activities outlined in the recovery plan include protecting colonies from predation and human disturbance, and conducting research on the breeding biology of least terns and their habitat requirements and management.

### Blunt-Nosed Leopard Lizard

The blunt-nosed leopard lizard (*Gambelia silus*) occurs in undeveloped areas of the San Joaquin Valley and surrounding foothills. Agricultural development in the valley has eliminated many leopard lizard popu-

lations, and the species' numbers continue to decline. According to one estimate, about 50 percent of the reptile's original range has been lost to agricultural and urban development by the 1950s. The status of the lizard in the foothills east of the San Joaquin Valley is uncertain, with no recent sightings north of Kern County.

Habitat destruction has been the most significant factor in reducing this species' range and population numbers. Leveling and cultivating of arid lands in the valley has proceeded at an alarming rate. Of the 618,800 acres of wildlands remaining in 1976, about 228,000 acres on the valley floor were identified as lizard habitat. By April 1979 this habitat had been reduced to 170,400 acres—a loss of 19,200 acres per year.

Other land uses, such as grazing and mineral development, have had a negative impact on the species' habitat.

The objective of the recovery plan is to restore blunt-nosed leopard lizard populations to 1979 levels or above by maintaining well-distributed, suitable habitat units. Current population densities are usually less than one individual per acre.

The plan calls for identification of all lands within the historical range of the species and a survey of the occurrence of the lizard in these areas. A series of aerial surveys conducted annually since 1976 has provided a set of county maps showing potential habitat remaining on the San Joaquin Valley floor in April 1979. (Mapping of potential habitat outside the valley has not been completed.)

According to the recovery plan, the restoration and maintenance of leopard lizard population levels is dependent upon a good understanding of the species' habitat requirements and biological needs. Basic habitat requirements have been determined and

habitat types described. The lizards occur on sparsely vegetated plains, low foothills, canyon floors, and large washes and arroyos. They usually do not occur in dense brush or on steep slopes. Population densities can be correlated with the number of mammal burrows present. Where these burrows are scarce, the lizards construct shallow, simple-chambered tunnels under exposed rocks or along banks of earth. Abandoned or occupied kangaroo rat burrows and abandoned squirrel burrows are used as permanent shelter.

Other steps recommended by the recovery team include effective enforcement of laws protecting the lizard and its habitat, monitoring land use changes through ground and aerial surveys, monitoring population trends where possible, and encouraging local governmental agencies and landowners to establish zoning laws and plan development to minimize mortality and habitat destruction.

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## MANATEE RECOVERY SLATED

In a continuing effort to improve the status of the West Indian manatee (*Trichechus manatus*), a critically Endangered marine mammal, the Service has approved a recovery plan that identifies necessary actions for preventing further decline of the species in U.S. waters. Earlier this year, the Service designated a portion of Kings Bay in Florida's Crystal River as an emergency refuge for the manatee (see January 1980 BULLETIN) and established restrictions for water-related public use on Merritt Island and Chassahowitzka National Wildlife Refuges (see February 1980 BULLETIN).

The thrust of the recovery plan is minimizing human-caused injuries and mortalities to manatees. According to the plan, reducing mortality is the fastest and most direct method of stabilizing or increasing manatee populations. Of 305 dead manatees salvaged from April 1974, through June 30, 1979, 103 were human-related mortalities. More than half of these involved collisions with boats. The plan recommends examination of the nature, extent, and location of these injuries and mortalities through salvage and necropsy, rescue and rehabilitation, and observation of interactions between manatees and objects that harm or kill them.

Minimizing habitat alteration, degradation, and destruction is another objective of the recovery plan. To ac-

complish this, the recovery plan has outlined the need to identify habitats of special biological significance to manatees, characterize these habitats, identify potential hazards to manatee habitats, and monitor the status of essential habitats.

The manatee is currently protected

under the Florida Manatee Sanctuary Act of 1978, which established the entire State of Florida as a "refuge and sanctuary for the manatees," the Marine Mammal Protection Act of 1972, and the Endangered Species Act of 1973. A continued cooperative effort between Florida and the Federal Government will be required for the successful implementation of this recovery plan.

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## CITES ANNUAL REPORT, APPENDICES LISTS AVAILABLE

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Annual Report for 1978 is available for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for \$4.75. To order a copy, refer to stock number 024-010-00542-4. The annual report

was prepared by the Service's Wildlife Permit Office.

The Wildlife Permit Office has reprints of the CITES appendices as amended at the meeting of party nations in Costa Rica in March 1979. Copies are available in limited supply from the U.S. Fish and Wildlife Service, Wildlife Permit Office, Department of the Interior, Washington, D.C. 20240.

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## NEW PUBLICATION

A manual, *Threatened and Endangered Plants of Alaska*, was published jointly by the U.S. Forest Service and the Bureau of Land Management. Including descriptions of over 30 plant taxa and their habitats, the manual is

designed for use as a field reference. Copies are available from either Steve Talbot or Lyle Linnell, Bureau of Land Management, State Office, 701 C Street, Box 13, Anchorage, Alaska 99513.

# RULEMAKING ACTIONS

APRIL 1980

## ENDANGERED STATUS, CRITICAL HABITAT SET FOR RED-BELLIED TURTLE

One of the North America's rarest reptiles, the Plymouth red-bellied turtle (*Chrysemys rubriventris bangsi*), is now protected in its only known habitat in Massachusetts with final Service designation of Critical Habitat and Endangered classification (F.R. 4/2/80).

### Background

The Plymouth red-bellied turtle was initially proposed for listing as an Endangered species, with 11 ponds proposed for designation as Critical Habitat, on May 19, 1978 (see the June 1978 BULLETIN) subsequent to a review of its status previously initiated by the Service (F.R. 6/6/77).

In accordance with 1978 amendments to the Endangered Species Act, the initial Critical Habitat proposal was withdrawn on March 6, 1979, and subsequently repropoed on September 13, 1979, to include an area approximating 7,000 acres in Plymouth County, Massachusetts, on the basis of new information submitted by Dr. James D. Lazell, Jr. (see the October 1979 BULLETIN). Public meetings and hearings on the Critical Habitat proposal were held on October 17, 1979, and on January 15 and 29, 1980.

### Status and Threats

While its population was estimated at under 200 in the Service's original listing proposal, recent surveys indicate that possibly no more than 50 Plymouth red-bellies survive today. Only 41 animals were captured in intensive surveys conducted since 1978 by Dr. Terry Graham (under contract to the Service). All have been found in ponds within the area now designated as Critical Habitat in Plymouth County (with the turtle's existence as yet unconfirmed in Dukes County, where it was known to occur).

This species is extremely vulnerable to habitat modification, primarily in the form of housing development and road construction, which has been a major threat. There have been reports of human harrassment, and collection and predation may also threaten the turtle's survival.

The turtle is known to wander extensively (especially in search of nesting sites), and to bask and feed on lands surrounding the ponds on which it depends. While the 11 ponds proposed are included in the final Critical Habitat for the turtle, the surrounding areas have been reduced from that originally proposed to a total of 3,269 acres, based on Graham's studies of the needs and ecological requirements of the species. As far as can be determined, the designated area contains sufficient space for the population to survive and reproduce successfully.

Any significant alteration of pond water levels (as by groundwater pump-

ing) or quality (as from siltation from land clearing or pollution) which would reduce or eliminate vegetation or aquatic prey items could adversely modify the turtle's Critical Habitat, as aquatic vegetation serves as both food and shelter for the species. Shoreline modification, filling, and dredging for beaches, dikes, real estate development or other similar activities or the draining of wetlands could also affect water quality, levels of shoreline, and nesting and over-wintering sites for the species.

[While there is considerable evidence suggesting that the generic name be limited to painted turtles, there remains some controversy as to the proper name for this species. Until taxonomic work is published on this generic separation, the Plymouth red-bellied turtle will be listed as *Chrysemys* (= *Pseudemys*) *rubriventris bangsi* to eliminate confusion.]

## BONYTAIL CHUB ENDANGERED

Habitat alteration and other factors have so reduced the numbers of the bonytail chub (*Gila eiegans*) that the Service has listed this fish as an Endangered species (F.R. 4/23/80).

Once found in the larger turbid rivers throughout the Colorado River basin, the bonytail has been on the decline since the early 1960's. Recent surveys of streams and reservoirs within its historic range indicate that the species is now confined to Lake Mohave along the Arizona and Nevada border. Chubs have not been located in the Green, Gunnison, Gila, and Salt Rivers where they were known to survive in eddies adjacent to swift waters.

Impoundment and diversion of the Colorado River and its tributaries has been a major factor threatening the bonytail's survival, coupled with competition and predation from introduced fish species. (Exotics now outnumber native fishes in the Colorado River basin.)

The population of bonytail chubs within Lake Mohave consists of only old individuals, and biologists have never observed successful reproduction within the reservoir. Lake Mohave's cold tailwaters do not offer the warm (65° F) temperatures needed for spawning, thereby precluding the

species' successful utilization of this artificial habitat. Unless reproduction is achieved, remaining populations in the reservoir will likely disappear as the fish senesce and die. (Attempts are now under way to propagate bonytails in captivity at the Service's Willow Beach Fish Hatchery in Arizona.)

Because the area now inhabited by the bonytail chub does not provide adequate sites for breeding, reproduction, and the rearing of offspring, Critical Habitat may not now be determined for this species under the requirements of the Endangered Species Act, as amended.

The species had been proposed for Endangered classification on April 24, 1978 (see the May 1978 BULLETIN).

### Reference Note

All Service notices and proposed and final rulemakings are published in the *Federal Register* in full detail. The parenthetical references given in the BULLETIN—e.g., (F.R. 1/17/80)—identify the month, day, and year on which the relevant notice or rulemaking was published in the *Federal Register*.

## ENDANGERED STATUS FOR GOODENOUGH GAMBUSIA

The Goodenough gambusia (*Gambusia amistadensis*)—a fish now extirpated from its only native habitat—has been listed by the Service as Endangered (F.R. 4/30/80).

Known only from Goodenough Spring, a tributary to the Rio Grande River in Val Verde County, Texas, the wild population of this gambusia disappeared following destruction of its habitat by U.S. Army Corps of Engineers impoundment activities. In July 1968, backwaters of the Corps' Amistad Reservoir began permanent flooding of this area, leaving the spring under more than 70 feet of silt-laden water with no evidence of surviving gambusia.

Today, the Goodenough gambusia exists only in captivity at the University of Texas and at the Dexter National Fish Hatchery in New Mexico. (As a result, Critical Habitat determination as called for under the Endangered Species Act as amended would not be prudent for the species at this time.) The Service hopes that it may eventually be possible to reestablish the species in the wild.

The species was proposed for Endangered classification on August 15, 1978 (see the September 1978 BULLETIN).

## CALIFORNIA MOTH LISTED AS THREATENED

The Kern primrose sphinx moth (*Euproserpinus euterpe*), occurring only in the Walker Basin of Kern County, California, has been classified by the Service as a Threatened species (F.R. 4/8/80).

Once thought to be extinct, the Kern primrose sphinx moth was re-discovered in a barley field in Kern County in 1974—apparently in the same area where it was first collected. Due to its extremely low numbers and susceptibility to collecting, Dr. Paul M. Tuskes petitioned the Service to list the insect for protection under the Endangered Species Act in March 1977. The Service subsequently published a proposal to list the species as Threatened on July 3, 1978 (see the August 1978 BULLETIN), and held a public meeting on the proposal on September 18, 1979.

Occurring in very low densities only in the Walker Basin, the largest colony of moths occupies a barley field on a cattle ranch where present management will not likely threaten the species. (Any changes in land management practices on other habitat within the Walker Basin could affect its populations, however.)

Due to its rarity and restricted distribution, potential overcollection is considered a major threat to the species. It has been estimated that single specimens may be worth as much as \$100 to sphingid moth collectors. Collection of females—more vulnerable

as they fly more slowly than males—could affect the reproductive success of the moth.

In 1979, when a larger than usual number of moths was observed (apparently representative of several different year's age classes that emerged simultaneously under favorable weather conditions), many females were observed ovipositing on filaree—an exotic weed unsuitable as a larval host plant. It is believed that natural selection is currently strongly favoring females which lay eggs on the larval food plant, an evening primrose.

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## PUBLIC MEETINGS/HEARINGS

Due to the often unavoidable short notice in scheduling public meetings and hearings (in compliance with 1978 Amendments to the Endangered Species Act) for certain listing and Critical Habitat proposals, we regret that we cannot always relay adequate notice to our readers. Until further notice, we will attempt to provide available information through this column. Due to space limitations and uncertainty of *Federal Register* publication dates, summaries of pertinent proposed rulemakings may not necessarily accompany meeting notices, but may be included in a subsequent issue of the *Bulletin*.

| Species/Action                                       | Affected State(s) | Locations of Meetings/Hearings   | Date    | Time      |
|--|-------------------|--|---------|-----------|
| Devil's River minnow: Reproposed C.H.                | TX                | Meeting: Del Rio Civic Center, Del Rio   | 6/12/80 | 7:00 p.m. |
| Leon Springs pupfish: Reproposed C.H.                | TX                | Meeting: Commerce Bldg., Ft. Stockton  | 6/13/80 | 7:00 p.m. |
| Coachella Valley fringe-toed lizard: Reproposed C.H. | CA                | Meeting: Palm Springs Spa Hotel, 100 N. Indian Ave. & Tahquitz Drive, Palm Springs | 6/20/80 | 7:30 p.m. |
|  |                   | Hearing: (as above)  | 7/7/80  | 7:30 p.m. |
| Mountain golden-heather: Proposed T and C.H.         | N.C.              | *Meeting: Western Piedmont Community College Auditorium, Morganton                 | 7/1/80  | 7:00 p.m. |

\* Tentative  
E—Endangered  
T—Threatened  
C.H.—Critical Habitat

## RAPTOR MEETINGS

The Sierra Club is sponsoring the 1980 PENNSYLVANIA RAPTOR CONFERENCE to be held Saturday, June 14, from 9:30 a.m. to 5:30 p.m. at Dickinson College in Carlisle. The conference is non-technical in nature and will focus on problems relating to birds of prey in Pennsylvania. If you are interested in attending, write to the Sierra Club, P.O. Box 135, Cogan Station, Pa. 17728. Fees are \$3.00 for

preregistration and \$3.50 for walk-in registration.

A two-day SYMPOSIUM ON THE BALD EAGLE IN WASHINGTON will be held June 14-15 at the Seattle Aquarium, Pier 59 in the Waterfront Park. Proceedings of the Symposium will be published and are included in the registration fee of \$5.00 (covering attendance of the symposium only). A \$14.00 fee includes dinner Saturday night at the Edgewater Inn. Send registration fees to Washington Bald Eagle Symposium, c/o Seattle City Light, Environmental Affairs, 1015 Third Avenue, Seattle, Washington 98104.

# CALIFORNIA MOTH

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rose (*Oenothera contorta epilobioides*). Collecting during the flight and oviposition period could therefore reduce the genetic variability necessary to insure maintenance of a fit population.

The publication of maps detailing the location of the Kern primrose sphinx moth would make this species even more vulnerable to taking by collectors. The Service has therefore determined that the designation of Critical Habitat for the insect would not be prudent.

## FIVE MUSSELS UNDER REVIEW

The Service is reviewing the status of five mussels found in Alabama and Mississippi to determine if they should be listed as Endangered or Threatened species (F.R. 4/11/80). All five species—the Curtus' mussel (*Pleurobema curtum*), Marshall's mussel (*Pleurobema marshalli*), Judge Tait's mussel (*Pleurobema taitianum*), penitent mussel (*Epioblasma penita*), and stirrup shell (*Quadrula stapes*)—typically inhabit silt-free shoal areas of sand and/or gravel, with a moderate to swift current.

The Service is seeking the views of the Governors of Mississippi and Alabama and any other interested parties, and requests any data relating to the status, distribution, population trends, or potential threats to these species. Also requested is information on areas that may qualify as Critical Habitat, and any associated economic or other impacts of such a designation.

Information should be submitted on or before July 11, 1980, to the Director (OES), U.S. Fish and Wildlife Service,

## 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     | 12                           | 55         | 67         | 10                           |           | 10        |
| Amphibians   | 5                            | 9          | 14         | 2                            |           | 2         |
| Fishes       | 31                           | 11         | 42         | 12                           |           | 12        |
| Snails       | 2                            | 1          | 3          | 5                            |           | 5         |
| Clams        | 23                           | 2          | 25         |                              |           |           |
| Crustaceans  | 1                            |            | 1          |                              |           |           |
| Insects      | 6                            |            | 6          | 3                            |           | 2         |
| Plants       | 49                           |            | 49         | 7                            | 2         | 9         |
| <b>Total</b> | <b>231</b>                   | <b>474</b> | <b>705</b> | <b>45</b>                    | <b>23</b> | <b>68</b> |

Number of species currently proposed: 35 animals  
(1 plant)

Number of Critical Habitats determined: 36

Number of Recovery Teams appointed: 68

Number of Recovery Plans approved: 35

Number of Cooperative Agreements signed with States:  
35 (fish & wildlife)  
4 (plants)

April 30, 1980

Department of the Interior, Washington, D.C. 20240.

## SNAKE RIVER SNAILS REVIEWED

Two snails, remnants of the extensive late Pleistocene freshwater fauna of southern Idaho, are being reviewed by the Service to determine if a proposal to list them as Endangered or Threatened species is warranted. The Bliss Rapids snail (Family Hydrobiidae) and Snake River physa snail (*Physa* sp.) are both found in the shallow water riffle habitat in the A. J. Wiley Reach of the Snake River, with the

Snake River physa snail also found near Homedale, Owyhee County, Idaho.

The habitat of both species in the A. J. Wiley Reach is threatened by impoundment from the Idaho Power Company's A. J. Wiley Project.

The Service is soliciting any additional information on these species, including data on their taxonomic status, distribution, habitat requirements, recommended Critical Habitats, and possible economic or other impacts of a Critical Habitat designation. Comments and data should be submitted on or before July 22, 1980, to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.



### ENDANGERED SPECIES TECHNICAL BULLETIN

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



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