

implement the protection and recovery provisions of the Endangered Species Act of 1973, as amended, for this toad. The Service seeks data and comments from the public on this proposal.

DATES: Comments for all interested parties must be received by February 23, 1987. Public hearing requests must be received by February 6, 1987.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boquerón, Puerto Rico 00622. Comments and materials received will be available for public inspection, by appointment, at this office during normal business hours, and at the Service's Southeast Regional Office, Suite 1282, 75 Spring Street SW., Atlanta, Georgia 30303.

FOR FURTHER INFORMATION CONTACT: Mr. David Densmore at the Caribbean Field Office address (809/851-7297) or Mr. Richard P. Ingram at the Atlanta Regional Office address (404/331-3583 or FTS 242-3583).

SUPPLEMENTARY INFORMATION:

Background

The Puerto Rican crested toad (*Peltophryne lemur*) was first described in 1868 by E.D. Cope, and was later placed in the genus *Bufo* (Stejneger 1904). Recently, the native bufonids of the Greater Antilles have been regrouped under the genus *Peltophryne*, in recognition of their presumed monophyletic origin (Pregill 1981). *Peltophryne lemur* is a medium-sized toad, 64 to 120 millimeters (2.5 to 4.5 inches) in snout-vent length, yellowish-olive to blackish-brown in color, with prominent supraorbital crests and a distinctive long, upturned snout. Males are considerably smaller than females, and exhibit less prominent crests.

The Puerto Rican crested toad is endemic to two islands on the Puerto Rican Shelf (the main island of Puerto Rico and the island of Virgin Gorda in the British Virgin Islands). The known historic distribution on Virgin Gorda is very limited, and the species has not been observed there for at least two decades; it is assumed to have been extirpated from that island. It has historically been considered rare on Puerto Rico, and for several years before 1966 (García Díaz 1967) was even feared to be extinct there. From better knowledge of its habitat, the toad is now believed to be confined to certain areas on the coastal plain of Puerto Rico. It has been found as single individuals or very small populations at several locations on the north coastal plain, and

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Puerto Rican Crested Toad

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine the Puerto Rican crested toad (*Peltophryne lemur*) to be a threatened species. Critical habitat is not proposed. The species is endemic to two islands on the Puerto Rican Shelf, but is presently thought to exist only on the main island of Puerto Rico, where a single large population is known from the southwest coast and a few small populations are believed to survive on the north coast. The threats include filling and drainage of its breeding sites, and direct loss of adults and their habitat during land development. This proposal, if made final, would

is known from two areas on the south coastal plain. Since 1975 it has been known to occur in Guánica Commonwealth Forest on the southern coast (Richard Thomas, University of Puerto Rico, pers. comm. 1976), and a large breeding aggregation estimated to contain more than a thousand individuals was found there in 1984 (Moreno 1985). The species has also been in captive propagation (Paine 1985), and approximately 850 toadlets were released in Cambalache Commonwealth Forest on the north coast in 1984 and 1985.

The Puerto Rican crested toad occurs at low elevations (below 200 meters or 660 feet) where there is exposed limestone or porous, well-drained soil offering an abundance of fissures and cavities. Adult toads are semifossorial and widely dispersed when not breeding. Although not completely understood, breeding appears to be sporadic and highly dependent upon occasional heavy rains (Rivero *et al.* 1980, Moreno 1985). When rainfall and surface water are adequate, more than one breeding event may occur in a single season. Breeding is concentrated in a very short period, and within a few weeks the toadlets metamorphose and quickly disperse. Breeding shows a high fidelity to sites that offer the right combination of elevation, topography, and ponded fresh water.

The Puerto Rican crested toad appears to be susceptible to a variety of threats at various stages of its life cycle. Because of their cryptic behavior, the location or even presence of adult toads in an area being developed is difficult to detect in advance. More importantly, destruction of its breeding sites by filling or alternation of drainage may indirectly destroy even a large population. Many breeding sites are known to have been eliminated on both the north and south coasts of Puerto Rico, and with so few breeding sites known to remain, further losses could place the species in danger of extinction.

The Puerto Rican crested toad was included as a category 2 species in a notice of vertebrate wildlife review on December 30, 1982 (47 FR 58454). Category 2 comprises taxa for which information in the possession of the Service indicates that proposing to list the species is possibly appropriate, but for which available data are not judged sufficient to support such proposal. The Puerto Rico Department of Natural Resources petitioned the Service to list the Puerto Rican crested toad as endangered on December 27, 1984. On August 20, 1986 (51 FR 29671), the Service announced a 12-month finding

that the action requested by the petitioner was warranted but precluded by other listing actions in accordance with section 4(b)(3)(B)(iii) of the Endangered Species Act of 1973, as amended, and that available evidence indicated the species should be listed as threatened. This proposed rule constitutes an additional required petition finding, and indicates that the action requested by the petitioner is warranted.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Puerto Rican crested toad (*Peltophryne lemur*) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Although the Puerto Rican crested toad has historically been rare, the species has undoubtedly declined further as its coastal lowland habitats have been destroyed by agricultural and urban development. In particular, known breeding sites have been filled or drained for construction, cultivation, and mosquito control. The Puerto Rico Department of Natural Resources is presently considering construction of a visitors parking lot within the species' only known major breeding area in Guánica Commonwealth Forest. In addition, a major resort development has recently been proposed for a tract of private land adjacent to this site. This sudden acceleration of development pressure where the only known healthy toad population survives has increased concern over the species' continued existence. However, discussions between Federal and Commonwealth agencies have been initiated in an effort to find alternatives to the proposed developments that will avoid destruction of toad breeding habitat.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The taking of toads has occurred for the purpose of captive breeding (Paine 1985), although only a few adults have been taken. However, overcollecting of other species of Puerto Rican herpetofauna is known to have occurred, and may become a factor

affecting the continued existence of this species. This would be more likely if collectors were aware of the location of breeding sites and were present during breeding when large numbers of toads may be concentrated in a small area.

C. Disease or Predation

Disease and predation have not been documented as factors in the decline of this species. Predation on dispersing toadlets is heavy, particularly from wading birds (Miguel Canales, Guánica Commonwealth Forest, pers. comm. 1986), and could become a significant factor with populations reduced too greatly by other problems.

D. The Inadequacy of Existing Regulatory Mechanism

The Commonwealth of Puerto Rico has recently adopted a regulation that recognizes and provides protection for certain Commonwealth listed species. The Puerto Rican crested toad is classed as threatened on the Commonwealth list. Federal listing would enhance this protection and apply the recovery and enforcement provisions of the Endangered Species Act to this species.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Reproduction in this species appears to rely on climatic events that occur at irregular intervals. Such reliance may create natural fluctuations in numbers of this toad that could interact with reduced availability of breeding sites to increase the likelihood of whole population segments being eliminated. Both extremes in sex ratios among breeding animals have also been reported, a low incidence of males in one area by Rivero *et al.* (1980), and a low incidence of females at another locality by Moreno (1985), but the significance of these observations is difficult to assess without more information about the normal reproductive biology of this species.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list the Puerto Rican crested toad as a threatened species. Threatened status is proposed because of the species' low numbers, restricted distribution, and apparent susceptibility to extirpation. Endangered status is not appropriate, since the species does not appear to be faced with imminent extinction. Critical habitat is not being proposed for reasons discussed in the following section.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for the Puerto Rican crested toad at this time. As discussed under threat Factor B in the "Summary of Factors Affecting the Species," collecting could threaten the toad's continued existence. The publication of critical habitat maps and other publicity accompanying critical habitat designation could increase collecting pressure and enforcement problems. The Service believes that Federal involvement in the areas where this species occurs can be identified without the designation of critical habitat. All involved parties and landowners will be notified of the location and importance of protecting this species's habitat. Protection of this species' habitat will also be addressed through the recovery process and through the section 7 jeopardy standard.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, Commonwealth, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the Commonwealth and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and were recently revised at 51 FR 19926 (June 3, 1986). Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the

continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. No critical habitat is being proposed for the Puerto Rican crested toad, as discussed above, and no Federal involvement is known or expected to occur.

The Act and implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general prohibitions and exceptions that apply to all threatened wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and Commonwealth conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving threatened wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22, 17.23, and 17.32. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. For threatened species, there are also permits for zoological exhibition, educational purposes, or special purposes consistent with the purposes of the Act. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposal are hereby solicited.

Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;
- (2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;
- (3) Additional information concerning the range and distribution of this species; and
- (4) Current or planned activities in the subject area and their possible impacts on this species.

Final promulgation of the regulation on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Caribbean Field Office, P.O. Box 491, Boquerón, Puerto Rico 00622.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

References Cited

- García Díaz, J. 1967. Rediscovery of *Bufo lemur* (Cope) and additional records of reptiles from Puerto Rico. *Stahlia* 10:1-6.
- Moreno, J.A. 1985. Notes on *Peltophryne lemur*. Unpublished report. 6 pp.
- Paine, F.L. 1985. International studbook of the Puerto Rican crested toad (*Peltophryne lemur*). Buffalo Zoological Gardens, New York. 33 pp.
- Pregill, G. 1981. Cranial morphology and the evolution of West Indian toads (Salientia: Bufonidae): Resurrection of the genus *Peltophryne* Fitzinger. *Copeia* 1981(2):273-285.
- Rivero, J.A., H. Mayorga, E. Estremera, and I. Izquierdo. 1980. Sobre el *Bufo lemur* (Cope) (Amphibia, Bufonidae). *Carib. J. Sci.* 15:33-40.
- Stejneger, L. 1904. The herpetology of Porto Rico. *Rept. U.S. Nat. Mus.*, 1902:549-724.

Author

The primary author of this proposed rule is Mr. David Densmore, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boquerón, Puerto Rico 00622 (809/851-7297).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat.

3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under "Amphibians", to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

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(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
AMPHIBIANS							
Toad, Puerto Rican.....	<i>Peltophyre lemur crested</i>	U.S.A. (PR) and British Virgin Islands.	Entire.....	T		NA	NA

Dated: November 28, 1986.

P. Daniel Smith,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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