

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Puerto Rican Crested Toad**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines the Puerto Rican crested toad (*Peltophryne lemur*) to be a threatened species pursuant to the Endangered Species Act (Act) of 1973, as amended. 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. Threats to this species include filling and drainage of its breeding sites, and direct loss of adults and their habitat during land development. This final rule will implement the Federal protection and recovery provisions afforded by the Act for this toad.

DATE: The effective date of this rule is September 3, 1987.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boquerón, Puerto Rico 00622, and at the Service's Southeast Regional Office, Suite 1282, 75 Spring Street, SW., Atlanta, Georgia 30303.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Pace 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 prior to 1966 (Garcia Diaz 1967) was thought to be extinct there. Recent surveys suggest that the toad is 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 northern coastal plain, and is known from two areas on the southern 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. Adults 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. There is a high fidelity to breeding 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 alteration 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 includes 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 a 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 Act, and that available evidence indicated the species should be listed as threatened. The Service proposed listing the Puerto Rican crested toad on December 23, 1986 (51 FR 45923).

Summary of Comments and Recommendations

In the December 23, 1986, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate agencies of the Commonwealth of Puerto Rico, municipal governments, Federal agencies, scientific organizations, private landowners, and other interested parties were contacted and requested to comment. Newspaper notices inviting general public comment were published in the *San Juan Star* (in English) and in *El Nuevo Dia* (in Spanish) on January 18, 1987. Seven letters of comment were received and are discussed below. No public hearing was requested or held.

Comments were received from the Secretary of the Puerto Rico Department of Natural Resources, administrators of the Federal Highway Administration and the Environmental Protection Agency, two scientists, and two private landowners. The Department of Natural Resources supported the proposal, while the Federal Highway Administration and Environmental Protection Agency acknowledged the proposal, and stated that they could not identify any specific projects that might affect the species. Of the two scientists who responded, one stated unqualified support for the proposal, while the other thought more status information should be gathered before proceeding with listing, although

he acknowledged that the threats posed by development in or near breeding areas would be sufficient justification for listing the species as threatened. Neither scientist provided any additional data. The two private landowners, who own the property proposed for resort development adjacent to the Guánica breeding area, did not object to the proposal.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Puerto Rican crested toad should be classified as a threatened species. Procedures found at 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 were followed. 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 has been considering construction of visitor facilities 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, and road construction through this site to improve access to the proposed resort area has been proposed by the Municipality of Yauco. 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 are continuing 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. However, predation on dispersing toadlets may be heavy, particularly from wading birds (M. Canals, Guánica Commonwealth Forest, pers. comm. 1986), and could become a significant factor if populations are greatly reduced by other problems.

D. The inadequacy of existing regulatory mechanisms. 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 enhances this protection and applies the recovery and enforcement provisions of the Act to this species.

E. Other natural or manmade factors affecting its continued existence. Reproduction in this species appears to rely on climatic events, sometimes one or more years apart, that occur at irregular intervals. Such reliance may create natural fluctuations in population sizes that could, when compounded by a reduced availability of breeding sites, increase the likelihood of whole subpopulations being eliminated. Extremes in sex ratios have also been reported; a low incidence of males in one area (Rivero *et al.* 1980), and a low incidence of females at another locality (Moreno 1985). However, the significance of these observations is difficult to assess without more information about the 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 make this rule final. Based on this evaluation, the preferred action is to list the Puerto Rican crested toad as threatened. Due to the species' low numbers, restricted distribution, and apparent susceptibility to extirpation, threatened status seems an accurate assessment of the species' condition. Endangered status is not appropriate, since the species does not appear to be faced with imminent extinction. It is not prudent to designate critical habitat because doing so would

increase the risk to this species, as detailed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a 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" above, 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 have been notified of the location and importance of protecting this species' habitat. Protection of this species' habitat will also be addressed through the recovery process and through the section 7 jeopardy standard. Therefore, it would not be prudent to determine critical habitat for the Puerto Rican crested toad at this time.

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. These may include support for additional study to determine more concisely the distribution and reproductive biology of this secretive animal, Service advice and cooperation in the ongoing program of captive propagation for this species in zoos, and other cooperation with the Commonwealth government on specific management measures. 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. 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.

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

Garcia Diaz, 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* 1981:273-285.
 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. Natl. Mus., 1902:549-724.

Author

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

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal

Regulations, is amended as set forth below:

PART 17—[AMENDED]

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. 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 crested	<i>Peltophryne lemur</i>	U.S.A. (PR), British Virgin Islands	Entire	T	283	NA	NA

Dated: July 9, 1987.
 Susan Recce,
 Acting Assistant Secretary for Fish and Wildlife and Parks.
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