

**50 CFR Part 17****RIN 1018-AB31****Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Plant *Calyptronoma rivalis*****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule.**SUMMARY:** The Service determines *Calyptronoma rivalis* (palma de manaca) to be a threatened species pursuant to the Endangered Species Act of 1973 (Act), as amended.

*Calyptronoma rivalis* is a palm tree that is endemic to the island of Puerto Rico. The three remaining natural populations are restricted to the subtropical moist and subtropical wet limestone forests of the northwest part of the island. The species is threatened by erosion due to flash flooding, and by agricultural expansion, and rural development. Flash flooding has increased due to extensive deforestation in surrounding areas. This final rule for *Calyptronoma rivalis* will implement the Federal protection and recovery provisions afforded by the Act.

**EFFECTIVE DATE:** March 8, 1990.**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, Boqueron, Puerto Rico 00622 and at the Service's Southeast Regional Office, Suite 1282, 75 Spring Street SW., Atlanta, Georgia 30303.**FOR FURTHER INFORMATION CONTACT:** Ms. Susan Silander at the Caribbean Field Office address (809/851-7297) or Mr. Tom Turnipseed at the Atlanta Regional Office address (404/331-3583 or FTS 242-3583).**SUPPLEMENTARY INFORMATION:****Background**

*Calyptronoma rivalis* was first

collected in 1901 by L.M. Underwood and R.F. Grigg in San Sebastian of western Puerto Rico. In 1923, N. Britton and P. Wilson referred to this species as *Calyptrogyne occidentalis*; however, L.H. Bailey, in his 1938 monograph on the group, provided sufficient evidence to place the species in a separate genus *Calyptronoma*. Authorities on the palm family accept this opinion and view this palm as an endemic species. Until recently, the species was known only from the type locality, where 44 individuals occur. Additional populations were discovered along the Camuy River in 1981 and later along the Guajataca River, both in northwestern Puerto Rico (Vivaldi and Woodbury 1981, Natural Heritage Program 1989). About 220 individuals are presently known from these populations. In addition, seeds have been collected from mature specimens and a small number of seedlings cultivated from these have been introduced into the Puerto Rico Department of Natural Resource's Rio Abajo Commonwealth Forest and the nearby Camp Guajataca of the Boy Scouts.

*Calyptronoma rivalis* is an arobrescent palm that may reach 30 to 40 feet (8 to 10 meters) in height and 6 to 10 inches (13 to 25 cm) in diameter. The spineless, pinnate leaves may reach up to 12 feet (3 meters) and have petioles and sheaths up to 2 feet long (.8 meter). The inflorescence is a drooping panicle about 3 feet (1 meter) long. The flowers are in triads of two males and one female and are borne on sunken pits. Fruits are only .24 inch (6 millimeters) in diameter and are subglobose and reddish when ripe. All fruits mature at approximately the same time and fall with the persistent flower parts still attached to the base.

Only three natural populations and two small, introduced populations are known: San Sebastián, Camuy River, Guajataca River, Camp Guajataca and the Rio Abajo Commonwealth Forest. All occur in the semievergreen seasonal forests of the karst region of northwestern Puerto Rico at elevations of 100 to 150 meters. All three natural populations are found in level or nearly level areas along stream banks.

Deforestation in the surrounding areas has increased the threat of flash flooding and therefore the establishment of seedlings may be difficult. The construction of a road in the Camuy area resulted in the destruction of a large portion of that population.

*Calyptronoma rivalis* was recommended for Federal listing by the Smithsonian Institution (Ayensu and DeFilipps 1978). The species was included among the plants being considered as candidates for proposal to list as endangered or threatened species by the Fish and Wildlife Service in notices of review published in the *Federal Register* (45 FR 82480) dated December 15, 1980; the November 28, 1983, update (48 FR 53640) of the 1980 notice; and the September 27, 1985, revised notice (50 FR 39526). The species was designated category 1 (species for which the Service has substantial information supporting the appropriateness of proposing to list them as endangered or threatened) in each of these three notices.

In a notice published in the *Federal Register* on February 15, 1983 (48 FR 6752), the Service reported the earlier acceptance of the new taxa in the Smithsonian's 1978 book as under petition within the context of section 4(b)(3)(A) of the Act, as amended in 1982. The Service made subsequent petition findings in 1984 through 1988 that listing *Calyptronoma rivalis* was warranted but precluded by other pending listing actions of a higher priority, and that additional data on vulnerability and threats were still being gathered. The Service proposed listing *Calyptronoma rivalis* on February 7, 1989 (54 FR 5983), which constituted the final required petition finding in accordance with section 4(b)(3)(B)(ii) of the Act.

**Summary of Comments and Recommendations**

In the February 7, 1989, proposed rule and associated notifications, all interested parties were requested to submit factual reports of information that might contribute to the development

of a final rule. Appropriate agencies of the Commonwealth of Puerto Rico, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice inviting general public comment was published in the *San Juan Star* on February 18, 1989. Five letters of comment were received and are discussed below.

Comments were received from several offices with the Puerto Rico Department of Natural Resources. The Secretary of the agency and the Terrestrial Ecology Section supported the listing but had no additional information on the status of the species. Dr. George Proctor, Natural Resources Specialist, provided details on location and abundance in the Camuy River population. The Natural Heritage Program provided information on an additional population of 10 to 15 mature individuals located along the Guajataca River.

The U.S. Army Corps of Engineers did not have additional information on the plant but stated that the palma de manaca was considered a facultative wetland species.

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Calyptronoma rivalis* 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 *Calyptronoma rivalis* (O.F. Cook) L.H. Bailey (palma manaca) are as follows:

**A. The present or threatened destruction, modification, or curtailment of its habitat or range.** Modification of the original semievergreen seasonal forest and conversion to agricultural and pasture land may have eliminated populations and reduced available habitat. Direct destruction of plants through deforestation and flash flooding and the continued modification of habitat appear to be the most serious threats to *Calyptronoma rivalis*. Road construction eliminated part of the Camuy River population. Fires in surrounding sugar cane fields have burned some individuals. Flash flooding, exacerbated by deforestation in surrounding areas, may cause erosion of stream banks, may reduce germination by washing away the seeds, and may

result in poor establishment and survival of seedlings.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** Taking for these purposes has not been a documented factor, but it could become a problem if information on the palm were to be widely publicized.

**C. Disease or predation.** Disease and predation have not been documented as factors in the decline of this species.

**D. The inadequacy of existing regulatory mechanisms.** The Commonwealth of Puerto Rico has adopted a regulation that recognizes and provides protection for certain Commonwealth listed species. Although the Puerto Rico Department of Natural Resources issued an internal directive in 1979 to try to protect this endemic palm, *Calyptronoma rivalis* is not yet on the Commonwealth list. Federal listing would assure protection and, if the species is ultimately placed on the Commonwealth list, enhance its protection and possibilities for funding needed research.

**E. Other natural or manmade factors affecting its continued existence.** All 3 natural populations, totalling perhaps 275 individuals, are known to inhabit areas that are susceptible to flash flooding. Although germination may occur readily, establishment of seedlings is often impossible due to the frequency of such occurrences. Additionally, cattle have been observed feeding on and trampling young seedlings.

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 *Calyptronoma rivalis* as threatened. Since the species appears to produce large quantities of viable seed, improvement in the species' status may only require mechanisms to protect it from the effects of deforestation in surrounding areas. In addition, introduction efforts in the Rio Abajo Forest appear to have been initially successful, although it is not yet known if the palms will reproduce and colonize the area naturally. Therefore, threatened rather than endangered seems an accurate assessment of the species' status. The reasons for not proposing critical habitat for this species are discussed below.

#### Critical Habitat

Section 4(a)(3) of the Act requires that to the maximum extent prudent and determinable, the Secretary designate 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 this species at this time. The number of individuals of *Calyptronoma rivalis* is sufficiently small that vandalism could seriously affect the survival of the species. Such an activity is difficult to control and is only regulated by the Act with respect to plants in cases of (1) removal and reduction to possession of endangered plants from lands under Federal jurisdiction, or malicious damage or destruction on such lands; and (2) removal, cutting, digging up, or damaging or destroying in knowing violation of any State law or regulation, including State criminal trespass law. Publication of critical habitat descriptions and maps in the **Federal Register** would increase the likelihood of such activities. The Service believes that Federal involvement in the areas where this plant 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 *Calyptronoma rivalis* 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. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants 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 a listed 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 *Calyptronoma rivalis*, as discussed above. Federal involvement is not expected where the species is known to occur.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71, would apply. These prohibitions, in part make it illegal for any person subject to the jurisdiction of the United States to import or export any threatened plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell or offer it for sale in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. In addition, for endangered plants, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the removal, cutting, digging up, or damaging or destroying of endangered plants in knowing violation of any State law or regulation, including State

criminal trespass law. Equivalent protection for threatened plants is not reflected in the 1988 amendments. Certain exceptions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. It is anticipated that few trade permits for *Calyptronoma rivalis* will ever be sought or issued since the species is not known to be in cultivation and is uncommon in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 3507, Arlington, Virginia 22203 (703/358-2104).

**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**

Ayensu, E.S., and R.A. DeFilipps. 1978. Endangered and threatened plants of the United States. Smithsonian Institution and World Wildlife Fund, Washington. DC xv + 403 pp.  
 Bailey, L.H. 1938. Certain palms of the Greater Antilles. I. 7. *Calyptronoma rivalis*. Gentes Herbarum 4:153-177.

Vivaldi, J.L., and R.O. Woodbury. 1981. Status report on *Calyptronoma rivalis* (O.F. Cook) L.H. Bailey. Unpublished status report submitted to the Fish and Wildlife Service, Atlanta, Georgia. 35 pp.

**Author**

The primary author of this final rule is Ms. Susan Silander, 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 species, Fish, Marine mammals, Plants (agriculture).

**Regulation Promulgation**

**PART 17—[AMENDED]**

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, is amended as set forth below:

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

**Authority:** 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1543; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Amend §§ 17.12(h) by adding the following, in alphabetical order, under *Arecaceae* to the list of Endangered and Threatened Plants:

**§ 17.12 Endangered and threatened plants.**

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 (h) • • •

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Arecaceae—Palm family:						
<i>Calyptronoma rivalis</i>	Palma de manaca	U.S.A. (PR)	T	374	NA	NA

Dated: January 23, 1990.  
**Constance B. Harriman,**  
 Assistant Secretary for Fish and Wildlife and Parks.  
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