

centimeters (2.2 to 3.5 inches) long and 2.2 to 4 centimeters (0.9 to 1.6 inches) wide, thin and nearly hairless except on the veins beneath. Leaflets are lanceolate, finely toothed, long-pointed and rounded, and unequal at the base. Nogal is monoecious; male and female flowers are borne in different clusters or catkins on the same tree. Staminate or male flowers are numerous and in drooping catkins, 8.8 to 11 centimeters (3.5 to 4.3 inches) long, borne on the twigs of the previous year. Pistillate or female flowers are several along an axis 4.4 to 8.8 centimeters (1.7 to 3.5 inches) long, borne at the ends of the shoots of the season. Individual male flowers are composed of a 6-lobed calyx and many stamens. Female flowers are about 0.5 centimeters (0.2 inches) long, composed of a 4-toothed scale opening at one side and 4 sepals. The fruit, a drupe, is a walnut which is composed of a blackish husk, a brown rough-ridged hard shell from 1.6 to 2.75 centimeters (0.6 to 1.1 inches) wide and one large oily edible seed (Little *et al.* 1974, Proctor 1992).

Juglans jamaicensis may have been more widespread in Puerto Rico in the past, but much of the forested areas in the central mountain region were cut for the planting of coffee. The species, possibly never a common one, may also have been cut for the use of its valuable wood (Little *et al.* 1974). Today it is known from only one locality on privately-owned land where it is threatened by rural development and agricultural activity.

Previous Federal Action

Juglans jamaicensis was included among the plants being considered as endangered or threatened by the Service, as published in the Federal Register notice of review dated February 21, 1990 (55 FR 6184) and September 31, 1993 (58 FR 51144). The species was designated as a category 2 candidate species (species for which the Service has information which indicates that proposing to list the species is possibly appropriate but for which sufficient data are not currently available to support listing) but was subsequently reclassified as a category 1 candidate species (species for which the Service has substantial information supporting the appropriateness of proposing to list them as endangered or threatened). *Juglans jamaicensis* is considered a "critical" plant species by the Natural Heritage Program of the Puerto Rico Department of Natural and Environmental Resources. The Center for Plant Conservation (1992) has assigned the species a Priority Status of A (a species which could possibly go extinct in the wild in the next 5 years).

This proposed rule constitutes the final 1-year finding in accordance with section 4(b)(3)(B)(ii) of the Act.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act 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 endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Juglans jamaicensis* C. DC. are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* *Juglans jamaicensis* is known only from Cuba, Hispaniola and Puerto Rico. Available information indicates that it is rare on the first two islands (CPC 1992, Proctor 1992). In Puerto Rico it is known from only one population consisting of 14 individuals on privately-owned land. Surrounding areas are currently planted in coffee. The expansion of the coffee plantation threatens these trees, particularly because the tendency to plant "sun coffee" is increasing and in such plantations all shade trees are eliminated. Located in a rural area, development for housing may threaten the species as well.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* The wood of the species is reported to be good quality and highly prized and indeed it is reported to have been cut in the past for such purposes (Little *et al.* 1974).

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. However, *Juglans jamaicensis* is not yet on the Commonwealth list. Federal listing would provide immediate protection and, if this species is ultimately placed on the Commonwealth list, enhance its protection and the likelihood for funding needed research.

E. *Other natural or manmade factors affecting its continued existence.* One of the most important factors affecting the continued survival of this species is its limited distribution. Because so few individuals are known to occur in a limited area, the risk of extinction is extremely high. Catastrophic natural

events, similar to the passing of Hurricane Hugo in 1989, may dramatically affect forest species composition and structure, felling large trees and creating numerous canopy gaps.

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 *Juglans jamaicensis* as endangered. The species is known from only one locality in Puerto Rico. Deforestation for rural and agricultural development are imminent threats to the survival of the species. Therefore, endangered rather than threatened status seems an accurate assessment of the species' condition. The reasons for not proposing critical habitat for these species are discussed below in the "Critical Habitat" section of this rule.

Critical Habitat

Critical habitat is defined in section 3 of the Act as: (i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection and; (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require 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 *Juglans jamaicensis*. Service regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist—(1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

The number of individuals of *Juglans jamaicensis* is small and vandalism and