

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Plant *Daphnopsis hellerana*

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Daphnopsis hellerana* to be an endangered species. *Daphnopsis hellerana* is a small tree or large shrub endemic to evergreen and semi-evergreen seasonal forests on limestone hills of the karst region of northern Puerto Rico. The species has been seriously impacted by agriculture, urbanization, and limestone quarrying. This final rule will implement for *Daphnopsis hellerana* the Federal protection and recovery provisions afforded by the Endangered Species Act of 1973, as amended.

EFFECTIVE DATE: July 25, 1988.

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 R. Silander at the Caribbean Field Office address (809/851-7297) or Mr. Tommy Turnipseed at the Atlanta Regional Office address (404/331-3583 or FTS 242-3583).

SUPPLEMENTARY INFORMATION:**Background**

Daphnopsis hellerana was first discovered and collected by Amos Arthur Heller in 1900 on a limestone hill near Bayamon, Puerto Rico. The species was not seen again until 1958, when Roy O. Woodbury found it in Toa Baja, near the type locality (Nevling and Woodbury 1966). Since 1958, three other populations have been located in the karst region of Puerto Rico, two in the Toa Baja/Dorado area, and the third near Isabela in northwestern Puerto Rico (Vivaldi and Woodbury 1981). The Isabela population and the plants rediscovered by Woodbury have since been destroyed, leaving two small populations of seven trees in Toa Baja and Dorado. The Toa Baja population is on Federal land under the jurisdiction of the National Institutes of Health (U.S.

Department of Health and Human Services) and leased to the University of Puerto Rico School of Medicine. The Dorado population is on Commonwealth public land. These 14 individuals are the only plants of this species known to exist.

Daphnopsis hellerana is an evergreen shrub or small tree reaching 20 feet (6 meters) in height, with a stem diameter of 2 inches (5 centimeters). The leaves are simple, alternate, elliptic to obovate in shape, and blunt or rounded at the apex. Both leaves and twigs are golden hairy when young. Male and female flowers are borne on separate plants (dioecious), and terminally clustered. The male flowers are small, tubular, and finely hairy; the female flowers are smaller, less than one-fourth inch (one-half centimeter) long, bell-shaped, and also finely hairy. The fruit is an elliptic, one-seeded, white berry that is less than three fourths of an inch (2 centimeters) long. The species is endemic to low elevation evergreen and semi-evergreen forests (subtropical moist forests) on limestone hills in the karst region of northern Puerto Rico.

Nearly all of the known populations of *Daphnopsis hellerana* have been located near Puerto Rico's principal population center (the San Juan/Bayamon area). As a result, urban and industrial expansion have eliminated known and potential habitat. In particular, construction of dwellings and roads, limestone quarrying for this construction, landfills, and clearing by yam planters have together reduced the species to its present low numbers. In addition, the extreme rarity of the species and its dioecious habit lower the probability of successful seed production and dispersal.

Daphnopsis hellerana was recommended for Federal listing by the Smithsonian Institution (Ayensu and Defilippis 1978). The species was included among the plants being considered as endangered or threatened species by the Fish and Wildlife Service, as published in the *Federal Register* (45 FR 82479) dated December 15, 1980. 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), and was retained in category 1 in the November 28, 1983, update (48 FR 53640) of the 1980 notice, and the September 27, 1985, revised notice (50 FR 39526).

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 subsequently found in October of 1983, 1984, and 1985, that listing *Daphnopsis hellerana* was warranted but precluded by other pending listing actions, in accordance with Section 4(b)(3)(B)(iii) of the Act. The Service proposed listing *Daphnopsis hellerana* on July 6, 1987 (52 FR 25265).

Summary of Comments and Recommendations

In the July 6, 1987, proposed rule and associated notifications, all interested parties were requested to submit factual report 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 *El Nuevo Dia* on July 21, 1987. Two letters of comment were received and are discussed below. A public hearing was neither requested nor held.

Comments were received from the U.S. Environmental Protection Agency and Lorin I. Nevling of the Illinois Department of Energy and Natural Resources.

Administrators of the U.S. Environmental Protection Agency stated that they knew of no ongoing or proposed actions that would affect the species and that they had no information on the status of the species.

Mr. Lorin Nevling, the author of a monograph of the genus *Daphnopsis*, supported the listing but commented on the spelling of the species name. The name has been spelled both as *helleriana* and *hellerana*. In this final rule the spelling *hellerana* has been retained in accordance with the rules of nomenclature.

The Caribbean Primate Research Center, in a telephone conversation, expressed interest in cooperating with the U.S. Fish and Wildlife Service in the conservation of this species.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Daphnopsis hellerana* should be classified as an endangered 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 *Daphnopsis hellerana* Urban (no common name) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Modification of habitat and direct destruction of plants have been significant factors reducing the number of *Daphnopsis hellerana*. Deforestation for construction and yam cultivation, the leveling of limestone hills for construction material, and random cutting have all contributed to the species' decline. The Commonwealth (Autoridad de Tierras) land is not in any protection status, and maybe subject to construction of roads and powerlines and to quarrying for construction material. The population on Federal land is not recognized or protected by any existing management plan.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Taking for these purposes has not been a documented factor in the decline of this species. However, any take by curiosity seekers could be extremely detrimental.

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 recently adopted a regulation that recognizes and provides protection for certain Commonwealth listed species. However, *Daphnopsis hellerana* is not yet on the Commonwealth list. Federal listing would provide interim 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.* Since *Daphnopsis hellerana* is dioecious, and only two populations of seven plants each are known to exist, rarity and the resulting effects on reproduction and genetic diversity are factors that could eventually lead to the species' extinction. Seedlings have been observed in the past, but there is no evidence at any site that they survived to maturity. Furthermore, there has been a steady decline in the number of mature plants at sites that have otherwise remained undisturbed. These observations suggest that recruitment is not adequate to sustain the remaining populations. There is also no evidence of vegetative reproduction by *Daphnopsis hellerana*, and, thus, the species' continued existence may depend upon reproduction from seed

and maintenance of a minimum population size.

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 *Daphnopsis hellerana* as endangered. Since there are so few individuals remaining and a continuing risk of damage to the plants and/or their habitat, endangered status seems an accurate assessment of the species' condition. The reasons for not proposing critical habitat for this species are discussed below in the "Critical Habitat" section.

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 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 *Daphnopsis hellerana* is sufficiently small that collecting or vandalism could serious affect the survival of the species. 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 will be notified of the location and importance of protecting this species' habitat. Protection of this species' habitat would 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 *Daphnopsis hellerana* 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 taking 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 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)(4) 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 *Daphnopsis hellerana*, as discussed above. Federal involvement is expected only if there is a change in the present status of National Institutes of Health lands in the Toa Baja area.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any endangered 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 remove it from areas under Federal jurisdiction and reduce it to possession. Certain exceptions can apply to agents of the Service and Commonwealth conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. It is anticipated that few trade permits for *Daphnopsis hellerana* 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, Hamilton Building, Room 400, Washington, DC 20240 (202/343-4968).

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.
 Newling, L.L. and R.O. Woodbury. 1966. Rediscovery of *Daphnopsis hellerana*. J. Arnold Arbor. 47:262-265.
 Vivaldi, J.L., and R.O. Woodbury. 1981. Status report on *Daphnopsis hellerana* Urban. Unpublished status report submitted to the

U.S. Fish and Wildlife Service, Atlanta, Georgia. 56 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, 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

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: 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.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under Thymelaeaceae, 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					
Thymelaeaceae—Mezoreum family:						
<i>Daphnopsis hellerana</i>	None	U.S.A. (PR)	E	309	NA	NA

Dated: June 3, 1988.
 Susan Rucca,
 Acting Assistant Secretary for Fish and Wildlife and Parks.
 [FR Doc. 88-14245 Filed 6-22-88; 8:45 am]
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