
DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

**Endangered and Threatened Wildlife
and Plants; Proposed Endangered
Status for *Daphnopsis hellerana***

AGENCY: Fish and Wildlife Service,
Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine *Daphnopsis hellerana* to be an endangered species. Critical habitat is not proposed. *Daphnopsis hellerana* is a small tree or large shrub endemic to evergreen and semievergreen 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 proposal, if made final, would implement for *Daphnopsis hellerana* the Federal protection and recovery provisions afforded by the Endangered Species Act of 1973, as amended. The Service seeks data and

comments from the public on this proposal.

DATES: Comments from all interested parties must be received by September 4, 1987. Public hearing requests must be received by August 20, 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, Boqueron, 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

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 each in Toa Baja and Dorado. The Toa Baja population is on Federal land under the jurisdiction of the National Institutes of Health (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 are 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, less than three fourths of an inch (2 centimeters) long. The species is endemic to low elevation evergreen and semievergreen 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. This proposed rule indicates that the petitioned action is warranted, and constitutes a final required finding in accordance with section 4(b)(3)(B)(ii) of the Act.

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 applications 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 numbers 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 Tierra) land is not in any protective status, and may be 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 propose this rule. 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 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 this species at this time. The number of individuals of *Daphnopsis hellerana* is sufficiently small that collecting or vandalism could seriously 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 could be identified without the designation of critical habitat. All involved parties and landowners would 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 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)(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 *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. 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 Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1903).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as 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 proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *Daphnopsis hellerana*;
- (2) The location of any additional populations of *Daphnopsis hellerana*, 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 areas and their possible impacts on *Daphnopsis hellerana*.

Final promulgation of the regulation on *Daphnopsis hellerana* 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 request must be made in writing and addressed to the Field Supervisor, Caribbean Field Office, U.S. Fish and Wildlife Service, 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

Ayensu, E.S., and R.A. DeFilippis. 1978.

Endangered and Threatened Plants of the United States. Smithsonian Institution and World Wildlife Fund, Washington, D.C. xv + 403 pp.

Nevling, 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 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 § 17.12(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	Specif rules
Scientific name	Common name					
Thymelaeaceae— <i>Mezereum</i> family: <i>Daphnopsis hellerana</i> .	none	U.S.A. (PR)	E		NA	NA

Dated: June 18, 1987.
 Susan Recce,
 Acting Assistant Secretary for Fish and Wildlife and Parks.
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