

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for *Warea Amplexifolia* (Wide-Leaf *Warea*)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine a plant in the Mustard family (Brassicaceae); *Warea amplexifolia* (wide-leaf *warea*), to be an endangered species pursuant to the Endangered Species Act (Act) of 1973, as amended. Critical habitat is not being proposed. This species occurred historically in a small region of central Florida in Lake County, western Orange County, extreme northwestern Osceola County, and northern Polk County. It is now limited to only four sites in Lake and Polk Counties. Habitat at all of the other sites at which the species was known to occur has been destroyed by intensive agricultural (citrus) and urban developments.

This proposal, if made final, would implement the Federal protection and recovery provisions afforded by the Act for this plant. Comments on this proposal are invited from all interested parties.

DATES: Comments from all interested parties must be received by July 15, 1986. Public hearing requests must be received by June 30, 1986.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Endangered Species Field Office, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. David J. Wesley, Endangered Species Field Supervisor, at the above address (904/791-2580 or FTS 946-2580).

SUPPLEMENTARY INFORMATION:**Background**

Warea amplexifolia was originally described by Thomas Nuttall in 1822 from a specimen collected in central peninsular Florida by N. A. Ware. Nuttall at first placed this plant in the genus *Stanleya* but in 1834 transferred it to the genus *Warea* and provided an amplified description that accommodated specimens from the

Florida panhandle. The panhandle specimens were later recognized as a distinct species, *Warea sessilifolia*, by Nash. Shinnars (1962) proposed a new name for the peninsular species, *Warea auriculata*, but other reviewers (Payson 1922, Channel and James 1964, Judd 1980) consider *Warea amplexifolia* to be the correct name. The plant has been collected infrequently during the years since the early 1800's, probably because of its extremely restricted geographical range. It is now known to occur at only four localities in Lake and Polk Counties, Florida.

Warea amplexifolia is in the mustard family (Brassicaceae). It is an erect herb growing to a height of about 0.8 meters (3 feet), with slender branching stems arising from an elongate tap root. The leaves are alternately arranged along the stem and are generally heart-shaped. They are about 8 millimeters (0.3 inch) to about 30 millimeters (1.3 inches) long and from about 4 millimeters (0.2 inch) to nearly 20 millimeters (0.8 inch) wide, with conspicuous basal lobes which clasp the stem. The flowers are showy and are borne in small, rounded, puff-like clusters at the ends of the branches. Each flower has 4 pale purple petals with a rounded upper portion, an elongated stalk-like lower portion, and 6 stamens which protrude above the petals. The pistil is narrowly cylindrical and is borne at the end of a long stalk. The fruit is a dry, thin, curved pod of about 30 millimeters (1.0 inch) to about 75 millimeters (3.0 inches) in length which is borne at the end of a 9-14 millimeter (0.3-0.5 inch) long stalk. The pod (silique) eventually splits lengthwise into two portions which spread apart revealing a thin central partition around which the small brown seeds are attached.

Warea amplexifolia is occasionally confused with the three other species of the genus. It is distinguished from *Warea sessilifolia* by its conspicuously heart-shaped leaves and lighter purple flowers; it is easily separated from *Warea carteri* and *Warea cuneifolia* by its stalkless and auriculate-based leaves. Keys to the species of *Warea* are given by Payson (1922), Small (1933) and Channel and James (1964).

Warea amplexifolia is a summer annual herb, with showy flowers, visited by various Hymenoptera (bees) and Lepidoptera (butterflies). Reproduction is exclusively sexual, by the production of seeds which are probably released from the pods by wind action. The small seeds generally fall near the parent plant. No information exists on the yearly fluctuation in seed production, seed viability, germination requirements, or the extent of soil

storage. Flowering occurs from mid-August to early October, and fruiting occurs from late September to mid-November. Senescence (old age) occurs just before the fruit matures; the population overwinters as seeds.

The following information is from Judd (1980). *Warea amplexifolia* is endemic to the Lake Wales Ridge of central peninsular Florida. It was known to occur in Lake County, Orange County, Osceola County, and Polk County, but is now confined to only Lake and Polk Counties. The Lake Wales ridge is an elongated area of raised and usually dry soils, with elevations up to about 100 meters (300 feet), extending from central Highlands County northward and gradually disappearing in southern Marion County. The region supports dry forests of *Pinus palustris* (long-leaf pine) or *Pinus clausa* (sand pine), and various communities dominated by scrubby oaks such as *Quercus laevis* (turkey oak), *Quercus geminata* (sand live oak), *Quercus incana* (bluejack oak), *Quercus myrtifolia* (myrtle oak), and *Quercus chapmanii* (Chapman's oak), or *Ceratiola ericooides* (Florida rosemary). *Warea amplexifolia* is restricted to *Pinus palustris* and scrubby oak forests. Most of the Lake Wales ridge has undergone intensive agricultural development and now supports extensive citrus groves. The remaining portion is under extremely heavy pressure from agricultural and urban developments. These developments have resulted in a loss of habitat for *Warea amplexifolia*, and threaten the survival of the species at the four sites where it still occurs in Lake and Polk Counties.

Section 12 of the Endangered Species Act of 1973 directed the Secretary of the Smithsonian Institution to prepare a report on plants considered to be endangered, threatened or extinct. The Secretary of the Smithsonian presented this report (House Document No. 94-51) to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the *Federal Register* (40 FR 27823) of its acceptance of the Smithsonian report as a petition within the context of Section 4(c)(2) of the Act. On June 16, 1976, the Service published a proposed rule in the *Federal Register* (41 FR 24523) to determine approximately 1,700 vascular plant species recommended by the Smithsonian Report to be endangered species pursuant to section 4 of the Act. *Warea amplexifolia* was included in the Smithsonian Report, the July 1, 1975, notice, and the June 6, 1976, proposal.

The 1978 Endangered Species Act Amendments required that all proposals over 2 years old be withdrawn, except

that a 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice of withdrawal of the June 6, 1976, proposal, along with four other proposals which had expired (44 FR 70796). On December 15, 1980, the Service published a revised notice of review in the **Federal Register** (45 FR 32480); *Warea amplexifolia* was included as a category-1 species (species for which data in the Service's possession indicate listing is warranted). A supplement to the Notice of Review (48 FR 53640, November 28, 1983) treated *Warea amplexifolia* as a category-2 candidate (species for which data in the Service's possession indicate listing is possibly appropriate). The 1985 updated review of plant candidates (50 FR 39526, September 27, 1985) maintained *Warea amplexifolia* in category 2. This reclassification was based on a report of the species being found in Alabama, subsequently found to be incorrect.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make findings on certain pending petitions within 12 months of their receipt. Section 2(b)(1) of the Act's Amendments of 1982, further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Warea amplexifolia* because of the acceptance of the 1975 Smithsonian Report as a petition. On October 13, 1983, October 12, 1984, and October 11, 1985, the Service made 12-month findings that the petition to list *Warea amplexifolia* was warranted, and that although pending proposals had precluded its proposal, expeditious progress was being made to add other species to the list. Biological data, supplied by Judd (1980) and supplemented by a field investigation in 1985, fully support a listing of *Warea amplexifolia* as endangered. The present proposal is based primarily on Judd's biological data, and constitutes the next 12-month finding requirement of section 4(b)(3)(B) of the Act for this species. All four sites listed by Judd as containing populations of *Warea amplexifolia* were revisited in 1985. Three of these four sites were found to still contain habitat which could support the species. The fourth site has been lost to commercial development since Judd completed his survey. An additional site was discovered in 1985 on the grounds of the Bok Tower Gardens, Lake Wales, Polk County; it was reported to the Fish and Wildlife Service by Kent Perkins of the University of Florida Herbarium on November 14, 1985.

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 application to *Warea amplexifolia* (Nuttall) Nuttall (wide-leaf warea) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* This has been, and continues to be, the primary threat to the survival of *Warea amplexifolia*. The species is known at present from only the following three sites of Judd (1980), all of which were relocated in 1985, and one additional site reported to the Fish and Wildlife Service by Kent Perkins, University of Florida Herbarium, in personal communication of November 14, 1985:

1. Leesburg Site (Lake County)—A population of ca. 250 plants occupy a woodlot or roughly 1 acre. The woodlot is surrounded by development (urban and citrus), but is now part of the Lake Griffin State Recreation area.

2. Clermont Site (Lake County)—About 700 plants (the largest population known) inhabit a woodland of roughly 10 acres. The woodland is privately owned (by a mining company) and is surrounded by orange groves.

3. Haines City Site (Polk County)—About 200 plants inhabit a privately owned woodland of about 1 to 2 acres in size surrounded by orange groves.

4. Lake Wales Site (Polk County)—A population of about 24 plants was discovered in 1985 at the Pine Ridge Reserve on the grounds of the Bok Towers Gardens. This area is about 50 acres in size and is a remnant of the original longleaf pine vegetation. It is managed by the Gardens to preserve its flora.

The species is known or assumed extirpated from four sites in Orange County and one site in both Lake and Osceola Counties within its historical range (Judd 1980). Judd further noted that very few areas of upland, dry, open *Pinus palustris* woods exist at the present time in the area of well-drained white sandy soil from Leesburg to Haines City. This area is now covered with citrus groves, with the few remaining wooded areas occupying mainly lowland sites. A search of the Clermont, Haines City, and Leesburg

areas revealed no additional localities for *Warea amplexifolia*.

Thus, of the 10 sites where the species has been known to occur historically, six have already been destroyed by agricultural and urban development. The remaining four sites are small, the three are privately-owned; two of these are very vulnerable to development pressures. Altogether, fewer than 1,200 plants are known to survive on less than 65 acres of land. All present populations are surrounded by citrus groves and/or urban developments (Orlando, Tavares, Leesburg, etc.).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* According to Judd (1980), *Warea amplexifolia* has potential as a cultivated ornamental because of its showy, light purple flowers clustered in dense "puff-like" terminal racemes. The plant is striking in full bloom, and is highly vulnerable to picking by vandals and curiosity seekers.

C. *Disease or predation.* Not applicable.

D. *The inadequacy of existing regulatory mechanisms.* *Warea amplexifolia* was listed as endangered in 1985 under the Preservation of the Native Flora of Florida Law (Section 581.185 of the Florida Statutes). This Florida law regulates taking, and the sale of plants, but it does not provide habitat protection.

E. *Other natural or manmade factors affecting its continued existence.* Because this species is an annual, and extremely restricted in both range and members, it is very vulnerable to disturbance and natural disasters. The failure of any one of the four remaining populations to set seed in the fall, could result in the extirpation of that population and a further reduction in the already small genetic variability of the 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 propose this rule. Based on this evaluation, the preferred action is to list *Warea amplexifolia* as endangered. The species is extremely limited in range and numbers, and occurs mainly on private lands in rapidly growing areas. A failure to list this species, or a proposal to list it as threatened, would not recognize the fact that available data indicate it is in danger of extinction throughout its entire range. Critical habitat is not being proposed for *Warea amplexifolia* for the reasons discussed in the following 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. As stated under Factor B in the "Summary of Factors Affecting the Species," *Warea amplexifolia* is a striking plant when in bloom, and has a potential for ornamental cultivation. In addition, its showy, light purple flowers are conspicuous in the field, and it would be a great temptation for flower lovers or for vandals to pick them. Since there are only four remaining populations of this species, any molestation of them by curiosity seekers or vandals could result in their extinction. Therefore, a determination of critical habitat would provide an additional threat to the species by supplying precise information to the general public on where the species may be found. All involved parties and landowners will be notified of the location and importance of protecting this species' habitat. Protection of this species' habitat will be addressed through the recovery process and through the section 7 jeopardy standard. Because of these factors, the Service believes that a determination of critical habitat is not prudent for *Warea amplexifolia*.

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, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States 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, and are now under revision (see proposal at 48 FR 29990; June 29, 1983). 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 listed subsequently, 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 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. Since all presently known sites for *Warea amplexifolia* are on private or State owned land, there will be no effect from the above requirement unless a private action requires some Federal action, such as funding or permits.

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 plant species. 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 an endangered plant, transport it in interstate or foreign commerce in the course of 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. *Warea amplexifolia* is not known at present from any Federal lands. Certain exceptions can apply to agents of the Service and State 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 would be sought or issued for *Warea amplexifolia*, since it is not in cultivation or common 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 this species;

(2) The location of any additional populations of this species 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 this species.

Final promulgation of the regulation on *Warea amplexifolia* 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 requests must be made in writing and addressed to the Field Supervisor, Endangered Species Field Office, 2747 Art Museum Drive, Jacksonville, Florida 32207.

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

- Channel, R.B., and C.W. James, 1964. Nomenclatural and taxonomic corrections in *Warea* (Cruciferae). *Rhodora* 66:18-28.
- Judd, W.S., 1980. Status report on *Warea amplexifolia*. Unpublished report prepared for U.S. Fish and Wildlife Service, Jacksonville, Florida, 22 pp.
- Nuttall, T. 1922. A catalogue of a collection of plants made in East-Florida, during the months of October and November, 1821 by A. Ware, Esq. *Amer. Jour. Sci.* 5:297.
- Nuttall, T. 1834. A description of some of the rarer or little known plants indigenous to the United States, from the dried specimens

in the herbarium of the Academy. Jour. Acad. Nat. Sci. Philadelphia 7:83.
 Payson, E.B. 1922. A monographic study of *Thelopodium* and its immediate allies. Ann. Missouri Bot. Gard. 9:233-324.
 Shinners, L.H. *Warea auriculata* instead of *W. amplexifolia* of Small (Cruciferae). Rhodora 66:18-26.
 Small, J.K. 1933. Manual of the Southeastern Flora. Privately published, New York, N.Y., pp. 573-574.

Author

The primary author of this proposed rule is John L. Paradiso, Jacksonville Endangered Species Field Office, 2747

Art Museum Drive, Jacksonville, Florida 32207 (904/791-2580 or FTS 946-2580).

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 Brassicaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants:

* * * * *
 (h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Brassicaceae—Mustard family:						
<i>Warea amplexifolia</i>	Wide-leaf warea	U.S.A. (FL)	E		NA	NA

Dated: April 18, 1986.
P. Daniel Smith,
 Deputy Assistant Secretary for Fish and Wildlife and Parks.
 [FR Doc. 86-11109 Filed 5-15-86; 8:45 am]
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