

**Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Determination of *Isotria medeoloides* (small whorled pogonia) To Be an Endangered Species****AGENCY:** U.S. Fish and Wildlife Service, Interior.**ACTION:** Final rule.

**SUMMARY:** The U.S. Fish and Wildlife Service determines the plant *Isotria medeoloides* (small whorled pogonia) to be an Endangered species under the authority contained in the Endangered Species Act of 1973, as amended. Historically, this species was known to occur in 48 counties in 16 eastern States and Canada. In 1982, it is known to occur in 15 counties in 10 different States and one county in Ontario, Canada, and total less than 500 individuals. The continued existence of this species is endangered by taking of the plants and the past loss of habitat. This rule will implement the protection provided by the Endangered Species Act.

**DATE:** This rule became effective on October 12, 1982.**FOR FURTHER INFORMATION CONTACT:** Mr. Richard Dyer, U.S. Fish and Wildlife Service, Department of the Interior, One Gateway Center, Suite 700, Newton Corner, Massachusetts 02158 (617/965-5100, extension 316).**ADDRESS:** The complete file for this rulemaking is available for inspection during normal hours by appointment at the Service's Office of Endangered Species, 1000 North Glebe Road, Arlington, Virginia.

**SUPPLEMENTARY INFORMATION:** *Isotria medeoloides* (small whorled pogonia) was named in 1814 and is often referred to as one of the rarest U.S. orchids. There are 17 known populations of the orchid in the eastern United States and Canada. Approximately 488 individual plants occur at these 17 sites. The plant can be found in a variety of forest types but is most often associated with relatively open areas in deciduous hardwoods: either beech-birch-maple or oak-hickory. The spectrum of habitats includes dry, rocky, wooded slopes to moist streambanks.

One or two yellowish-green flowers appear from mid-May in the south to mid-June in the north above a whorl of five or six light green, elliptic, somewhat pointed leaves. The short sepals are up to 2.5 cm long and help distinguish this species from the other member of the genus, *Isotria verticillata*, which has longer sepals. At maturity the plants are

9.5-25 cm tall. The continued existence of this plant is being threatened by the past inadvertent loss of populations due to habitat alteration, such as golf courses, housing complexes, etc., and taking by collectors for other than commercial purposes. Today there are nearly as many, if not more dried specimens of *Isotria medeoloides* in herbaria than are known to exist in the wild. This rule determines *Isotria medeoloides* to be Endangered, implementing the protection provided by the Endangered Species Act of 1973, as amended. Critical Habitat is not being determined at this time. The following paragraphs further discuss the actions to date involving this plant, the threats to the plant, and effects of the action.

The U.S. named this species on a provisional list for the Annex to the Convention of Nature Protection and Wildlife Preservation in the Western Hemisphere (CNPWP) during a conference held in Mar del Plata, Argentina, October 18-22, 1965. Sections 2 and 8 of the Endangered Species Act of 1973, as amended, provide the U.S. implementing legislation for this Convention. The President, by Executive Order 11911 (41 FR 15683-15684), designated the Secretary of the Interior to act on behalf of and to represent the U.S. in all regards as required by the CNPWP, and required that he consult with other departments and agencies as required.

This species was included on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) at the original plenipotentiary conference in Washington, D.C. in February and March 1973.

**Background**

Section 12 of the Endangered Species Act of 1973 directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Director published a notice in the *Federal Register* (40 FR 27823-27924) of his acceptance of the report of the Smithsonian Institution as a petition within the context of Section 4(c)(2) of the Act, and of his intention thereby to review the status of the plant taxa named within. On June 16, 1976, the Service published a proposed rule in the *Federal Register* (41 FR 24523-24572) to determine approximately 1,700 vascular plant taxa to be Endangered species pursuant to Section 4 of the Act. This list was assembled on the basis of

comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the July 1, 1975, *Federal Register* publication. *Isotria medeoloides* was included in the July 1, 1975, notice of review and the June 16, 1976, proposal.

Following the June 16, 1976, proposal, hundreds of comments were received from individuals, conservation organizations, botanical groups, and business and professional organizations. Few of these comments were specific in nature in that they did not address individual plant species. Most comments addressed the program or the concept of endangered plants and their protection and regulation. These comments are summarized in the April 26, 1978, *Federal Register* publication of a final rule which also determined 13 plant species to be Endangered or Threatened species (43 FR 17909-17916).

The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1 year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice of the withdrawal of the still applicable portions of the June 16, 1976, proposal along with other proposals which had expired (44 FR 70796-70797). In late 1979 through mid-1980, the Service completed intensive studies (through contracted field botanists) on *Isotria medeoloides* in seven northeastern States (Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, and West Virginia), which cover a major portion of the species' range. As a result of these field surveys, the species' precarious status was further confirmed and resubstantiated. No new populations were discovered, some historical populations were confirmed as being extirpated, and existing known populations were found to be continuing to decline in numbers of individuals. Based on the sufficient new information including this 1980 field data, the Service repropoed *Isotria medeoloides* on September 11, 1980 (45 FR 59909-59914).

Critical Habitat has not been determined for *Isotria medeoloides* primarily because of the history of its taking. Bringing further general public attention to existing populations via Critical Habitat designation would in itself be a threat to the plant. Also, enforcement of the limited State and U.S. Forest Service taking restrictions is difficult and costly, and there are no general Federal taking prohibitions for plants in Section 9(a)(2) of the Act, so management of the species would be a

greater burden if knowledge of exact sites were readily available to the public.

#### Summary of Comments and Recommendations

In the September 11, 1980, *Federal Register* proposed rule (45 FR 59909-59914) and associated notifications and press releases, all interested parties were requested to submit factual reports or information which might contribute to the development of a final rule. Letters were sent to the Governors of 17 States, the U.S. Forest Service, and to Canadian officials notifying them of the proposed action and soliciting their comments and suggestions. All comments received during the period from September 11, 1980 to January 22, 1981, are discussed below.

A total of 38 comments was received, including letters from the Governors of 15 States. These interested parties and Governors supported the proposal to list *Isotria medeoloides* as Endangered.

The Governor of Georgia, the Georgia Department of Natural Resources, and the U.S. Forest Service, Chattahoochee National Forest, Georgia, all expressed the opinion that they are not opposed to listing, but that Georgia should not be included in the historical range of *Isotria medeoloides*. Recent reports of the species' occurrence in the Chattahoochee National Forest on which the proposal was based have not been verified by the State of Georgia, and site specific information is not available. The Service has not been able to obtain this specific information despite attempts, and agrees that the historical range should be modified in this manner since the reports cannot be verified.

The Governors of the States of Virginia, Connecticut, South Carolina, North Carolina, Pennsylvania, Massachusetts, Illinois, Michigan, New Hampshire, Maine, Maryland, Missouri, New Jersey, New York, and Georgia all wrote in support of the listing of the species as Endangered. Only the State of New Hampshire expressed the opinion that Critical Habitat should be determined in the future to protect the sites from destruction. The Governors of Connecticut, South Carolina, and Michigan, as well as several concerned individuals, felt that Critical Habitat should not be designated due to increased risks of taking by collectors. The Service agrees with the latter position, and has not designated Critical Habitat for *Isotria medeoloides* for reasons stated in the proposed and final rules.

The State of South Carolina recommended the development of a

recovery plan and recovery team for the conservation of *Isotria medeoloides*. The Service agrees that recovery planning should be a high priority. Recovery actions can be initiated only after listing occurs.

The Tennessee Valley Authority commented in favor of listing, and stated that they were aware of no current or planned TVA programs that would be impacted by the listing.

The U.S. Forest Service supported listing of the species throughout its historical range, with the aforementioned exception of Georgia. They cited no significant impact of listing on the 2½ acres of National Forest areas in which the species occurs.

New information on the occurrence of *Isotria medeoloides* was provided by several interested individuals. A biologist in Virginia indicated that the possibly extant population of *Isotria medeoloides* occurs in James City County rather than Gloucester County, as cited in the proposal. In addition, locality information was provided for the former site in Buckingham County.

The Governor of Massachusetts noted that *Isotria medeoloides* was officially listed in the State as of April 17, 1980. Comments received from the Governor of Michigan indicated that the Michigan Nature Association currently owns the land on which *Isotria medeoloides* occurs in the State. The land was purchased several years ago solely for the purpose of protecting this rare orchid population.

The Army Corps of Engineers, Memphis District, pointed out that information cited for the Missouri population was incomplete. The narrative should have noted that the single Missouri site was destroyed by a clear cut, as described by Ayensu and DeFilippis (1978, p. 62).

The Service acknowledges those who wrote regarding the proposal of *Isotria medeoloides*, and appreciates their efforts concerning the conservation of this species.

#### Conclusion

After a thorough review and consideration of all information available, the Secretary has determined that *Isotria medeoloides* (Pursh) Raf. (small whorled pogonia) is an Endangered species (in danger of extinction throughout all or a significant portion of its range) due to one or more of the factors described in Section 4(a) of the Act. These factors and their application to this plant are as follows:

1. *Present or threatened destruction, modification or curtailment of its habitat or range.*—*Isotria medeoloides*

has historically been known to occur in 48 counties in 16 eastern States and Canada. Today it is known to exist in 15 counties in 10 different States and one county in Ontario, Canada.

Currently, the known extant populations of this orchid are as follows (reported by State or Province, county, and number of individuals):

Illinois (Randolph, 10); Maine (Cumberland, Kennebec, 333); Michigan (Berrien, 2); New Hampshire (Carroll, Merrimack, Rockingham, Strafford, 22); New Jersey (Sussex, 42); North Carolina (Henderson, Macon, 21); Pennsylvania (Centre, 5); Rhode Island (Providence, 8); South Carolina (Oconee, 18); Virginia (James City, 1 in 1980, none in 1981); Canada: Ontario (Elgin, 4).

The status of the historical and these extant individual populations was summarized in detail in the proposed rule (45 FR 59911-59912). For the most part only minor or no changes have taken place since that September 1980 proposal, except as indicated herein. In Maine, in 1981, a population of 143 plants was found in Cumberland County and the Kennebec site had 190 plants. Thus 71 percent of the total known individuals are in Maine. The Service's Newton Corner, Massachusetts Regional Office (address cited above) maintains a current information file on this species.

A summary of the species' status shows that approximately 466 plants at 17 different sites were known to exist in the eastern United States and Canada at the end of the 1981 field season. Two of these sites are located on U.S. Forest Service land. The remainder are on privately-owned land.

Many people feel that the disclosure of specific localities will further endanger the orchid's continued existence. Due to the documented history of taking through the years just for scientific purposes those fears are not unfounded. On the other hand, many former localities, some dating back to the late 1800s, have been inadvertently lost due to habitat alteration. Based on herbaria label data and recent field checks of these sites, shopping malls, housing developments, and golf courses now mark the localities of historical populations. Any conservation program for the species must be concerned with information on specific sites, so that neither inadvertent nor deliberate destruction occurs.

Other reasons for the species' disappearance throughout its range are not so clear. Some populations such as the one in Gloucester, Rhode Island, have been monitored for a period of years, where there has been a gradual decline in the number of individual plants from 28 plants in 1947 to 4 plants

in 1978. However, in 1979, 12 plants were seen, and 8 plants were noted in 1981. Other populations have displayed similar characteristics. One popular source (Correll, 1950) states that the species may remain dormant for up to 20 years; however, this has not yet been scientifically substantiated.

Except for the two populations on U.S. Forest Service land, the remaining extant localities occur on private lands where specific ownership has been determined at all but three sites. In certain instances (Rhode Island and Virginia), lands adjacent to these known localities are being cleared for house lots, but the sites of the orchid are not involved directly in the developments.

(2) *Overutilization for commercial, sporting, scientific, or educational purposes.*—Collecting for scientific purposes has contributed to the loss of plants through the years. There are specimens of *Isotria medeoloides* in all major eastern institutional herbaria and many private collections. In several instances, the available literature documents the removal of specimens for "the scientific record." Wildflower garden enthusiasts are known to have taken this species from the wild and attempted transplantation to a more convenient locality. The rarity of this orchid makes it the object of interest by professionals and amateurs alike. Significant commercial trade in the species is not known or expected in the future, nor is any significant import or export of the species.

(3) *Disease or predation (including grazing).*—Not applicable to this species.

(4) *The inadequacy of existing regulatory mechanisms.*—There is no provision in the Endangered Species Act which would offer the species direct protection from collectors or private actions. Only the States of Michigan, North Carolina, Massachusetts, the Province of Ontario, and the Government of Canada have officially listed *Isotria medeoloides* as an Endangered species. Michigan legislation provides prohibition against taking the orchid. Also under Michigan Public Act No. 203, the Michigan Department of Natural Resources has been given responsibility for conducting "investigations on fish, plants, and wildlife in order to develop information relating to population, distribution, habitat needs, limiting factors and other biological and ecological data to determine management measures necessary for their continued ability to sustain themselves successfully." The key in this State program is the identification and protection of habitats using available laws and regulations.

The legislation protecting Endangered plants in North Carolina prohibits their removal from private property without the landowner's permission, and prohibits commerce in the species.

Existing Massachusetts legislation, authorizes the Massachusetts Division of Fisheries and Wildlife to list Endangered plants; *Isotria medeoloides* is so listed. Its legislation does not provide for management or protection authority except on State-owned lands. The species has not been recorded in the State since 1899.

The U.S. Forest Service's regulations prohibit removing, destroying, or damaging any plant that is classified as a Threatened, Endangered, rare, or unique species (42 FR 2956-2962). These regulations already help the 29 plants on 2½ acres of National Forest land, but do not provide all of the provisions furnished by the Endangered Species Act.

Official listing under the Endangered Species Act of 1973, as amended, will provide a means by which various conservation and recovery actions can be implemented to insure the continued existence of this plant throughout its range.

(5) *Other natural or manmade factors affecting its continued existence.*—The species' biology is not well understood but there is evidence of continuing decline in several populations. The limited number, size, and distribution of existing populations are cause for concern as natural factors could lead to the extinction of the species.

Although populations lost by past habitat alteration are obvious, the habitats of some declining populations have not "significantly" changed over the period of observance. Many theories could be advanced in attempts to explain the species' apparent natural decline. What is apparent may be due to no one factor but a number of factors acting interdependently. Natural successional changes, microclimatic parameters, any genetic depletion, and any failure in reproductive mechanisms are but a few of the unknown aspects of or problems with the species' biology and ecology that need to be understood before the full reasons for the decline can be understood and perhaps reversed.

#### Critical Habitat

Critical Habitat is not being determined for *Isotria medeoloides*, due to the extreme rarity of this orchid, the documented history of taking, and the great interest in this species by many botanists and wildflower enthusiasts. It would not be prudent, in accord with

Section 4(a)(1) of the Act, to bring further attention to site specific areas where the species occurs via Critical Habitat designation.

#### References Cited

Ayensu, E.S. and R.A. DeFilipps. 1978. Endangered and Threatened Plants of the United States. Smithsonian Institution and the World Wildlife Fund, Inc., Washington, D.C.

Correll, D.S. 1950. Native orchids of North America north of Mexico. Chronica Botanica Company, Waltham, MA.

#### Effects of the Rule

In addition to the effects discussed above, the effects of this rule include, but are not necessarily limited to, the following:

The Act and implementing regulations published in the June 24, 1977, **Federal Register** (42 FR 32373-32381) and codified in Title 50 of the Code of Federal Regulations set forth a series of general trade prohibitions and exceptions which apply to all Endangered plant species. The regulations are found at §§ 17.61-17.63 of 50 CFR and are summarized below.

With respect to *Isotria medeoloides* all prohibitions of Section 9(a)(2) of the Act, as implemented by § 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the U.S. to import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. Certain exceptions could apply to agents of the Service and State conservation agencies. The Act and §§ 17.62 and 17.63 provide for the issuance of permits to carry out otherwise prohibited activities involving Endangered species under certain circumstances, such as trade in specimens of cultivated origin. Significant commercial trade in the species is not known or expected in the future, nor is any significant import or export of the species. It is difficult to propagate, and only two specimens are surviving in cultivation.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species which is listed as Endangered. This protection will accrue to *Isotria medeoloides*. Provisions for Interagency Cooperation which implement section 7 of the Act are codified at 50 CFR Part 402. These require Federal agencies to insure that activities they authorize,

fund, or carry out, are not likely to jeopardize the continued existence of *Isotria medeoloides*.

Since population of *Isotria medeoloides* are known to occur on U.S. Forest Service lands in North Carolina and South Carolina, the U.S. Forest Service will be required to carry out programs for the species' conservation, and to insure that its actions are not likely to jeopardize the species' continued existence. The U.S. Forest Service's present regulations prohibit removing, destroying, or damaging any plant that is classified as a Threatened, Endangered, rare, or unique species (42 FR 2956-2962), and are consistent with the purposes of the Act and current practices of that agency. A population of 27 plants occurs on the Nantahala National Forest in North Carolina. The U.S. Forest Service is aware of the locality and has modified timber management practices within a 2 acre area to protect the plants, by selective cutting during the orchid's dormancy. Thus there is only a very slight economic impact resulting from protecting the area. Field personnel and timber markers have been trained in identification and are aware of the need to protect the species. Eighteen plants were seen in 1981 on ¼ acre of the Sumter National Forest in South Carolina. Compliance with U.S. Forest Service policies as stated in the January 1980 Manual on Wildlife and Fish Management, Amendment No. 136, helps to insure the protection of this population. No involvement with other Federal activities is foreseen.

#### Effect Internationally

In addition to the protection provided by the Act, all orchids are on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which requires a permit for export or import of this plant. The Service will review whether it should be considered for Appendix I of that Convention, or for official placement on the Annex of the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, or other appropriate international agreements.

#### National Environmental Policy Act

An Environmental Assessment has been prepared in conjunction with this rule. It is on file at the Service's Newton Corner, Massachusetts Regional Office, and Washington, D.C. Office of Endangered Species. This assessment forms the basis for a decision that this is

not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 and 40 CFR Parts 1500-1508.

**Note.**—The Department of the Interior has determined that this rule is not a major rule under Executive Order 12291. Significant commercial trade in *Isotria medeoloides* would not be impacted by this rule because none is known to exist at present nor is any anticipated. Known land developments on property adjacent to sites maintaining this species will not be impacted because they are not expected to directly involve the species' habitat. Further, those plants existing on U.S. Forest Service land will be protected by that agency's slight modification of its timber management practices—a very small economic impact to the only Federal activity expected to be impacted by this rule. Since this rule was proposed before January 1, 1981, a Determination of Effects on Small Entities in not required by the Regulatory Flexibility Act (5 U.S.C. 601). This rule does not contain information collection requirements which require approval by the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*).

#### Authority and Authors

This rule is being published under the authority contained in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*; 87 Stat. 884). The primary authors of this rule are Mr. Richard Dyer, U.S. Fish and Wildlife Service, Newton Corner, Massachusetts, and Ms. Irene Storcks, then of the Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975). Dr. Bruce MacBryde of the Service's Washington Office served as editor.

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Plants (agriculture), Fish, Marine mammals.

#### Regulation Promulgation

#### PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

Accordingly, Part 17 of Chapter I of Title 50 of the U.S. Code of Federal Regulations is amended as set forth below:

1. Section 17.12(h) is amended by adding, in alphabetical order under Orchidaceae, the following plant:

#### § 17.12 Endangered and threatened plants.

\* \* \* \* \*  
(h) \* \* \*

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Orchideaceae—Orchid family: <i>Isotria medeoloides</i> .....	Small whorled pogonia .....	Canada (Ontario) and U.S.A. (CT, IL, MA, MD, ME, MI, MO, NH, NJ, NY, NC, PA, RI, SC, VA, VT).	E	121	NA	NA

Dated: August 20, 1982.

**J. Craig Potter,**

*Acting Assistant Secretary for Fish and Wildlife and Parks.*

[FR Doc. 82-24816 Filed 9-9-82; 8:45 am]

**BILLING CODE 4310-55-M**