50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Erythronium Propullans (Minnesota Trout Lily)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines endangered status for *Erythronium propullans* (Minnesota trout lily), the only plant species known to be endemic to Minnesota. It is found at only 26 small sites in Rice and Goodhue Counties, and is jeopardized by its small numbers and limited reproductive capabilities, and by development, collectors, and recreationists. This measure implements the protection provided by the Endangered Species Act of 1973, as amended, for this plant.

DATE: The effective date of this rule is April 25, 1986.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Service's Regional Office of Endangered Species, Federal Building, Fort Snelling, Twin Cities, Minnesota 55111.

FOR FURTHER INFORMATION CONTACT: James M. Engel at the above address (612/725-3276 or FTS 725-3276).

SUPPLEMENTARY INFORMATION:

Background

Erythronium propullans Gray (Minnesota trout lily) is a member of the Liliaceae (lily family). It was first discovered near St. Mary's College in Faribault, Minnesota, in 1870, and was described by Gray (1871). There have been no revisions of its taxonomic status since that time. It has now been found to occur in two counties of southeastern Minnesota, and is the only species of plant known to be endemic to that State.

This lilylike plant is about 6 inches (15 centimeters) tall, with one pair of mottled green, pointed leaves arising from near the base. A single nodding, bell-shaped flower, with recurved petals, is at the end of a slender, leafless stalk. Perianth parts usually number four or five, rather than six as in other species of *Erythronium*. The flowers are generally distinguishable from those of *E. albidum*, the only other *Erythronium* found in the same habitat. According to Thomas Morley (University of Minnesota, pers. comm., May 19, 1985), the flowers of *E. propullans* vary in color from pink to pale violet to gray-white. Those of *E. albidum* are similar in color, but generally whiter. Measuring about a half inch (8–15 millimeters) in length, the flowers of *E. propullans* are smaller than those of any other *Erythronium*. Morley (1982) found the average proportion of flowering plants to be 28.3 percent (range 7.8–50.9 percent) in colonies of *E. propullans*, but only 3.8 percent (range 1.1–9.9 percent) in colonies of *E. albidum*. The fruits of *E. propullans* are smaller than those of *E. albidum* and remain in a nodding or horizontal position at maturity, while those of the latter species become erect (Morley 1978).

The outstanding feature of *E. propullans* is vegetative reproduction through production of a single bulblet from a lateral stem offset below the leaves (Morley 1982). The other two species of *Erythronium* in Minnesota increase vegetatively by multiple basal offsets from the deeply buried bulbs (Banks 1980). Because *E. propullans* seems to depend entirely upon an inefficient means of vegetative reproduction, Morley (pers. comm.) questioned the ability of this species to reproduce successfully over the long term.

Erythronium propullans is a spring ephemeral in deciduous forest, blooming in April or May. The aerial parts of the plant completely disintegrate after the forest canopy fills out in early June. The species is usually associated with other spring ephemerals such as *Dicentra cucullaria* (Dutchman's breeches), *Erythronium albidum* (white dog-tooth violet), and *Trillium nivale* (snow trillium).

Erythronium propullans occurs in the wooded valleys along the Cannon, Straight, and Zumbro Rivers in Rice and Goodhue Counties, Minnesota. The plant grows on north-facing slopes, rising 50–90 feet (15–27 meters) above the stream beds, but usually occupies the lower part of the slope, and sometimes extends onto the floodplain (Morley 1978). The plant usually occurs in moderate to heavy shade. Plant colonies or clones are 8–20 inches (2–5 decimeters) or larger in diameter. Morley (1978) estimated the total number of colonies within the 26 known sites to be about 400, with an average of 20 plants per colony.

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. In the **Federal Register** July 1, 1975 (40 FR 27823), the Service published a notice of its acceptance of this report as a petition within the context of section 4(c)(2) of the Act (petition acceptance is now governed by section 4(b)(3) of the Act, as amended), and of its intention to review the status of the plant taxa named therein. *Erythronium propullans* was named in the Smithsonian Report as threatened and was included in the Service's 1975 notice of review.

Erythronium propullans was also included as a category-1 species in an updated notice of review for plants published in the **Federal Register** of December 15, 1980 (45 FR 82480). Category 1 comprises taxa for which the Service presently has sufficient biological information to support their being proposed for listing as endangered or threatened.

The Endangered Species Act Amendments of 1982 required that petitions, such as that comprised by the Smithsonian report, which were still pending as of October 13, 1982, be treated as having been received on that date. Section 4(b)(3) of the Act, as amended, requires that, within 12 months of the receipt of such a petition, a finding be made as to whether the requested action is warranted, not warranted, or warranted but precluded

by other activity involving additions to or removals from the Federal Lists of Endangered and Threatened Wildlife and Plants. Therefore, on October 13, 1983, the Service made the finding that listing of *E. propullans* was warranted but precluded by other pending listing activity. This finding was published in the **Federal Register** of January 20, 1984 (40 FR 2485). In case of such a finding, the petition is recycled and another finding becomes due within 12 months. On October 12, 1984, another finding of warranted but precluded was made with respect to the listing of *E. propullans*. This finding was published in the **Federal Register** of May 10, 1985 (50 FR 19761). Still another finding was due by October 12, 1985, and that finding, to the effect that the petitioned action was warranted, was incorporated in a proposed rule to determine endangered status for *E. propullans*, issued in the **Federal Register** of May 3, 1985 (50 FR 18893).

Summary of Comments and Recommendations

In the proposed rule of May 3, 1985, and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice, inviting general public comment, was published in the *Minneapolis Star and Tribune* on May 22, 1985. No public hearing was requested or held.

Five supportive comments were received, one from the Environmental Defense Fund, which also encouraged the Service and the State of Minnesota to commence conservation measures critical to the continued existence of *E. propullans*. The Service intends to coordinate with the State on recovery activities for this species. The International Union for Conservation of Nature and Natural Resources and three private individuals also supported the proposal. One of these, a University of Minnesota professor with considerable expertise concerning *E. propullans*, noted that the species probably occurs at more than 14 sites, possibly as many as 25, depending on the definition of "site." He identified one additional population on the north side of the Straight River, southeast of Faribault, Minnesota. He further advised that two sites are publicly owned, one at Nerstrand Woods State Park and another within the River Bend Nature Center, southeast of Faribault, Minnesota. This new information has been incorporated into the appropriate sections of this rule.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Erythronium propullans* 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 endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Erythronium propullans* Gray (Minnesota trout lily) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* There are no historical data to indicate that the range of *E. propullans* was larger at one time than it is now. Morley (1978) reported that road construction near the city of Faribault eliminated several colonies. Several large colonies located 1.5 miles (2.5 kilometers) northeast of Faribault were destroyed by conversion of pastureland to cropland. Motorbikes destroyed one colony within the city of Faribault (Morley 1978). Existing urban sites also are jeopardized by off-road vehicles and by overutilization of foot paths. Remaining rural sites face destruction from the conversion of woodland to cropland.

Twenty-six populations are now known to exist. Twenty-two of these are on privately owned property and currently receive no protection or management. Of the four other populations, one is found within a State park, one within a nature center, and two on land owned and managed by The Nature Conservancy. Although these four populations are on protected land, they could still be lost through inadvertent human alteration of the habitat or natural population fluctuations.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* There is significant threat from wildflower collectors who may reduce populations at more accessible sites. One site was severely damaged in the early 1970's, when a large number of plants were removed and replanted in the University of Minnesota Landscape Arboretum (Smith 1981).

C. *Disease or predation.* None known.

D. *The inadequacy of existing regulatory mechanisms. E. propullans* is officially listed as endangered by the State of Minnesota, and is afforded limited protection under the State law that prohibits taking, transporting, and sale of State endangered and threatened plants from all lands, except ditches, roadways, and certain types of agricultural and forest lands. This law does not prohibit the loss and disturbance of habitat, which is the main problem for *E. propullans*.

E. *Other natural or manmade factors affecting its continued existence.* As there are relatively few remaining populations of *E. propullans*, and these are small in size, the species could be jeopardized simply by natural fluctuation in numbers. Also, since the species has an apparently inefficient means of vegetative, rather than sexual, reproduction, there is concern about its ability to maintain itself.

In determining to make this rule final, the Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by *E. propullans*. Based on this evaluation, the preferred action is to list the species as endangered. The few remaining populations are small in size, mostly unprotected, and subject to a variety of human-caused and natural problems. Critical habitat is not being designated for reasons discussed below.

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 a species is determined to be endangered or threatened. The designation of critical habitat is not considered to be prudent when such designation would not be of net benefit to the species involved (50 CFR 424.12). In the present case, the Service considers that designation of critical habitat would not be prudent, because no benefit to the taxon can be identified that would outweigh the potential threat of vandalism or collection, which might be exacerbated by the publication of a detailed critical habitat description and map.

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 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 by Federal agencies and applicable prohibitions 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)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed 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. There are no known Federal activities, current or planned, that would affect *E. propullans*.

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. With respect to *E. propullans*, all trade prohibitions of section 9(a)(2) of the Act, as 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, 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, or to remove this species from areas under Federal jurisdiction and reduce it to possession. 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. International and interstate commerce in *E. propullans* is not known to exist. It is anticipated that few trade permits would ever be sought or issued, since this plant is not common in cultivation or 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).

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. The reasons for this determination were published in the **Federal Register** of October 25, 1983 (48 FR 49244).

References Cited

Banks, J. 1980. The reproductive biology of *Erythronium propullans* Gray and sympatric populations of *E. albidum* Nutt. (Liliaceae). Bull. Torrey Bot. Club 107:181-188.

Gray, A. 1871. A new species of *Erythronium*. Amer. Nat. 5:298-300.

Johnson, A.G., and M.K. Smithberg. 1968. A wildflower unique to Minnesota. Minnesota Horticulturalist 96:38-39.

Morley, T. 1978. Distribution and rarity of *Erythronium propullans*. Phytologia 40:381-389.

———. 1982. Flowering frequency and vegetative reproduction in *Erythronium albidum* and *E. propullans*, and related observations. Bull. Torrey Bot. Club 109:169-176.

Smith, W.R. 1981. Status report on *Erythronium propullans*. Unpubl. ms., Minnesota Dept. Natural Resources, 9 pp.

Author

The primary author of this final rule is William F. Harrison (see **"ADDRESSES"** section) (612/725-3276 or FTS 725-3276).

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.*).

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Liliaceae, 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					
Liliaceae—Lily family:						
Erythronium propullans	Minnesota trout lily	U.S.A. (MN)	E	221	NA	NA

Dated: February 28, 1986.

P. Daniel Smith,

Deputy Assistant Secretary for Fish and Wildlife and Parks.

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