

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Endangered Status for *Lupinus aridorum* (Scrub Lupine)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines a plant in the pea family, *Lupinus aridorum* (scrub lupine), to be an endangered species pursuant to the Endangered Species Act of 1973 (Act), as amended. This plant has been found at only 16 sites in Orange and Polk Counties, Florida; fewer than 350 individual plants are known to exist. All sites are on privately owned property, and are highly desirable for residential and commercial development. Populations have already suffered losses from home building, road construction, off-road vehicle use, and/or land clearing for pastures and other purposes.

This rule will implement the Federal protection and recovery provisions

afforded by the Act for *Lupinus aridorum*.

DATES: The effective date of this rule is May 7, 1987.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Jacksonville Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207.

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

SUPPLEMENTARY INFORMATION:**Background**

Lupinus aridorum, a member of the pea family (Fabaceae), was first collected by Meislahn in 1900 in Orange County, Florida. It was not collected again until McFarlin found it in Polk County in 1928 and 1937. Renewed efforts by Beckner in the early 1970's, and again in the early 1980's by Beckner and Wunderlin, greatly expanded knowledge of the distribution of the species in both Orange and Polk Counties. Beckner recognized and named the species as distinct in 1982. Prior to that, the plants were variously misidentified by workers as *Lupinus diffusus* and *Lupinus westianus*. Since the plant was described as a full species

by Beckner, there have been no alternative taxonomic treatments.

Lupinus aridorum is a biennial or short-lived perennial growing from a soft woody base; the stems are up to one meter (3 feet) tall. Its leaves are obovate-elliptic in shape, 4-7 centimeters (1.5-2.8 inches) long, and 2-4 centimeters (0.8-1.5 inches) wide. The ends of the leaves are rounded with sharp pointed tips and the bases are rounded; the upper and lower surfaces are covered with silvery hairs. The petioles are 2-4.5 centimeters (0.8-1.8 inches) long; the stipules are very small. The inflorescences are racemose with stalks 4-13 centimeters (1.5-5.2 inches) long, and the flowering portion 4-15 centimeters (1.5-5.8 inches) long. The petals are pale flesh-pink except for the standard, which has a black center surrounded by a maroon-red area. The standard is about 1.5 centimeters (0.5 inch) long, the wing petals about 1.4 centimeters (0.5 inch) long, and the keel petals slightly shorter. The fruit is 2-2.5 centimeters (0.8-1.0 inch) long, woody, and elliptic in shape, tapering to a sharp apex.

Lupinus aridorum is distinctive in the field, being the only upright pink-flowered lupine in Florida. It is further distinguished from the only other pink-flowered lupine, the prostrate *Lupinus villosus*, by the lack of long, shaggy hairs on stems and leaves, and vestigial

(rather than large and conspicuous) stipules. It is most closely related to *Lupinus westianus* of the Florida panhandle, but differs in flower color. *Lupinus westianus* having blue flowers.

Lupinus aridorum is endemic to central Florida. It is known from Orange County, between the city of Orlando and Walt Disney World, and from Polk County, between Winter Haven and Auburndale. Recently N.J. Bissett, a Winter Haven horticulturist, (pers. comm. 1986) reported that there is also a "fairly sparse population" visible from State road 64, west of the Avon Park Bombing Range in Polk County. The scrub lupine is a sand pine scrub species that grows primarily in well drained sandy soils of the Lakewood or St. Lucie series. The sands are white or occasionally yellow where the turkey oak woods have invaded the sand pine scrub. The tree layer may be a mixture of *Pinus clausa* (sand pine), *Pinus elliotii* (slash pine), and *Quercus laevis* (turkey oak) (Wunderlin 1982). The scrub layer is usually sparse which many be the result of disturbance at many of the sites where the lupine occurs. The most frequent shrubs include *Ceratiola ericoides* (rosemary), *Quercus geminata* (scrub live oak), *Lyonia ferruginea* (rusty lyonia), *Palafoxia feayi*, *Ximenia americana* (tallowwood), and scattered *Sabal palmetto* (cabbage palm). The herbaceous layer is dominated by *Aristida stricta* (wiregrass) intermixed with *Pityopsis graminifolia*, *Helianthemum nashii*, *Rhynchospora megalocarpa*, *Bonamia grandiflora*, *Polygonella myriophylla*, and *Opuntia humifusa* (prickly-pear cactus). In the open areas, *Selaginella arenicola* (sand spikemoss) is often common. All currently known populations of *Lupinus aridorum* are on privately owned land. They are in danger of extirpation because they occur in two of the most rapidly growing areas of Florida.

On December 15, 1980, the Service published in the **Federal Register** (45 FR 82480) its Review of Plant Taxa for Listing as Endangered or Threatened. On November 28, 1983 (48 FR 53640), the Service published a supplement to this review. *Lupinus aridorum*, which had not been named when the 1980 review was published, was listed in the 1983 supplement as a category 2 species (those candidate species for which the Service needs additional information before proceeding with a proposal). The 1985 updated version of the review (September 27, 1985; 50 FR 39526) included *Lupinus aridorum* as a category 1 species (those candidate species for which the Service possesses

information indicating listing is appropriate).

All plant taxa included in the 1980 review, 1983 supplement, and 1985 review, are treated as being under petition. Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Service to make findings on pending petitions within 12 months of their receipt. On October 12, 1984, and again on October 11, 1985, the Service made its 12-month finding that listing of *Lupinus aridorum* was warranted, and that although proposal of other higher priority species had precluded its proposal, expeditious progress was being made to add other species to the list. Biological data, supplied by Wunderlin in 1984, fully supported a proposed rule listing *Lupinus aridorum* as endangered, and on April 24, 1986, the Service published the proposed rule which constituted the next 12-month finding for this species.

Summary of Comments and Recommendations

In the April 24, 1986, proposed rule (51 FR 15514) 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. Newspaper notices that invited general public comment were published in the *Orlando Sentinel* and the *Winter Haven News Chief*. The following six comments were received concerning the proposal.

The Florida Department of Agricultural and Consumer Services, and the Bok Tower Gardens, Lake Wales, Florida, fully supported the listing of *Lupinus aridorum* as endangered. The Florida Department of Environmental Regulation determined that the proposed listing was consistent with the Florida Coastal Management Program. The Florida State Clearing House, in compliance with Presidential Executive Order #12372 and the Governor's Executive Order 85-150, noted that the action was in accord with State plans, programs, procedures, and objectives. The International Union for Conservation of Nature and Natural Resources wrote that it had no additional data on the status of *Lupinus aridorum*, but appreciated receiving the detailed considerations published in the proposal. Nancy J. Bissett, a Winter Haven horticulturist, supported the listing, and reported a new site for the species on State road 64, west of the Avon Park Bombing Range in Polk County.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Lupinus aridorum* 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 *Lupinus aridorum* McFarlin ex Beckner (scrub lupine) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* *Lupinus aridorum* is known from only 16 sites (Wunderlin 1984, Bissett 1986 pers. comm.). Ten of these are in Orange County between the city of Orlando and Walt Disney World. Orlando has been, and continues to be, one of the most rapidly growing cities in Florida. The sites on which scrub lupines are growing are prime property for development. Six sites for *Lupinus aridorum* are in Polk County, near the towns of Winter Haven, Auburndale, and Avon Park. These are also rapidly expanding communities whose growth threatens the continued existence of the species.

Altogether, fewer than 350 plants of *Lupinus aridorum* are thought to exist, most of which occur in habitats that have already been highly modified, or are threatened by housing developments, road construction and maintenance, conversion to pastureland, and pedestrian, horse, and off-road vehicular traffic. One site occurs on highway right-of-way lands; all other sites are privately owned and subject to development or modification by the landowners at any time.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Although the scrub lupine has not been in commercial trade, it is a large and attractive plant when in bloom and has the potential to be used as a decorative landscape addition. The attractive nature of the scrub lupine, and its potential for landscaping use, is emphasized by the fact that at one site, where a single large plant, seven feet in diameter, was growing, the landowner actually divided a fence he was building in order to avoid destroying it (Wunderlin 1984). The scrub lupine is only sporadically collected for scientific purposes.

C. *Disease or predation.* Not applicable.

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

E. *Other natural or manmade factors affecting its continued existence.* The scrub lupine is restricted in distribution and occurs in relatively small numbers (largest site has fewer than 100 plants). Such rarity increases the species' vulnerability to disturbance and natural disasters.

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 *Lupinus aridorum* as endangered. It occurs in three small disjunct population centers (Orlando area, Winter Haven area, and Avon Park area), and is known from only 16 sites. Human population pressures in all three areas are increasing annually. Currently, all 16 known populations are on private lands and their continued existence is not secure. Critical habitat is not determined for the scrub lupine for reasons discussed in the "Critical Habitat" section below.

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 *Lupinus aridorum* at this time. This species is a large plant which bears attractive pink flowers. There are indications that it might be a desirable species for landscaping purposes. In addition, it occurs very near areas of high human concentration where it could readily be located and vandalized. The identification of the precise sites where populations occur, through publication of critical habitat descriptions and maps in the **Federal Register**, might increase the threats to the species. It would be difficult to safeguard it from curiosity seekers or vandals. In addition, critical habitat benefits apply only when Federal activities and/or Federal lands are involved. The scrub lupine occurs only on privately owned lands where no

Federal involvements are known at present. Therefore, there would be no benefits to this species by a designation of critical habitat. Because of these factors, the Service finds that a designation of critical habitat for *Lupinus aridorum* is not prudent.

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. 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. Since all presently known sites for *Lupinus aridorum* are on privately owned land, there will be no effect from the above requirement unless a private activity requires some Federal action, such as funding or issuance of permits.

Section 9 of 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 endangered plants, transport such in interstate or foreign commerce in the course of a commercial activity, sell or offer them for sale in interstate or foreign commerce, or remove them from areas under Federal jurisdiction and reduce them 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. With respect to *Lupinus aridorum*, it is anticipated that few trade permits will ever be sought or issued since the species is not known to be in cultivation and is scarce 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. 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

- Beckner, J. 1982. *Lupinus aridorum* J.B. McFarlin ex Beckner (Fabaceae), a new species from central Florida. *Phytologia* 50:209-211.
- Wunderlin, R.P. 1982. Guide to the vascular plants of central Florida. University Presses of Florida, 472 pp.
- Wunderlin, R.P. 1984. Endangered and threatened plant status survey. *Lupinus aridorum* McFarlin ex Beckner. Unpublished report prepared under contract with U.S. Fish and Wildlife Service.

Author

The primary author of this final rule is John L. Paradiso, U.S. Fish and Wildlife Service, Endangered Species Field Station, 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).

Regulations 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 Fabaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

(h)

Scientific name	species	Common name	Historic range	Status	When listed	Critical habitat	Special rules
FABACEAE—PEA FAMILY Lupinus aridorum		Scrub lupine	USA (FL)	E	264	N/A	N/A

Dated: March 24, 1987.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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