

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for *Lupinus Aridorum* (Scrub Lupine)****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to determine 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 15 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. The species currently receives no Federal or State protection. 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 proposes the Federal protection and the recovery provisions afforded by the Act for *Lupinus Aridorum*. Comments are solicited.

**DATES:** Comments from all interested parties must be received by June 23, 1986. Public hearing requests must be received by June 9, 1986.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Jacksonville Endangered Species Field Station, 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**

*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 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. This plant 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, possibly as a 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 and the land on which they occur has high potential for development.

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).

For procedural reasons, plant taxa 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 pending proposals had precluded its proposal, expeditious progress was being made to add other species to the list. Biological data, supplied by Wunderlin in 1984, now fully a proposed rule listing *Lupinus aridorum* as endangered. The present proposed rule constitutes the next 12-month finding requirement of Section 4(b)(3)(B) of the Act for this species.

#### 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 *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 15 sites (Wunderlin 1984). 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 the scrub lupine are growing are prime property for development. Five sites for the scrub lupine are in Polk County, near the towns of Winter Haven and Auburndale. These are also rapidly expanding communities whose growth threatens the continued existence of the scrub lupine.

Altogether, about 339 plants of *Lupinus aridorum* are known 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, pedestrian, horse, and off-road vehicular traffic. All of the presently known habitat is 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.** There are currently no State or Federal laws that offer complete protection for this species. *Lupinus aridorum* is covered currently by the Preservation of Native Flora of Florida Act (Section 581.185-187 Florida Statutes). This statute includes prohibition concerning taking, transport, and the sale of listed plants, but

provides no habitat protection. The Endangered Species Act would offer needed recovery planning for the species.

**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 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 propose this rule. Based on this evaluation, the preferred action is to list *Lupinus aridorum* as endangered. It occurs in two disjunct population centers (Orlando area and Winter Haven area) and is known from 15 sites. Human population pressures in both the Orlando and Winter Haven areas are increasing annually. Currently all 15 known populations, are on private lands and their continued existence is not secure. Critical habitat is not proposed 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 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 to areas of high human concentration where it could readily be found 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 the 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, 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 insure 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.

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. 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, transport in interstate or foreign commerce in the course of a commercial activity, sell, or offer for sale listed species in interstate or foreign commerce, or to remove such species from Federal lands 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 would 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).

#### 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 these proposed rules 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 area and their possible impacts on this species.

Final promulgation of the regulation on *Lupinus aridorum* 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 Station, 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

- Beckner, J. 1982. *Lupinus aridorum* [L. 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 proposed 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).

#### 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 Fabaceae, 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	Spec rule
Scientific name	Common name					
Fabaceae—Pea family						
<i>Lupinus aridorum</i>	Scrub lupine	U.S.A. (FL)	E		NA	

Dated: April 1, 1986.

**Susan Recce,**

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

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