
DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service**50 CFR Part 17**
Endangered and Threatened Wildlife and Plants; Proposed Determination of Endangered Status for *Pediocactus despainii* (San Rafael Cactus)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine endangered status for *Pediocactus despainii* (San Rafael cactus). There are two known populations of this plant, about 25 miles apart and each containing 2,000-3,000 individuals. Both occur in central Utah (Emery County), mainly in areas administered by the Bureau of Land Management. This rare species is being sought by cactus collectors, one population is heavily impacted by recreational off-road vehicles (ORVs), and approximately half of each population is in areas covered by oil and gas leases and/or mining claims for gypsum. This proposal, if made final, would implement protection provided by the Endangered Species Act of 1973, as amended. The Service is requesting comments on this action.

DATES: Comments from all interested parties must be received by May 27, 1986. Public hearing requests must be received by May 12, 1986.

ADDRESSES: Comments and materials concerning this proposal should be sent to: Field Supervisor, Endangered Species Office, U.S. Fish and Wildlife Service, 2078 Administration Building, 1745 West 1700 South, Salt Lake City, Utah 84104. Comments and materials received will be available for public inspection, by appointment, during normal business

hours at the above address and at the Service's Grand Junction Field Office, Independence Plaza, Suite B113, 25 1/2 Road, Grand Junction, Colorado 81505.

FOR FURTHER INFORMATION CONTACT: John Anderson, at the Grand Junction address above (303/241-0563 or FTS 322-0348) or John Larry England at the Salt Lake City address above (801/524-4430 or FTS 588-4430).

SUPPLEMENTARY INFORMATION:**Background**

Pediocactus despainii (San Rafael cactus) was discovered in 1978 on the San Rafael Swell, a large anticline (geologic upwarp) in Emery County, Utah. The discovery was made by Kim Despain, a Brigham Young University (BYU) graduate student. Additional material was collected in 1979 by Despain, E. Neese, and K. Thorne of BYU, and also by K. Heil of San Juan College, Farmington, New Mexico (Heil 1984). The description of *Pediocactus despainii* was published the following year by Welsh and Goodrich (1980). A second population on the San Rafael Swell, approximately 25 miles from the first, was found in 1982 by S. Brack, a cactus nurseryman from Belen, New Mexico. In 1984, Heil conducted a status survey and did not locate any other populations. The San Rafael cactus is thus known from just two populations. One population occupies an area 3 miles across, the other occupies an area 1 mile across. Each population contains 2,000 to 3,000 individual plants (Heil 1984).

Pediocactus despainii is small barrel-type cactus, 3.8 to 6.0 centimeters (1.5 to 2.3 inches) tall and 3.0 to 9.6 centimeters (1.2 to 3.8 inches) wide. Each areole or spine cluster contains no central spines and between 9 and 13 white, flattened, pectinate (comblike) radial spines that partially obscure the stem. The small flowers are about 2.5 centimeters (1 inch) across and are peach to yellow in color with a bronze tint. *Pediocactus despainii* is distinguished from other members of its genus by size, its naked (hairless) areoles, the bronze tint to its flowers, and other characteristics. With its diminutive size and peculiar habit of shrinking under ground for several months a year during dry or cold seasons, the recentness of the discovery of *Pediocactus despainii* is not surprising. It is only noticeably visible for a short time in the spring when it is in bloom. Otherwise, even if the exact location of its populations are known, it can be easily overlooked. It grows on hills, benches, and flats of the Great Basin Grassland. This habitat is savannahlike and contains scattered

junipers, pinyon pines, low shrubs, annuals, and perennial herbs. The occupied area is mostly administered by the Bureau of Land Management (BLM), but also includes one section owned by the State of Utah.

The genus *Pediocactus* contains eight species, one with two varieties and another with three (Heil et al. 1981). Except for one wide ranging species, all are rare endemics of the Four Corners region (Utah, Colorado, Arizona, and New Mexico). Four—*P. bradyi*, *P. knowltonii*, *P. peeblesianus* var. *peeblesianus*, and *P. sileri*—are currently listed as endangered. Another four—*P. despainii*, *P. paradinei*, *P. peeblesianus* var. *fickeiseniae*, and *P. winkleri*—are candidates for addition to the List of Endangered and Threatened Plants. These disjunct species are probably relicts of a once more widespread genus (Benson 1982). *Pediocactus despainii*, as a newly described rare cactus and as a member of a group of cacti eagerly sought by collectors both in this country and abroad, is endangered by collection pressures. The type locality is near a popular, though undeveloped, camping area and receives heavy use from off-road vehicles (ORVs), such as motorcycles. Approximately half of the range of *Pediocactus despainii* is covered by oil and gas leases and mining claims for gypsum. There has been surface disturbance associated with exploration for gypsum beds near the type locality.

In the Federal Register of December 15, 1980 (45 FR 82480), the Service published a notice of review for plants, which included *Pediocactus despainii* in Category 1. Category 1 comprises taxa for which substantial biological data are available to support listing actions. No comments on this taxon have been received in response to the 1980 notice. In the Federal Register of November 28, 1983 (48 FR 53640), the Service published a Supplement to the 1980 notice of review, in which *Pediocactus despainii* was changed to a Category 2 candidate. Category 2 comprises taxa for which the Service has information indicating the possible appropriateness of a proposal to list the taxa as endangered or threatened, but for which more substantial data are needed on biological vulnerability and threats. The status survey of Heil (1984), compiled through contract to the Service, provided the needed data.

Taxa covered by the 1980 plant notice of review, and/or the 1983 supplement, are treated as if under petition pursuant to the Endangered Species Act of 1973 as amended. The Act Amendments of

1982 required that petitions that were still pending as of October 13, 1982, be treated as having been received on that date. Section 4(b)(3) of the act require 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 determination of endangered status for *Pediocactus despainii* was warranted but precluded by other listing activity. Notice of this finding was published in the *Federal Register* of January 20, 1984 (49 FR 2458-2488), as corrected in the *Federal Register* of February 16, 1984 (49 FR 5977). In the case of such a finding, the petition is recycled and another finding becomes due within 12 months. On October 12, 1984, and again on October 11, 1985, additional findings of warranted but precluded were made with respect to the listing of *Pediocactus despainii*. Notices of these findings were published, respectively, in the *Federal Register* issues of May 10, 1985 (50 FR 19761-19763), and January 9, 1986 (51 FR 996-999). Still another finding is due by October 11, 1986, and that finding, to the effect that the petitioned action is warranted, is incorporated in this proposed rule.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424) 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 *Pediocactus despainii* Welsh and Goodrich (San Rafael cactus) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The type locality of *Pediocactus despainii* is being heavily impacted by ORV's, as it is near a popular recreation area. The level of impact is such that in one area the individual plants were found literally growing between the crisscrossed ORV tracks, but non were seen in the ORV tracks themselves. About half of the area occupied by both populations contain oil and gas leases and mining claims for gypsum or other mineral. While no commercial development has

taken place or is likely to occur soon, surface disturbances from associated exploration and annual assessment work will continue to be a threat to the involved habitat. Semiarid grassland parks and understory vegetation of juniper-pinyon woodland are fragile habitats. They are easily invaded by aggressive native shrub and tree species or exotic weedy species when they are mechanically disrupted or when native grass species are removed. Another grassland cactus, *Opuntia imbricata* (tree cholla), was found to be significantly positively associated with some of the same native perennial grass species, and negatively associated with weedy species indicative of range deterioration, in the short grass prairie in El Paso County, Colorado (Kinraide 1978). Maintenance of the desert grassland parks and understory vegetation of juniper-pinyon woodland may be an essential habitat requirement for *Pediocactus despainii*.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* As indicated above in the "Background," this rare plant is highly desired by cactus collectors. It is known that such collectors "make the rounds" through the Four Corners area, from the habitat of one *Pediocactus* species to the next, to collect a complete set (Ken Heil, pers comm.). The small size of these species makes them easy to hide and therefore hard to detect in interstate or international commerce.

C. *Disease or predation.* The effect of livestock grazing on *Pediocactus despainii* is unknown. Because of the small size of this cactus and its habit of shrinking underground for part of the year, grazing is thought to be not directly significant to its survival. However, there are cattle-watering reservoirs within the range of the first discovered population, which may cause localized concentrations of livestock and the possibility of trampling of a portion of that population. The effect of livestock grazing on the surrounding desert grassland and juniper-pinyon understory vegetation needs to be evaluated to determine its impact on *Pediocactus despainii*.

D. *The inadequacy of existing regulatory mechanisms.* Although BLM provides special management for candidate and "sensitive" species of plants and wildlife, listing of this species under the Act would invoke protections that do not exist under present law or regulations. The Act offers possibilities for additional protection of this taxon through the "Available Conservation Measures" discussed below. One population lies within a block of Federal

land proposed for selection by the State under Project Bold, a legislative proposal designed to consolidate State lands. If this site were to pass from Federal to State ownership, some benefits of the Act for *Pediocactus despainii* would be lost.

No treaties, except the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and no Federal or State laws, directly protect *Pediocactus despainii*. CITES regulates international export and import but not interstate commerce collecting for possession, or impacts to habitat.

E. *Other natural or manmade factors affecting its continued existence.* The fragile nature and vulnerability of the desert grassland and juniper-pinyon ecosystem, in which *Pediocactus despainii* occurs, have been mentioned above. Also, because of the low number of plants in just two populations, the possibility is increased that a catastrophic disturbance, either natural or manmade, could destroy a significant portion of the species. The San Rafael cactus has some natural protection afforded by its habit of shrinking into the ground for part of the year. However, it forms buds in the fall that overwinter to become the next spring's flowers (Heil *et al.* 1981). These flowering buds at ground level may be vulnerable to surface disturbance, increasing the portion of the year that the species' reproduction is vulnerable.

The Service has carefully assessed the best scientific and commercial information available regarding the present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list *Pediocactus despainii* as an endangered species. With only 4,000 to 6,000 individuals, in just two populations, collecting could lower its numbers significantly. Surface disturbances are impacting the ecosystem in which the San Rafael cactus occurs. Endangered status would be an accurate assessment of the taxon's condition. For the reasons given below, it would not be prudent to propose critical habitat.

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. The BLM and State of Utah are

already aware of the occurrence of *Pediocactus despainii* on their land and have been informed of this proposal. As discussed under Factor "B" in the "Summary of Factors Affecting the Species," *Pediocactus despainii* is threatened by collecting, an activity difficult to prevent. For this reason, locality information and habitat description in previous articles (Welsh 1980, Heil *et al.* 1981) have been kept purposely vague. Publication of critical habitat descriptions and maps would make this species even more vulnerable than it is now.

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. 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 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. The listing of *Pediocactus despainii* could possibly affect the BLM by requiring that agency to restrict traffic to some existing roads, in order to

minimize the impact from recreational ORV use, and to exercise special care in administering mining claims and oil and gas leases.

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 *Pediocactus despainii*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, would 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. 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. Because of horticultural interest in *Pediocactus despainii*, trade permits may be sought, but few permits for plants of wild origin would ever be issued since the species is not common in the wild. Plants of cultivated origin are available and permits may, under certain circumstances, be issued for trade in those.

Section 9(a)(2)(B) of the Act, as amended in 1982, prohibits the removal and reduction to possession of endangered plant species from areas under Federal jurisdiction. This prohibition would apply to *Pediocactus despainii*. Permits for exceptions to this prohibition are available through regulations published September 30, 1985 (50 FR 39681; to be codified at 50 CFR 17.62). *Pediocactus despainii* occurs, in large part, on land managed by the BLM. Few collecting permits for removing the species from the wild for possession will ever be issued, because of its rarity. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, 6th Floor Broyhill, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1903).

On July 29, 1983, *Pediocactus despainii* was included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The effect of this inclusion is that both export and import permits are required before international shipment may occur. Such shipment is strictly regulated by CITES member nations to prevent it from being detrimental to the survival of the

species, and cannot be allowed if it is for primarily commercial purposes. If plants are certified as artificially propagated, however, international shipment requires only export documents under CITES, and commercial shipments may be allowed.

If this taxon is listed under the Act, the Service will review it to determine whether it should be placed upon the Annex of the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, which is implemented through section 8A(e) of the Act, and whether it should be considered for other appropriate international agreements.

Public Comments Solicited

The Service intends that any final rule adopted will be accurate and as effective as possible in the conservation of endangered or threatened species. 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 *Pediocactus despainii*;
- (2) The location of any additional populations of *Pediocactus despainii* 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 *Pediocactus despainii*.

Final promulgation of the regulation on *Pediocactus despainii* 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, Salt Lake City Field Office (see ADDRESSES section above).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under 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).

Literature Cited

Benson, L. 1982. The Cacti of the United States and Canada. Stanford University Press. 1044 pp.
 Heil, K. 1984. Status Report on *Pediocactus despainii*. U.S. Fish and Wildlife Service. Denver, Colorado. 14 pp.
 Heil, K., B. Armstrong, and D. Schleser. 1981. A Review of the Genus *Pediocactus*. *Cactus & Succulent Journal* 53:17-39.
 Kinraide, T.B. 1978. The Ecological Distribution of Cholla Cactus (*Opuntia imbricata* (Haw.) DC. in El Paso County,

Colorado. *Southwestern Naturalist* 23(1):117-134.
 Welsh, S.L. and S. Goodrich. 1980. Miscellaneous Plant Novelties from Alaska, Nevada, and Utah. *Great Basin Naturalist* 40:78-88.

Author

The primary author of this proposed rule is John Anderson; John L. England acted as editor (see **ADDRESSES** section above).

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 the family Cactaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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 (h) * * *

Scientific name	Species	Common name	Historic range	Status	When listed	Critical listed	Special rules
Cactaceae—Cactus family							
<i>Pediocactus despainii</i>		San Rafael cactus	U.S.A. (UT)	E		NA	NA

Dated: March 2, 1986.
P. Daniel Smith,
Assistant Secretary for Fish and Wildlife and Parks.
 [FR Doc. 86-6701 Filed 3-26-86; 8:45 am]
BILLING CODE 4310-55-M