

recordkeeping requirements, and Transportation.

Dated: March 23, 1992.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

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Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB75

Endangered and Threatened Wildlife and Plants; Proposal To List the Plant *Coryphantha Scheeri* var. *Robustispina* (Pima Pineapple Cactus) as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service proposes to list the plant *Coryphantha scheeri* var. *robustispina* (Pima pineapple cactus), as an endangered species under the authority of the Endangered Species Act of 1973, as amended (Act). This species is known from Pima and Santa Cruz counties, southern Arizona, and northern Sonora, Mexico. Threats to the species include illegal collection, habitat degradation due to recreation, historical and present overuse of the habitat by livestock, and habitat loss due to mining, agriculture, road construction, urbanization, and range management practices to increase livestock forage. This proposal, if made final, would implement Federal protection provided by the Act for Pima pineapple cactus. Critical habitat is not being proposed. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by June 19, 1992. Public hearing requests must be received by June 4, 1992.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Ecological Services Field Office, U.S. Fish and Wildlife Service, 3616 West Thomas Road, suite 6, Phoenix, Arizona 85019. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Sue Rutman, at the above address (Telephone 602/379-4720 or FTS 261-4720).

SUPPLEMENTARY INFORMATION:**Background**

The Pima pineapple cactus is an attractive hemispherical plant, the adults measuring 10–17.5 cm (4–7 inches) tall and 7.5–10 cm (3–4 inches) in diameter. Each spine cluster has one strong, straw-colored, hooked central spine and six radial spines (Benson 1982). Plants can be single-stemmed, multi-headed, or can appear in clusters formed when seeds germinate at the base of a mother plant or when a tubercle of the mother plant roots. The silky yellow flowers appear in mid-July with the onset of summer rains. The fruits are green, succulent, sweet and disappear rapidly from the plant (Mills 1991). Mills (1991) believes the plants have short life spans, and that pollination, fruit set, and seed set do not appear to be a problem.

Coryphantha scheeri var. *robustispina* was first collected in 1856 by Mr. A. Schott, who found the plants growing in a grassland on the south side of the Baboquivari Mountains, Sonora, Mexico. These plants were originally named *Mammillaria robustispina* (Engelmann 1856), and subsequently underwent several name changes (Kuntze 1891, Britton and Rose 1963, Marshall 1953). Lyman Benson (1969) published the most recent revision, which split *Coryphantha scheeri* into three varieties, including variety *robustispina*.

The Pima pineapple cactus grows in alluvial basins or on hillsides in rocky to sandy or silty soils in semidesert grassland and Sonoran desert scrub in southern Arizona. The species occurs most commonly in open areas on flat ridgetops or areas with less than 15% slope. Dominant plant species in these sparsely vegetated areas vary but include *Acacia constricta* (white-thorn acacia), *Celtis pallida* (desert hackberry), *Prosopis velutina* (mesquite), *Ambrosia deltoidea* (burrobush), *Gutierrezia sarothrae* (snakeweed), *Isocoma tenuisecta*, *Eragrostis lehmanii* (Lehman's lovegrass), and various cacti (Mills 1991).

The Pima pineapple cactus is found between 690–1,500 meters (2,300–5,000 feet) elevation in Pima and Santa Cruz counties, southern Arizona, and northern Sonora, Mexico (Phillips 1981). The range extends east from the Baboquivari Mountains to the Santa Rita Mountains. The northernmost boundary is near Tucson. The southern boundary of the range is less well understood but is believed to extend south a relatively short distance into Sonora, Mexico. Accurate population density estimates are very difficult to

make because the Pima pineapple cactus is difficult to find in the field (Mills 1991). Minimum density estimates for areas near the Sierrita Mountains of Arizona range from a low of one plant per 21 acres to a high of one plant per 4.6 acres (Mills 1991). The amount of habitat loss that has already occurred and will likely continue to occur throughout the range of this species, the amount of habitat modification, the sparsity of plants, and the difficulty in protecting an area large enough to maintain a viable population contribute to the need to propose this species as endangered.

Federal government actions on this species began with Section 12 of the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), which 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 Service published a notice (40 FR 27823) that formally accepted the Smithsonian report as a petition within the context of section 4(c)(2), now section 4(b)(3)(A), of the Act and of its intention thereby to review the status of those plants. *Coryphantha scheeri* var. *robustispina* was included as "threatened" in the July 1, 1975, petition.

On December 15, 1980, the Service published a revised notice of Review for Native Plants in the **Federal Register** (45 FR 82480); *Coryphantha scheeri* var. *robustispina* was included in that notice as a category 1 species. Category 1 species are those for which the Service presently has sufficient information to support the determination that listing the species as threatened or endangered is biologically appropriate. The 1985 revision (50 FR 39526) of the 1980 notice and the 1990 notice (55 FR 6184) included *Coryphantha scheeri* var. *robustispina* in category 1.

Section 4(b)(3)(B) of the Act, as amended in 1982, requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. Because the 1975 Smithsonian report was accepted as a petition, all the taxa contained in the notice, including *Coryphantha scheeri* var. *robustispina*, were treated as being newly petitioned on October 13, 1982. In 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, and 1991, the Service found that the petitioned listing of *Coryphantha*

scheeri var. *robustispina* was warranted but precluded by other listing actions of a higher priority and that additional data on vulnerability and threats were still being gathered. This proposal constitutes the final finding for the petitioned action.

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 *Coryphantha scheeri* (Kuntze) L. Benson var. *robustispina* (Schott) L. Benson (Pima pineapple cactus) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Construction associated with a rapidly growing human population is the most significant cause of habitat loss. Tucson is a major city at the north boundary of the species' range, Green Valley is a large community in the center of the range, and Nogales, Arizona, occurs near the southern part of its range. Additional development within and between the densely populated areas is occurring every year. Habitat loss for the Pima pineapple cactus accompanies this development. Home building, commercial development, road construction and maintenance, and utility corridor construction are some of the important activities that have caused and continue to cause habitat loss.

Mining has also resulted in the loss of hundreds of acres of potential habitat throughout the range of this species. When one copper mine near Green Valley was expanded in the early 1980's, botanists familiar with this species noted that many plants were lost because they were not salvaged or salvaged but not used for conservation purposes. Although the mine near Green Valley is by far the largest mine, many other small mines occur throughout the range of this species. Actions associated with mineral extraction, such as constructing road access, tailings piles, and settling or leaching ponds, can also contribute to habitat loss. In the future, habitat loss due to mining and associated activities is expected to continue or increase throughout the range of this species.

Currently, the undeveloped part of the range of this species is mostly used for livestock grazing, as it has been for over one century. Severe overgrazing at the turn of the century and some continuing livestock grazing practices may have altered the ecosystem. Some effects of overgrazing include erosion, changes in hydrology and microclimate, invasion of weedy exotic plants, shifts in density, relative abundance, and vigor of native species, and increases in woody perennials. Overgrazing in some areas continues today. Some modern range management practices, such as imprinting, chaining, ripping, and seeding of exotic grasses, have contributed to the modification or loss of habitat and/or loss of plants. Mills (pers. com. 1991, Tucson, Arizona) has seen damage to Pima pineapple cacti that may have been caused by livestock.

Habitat for the Pima pineapple cactus may have occurred in several areas along the Santa Cruz River south of Tucson that are now under cultivation. Habitat for the Pima pineapple cactus is found in the vicinity of these orchards and fields.

The introduction of non-native species has modified many southern Arizona ecosystems. Much Pima pineapple cactus habitat was altered by the introduction of Lehman's lovegrass, an aggressive exotic introduced to provide cattle forage and control erosion. Lehman's lovegrass outcompetes native grasses and monotypic stands of it cover large areas of middle-elevation southern Arizona. The lack of structural and native species diversity and competition for light and nutrients in the grassland habitats may have adversely affected the Pima pineapple cactus. Another successful exotic grass is Mediterranean grass (*Schismus barbatus*), which is common in Sonoran desertscrub/grassland transition habitats. Dense stands of Mediterranean grass in desertscrub habitats contribute fine fuels that are readily flammable and carry fires in fire-intolerant habitat. Lehman's lovegrass and Mediterranean grass are two of many non-native species that may have had negative effects to the natural ecosystem. The introduction of other new non-native plant species to the southwestern United States is continuing. These introductions carry with them the potential for additional negative impacts.

Off-road vehicle use is not currently considered a serious problem, but habitat loss and degradation is occurring in parts of Pima pineapple cactus habitat due to this activity.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Illegal collection of this species has been documented on numerous occasions. On one occasion, surveys for the Pima pineapple cactus had been conducted and plants had been mapped. On a subsequent visit, botanists discovered that mapped plants were missing and only holes in the ground remained. In another incident, surveys for the species had been conducted for a road project near Tucson. Several plants were taken after surveyors left the site. Again, empty holes indicated they had been taken. The Service has received other reports of take that are less verifiable than the two incidents reported above. Some of these incidents indicate that collectors are specifically interested in taking *Coryphantha scheeri* var. *robustispina* and at other times it appears that the collectors have no knowledge as to the identity of the cacti but are taking all cacti in a general area. Hobbyists and commercial collectors are probably the two groups most likely to take this species.

C. Disease or Predation

Some plants appeared to be damaged by the larval stage of *Phycitidae* sp., a lepidopteran (Phillips 1981). The effects of this damage on population stability are unknown.

D. The Inadequacy of Existing Regulatory Mechanisms

The Arizona Native Plant Law protects *Coryphantha scheeri* var. *robustispina* as a highly safeguarded species. To legally collect this cactus on public or private lands in Arizona, a collector must obtain a permit from the Arizona Department of Agriculture. Permits may be issued for scientific and education purposes only. However, illegal collecting continues to occur. Due to the relatively large range of this species, the remote nature of some of its habitat, and the relatively few law enforcement agents available to cover this area, enforcement is difficult. Endangered Species Act protection may present a deterrent to illegal collectors and would increase the number of agents having enforcement authority.

E. Other Natural or Manmade Factors Affecting its Continued Existence
None known.

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 *Coryphantha scheeri* var. *robustispina* as endangered. With habitat loss and degradation continuing, the species warrants protection under the Act. Endangered status seems appropriate because of the amount of habitat already lost, the

accelerating habitat loss and degradation due to the rapidly growing human population within the range of this plant, and the current inadequacy of legal protection afforded to the species. Critical habitat is not being proposed for the 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 propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for this species. As discussed under Factor B in the Summary of Factors Affecting the Species, *Coryphantha scheeri* var. *robustispina* is threatened by taking, an activity difficult to enforce against and only regulated by the Act with respect to plants in cases of (1) removal and reduction to possession of listed plants from lands under Federal jurisdiction, or their malicious damage or destruction on such lands; and (2) removal, cutting, digging up, or damaging or destroying in knowing violation of any State law or regulation, including State criminal trespass law. Such provisions are difficult to enforce, and publication of critical habitat descriptions and maps would make *Coryphantha scheeri* var. *robustispina* more vulnerable and increase enforcement problems. Therefore, it would not now be prudent to determine critical habitat for *Coryphantha scheeri* var. *robustispina*.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery action, 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 authorizes recovery plans for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants 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)(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.

This species occurs on federally owned lands managed by the Bureau of Land Management (BLM)—Phoenix District, U.S. Forest Service Coronado National Forest, and the Fish and Wildlife Service Buenos Aires National Wildlife Refuge. Federal activities on these lands that could impact *Coryphantha scheeri* var. *robustispina* include, but are not limited to, livestock grazing and range management practices, road and utility corridor construction, mining permits and mitigation, controlled burns, and recreation planning.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general 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 this species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. In addition, for listed plants, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the removal, cutting, digging up, or damaging or destroying of listed plants in knowing violation of any State law or regulation, including State criminal trespass law. Certain exceptions 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.

It is anticipated that few trade permits would ever be sought or issued because the species 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 Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 3507, Arlington, Virginia 22201 (703/358-2104).

On July 1, 1975, *Coryphantha scheeri* var. *robustispina* was listed on appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The effect of this listing is that a permit for export is required from the country of origin. Commercial trade is allowed but only after the country of export has determined that it will not harm the wild populations. International movement of this species is minimal. If the species is listed under the Act, the Service will review it to determine whether it should be considered for transfer to appendix I of CITES.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning 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 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, distribution, and population size 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 this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to 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 received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Field Supervisor (See ADDRESSES).

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

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- Britton, N.L. and J.N. Rose. 1963. The Cactaceae. Descriptions and Illustrations of Plants of the Cactus Family. Vol. IV. Dover Publications, Inc., New York. 318 pp.
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- Marshall, W.T. 1950. Arizona's Cactuses. Desert Botanical Garden of Arizona, Science Bulletin Number 1. 94 pp.
- Mills, G.S. 1991. Miscellaneous Notes on *Coryphantha scheeri robustispina*. Unpublished report to U.S. Fish and Wildlife Service, Phoenix, Arizona. 30 pp.
- Phillips, III, A. M., B. G. Phillips, and N. Brian. 1981. Status Report for *Coryphantha scheeri* var. *robustispina*. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 15 pp.

Author

The primary author of this proposed rule is Susan Rutman (See ADDRESSES).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

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 16 U.S.C. 1361-1407; 16d U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under Cactaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

(h) . . .

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific Name	Common Name					
Cactaceae—Cactus family:						
<i>Coryphantha scheeri</i> var. <i>robustispina</i> .	Pima pineapple cactus	U.S.A. (AZ); Mexico (Sonora)	E		NA	NA

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Acting Director, Fish and Wildlife Service.

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