

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposal To Determine *Coryphantha Robbinsorum* (Cochise Pincushion Cactus) To Be a Threatened Species****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service proposes to determine a plant, *Coryphantha robbinsorum* (Earle) A.D. Zimmerman (Cochise pincushion cactus), to be a threatened species. Populations of this plant are known to occur in Cochise County, Arizona, on State and private lands. There is one population in adjacent Sonora, Mexico. The U.S. populations are threatened with habitat destruction from grazing, exploration and possible drilling for oil, and over-collection. The proposal, if made final, will implement the protection provided by the Endangered Species Act of 1973, as amended, for *Coryphantha robbinsorum*. Critical habitat is not being proposed at this time. The Service seeks data and comments from interested parties on this proposal.

DATE: Comments from all interested parties must be received by May 6, 1985. Public hearing requests must be received by April 22, 1985.

ADDRESS: Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103. Comments and materials received will be available for public inspection during normal business hours, by appointment, at the Service's Regional Office of Endangered Species, 500 Gold Avenue, SW., Room 4000, Albuquerque, New Mexico.

FOR FURTHER INFORMATION CONTACT: Peggy Olwell, Endangered Species, Albuquerque, New Mexico (see ADDRESSES above) (505/766-3972; FTS 474-3972).

SUPPLEMENTARY INFORMATION:**Background**

Coryphantha robbinsorum was first collected by James, Jimmy, and John Robbins in 1976. The species was described by W.H. Earle in 1976 as

Cochiseia robbinsorum. Hunt (1978 placed the taxon in *Escobaria*. A.D. Zimmerman made the combination *Coryphantha robbinsorum* in 1978.

Coryphantha robbinsorum is a small, unbranched cactus. The tubercles are tightly packed in 8 and 13 spirals in mature plants (5 and 8 spirals in smaller plants). The areoles are circular to broadly oval and filled with copious white hairs. A deep furrow runs on the upper surface of the tubercle. The radial spines number 11 to 17. Juvenile plants have 10 equal-length spines which are densely pubescent. Central spines are usually lacking. The bell-shaped flowers are pale yellow-green with a slight bronze cast. Anthers are yellow; the stigma lobes and style are green. Fruits are orange-red when ripe, but quickly turn dull red; seeds are black. Flowering occurs in March and April; fruit ripens in July and August (Zimmerman, 1978).

Coryphantha robbinsorum is historically known to occur in the Semidesert Grassland Community in Cochise County, Arizona. There is also a population in adjacent Sonora, Mexico. The population in Cochise County, Arizona is found on several isolated hills averaging about one hectare (2.47 acres). Each. Within an area of 4 to 6 square miles (2.5 to 3.7 square kilometers), there are roughly 40 hectares (98.8 acres) occupied by the plants. All of the known population in Arizona is on a privately owned ranch and Arizona State lands. Plants are locally common over about half the range, and scattered to rare over the remainder. The population in Mexico was verified in late 1984.

Coryphantha robbinsorum occurs in the Semidesert Grassland at an elevation of 1280 meters (4,198 feet), on limestone hills. Dominant associated species are sandpaper bush (*Mortonia scabrella*), ocotillo (*Fouquieria splendens*), desert spoon (*Dasyliion wheeleri*), snakeweed (*Gutierrezia microcephala*), Palmer agave (*Agave palmeri*), amole (*Agave schottii*), and prickly pear (*Opuntia phaeacantha*).

The first Federal action involving this species began when *Coryphantha robbinsorum* was included as a category 2 species in a list of plants under review for threatened and endangered classification in the December 15, 1960, Federal Register (45 FR 82480). Category 2 includes taxa for which the Service has insufficient biological data to support a proposed rule. A status report was completed in 1982, and

Coryphantha robbinsorum was included as a category 1 species in the supplement to the 1980 notice which was published in the November 28, 1983, Federal Register (48 FR 53648). Category 1 includes taxa for which the Service presently has sufficient biological information to support listing as endangered or threatened.

The Endangered Species Act Amendments of 1982 required that all petitions pending as of October 13, 1982, be treated as having been newly submitted on that date. The species covered by the December 15, 1980, notice of review are considered to be under petition, and the deadline for making a finding on those species, including *Coryphantha robbinsorum*, was October 13, 1983. On October 13, 1983, and again on October 13, 1984, the petition finding was made that listing *Coryphantha robbinsorum* was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Such a finding requires a recycling of the petition, pursuant to section 4(b)(3)(C)(i) of the Act. Therefore, a new finding must be made on or before October 13, 1985; this proposed rule constitutes the finding that the petitioned action is warranted and proposes to implement the action in accordance with section 4(b)(3)(B)(ii) of the Act.

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 (to be codified at 50 CFR Part 424; see 49 FR 38900, October 1, 1984) set forth procedures for adding species to the Federal list. 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 robbinsorum* (Earle) A.D. Zimmerman (Cochise pincushion cactus) are as follows:

A. Present or threatened destruction, modification, or curtailment of its habitat or range. Threats to the survival of *Coryphantha robbinsorum* include habitat destruction due to livestock grazing leading to trail formation, soil disturbance, and erosion channels and direct destruction of plants by trampling. One population studied by Phillips and Brian (1982) was immediately adjacent to a livestock water source; livestock trails leading to the tank and service roads were evident in topographically less rugged parts of the habitat. All of the known range in Arizona is on an active cattle ranch, including private land and State land leased for grazing.

While overgrazing is not a serious problem, and the owners of the ranch are conservation-oriented and sympathetic to preservation of the cactus (Zimmerman, 1984), a change in grazing practices or ranch ownership could lead to rapid deterioration of present conditions.

A source of potentially serious concern is exploration for oil in the area. At least one deep well was drilled around 1976, and the access road passed through a *Coryphantha robbinsorum* population. Although no oil was found, additional exploration continues. The present ranch owners do not own the mineral rights to the area (Zimmerman, 1984).

B. Overutilization for commercial, recreational, scientific, or educational purposes. Its recent recognition, small size and handsome appearance make *Coryphantha robbinsorum* a very desirable cactus for private collectors and the commercial trade. Brack (1984) noted its vulnerability to any stress, and stated that human collecting is the main threat to the species. He further stated that confidentiality of the location is the key factor in its protection. Zimmerman (1984) noted that more than half the total population is on less than 4 percent of the total habitat, some 40 hectares (88.8 acres). Because individuals of this species are so concentrated, they are potentially very vulnerable to commercial cactus exploitation. Density of plants on the remaining 96 percent of the habitat is very low. Theoretically, collectors could reduce the plants to 5 to 10 percent of their present numbers if the proper habitat were thoroughly searched. Finding the last plants, those not in the usual habitats and very sparsely distributed, would be nearly impossible. However, once reduced to widely scattered individuals in marginal habitat, the species might be unable to recover and might be vulnerable to extinction from natural events.

C. Disease or predation. No evidence of damage or death of plants from insects, pathogens, rodents, or other animals has been noted. Cattle do not intentionally graze plants, but inadvertent trampling and habitat damage by range cattle may be a serious threat, as described in "A," above (Phillips and Brian, 1982).

D. The inadequacy of existing regulatory mechanisms. The Arizona Native Plant Law (A.R.S. Chap. 7, Art. 1, Sec. 3-901 C.I.) includes all members of the cactus family on its list of protected plants. These may be collected only with a State permit and permission of the landowner. *Coryphantha robbinsorum* is not included in the more restrictive prohibited list, which allows collection only for scientific or

educational purposes under permit (Sec. 3-901 B). The Native Plant Law provides no protection against habitat loss or incidental taking or destruction, the major risks to this species.

E. Other natural or manmade factors affecting its continued existence. *Coryphantha robbinsorum* has a much lower reproductive potential than most other cacti (Zimmerman, 1984), with an estimated average production of 3 fruits, with 20 seeds each, per year per plant (Brack, 1984). According to Zimmerman (1984), absence of these cacti from nearly half the isolated patches of apparently suitable habitat may be the result of natural local extinctions. A delicate balance between local extinction and recolonization in small "islands" of suitable habitat may be a natural feature of the biology of the species. If such a balance exists, any reserve intended to provide for the survival of this species would have to encompass several adjacent patches of suitable habitat, in order to allow for local extinctions and re-colonization.

Range fires and competition with dense grasses could become threats should grazing be eliminated entirely (Zimmerman, 1984).

The low total estimated population and restriction to a specific habitat type within a very restricted geographic range intensify the effects of any adverse impacts to the species or its habitat (Phillips and Brian, 1982).

The Service has carefully assessed the best scientific 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 robbinsorum* as threatened. Threatened status seems appropriate because the population, while extremely limited in distribution and facing serious potential threats, has a sufficient number of plants to maintain self if not heavily impacted by collecting. The threats are mitigated by the remote, unpublicized location and the concern of the present landowners for preserving the cactus. The reasons for not designating critical habitat are discussed below.

Critical Habitat

Section 4(a)(3) of the Endangered Species 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 *Coryphantha robbinsorum* because its restricted distribution, accessibility, and attractiveness to cactus collectors make

it vulnerable to threats from collection. The cactus may be sought as a curiosity by collectors of rare cacti if critical habitat maps are published in the *Federal Register*. Publication of such maps would call attention to this species, make specimens easy to locate, and make it more vulnerable to taking. Therefore, it would not be prudent to determine critical habitat for *Coryphantha robbinsorum* at this time.

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 all listed species. Such actions are initiated by the Service following listing. The protection required by Federal agencies and taking 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. 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. This protection would now accrue to *Coryphantha robbinsorum*. 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 *Coryphantha robbinsorum*. If a Federal action may affect a listed species, the responsible Federal agency must enter into formal consultation with the Service. There would be no known impacts to Federal projects by the listing of *Coryphantha robbinsorum*, which occurs on private and State lands.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plant species. With respect to *Coryphantha robbinsorum*, the trade prohibitions of section 9(a)(2) of the Act, as implemented by 50 CFR

17.71, 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. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. It is anticipated that few permits would ever be sought or issued since the species is not common in cultivation or in the wild.

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. Section 4(d) provides for the extension of such protection to threatened plant species through regulations. This protection will apply to *Coryphantha robbinsorum* once revised regulations are promulgated. Permits for exceptions to this prohibition are available through section 10(a) and 4(d) of the Act, until revised regulations are promulgated to incorporate the 1982 amendments. Proposed regulations implementing this prohibition were published on July 8, 1983 (48 FR 31417), and it is anticipated that these will be made final following public comment. *Coryphantha robbinsorum* occurs on Arizona State and private lands. 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, D.C. 20240 (703/235-1903).

Coryphantha robbinsorum is listed on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which requires a permit from the country of origin for export. 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 listed on Appendix I of CITES.

Public Comments Solicited

The Service intends that any final rule adopted will be accurate and as effective as possible in the conservation of any 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 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 *Coryphantha robbinsorum*;

(2) The location of any additional populations of *Coryphantha robbinsorum* and the reasons why any habitat of this species 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 *Coryphantha robbinsorum*.

Final promulgation of the regulation on *Coryphantha robbinsorum* 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. Request must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Regional Director (see ADDRESSES section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by 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

- Brack, S. 1984. Correspondence to Office of Endangered Species, Region 2, regarding *Coryphantha robbinsorum*, 19 Jan. 1984.
- Earle, W.H. 1976. *Cochisea* Earle, genus novum. Saguaroand Bulletin 30:65-66.
- Hunt, D.R. 1978. Amplification of the genus *Escobaria*. Cactus & Succulent Journal of Great Britain 40:13.
- Lopresti, Vincent. 1984. *Coryphantha robbinsorum* en Mexico. Cact. Suc. Mex. XXIX:81-83.
- Phillips, B.G., and N.J. Brian. 1982. Status report on *Coryphantha robbinsorum*. U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque, N.M.
- Zimmerman, A.D. 1978. The relationships of *Cochisea robbinsorum* Earle. Cactus & Succulent Journal (U.S.) 50:293-297.

Zimmerman, A.D. 1984. Correspondence to Office of Endangered Species, Region 2, regarding *Coryphantha robbinsorum*, 27 Feb. 1984.

Authors

The primary author of this proposed rule is Peggy Olwell, Office of Endangered Species, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3974; FTS 474-3972). The preliminary listing package was provided by Drs. Arthur Phillips, III, and Barbara G. Phillips, Museum of Northern Arizona, Flagstaff, Arizona. The editor is LaVerne Smith, Office of Endangered Species, U.S. Fish and Wildlife Service,

Washington, D.C. 20240 (703/235-1975; FTS 235-1975). Status information was provided by Dr. Barbara G. Phillips and Ms. Nancy Brian, Museum of Northern Arizona, Route 4, Box 720, Flagstaff, Arizona 86001 (602/774-5211).

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 reads 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) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Cactaceae—Cactus Family:						
<i>Coryphantha robbinsorum</i>	Cochise pincushion cactus	U.S.A. (AZ); Mexico (Sonora)	T		NA	NA

Dated: February 8, 1985.

J. Craig Potter,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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