

## 50 CFR Part 17

**Endangered and Threatened Wildlife and Plants; Determination That *Echinocereus Triglochidiatus* Var. *Inermis* Is an Endangered Species**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines *Echinocereus triglochidiatus* Engelm. var. *inermis* (Schum.) G. K. Arp (Spineless hedgehog cactus), a native plant of Colorado and Utah, to be an Endangered species. Historically more widespread, this cactus is presently known from only four populations on the rugged tablelands of the Colorado Plateau. The total population of this cactus currently numbers about 3000 plants. Exploitation of the Spineless hedgehog cactus by commercial and private collectors has been well documented. Depletion of the natural population, about 90% of which occurs on Federal lands administered by the Bureau of Land Management, is an ongoing problem, and is the major threat to this taxon. The determination that *Echinocereus triglochidiatus* var. *inermis* is an Endangered species implements the protection provided by the Endangered Species Act as well as mechanisms to assist in management and recovery of surviving populations. **DATE:** This rulemaking becomes effective on December 7, 1979.

**FOR FURTHER INFORMATION CONTACT:** Mr. John Spinks, Chief, Office of Endangered Species, Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C. 20240 (702/235-2771).

**SUPPLEMENTARY INFORMATION:****Background**

*Echinocereus triglochidiatus* var. *inermis* (Spineless hedgehog cactus) is known from only four populations in far western Colorado and adjacent eastern Utah. The total population, numbering about 3,000 plants, is scattered in the rugged mountainous country of the Colorado Plateau. It is a highly unusual cactus because it lacks spines. Individuals with small, rudimentary spines are occasionally seen in addition to the more common totally spineless condition. The curiosity of a spineless cactus, in conjunction with its scarlet red flowers, makes *Echinocereus triglochidiatus* var. *inermis* a favorite of both private and commercial cacti collectors.

The Secretary of the Smithsonian Institution, in response to Section 12 of the Endangered Species Act, presented

his report on plant species to Congress on January 9, 1975. This report, designated as House Document No. 94-51, contained lists of over 3,100 U.S. vascular plant taxa considered to be Endangered, Threatened or extinct. On July 1, 1975, the Director published a notice in the *Federal Register* (40 FR 27823-27924) of his acceptance of the report of the Smithsonian Institution as a petition to list these species under Section 4(c)(2) of the Act, and of his intention thereby to review the status of the plant taxa named within as well as any habitat which might be determined to be critical.

On June 16, 1976, the Service published a proposed rulemaking in the *Federal Register* (41 FR 24523-24572) to determine approximately 1,700 vascular plant species to be Endangered species pursuant to Section 4 of the Act. This list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the above mentioned *Federal Register* publication.

*Echinocereus triglochidiatus* var. *inermis* was included in the June 16, 1976, proposal. A public hearing on the June 16, 1976, proposal was held on July 22, 1976, in El Segundo, California.

In the June 24, 1977, *Federal Register*, the Service published a final rulemaking (42 FR 32373-32381, codified at 50 CFR Part 17) detailing the regulations to protect Endangered and Threatened plant species. The rules establish prohibitions and a permit procedure to grant exceptions to the prohibitions under certain circumstances.

**Note.**—The Department has determined that this rule does not meet the criteria for significance in the Department Regulations implementing Executive Order 12044 (43 CFR Part 14) or require the preparation of a regulatory analysis.

**Summary of Comments and Recommendations**

In keeping with the intent of Section 4(b)(1)(c) of the Act, a summary of all comments and recommendations received are here published in the *Federal Register* prior to adding this cactus to the List of Endangered and Threatened Wildlife and Plants.

Hundreds of comments on the general proposal of June 16, 1976, were received from individuals, conservation organizations, botanical groups, and business and professional organizations. Few of these comments were specific in nature, in that they did not address individual plant species. Most comments addressed the program or the concept of Endangered and Threatened plants and

their protection and regulation. These comments are summarized in the April 26, 1978, *Federal Register* publication which also determined 13 plant species to be Endangered or Threatened species (43 FR 17909-17916). Some of these comments had addressed the general problems of cacti conservation. Additionally many comments on the cactus trade were received in response to the June 7, 1976, proposed rule (41 FR 22915) on prohibitions and permit provisions for plants under Section 9(a)(2) and 10(a) of the Act. These comments are summarized in the June 24, 1977, final prohibitions and permit provisions (43 FR 32374-32381). The governors of Utah and Colorado were both notified of the proposed action. The governors themselves submitted no comments, nor did the conservation agencies of either state. Comments specific to *Echinocereus triglochidiatus* var. *inermis* have all concerned the ongoing taxonomic debate over the correct ranking status of this taxon. The question raised by several botanists specializing in cacti is whether this spineless cactus should be legitimately recognized at the level of variety. One view holds that segregation of this taxon is based on a single character, spinelessness, and that such a single character difference is insufficient evidence on which to distinguish a variety. In this argument, the definition of a variety is based upon the tendency of a cluster of characters to remain together. The opposing view, supported by Dr. Gerald Arp, Senior Research Geobotanist at ARCO, Dr. Dieter H. Wilken, Curator at Colorado State University Herbarium, Dr. William A. Weber, Curator at the University of Colorado Museum at Boulder, and Barry Johnston, a graduate student at the University of Colorado who has been employed doing field and herbarium studies of this taxon, holds that the "only true test of a taxonomic system is practicality in expressing the systematic relationships of natural populations. The fact that this cactus is recognized by individuals (i.e. cactus collectors) as a distinct entity emphasizes the practicality. This recognition, combined with some apparent populational integrity and isolation, should serve to support the recognition of var. *inermis*."

**Conclusion**

After a thorough review and consideration of all the information available, the Director has determined that *Echinocereus triglochidiatus* Engelm. var. *inermis* (Schum.) G. K. Arp (Spineless hedgehog cactus; synonyms: *Echinocereus phoenicis* var. *inermis*, *Echinocereus coccineus* var.

*inermis*) is in danger of becoming extinct throughout all or a significant portion of its range due to one or more of the factors described in Section 4(a) of the Act.

These factors and their application to *Echinocereus triglochidiatus* var. *inermis* are as follows:

1. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The greatest threat to *Echinocereus triglochidiatus* var. *inermis* is from commercial and private cactus collectors who remove these plants from the desert. This threat is particularly severe where populations occur along roads. Also, the one population of Spineless hedgehog cactus that has been located by the general public was immediately and totally collected.

In addition to overcollection, this cactus is also threatened by overgrazing. Sheep eat the joints of this spineless cactus which, because it prevents flowering and thus reproduction, leads to the decline of this taxon.

Another threat to *Echinocereus triglochidiatus* var. *inermis* is habitat modification. Two activities which pose a long-range threat to this cactus' habitat on the Colorado Plateau are type conversions and chaining and seeding operations to create more grazing land and mineral exploration and mining activities. The general region where this cactus occurs is potentially subject to future development of mineral deposits. There are no current conflicts with known populations of *Echinocereus triglochidiatus* var. *inermis* and potential activities are too ill-defined to anticipate the possible extent of threats to the cactus.

2. *Overutilization for commercial, sporting, scientific, or educational purposes.* Because of its highly unusual spineless character and large, scarlet red flowers, *Echinocereus triglochidiatus* var. *inermis* is in world-wide demand by collectors of rare cacti. This cactus, being very rare and highly endemic, has been, and will continue to be, a particular prize among collectors and therefore is very threatened by unregulated commercial trade from specimens of wild origin. Removal of plants from the wild has occurred and has resulted in the severe depletion of one wildlands population in Colorado. This over-collection is an ongoing threat.

3. *Disease or predation* (including grazing). Overgrazing is a definite threat to the Spineless hedgehog cactus. Because it lacks spines, sheep eat the tips of the joints. This decreases reproduction in *Echinocereus triglochidiatus* var. *inermis* since the joints secrete a very hard callous

covering over the damaged area, and will not flower again. Although cattle do not eat this cactus, cattle grazing adversely affects this species by trampling, especially young plants during wet seasons of the year when the ground is muddy.

4. *The inadequacy of existing regulatory mechanisms.* There currently exist no State or Federal laws fully protecting this cactus or its habitat. The following restrictive provisions are currently available for those plants (95% of the total population) occurring on Federal lands. The Bureau of Land Management has authority under the Federal Land Policy and Management Act of 1976 (the BLM Organic Act) to restrict taking of vegetative resources under certain circumstances. Present regulations state that removal of plants for commercial purposes may be done only where specifically authorized by law (43 CFR 6010.2). Forest Service regulations prohibit the taking of Endangered plants on Forest Service lands (36 CFR 261.9(b)). Forest Service regional offices may implement permit systems, pursuant to 36 CFR 261.1a, for collecting rare plants. However, no such permit system yet exists in this region. Taking and vandalism remain threats to Endangered and Threatened plant species occurring on these lands. The Endangered Species Act will afford additional and broader protection.

All native cacti are on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. However, this Convention only regulates export of the cactus but does not regulate interstate or intrastate trade in the cactus or habitat destruction. Except as noted in the preceding paragraph, no other Federal protective laws currently apply specifically to this species. The Endangered Species Act will now offer additional protection for this cactus.

5. *Other natural or manmade factors affecting its continued existence.* Restriction to particular bedrock outcroppings with a low total population level consisting of small, scattered and disjunct populations with a resultant restricted gene pool are factors which tend to intensify the adverse effects of threats to this plant and its habitat.

#### Effect of the Rulemaking

Section 7(a) of the Act amended in 1978 provides:

The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by

carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act. Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") does not jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section.

Provisions for Interagency Cooperation were published on January 4, 1978, in the Federal Register (43 FR 870-876) and codified at 50 CFR Part 402. These regulations are intended to assist Federal agencies in complying with Section 7(a) of the Act. This rulemaking requires Federal agencies to satisfy these statutory and regulatory obligations with respect to this species.

Endangered species regulations in Title 50 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered species. The regulations which pertain to Endangered plant species, are found at §§ 17.61-17.63 (42 FR 32378-32381).

Section 9(a)(2) of the Act, as implemented by § 17.61 would apply. With respect to any species or plant listed as Endangered, it is, in general, illegal for any person subject to the jurisdiction of the United States to import or export such species; deliver, receive, carry, transport, or ship such species in interstate or foreign commerce by any means and in the course of a commercial activity; or sell or offer such species for sale in interstate or foreign commerce. Certain exceptions apply to agents of the Service and State conservation agencies.

Section 10 of the Act and regulations published in the Federal Register of June 24, 1977 (42 FR 32373-32381, 50 CFR Part 17), also provide for the issuance of permits under certain circumstances to carry out otherwise prohibited activities involving Endangered plants. It is no anticipated that there will be a large number of permit applications generated as a result of this rulemaking.

#### Effect Internationally

In addition to the protection provided by the Act, all native cacti are on Appendix II of the Convention of International Trade in Endangered Species of Wild Fauna and Flora which requires a permit for export of this plant.

The Service will review whether it should be considered under the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere or other appropriate international agreements.

**National Environmental Policy Act**

A final Environmental Assessment has been prepared and is on file in the Service's Washington Office of Endangered Species. The assessment is the basis for a decision that this determination is not a major Federal action which significantly affects the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969.

**Endangered Species Act Amendments of 1978**

The Endangered Species Act Amendments of 1978 added the following provision to subsection 4(a)(1) of the Endangered Species Act of 1973:

At the time any such regulation (to determine a species to be an Endangered or Threatened species) is proposed, the Secretary shall by regulation, to the maximum extent prudent, specify any habitat of such species which is then considered to be Critical Habitat.

*Echinocereus triglochidiatus* var. *inermis* is threatened by taking and the taking of plants is not prohibited by the Endangered Species Act of 1973. Publication of Critical Habitat maps would make this species more vulnerable to taking and therefore it would not be prudent to determine Critical Habitat. Federal agencies will be notified of the locations of these plants for protection purposes. BLM, the principal Federal agency involved, is aware of the location of the plant.

*Echinocereus triglochidiatus* var. *inermis* was proposed for listing as an Endangered plant on June 16, 1976 (41 FR 24570). Since it has been determined to be imprudent to designate Critical Habitat for this species at this time, and all listing requirements of the Act have been satisfied, the Service now proceeds with the final rulemaking to determine this species to be Endangered under the authority contained in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

The primary author of this rule is Ms. Rosemary Carey, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975).

**Regulation Promulgation**

Accordingly, § 17.12 of Part 17 of

Chapter I of Title 50 of the U.S. Code of Federal Regulations is amended as follows:

1. Section 17.12 is amended by adding, in alphabetical order by family, genus, species and variety, the following plant:

**§ 17.12 Endangered and threatened plants.**

Species		Range		Status	When listed	Special rules
Scientific name	Common name	Known distribution	Portion endangered			
<i>Echinocereus triglochidiatus</i> var. <i>inermis</i> .	Spineless hedgehog cactus.	U.S.A. (Co., Utah)....	Entire .....	E	80	NA

Dated: October 31, 1979.

Robert S. Cook,  
Acting Director, Fish and Wildlife Service.

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