

Multnomah Street, Portland, Oregon 97232.

FOR FURTHER INFORMATION CONTACT: John L. Spinks, Chief, Division of Endangered Species, U.S. Fish and Wildlife Service, Suite 1692, Lloyd 500 Building, 500 N.E. Multnomah Street, Portland, Oregon 97232 (503/231-6131; FTS 429-6131).

SUPPLEMENTARY INFORMATION:

Background

Camissonia benitensis is a small, hairy, annual member of the evening-primrose family (Onagraceae) with bright yellow flowers. Peter H. Raven discovered this plant in the Clear Creek Reservation Area, San Benito County, California, in 1960 and published its description in 1969: It grows on alluvial terraces along Clear Creek and San Carlos Creek, at elevations ranging from 2,500 to 4,600 feet (760 to 1,340 meters). The species has only been observed to grow on alluvial terraces of serpentine origin; it is not known whether it is also able to grow on serpentine uplands. The species has only a moderate reproductive potential under favorable conditions, apparently is not weedy or aggressive, and is highly sensitive to trampling (Griffin 1977, 1978).

In May of 1979 a total of only 70 plants were observed to flower (Marcus 1979). A field examination by U.S. Fish and Wildlife Service and Bureau of Land Management (BLM) personnel in April of 1980 revealed that the plants on Clear Creek numbered perhaps 200 to 300 at a single small location. At that time the site was completely unprotected and numerous tire tracks crisscrossed the area. Shortly thereafter BLM fenced the site. A second location (first observed in 1978 by BLM personnel) had been severely altered by ORV activity and no plants were observed. This latter site was fenced by the BLM in 1981. The San Carlos Creek site was inaccessible at the time because of impassable road conditions.

Observations in the spring (May-June) of 1983 revealed nine colonies of the plant ranging from 10 to 100 individuals (Kiguchi 1983). Eight of the colonies occurred on BLM land and one was on private land. The population on private land, one of the largest and most vigorous, occurred near the west entrance to Clear Creek Canyon. It is being destroyed by gravel mining activities. To date the BLM has fenced or barred access to all but one site on public land. The single remaining site on public land had been scheduled for protection by spring, 1984, but this has

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for "Camissonia Benitensis" (San Benito Evening-Primrose)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Camissonia benitensis* (San Benito evening-primrose) to be a threatened species. This action is being taken because a significant portion of the limited range of this species is subject to gravel mining and damage by off-road vehicle (ORV) use. The San Benito evening-primrose occurs only in parts of the Clear Creek and San Carlos Creek drainages, between Hernandez and New Idria, San Benito County, California. This plant occurs as a few scattered populations on serpentine alluvial terraces on public (Bureau of Land Management) and private land within these drainages. The designation as threatened provides this species the protection of the Endangered Species Act of 1973, as amended.

DATES: The effective date of this rule is March 14, 1985.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at U.S. Fish and Wildlife Service, Suite 1692, Lloyd 500 Building, 500 N.E.

not yet been carried out. No protection is afforded the plants on private land.

Section 12 of the Endangered Species Act of 1973 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 in the *Federal Register* (40 FR 27823) of its acceptance of the report as a petition within the context of section 4(c)(2) of the 1973 Act, and of its intention thereby to review the status of the plant taxa named within. *Camissonia benitensis* was included in that notice. On August 5, 1977, the Service was petitioned by Ms. Alice Q. Howard of the California Native Plant Society's Rare Plant Project Committee to place the San Benito evening-primrose on the U.S. List of Endangered and Threatened Plants, with a designation of critical habitat. Accompanying this petition was a detailed account of this species and its status prepared by Dr. James R. Griffin of the University of California, Hastings Natural History Reservation. The July 1, 1975 notice was replaced with the December 15, 1980 notice of review of plant species for listing under the Act (45 FR 82480), which also included *Camissonia benitensis*. On February 15, 1983, the Service published a notice in the *Federal Register* (48 FR 6752) of its prior finding that the petitioned action on this species may be warranted, in accord with section 4(b)(3)(A) of the Act as amended in 1982. On October 13, 1983, the petition finding was made that listing *Camissonia benitensis* was warranted but precluded by other pending listing actions. On October 31, 1983, the Service found that the petitioned action was warranted and published the proposed rule (48 FR 50126-50128), in accordance with section 4(b)(3)(B)(ii) of the Act. For reasons of hazards posed to the species, more fully detailed below, designation of critical habitat for this species is not deemed prudent. After reviewing all of the comments received on the proposed rule, the Service has concluded to change the status of the plant from endangered to threatened in the final rule.

Summary of Comments and Recommendations

In the October 31, 1983 proposed rule (48 FR 50126-50128) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments,

Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice was published in the *Hollister Free Lance* on November 11, 1983, which invited general public comment. A public hearing was requested by Mr. Ed Dunkley of the California Association of Four Wheel Drive Clubs and held in Coalinga, California. Eighteen written comments were received in response to the original proposal and six more were received during the public hearing; all of these are discussed below.

Few of the commenters presented new data on the status of the species or new information revealing additional threats or lack thereof. BLM indicated that it has designated the Clear Creek Canyon as a recreation area for ORV's and has developed a management plan that will substantially limit vehicle use in the canyon. The Bureau further indicated that recent surveys (Kiguchi 1983) found a total of nine colonies and that the *Camissonia benitensis* population may be increasing as a result of the fencing of several sites. Service personnel inspected the area and noted a substantial increase in the number of protective fences and barriers placed around individual colonies. Based on these efforts and the presence of nine colonies of the plant, BLM suggested that the listing of *Camissonia benitensis* was premature. The Service finds that, while the efforts of BLM to protect the plants appear to be beneficial and necessary, at this time the population still remains exceedingly low for an annual plant, and the species is still subject to threats from gravel mining operations on private land and damage from ORV operators that do not respect the enclosures. However, due to the species' improved status as a result of these efforts, the Service believes that *Camissonia benitensis* should be listed as threatened rather than endangered as originally proposed. Although precise counts were not presented in the latest census, Kiguchi (1983) suggests the population numbers approximately 1,000 individuals, most of which occur on two or three sites. One of the largest colonies occurs on private land. This site is being destroyed by gravel mining activities. BLM has no control over this activity, but Federal listing may provide additional limited options to protect this site.

Ten letters were received in support of the listing. Included among these was a letter from the County of San Benito that recommended the species be protected and preserved by the most prudent means. The County emphasized

the threat of ORV's pointed out that designation of critical habitat may increase the threat of vandalism and destruction. All other commenters in support of the listing emphasized the ORV threats. Several commenters also indicated that, while fencing and barriers have helped to protect the plant, violations of these sites by ORV recreationists are likely to occur. Three commenters noted that the close proximity of camping sites to colonies of the plant increases the likelihood of human access and disturbance, and creates additional difficulties for assuring the safety of the species.

Two letters received from ORV organizations expressed concern about the potential impact of the listing on ORV activities in the Clear Creek area—these organizations were the South County Trail-Riders 4 x 4 Club and the California Association of 4 Wheel Drive Clubs. These letters raised a number of questions also voiced at the public hearing. The public hearing was held at the West Hills Community College and was attended by approximately ten people. For the sake of brevity, the written comments and those from the public hearing have been combined and summarized here:

The question was asked by letter and by several individuals at the public hearing whether *Camissonia benitensis* is a separate species or just a mutation or local adaptation. Based on the best scientific information available, *Camissonia benitensis* is recognized as a distinct species (Raven 1969 and personal communication 1983, and Griffin personal communication 1984). Morphologically, *C. benitensis* is similar in appearance to the non-serpentine species *C. contorta*. However, *C. benitensis* differs from *C. contorta* in chromosome number, the former being tetraploid, the latter hexaploid (Raven 1969, Griffin personal communication 1980). Another differentiating feature can be determined by a close examination of the pollen: the tetraploid rarely has up to about 10 percent four-pored pollen, the hexaploid often has more than 30 percent four-pored pollen. Other characteristics such as leaf shape and pubescence also are distinctive in *C. benitensis*. Actual chromosome counts, however, provide the most reliable method of identification.

With regard to the comment that *C. benitensis* may be only a mutant form of *C. contorta*, Raven (1969) indicates this is not the case. Based on a careful examination and study of the genus *Camissonia* (90 taxa) and similar genera in the family Onagraceae, Raven (1969) postulated that *C. benitensis* was

derived from *C. strigulosa*, a common species in the coast range of California found from the vicinity of Bodega Bay south to Santo Tomas in Baja California. *C. strigulosa* is not known from San Benito County, but its range overlaps with *C. contorta* in several other locations in the Coast Range. Raven (1969) hypothesized that differentiation at the tetraploid level gave rise to local endemics such as *C. benitensis* and *C. integrifolia*. Undoubtedly, the unusual soil conditions of Clear Creek Canyon are correlated with the derivation of this species.

The concern was voiced several times by commenters that *C. benitensis* may occur in other areas. The Service recognizes this as a relatively remote possibility considering the limited extent of alluvial serpentine areas in this region. Surveys by BLM botanists, Dr. J.R. Griffin, and other local botanists have found no locations for this species in other drainages or regions despite efforts over the years since *C. benitensis* was described. Therefore, based upon the best available scientific information, the Service finds it reasonable to assume that *C. benitensis* is endemic to the Clear Creek and San Carlos Creek drainages.

The major concern voiced by all of the ORV representatives at the hearing was that the listing of *Camissonia benitensis* would "close down" or significantly reduce ORV recreation in the vicinity of Clear Creek. This is highly unlikely because of the very limited habitat of this plant along the alluvial terraces of Clear Creek and San Carlos Creek. Non-riparian and non-alluvial areas of Clear Creek evidently do not provide habitat for this species. Most upland sites, therefore, could still be available for ORV activities. A management plan for the area could be developed in such a way that ample protection for the *Camissonia* could be provided without closing large areas to ORV recreationists.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Camissonia benitensis* (San Benito evening-primrose) should be classified as a threatened species. Procedures found at 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, revised 49 FR 38900, October 1, 1984) were followed. 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 *Camissonia benitensis* (San Benito evening-primrose) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* In the past, habitat and colonies of *Camissonia benitensis* along Clear Creek on BLM land have been adversely affected by ORV activities (Marcus 1979). Recent efforts by BLM to protect the species by fencing of observed colonies have been relatively effective in preventing additional losses and may have enhanced survival on those specific sites. However, recent surveys suggest that the population consists only of approximately 1,000 individuals, a relatively low number for an annual plant. The close proximity of camping and ORV free play areas and trails to fenced *Camissonia* sites along Clear Creek makes protection of the species heavily dependent upon voluntary user compliance (BLM 1982). This situation provides uncertain protection for the species. These same difficulties also limit BLM's protection of *Camissonia* within the "Natural Area" along San Carlos Creek.

In addition to the sites on public land, one of the largest colonies occurs on private land near the entrance to Clear Creek Canyon. Active gravel removal at this site threatens to destroy the entire colony. Stochastic losses may become a problem in causing further declines of the species in all areas. Federal listing may provide additional limited options to protect these sites.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Not applicable.

C. *Disease or predation.* Not applicable.

D. *The inadequacy of existing regulatory mechanisms.* At this time *Camissonia benitensis* is not listed as rare or endangered by the State of California and, therefore, protection is minimal. The BLM, which recognizes ORV activities as a legitimate use of the public land in this area, is attempting to protect individual colonies of the plant on public land by fences, barriers, weekly patrols, and requests for user compliance. The Service does not believe that this provides certain protection for the species. Listing under the Act will aid in the conservation of this species through interagency cooperation under section 7 of the Act. Moreover, section 9(a)(2)(B) of the Act prohibits removing and reducing to possession any endangered plant from areas under Federal jurisdiction. Section 4(d) allows for the provision of such

protection to threatened species through regulations. This protection will apply to *Camissonia benitensis* under Federal jurisdiction once revised regulations are promulgated.

E. *Other natural or manmade factors affecting its continued existence.* Although *Camissonia benitensis* is an annual, it appears to have only a moderate reproductive capacity, even under favorable conditions (Griffin 1977). Very little is known about its environmental requirements and it is unclear whether the plant will be able to recover or expand even with protection. Under existing conditions intensive ORV use in close proximity to fenced *Camissonia* sites increased the likelihood of vandalism. Federal listing will assist in providing additional authority to protect the species and its habitat.

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 make this rule final. Based on this evaluation, the preferred action is to list *Camissonia benitensis* as a threatened species. The Service finds that the protective measures initiated by the BLM on public land have reduced adverse impacts of ORV activities to the point where the species is no longer in danger of extinction. However, uncertain protection hampers efforts to fully protect the species on public land and gravel removal on private land threatens to destroy one of the largest colonies of the plant, so that it is likely to become endangered without vigorous protection under the Act. Critical habitat has not been designated because of the threat of vandalism and increased enforcement problems, as is explained more fully in the following section.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a 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. This species is potentially threatened by vandalism, and occurs in an area in which enforcement of restrictions against such activity is difficult because of its remoteness. Publication of maps indicating specific areas where this species occurs would likely increase the threat of vandalism and increase enforcement problems. Therefore, it would not be prudent to determine

critical habitat for *Camissonia benitensis* at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the 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. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal in the Federal Register of June 29, 1983, 48 FR 29990. 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 a listed species. If a Federal action may affect a listed species, the responsible Federal agency must enter into formal consultation with the Service. Consultations involving the BLM are anticipated for actions involving public lands. Development and implementation of the management plan for the Clear Creek area will likely require formal consultation pursuant to section 7(a)(2). No other actions are now known that would require a section-7 consultation.

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 the San Benito evening-primrose, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71, 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, 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 plant species under certain circumstances. It is anticipated that few trade 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) allows for the provision of such protection to threatened species through regulations. This protection will apply to *Camissonia benitensis* under Federal jurisdiction once revised regulations are promulgated. Once the revised regulations are promulgated, permits for exceptions to this prohibition will be available through sections 10(a) and 4(d) of the Act. Proposed regulations implementing this new prohibition were published on July 8, 1983 (48 FR 31417), and it is anticipated that few collecting permits for the species will ever be requested. 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).

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).

Literature Cited

Bureau of Land Management. 1982. Implementation plan for off-road vehicle designations in the Clear Creek Recreation Area. BLM Hollister Resource Area. Unpubl. plan.
 Griffin, J.R. 1977. Status report for *Camissonia benitensis*. California Native Plant Society. Unpubl. rept.
 Griffin, J.R. 1978. Survey of rare and endangered plants of the Clear Creek Recreation Area. Report to Folsom District Manager, BLM. #CA-040-PH8-078. Unpubl. rept.
 Kiguchi, L.M. 1983. Sensitive plant survey: Clear Creek Recreation Area and San Benito Mountain Natural Area. BLM Hollister Resource Area. Unpubl. rept.
 Marcus, D. 1979. Inventory of rare and endangered plants of the Folsom District (BLM). Status report for *Camissonia benitensis*. BLM contract report. Unpubl. rept.
 Raven, P.H. 1969. A revision of the genus *Camissonia* (Onagraceae). Contributions U.S. National Herb. 37:332-333.

Author

The primary author of this rule is Monty Knudsen, Sacramento Endangered Species Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Room E-1823, Sacramento, California 95825 (916/484-4935; FTS 468-4935).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended 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. Amend § 17.12(h) by adding the following, in alphabetical order, under Onagraceae 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					
Onagraceae—Evening primrose family:						
<i>Camissonia benitensis</i>	San Benito evening-primrose	U.S.A. (CA)	T	171	NA	NA

Dated: December 24, 1984.

Susan Recce,

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

[FR Doc. 85-3319 Filed 2-11-85; 8:45 am]

BILLING CODE 4310-55-M
