
DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****RIN 1018-AB73****Endangered and Threatened Wildlife
and Plants; Proposed Endangered
Status for *Arenaria paludicola* (Marsh
Sandwort) and *Rorippa gambellii*
(Gambel's Watercress)****AGENCY:** Fish and Wildlife Service,
Interior.**ACTION:** Proposed rule.

SUMMARY: The U.S. Fish and Wildlife
Service (Service) proposes endangered
status pursuant to the Endangered
Species Act of 1973, as amended (Act),
for *Arenaria paludicola* (marsh
sandwort) and *Rorippa gambellii*

(Gambel's watercress). Both plants inhabit freshwater marshes along the coast of San Luis Obispo and Santa Barbara Counties, California. Historically, marsh sandwort once ranged from the State of Washington to San Bernardino County in southern California. Gambel's watercress once ranged along the California coast from San Luis Obispo to San Diego Counties, and has also been found in the Valley of Mexico near Mexico City. The coastal wetland habitats where these two plants occurred have decreased in number and are currently threatened primarily by urban development. This proposal, if made final, would implement the protections provided by the Act. The Service requests comments and data from the public on this proposal.

DATES: Comments from all interested parties must be received by November 29, 1991. Public hearing requests must be received by November 14, 1991.

ADDRESSES: Comments and materials concerning this proposal should be sent to Office Supervisor, U.S. Fish and Wildlife Service, Southern California Field Station, Ventura Office, 2140 Eastman Avenue, suite 100, Ventura, California, 93003. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Dr. Steven Chambers, Office Supervisor, at the above address, or at 805-644-1766 (commercial) or 983-6040 (FTS).

SUPPLEMENTARY INFORMATION:

Background

Arenaria paludicola and *Rorippa gambellii* are both historically known from swamps and freshwater marsh habitats primarily along the Pacific Coast from Washington to California. Such wetland habitats have been vanishing in California at a rapid rate due primarily to urbanization.

Arenaria paludicola (marsh sandwort) was first described by A. Kellogg in 1863 under the name *Alsine palustre*, based on a specimen collected near Fort Point, San Francisco (Kellogg 1863). In 1876, S. Watson made the new combination *Arenaria palustris*, not realizing that the name had been published by Gay in 1845 in reference to a different species (Abrams 1944). Robinson noticed the duplication of names and, in his treatment of Alsineae (one of three tribes recognized within Caryophyllaceae at the time), renamed the plant *Arenaria paludicola* (Robinson 1894).

This slender perennial herb of the pink family (Caryophyllaceae) roots at

the nodes of procumbent stems. The species bears small inconspicuous flowers from May through August. The singularly borne flowers in the axils of narrow opposite leaves and the smooth and angled stem separate this species from others in the genus. Historically, the species was known from four counties of coastal California as well as in the State of Washington. The Service contracted with the Natural Heritage Program in the State of Washington to conduct a status survey for marsh sandwort in that state. A full report is due later this year. However, Heritage Program staff have indicated that a review of historical specimens revealed that all but one of the specimens had been misidentified. Field surveys conducted in 1990 focused on the area from which the one historical specimen was located, as well as from other potential sites along the coast of Washington. No extant sites of marsh sandwort were found as a result of the surveys (J. Gamon, Washington State Natural Heritage Program, pers. comm.). In California, historical locations were known from the Counties of San Francisco, Santa Cruz, San Luis Obispo, and San Bernardino. These populations have been eliminated due to urbanization and associated impacts such as encroachment by nonnative plants and off-road vehicle activity. The only known extant location is in a small marshy area of Black Lake Canyon in San Luis Obispo County. This population was first reported in 1947 and rediscovered in 1984. In a 1988 survey by Myers, only 10 plants were found at the site (Morey 1990).

Rorippa gambellii (Gambel's watercress) was first described by S. Watson as *Cardamine gambellii* in 1876 using specimens collected by Gambel near Santa Barbara, Santa Barbara County. O.E. Schulz placed the plant in the genus *Nasturtium* in 1933. However, Munz chose to recognize the placement of the taxon in the former genus in his publication on California flora (Munz 1959). Recent work by Al-Shehbaz and Rollins (1988) pointed out the inconsistency in the features historically used to distinguish the genera *Cardamine* and *Rorippa*, including flower color, presence of median nectaries, and seed coat pattern. They consequently subsume several species of *Cardamine* into *Rorippa*, including *Rorippa gambellii*.

Rorippa gambellii, a member of the mustard family (Brassicaceae), is an herbaceous perennial that characteristically roots from the stem nodes of a horizontal rootstock. The species produces dense inflorescences of white flowers from April through

June. The narrow fruits with seeds arranged in one row (rather than two) and the more angular and sharply toothed leaflets distinguish this species from the more common *Rorippa nasturtium-aquaticum*. The species was reported historically from about a dozen locations in southern California and from near Mexico City in the Valley of Mexico. Populations in the Counties of San Bernardino and San Diego have been extirpated due to habitat alteration. A population from Barka Slough on Vandenberg Air Force Base, Santa Barbara County, was seen as recently as 1980. However, surveys by Price (1989) were unsuccessful in relocating it. In San Luis Obispo County, populations near Small Twin Lake and Oceano Beach have been extirpated. The three known extant populations of *Rorippa gambellii* occur in San Luis Obispo County at Black Lake Canyon, Oso Flaco Lake, and Little Oso Flaco Lake. These three sites are within four aerial miles of each other. The total number of individuals counted during surveys in 1989 resulted in a total count of less than 1,000 individuals (Wickenheiser and Morey 1990).

Federal government actions on *Arenaria paludicola* began as a result of section 12 of the Endangered Species Act of 1973, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct in the United States. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975.

The Service published a notice in the July 1, 1975, *Federal Register* (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act and its intention thereby to review the status of the plant taxa named therein. On June 16, 1976, the Service published a proposal in the *Federal Register* (42 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. *Arenaria paludicola* was included in the July 1, 1975, *Federal Register* document as a threatened species. General comments received in response to the 1976 proposal were summarized in an April 26, 1978, *Federal Register* publication (43 FR 17909). The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to those proposals already more than 2 years old. In the December 10, 1979, *Federal Register* (44 FR 70796), the Service published a notice

of withdrawal of the June 6, 1976, proposal, along with four other proposals that had expired.

The Service published an updated notice of review for plants on December 15, 1980 (45 FR 82480). This notice included *Rorippa gambellii* as a Category 1 species and *Arenaria paludicola* as a Category 2 species. Category 1 species are those taxa for which the Service has in its possession enough information on biological vulnerability and threats to support a proposal to list, while Category 2 species are those for which data in the Service's possession indicate listing is possibly appropriate, but for which substantial data on biological vulnerability and threats are not currently known or on file to support proposed rules. On November 28, 1983, the Service published in the **Federal Register** a supplement to the Notice of Review (48 FR 53640); the plant notice was again revised on September 27, 1985 (50 FR 39526). *Arenaria paludicola* and *Rorippa gambellii* were included in both of these revisions as Category 2 species. On February 21, 1990, (55 FR 6184) the plant notice was again revised, and *Arenaria paludicola* and *Rorippa gambellii* were both included as Category 1 species.

Section 4(b)(3)(B) of the Act 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. This was the case for *Arenaria paludicola*, because the 1975 Smithsonian report had been accepted as a petition. In October of 1983, 1984, 1985, 1986, 1987, 1988, 1989, and 1990, the Service found that the petitioned listing of *Arenaria paludicola* was warranted but precluded by other higher priority listing actions. Publication of this proposal constitutes the final finding for the petitioned action.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (16 U.S.C. 1533) 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 *Arenaria paludicola* Rob. (marsh sandwort) and *Rorippa gambellii* (S. Wats.) Roll. & Al-Shehbaz (Gambel's watercress) are as follows:

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

The only known occurrence of *Arenaria paludicola* is threatened with habitat modification by the proposed drilling of water wells associated with a proposed housing development. In addition, a series of below-average rainfall years has dropped the base flow within Black Lake Canyon, which may already have altered the hydrological regime for the plant. One occurrence of *Rorippa gambellii* co-occurs with *Arenaria paludicola* at Black Lake Canyon and is threatened by the same alteration of hydrologic regime. The occurrence of *Rorippa gambellii* at Oso Flaco Lake is threatened with the modification of habitat due to encroachment of sand from adjacent dunes. Efforts to revegetate dunes that had been previously denuded by off-road vehicle activity have been marginally successful (Wickenheiser 1989). At Little Oso Flaco Lake, the occurrence of *Rorippa gambellii* is threatened by the lack of a permanent water source. This site's water source is made available in part by agricultural activities in adjacent farmlands. Thus the water level at this site regularly fluctuates.

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

Although these species are not presently sought after by collectors, they are vulnerable to taking, owing especially to their limited distribution. The increased public attention that may be brought to bear as a result of this proposal could potentially increase the desirability of these species, thereby increasing the threat of collection.

C. Disease or Predation

Not known to be applicable.

D. The Inadequacy of Existing Regulatory Mechanisms

Under the Native Plant Protection Act (chapter 1.5 S 1900 *et seq.* of the Fish and Game code) and California Endangered Species Act (chapter 1.5 S 2050 *et seq.*), the California Fish and Game Commission has listed *Arenaria paludicola* as endangered and *Rorippa gambellii* as threatened (14 California Code of Regulations S 670.2). Though both statutes prohibit the "take" of State-listed plants (chapter 1.5 S 1908 and S 2080), State law appears to exempt the taking of such plants via habitat modification or land use change by the landowner. After the California Department of Fish and Game notifies a

landowner that a State-listed plant grows on his or her property, State law requires only that the landowner notify the agency "at least 10 days in advance of changing the land use to allow salvage of such plant" (chapter 1.5 S 1913).

The County of San Luis Obispo has designated a portion of Black Lake Canyon as a Sensitive Resource Area (SRA), thereby restricting land use in the area. However, the boundaries of such SRAs may be altered by amending the County General Plan.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Eucalyptus trees were planted at Black Lake Canyon several decades ago. These non-native trees are altering the habitat of *Arenaria paludicola* by increasing the amount of shade, reducing the local water availability, and possibly introducing organic compounds that inhibit growth of other species into the surrounding substrate. Because of the limited distribution of both species, *Arenaria paludicola* and *Rorippa gambellii* are both subject to stochastic extinction: Extinction due to random events such as flood, drought, disease, or predation.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these species in determining to propose this rule. Based on this evaluation, the preferred action is to list *Arenaria paludicola* Rob. (marsh sandwort) and *Rorippa gambellii* (S. Wats.) Roll & Al-Shehbaz (Gambel's watercress) as endangered, because of their limited distribution, loss of freshwater marsh habitat due to changes in the hydrological regime, competition from non-native species, and encroachment of sand from adjacent coastal dunes.

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 concurrently with determining a species to be endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for these species. Such a determination would result in no known benefit to the species. The publication of legal descriptions and maps necessary in a proposal to designate critical habitat would highlight the locations of these plants, and might result in increased threats of vandalism or take. All involved parties and principal landowners have been notified of the

location and importance of protecting these species' habitat. Protection of these species' habitat will be addressed through the recovery process and through the section 7 consultation process. Therefore, it would not now be prudent to determine critical habitat for *Arenaria paludicola* and *Rorippa gambellii*.

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 activities. 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. 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) of the Act 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. Federal agencies that may affect these two plants through activities they fund, authorize, or carry out include the Federal Highway Administration, the Federal Housing Administration, and the Corps of Engineers through section 404 of the Clean Water Act permitting authority.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 for endangered species set forth a series of general prohibitions and exceptions that apply to all endangered

plants. With respect to *Arenaria paludicola* and *Rorippa gambellii*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, make it illegal with respect to any endangered plant 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 in interstate or foreign commerce; remove and reduce to possession any such species from areas under Federal jurisdiction; maliciously damage or destroy any such plants on any area under Federal jurisdiction; or to remove, cut, dig up, damage, or destroy any such species on any other area in knowing violation of any State law or regulation or in the course of any violation of a 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 are 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, room 432, 4401 N. Fairfax Drive, Arlington, Virginia 22203 (703/358-2104, FTS 921-2104).

In some instances, permits may be issued for a specified time to relieve undue economic hardship that would be suffered if such relief were not available. This species is not in trade, and such permit requests are not expected.

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 these species;
- (2) The location of any additional populations of these 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 these species; and

(4) Current or planned activities in the subject area and their possible impacts on these species.

Any final decision on this proposal concerning these two species of plants 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 Office Supervisor (see ADDRESSES section).

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

- Abrams, L. 1944. Illustrated flora of the Pacific States, Vol. II. Stanford University Press.
- Al-Shehbaz, I.A., and R.C. Rollins. 1988. A reconsideration of *Cardamine curvisiliqua* and *C. gambellii* as species of *Rorippa* (Cruciferae). *Journal of the Arnold Arboretum* 69:65-71.
- Kellogg, A. 1863. Description of a new species of *Alsine*. *Proceedings of the California Academy of Natural Sciences* 3:61.
- Morey, S.C. 1990. A management strategy for the recovery of marsh sandwort (*Arenaria paludicola*), Endangered Plant Program, Natural Heritage Division, State of California Department of Fish and Game. 14 pp.
- Munz, P.A. 1959. A California flora. Univ. of Calif Press, Berkeley.
- Price, R.A. 1989. Field studies on *Rorippa gambellii*. Report submitted to the Endangered Plant Program, Natural Heritage Division, California Department of Fish and Game. 6 pp.
- Robinson, B.L. 1894. contributions of the Gray Herbarium of Harvard University, new series, no. VI: The North American *Alsineae*. *Proceedings of the American Academy of Sciences* 29:298.

Wickenheiser, L.P. 1989. Report to the Fish and Game Commission on the status of Gambel's watercress (*Rorippa gambellii*). Natural Heritage Division, Status Report 89-27. 18 pp.

Wickenheiser, L.P. and S.C. Morey. 1990. A management strategy for the recovery of Gambel's watercress (*Rorippa gambellii*). State of California Department of Fish and Game, Endangered Plant Program, Natural Heritage Division. 19 pp.

Author

The primary author of this proposed rule is Ms. Constance Rutherford, southern California Field Station, Ventura Office, U.S. Fish and Wildlife

Service, 2140 Eastman Avenue, suite 100, Ventura, California 93003 (805/644-1766, or FTS 983-6040).

List of Subjects in 50 CFR Part 17

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

Proposed Regulations 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; 16 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 the plant families indicated, 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					
Brassicaceae—Mustard family:						
<i>Rorippa gambellii</i>	Gambel's watercress.....	U.S.A. (CA).....	E		NA	NA
Caryophyllaceae—Pink family:						
<i>Arenaria paludicola</i>	Marsh sandwort.....	U.S.A. (CA).....	E		NA	NA

Dated: September 20, 1991.

Bruce Blanchard,

Acting Director, U.S. Fish and Wildlife Service.

[FR Doc. 91-23463 Filed 9-27-91; 8:45 am]

BILLING CODE 4310-55-M