
DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service**50 CFR Part 17**
Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for *Lomatium bradshawii* (Bradshaw's lomatium)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine *Lomatium bradshawii* (Bradshaw's lomatium) to be an endangered species. This action is being taken because the few remnant populations of the species are being threatened by habitat alteration or destruction through agricultural or residential development and competition with encroaching woody vegetation. *Lomatium bradshawii* occurs in isolated pockets of remaining native bottom land prairie habitat in the Willamette Valley of Oregon. A determination of *Lomatium bradshawii*

to be an endangered species would implement the protection provided by the Endangered Species Act of 1973, as amended. Comments and materials related to the proposal are now being solicited.

DATES: Comments from the public and the State of Oregon must be received by January 20, 1987. Public hearing requests must be received by January 5, 1987.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, 500 NE. Multnomah Street, Suite 1692, Portland, Oregon 97232. Comments and materials relating to this rule are available for public inspection by appointment during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne S. White, Chief, Division of Endangered Species, U.S. Fish and Wildlife Service, 500 NE. Multnomah Street, Suite 1692, Portland, Oregon 97232 (503/231-6131 or FTS 429-6131).

SUPPLEMENTARY INFORMATION:

Background

Lomatium bradshawii (Bradshaw's lomatium) is a member of a native lowland prairie community endemic to the Willamette Valley of Oregon. It was first collected in 1916 at Salem, and was described as *Leptotaenia bradshawii* in 1934. It was included in *Lomatium* in 1942. It is usually found on low swales in soils that are wet much of the year.

The most significant threat to this plant's survival has been the conversion of native prairie habitat to agricultural land. This habitat is very valuable and productive as farmland, and consequently most of such land in the Willamette Valley is now in agricultural use. Recently, residential/industrial development has encroached upon much of the remaining habitat that supports *Lomatium bradshawii*.

There are eight or nine populations remaining within the plant's former range, scattered from Salem to just south of Eugene, Oregon. These populations vary in size from several thousand plants to only a few individuals. The vigor of these populations also varies considerably. Two of these populations are vulnerable to further suburban development.

The continued existence of this species is threatened by land use conversion, which is eliminating the native prairies in favor of agriculture and other developments. Suppression of fire in some areas also appears to be allowing encroachment of prairie habitat by woody vegetation, resulting in a decline of the *Lomatium*. This rule proposes to determine *Lomatium bradshawii* to be endangered, and implements the protection provided by the Endangered Species Act of 1973, as amended.

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 of the Smithsonian Institution as a petition within the context of former Section 4(c)(2) of the Act (petition acceptance is now governed by Section 4(b)(3) of the Act), and of its intention to review the status of the plant taxa named within. On June 16, 1976, the Service published a proposed rule in the **Federal Register** (41 FR 24523) 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 July 1, 1975, **Federal Register** publication. *Lomatium bradshawii* was included in the July 1, 1975, notice of review and in the June 16, 1976, proposal.

The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was established for proposals already over 2 years old. On December 10, 1979, the Service published a notice of the withdrawal of the still-pending portion of the June 16, 1976, proposal, along with four other proposals that had expired. The withdrawal of the proposal to list *Lomatium bradshawii* was not based on biological considerations, but instead was the result of the administrative requirements of the Act prior to the 1982 Amendments. An updated notice of review, published on December 15, 1980 (45 FR 82480), listed *Lomatium bradshawii* in Category 1, which comprises taxa for which sufficient information is available to support proposal of listing as endangered or threatened. On February 15, 1983, the Service published notice (48 FR 6752) of its finding that the petitioned listing of this species may be warranted, in accord with section 4(b)(3)(A) of the Act, as amended in 1982. On October 13, 1983, October 12, 1984, and again on October 11, 1985, the petition finding was made that listing of this taxon 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 that the petition be recycled, pursuant to section 4(b)(3)(C)(i) of the Act. Therefore, a new finding must be made; the Service finds that the petitioned action is warranted

and hereby publishes a proposal to list the species as endangered, 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 (codified at 50 CFR Part 424) 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) of the Act. These factors and their application to *Lomatium bradshawii* (Rose *ex* Math.) Math. & Const. (Bradshaw's lomatium) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Although this species was known historically throughout the Willamette Valley of Oregon, habitat of *Lomatium bradshawii* has been mostly developed for agriculture or urbanization, leaving a few small preserves that are generally managed for grazing, or wildlife, or not managed at all. Today there are eight or possibly nine known remaining populations of the species.

Invasion of prairie vegetation by various woody plant species has also caused decline in *Lomatium bradshawii* at some sites. Prairies in the Willamette Valley apparently require periodic burning to prevent such encroachment. Because seeds and young plants of the *Lomatium* do not survive fire, however, burning at too frequent an interval can prevent establishment of new individuals of the species (Kagan 1980).

Two existing populations are located near Corvallis, Oregon: one on the Finley National Wildlife Refuge (NWR) and the other just northeast of Corvallis. The population on Finley NWR was recently rediscovered and presently consists of about 60 individual plants. The habitat on the refuge is managed by the U.S. Fish and Wildlife Service, primarily as a natural area. Past management practices included some controlled burning to prevent the encroachment of shrubs on the native grassland. Future refuge habitat management activities will include provisions to improve the status of this population.

The second site, at the Jackson-Frazier wetland northeast of Corvallis, consisted until recently of a remnant population of several hundred plants. An adjoining wet prairie of approximately 75 acres north of this

area functioned as the watershed critical to this population. A large portion of this population was destroyed by construction of a housing development in 1980. The area supporting the remaining *Lomatium* plants was plowed in November 1985, about 400 plants still survive in 1986 (Kagan, pers. comm.).

Other remaining populations of *L. bradshawii* are in and around Eugene, Oregon. One is located near the Long Tom River, northwest of Eugene, Oregon. It formerly occurred on both private and Bureau of Land Management (BLM) land. The portion of the habitat on private land and some adjacent habitat on BLM land has been plowed, destroying approximately half of the total population. The remainder of this population, occurring on BLM land has been subject to light grazing in the past but has never been plowed. Future management of this land is undetermined, and it remains unfenced at this time.

The second of these more southern populations, and the largest extant population of the species, numbering in the tens of thousands, is located in Eugene near Willow Creek. This site supports a diverse plant community, a relict of the Willamette Valley bottom land prairie. Another plant candidate for listing, *Erigeron decumbens* var. *decumbens* (Willamette daisy) also occurs at this site. This land is private owned and has been under consideration for residential development in the past. Currently, it is leased to the Nature Conservancy, and the local community is negotiating to attempt to preserve the land.

The third population in the Eugene area is located near the Fern Ridge Reservoir on land administered by the Army Corps of Engineers. Although about 100 individuals of the *Lomatium* have been destroyed here in recent years, apparently as a result of permanent flooding of a portion of the area, the remaining population is estimated to comprise about 10,000 plants.

The fourth population in the Eugene area was discovered near Mt. Pisgah in 1985. It comprises about 100-200 individuals.

Three other recently discovered small populations, of fewer than 100 individuals each, occur in or near Eugene, Oregon. One is located in Eugene along Amazon Creek. Although this land has been managed for recreation for many years, a very small population of *Lomatium bradshawii* occurs at the site. Another population has been discovered west of Eugene

near an electric power substation. A third was discovered a few miles south of Eugene along the Camas Swale near Interstate 5. *Lomatium bradshawii* has not been seen at Camas Swale for two years, and may now be extirpated there. These populations are very small and their continued existence is doubtful.

B. Overutilization for commercial, recreational, scientific, or educational purposes. Although the species is not known to be threatened now by collecting or vandalism, its rarity makes it vulnerable to any potential threat of taking.

C. Disease or predation. Grazing may have formerly contributed to a reduction in the range of *Lomatium bradshawii*, but it is believed that grazing was never a significant problem. Land use conversion and introduction of forage plants for the purposes of grazing livestock may have been a significant problem. This issue was addressed under factor A.

Lomatium bradshawii is known to be affected by a number of parasites. A fungus, a spittle bug, two species of aphids, and an unidentified insect predator (of the fruit) have been associated with *L. bradshawii* (Kagan 1980). They are not known to present a threat to the species as a whole; however, they could threaten small and stressed populations. Further work is necessary to determine the significance of any such threats.

D. The inadequacy of existing regulatory mechanisms. Oregon has at this time no conservation authority specifically for *Lomatium bradshawii* or any protection authority for rare plants in general. Official listing under the Act would provide a means by which various conservation and recovery actions can be implemented to ensure the continued existence of this plant throughout its range. If the species were listed, it would also receive the protection of section 7(a)(2) of the Act; BLM, the Fish and Wildlife Service, and the Army Corps of Engineers would have to insure that their land management activities affecting resident populations of Bradshaw's lomatium are not likely to jeopardize the continued existence of the species. (See discussion under "Available Conservation Measures," below.)

E. Other natural or manmade factors affecting its continued existence. The remaining small populations are all disjunct and geographically (thus genetically) isolated from each other. Inbreeding depression in these small populations may be a real threat to their long-term survival (Kagan 1980). Further study is necessary to assess the significance of inbreeding.

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 *Lomatium bradshawii* as endangered. This species has been reduced to a few remnant populations as a result of conversion of its habitat in the Willamette Valley to urban and agricultural use. Therefore, the Service believes that Bradshaw's lomatium is in danger of extinction throughout all or a significant portion of its range. No critical habitat is proposed to be designated, 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 designate any habitat of a species that 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 this species at this time. Because there are only eight known remaining populations of *Lomatium bradshawii*, the plant could be threatened by taking or vandalism if its localities are made widely known. Taking, an activity which is difficult to detect and control, is not regulated by the Endangered Species Act with respect to plants, except for a prohibition against removal and reduction to possession of endangered plants from lands under Federal jurisdiction. Publication of critical habitat descriptions would make this species more vulnerable to collection and vandalism pressures and increase enforcement problems. Therefore, it would not be prudent to determine critical habitat for *Lomatium bradshawii* 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 authority for 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

prohibition against removal and reduction to possession on Federal land 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, (revised by 51 FR 19926, June 3, 1986). 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. In the case of *L. bradshawii*, the management of Finley National Wildlife Refuge, the management of the area under the jurisdiction of the Army Corps of Engineers near Fern Ridge Reservoir, and BLM's management of public land on which this species occurs would be subject to these requirements.

The Act and its implementing regulations found at 50 CFR 17.61 and 17.62 set forth a series of general trade prohibitions and exceptions that apply to endangered plant species. With respect to *Lomatium bradshawii*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, 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, sell, or offer this species for sale in interstate or foreign commerce, or to remove this species from areas under Federal jurisdiction and reduce it to possession. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered plant species under certain circumstances. Because this species is not known to be cultivated and is rare in the wild, it is anticipated that few, if any, trade permits would ever be sought or issued. 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, DC 20240 (703/235-1903).

Public Comments Solicited

The Service intends that any final rule resulting from this proposal will be accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of this proposed rule are hereby solicited. Comments particularly are sought concerning the following:

- (1) Biological, commercial, or other relevant data concerning any threat (or lack thereof) to *Lomatium bradshawii*;
- (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 and distribution of this species; and
- (4) Current or planned activities in the subject area and their possible impacts on *Lomatium bradshawii*.

Final promulgation of a regulation on *Lomatium bradshawii* 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 in writing within 45 days of the proposed rule's publication. Requests should be addressed to the Regional Director (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).

Literature Cited

Kagan, J.S. 1980. The Biology of *Lomatium bradshawii* (Apiaceae), a rare plant of Oregon. Unpublished Report. 71 pp.

Author

The primary author of this rule is Peter A. Stine, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, P.O. Box 50167, Honolulu, Hawaii 96850.

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 continues to read 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 Apiaceae, 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					
Apiaceae—Parsley family:						
<i>Lomatium bradshawii</i>	Bradshaw's tomatium	U.S.A. (OR)	E		NA	NA

Dated: October 17, 1986.
Susan Recce,
 Deputy Assistant Secretary for Fish and Wildlife and Parks.
 [FR Doc. 86-26290 Filed 11-20-86; 8:45 am]
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