DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB18

Endangered and Threatened Wildlife and Plants; Final Rule To Determine "Ranunculus Acriformis" var. "Aestivalis" (Autumn Buttercup) To Be Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service has determined a plant, *Ranunculus acriformis* var. *aestivalis* (autumn buttercup), to be an endangered species under the authority of the Endangered Species Act of 1973, as amended. The plant is endemic to the upper Sevier River Valley in western Garfield County, Utah. The plant occurs on less than 0.004 hectare (0.01 acre) within a fresh water marsh. The single known population has experienced a population decline of over 90 percent in the past 6 years and now numbers only about 20 individuals. Continued grazing and any modification of its habitat is likely to cause the extinction of this taxon in the foreseeable future. This action implements protection provided by the Endangered Species Act of 1973, as amended, for *Ranunculus acriformis* var. *aestivalis*.

EFFECTIVE DATE: August 21, 1989.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Service's Fish and Wildlife Enhancement Office, 1745 West 1700 South, Salt Lake City, Utah 84104.

FOR FURTHER INFORMATION CONTACT: John L. England, Botanist, at the above address, (801/524-4430 or FTS 588-4430).

SUPPLEMENTARY INFORMATION:

Background

Marcus E. Jones first collected the autumn buttercup in early September 1894. Jones' diary for the period indicates "Orton's Ranch" as the collection location (Benson 1948). Jones apparently did not describe the taxon (Mutz 1984) and his specimens of the buttercup were eventually deposited at Pomona College in Claremont, California. Lyman Benson while preparing a monograph of the genus *Ranunculus* in North America recognized the uniqueness of the Jones collection and revisited the general location in an attempt to rediscover the population. Benson located a grandson of Orton who led him to a swampy area along the Sevier River where he discovered a population of the buttercup and collected specimens from a group of "15 or 20 small clumps" in the vicinity of the Jones collection of a half century earlier; from this collection Benson described *Ranunculus acriformis* var. *aestivalis* (Benson 1948).

Despite Benson's very complete description of the population's location, the taxon was essentially lost for more than 30 years (Mutz 1984). The habitat was reported "over grazed" in 1960 (Mutz 1984), and the **Federal Register** dated July 1, 1975 (40 FR 27824), indicated that the taxon was "probably extinct." During field work in connection with a review of the genus *Ranunculus* for Utah, Margaret Plamieri was unable to relocate the autumn buttercup in August of 1974 (Palmieri 1976).

On August 23, 1982, Kathryn Mutz located the autumn buttercup in a wetland above the Sevier River about 1 mile north of the type location. This newly discovered site was revisited by Mutz in 1983 in conjunction with the preparation of a status report of that species for the Service, and 407 mature plants and 64 seedlings were counted. The species' habitat is a series of small peaty hummocks on a low knoll less than 0.004 hectare (0.01 acre) in size surrounded by a marsh. The knoll may be the result of a raised peat bog uplifted by the upwelling waters of a spring which surrounds it. The overflow channel of a nearby spring fed stock water pond also runs past the knoll. In 1984 the autumn buttercup was again observed but had been heavily grazed. In 1985 the habitat was heavily grazed and trampled; no flowers were observed and only eight individuals were counted. Of those eight plants only one mature leaf had not been grazed (Service 1985). In 1986, 14 plants were counted, 4 of which were in flower, and there had been only moderate grazing in the immediate vicinity of the buttercup (Service 1986). In 1987, 12 plants were counted, 2 with floral buds in early August. The site was revisited in late August of that year. During the 3 intervening weeks the site had been moderately grazed and all the flowering systems had been cropped before seed had set (Service 1987). In 1988, 9 mature plants and 13 seedlings were counted, most of these were severely grazed by small herbivores, probably voles (Service 1988).

Wire cages have been set over all remaining plants to protect them from large herbivores. Five seedlings were taken (one died) and moved to the

Arboretum at Flagstaff, Arizona, for protective cultivation in a greenhouse environment under the auspices of The Center for Plant Conservation. In December 1988 The Nature Conservancy purchased the property which harbors the species' last known population. The autumn buttercup apparently has been extirpated from its type locality. Searches by Mutz in 1982 and 1983 (Mutz 1984) and by the Service in 1985, 1986, and 1987 have not located any other populations of *R. acriformis* var. *aestivalis*. The entire known population of the taxon is on lands in private ownership.

The autumn buttercup is a herbaceous perennial plant normally growing between 0.3 to 0.6 meter (1 to 2 feet) tall. Most of the simple but deeply palmately divided leaves are clustered at the base. Leaves and stems are covered with fine hairs. Leaves with three linear divisions are found high on the flowering stems. Flowers, usually six to ten per plant, are about 1.3 centimeters (0.5 inch) in diameter with five yellow petals and five reflexed yellow green sepals which fall off soon after the flower opens. Fruits of the buttercup are achenes. Twenty to forty of these small, dry, one-seeded fruits are clustered on the surface of the receptacle of the past flower in the shape of a cylinder or inverted cone from 0.6 to 0.8 centimeter (0.25 to 0.33 inch) high. Height of the buttercups at flowering may apparently be altered by the intensity of grazing; the few plants observed flowering in 1983 were less than 7.6 centimeters (3 inches) tall. Seedlings of the autumn buttercup have small (less than 1.3 centimeters (0.5 inch) wide) leaves with three broad, rounded lobes (Mutz 1984).

Benson (1948) followed a conservative taxonomic approach in his nomenclatural designations. His publication contained the scientific description and the naming of the autumn buttercup from the Sevier River Valley of central Utah as *R. acriformis* var. *aestivalis*. In the same publication Benson indicated that by following a moderate policy in taxonomic determination, it would have been appropriate to designate the autumn buttercup as a species in its own right rather than a variety of *R. acriformis* (i.e., "*R. aestivalis*"). *R. acriformis* var. *aestivalis*, has floral characteristics very similar to typical *R. acriformis* (i.e., petal size and shape), although tending to be somewhat smaller. Seed characteristics, however, are markedly different, and leaf shape is different, with the lobes of *R. acriformis* var. *aestivalis*. being much narrower than the other varieties.

Welsh (1986) and Welsh et al. (1987) assigned the taxon to *R. acris* as *R. acris* var. *aestivalis* based on the more angular lobes of the basal leaves and the short beak of the achene which are typical of *R. acris*. *R. acris* is native to Europe and Asia with one variety, *R. acris* var. *frigidus*, occurring in the Aleutian Islands. Thus *R. acris* var. *aestivalis* would represent a Pleistocene relict population extremely isolated geographically from the main body of that species' population. The autumn buttercup differs morphologically from *R. acris* with its smaller and proportionally narrower petals, more slender stems, and more angular leaf shape. In addition, the autumn buttercup exhibits none of the aggressive weedy behavior and poisonous properties of *R. acris*, which has the common name of tall buttercup. Benson (1948) argues that *R. turneri* of the Western American arctic may be a phylogenetic link between *R. acris* of the old world and the *R. occidentalis* group (including *R. acriformis*) of the new world, with the closest relationship being with *R. acriformis* var. *montanensis*. Thomas Duncan, University of California at Berkeley, pers. comm., 1987, stated that his preliminary taxonomic evaluation of *R. acriformis* var. *aestivalis* would align that entity with *R. occidentalis* of the Pacific Northwest and that it appears to be a species in its own right. *R. acriformis* var. *aestivalis* represents an important part of scientific understanding of the development of the buttercup genus and its relationships in western North America and eastern Asia.

With the apparent extinction of all but one of its populations, an occupied habitat of less than 0.004 hectare (0.01 acre), a total population of about 20 individuals and a documented population decline of more than 90 percent in its remaining occupied habitat within the past 6 years, the autumn buttercup is in imminent danger of extinction.

Section 12 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*) directed the Secretary of the Smithsonian Institution to prepare a report of 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 Section 4 of the Act and of its intention to review the status of plant taxa named within. *R. acriformis* var. *aestivalis* was included on list "C" of that notice as probably extinct.

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. The 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. *R. acriformis* var. *aestivalis* was included in that proposed rule and was marked with an asterisk to denote it as a species for which the Service especially desired information on living specimens and extant populations. General comments received in relation to the 1976 proposal were summarized in the **Federal Register** on April 26, 1978 (43 FR 17909). The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. On December 10, 1979, the Service published a notice (44 FR 70796) withdrawing the June 16, 1976, proposal.

On December 15, 1980, the Service published a revised notice of review for native plants in the **Federal Register** (45 FR 82480); *R. acriformis* var. *aestivalis* was included in that notice as a category 1 species. Category 1 is comprised of taxa for which the Service has sufficient biological data to support proposing them as endangered or threatened. In addition, *R. acriformis* var. *aestivalis* was designated with an asterisk to identify that species as one that may have recently become extinct. In 1982, a *R. acriformis* var. *aestivalis* population was discovered (Mutz 1984). On November 28, 1983, the Service published a supplement to its December 15, 1980, notice of review in the **Federal Register** (48 FR 53640); *R. acriformis* var. *aestivalis* was included in that notice as a category 2 species. Category 2 is composed of taxa for which the Service has information which indicates that proposing to list those taxa as endangered or threatened species is possibly appropriate, but for which substantial data on biological vulnerability and threat are not currently known or on file to support proposed rules.

In 1983 another population of *R. acriformis* was discovered in the Wasatch Plateau of central Utah, and in 1984 still another population was found in the Wasatch Mountains of Utah. Before 1983 the only known occurrence of *R. acriformis* in Utah was of the variety *aestivalis*. The *R. acriformis* populations of the Wasatch Mountains and Wasatch Plateau have now been determined to be the variety *montanensis*, which previously had a known distribution in the northern Rocky Mountains of Idaho, Wyoming, and Montana. *R. acriformis* var.

aestivalis is morphologically, phenologically, and distributionally distinct from *R. acriformis* var. *montanensis*, which is distributed in Utah far to the north at a much greater elevation and flowers earlier than *R. acriformis* var. *aestivalis* (Welsh and Chatterley 1985, Welsh et al. 1987). As a consequence of a Service sponsored status survey (Mutz 1984) and taxonomic evaluation of the *R. acriformis* var. *aestivalis* and *R. acriformis* var. *montanensis* population in Utah (Welsh and Chatterly 1985), the Service changed the status of *R. acriformis* var. *aestivalis* back to category 1 in the updated plant notice of review published in the **Federal Register** on September 27, 1985.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary of the Interior to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the Act's amendments of 1982 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 *R. acriformis* var. *aestivalis* because of the Service's acceptance of the 1975 Smithsonian report as a petition. On October 13, 1983, October 12, 1984, October 11, 1985, October 10, 1986, and October 9, 1987, the Service made the successive 1-year findings that the listing of *R. acriformis* var. *aestivalis* was warranted, but precluded by other listing actions of higher priority. Biological data supplied by Mutz (1984) and by the Service (1985, 1986, 1987, and 1988) fully support the listing of *R. acriformis* var. *aestivalis*. On July 22, 1988, the Service published in the **Federal Register** (53 FR 27724) a proposal to list *R. acriformis* var. *aestivalis* as an endangered species. The Service now determines *R. acriformis* var. *aestivalis* to be an endangered species with the publication of this final rule.

Summary of Comments and Recommendations

In the July 22, 1988, proposed rule (53 FR 27724) 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. Newspaper notices inviting general public comment were published, during the open public comment period between July 22, 1988 and September 20, 1988, in the following newspapers: Garfield County News, Panguitch, Utah; Deseret News, Salt Lake City, Utah; and The Salt Lake Tribune, Salt Lake City, Utah. Two comments were received and are discussed below.

One comment was received from a university botanist which questioned the taxonomic validity of *R. acriformis* var. *aestivalis*, suggesting that the extant population may be a remnant of an abandoned herb garden and that *R. acriformis* var. *aestivalis* may be an introduced population of *R. acris*. That same commenter suggested that the Service resolve that taxonomic question and provide interim protection to the Panguitch population of *R. acriformis* var. *aestivalis* until that question could be resolved. The commenter suggested that Dr. Thomas Duncan be contacted to resolve the question.

The Service had previously been aware of a possible taxonomic problem and had contacted Dr. Duncan. Dr. Duncan indicated that the species was not *R. acris*, but that it might be a species in its own right (pers. comm., 1987; see the Background section above). The time involved in resolving the question of the relationship of *R. acriformis* var. *aestivalis* to *R. acris* was a primary reason for the delay in proposing *R. acriformis* var. *aestivalis* to be an endangered species. A critical reevaluation of the taxonomy of *R. acriformis* var. *aestivalis* will be published in the scientific literature (Thomas Duncan, pers. comm., 1987). It will demonstrate the uniqueness of the taxon. The Governor of Utah commented in behalf of the State of Utah and did not oppose the proposed listing of *R. acriformis* var. *aestivalis* as an endangered species.

Summary of Factors Affecting the Species

After a through review and consideration of all information available, the Service has determined that *Ranunculus acriformis* var. *aestivalis* should be classified as an endangered species. Procedures found at Section 4(a)(1) of the Endangered Species Act and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act 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 *Ranunculus acriformis* var. *aestivalis* L. Benson (autumn buttercup) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Since the species was proposed as an endangered species, the Nature Conservancy purchased the land on which the last known population exists. This action has removed the impending threat of destruction or modification of that population's habitat. However, considering that the total known population of the autumn buttercup has been reduced to one hummocky knoll of less than 0.004 hectare (0.01 acre) and about 20 individuals as of August 1988, any inadvertent destruction or modification of that population's habitat could cause the species' extinction.

The autumn buttercup apparently has been extirpated from its type locality about 1 mile south of its currently known location (Benson 1948, Palmieri 1976, Mutz 1984). This modification of the species' range is the result of intense agriculture activities, primarily livestock grazing of wet meadows.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* With the very small existing population, any use of the autumn buttercup may seriously reduce the prospect of the species' survival. Benson (1948) recognized this threat. Any collecting or vandalism could cause the extinction of the autum buttercup.

C. *Disease or predation.* The autumn buttercup has been observed to be palatable to livestock and small mammals and to be selectively grazed. In the 1985 survey of the autumn buttercup population (Service 1985) only one leaf, on one of the eight plant found that year, had not been partially eaten. In 1987 and again in 1988 all the flowering stems had been grazed to ground level, with no seed produced. There are no known insect herbivores, parasites, or disease organisms which significantly affect this species.

D. *The inadequacy of existing regulatory mechanisms.* The autumn buttercup presently receives no protection or consideration under any Federal, State, or local law or regulation.

E. *Other natural or manmade factors affecting its continued existence.* The low numbers and limited distribution of the autumn buttercup contribute to the buttercup's vulnerability to natural or man-caused stresses. Further reduction in the number of plants would reduce the reproductive capability and genetic potential of the species.

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 *Ranunculus acriformis* var. *aestivalis* as endangered without critical habitat. Threatened

status would not reflect the extreme vulnerability of this species to extinction, because *Ranunculus acriformis* var. *aestivalis* is in danger of extinction throughout its very limited range due to grazing, inadvertent destruction or modification of its limited habitat, and the fact that there is currently no existing legislation (Federal, State, or local) to protect the species. The reasons for not designating critical habitat are discussed below.

Critical Habitat

Section 4(a)(3) of the Act requires, to the maximum extent prudent and determinable, that 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 presently prudent for this species. The limited distribution and accessibility of the autumn buttercup make it vulnerable to vandalism and collecting. These potential threats are of particular significance since the known population site is easily accessible and public access would be difficult to control under existing authorities. The one remaining site contains a very small population, and any collection would be extremely detrimental. Publication of a critical habitat description would make this species even more vulnerable and increase enforcement problems. All involved parties and landowners have been notified of the location and importance of protecting this species' habitat. Protection of this species' habitat will be addressed through the recovery process and through the Section 7 jeopardy standard. Therefore, it would not be prudent to determine critical habitat for *Ranunculus acriformis* var. *aestivalis*.

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 State 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)(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 or to destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. However, *R. acriformis* var. *aestivalis* is not known to occur on lands under Federal jurisdiction and no Federal involvement with this species is currently known.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, 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, sell or offer for sale this species in interstate or foreign commerce, or to remove and reduce to possession this species from areas under Federal jurisdiction. In addition, for listed plants, the 1988 amendments (Pub. L. 100–478) to the Act prohibit the malicious damage or destruction on Federal lands, and their removal, cutting, digging up, or damaging or destroying of listed plants in knowing violation of any State law or regulation, including 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. With respect to *R. acriformis* var. *aestivalis*, it is anticipated that few, if any, trade permits would ever by sought or issued because the species is not common in the wild and, at present, only four individual plants are in cultivation. 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, P.O. Box 3507, Arlington, Virginia 22203 (703/358–2104).

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

Benson, L. 1948. A treatise on the North American Ranunculi. American Midland Naturalist 40:1–261.

Mutz, K.M. 1984. Status report on *Ranunculus acriformis* A. Gray var. *aestivalis* L. Benson. Unpublished report prepared under contract with U.S. Fish and Wildlife Service, Denver, Colorado. 36 pp.

Palmieri, M.D. 1976. A revision of the genus *Ranunculus* for the State of Utah. Unpublished Master's Thesis. Brigham Young University, Provo, Utah. 141 pp.

U.S. Fish and Wildlife Service. 1985. Status of *Ranunculus acriformis aestivalis*. Salt Lake City, Utah. 1 p.

———. 1986. Status of *Ranunculus acriformis aestivalis*. Salt Lake City, Utah. 1 p.

———. 1987. Status of *Ranunculus acriformis aestivalis*. Salt Lake City, Utah. 1 p.

———. 1988. Status of *Ranunculus acriformis aestivalis*. Salt Lake City, Utah. 1 p.

Welsh, S.L. 1986. New taxa and combinations in the Utah Flora. Great Basin Naturalist 46:254–260.

Welsh, S.L., N.D. Atwood, L.C. Higgins, and S. Goodrich. 1987. A Utah flora. Great Basin Naturalist Memoirs Number 9. 897 pp.

Welsh, S.L. and L.M. Chatterley. 1985. Utah's rare plants revisited. Great Basin Naturalist 45:173–236.

Author

The primary author of this final rule is John L. England, U.S. Fish and Wildlife Service, Salt Lake City, Utah (see **ADDRESSES** section above) (801/524–4430 or FTS 588–4430).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation.

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

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; Pub. L. 100–478, 102 Stat. 2306; Pub. L. 100–653, 102 Stat. 3825 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under Ranunculaceae 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					
Ranunculaceae—Buttercup Family:						
* * * * *						
Ranunculus acriformis var. *aestivalis* (=*Ranunculus acris* var. *aestivalis*).	Autumn buttercup	U.S.A. (UT)	E	355	NA	NA
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Dated: June 12, 1989.

Susan Recce Lamson,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 89–17157 Filed 7–20–89; 8:45 am]

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