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50 CFR Part 17

RIN 1018-AB38

**Endangered and Threatened Wildlife and Plants; Threatened Status for *Lesquerella lyrata* (Lyrate bladder-pod)**

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

**ACTION:** Final rule.

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**SUMMARY:** The Service determines a plant, *Lesquerella lyrata* (lyrate bladder-pod), to be a threatened species under the authority contained in the Endangered Species Act (Act) of 1973, as amended. This species is currently known from only two populations in cedar glade areas of northwest Alabama (Colbert and Franklin Counties). It is extremely vulnerable due to its limited range, the loss of much suitable habitat from urbanization and agricultural practices and the apparent need for active management to sustain current populations. This action will extend the Act's protection to *Lesquerella lyrata*.

**EFFECTIVE DATE:** October 29, 1990.

**ADDRESSES:** The complete file for this rule is available for inspection, by appointment, during normal business

hours at the Jackson, Mississippi, Field Office, U.S. Fish and Wildlife Service, Jackson Mall Office Center, Suite 318, 300 Woodrow Wilson Avenue, Jackson, Mississippi 39213.

**FOR FURTHER INFORMATION CONTACT:** Cary Norquist, at the above address (601/965-4900 or FTS 490-4900).

**SUPPLEMENTARY INFORMATION:**

**Background**

*Lesquerella lyrata*, a member of the mustard family (Brassicaceae), is an annual that ranges from 1 to 3 decimeters (4 to 12 inches) in height. Plants are shortly pubescent and usually branched near the base. The stem leaves are alternate, ovate to elliptic in shape, smooth or toothed on the margins, with prominent ear-like projections at the

bases. The flowers are ascending, on stalks 10 to 15 millimeters (mm) (0.4 to 0.6 inches) long, with yellow petals 5 to 7 mm (0.2 to 0.3 inch) in length. The fruits are silques, globose in shape, 2.5 to 3.5 mm (0.1 inch) long and 3 to 4 mm wide (0.1 to 0.2 inch) (Rollins and Shaw 1973, McDaniel 1987). This species is dormant in the summer, surviving as seeds; germinates in the fall; and overwinters as a rosette (J. Baskin, University of Kentucky, pers. comm. 1989). Plants flower from March to April, fruit and disperse seeds in late April and May.

*Lesquerella lyrata* is most closely related to *L. densipila*, which occurs disjunctly in Alabama (Rollins 1955). The morphologically similar *L. densipila* has fruits and styles which are pubescent as opposed to those of *L. lyrata* which are glabrous (Rollins 1955, Rollins and Shaw 1973, McDaniel 1987). Although no one questions the distinctiveness of *L. lyrata*, some suggest that a more appropriate separation of these two taxa would be at the varietal level (McDaniel 1987).

*Lesquerella lyrata* was discovered and described by R.C. Rollins (1955) from specimens he collected at three sites in Franklin County, Alabama. This species was thought to be extinct until it was rediscovered near the type locality in 1984 (Webb and Kral 1986). Extensive field surveys have been conducted for this species repeatedly (Webb pers. comm. 1989, Webb and Kral 1986, McDaniel 1987). However, only one additional population has been located, which is in Colbert County, Alabama (Webb and Kral 1986). In addition, no plants have been located at two of the original localities in Franklin County cited by Rollins (1955), despite repeated attempts (Webb and Kral 1986, McDaniel 1987). Currently, only two populations of *L. lyrata* are known to exist, with one each in Franklin and Colbert Counties, Alabama.

*Lesquerella lyrata* is a component of glade flora and occurs in association with limestone outcroppings. The terms "glade" and "cedar glade" refer to these shallow-soiled, open areas that are sometimes surrounded by cedar (*Juniperus virginiana*) woods. *Lesquerella lyrata* often occurs essentially without associates; however, at times it may occur with *Leavenworthia alabamica*, *Arenaria patula*, *Sedum puchellum* and weedy species such as *Ceratium glomeratum* and *Krigia oppositifolia*. Most of the cedar glade endemics exhibit such weedy tendencies; however, none appear to spread far from their original glade habitat (Baskin and Baskin 1986,

Webb and Kral 1986). Current populations are located primarily on glade-like areas that exhibit various degrees of disturbance, including unimproved pastures, cultivated/plowed fields and roadside rights-of-way. Each population consists of several sites located within a 0.4 to 0.8 kilometer (0.25 to 0.5 mile) radius of one another. Population size varies, as with all annuals; however, at times, sites are reported to support hundreds to thousands of individuals (Webb and Kral 1986, McDaniel 1987).

Both populations are located on privately-owned lands. No sites are protected and current populations have been declining over the last few years due to succession from the lack of regular management that is needed to maintain populations of this species (Webb pers. comm. 1989, McDaniel 1987).

Federal actions involving *Lesquerella lyrata* began with 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. 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 (40 FR 27823) of its acceptance of the report as a petition within the context of section 4(c)(2), now section 4(b)(3)(a), of the Act and of its intention thereby to review the status of those plants. On June 16, 1976, the Service published a proposed rule (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. *Lesquerella lyrata* was included in the Smithsonian petition and the 1976 proposal. General comments received in relation to the 1976 proposal were summarized in an April 28, 1978 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 proposals already over 2 years old. In December 1979, the Service published a notice of withdrawal of the June 16, 1976, proposal (44 FR 70796), along with four other proposals that had expired. *Lesquerella lyrata* was included as a category 1\* species in a revised list of plants under review for threatened or endangered classification published December 15, 1980 (45 FR 82480). Category 1\* comprises taxa for which the Service presently has sufficient biological information to support their being proposed to be listed

as endangered or threatened species, but they may have already become extinct. On November 28, 1983, the Service published a supplement to the Notice of Review for Native Plants (48 FR 53640); the plant notice was again revised September 27, 1985 (50 FR 39526). *Lesquerella lyrata* was included as a category 2 species in the 1983 supplement and the 1985 revised notice. Category 2 species are those for which listing as endangered or threatened species may be warranted but for which substantial data on biological vulnerability and threats are not currently known or on file to support a proposed rule. Data obtained over the last few years supported the plant's reevaluation to category 1 and listing as threatened. The data demonstrate a limited distribution and continuing threats to the species.

Section 4(b)(3) of the Endangered Species Act, as amended in 1982, 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 *Lesquerella lyrata* because of the acceptance of the 1975 Smithsonian report as a petition. In October of 1983, and each succeeding year, the Service found that the petitioned listing of *Lesquerella lyrata* was warranted, but that listing this species was precluded due to other higher priority listing actions and that additional data were being gathered. On April 25, 1990, the Service published a proposal (55 FR 17552) to list *Lesquerella lyrata* as a threatened species, constituting the final petition finding required by the Act.

#### Summary of Comments and Recommendations

In the April 25, 1990, proposed rule 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 Federal and State agencies, county governments, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices, inviting public comment, were published in the *Colbert County Times*, Tusculumbia, Alabama, on May 10, 1990, and the *Franklin County Times*, Russellville, Alabama, on May 13, 1990.

One comment was received from a private conservation organization. The commentator was supportive of the listing but recommended this *Lesquerella* be listed as endangered rather than

threatened. The Service's rationale for threatened status is addressed in the following section (see last paragraph).

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Lesquerella lyrata* 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 (50 CFR part 424) promulgated to implement the existing 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 *Lesquerella lyrata* Rollins (lyrate bladder-pod) are as follows:

**A. The present or threatened destruction, modification, or curtailment of its habitat or range.** *Lesquerella lyrata* is endemic to cedar glade areas in northwestern Alabama. It is thought that this species evolved in glade systems that are now highly disturbed and exist as isolated pockets surrounded by agricultural lands (Webb and Kral 1986). Some cedar glade systems continue to be adversely modified as they are utilized for agricultural purposes, while others have been destroyed by housing development or garbage dumping (Kral 1983). Baskin and Baskin (1985) state that few glades in the Southeast have been left completely undisturbed.

As noted previously in this document, *L. Lyrata* now occurs primarily in disturbed glade areas including cultivated fields and unimproved pastures. Thus, agricultural use and the survival of this species are not necessarily incompatible (Webb and Kral 1986). Periodic disturbance, such as by plowing in row crop farming, is needed to arrest succession and maintain populations of *Lesquerella lyrata* in this type of habitat. While the plant may survive under these conditions, populations may be impacted if plowing or herbicide treatment occurs in the spring prior to seed set and dispersal (mid-May). Populations located in pastures are enhanced by disturbance created from light grazing; however, if sites are heavily grazed, this could negatively impact plants by excessive soil compaction. Improvement of pastures with the introduction of forage grasses would eventually decimate populations due to competition (Kral 1983). Mowing along the roadside rights-of-way aids the species in seed dispersal; however, mowing and herbicide application prior

to seed set pose a threat (Webb and Lyons 1984).

No site where *Lesquerella lyrata* occurs is protected. Thus, individual sites could be destroyed for developmental purposes as has been the case with other glade areas.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** This species is collected for scientific purposes; however, such does not pose a significant threat to this species at this time.

**C. Disease or predation.** None known.

**D. The inadequacy of existing regulatory mechanisms.** *Lesquerella lyrata* is unofficially considered endangered in the State of Alabama, although such designation does not afford this species any legal protection.

**E. Other natural or manmade factors affecting its continued existence.** The greatest threat to this species is its extreme vulnerability due to its limited range and small number of populations. Disturbance (natural or artificial) appears to be a key factor in the maintenance of *L. lyrata* (McDaniel 1987). Active management of sites will be required to perpetuate this species. Under natural conditions, *Lesquerella lyrata* is an early successional species that colonizes shallow cedar glade soils and then slowly disappears as the soil layer becomes further developed (E. Lyons, Amherst College, pers. comm. 1989). This species is a poor competitor and is eliminated by shade and competition from the invading perennials (Kral 1983, McDaniel 1987). Due to the continuing loss of cedar glades, presently available habitat for *L. lyrata* is limited primarily to areas modified by human activity. Current populations have declined in recent years due to succession from a lack of management/disturbance (Webb, pers. comm. 1989, McDaniel 1987). Periodic disturbance of habitat arrests succession and brings seeds to the surface which facilitates germination (Baskin, pers. comm. 1989, Webb and Lyons 1984). As with all annuals, this species' long-term survival is dependent upon its ability to reproduce and reseed an area every year. Thus, populations decline and move toward extinction if conditions remain unsuitable for reproduction for many years.

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 *Lesquerella lyrata* as a threatened species. This species is not in imminent danger of

extinction as current land use practices at the sites have perpetuated populations and no proposed activities are known which would suddenly change this situation. However, this species is extremely vulnerable due to its restricted range and protective measures are needed to assure this species' continued existence. Critical habitat is not being designated for reasons discussed 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 presently prudent for this species. Publication of critical habitat maps will increase public interest and possibly lead to additional threats for this species from collecting and vandalism. This species occurs at a limited number of sites and all are easily accessible. Publication of critical habitat descriptions and maps would make *Lesquerella lyrata* more vulnerable and increase enforcement problems. All involved State agencies and principal 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 now be prudent to determine critical habitat for *Lesquerella lyrata*.

#### 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 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)(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.

All known populations are under private ownership. The Environmental Protection Agency will consider this species relative to pesticide use.

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 plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71, would 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 the species from areas under Federal jurisdiction. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. In addition, for endangered plants, the 1938 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the removal, cutting, digging up, or damaging or destroying of endangered plants in knowing violation of any State law or regulation, including State criminal trespass law. Section 4(d) of the Act allows for the provision of such protection to threatened species through regulations. This protection will

apply to *Lesquerella lyrata* once revised regulations are promulgated. Certain exceptions 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 species under certain circumstances.

It is anticipated that few trade permits would ever be sought or issued because the species is 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, 4401 N. Fairfax Drive, room 432, Arlington, VA 22201 (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 on October 25, 1983 (48 FR 49244).

**References Cited**

Baskin, J.M., and C.C. Baskin. 1985. Life cycle ecology of annual plant species of cedar glade of southeastern United States. pp. 371-398. In J. White (ed). Population structure of vegetation. Dr. W. Junk Publishers, Dordrecht.

Baskin, J.M., and C.C. Baskin. 1986. Distribution and geographical/ evolutionary relationships of cedar glade endemics in southeastern United States. pp. 136-154. In P. Somers (ed.), Symposium: Biota, ecology, and ecological history of cedar glades. ASB Bulletin 33(4).

Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. USDA, Forest Service, Tech. Pub. R8-TP2. 1305 pp.

McDaniel, S.T. 1987. Status report on *Lesquerella lyrata*. Provided under contract to U.S. Fish and Wildlife Service, Jackson, Mississippi. 15 pp.

Rollins, R.C. 1955. The auriculate-leaved species of *Lesquerella*. *Rhodora* 57:241-264.

Rollins, R.C., and E.A. Shaw. 1973. The genus *Lesquerella* (Cruciferae) in North America. Harvard University Press, Cambridge, Mass. 228 pp.

Webb D., and E. Lyons. 1984. Site survey summary on *Lesquerella lyrata*. Unpublished. 7 pp.

Webb D.H., and R. Kral. 1986. Recent collections and status of *Lesquerella lyrata* Rollins (Cruciferae). *Sida* 11:347-351.

**Author**

The primary author of this final rule is Cary Norquist (see ADDRESSES Section) 601/685-4900 or FTS 490-4900.

**List of Subjects in 50 CFR Part 17**

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

**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 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. Amend § 17.12(h) by adding the following, in alphabetical order under Brassicaceae, 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					
Brassicaceae—Mustard family:						
<i>Lesquerella lyrata</i> .....	Lyrate bladder-pod .....	U.S.A. (AL) .....	T	403	NA	NA

dated: September 14, 1990.

Edward N. Smith,

Acting Director, Fish and Wildlife Service.

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