

FOR FURTHER INFORMATION CONTACT:
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0321).

SUPPLEMENTARY INFORMATION:

Background

Solidago shortii, a member of the Asteraceae (Aster family), was first collected by C.W. Short at Falls of the Ohio, Jefferson County, Kentucky. In 1842, the species was described and named in honor of its discoverer by Torrey and Gray. The original site, which was apparently Rock Island, adjacent to Falls of the Ohio on the Ohio River, was later inundated by dam construction. In 1939, Braun (1941) discovered *Solidago shortii* in the vicinity of Blue Licks, Kentucky. She reported that numerous populations were growing on rocky slopes and in pastures in Nicholas and Fleming Counties, Kentucky. Medley (1980) conducted a status survey for *Solidago shortii*, but despite extensive searches in 1978, 1979, and 1980, he found only one population. This population is located within Blue Licks Battlefield State Park, Robertson County, Kentucky. Medley reported that a major segment of this population was almost completely destroyed by campground construction in the middle 1970s. Medley (1980) further stated that the overgrazed pastures, which, according to Braun (1941), had provided habitat for *Solidago shortii*, were still numerous in the Blue Licks area. However, Medley (1980) concluded, after thorough searches of likely habitat, that the only remaining population was within Blue Licks Battlefield State Park. In 1983, Baskin and Baskin (1984) reported on the discovery of three additional populations of *Solidago shortii*, and in 1984, Baskin (personal communication, October 1984) informed the Service that another population had been found. One population is located just outside the State park's boundary in Nicholas County, and the other three populations are within a 2-mile radius of the park in Nicholas, Fleming, and Robertson Counties, Kentucky, respectively.

The historic distribution of *Solidago shortii* may have been correlated with disturbance caused by bison. The largest remaining population is adjacent to the old Buffalo Trace, which passes through Blue Licks Battlefield State Park (Medley, 1980). It was also suggested by Braun (1941) that fire may have been a factor that created openings within wooded areas and provided habitat for the species. Whether the loss of the numerous populations reported by Braun (1941) was caused by more

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Endangered Status for *Solidago Shortii* (Short's Goldenrod)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service has determined *Solidago shortii* Torrey and Gray (Short's goldenrod), a plant endemic to three counties in Kentucky, to be an endangered species under the Endangered Species Act of 1973, as amended. Only five populations of *Solidago shortii* are known, and these are threatened by potential recreational activities, natural and human-induced habitat alterations, and development of its habitat. This action will implement Federal protection provided by the Endangered Species Act of 1973, as amended, for *Solidago shortii*.

DATE: The effective date of this rule is October 7, 1985.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Endangered Species Field Station, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801.

intense grazing pressures during the intervening years or was the result of some other factor or factors is not known.

Short's goldenrod is usually less than 1 meter (39 inches) tall and bears yellow flowers between mid-August and early November. The light brown fruits (achenes) mature several weeks after the flowers wither. The alternately arranged narrow leaves are usually 5-10 centimeters (2-4 inches) long and 0.6-1.5 centimeters (0.24-0.60 inches) wide. *Solidago shortii* is found in cedar glades and openings in oak and hickory forests (Kral, 1983; Medley, 1980), in areas adjacent to the Old Buffalo Trace (Medley, 1980), and in pastures and areas adjacent to roads (Braun, 1941; Baskin and Baskin, 1984).

Federal Government actions on this species 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 in the *Federal Register* (40 FR 27823) of its acceptance of the Smithsonian Institution 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 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. 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. *Solidago shortii* was included in the July 1, 1975, notice of review and the June 16, 1976, proposal. General comments received in relation to the 1976 proposal were summarized in the *Federal Register* on April 26, 1978 (43 FR 17909). On December 10, 1979, the Service published a notice (44 FR 70796) withdrawing that portion of the June 16, 1976, proposal that had not been made final, along with four other proposals that had expired. On December 15, 1980, the Service published a revised notice of review for native plants in the *Federal Register* (45 FR 82480); *Solidago shortii* was included in that notice as a category-1 species. Category-1 species are those for which data in the Service's

possession indicate that listing is warranted.

Section 4(b)(3)(B) 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 to the Act 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 *Solidago shortii* because of the acceptance of the 1975 Smithsonian report as a petition. On October 13, 1983, the Service found that the petitioned listing of *Solidago shortii* was warranted, and that although other pending proposals had precluded its proposal, expeditious progress was being made to list this and other species. Notice of this finding was published in the *Federal Register* on January 20, 1984 (49 FR 2485). On October 11, 1984, the Service published, in the *Federal Register* (49 FR 39873), a proposed rule to list *Solidago shortii* as an endangered species, constituting the next required 12-months finding.

Summary of Comments and Recommendations

In the October 11, 1984, proposed rule (49 FR 39873) 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 were published in *The Mercury*, Carlisle, Kentucky, on October 25, 1984; *The Times*, Augusta, Kentucky, on October 30, 1984; and the *Gazette*, Flemingsburg, Kentucky, on October 31, 1984; which invited general public comments. Eight substantive comments were received and are discussed below.

The proposal was supported by the Kentucky Department of Parks, the Kentucky Nature Preserves Commission, and one private individual. The Kentucky Department of Fish and Wildlife Resources (KDFWR) also supported the proposal and recommended that critical habitat be designated. They stated that, "In our view, designation of areas as critical habitat would definitely be an asset to protection of the species. This measure would ensure against development by the Department of Parks at the Blue Licks site and protect the smaller populations along the roads if the Department of Transportation deemed road widening necessary. KDFWR does not feel that designation of critical

habitat will cause that much more public attraction to the sites and would afford the species considerably more protection." The Service does not believe that designating critical habitat for *Solidago shortii* would provide the species any significant increased protection. The Kentucky Department of Parks is on record as a staunch supporter of active management to protect the species. The Kentucky Department of Highways is aware of the plant's location, and if Federal funds are involved with a highway project, the Endangered Species Act of 1973, as amended, requires consideration of the plant's welfare whether or not critical habitat is designated. The Service also believes (see "Critical Habitat" section of this rule) that critical habitat designation would draw attention to specific areas inhabited by the species and could further threaten the plant from inadvertent trampling and the increased incidence of taking.

The Kentucky Department of Highways (DOH) informed the Service of their plans for a project adjacent to *Solidago shortii* populations. Their review of the project impact area and the precise location of the plants has shown that none of the plants will be impacted by the project. The Service has been in contact with DOH on this matter and concurs with DOH's assessment.

The Federal Energy Regulatory Commission concluded "... that listing Short's goldenrod as an endangered species would have no effect on any hydroelectric project under the Commission's jurisdiction." The Service concurs with this statement.

The Department of the Army, Corps of Engineers (CoE), referred to the Falmouth Lake Project, but does not believe that a serious conflict would arise because (1) the project is presently inactive and likely will not be built and (2) if it were built, the flood pool elevation would likely not reach the 650.0-foot elevation where the plants are found. CoE also stated, "If further detailed investigations of the Falmouth Lake would be approved and funded, additional coordination will be effected between our respective agencies to assure that Federal and State environmental policies and guidelines are satisfied." The Service appreciates the concern the CoE has shown for this species, and will be available to assist CoE in meeting Endangered Species Act responsibilities if the Falmouth Lake Project is approved.

A University of Kentucky professor with considerable expertise concerning this species supported endangered species status for the plant and supplied

information on one newly found population of *Solidago shortii* in Robertson County, Kentucky. He concluded that this new population should ". . . in no way affect the proposal for endangered species status of this species." The Service has analyzed this new information, which is included in the "Background" section of this rule. The Service concludes that, as this population is in the same area as the other populations and is threatened by the same factors, the existence of this additional population does not measurably alter the species' status.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Solidago shortii* should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (50 CFR Part 424) 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 *Solidago shortii* Torrey and Gray (Short's goldenrod) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* *Solidago shortii* occurs at five locations in an extremely limited portion of Robertson, Nicholas, and Fleming Counties, Kentucky. One of these populations is within Blue Licks Battlefield State Park. In the middle 1970s, a major segment of the park's population was lost during construction of a new campground. Most of the plants remaining at the park (about 2,000 individuals) are within a 1.5-acre area that has been dedicated by the Kentucky Nature Preserve Commission as a nature preserve. Research is needed to determine proper management techniques for maintenance of the species at this site. Additional protection from accidental trampling or inadvertent destruction is also needed. The remaining four sites are located on private property. No plans to develop these sites are known at this time; however, they could be lost to building and other construction activities in the future. Changes in land use, such as more intensive agricultural activities, could further reduce or eliminate *Solidago shortii* from these sites. Kral (1983) states that fire could adversely affect *Solidago shortii*. The populations on private land are

susceptible to fires as these plants are adjacent to roadsides. Although no known highway alterations that would impact the plants are planned at this time, alterations that are not designed in a manner to minimize impacts to *Solidago shortii* could adversely affect the species.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* The largest population (up to half of the known plants) occurs within a Kentucky park. Increased recreational use at the park could adversely impact the species if recreation activities are not carefully directed to areas away from the *Solidago shortii* population. As mentioned above, a major segment of the park's population was destroyed by campground construction. The remaining individuals are vulnerable to accidental trampling by park visitors. The small total number of individual plants in existence (Medley, 1980; Baskin and Baskin, 1984) makes the species vulnerable to overcollecting for scientific purposes. The plants within the park cannot be collected without a permit from the Department of Parks and the Kentucky Nature Preserves Commission. However, the much smaller and consequently more vulnerable populations on private land have no protection from this potential threat.

C. *Disease or predation.* No diseases are known to be adversely impacting *Solidago shortii*. Kral (1983) states that grazing could adversely impact the species.

D. *The inadequacy of existing regulatory mechanisms.* The Blue Licks Battlefield State Park Nature Preserve population of *Solidago shortii* is afforded protection from unauthorized taking. Taking is authorized through a permit system administered by the Department of Parks and the Kentucky Nature Preserves System. Permits are only issued for valid scientific purposes. Currently, there are no other forms of protection provided to the species. The Endangered Species Act will afford additional protection to *Solidago shortii*.

E. *Other natural or manmade factors affecting its continued existence.* *Solidago shortii* has been reduced to a small number of populations with a limited number of individuals in each population. Therefore, the plant is particularly vulnerable to any natural or human-induced factors, such as fire, that might further reduce population size. Although fire may have been important historically in maintaining suitable habitat, a fire in the plant's existing remnant habitat could destroy an entire population.

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 *Solidago shortii* as an endangered species. Only five populations of this species are known to exist. Four of the five populations are on privately owned property and currently receive no protection or management designed to enhance their continued existence. The fifth population is on property administered by the Kentucky Department of Parks and the Kentucky Nature Preserves Commission. Although this population is within a State park and a dedicated nature preserve, it could still be lost through inadvertent human-induced alterations of its habitat, natural fluctuations in the population, or perturbations of human or natural origin, such as fire. Critical habitat is not being designated for reasons discussed in the "Critical Habitat" section of this rule.

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 1.5-acre site in Blue Licks Battlefield State Park, which contains the largest remaining population of *Solidago shortii*, has been registered as a nature preserve. Both the Kentucky Department of Parks and the Kentucky Nature Preserves Commission believe that any publicity about the preserve and the extremely rare species that it contains would be disadvantageous to the continued existence of *Solidago shortii*. Although taking without a State permit is prohibited, this prohibition is difficult to enforce. Taking is not prohibited 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. No Federal lands are involved here. Publication of critical habitat descriptions and maps would increase the vulnerability of *Solidago shortii* and would create additional enforcement problems for the Kentucky Department of Parks. Critical habitat designation may stimulate increased visitation to all the population sites and result in inadvertent trampling, habitat destruction, and taking. The Kentucky Department of Parks and the private landowners on whose property the populations of *Solidago shortii* occur are aware of the plants' locations and the

importance of protecting the plants and their habitat. No additional benefits would result from a determination of critical habitat. Therefore, it is not prudent to designate critical habitat for *Solidago shortii* 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 for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened 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 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). 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 affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. No Federal projects have been identified that would require formal consultation under section 7(a)(2) with respect to *Solidago shortii*. As this species does not occur on Federal lands, Federal involvement is expected to be minimal.

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 plant species. With respect to *Solidago shortii*, 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, or sell or offer for sale this species in interstate or foreign commerce. Certain exceptions can 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 since *Solidago shortii* is not common in cultivation or in the wild.

Section 9(a)(2)(B) of the Act, as amended in 1982, prohibits the removal and reduction to possession of endangered plant species from areas under Federal jurisdiction. The new prohibition will apply to *Solidago shortii* if it ever is discovered on Federal lands. Permits for exceptions to this prohibition are available through section 10(a) of the Act, until revised regulations are promulgated to incorporate the 1982 Amendments. Proposed regulations implementing this new prohibition were published on July 8, 1983 (48 FR 31417), and it is anticipated that these will be made final following public comment. *Solidago shortii* is not known to occur on Federal lands, and therefore no requests for permits are anticipated.

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

- Baskin, J.M., and C.C. Baskin. 1984. Rediscovery of the rare Kentucky endemic *Solidago shortii* T. & G. in Fleming and Nicholas Counties. Transactions of the Kentucky Academy of Science 45:159.
- Braun, E.L. 1941. A new locality for *Solidago shortii*. Rhodora 43:484.
- Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. USDA, Forest Service, Southern Region, Technical Publication R8-TP2.
- Medley, M.E. 1980. Status of *Solidago shortii*. Unpublished report produced under contract to the U.S. Fish and Wildlife Service, Atlanta, Georgia. 14 pp.
- Torrey, J., and A. Gray. 1842. A flora of North America. New York Botanical Garden. New York. Vol. II: p. 222.

Authors

The primary authors of this final rule are Mr. Robert R. Currie and Mr. Richard G. Biggins, Endangered Species Field Station, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801 (704/259-0321 or FTS 8/672-0321).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

PART 17—[AMENDED]

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

1. The authority citation for Part 17 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. Amend § 17.12(h) by adding the following, in alphabetical order under the family Asteraceae, 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					
Asteraceae—Aster family:						
<i>Solidago shortii</i>	Short's goldenrod	U.S.A. (KY)	E	198	NA	NA

Dated: August 13, 1985.

P. Daniel Smith,

Acting Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 85-21090 Filed 9-4-85; 8:45 am]

BILLING CODE 4310-55-M