
DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****RIN 1018-AB42****Endangered and Threatened Wildlife and Plants: Proposed Endangered Status for the Plant *Helianthus Schweinitzii* (Schweinitz's sunflower)****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule.

SUMMARY: The Service proposes to list *Helianthus schweinitzii* (Schweinitz's sunflower), a perennial herb limited to 15 populations in North Carolina and South Carolina, as an endangered species under the authority of the Endangered Species Act (Act) of 1973, as amended. *Helianthus schweinitzii* is endangered by suppression of fire and/or grazing, residential and industrial development, mining, encroachment by exotic species, highway construction and improvement, and roadside and power line right-of-way maintenance. This proposal, if made final, would implement Federal protection provided by the Act for *Helianthus schweinitzii*. The Service seeks data and comments from the public on this proposal.**DATES:** Comments from all interested parties must be received by August 31, 1990. Public hearing requests must be received by August 18, 1990.**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Field Supervisor, Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, room 224, Asheville, North Carolina 28801. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.**FOR FURTHER INFORMATION CONTACT:** Ms. Nora Murdock at the above address (704/259-0321 or FTS 672-0321).

SUPPLEMENTARY INFORMATION:

Background

Helianthus schweinitzii, described by John Torrey and Asa Gray (1841) from material collected in North Carolina, is a rhizomatous perennial herb. This sunflower grows from 1 to 2 meters tall from a cluster of carrot-like tuberous roots; stems are usually solitary, branching only at or above mid-stem, with the branches held in candelabrum-style arches. The narrowly-lanceolate opposite leaves are scabrous above, resin-dotted and loosely soft-white-hairy beneath, entire (or occasionally with a few small teeth), 18 centimeters long, and 2.5 centimeters wide. The yellow flowers are approximately 5.5 centimeters in diameter and are borne from September to frost in a rather open system of upwardly arching heads. The fruit of this species is a smooth, dark gray-brown achene approximately 5 millimeters long (Kral 1983, Radford *et al.* 1964, Cronquist 1980). Stems are often a deep red color. The leaves are opposite on the lower parts of the stems, usually becoming alternate on the upper parts. The most distinctive feature of *Helianthus schweinitzii* is its tuberous root system. The aerial portion of the plant does not have many obviously distinctive features and can be confused with several other similar species, including the sympatric *H. laevigatus* and narrow-leaved extremes of *H. microcephalus*. However, the relatively small heads of *H. schweinitzii*, as well as the rather narrowly lanceolate leaf, which is revolute (at least when dry) and rather densely pubescent and resin-dotted beneath, combine to distinguish *H. schweinitzii* from its similar relatives.

Helianthus schweinitzii is endemic to the piedmont of the Carolinas, where it is currently known from 10 locations in North Carolina and 5 in South Carolina. The species occurs in clearings and edges of upland woods on moist to dryish clays, clay-loams, or sandy clay-loams, which often have a high gravel content and are moderately podzolized. Soils supporting this species are mainly of the Iredell series. Like most sunflowers, this species is a plant of full sun or the light shade of open stands of oak-pine-hickory (Kral 1983). Natural fires as well as large herbivores, including elk and bison, are part of the history of the vegetation in this species' range, and many of the associated herbs are also cormophytic, sun-loving species which depend on periodic disturbances to reduce the shade and competition of woody plants (Kral 1983). The piedmont areas now occupied by remnant populations of *Helianthus schweinitzii*

were characterized in early accounts (Brown 1953) as:

Where the woodlands came to an end, [and] the open prairies began. We are informed by early writers that the Blackjack lands of Chester and York [Counties, South Carolina] were once prairies with no growth of trees, and covered in many places with maiden cane * * * through this country, with its magnificent woods and wide prairies, roam the buffalo and the deer in large numbers, the luxuriant grass lands also feed the elk * * * the * * * region [is] now thickly covered with Blackjack, but at that time [(during the American Revolution)], [it was] an open prairie, on which persons could be seen at a great distance. The patriots coming to visit their families always endeavored to pass over this plain by night, to avoid detection by the Torries.

Logan (1859) similarly described this same region as a prairie where "vast brakes of cane [stretched] in unbroken lines of evergreen for hundreds of miles * * *" Schweinitz's sunflower, like other prairie species, is dependant upon some form of disturbance to maintain the open quality of its habitat. Currently, artificial disturbance, such as power line and road right-of-way maintenance (where they are accomplished without herbicides and at a season that does not interfere with the reproductive cycle of this sunflower) are maintaining some of the openings historically provided by naturally occurring periodic fires and native grazing animals.

Twenty-one populations of *Helianthus schweinitzii* have been reported historically from 10 counties in North Carolina and South Carolina. Earlier reports of the species from Georgia and Alabama are now believed to have been in error (Robert Kral, Vanderbilt University, personal communication, 1988). Of the 15 remaining populations (located in York County, South Carolina, and Stanley, Cabarrus, Mecklenburg, Rowan, and Union Counties, North Carolina), 7 are within rights-of-way maintained by the North Carolina Department of Transportation, 2 are in rights-of-way maintained by the South Carolina Department of Highways and Public Transportation, 1 is on land managed by the Rock Hill, South Carolina, Department of Parks, Recreation, and Tourism, and the remaining 5 are on privately owned lands usually in or near transmission line corridors of various utility companies. Extirpated populations are believed to have succumbed as a result of suppression of natural disturbance (fire and/or grazing), residential and industrial development, and highway construction and improvement. The continued existence of *Helianthus*

schweinitzii is threatened by these activities, as well as by mining (part of one population exists near an active gravel quarry), herbicide use, and possibly by encroachment of exotic species.

Federal government actions on this species began with section 12 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*), 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 number 94-51, was presented to Congress on January 9, 1975. The Service published a notice in the July 1, 1975, *Federal Register* (40 FR 27832) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) [now section 4(b)(3)] of the Act and of its intention thereby to review the status of the plant taxa named within.

On December 15, 1980, the Service published a revised notice of review for native plants in the *Federal Register* (45 FR 82480); *Helianthus schweinitzii* was included in that notice as a Category 1 species. Category 1 species are those species for which the Service currently has on file substantial information on biological vulnerability and threats to support proposing to list them as endangered or threatened. Subsequent revisions of the 1980 notice have maintained *Helianthus schweinitzii* in Category 1 until the February 21, 1990, publication of the revised notice of review for native plants in the *Federal Register* (55 FR 6184), in which this species' status changed to Category 2 in recognition of the need for additional status surveys. Recent surveys have been conducted by Service and State personnel, and the Service now believes sufficient information exists to proceed with a proposal to list *Helianthus schweinitzii* as endangered.

Section 4(b)(3)(B) of the 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 *Helianthus schweinitzii* because of the acceptance of the 1975 Smithsonian report as a petition on October 13, 1983; and in October of each year thereafter, through 1989, the Service found that the petitioned listing of *Helianthus schweinitzii* was warranted but precluded by other listing actions of a higher priority and that

additional data on vulnerability and threats were still being gathered. Publication of this proposal constitutes the final finding for the petitioned action.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Act and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Helianthus schweinitzii* Torrey and Gray (Schweinitz's sunflower) are as follows:

A. The present or threatened destruction, modifications, or curtailment of its habitat or range. *Helianthus schweinitzii* has been and continues to be endangered by destruction or adverse alteration of its habitat. Since discovery of this species, approximately one-third of the known populations have been extirpated, largely due to fire/grazing suppression, and conversion of the habitat for residential and industrial purposes. Fire/grazing suppression is a serious problem for this species and will be discussed in detail under Factor E below. At least 14 of the remaining 15 populations are currently threatened by habitat alterations (North Carolina Natural Heritage Program and South Carolina Heritage Trust Program, 1989).

Ten of these populations survive along roadsides with an additional population being in a utility line rights-of-way. Some of the roadside population being in a utility line right-right-of-way. Three others have been partially bulldozed in recent years. All of these populations are small, which increases their vulnerability to extirpation as a result of highway and rights-of-way. Three others have been improvement, particularly if herbicides are used. Significant declines have been noted within the last 3 years in six of the remaining populations, with decreases ranging from 9 percent to 89 percent. During the same time period, increases in numbers of stems were noted at only three of the currently extant sites, ranging from 14 percent to 150 percent (the latter figure is from one unusually vigorous population located on a highly vulnerable site only a few feet off a paved highway). Four of the remaining populations are tiny, containing less than 40 plants each.

The extreme narrowness of geographic range and scarcity of seed

sources, as well as appropriate habitat, increases the severity of the threats faced by *Helianthus schweinitzii*. As stated in the "Background" section above, this species requires some form of disturbance to maintain its open habitat and can withstand mowing and timber-harvesting operations, if properly done. It cannot withstand bulldozing or direct application of broadleaf herbicides. In addition, the small populations that survive on road edges could be easily destroyed by highway improvement projects or by right-of-way maintenance activities if these are not done in a manner consistent with protecting the species.

B. Overutilization for commercial, recreational, scientific, or educational purposes. *Helianthus schweinitzii*, although it is offered for sale by a few native plant nurseries, is not currently a significant component of the commercial trade in native plants. However, with its relatively showy flowers, the species has potential for horticultural use, and publicity could generate an increased demand which might exceed the currently available sources of cultivated material. Because of the species' small and easily accessible populations, it is vulnerable to taking and vandalism that could result from increased specific publicity.

C. Disease or predation. Not applicable to this species at this time.

D. The inadequacy of existing regulatory mechanisms. *Helianthus schweinitzii* is afforded legal protection in North Carolina by North Carolina general statutes, §106-202.122, 106-202.19 (CUN.SUP.1985), which provides for protection from interstate trade (without a permit) and for monitoring and management of State-listed species and prohibits taking of plants without written permission of landowners. *Helianthus schweinitzii* is listed in North Carolina as endangered. The species is recognized in South Carolina as threatened and of national concern by the South Carolina Advisory Committee on rare, threatened, and endangered plants in South Carolina; however, this State offers no official protection. The Endangered Species Act would provide additional protection and encouragement of active management for *Helianthus Schweinitzii*.

E. Other natural or manmade factors affecting its continued existence. As mentioned in Factor A, many of the remaining populations are small in numbers of individual stems and in terms of area covered by the plants. Therefore, there may be low genetic variability within populations, making it more important to maintain as much habitat and as many of the remaining

colonies as possible. Much remains unknown about the demographics and reproductive requirements of this species in the wild, although germination tests and cultivation experiments have been conducted at the North Carolina Botanical Garden in cooperation with the Center for Plant Conservation, The Garden Club of America, and the Fauquire-Loudon Garden Club of Virginia. A few commercial nurseries specializing in native plants are currently propagating this species and are offering cultivated specimens for sale.

Fire or some other suitable form of disturbance, such as well-timed mowing or careful clearing, is essential to maintaining the prairie remnants occupied by *Helianthus schweinitzii*. Without such periodic disturbance, this type of habitat is gradually overtaken and eliminated by shrubs and trees of the adjacent woodlands. As the woody species increase in height and density, they overtop *Helianthus schweinitzii*, which, like most other sunflowers, is shade intolerant. The current distribution of the species is ample evidence of its dependence on disturbance. Of the 15 remaining populations, 11 are on roadsides or in power line rights-of-way.

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 *Helianthus schweinitzii* as endangered. With one-third of the species' populations already having been eliminated, only 15 remaining in existence, and based upon its dependence on some form of active management, it definitely warrants protection under the Act. Endangered status seems appropriate because of the imminent serious threats facing those populations. As stated by Kral (1983).

The problem is that, this being a very localized species, * * * seed sources are usually * * * destroyed [thereby preventing recolonization of bulldozed or otherwise severely disturbed sites]; therefore large tracts of the former range of *H. schweinitzii* now lack it [the species].

Critical habitat is not being 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 propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that

designation of critical habitat is not presently prudent for *Helianthus schweinitzii*. As discussed in Factor B in the "Summary Factors Affecting the Species," *Helianthus schweinitzii* is threatened by taking, an activity difficult to enforce against and only regulated by the Act with respect to plants in cases of (1) removal and reduction to possession of endangered plants from lands under Federal jurisdiction, or their malicious damage or destruction on such lands; and (2) removal, cutting, digging up, or damaging or destroying in knowing violation of any State law or regulation, including State criminal trespass law. Such provisions are difficult to enforce, and publication of critical habitat descriptions and maps would make *Helianthus schweinitzii* more vulnerable and would increase enforcement problems. All involved parties 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 consultation process. Therefore, it would not now be prudent to determine critical habitat for *Helianthus schweinitzii*.

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)(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 the species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal activities that could impact *Helianthus schweinitzii* and its habitat in the future include, but are not limited to, the following: Power line construction, maintenance, and improvements; highway construction, maintenance, and improvement; and permits for mineral exploration and mining. The Service will work with the involved agencies to secure protection and proper management of *Helianthus schweinitzii* while accommodating agency activities to the extent possible.

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 the species from areas under Federal jurisdiction. In addition, for endangered plants, the 1988 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. Certain exceptions apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances.

It is anticipated that few trade permits will 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, P.O. Box 3507,

Arlington, Virginia 22203-3507 (703/358-2104).

Public Comments Solicited

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

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

Final promulgation of the regulation on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Asheville Field Office (see "ADDRESSES" section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein, as well as others, is available upon request from the Asheville Field Office (see "ADDRESSES" section).

Author

The primary author of this proposed rule is Ms. Nora Murdock (see "ADDRESSES" section) (704/259-0321 of FTS 672-0321).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record-keeping requirements, and Transportation.

Proposed Regulation Promulgation

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:

PART 17--[AMENDED]

(1) The authority citation for 50 CFR part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1543; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

(2) It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under 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>Helianthus schweinitzii</i>	Schweinitz's sunflower	U.S.A. (NC, SC)	E		NA	NA

Dated: May 23, 1990.
Bruce Blanchard,
Acting Director, Fish and Wildlife Service.
[FR Doc. 90-15326 Filed 6-29-90; 8:45 am]
BILLING CODE 4310-55-M