DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Rhus michauxii (Michaux's Sumac)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to list *Rhus michauxii* (Michaux's sumac), a dioecious shrub limited to 16 populations in North Carolina and Georgia, as an endangered species under the authority of the Endangered Species Act of 1973, as amended (Act). *Rhus michauxii* is endangered by suppression of fire, conversion of habitat for silviculture and agriculture, industrial and residential development, highway construction and improvements, hybridization with other species, and geographic isolation of small, single-sex populations. This proposal, if made final, would implement Federal protection provided by the Act for *Rhus michauxii*. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by March 7, 1989. Public hearing requests must be received by February 21, 1989.

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

Rhus michauxii, described by C. S. Sargent (1895) from material collected in North Carolina, is a rhizomatous shrub. It is sometimes called "false poison sumac" because of its superficial resemblance to *Rhus vernix*. The erect stems grow from 0.3 to 1 meter in height, and the entire plant is densely pubescent. The narrowly winged or wingless rachis supports 9 to 13 sessile,

oblong to oblong-lanceolate leaflets that are each 4 to 9 centimeters long, 2 to 5 centimeters wide, and acute to acuminate. The bases of the leaflets are rounded, and their edges are simply or doubly serrate. Flowering in this dioecious species occurs in June. The small flowers are borne in a terminal, erect, dense cluster, with each one being four- to five-parted and greenish-yellow to white. The fruit, which is a red, densely short-pubescent drupe, 5 to 6 millimeters broad, is borne on female plants form August to September (Radford *et al.* 1964, Cooper *et al.* 1977, Sargent 1895). *Rhus michauxii* differs from other similar species of the genus by its short stature, dense overall pubescence, and evenly serrate leaflets.

Rhus michauxii is a species endemic to the inner coastal plain and lower piedmont of North Carolina, South Carolina, and Georgia, where it is currently known form 15 locations in North Carolina and 1 location in Georgia. The species occurs in sandy or rocky open woods, perhaps in association with basic soils (Cooper *et al.* 1977), and appears to be dependent upon some form of disturbance to maintain the open quality of its habitat. Artificial disturbances, such as railroad and highway right-of-way maintenance, are maintaining some of the openings historically provided by naturally occurring periodic fires. Thirty populations of *Rhus michauxii* have been reported historically from 21 counties in North Carolina, South Carolina, and Georgia. Sixteen of these populations remain in existence in North Carolina and Georgia. The following is a summary of the most current information for this species.

Georgia: Four populations were reported historically in the State from the counties of Newton, Rabun, Columbia, and Elbert. Only the Elbert County population is known to remain, with just four plants surviving. This site is on land owned by the U.S. Army Corps of Engineers, leased to the Georgia Department of Natural Resources as part of the Broad River Wildlife Management Area (T. Patrick, Georgia Heritage Inventory, personal communication, 1988.) The Newton County population is believed to have been destroyed during the construction of a water tower. Causes for the disappearance of the populations in Rabun and Columbia Counties are not known.

South Carolina: One population was reported historically from Kershaw County. Although extensive searches have been conducted in that area and others of potentially suitable habitat, the species is believed to have been extirpated from the State.

North Carolina: Rhus michauxii was once known to occur at 25 sites in this State. The species has been extirpated at 10 of these localities, with the causes for extirpation being largely unknown. One population is believed to have been extirpated in each of the following counties: Orange, Wake, Wilson, Robeson, Moore, Lincoln, Franklin, Durham, Mecklenberg, and Hoke. The distribution of the 15 extant populations by county is as follows.

Three populations remain in Hoke County. One of these sites, with several hundred female plants, is privately owned; another, with 23 plants, is located on Ft. Bragg Military Reservation and is owned by the U.S. Department of Defense; and the third, a severely disturbed site where only four plants remain, is partially in private ownership and partially owned by The Nature Conservancy.

Six populations occur in Richmond County. One of these (consisting of 2 plants) is privately owned, and 4 (3 with less than 50 plants each and one with 137 plants) are located on land owned by the U.S. Department of Defense that is leased and managed by the North Carolina Wildlife Resources Commission as part of the Sandhills Gamelands. The sixth population, with only eight plants, is on Ft. Bragg Military Reservation, owned by the U.S. Department of Defense.

Two populations occur in Scotland County on the Sandhills Gamelands, which are managed by the North Carolina Wildlife Resources Commission and owned by the U.S. Department of Defense. Both of these populations are large, with 1 covering an area of 76 meters by 137 meters, but contain only female plants. The other consists of 300 to 400 male plants.

One population survives in each of the following counties: Franklin, Davie, Robeson, and Wake. The Franklin County population is privately owned and contains over 250 plants of both sexes. The Davie County population, also in private ownership, consists of about 30 plants covering a 0.9-meter square area. The Robeson County population, in private ownership, consists of several hundred male plants. The Wake County population, owned by the City of Raleigh, consists of 279 plants of both sexes.

Many of these populations are in vulnerable locations, such as highway rights-of-way or on the edges of plowed fields. Those which are not adjacent to some maintained opening or exposed to periodic disturbance are endangered by natural succession.

On December 15, 1980, the Service published a revised Notice of Review for Native Plants in the **Federal Register** (45 FR 82480); *Rhus michauxii* was included in that notice as a category 1 species. Category 1 species are those for which the Service presently has sufficient information on hand to support the biological appropriateness of their being listed as endangered or threatened species. Subsequent revisions of the 1980 notice have maintained *Rhus michauxii* in category 1.

Summary of Factors Affecting the Species

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 listing provisions of the Act set forth the procedures for adding species to the Federal Lists. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Rhus michauxii* Sargent (Michaux's sumac) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range. Rhus michauxii* has been and continues to be endangered by destruction or adverse alteration of its habitat. Since discovery of the species, 47 percent of the known populations have been extirpated, partly as a result of conversion of habitat for silvicultural and agricultural purposes and for industrial and residential development. Fire suppression appears to be a problem for this species and will be discussed in detail under Factor E below. Of the 14 populations that have been extirpated, 1 is known to have been eliminated by industrial development and one by conversion of the site to pine plantation. Causes for the extirpation of the others are unknown. Many of the remaining populations are on the edges of highway or railroad rights-of-way or cultivated fields. Fourteen of the 16 remaining populations are currently threatened by habitat alteration.

In addition to the major threats listed above, those populations on military land are potentially threatened by mechanized military training activities. Although this has not been a documented problem for this species thus far, some of the small sites occupied by the species could easily be destroyed by heavy, tracked vehicles such as tanks. Nonetheless, populations probably persist on military lands and

State gamelands where they have not survived on adjacent privately owned land because of the prescribed burning programs of the Defense Department and the North Carolina Wildlife Resources Commission, and periodic fires incidental to military training (J. Carter, North Carolina State University, personal communication, 1987; J. Moore, North Carolina Natural Heritage Program, personal communication, 1987). Activities associated with intensive timber management on publicly owned land, such as timber harvesting, road building, and conversion of habitat to pine plantation, if done in a manner not consistent with the protection of *Rhus michauxii* populations, could adversely affect the species, as has been the case on private lands in the past.

B. *Overutilization for commercial, recreational scientific, or educational purposes. Rhus michauxii* is not currently a significant component of the commercial trade in native plants. However, because of its small and easily accessible populations, it is vulnerable to taking and vandalism that could result from increased publicity.

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

D. *The inadequacy of existing regulatory mechanisms. Rhus michauxii* is afforded legal protection in North Carolina by North Carolina General Statutes, sections 106–202.12 to 106–202.19 (Cum. Supp. 1985), which provide for protection from intrastate trade (without a permit) and for monitoring and management of State-listed species and which prohibit taking of plants without written permission of landowners. *Rhus michauxii* is listed in North Carolina as endangered and of special concern (Sutter *et al.* 1983). The species is recognized in South Carolina as extirpated in the State 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 species is not listed by the State of Georgia where it was thought to have been extirpated until very recently. State prohibitions against taking are difficult to enforce and do not cover adverse alterations of habitats, such as exclusion of fire. The Endangered Species Act would provide additional protection and encouragement of active management for *Rhus michauxii.*

E. *Other natural or manmade factors affecting its continued existence.* As mentioned in the "Background" section of this proposed rule, many of the remaining populations are small in numbers of individual stems and in area covered by the plants. Of the 16 remaining populations, 9 have less than 100 plants, with 3 of these containing less than a dozen plants each. The rhizomatous nature of the species indicates that there are many fewer individual plants in existence than stem counts would indicate. In addition, only two of the remaining populations contain both male and female plants. The dioecious nature of the species further increases the vulnerability of extremely small populations where plants of only one sex remain. Existing conditions at most of the occupied sites are indicative of low genetic variability within populations, which makes it more important to maintain as much habitat and as many of the remaining colonies, particularly those containing both sexes, as possible.

Another potential threat to this species, particularly in populations where only a few plants remain, is hybridization with sympatric species such as *Rhus galbra* and *Rhus copallina.* Hardin and Phillips (1985) documented the existence of an intermediate form between *Rhus galbra* and *Rhus michauxii* in at least two sites from which *Rhus michauxii* had been reported. Much remains unknown about the demographics and reproductive requirements of this species. Fire or some other suitable form of disturbance, such as mowing or careful clearing, is essential for maintaining the open habitat preferred by *Rhus michauxii.* Without such periodic disturbance, this type of habitat is gradually overtaken and eliminated by the shrubs and trees of the adjacent woodlands. As the woody species increase in height and density, they overtop the *Rhus michauxii,* which is shade-intolerant. The current distribution of the species is ample evidence of its dependence on disturbance. Of the 16 remaining populations, 11 are on roadsides or in the edges of artificially maintained clearings. Two others are in areas that have been exposed to periodic fire, another is in a natural opening on the rim of a Carolina bay (shallow, elliptical depression of unknown origin); the remaining two are in wooded sites and are declining in vigor (J. Moore, personal communication, 1988; T. Patrick, personal communication, 1988).

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 *Rhus michauxii* as endangered. With almost half of the species' populations already having been eliminated and only 16 remaining in existence (with most of these being very small in size and containing plants of only one sex), and based upon its dependence on some form of active management, it warrants protection under the Act. Endangered status seems appropriate because of the imminent serious threats facing most populations. As stated by Hardin and Phillips (1985), "*Rhus michauxii* is apparently on the verge of extinction * * *" 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 designate any habitat of a species which is considered to be critical habitat, at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *Rhus michauxii* at this time. As discussed under Factor B in the "Summary of Factors Affecting the Species" section, *Rhus michauxii* is vulnerable to taking, an activity difficult to enforce against and only regulated by the Act with respect to plants in cases of (1) removal, reduction to possession from lands under Federal jurisdiction, or malicious damage or destruction; 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 would make *Rhus michauxii* more vulnerable and would increase enforcement problems for the U.S. Department of Defense. The populations on private lands would be vulnerable to collection and vandalism. Increased visits to population locations stimulated by critical habitat designation could adversely affect the species. The Federal and State agencies and landowners involved in protecting and managing the habitat of the species have been informed of the plant's locations and the importance of protection.

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 collection 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 any critical habitat. 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 the destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, 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 adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

The U.S. Department of Defense has jurisdiction over portions of this species' habitat. Federal activities that could impact *Rhus michauxii* and its habitat in the future include, but are not limited to, the following: Silvicultural activities, including timber harvesting and conversion of sites to pine plantations by means of mechanical site preparation; mechanized military training operations; recreational development; power line construction and certain types of maintenance/improvements; highway construction and certain types of maintenance/improvements; and permits for mineral exploration and mining. The Service will work with the involved agencies to secure protection and proper management of *Rhus michauxii* 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. With respect to *Rhus michauxii*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to import or export the species, transport it in interstate or foreign commerce in the course of commercial activity, sell or offer it for sale in interstate or foreign commerce, or to remove and reduce the species to possession 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 in knowing violation of any State law or regulation, including State criminal trespass law. 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 expected that few trade permits would ever be sought or issued, since *Rhus michauxii* 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 27329, Central Station, Washington, DC 20038-7329 (202/343-4955).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of 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 *Rhus michauxii*;

(2) The location of any additional populations of *Rhus michauxii* and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range and distribution of this species; and

(4) Current or planned activities in the subject area and the possible impacts on *Rhus michauxii*.

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

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date 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

Cooper, J., S. Robinson, and J. Funderburg. 1977. Endangered and threatened plants and animals of North Carolina; proceedings of the symposium on endangered and threatened biota of North Carolina. North Carolina State Museum of Natural History, Raleigh, North Carolina. P. 61.

Hardin, J., and L. Phillips. 1985. Hybridization in eastern North American Rhus (Anacardiaceae). Association of Southeastern Biologists Bulletin 32(3):99-106.

Radford, A., H. Ahles, and C. Bell. 1964. Manual of the vascular flora of the Carolinas. University of North Carolina Press, Chapel Hill. p. 678.

Sargent, C.S. 1895. New or little-known plants: *Rhus michauxii*. Garden and Forest 398:404-405.

Sutter, R., L. Mansberg, and J. Moore. 1983. Endangered, threatened, and rare plant species of North Carolina: a revised list. Association of Southeastern Biologists Bulletin 30:153-163.

Author

The primary author of this proposed rule is Ms. Nora Murdock, Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801 (704/259-0321 or FTS 672-0321).

List of Subjects in 50 CFR Part 17

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

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 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 (16 U.S.C. 1531 *et seq.*); 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 the family Anacardiaceae, 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					
Anacardiaceae—Cashew family:						
*	*	*	*	*		
Rhus michauxii	Michaux's sumac	U.S.A. (NC, SC, GA)	E		NA	NA
*	*	*	*	*		

Dated: December 21, 1988.

Becky Norton Dunlop,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 89–259 Filed 1–5–89; 8:45 am]

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