

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for *Mezoneuron kavaense* (Uhiuhi)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines a Hawaiian plant, *Mezoneuron kavaense* (uhiuhi), to be an endangered species. Once fairly common on the islands of Hawaii, Maui, Oahu, and Kauai, only 3 small populations of this endemic species, totaling fewer than 50 individuals, remain. These are located on State and privately owned land in North Kona, island of Hawaii; in the Waianae Mountains, island of Oahu; and in western Kauai. Populations of the species face threats from continued cattle grazing, wildfire, and impaired seedling establishment because of exotic plant species, rodent and insect damage, and feral animal browsing on or near sites on which they occur. Protective measures are needed to ensure its continued existence. This determination that *Mezoneuron kavaense* is an endangered species implements the protection provided by the Endangered Species Act of 1973, as amended.

DATES: The effective date of this rule is August 7, 1986.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at U.S. Fish and Wildlife Service, Suite 1692, Lloyd 500 Building, 500 NE Multnomah Street, Portland, Oregon 97232.

FOR FURTHER INFORMATION CONTACT:

SUPPLEMENTARY INFORMATION:

Background

Mezoneuron kavaense (uhiuhi) is an endemic Hawaiian tree that grows to 10 meters (34 feet) in height and 30 centimeters (12 inches) in trunk diameter, with loose, spreading branches. The bark is rough-scaly and of a dark gray to brown color. The leaves are pinnate, having 4 to 8 leaflets about 3 centimeters (1.25 inches) in length. The flowers are arranged in terminal racemes 2.5 to 10 centimeters (1 to 4 inches) long and are dark red in color (Rock 1913). Seed pods are flat, very thin, bluish-glaucous when young, and pale pink to gray when older. They are about 8 centimeters (3.2 inches) long and 5 centimeters (2 inches) wide, with a conspicuous line running down the length of the pod (Lamoureux 1982).

Sites occupied by *Mezoneuron kavaense* can be described as dryland open forest on rough weathered (unweathered on Hawaii) lava on steep slopes, ranging in elevation from 76 meters (250 feet) to 910 meters (3,000 feet). Annual rainfall varies from 75 centimeters (30 inches) to 152 centimeters (65 inches) and is evenly distributed throughout the year. Associated species include *Erythrina sandwicensis*, *Chenopodium oahuense*, *Diospyros ferrea*, and *colubrina oppositifolia* (Lamoureux 1982). *Kokia drynarioides*, an endangered species (see 49 FR 47397; December 4, 1984), coexists with uhiuhi in North Kona, island of Hawaii.

Although well known to Hawaiian natives, who used its strong, dark, heavy wood for spears and fishing implements, the species remained uncollected by botanists until 1865, when Horace Mann, Jr. obtained specimens from Kauai. He later described them as a new species, *Caesalpinia kavaensis* (Mann 1867). William Hillebrand acquired additional specimens for Oahu and Maui and transferred the species to the genus *Mezoneuron*, as *Mezoneuron kavaense* (Hillebrand 1888). As they differ only in minor characters of the seed pod, the genera *Mezoneuron* and *Caesalpinia* are combined under the older name *Caesalpinia* by many botanists. Commonly known as uhiuhi, the tree is also referred to as kea (on Maui only)

declined to only 3 populations, totaling fewer than 50 individuals, located on the slopes of Hualalai, North Kona, Hawaii; in the Waianae Mountains, Oahu; and in the Waimea Canyon in western Kauai. The Hawaii population occurs on the Pu'uwa'awa'a Ranch, State-owned land, and on private land owned by the Bernice P. Bishop Estate. These lands are leased as cattle pasture.

Grazing by cattle, goats, and other herbivores is the most probable cause for the species' decline, and continues to impact the remaining trees. In recent years rodent and insect damage and competition from exotic plant species, especially fountaingrass (*Pennisetum setaceum*), have reduced the number and survivorship of seedlings, and increased the probability, extent, and intensity of wildlife (Lamoureux 1982). Only 1 of the 3 remaining populations exhibits signs of successful reproduction. A cooperative effort among Federal, State, and private agencies is needed to preserve the remaining trees and promote the species' recovery.

Section 12 of the Endangered Species Act of 1973 (Act) directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report (House Document No. 94-51) was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice of review in the *Federal Register* (40 FR 27823) accepting this report as a petition within the context of section 4(c)(2) of the Act (petition acceptance is now governed by section 4(b)(3) of the Act, as amended). On June 16, 1976, the Service published a proposed rule in the *Federal Register* (41 FR 24523) to determine approximately 1,700 vascular plant taxa to be endangered species pursuant to section 4 of the Act. *Mezoneuron kavaense* was included in the Smithsonian report, the notice of review of July 1, 1975, and the proposal of June 16, 1976.

The Act, as amended in 1978, requires that all proposals over 2 years old be withdrawn, except that a 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice of

had expired (44 FR 70796). In the **Federal Register** of December 15, 1980 (45 FR 82480), the Service published a revised notice of review. *Mezoneuron kavaense* was included in this notice as a category-1 species, indicating that existing data warranted a proposal to list it as endangered or threatened.

The Endangered Species Act Amendments of 1982 required that all petitions pending as of October 13, 1982, be treated as having been newly submitted on that date. The deadline for making a finding on species then under petition, including *Mezoneuron kavaense*, was October 13, 1983. On October 13, 1983, and again on October 12, 1984, the petition finding was made that listing *Mezoneuron kavaense* was warranted, but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Such a finding requires a recycling of the petition, pursuant to section 4(b)(3)(c)(i) of the Act. A new finding was required to be made on or before October 13, 1985. A proposal, constituting a final finding that the petition was warranted, was published on August 5, 1985 (50 FR 31632), based on information available in 1976 and information gathered after that time, and summarized in a detailed status report prepared under contract by a University of Hawaii botanist (Lamoureux 1982). The Service now determines *Mezoneuron kavaense* to be an endangered species with the publication of this final rule.

Summary of Comments and Recommendations

In the August 5, 1985, proposed rule (50 FR 31632) 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. A newspaper notice that invited public comment was published in the *Hawaii Tribune-Herald* on October 27, 1985, the *Garden Island* on October 29, 1985, the *Honolulu Star Bulletin* and the *Honolulu Advertiser* on October 31, 1985. Five comments were received and are discussed below. A public hearing was requested and held in Kailua-Kona, Hawaii November 4, 1985, and in Lihue, Kauai November 7, 1985. The comment period was reopened following the public hearing, closing again December 9, 1985 (50 FR 42196). Two persons testified at the Kailua-Kona and one at the Lihue hearing; this testimony is included in the following summary.

Comments were received from the Governor of the State of Hawaii, the Director of the Waimea Arboretum and Botanical Garden, a member of the Botany Department of the University of Hawaii, and a private citizen. Testimony at the public hearing was presented on behalf of the Administrator of the Division of Forestry and Wildlife of the State Department of Land and Natural Resources and by a representative of the Kamehameha School/Bishop Estate. All comments submitted prior to the close of the comment period on December 9, 1985, and all testimony given at the public hearing have been considered in formulating this final rule.

All letters of comment received supported the listing of *Mezoneuron kavaense* as an endangered species. The testimony given on behalf of the Administrator of the State Division of Forestry and Wildlife at both hearings also supported the listing. Most of the comments of the representative of the Kamehameha School/Bishop Estate concerned listing and research procedures and recovery plans. As these are not specifically pertinent to this listing action, they are not included in this summary of comments but instead have been referred to the appropriate Service personnel.

The Estate representative wanted to know the number of individual plants on Estate property and the location of these individuals. One is believed to be on Estate land and the approximate location was pointed out on a map. The Estate representative believed that the Service's documentation was inadequate for listing the species and that it had not been searched for extensively enough. The botanist Joseph Rock worked in the Kona area of Hawaii Island at the turn of this century. He was assisted by cowboys who had spent years on the land and knew it and its plants well. Rock wrote in 1913 that on Hawaii Island, the tree is: ". . . only found in Kona . . . (where) it is not uncommon." Recent random sampling indicates that the tree is rare in Kona, extinct on Maui, and reduced to a single individual on Kauai. The total known remaining members of the species in the wild number fewer than 50 individuals restricted to a single population in the Waianae Mountains of Oahu, a population in the Pu'uwa'awa'a area of Hawaii, and the tree on Kauai. There are many threats to the species, especially the Hawaii Island population: most of the trees grow in a ranch paddock; rat and insect damage to the seeds has been observed; no seedlings are present; and fires in the area are common. Even if additional plants were

located and the species found to be more common, the Service believes that the species' existence would probably be in jeopardy due to the threats enumerated above. Finding a few additional individuals would not be a surprise, but the chance of finding a large, thriving population is very small.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Mezoneuron kavaense* 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 (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Mezoneuron kavaense* (Mann) Hbd. (uhiuhi) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* At one time, *Mezoneuron kavaense* was common enough in the Hawaiian islands to have its wood used by natives for spears and fishing implements. Since the arrival of European settlers and their domestic stock, the species has declined sharply and, in the past century alone, 3 populations have been extirpated and another has been reduced to a single tree. Fewer than 50 trees currently remain in the wild, occurring on Hualalai, North Kona, island of Hawaii; in the Waianae Mountains, island of Oahu; and in western Kauai. The species' habitat is subject to degradation through the grazing of cattle, sheep, goats, and other herbivores. Exotic plant species, especially fountaingrass, jeopardize its existence by inhibiting regeneration and increasing the probability, extent, and intensity of wildlife (Lamoureux 1982). Presently, only the Oahu population is exhibiting signs of successful reproduction.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* The wood of the uhiuhi is extremely hard, close-grained, dark-colored, and durable (Rock 1913). It was used by native Hawaiians for spears, digging sticks, tapa beaters, sled-runners, and "la'au melo-melo" (fishing devices). Harvesting of the few remaining trees poses a continued threat since the wood is highly prized by certain knowledgeable people (Lamoureux 1982).

Collection of seeds, seedlings, and saplings for private gardens presents an additional, if slight, threat to the species. The tree is attractive and, given proper care, grows readily in cultivation (Lamoureux 1982).

C. Disease or Predation. The black coffee twig borer (*Xylosandrus compactus*) affects *Mezoneuron kavaïense* by reducing the survival of seedlings and saplings (Lamoureux 1982). Rodent damage has been observed on Hawaii, where seeds were taken from fruit on the ground and on the tree (Lamoureux 1982). The grazing of cattle (Hawaii), goats (Hawaii, Oahu, and Kauai), and sheep (Hawaii) on shoots, seedlings, and saplings also seriously affects the species.

D. The inadequacy of existing regulatory mechanisms. The Pu'uwa'awa'a Ranch is zoned for agriculture, and managed to maximize grazing potential rather than to provide protection for native species such as *Mezoneuron kavaïense*. State-owned land that supports the species on Oahu and Kauai is zoned for conservation, but such zoning provides no specific protection to the species. Several of the trees are in State forest reserves; regulations prohibit the removal, destruction, or damage of plants growing on State forest lands.

E. Other natural or manmade factors affecting its continued existence. Reduction of the gene pool and genetic variability, resulting from small population sizes, could have detrimental effects on the continued existence of *Mezoneuron kavaïense*.

The Hawaii population, which occurs on the slopes of a dormant volcano, could also be destroyed if an eruption occurs. The last eruption of Hualalai sent lava through the center of the uhiuhi's present habitat.

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 *Mezoneuron kavaïense* as endangered. The historical decline of the species, including its extirpation on Maui; the small number of individuals remaining in the wild; and the present threats faced by the species warrant this determination. For the reasons discussed below, critical habitat is not being designated at this time.

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 prudent for this species at this time. As discussed under Factor B in the "Summary of Factors Affecting the Species," *Mezoneuron kavaïense* is threatened by collecting, an activity difficult to control and not regulated 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. *Mezoneuron kavaïense* occurs on State and private land not under Federal jurisdiction. Publication of a critical habitat description in the **Federal Register** and local newspapers would serve to increase the risk of taking or vandalism, while providing no additional benefit to the species. Therefore, it would not be prudent to determine critical habitat for *Mezoneuron kavaïense* 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. Section 6 of the Act details conditions for cooperative action between the Service and State agencies. The State of Hawaii has entered into a cooperative agreement with the Service, and this may facilitate needed protection for the uhiuhi. Since much of the species' habitat is on State land, cooperation between Federal and State officials is necessary to ensure its continued survival. 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 were recently revised at 51 FR 19926 (June 3, 1986) 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 activities are known or expected to affect *Mezoneuron kavaïense*. Protection of this species will require cooperation among private landowners, the State of Hawaii, the Counties of Hawaii, Honolulu, and Kauai, and the U.S. Fish and Wildlife Service.

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 now apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export this species, transport it in interstate or foreign commerce in the course of a commercial activity, sell it or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. 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. Due to its depleted state in the wild, and low percentage of seedling survival, propagation of *Mezoneuron kavaïense* in nurseries may be necessary for its continued existence and recovery. Cultivated specimens are currently found on several sites in the Hawaiian Islands. If propagation of the species for its recovery is proposed, permits for scientific purpose and for enhancing the propagation of the species, allowed under § 17.62, may be

requested. Otherwise, it is anticipated that few trade permits would ever be sought or issued since the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquires regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1903).

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

Hillebrand, W. 1888. Flora of the Hawaiian Islands. Carl Winter, Heidelberg. 673 pp.
 Lamoureux, C. 1982. Unpublished status survey of *Mezoneuron kavaense* (Mann) Hbd. U.S. Fish and Wildlife Service. Honolulu. 46 pp.
 Mann, H., Jr. 1867. Enumeration of Hawaiian plants. Proc. Amer. Acad Arts 7:143-235.
 Rock, J.F. 1913. The indigenous trees of the Hawaiian Islands. Honolulu. 518 pp.

Author

The primary author of this final rule is Dr. Derral R. Herbst, Office of Environmental Services, U.S. Fish and Wildlife Service, 300 Ala Moana Blvd., P.O. Box 50167, Honolulu, 96850 (808/546-7530 or FTS 546-7530).

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 Fabaceae, 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					
Fabaceae—Pea family <i>Mezoneuron kavaense</i>	Uhuhu	U.S.A. (HI)	E	238	NA	NA

Dated: June 12, 1986.

Susan E. Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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