

navigational device, guide or menu shall be subject to the requirements of Section 653(b)(1)(E) of the Communications Act;

(5) An open video system operator may permit video programming providers, including its affiliate, to develop and use their own navigational devices. If an open video system operator permits video programming providers, including its affiliate, to develop and use their own navigational devices, the operator must create an electronic menu or guide that all video programming providers must carry containing a non-discriminatory listing of programming providers or programming services available on the system and informing the viewer how to obtain additional information on each of the services listed;

(6) An open video system operator must grant access, for programming providers that do not wish to use their own navigational device, to the navigational device used by the open video system operator or its affiliate; and

(7) If an operator provides an electronic guide or menu that complies with paragraph (b)(5) of this section, its programming affiliate may create its own menu or guide without being subject to the requirements of Section 653(b)(1)(E) of the Communications Act.

(c) An open video system operator shall ensure that video programming providers or copyright holders (or both) are able to suitably and uniquely identify their programming services to subscribers.

(d) An open video system operator shall transmit programming identification without change or alteration if such identification is transmitted as part of the programming signal.

10. Section 76.1513 is amended by adding a note following paragraph (e)(1)(viii) to read as follows:

§ 76.1513 Dispute resolution.

* * * * *

(e) * * *

(1) * * *

(viii) * * *

Note to paragraph (e)(1)(viii): Upon request by a complainant, the preliminary carriage rate estimate shall include a calculation of the average of the carriage rates paid by the unaffiliated video programming providers receiving carriage from the open video system operator, including the information needed for any weighting of the individual carriage rates that the operator has included in the average rate.

* * * * *

11. Section 76.1514 is amended by revising paragraph (b) to read as follows:

§ 76.1514 Bundling of video and local exchange services.

* * * * *

(b) Any local exchange carrier offering such a package must impute the unbundled tariff rate for the regulated service.

[FR Doc. 96-21262 Filed 8-20-96; 8:45 am]

BILLING CODE 6712-01-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB88

Endangered and Threatened Wildlife and Plants; Endangered Status for Three Plants From the Island of Nihoa, Hawaii

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) determines endangered status pursuant to the Endangered Species Act of 1973, as amended (Act), for three plants: *Amaranthus brownii* (no common name (NCN)), *Pritchardia remota* (loulou), and *Schiedea verticillata* (NCN). These three species are endemic to the island of Nihoa, Hawaiian Islands. Two of the species are threatened by competition with the one widespread alien plant that has established on the island. Two of the species grow in steep, rocky habitats which are easily disturbed. Because of the small numbers of existing individuals and populations and their narrow distributions, which are limited to the 0.25 square mile (sq mi) (0.65 sq kilometer (km)) island, these species are subject to a danger of extinction and/or reduced reproductive vigor. This final rule implements the Federal protection provisions provided by the Act.

EFFECTIVE DATE: September 20, 1996.

ADDRESSES: The complete file for this rule is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Pacific Islands Ecoregion, 300 Ala Moana Boulevard, Room 3108, P.O. Box 50088, Honolulu, Hawaii 96850.

FOR FURTHER INFORMATION CONTACT: Robert P. Smith, Pacific Islands Ecoregion Manager, at the above address (808/541-2749).

SUPPLEMENTARY INFORMATION:

Background

Amaranthus brownii, *Pritchardia remota*, and *Schiedea verticillata* are

endemic to the island of Nihoa, Hawaii. Nihoa is the largest and highest of the uninhabited islands of Hawaii. The Hawaiian Archipelago is made up of 132 islands, reefs, and shoals forming an arch 1,600 statute mi (2,580 km) long in the middle of the Pacific Ocean. The eight major Hawaiian Islands occur in the southeast 400 mi (650 km) of the arch. Northwest of Nihoa, small islands and atolls are widely scattered over the remaining 1,200 mi (1,930 km) of the arch and make up the Northwestern Hawaiian Islands (NWHI) (formerly called the Leeward Islands) (Department of Geography 1983, Macdonald *et al.* 1983, Walker 1990). Nihoa, the largest of the lava islands west of Nihoa, is the closest to the main islands, situated 170 mi (275 km) northwest of Kauai. Over many years, waves driven by prevailing trade winds eroded the island into its current shape, which is the remnant southwest quadrant of the original huge volcanic cone. The east, west, and north sides of Nihoa are sheer cliffs, and the south coast comprises low cliffs with rock benches and one small beach (Cleghorn 1987, Gagne and Conant 1983, Macdonald *et al.* 1983). The island, formed about 7.5 million years ago by a single shield volcano, now measures only 0.85 mi (1.4 km) long, an average of 0.3 mi (0.5 km) wide, and 156 acres (ac) (63.1 hectares (ha)) in area (Macdonald *et al.* 1983, Walker 1990). The highest point, 896 feet (ft) (273 meters (m)) in elevation (Conant 1985), is located at one of the two peaks on Nihoa, which are separated by a depression dissected by six valleys (Macdonald *et al.* 1983). The elevation of the island is not sufficient to increase precipitation from that which would fall on a flat island, and the yearly rainfall of 20 to 30 inches (in) (508 to 762 millimeters (mm)) per year, usually concentrated in the winter months, is the result of unpredictable rain squalls passing over the island (Carlquist 1980, Cleghorn 1987). Valleys are deep and have little sediment, indicating that their streams were once powerful, but the only water on the island now is found in three freshwater seeps (Cleghorn 1987).

Nihoa, with the most diverse flora and fauna of any of the NWHI, presents a relatively intact low-elevation dryland ecosystem with a complement of native plants, arthropods, and birds (Gagne 1982). Such areas were probably common in the main Hawaiian Islands prior to their disturbance by Polynesian agricultural practices (Cuddihy and Stone 1990). Nihoa was first inhabited in the thirteenth century by a small group of Polynesian settlers who

terraced and cultivated most of the gently sloping area of the island, a total of 12 to 31 ac (4.9 to 12.5 ha) or 7.7 to 20 percent of the area of the island. Most of the island was unsuitable for cultivation, and habitation did not persist for a long period of time; therefore, much of the natural ecosystem remained intact (Cleghorn 1987, Emory 1928, Harrison 1990). Animals now found on or near Nihoa include—a small, resident population of Hawaiian monk seal (*Monachus schauinslandi*), a listed endangered species; green sea turtle (*Chelonia mydas*), a listed threatened species; 17 species of breeding seabirds; several migratory seabirds; 2 endemic land birds (Nihoa millerbird (*Acrocephalus familiaris*) and Nihoa finch (*Telespiza ultima*)), both listed endangered species; 6 species of endemic land snails; and 35 endemic and 26 indigenous arthropods, many only recently discovered.

A total of 26 vascular plant taxa have been found on Nihoa: Three species endemic to Nihoa—*Amaranthus brownii*, *Pritchardia remota* (loulou), and *Schiedea verticillata*; nine taxa endemic to the Hawaiian Islands—*Chamaesyce celastroides* var. *celastroides* ('akoko), *Chenopodium oahuense* ('aheahea), *Eragrostis variabilis* (kawelu), *Panicum torridum* (kakonakona), *Portulaca villosa* ('ihi), *Rumex albescens* (hu'ahu'ako), *Sesbania tomentosa* ('ohai), *Sicyos pachycarpus* (kupala), and *Solanum nelsonii* (popolo); eight taxa indigenous to Hawaii—*Boerhavia diffusa* (alena), *Heliotropium curassavicum* (seaside heliotrope), *Ipomoea indica* (koali 'awa), *Ipomoea pes-caprae* ssp. *brasilensis* (pohuehue), *Portulaca lutea* ('ihi), *Sida fallax* ('ilima), *Solanum americanum* (glossy nightshade), and *Tribulus cistoides* (nohu); and six alien species which have been naturalized in Hawaii—*Cenchrus echinatus* (common sandbar), *Nephrolepis multiflora* (sword fern), *Paspalum* sp., *Portulaca oleracea* (pigweed), *Setaria verticillata* (bristly foxtail), and *Tetragonia tetragonioides* (New Zealand spinach) (Conant 1985, Conant and Herbst 1983, Gagne and Conant 1983, Harrison 1990, Herbst 1977).

Bare rock and unvegetated soil make up about one-third of the surface of Nihoa. All vegetation is classified as being part of Coastal Communities, including Coastal Dry Communities and a Coastal Mesic Community. Coastal Dry Shrublands include two forms of 'Ilima (*Sida*) Shrubland—prostrate plants near the shore and erect plants in more sheltered sites. The 'Aweoweo (*Chenopodium* or 'aheahea) Coastal Shrubland includes 'aheahea and

popolo as codominants, as well as 'ilima and several other less frequent species. The Loulu (*Pritchardia*) Coastal Forest, a type of Coastal Mesic Forest, contains *Pritchardia remota* as the only dominant (Gagne and Cuddihy 1990).

Nihoa is owned by the Federal government and is included within the boundaries of the City and County of Honolulu. Nihoa is part of the Hawaiian Islands National Wildlife Refuge, which is managed by the Service, and has been designated a Research Natural Area (Clapp *et al.* 1977; Conant 1985; Department of the Interior 1986a, 1986b; Harrison 1990; Honolulu 1988; Miller 1983).

Discussion of the Three Plant Species

Amaranthus brownii was first collected by Edward L. Caum during the Tanager Expedition in 1923. Erling Christophersen and Caum named it in honor of Dr. F.B.H. Brown in 1931.

Amaranthus brownii, a member of the amaranth family (Amaranthaceae), is an annual herb with leafy upright or ascending stems, 1 to 3 ft (30 to 90 centimeters (cm)) long. The slightly hairy, alternate leaves are long and narrow, 1.6 to 2.8 in (4 to 7 cm) long, 0.06 to 0.16 in (1.5 to 4 mm) wide, and more or less folded in half lengthwise. Flowers are either male or female, and both sexes are found on the same plant. The green flowers are subtended by two oval, bristle-tipped bracts about 0.04 in (1 mm) long and 0.03 in (0.7 mm) wide. Each flower has three bristle-tipped sepals which are lance-shaped and 0.05 in (1.3 mm) long by 0.03 in (0.8 mm) wide in male flowers and spatula-shaped and 0.03 to 0.04 in (0.8 to 1 mm) long by 0.01 to 0.02 in (0.2 to 0.5 mm) wide in female flowers. Male flowers have three stamens; female flowers have two stigmas. The flattened, oval fruit, which does not split open at maturity, is 0.03 to 0.04 in (0.8 to 1 mm) long and 0.02 to 0.03 in (0.6 to 0.8 mm) wide and contains one shiny, lens-shaped, reddish black seed. This species can be distinguished from other Hawaiian members of the genus by its spineless leaf axils, its linear leaves, and its fruit which does not split open when mature (Wagner *et al.* 1990).

When *Amaranthus brownii* was first collected in 1923, it was "most common on the ridge leading to Millers Peak, but abundant also on the ridges to the east" (Herbst 1977). The two known populations are separated by a distance of 0.25 mi (0.4 km) and contained approximately 35 plants—about 23 plants near Millers Peak and about a dozen plants in Middle Valley. Although the species was last reported in 1983, annual surveys by Service

refuge staff have of necessity taken place well after this annual plant's normal growing season. During the dry summer months when surveys are conducted, individuals of *A. brownii* are difficult to distinguish from other desiccated herbaceous or seedling plants. The unusually dry conditions of the past several years are another probable factor in the lack of *A. brownii* reported. During this species' normal growing season of December through March, the seas are too rough to permit landing on Nihoa by survey personnel. The Service continues to attempt winter surveys of Nihoa with veteran field botanist Steve Perlman of the Hawaii Plant Conservation Center, who believes that the species is likely present during the wetter winter months. *Amaranthus brownii* typically grows on rocky outcrops in fully exposed locations at elevations between 390 and 700 ft (120 and 213 m). Associated species include 'aheahea, kakonakona, and kupala. Pigweed, an invasive alien species, is widespread on Nihoa and grows in habitat similar to *A. brownii*. Because it grows on rocky outcrops, *A. brownii* is more likely to be affected by substrate changes. Due to the small numbers of populations and individuals and its limited distribution, this species is threatened by extinction from naturally occurring events and/or reduced reproductive vigor. This species may have experienced a reduction in total numbers due to disturbances resulting from Polynesian settlement of Nihoa (Hawaii Heritage Program (HHP) 1990a1, 1990a2; Wagner *et al.* 1985, 1986, 1990; Kenneth McDermond and Elizabeth Flint, U.S. Fish and Wildlife Service (USFWS), *in litt.*, 1993; Steve Perlman, Hawaii Plant Conservation Center, pers. comm., 1996).

In 1858, Dr. Rooke brought seed of a palm from Nihoa and planted it on the palace grounds in Honolulu (Hillebrand 1888). A Hillebrand specimen, probably collected from this cultivated tree, was used by Odoardo Beccari (1890) to describe *Pritchardia remota*. Otto Kuntze transferred the species to other genera, resulting in *Washingtonia remota* (Kuntze 1891) and later *Eupritchardia remota* (Beccari and Rock 1921). In their 1921 monograph of the genus, Beccari and Joseph Rock included the species in *Pritchardia*, as do the authors of the current treatment (Read and Hodel 1990).

Pritchardia remota, a member of the palm family (Arecaceae), is a tree 13 to 16 ft (4 to 5 m) tall with a ringed, wavy trunk about 5.9 in (15 cm) in diameter. The rather ruffled, fan-shaped leaves are about 31 in (80 cm) in diameter and are somewhat waxy to pale green with a few

tiny scales on the lower surface. The flowering stalks, up to 12 in (30 cm) long, are branched and have flowers arranged spirally along the hairless stalks. Below each flower is a bract 0.08 to 0.1 in (2 to 3 mm) long. The flower consists of a cup-shaped, three-lobed calyx (fused sepals); three petals, each about 0.2 in (6 mm) long; six stamens; and a three-lobed stigma. The pale greenish brown fruit is almost globose, 0.7 to 0.8 in (1.9 to 2 cm) long and about 0.7 in (1.9 cm) in diameter. This is the only species of *Pritchardia* on Nihoa and can be distinguished from other species of the genus in Hawaii by its wavy leaves; its short, hairless inflorescences; and its small, globose fruits (Beccari and Rock 1921, Read and Hodel 1990).

Pritchardia remota is known from two extant populations along 0.1 mi (0.2 km) of the length of each of two valleys which are about 0.4 mi (0.6 km) apart on opposite sides of Nihoa. Including seedlings, 680 plants are found in scattered groups: 387 plants in West Palm Valley and 293 in East Palm Valley (Herbst 1977). Earlier totals were somewhat smaller, probably because younger seedlings were not counted (Herbst 1977). An uncollected palm, no longer extant, was observed growing on Laysan Island and may have been this species (Ely and Clapp 1973, Rock 1913). Most of the populations of *P. remota* are crowded into scattered, small groves on abandoned agricultural terraces lower in the valleys. A few trees also grow at the bases of basaltic cliffs on the steep outer slopes of each of the two valleys. Plants grow from 660 to 896 ft (200 to 273 m) in elevation (Wagner *et al.* 1990). *Pritchardia remota* is unusual among Hawaiian members of the genus in that it occurs in a dry area. Fossil loulou stems have been found near sea level on Oahu, which may indicate that the genus was more widespread before so much lowland habitat was altered for human use (Carlquist 1980, Cuddihy and Stone 1990). Within the Loulou Coastal Forest Community, *P. remota* assumes complete dominance with a closed canopy and thick layers of fallen fronds in the understory (Gagne and Cuddihy 1990). Plants growing near the groves and in association with the single individuals include 'aheahea, 'ilima, popolo, and some 'ohai. Lichens grow on the trunks of the trees (Sheila Conant, University of Hawaii, pers. comm., 1991; Derral Herbst, USFWS, pers. comm., 1991). *Pritchardia remota* provides nesting and other habitat for red-footed boobies (*Sula sula rubripes*) as well as occasional perching space for brown noddies (*Anous stolidus*

pileatus), two of the resident seabirds on Nihoa (Conant 1985). *Pritchardia remota* is in cultivation in several botanical gardens. The species is threatened by extinction from naturally occurring events due to the small number of populations and the plant's narrow range (Conant 1985; Karen Shigematsu, Lyon Arboretum, pers. comm., 1991).

The first specimens of *Schiedea verticillata* were collected near Derbys Landing in 1923. Brown (in Christophersen and Caum 1931) chose the specific epithet to refer to the verticillate (whorled) arrangement of the leaves. Although Sherff (1944) transferred the species to the genus *Alsinidendron*, current workers (Wagner *et al.* 1990) consider it to be a species of *Schiedea*.

Schiedea verticillata, a member of the pink family (Caryophyllaceae), is a perennial herb which dies back to an enlarged root during dry seasons. The stems, which can reach 1.3 to 2 ft (0.4 to 0.6 m) in length, are upright or sometimes pendent. The stalkless leaves are fleshy, broad, and pale green, are usually arranged in threes, and measure 3.5 to 5.9 in (9 to 15 cm) long and 2.8 to 3.5 in (7 to 9 cm) wide. Flowers are arranged in open, branched clusters, usually 6.7 to 9.8 in (17 to 25 cm) long. Opposite or whorled pale green bracts, located at inflorescence branches and underneath the flowers, measure 0.2 to 1.6 in (6 to 40 mm) long at the central branch and 0.1 to 0.2 in (3.5 to 6 mm) long on the side branches and underneath the flowers. Each petalless flower is positioned on a stalk 0.2 to 0.8 in (5 to 20 mm) long and has five lance-shaped sepals 0.3 to 0.4 in (8 to 10 mm) long, five nectaries, 10 stamens, and four or five styles. The ovoid capsule measures 0.3 to 0.4 in (7 to 9 mm) long and releases reddish to grayish brown seeds, about 0.03 in (0.7 to 0.8 mm) long. This species, the only member of its genus to grow in the NWHI, is distinguished from other species of the genus by its exceptionally large sepals and, usually, three leaves per node (Wagner *et al.* 1990).

All historically known populations of *Schiedea verticillata* are known to be extant. Five populations are scattered in the western 10 percent of the island in an area about 0.06 mi (0.1 km) by 0.4 mi (0.6 km), and a sixth population is found on the far eastern end of the island 0.7 mi (1.2 km) away. The six populations contained a total of 385 to 414 individuals prior to 1992—at Dogs Head, at least 95 plants have been observed; a population at Devils Slide consisted of 96 to 100 plants; in West Palm Valley, 2 or 3 plants have been

seen in the upper portion and 30 to 38 plants have been counted in the lower portion; the Pinnacle Peak population contained 12 to 25 individuals; at Millers Peak, 2 to 5 plants have been observed; and another population on the east spur of the island contains 148 plants (HHP 1990b1 to 1990b6). In 1992, the Service's refuge staff counted only 170 to 190 plants in all 6 populations (K. McDermond and E. Flint, *in litt.*, 1993). *Schiedea verticillata* typically grows in soil pockets and cracks on coastal cliff faces at elevations between 100 and 890 ft (30 and 270 m) (Wagner *et al.* 1990, Weller *et al.* 1990). Associated species include 'aheahea, pohuehue, koali 'awa, kupala, kawelu, and lichens on surrounding rock. *Schiedea verticillata* is threatened by competition with pigweed, which is widespread on Nihoa and grows in habitats similar to this species.

Catastrophic events are especially threatening to the survival of these three plant species. Natural events occurring on the island of Nihoa could further restrict the plants' ranges, and because of the limited number of individuals, extinction from catastrophic natural events is of major concern. Specifically, erosion, landslides, rock slides, and flooding could result in severe habitat destruction and death of individual plants. Evidence of heavy flash floods has been noted in the lower part of East Palm Valley, where *Pritchardia remota* specimens are located (Kramer 1962). Continued existence of these species, which have limited numbers and narrow ranges, is imperiled by naturally occurring events because of the vulnerability of these plants to disturbance events in their steep, rocky habitat (Conant 1985; S. Conant, pers. comm., 1991).

Previous Federal Action

Federal action on these plants began as a result of section 12 of the Act, which directed the Secretary of the Smithsonian Institution to prepare a report on plants considered to be endangered, threatened, or extinct in the United States. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. In that document, *Pritchardia remota* was considered to be endangered. On July 1, 1975, the Service published a notice in the Federal Register (40 FR 27823) of its acceptance of the Smithsonian report as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act, and giving notice of its intention to review the status of the plant taxa named therein. As a result of that review, on June 16, 1976, the Service published a

proposed rule in the Federal Register (41 FR 24523) to determine endangered status pursuant to section 4 of the Act for approximately 1,700 vascular plant taxa. *Amaranthus brownii* and *Schiedea verticillata* were considered to be endangered in the proposed rule, but *P. remota* was not included. 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.

General comments received in response to the 1976 proposal are summarized in an April 26, 1978, Federal Register publication (43 FR 17909). In 1978, amendments to the Act required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice in the Federal Register (44 FR 70796) withdrawing the portion of the June 16, 1976, proposal that had not been made final, along with four other proposals that had expired. The Service published updated notices of review for plants on December 15, 1980 (45 FR 82479), September 27, 1985 (50 FR 39525), and February 21, 1990 (55 FR 6183). In these notices, *Amaranthus brownii* and *Schiedea verticillata*, which were in the proposed rule, were treated as candidates for Federal listing. The two species that were proposed as endangered in the June 16, 1976, proposed rule were considered candidates on all three of these notices. *Pritchardia remota* was included as a candidate in the 1980 notice and remained so on the 1985 and 1990 notices.

Section 4(b)(3)(B) of the Act requires the Secretary to make findings on petitions that present substantial information indicating the petitioned action may be warranted within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. On October 13, 1983, the Service found that the petitioned listing of these taxa was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act; notification of this finding was published on January 20, 1984 (49 FR 2485). Such a finding requires the Service to consider the petition as having been resubmitted, pursuant to section 4(b)(3)(C)(i) of the Act. The finding was reviewed in October of 1984, 1985, 1986, 1987, 1988, 1989, 1990, and 1991. Publication of the

proposed rule constituted the final one-year finding for these species.

On March 24, 1993, the Service published in the Federal Register (58 FR 15828) a proposal to list these three plants from the island of Nihoa, Hawaii, as endangered. This proposal was based primarily on information supplied by the Hawaii Heritage Program and observations by botanists and naturalists. The Service now determines these three species from the island of Nihoa to be endangered with the publication of this final rule.

The processing of this final rule follows the Service's listing priority guidance published in the Federal Register on May 16, 1996 (61 FR 24722). The guidance clarifies the order in which the Service will process rulemakings following two related events: 1) the lifting, on April 26, 1996, of the moratorium on final listings imposed on April 10, 1995 (Public Law 104-6), and 2) the restoration of significant funding for listing through passage of the omnibus budget reconciliation law on April 26, 1996, following severe funding constraints imposed by a number of continuing resolutions between November 1995 and April 1996. The guidance calls for prompt processing of final rules containing species facing threats of high magnitude. Both *Pritchardia remota* and *Schiedea verticillata* face high magnitude threats. The Service's Pacific Regional Office confirmed on June 6, 1996, that the status of the three species in this rule did not change during the moratorium on final listings.

Summary of Comments and Recommendations

In the March 24, 1993, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final listing decision. The public comment period ended on May 24, 1993. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. One letter of comment was received from a Federal agency, supporting the listings of these three plant species due to their low numbers and the recent decline in population sizes of two of the species. Additional information included in the letter has been incorporated into this final rule.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information

available, the Service has determined that *Amaranthus brownii* Christoph. & Caum (NCN), *Pritchardia remota* Becc. (loulou), and *Schiedea verticillata* F. Brown (NCN) should be classified as endangered species. Procedures found at section 4(a)(1) of the Act and regulations implementing 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 *Amaranthus brownii* Christoph. & Caum (NCN), *Pritchardia remota* Becc. (loulou), and *Schiedea verticillata* F. Brown (NCN) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Amaranthus brownii and *Schiedea verticillata* grow on rocky outcrops and cliff faces, making these plants vulnerable to substrate changes. Because of the steep slope and rocky nature of Nihoa, the habitat is very easily disturbed. Currently, the only legal visitors are those with Service approval, usually refuge personnel or scientific researchers who are very aware of the fragile nature of the island's environment (Conant 1985). Access to this island for Hawaiian religious ceremonies would be a permitted action, but visitors would be accompanied by refuge personnel (Jerry Leinecke, USFWS, pers. comm., 1991). With increased commercial fishing in the NWHI, there is a greater possibility of mishaps and unauthorized landings on Nihoa (Gagne and Conant 1983).

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Illegal collecting for scientific or horticultural purposes or visits by individuals interested in seeing rare plants could result from increased publicity, and would threaten these three species, especially *Amaranthus brownii* and *Schiedea verticillata*. The limited legal access to Nihoa and the island's distance from the inhabited main Hawaiian Islands reduces the effect of this impact. However, the island's isolation also decreases the amount of monitoring which can be provided by Federal and State authorities.

C. Disease or Predation

Rats (*Rattus* spp.) and house mice (*Mus musculus*), which have made their way to several small islands and islets in the Hawaiian chain (Tomich 1986),

could be introduced to Nihoa from a nearby ship. Rodent predation could prove disastrous for *Pritchardia remota*; predation of seeds by rodents has reduced the reproductive capacity of other Hawaiian *Pritchardia* species (Center for Plant Conservation (CPC) 1990b, Cuddihy and Stone 1990). Rodents might also find the fleshy roots of *Schiedea verticillata* palatable (CPC 1990a). The former presence of house cats (*Felis catus*) and the current presence of geckos (*Lepidodactylus lugubris*) and at least 70 species of alien insects are proof that introductions to the island occur (Beardsley 1966; Bryan 1978; Conant *et al.* 1984; John Strazanac, Bishop Museum, pers. comm., 1991). Carmine spider mites (*Tetranychus cinnabarinus*) have been collected several times on Nihoa and could threaten *Schiedea verticillata* (CPC 1990a; J. Strazanac, pers. comm., 1991).

D. The Inadequacy of Existing Regulatory Mechanisms

All populations of the three plant species are located on Federal land within a national wildlife refuge managed by the Service. The National Wildlife Refuge System Administration Act prohibits unauthorized entry, use, or occupancy of refuge areas, as well as disturbance, injury, cutting, burning, removal, destruction or possession of "natural growth" (16 U.S.C. 668dd(c)). However, the remoteness of this uninhabited island makes enforcement of these restrictions and monitoring of threats difficult.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Nihoa's plant populations, as well as its many birds, are vulnerable to the intentional or inadvertent introduction of alien animals. The difficulty in landing on the island provides a degree of protection from animal introductions, but a wrecked fishing boat could accidentally introduce rats, which could cause a severe and rapid degradation of both the flora and fauna of Nihoa.

Alien plant species naturalizing on Nihoa would compete with native plant

taxa for space, water, nutrients, and light. Six alien plant species, which are naturalized in other parts of the Hawaiian Islands, have been found on Nihoa.

Three of the alien plant species were first recorded in the area of Millers Peak, where a military installation was located during the 1960s. *Cenchrus echinatus* (common sandbur) was first noticed between 1961 and 1969. In 1962, a soldier's towel at the military camp was found with six sandbur fruits stuck to it. This was burned, but it illustrates how easily alien propagules can be brought to Nihoa by human visitors. Service policy has been to destroy all sandbur plants, and none were seen after 1969 until 1981, when one plant with fewer than 10 fruits was discovered and destroyed. An unidentified species of the grass genus *Paspalum* was observed in 1962 near the military camp, but it has not been found since so has evidently not established. Three small colonies of *Portulaca oleracea* (pigweed) were found in 1977 near the military installation. It has now spread over the entire island, having become the only widespread exotic plant present. Pigweed grows in shallow soil pockets, especially near ridge tops, the type of habitat in which *Amaranthus brownii* and *Schiedea verticillata* grow. It may be replacing individuals of two native species of *Portulaca* and potentially could threaten *Amaranthus brownii* and *Schiedea verticillata*.

Two introduced species have been found near the southern coast. *Setaria verticillata* (bristly foxtail) was found in 1969 but has not been collected since, so it has probably not become established. *Tetragonia tetragonioides* (New Zealand spinach) was collected in 1977 and again in 1991. In 1981 one colony of *Nephrolepis multiflora* (sword fern), an alien species established in the main Hawaiian Islands, was found in the southern part of Nihoa some distance from the usual landing site. Two other colonies were found in 1983 in the northwestern part of the island. This is the first fern naturalized in the main Hawaiian Islands to have reached

the NWHI and is thought to have arrived by wind dispersal. Caution on the part of personnel working on the island and frequent monitoring of the vegetation and removal of alien plants have helped keep established exotic plant species to a minimum on Nihoa (Conant 1983a, 1983b, 1985; Herbst 1980; Marshall 1964).

With its low amount of rainfall, Nihoa often has much dry vegetation, which is very susceptible to fire. An 1885 trip to Nihoa by a group led by Queen Liliuokalani illustrates this vulnerability. The group had to leave the island abruptly after they started a fire which quickly swept across the island (Culliney 1988). Fires caused by smoking or cooking remain potential threats.

Erosion, landslides, rock slides, and flooding due to natural causes potentially could result in the death of individual plants as well as habitat destruction. This especially affects the continued existence of species or populations with limited numbers and/or narrow ranges, including all three plant species in this rule. Evidence of heavy flash floods has been noted in the lower part of East Palm Valley, where there are specimens of *Pritchardia remota* (Kramer 1962).

The very limited range of all three of the plant species, the small number of populations of two of the species, and the small number of individuals of one of the species increases the potential for extinction from naturally occurring events. The limited gene pool may depress reproductive vigor, or a single human-caused or natural environmental disturbance could destroy a significant percentage of the individuals or an entire population. All three of the plant species are restricted in their natural range to small portions of an island with an area of only 0.25 sq mi (0.65 sq km). Two of the species, *Amaranthus brownii* and *Pritchardia remota*, have only two populations each, and fewer than 40 individuals of *A. brownii* have ever been counted.

The threats facing these three species are summarized in Table 1.

TABLE 1.—SUMMARY OF THREATS

Species	Rats	Alien plants	Fire	Substrate loss*	Limited numbers**
<i>Amaranthus brownii</i>		X	P	X	X1,2
<i>Pritchardia remota</i>	P	P	P	P	X1
<i>Schiedea verticillata</i>	P	X	P	X	

X=Immediate and significant threat.

P=Potential threat.

*=Substrate loss includes erosion, rock slides, and landslides.

**=No more than 100 individuals and/or no more than 5 populations.

1=No more than 5 populations.

2=No more than 50 individuals.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these species in issuing this final rule. Based on this evaluation, this rulemaking will list these three plant species as endangered. One of the species is known from only 2 populations and fewer than 40 individuals; another species is known from only 2 populations. Each of the three species is threatened by one or more of the following—competition with the alien plant pigweed, substrate loss, and increased likelihood of extinction and/or reduced reproductive vigor due to small numbers of individuals and populations and their extremely limited range. Because these three species are in danger of extinction throughout all or a significant portion of their ranges, they fit the definition of endangered as defined in the Act.

Critical habitat is not being designated for these species for reasons discussed in the "Critical Habitat" section of this final rule.

Critical Habitat

Critical habitat is defined by section 3 of the Act as: (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection and; (2) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require 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 *Amaranthus brownii*, *Pritchardia remota*, and *Schiedea verticillata* at this time. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) The species is threatened by taking or other

human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

The publication of precise maps and descriptions of critical habitat in the Federal Register and local newspapers as required in a proposal for critical habitat would increase the degree of threat to these plants by making them more vulnerable to take or vandalism and their fragile habitat more susceptible to damage. The listing of these species as endangered also publicizes their rarity and, thus, can make these plants attractive to researchers, collectors, and those wishing to see rare plants. This could contribute to their decline and/or increase enforcement problems. The only known populations of the three species occur on land owned and managed by the Federal government, which is aware of the location and importance of protecting the plants and their habitat. Protection of the species' habitat will be addressed through the recovery process and through the section 7 consultation process. All the plants are located on a national wildlife refuge, one of the policies of which is to conserve native vegetation, so it is unlikely that Federal activities would negatively affect the continued existence of these plants. Therefore, the Service finds that designation of critical habitat for these species is not prudent at this time, because such designation would increase the degree of threat from vandalism, collecting, or other human activities and because it is unlikely to aid in the conservation of these species.

Available Conservation Measures

Conservation measures provided to species listed as endangered under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing results in public awareness and conservation actions by Federal, State, and local agencies, private organizations, and individuals. The Act provides for possible land acquisition and cooperation with the State 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 requires Federal agencies to evaluate their

actions with respect to any species that is proposed or listed as endangered. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of 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. All populations of the three species occur on land managed by the Service as a National Wildlife Refuge. There are no other known Federal activities that occur within the present known habitat of these species.

The Act and implementing regulations at 50 CFR 17.61, 17.62, and 17.63 for endangered species set forth a series of general prohibitions and exceptions that apply to all endangered plant species. With respect to the three plant species from the island of Nihoa, all prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal with respect to any endangered plant, 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 these species in interstate or foreign commerce; or to remove and reduce to possession any such species from areas under Federal jurisdiction; maliciously damage or destroy any such species on any area under Federal jurisdiction; or remove, cut, dig up, damage or destroy any such species on any other area in knowing violation of any State law or regulation or in the course of any violation of a 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 plant species under certain circumstances.

It is the policy of the Service (59 FR 34272, July 1, 1994) to identify to the maximum extent practicable at the time a species is listed those activities that would or would not be likely to constitute a violation of section 9 of the Act. Such information is intended to clarify the potential impacts of a species' listing on proposed and ongoing activities within the species'

range. All three of these species occur solely on Federal refuge lands. Collecting and damaging these species are prohibited without a Federal permit. The Service is not otherwise aware of any legal activities currently being conducted by the public that will be affected by this listing and result in a violation of section 9. Illegal boat landing or entry to the island have already been discussed as potentially threatening these three species. Requests for copies of the regulations concerning listed plants and inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon 97232-4181 (telephone 503-231-6241; FAX 503-231-6243). Questions regarding whether specific activities will constitute a violation of section 9 should be directed to the Ecoregion Manager of the Service's Pacific Islands Office (see **ADDRESSES** section).

National Environmental Policy Act

The Service has determined that an Environmental Assessment or Environmental Impact Statement, 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 is available upon request from the Pacific Islands Ecoregion (see **ADDRESSES** section).

Authors

The primary authors of this final rule are Marie M. Bruegmann and Zella E. Ellshoff, Pacific Islands Ecoregion (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. Section 17.12(h) is amended by adding the following, in alphabetical order under FLOWERING PLANTS, to the List of Endangered and Threatened Plants, to read as follows:

§ 17.12 Endangered and threatened plants.
* * * * *
(h) * * *

Species		Historic range	Family name	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
Flowering plants							
*	*	*	*	*	*		*
<i>Amaranthus brownii</i>	None	U.S.A. (HI)	Amaranthaceae.	E	587	NA	NA
*	*	*	*	*	*		*
<i>Pritchardia remota</i>	Loulu	U.S.A. (HI)	Arecaceae	E	587	NA	NA
*	*	*	*	*	*		*
<i>Schiedea verticillata</i>	None	U.S.A. (HI)	Caryophyllaceae	E	587	NA	NA
*	*	*	*	*	*		*

Dated: August 12, 1996.

John G. Rogers,

Acting Director, Fish and Wildlife Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 285

[I.D. 081596C]

Atlantic Tuna Fisheries; Fishery Closure

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Closure.

SUMMARY: NMFS has determined that the Atlantic bluefin tuna (ABT) General category quota for the August period will be attained by August 17, 1996. Therefore, the General category fishery for the August period will be closed effective at 11:30 p.m. on August 17, 1996. This action is being taken to prevent overharvest of the adjusted 193 metric tons (mt) subquota for the August period.

EFFECTIVE DATE: The General category closure for the August period is effective 11:30 p.m. local time on August 17, 1996, through August 31, 1996.

FOR FURTHER INFORMATION CONTACT: John Kelly, 301-713-2347, or Mark Murray-Brown, 508-281-9260.

SUPPLEMENTARY INFORMATION: Regulations implemented under the

authority of the Atlantic Tunas Convention Act (16 U.S.C. 971 *et seq.*) governing the harvest of ABT by persons and vessels subject to U.S. jurisdiction are found at 50 CFR part 285. Section 285.22 subdivides the U.S. quota recommended by the International Commission for the Conservation of Atlantic Tunas among the various domestic fishing categories.

General Category Closure

NMFS is required, under 285.20(b)(1), to monitor the catch and landing statistics and, on the basis of these statistics, to project a date when the catch of ABT will equal the quota and publish a Federal Register announcement to close the applicable fishery.

Implementing regulations for the Atlantic tuna fisheries at 50 CFR 285.22 provide for a quota of 186 mt of large