DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AH10

Endangered and Threatened Wildlife and Plants; Prudency Determinations for Eight Plant Species From the Hawaiian Islands, and Proposed Critical Habitat Designations for Eighteen Plant Species From the Island of Lanai, Hawaii

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule and notice of prudency determination.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), have reconsidered our findings concerning whether designating critical habitat for eight federally protected plants from the island of Lanai would be prudent. Some of these plant species may also occur on other Hawaiian Islands. The eight plants were listed as endangered species under the Endangered Species Act of 1973, as amended (Act), between 1991 and 1996. At the time each plant was listed, we determined that designation of critical habitat was not prudent because it would increase the degree of threat to the species and/or would not benefit the plant.

We propose that critical habitat is prudent for seven of these species (*Abutilon eremitopetalum, Cyanea macrostegia* ssp. *gibsonii, Gahnia lanaiensis, Hedyotis mannii, Portulaca sclerocarpa, Tetramolopium remyi*, and *Viola lanaiensis*) because the potential benefits of designating critical habitat essential for the conservation of these species outweigh the risks that may result from human activity due to critical habitat designation. Therefore, we are proposing the designation of critical habitat for these seven species. We propose that designation of critical habitat is not prudent for one species, *Phyllostegia glabra* var. *lanaiensis*, which is no longer extant in the wild, and for which no genetic material is currently known. Such designation would not be beneficial to this species.

For three additional species from Lanai, *Hedyotis schlechtendahliana* var. *remyi, Labordia tinifolia* var. *lanaiensis*, and *Melicope munroi*, we determined that designation of critical habitat was prudent at the time of their listing as endangered species in 1999. Critical habitat designations for these species are also proposed at this time.

In addition, we proposed that critical habitat was prudent for nine species (*Bonamia menziesii*, *Centarium sebaeoides*, *Clermontia oblongifolia* ssp. *mauiensis*, *Ctenitis squamigera*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyrtandra munroi*, *Hibiscus brackenridgei*, *Spermolepis hawaiiensis*, and *Vigna o-wahuensis*) from Lanai that also occur on Kauai, Niihau, Maui, and/or Kahoolawe in proposed rules published earlier in 2000. Critical habitat designations for these species on Lanai are proposed at this time, with the exception of *Vigna o-wahuensis* for which we do not currently know the specific location of this species on Lanai.

We solicit data and comments from the public on all aspects of this proposal, including data on the economic and other impacts of the proposed designations. We may revise this proposal to incorporate or address new information received during the comment period.

DATES: We must receive comments from all interested parties by February 26, 2001. Public hearing requests must be received by February 12, 2001.

ADDRESSES: If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods:

You may submit written comments and information to the Field Supervisor, U.S. Fish and Wildlife Service, Pacific Islands Office, 300 Ala Moana Blvd., P.O. Box 50088, Honolulu, Hawaii 96850–0001.

You may send comments by electronic mail (e-mail) to lani_crithab_pr@fws.gov. Please submit comments in ASCII file format and avoid the use of special characters and encryption. Please include ''Attn: 1018–AH10'' and your name and return address in your e-mail message. If you do not receive a confirmation from the system that we have received your e-mail message, contact us directly by calling our Pacific Islands Office at phone number 808/541–3441. Please note that the e-mail address (lani_crithab_pr@fws.gov) will be closed at the termination of the public comment period.

You may hand-deliver written comments to our Pacific Islands Office at 300 Ala Moana Blvd., Room 3–122, Honolulu, Hawaii.

Comments and materials received, as well as supporting documentation used in the preparation of this proposed rule will be available for public inspection, by appointment, during normal business hours at the Pacific Islands Office.

FOR FURTHER INFORMATION CONTACT: Paul Henson, Field Supervisor, Pacific Islands Office (see **ADDRESSES** section) (telephone 808/541–3441; facsimile 808/541–3470).

SUPPLEMENTARY INFORMATION:

Background

We have reconsidered our findings concerning whether designating critical habitat for eight federally protected plants from the island of Lanai is prudent. Currently, four of these species (*Abutilon eremitopetalum*, *Cyanea macrostegia* ssp. *gibsonii, Gahnia lanaiensis*, and *Viola lanaiensis*) are endemic to the island of Lanai, while two species (*Hedyotis mannii* and *Portulaca sclerocarpa*) are known from Lanai, as well as one or more other islands. One species, *Tetramolopium remyi*, was known from Maui and Lanai but is currently only extant on Lanai (Table 1). We believe the eighth species, *Phyllostegia glabra* var. *lanaiensis*, may be extinct.

Proposed prudency determinations for nine species (*Bonamia menziesii*, *Centarium sebaeoides*, *Clermontia oblongifolia* ssp. *mauiensis*, *Ctenitis squamigera*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyrtandra munroi*, *Hibiscus brackenridgei*, *Spermolepis hawaiiensis*, and *Vigna o-wahuensis*) which also occur on the islands of Kauai or Niihau were published in a previous proposal (65 FR 66807); those which also occur on Maui or Kahoolawe are being published in a concurrent proposal.

In addition, for three species (*Hedyotis schlechtendahliana* var. *remyi*, *Labordia tinifolia* var. *lanaiensis*, and *Melicope munroi*), we determined that designation of critical habitat was prudent at the time of their listing as endangered species in 1999. Proposed critical habitat designations for these species are included in this proposal.

TABLE 1.—SUMMARY OF ISLAND DISTRIBUTION OF 37 SPECIES ON LANAI

Species	Island distribution						
	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii	N.W. Isles, *Ka*hoolawe *Ni*hau
Abutilon eremitopetalum (No common name).				C			
Adenophorus periens (pendant kihi fern).	C	H	C	R	R	C	
Bidens micrantha sp. *kalealaha* (ko oko alau).				H	C		
Bonamia menziesii (No common name).	C	C	H	C	C	C	
Brighamia rockii (pua ala) ..			C	H	H		
Cenchrus agrimonioides (No common name).		C		H	C	R	NW Isles (H)
Centaurium sebaeoides (awiwi).	C	C	C	C	C		
Clermontia oblongifolia ssp. *mauiensis* (oha wai).				C	C		
Ctenitis squamigera (pauoa).	H	C	H	C	C	H	
Cyanea grimesiana ssp. *grimesiana* (haha).		C	C	C	C		
Cyanea lobata (haha)				H	C		
Cyanea macrostegia ssp. *gibsonii* (haha).				C			
Cyperus trachysanthos (pu uka a).	C	C	H	H			Ni(C)
Cyrtandra munroi (ha iwale)				C	C		
Diellia erecta (No common name).	H	H	C	H	C	C	
Diplazium molokaiense (No common name).	H	H	H	H	C		
Gahnia lanaiensis (No common name).				C			
Hedyotis mannii (No common name).			C	C	H		
Hedyotis schlechtendahliana var. *remyi* (kopa).				C			
Hesperomannia arborescens (No common name).		C	C	H	C		
Hibiscus brackenridgei (mao hau hele).	H	C	H	C	C	C	Ka(R)
Isodendrion pyrifolium (aupaka).		H	H	H	H	C	Ni(H)
Labordia tinifolia var. *lanaiensis* (kamakahala).				C			
Mariscus faurei (No common name).			C	H		C	
Melicope munroi (alani)			H	C			
Neraudia sericea (No common name).			C	H	C		Ka(H)
Phyllostegia glabra var. *lanaiensis* (ulihi).				H			
Portulaca sclerocarpa (po e).				C		C	
Sesbania tomentosa (ohai)	C	C	C	H	C	C	Ni(H), Ka(C), NW Isles (C)
Silene lanceolata (No common name).	H	C	C	H		C	
Solanum incompletum (popolo ku mai).	H		H	H	H	C	
Spermolepis hawaiiensis (No common name).	C	C	C	C	C	C	
Tetramolopium lepidotum ssp. *lepidotum* (No common name).		C		H			
Tetramolopium remyi (No common name).				C	H		
Vigna o-wahuensis (No common name).		H	C	C	C	C	Ni(H), Ka(C)
Viola lanaiensis (No common name).				C			

TABLE 1.—SUMMARY OF ISLAND DISTRIBUTION OF 37 SPECIES ON LANAI—Continued

Species	Island distribution						
	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii	N.W. Isles, *Ka*hoolawe *Ni*hau
Zanthoxylum hawaiiense (ae).	C		C	H	C	C	

KEY:
C (Current)—population last observed within the past 30 years.
H (Historical)—population not seen for more than 30 years.
R (Reported)—reported from undocumented observations.

An additional 17 species are known only from historical records (pre-1970) on Lanai or from undocumented observations (Table 1). Proposed prudency determinations and proposed critical habitat designations or non-designations for these species which still occur on other islands have been or will be included in the proposed rules for the islands on which they currently occur (Table 2).

TABLE 2.—LIST OF PROPOSED RULES IN WHICH PRUDENCY DETERMINATIONS AND CRITICAL HABITAT DESIGNATIONS/NON-DESIGNATIONS WERE OR WILL BE PROPOSED FOR 14 SPECIES THAT NO LONGER OCCUR ON LANAI

Species	Proposed rule in which prudency will be proposed	Proposed rule in which critical habitat designations/non designations will be discussed
Brighamia rockii	Molokai	Molokai.
Cenchrus agrimonioides	Maui and Kahoolawe	Maui and Kahoolawe; Oahu.
Cyperus trachysanthos	Kauai and Niihau (65 FR 66807)	Kauai and Niihau (65 FR 66807); Oahu.
Diellia erecta	Maui and Kahoolawe	Maui and Kahoolawe; Molokai; Hawaii; Oahu.
Diplazium molokaiense	Maui and Kahoolawe	Maui and Kahoolawe
Hesperomannia arborescens	Maui and Kahoolawe	Maui and Kahoolawe; Molokai; Oahu.
Isodendrion pyrifolium	Hawaii	Hawaii.
Mariscus faurei	Molokai	Molokai; Hawaii.
Neraudia sericea	Maui and Kahoolawe	Maui and Kahoolawe; Molokai.
Sesbania tomentosa	Kauai and Niihau (65 FR 66807)	Kauai and Niihau (65 FR 66807); Maui and Kahoolawe; Molokai; Northwest Hawaiian Islands; Hawaii; Oahu.
Silene lanceolata	Molokai	Molokai; Hawaii; Oahu.
Solanum incompletum	Hawaii	Hawaii.
Tetramolopium lepidotum ssp. *lepidotum*	Oahu	Oahu
Zanthoxylum hawaiiense	Kauai and Niihau (65 FR 66807)	Kauai and Niihau (65 FR 66807); Maui and Kahoolawe; Molokai; Hawaii.

Critical habitat is proposed for designation within 10 units on the island of Lanai. The land area within these units totals 1,953 hectares (ha) (4,826 acres (ac)). If this proposal is made final, section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq*.) would prohibit destruction or adverse modification of critical habitat through any activity funded, authorized, or carried out by any Federal agency. Section 4 of the Act requires us to consider economic and other impacts of specifying any particular area as critical habitat.

The Island of Lanai

Lanai is a small island totaling about 360 square kilometers (sq km) (139 square miles (sq mi) in area. Hidden from the trade winds in the lee or rain shadow of the more massive West Maui Mountains, Lanai was formed from a single shield volcano built by eruptions at its summit and along three rift zones. The principal rift zone runs in a northwesterly direction and forms a broad ridge whose highest point, Lanaihale, has an elevation of 1,027 meters (m) (3,370 feet (ft)) (Department of Geography 1998). The entire ridge is commonly called Lanaihale, after its highest point. Annual rainfall on the summit of Lanaihale is 760–1,015 millimeters (mm) (30–40 inches (in.)), but is considerably less, 250–500 mm (10–20 in.), over much of the rest of the island (Department of Geography 1998).

Geologically, Lanai is part of the four island complex comprising Maui, Molokai, Lanai, and Kahoolawe, known collectively as Maui Nui (Greater Maui). During the last Ice Age about 12,000 years ago when sea levels were about 160 m (525 ft) less than their present level, these four islands were connected by a broad lowland plain (Department of Geography 1998). This land bridge allowed the movement and interaction of each island's flora and fauna and contributed to the present close relationships of their biota.

Changes in Lanai's ecosystem began with the arrival of the first Polynesians about 1500 years ago. In the 1800s, goats (*Capra hircus*) and sheep (*Ovis aries*) were first introduced to the island. Native vegetation was soon decimated by these non-native ungulates, and erosional processes from wind and rain caused further damage to the native forests (Hobdy 1993). Formal ranching was begun in 1902, and by 1910, the Territory forester helped to revegetate the island. By 1911, a ranch manager from New Zealand, George Munro, instituted a forest management practice to recover the native forests and bird species which included fencing and eradication of sheep and goats from the mountains. By the 1920s, Castle and Cooke had acquired more than 98 percent of the island and established a 6,500 ha (16,000 ac) pineapple plantation surrounding its company town, Lanai City. In the early 1990s, the pineapple plantation closed, and luxury hotels were developed by the private landowner, sustaining the island's economy today.

Discussion of the 19 Plant Taxa

Species Endemic to Lanai

Abutilon eremitopetalum

Abutilon eremitopetalum is a long-lived shrub in the mallow family (Malvaceae) with grayish-green, densely hairy, heart-shaped leaves. It is the only *Abutilon* on Lanai whose flowers have green petals hidden within the calyx (the outside leaflike part of the flower) (Bates 1999).

Little is known about the life history of *Abutilon eremitopetalum*. It apparently flowers during the wet season (*e.g.* February) (Service 1995). Pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown.

Historically, *Abutilon eremitopetalum* was found in small, widely scattered colonies at elevations of between 215 and 305 meters (m) (700 and 1,000 ft) in the ahupuaa (geographical areas) of Kalulu, Mahana, Maunalei, Mamaki, and Paawili on the northern, northeastern, and eastern parts of Lanai Island (Caum 1933; Hawaii Natural Heritage Program (HINHP) Database 2000; Service 1995). Currently, about seven individuals are known from a single population in Kahea Gulch on the northeastern part of the island (Geographic Decision Systems International (GDSI) 2000; HINHP Database 2000).

Abutilon eremitopetalum is found in lowland dry forest. The only known population is found at an elevation of 335 m (1,100 ft) on a moderately steep north-facing slope on red sandy soil and rock. Historically, *A. eremitopetalum* has been reported from elevations of 210–521 m (690–1,710 ft). *Erythrina sandwicensis* (wili wili) and *Diospyros ferrea* (lama) are the dominant trees in open forest of the area. Other associated native taxa include *Canthium odoratum* (ohee), *Dodonaea viscosa* (aalii), *Nesoluma polynesicum* (keahi), *Rauvolfia sandwicensis* (hao), S*ida fallax* (ilima), and *Wikstroemia* sp. (akia) (Service 1995; HINHP Database 2000).

The threats to *Abutilon eremitopetalum* are habitat degradation and competition by encroaching exotic plant species such as *Lantana camara* (lantana), *Leucaena leucocephala* (koa haole), and *Pluchea carolinensis* (sourbush); browsing by axis deer (*Axis axis*); soil erosion caused by feral ungulate grazing on grasses and forbs; and the small number of extant individuals, as the limited gene pool may depress reproductive vigor, or a single natural or man-caused environmental disturbance could destroy the only known existing population. Fire is another potential threat because the area is dry much of the year (HINHP Database 2000; 56 FR 47686; Service 1995).

Cyanea macrostegia ssp. *gibsonii*

Cyanea macrostegia ssp. *gibsonii*, a long-lived perennial and a member of the bellflower family (Campanulaceae), is a palm-like tree 1 to 7 m (3 to 23 ft) tall with elliptic or oblong leaves that have fine hairs covering the lower surface. The following combination of characters separates this taxon from the other members of the genus on Lanai: calyx lobes are oblong, narrowly oblong, or ovate in shape; and the calyx and corolla (petals of a flower) both more than 0.5 centimeters (cm) (0.2 in.) wide (Lammers 1999; 56 FR 47686).

Cyanea macrostegia ssp. *gibsonii* was seen flowering in the month of July; however, details of its flowering period are unknown. Pollination vectors, seed dispersal agents, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown (Service 1995).

Cyanea macrostegia ssp. *gibsonii* historically is documented from the summit of Lanaihale and the upper parts of Mahana, Kaiholena, and Maunalei Valleys of Lanai (Lammers 1999; 56 FR 47686). There are a total of seven populations containing 74 individuals (HINHP Database 2000). Presently, this taxon is known from Lanaihale, Kaiholena, between Kunoa and Waialala Gulches, Waialala Gulch, Kunoa Gulch, south of Kahinahina Ridge, and at the head of Hauola Gulch (GDSI 2000; HINHP Database 2000).

The habitat of *Cyanea macrostegia* ssp. *gibsonii* is lowland wet *Metrosideros polymorpha* (ohia) forest or *Diplopterygium pinnatum* (uluhe lau nui)—*M. polymorpha* shrubland between elevations of 760–970 m (2,490–3,180 ft). It has been observed to grow on flat to moderate or steep slopes, usually on lower gulch slopes or gulch bottoms, often at edges of streambanks, probably due to vulnerability to ungulate damage at more accessible locations. Sites are sunny to shady, mesic to wet with clay or other soil substrate. Associated vegetation includes *Dicranopteris linearis* (uluhe), *Perrottetia sandwicensis* (olomea), *Scaevola chamissoniana* (naupaka kuahiwi), Pipturus sp. (mamake), *Antidesma* sp. (hame), *Freycinetia arborea* (ieie), *Psychotria* sp. (kopiko), *Cyrtandra* sp. (ha iwale), *Broussaisia arguta* (kanawao), *Cheirodendron* sp. (olapa), *Clermontia* sp. (oha wai), *Dubautia* sp. (na ena e), *Hedyotis* sp. (No Common Name), Ilex *anomala* (aiea), *Labordia* sp. (kamakahala), *Melicope* sp. (alani), *Pneumatopteris* sp. (No common name), and *Sadleria* sp. (ama u) (Service 1995; HINHP Database 2000).

The threats to *Cyanea macrostegia* ssp. *gibsonii* are browsing by deer; competition with the alien plant *Hedychium gardnerianum* (kahili ginger); and the small number of extant individuals, as the limited gene pool may depress reproductive vigor, or any natural or man-caused environmental disturbance could destroy the existing populations (HINHP Database 2000; Service 1995; 56 FR 47686).

Gahnia lanaiensis

Gahnia lanaiensis, a short-lived perennial and a member of the sedge family (Cyperaceae), is a tall (1.5 to 3 m (5 to 10 ft)), tufted, grass-like plant. This sedge may be distinguished from grasses and other genera of sedges on Lanai by its spirally arranged flowers, its solid stems, and its numerous, three-ranked leaves. *Gahnia lanaiensis* differs from the other members of the genus on the island by its achenes (seed-like fruits), which are 0.36 to 0.46 cm (0.14 to 0.18 in.) long and purplish-black when mature (Koyama 1999).

July has been described as the ''end of the flowering season'' for *Gahnia lanaiensis* (Degener *et al.* 1964). Plants of this species have been observed with fruit in October (56 FR 47686). Pollination vectors, seed dispersal agents, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown.

Gahnia lanaiensis is known from a total of three populations containing 47 individuals along the summit of Lanaihale, in the Haalelepaakai area and on the eastern edge of Hauola Gulch (HINHP Database 2000). The populations are found between 915 and 1,030 m (3,000 and 3,380 ft) in elevation (GDSI 2000; HINHP Database 2000). This distribution encompasses the entire known historic range of the species.

The habitat of *Gahnia lanaiensis* is lowland wet forest (shrubby rainforest to open scrubby fog belt or degraded lowland mesic forest), wet *Diplopterygium pinnatum-Dicranopteris linearis-Metrosideros polymorpha* shrubland, or wet *Metrosideros polymorpha-Dicranopteris linearis* shrubland. It occurs on flat to gentle ridgecrest topography in moist to wet clay or other soil substrate in open areas or in moderate shade. Associated species include native mat ferns, *Doodia* sp. (okupukupu lau ii), *Odontosoria chinensis* (pala a), *Ilex anomala,*

Hedyotis terminalis (manono), *Sadleria* sp., *Coprosma* sp. (pilo), *Lycopodium* sp. (wawae iole), *Scaevola* sp. (naupaka), and *Styphelia tameiameiae* (pukiawe) (Service 1995).

The primary threat to this species is the small number of plants and their restricted distribution, which increases the potential for extinction from naturally occurring events. In addition, *Gahnia lanaiensis* is threatened by the planned development of the island; disturbance of the soil or destruction of groundcover plants which would increase the potential for erosion and open areas to invading non-native plants; and *Leptospermum scoparium* (manuka), a weedy tree introduced from New Zealand which is spreading along Lanaihale, but has not yet reached the area where *Gahnia* is found (Service 1995; HINHP Database 2000).

Hedyotis schlechtendahliana var. *remyi*

Hedyotis schlechtendahliana var. *remyi*, a short-lived perennial and a member of the coffee family (Rubiaceae), is a few branched subshrub from 60 to 600 cm (24 to 240 in.) long, with weakly erect or climbing stems that may be somewhat square, smooth, and glaucous (with a fine waxy coating that imparts a whitish or bluish hue to the stem). The species is distinguished from others in the genus by the distance between leaves and the length of the sprawling or climbing stems, and the variety *remyi* is distinguished from *Hedyotis schlechtendahliana* var. *schlechtendahliana* by the leaf shape, presence of narrow flowering stalks, and flower color (Wagner *et al.* 1999).

Pollination vectors, seed dispersal agents, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown for *Hedyotis schlechtendahliana* var. *remyi*.

Historically, *Hedyotis schlechtendahliana* var. *remyi* was known from five locations on the northwestern portion of Lanaihale (HINHP Database 2000; Wagner *et al.* 1999; 64 FR 48307). Currently, this species is known from eight individuals in three populations on Kaiholeha-Hulupoe Ridge, Kapohaku drainage, and Waiapaa drainage on Lanaihale (GDSI 2000; HINHP Database 2000).

Hedyotis schlechtendahliana var. *remyi* typically grows on or near ridge crests in mesic windswept shrubland with a mixture of dominant plant taxa that may include *Metrosideros polymorpha, Dicranopteris linearis*, or *Styphelia tameiameiae* at elevations between 732 and 914 m (2,400 to 3,000 ft). Associated plant taxa include *Dodonaea viscosa, Odontosoria chinensis, Sadleria* sp., *Dubautia* sp., and *Myrsine* sp. (kolea) (HINHP Database 2000; 64 FR 48307).

The primary threats to *Hedyotis schlechtendahliana* var. *remyi* are habitat degradation and destruction by axis deer; competition with alien plant taxa such as *Psidium cattleianum* (strawberry guava), *Myrica faya* (firetree), *Leptospermum scoparium*, and *Schinus terebinthifolius* (christmasberry); and random environmental events or reduced reproductive vigor due to the small number of remaining individuals and populations (HINHP Database 2000; 64 FR 48307).

Labordia tinifolia var. *lanaiensis*

Labordia tinifolia var. *lanaiensis*, a short lived perennial in the logan family (Loganiaceae), is an erect shrub or small tree 1.2 to 15 m (4 to 49 ft) tall. The stems branch regularly into two forks of nearly equal size. This subspecies differs from the other taxa in this endemic Hawaiian genus by having larger capsules and smaller corollas (Wagner *et al.* 1999). Flowering time, pollination vectors, seed dispersal agents, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown.

Labordia tinifolia var. *lanaiensis* was historically known from the entire length of the summit ridge of Lanaihale (HINHP Database 2000). Currently, *L. t.* var. *lanaiensis* is known from only three populations at the southeastern end of the summit ridge of Lanaihale (HINHP Database 2000). These populations total 300 to 800 scattered individuals (GDSI 2000).

The typical habitat of *Labordia tinifolia* var. *lanaiensis* is lowland mesic forest associated with the native species *Dicranopteris linearis* and *Scaevola chamissoniana*, at elevations between 710 and 1,020 m (2,330 and 3,345 ft) (HINHP Database 2000; 64 FR 48307).

Labordia tinifolia var. *lanaiensis* is threatened by axis deer and several alien plant taxa. The species is also threatened by random environmental factors because of the small number of populations (64 FR 48307).

Viola lanaiensis

Viola lanaiensis, a short-lived perennial of the violet family (Violaceae), is a small, erect, unbranched or little branched subshrub. The leaves, which are clustered toward the upper part of the stem, are lance-shaped with a pair of narrow, membranous stipules (leaf-like appendages arising from the base of a leaf) below each leaf axis. The flowers are small, white with purple tinged or with purple veins, and occur singly or up to four per upper leaf axil. The fruit is a capsule, about 1.0 to 1.3 cm (0.4 to 0.5 in) long (Wagner *et al.* 1999). It is the only member of the genus on Lanai. Flowering time, pollination vectors, seed dispersal agents, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown.

Viola lanaiensis was known historically from scattered sites on the summit, ridges, and upper slopes of Lanaihale (from near the head of Kaiolena and Hookio Gulches to the vicinity of Haalelepaakai, a distance of about 4 km (2.5 mi), at elevations of approximately 850–975 m (2,790–3,200 ft). An occurrence of *V. lanaiensis* was known in the late 1970s along the summit road near the head of Waialala Gulch where a population of approximately 20 individuals flourished. That population has since disappeared due to habitat disturbance. Five populations are currently known from southern Lanai: in Kunoa Gulch; between Kunoa and Waialala Gulches; in the upper end of the northernmost drainage of Awehi Gulch; in Hauola Gulch, and along Hauola Trail. It is estimated that the populations total less than 500 plants (GDSI 2000; HINHP Database 2000).

The habitat of *Viola lanaiensis* is *Metrosideros polymorpha-Dicranopteris linearis* lowland wet forest or lowland mesic shrubland. It has been observed on moderate to steep slopes from lower gulches to ridgetops, from 670–975 m (2,200–3,200 ft) elevation, with a soil and decomposed rock substrate in open to shaded areas. It was once observed growing from crevices in drier soil on a mostly open rock area near a recent landslide. Associated vegetation includes ferns and short windswept shrubs or other diverse mesic community members such as *Scaevola chamissoniana, Hedyotis terminalis, Hedyotis centranthoides* (No common name), *Styphelia tameiameiae, Carex* sp. (No common name), *Ilex anomala, Psychotria* sp., *Antidesma* sp., *Coprosma* sp., *Freycinetia arborea, Myrsine* sp., *Nestegis* sp. (olopua), *Psychotria* sp., and *Xylosma* sp. (maua) (Service 1995; 56 FR 47686).

The main threats to *Viola lanaiensis* include browsing and habitat disturbance by axis deer; encroaching alien plant species such as *Leptospermum* sp. (No common name); depressed reproductive vigor due to a limited local gene pool; the probable loss of appropriate pollinators; and slugs (Service 1995; 56 FR 47686).

Multi-Island Species

Bonamia menziesii

Bonamia menziesii, a short-lived perennial and a member of the morning-glory family (Convolvulaceae), is a vine with twining branches that are fuzzy when young. This species is the only member of the genus that is endemic to the Hawaiian Islands and differs from other genera in the family by its two styles, longer stems and petioles (a stalk that supports a leaf), and rounder leaves (Austin 1999). Little is known about the life history of this plant. Reproductive cycles, longevity, specific environmental requirements, and limiting factors are unknown.

Historically, *Bonamia menziesii* was known from Kauai, Oahu, Molokai, West Maui, and Hawaii (HINHP Database 2000). Currently, this species is known from Kauai, Oahu, Maui, Hawaii, and Lanai. On Lanai, the three populations, containing a total of 14 individual plants, are found in the Ahakea and Kanepuu Units of Kanepuu Preserve, and on Puhielelu Ridge (GDSI 2000; HINHP Database 2000).

Bonamia menziesii is found in dry *Nestegis sandwicensis-Diospyros* sp. (lama) forest and dry *Dodonea viscosa* shrubland at elevations between 150 and 855 m (490 and 2,800 ft) (Austin 1999; 59 FR 56333). Associated species include *Bobea* sp. (ahakea), *Nesoluma polynesicum, Erythrina sandwicensis, Rauvolfia sandwicensis, Metrosideros polymorpha, Canthium odoratum, Dienella sandwicensis* (uki uki), *Diospyros sandwicensis* (lama), *Hedyotis terminalis, Melicope* sp. (alani), *Myoporum sandwicense* (naio), *Nestegis sandwicense, Pisonia* sp. (papalakepau), *Pittosporum* sp. (hoawa), *Pouteria sandwicensis* (alaa), and *Sapindus oahuensis* (lonomea) (HINHP Database 2000; 59 FR 56333).

The primary threats to this species on Lanai are habitat degradation and possible predation by feral pigs *(Sus scrofa),* goats, axis deer, black-tailed deer *(Odocoileus hemionus columbianus),* and cattle *(Bos taurus);* competition with a variety of alien plant species such as *Lantana camara, Leucaena leucocephala* and *Schinus terebinthifolius;* and an alien beetle *(Physomerus grossipes)* (Service 1999; 59 FR 56333).

Centaurium sebaeoides

Centaurium sebaeoides, a member of the gentian family (Gentianaceae), is an annual herb with fleshy leaves and stalkless flowers. This species is distinguished from *Centaurium erythraea,* which is naturalized in Hawaii, by its fleshy leaves and the unbranched arrangement of the flower cluster (56 FR 55770; Wagner *et al.* 1999).

Centaurium sebaeoides has been observed flowering in April. Flowering may be induced by heavy rainfall. Populations are found in dry areas, and plants are more likely to be found following heavy rains (Service 1999).

Historically and currently, *Centaurium sebaeoides* is known from Kauai, Oahu, Molokai, Lanai, and Maui (Wagner *et al.* 1999). On Lanai, there is one population containing between 20 and 30 individual plants in Maunalei Valley (HINHP Database 2000). This species is found on dry ledges around 210 m (690 ft) elevation. Associated species include *Hibiscus brackenridgei* (HINHP Database 2000).

The major threats to this species on Lanai are competition from alien plant species (HINHP Database 2000).

Clermontia oblongifolia ssp. *mauiensis*

Clermontia oblongifolia ssp. *mauiensis,* a short-lived perennial and a member of the bellflower family (Campanulaceae), a shrub or tree with oblong to lance-shaped leaves on leaf stalks (petioles). *Clermontia oblongifolia* is distinguished from other members of the genus by its calyx and corolla, which are similar in color and are each fused into a curved tube that falls off as the flower ages. The species is also distinguished by the leaf shape, the male floral parts, the shape of the flower buds, and the lengths of the leaf and flower stalks, the flower, and the smooth green basal portion of the flower (the hypanthium) (Lammers 1988, 1999; 57 FR 20772). *Clermontia oblongifolia* ssp. *mauiensis* is reported from Maui and Lanai, while *C. o.* ssp. *oblongifolia* is only known from Oahu, and *C. o.* ssp. *brevipes* is only known from Molokai.

Clermontia oblongifolia ssp. *mauiensis* is known to flower from November to July (Rock 1919). Little is known regarding pollination vectors, seed dispersal, or other factors.

Historically and currently, *Clermontia oblongifolia* ssp. *mauiensis* is known from Lanai and Maui (Lammers 1999; 57 FR 20772). On Lanai, an unknown number of individuals are reported from Kaiholena Gulch (HINHP Database 2000).

This plant typically grows on the sides of ridges in *Metrosideros polymorpha* dominated lowland wet forest at elevations between 800–900 m (2,625–2,950 ft). Associated native species include *Coprosma* sp., *Clermontia* sp., *Hedyotis* sp., and *Melicope* sp. (HINHP Database 2000).

The threats to this species on Lanai are the small number of populations and individuals which make it vulnerable to extinction from a single natural or human-caused environmental disturbance; depressed reproductive vigor; and habitat degradation by feral pigs (57 FR 20772; Service 1997).

Ctenitis squamigera

Ctenitis squamigera, a short-lived perennial and a member of the wood fern family (Dryopteridaceae) (Wagner and Wagner 1992). It has a rhizome (horizontal stem), creeping above the ground and densely covered with scales similar to those on the lower part of the leaf stalk. It can be readily distinguished from other Hawaiian species of *Ctenitis* by the dense covering of tan-colored scales on its frond (Wagner and Wagner 1992). Reproductive cycles, longevity, specific environmental requirements and limiting factors are unknown.

Historically, *Ctenitis squamigera* was recorded from Kauai, Oahu, Molokai, Maui, Lanai, and the island of Hawaii (HINHP Database 2000). Currently, it is found on Oahu, Lanai, West Maui, and Molokai (HINHP Database 2000; 59 FR 49025). There are three populations totaling 42 individual plants on Lanai in the Waiapaa-Kapohaku area on the leeward side of the island, Lopa Gulch, and Waiopa Gulch on the windward side (GDSI 2000; HINHP Database 2000).

This species is found in the forest understory at elevations of 380 to 917 m (1,250 to 3,010 ft) in diverse mesic forest and scrubby mixed mesic forest (HINHP Database 2000). Associated native plant taxa include *Nestegis sandwicensis, Coprosma* sp., *Sadleria* sp., *Selaginella* sp. (lepelepe a moa), *Carex meyenii* (No common name), *Blechnum occidentale* (No common name), *Pipturus* sp., *Melicope* sp., *Pneumatopteris sandwicensis* (No common name), *Pittosporum* sp., *Alyxia oliviformis* (maile), *Freycinetia arborea, Antidesma* sp., *Cyrtandra* sp., *Peperomia* sp. (ala ala wai nui), *Myrsine* sp., *Psychotria* sp., *Metrosideros polymorpha, Syzygium sandwicensis* (ohia ha), *Wikstroemia* sp., *Microlepia* sp. (No common name), *Doodia* sp., *Boehmeria grandis* (akolea), *Nephrolepis* sp. (kupukupu), *Perrotettia sandwicensis,* and *Xylosma* sp. (HINHP 2000, 59 FR 49025).

The primary threats to this species on Lanai are habitat degradation by feral pigs, goats, and axis deer; competition with alien plant taxa, especially *Psidium cattleianum* and *Schinus terebinthifolius*; fire; decreased reproductive vigor and extinction from naturally occurring events due to the small number of existing populations and individuals (Service 1998; Culliney 1988; HINHP Database 2000; 59 FR 49025).

Cyanea grimesiana ssp. *grimesiana*

Cyanea grimesiana ssp. *grimesiana,* a short-lived perennial and a member of the bellflower family (Campanulaceae), is a shrub with pinnately divided leaves. This species is distinguished from others in this endemic Hawaiian genus by the pinnately lobed leaf margins and the width of the leaf blades. This subspecies is distinguished from the other two subspecies by the shape and size of the calyx lobes which overlap at the base (Lammers 1999).

Little is known about the life history of this plant. On Molokai, flowering plants have been reported in July and August. Reproductive cycles, longevity, specific environmental requirements, and limiting factors are unknown.

Historically and currently, *Cyanea grimesiana* ssp. *grimesiana* is known from Oahu, Molokai, Lanai, and Maui (61 FR 53108; Service 1999). Currently, on Lanai there are two populations with at least three individuals in Kaiholena Gulch and Waiakeakua Gulch (HINHP Database 2000).

This species is typically found in mesic forest often dominated by *Metrosideros polymorpha* or *M. polymorpha* and *Acacia koa* (koa), or on rocky or steep slopes of stream banks, at elevations between 350 and 945 m (1,150 and 3,100 ft). Associated plants include *Antidesma* sp., *Bobea* sp., *Myrsine* sp., *Nestegis sandwicensis, Psychotria* sp., and *Xylosma* sp. (61 FR 53108; Service 1999).

The threats to this species on Lanai are habitat degradation and/or destruction caused by feral axis deer, goats, and pigs; competition with various alien plants; randomly naturally occurring events causing extinction due to the small number of existing individuals; fire; landslides; rats *(Rattus rattus)*; and various slugs (59 FR 53108; Service 1999).

Cyrtandra munroi

Cyrtandra munroi, a short-lived perennial and a member of the African violet family (Gesneriaceae). It is a shrub with opposite, elliptic to almost circular leaves which are sparsely to moderately hairy on the upper surface and covered with velvety, rust-colored hairs underneath. This species is distinguished from other species of the genus by the broad opposite leaves, the length of the flower cluster stalks, the size of the flowers, and the amount of hair on various parts of the plant (Wagner *et al.* 1999).

Some work has been done on the reproductive biology of some species of *Cyrtandra* (Service 1995), but not on *C. munroi* specifically. Studies indicate that a specific pollinator may be necessary for successful pollination. Seed dispersal may be via birds which eat the fruits (Service 1995). Flowering time, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown.

Historically and currently, *Cyrtandra munroi* is known from Lanai and Maui (HINHP Database 2000; Wagner *et al.* 1999). Currently, on Lanai there are a total of two populations containing 17 individuals in the Kapohaku/Waiapaa area, and the gulch between Kunoa and Waialala gulches (GDSI 2000; HINHP Database 2000).

The habitat of this species is diverse mesic forest, wet *Metrosideros polymorpha* forest, and mixed mesic *M. polymorpha* forest, typically on rich, moist to wet, moderately steep talus slopes from 300 to 920 m (980–3,020 ft). It occurs on soil and rock substrates on slopes from watercourses in gulch bottoms and up the sides of gulch slopes to near ridgetops. Associated native species include, *Diplopterygium pinnatum, Diospyros* sp., *Hedyotis acuminata* (au), *Clermontia* sp., *Alyxia oliviformis, Bobea* sp., *Coprosma* sp., *Dicranopteris linearis, Freycinetia arborea, Melicope* sp., *Myrsine* sp., *Perrottetia sandwicensis, Pipturus* sp., *Pittosporum* sp., *Pleomele* sp. (hala pepe), *Pouteria sandwicensis, Psychotria* sp., *Sadleria* sp., *Scaevola* sp., *Xylosma* sp., and other *Cyrtandra* spp. (HINHP Database 2000; Service 1995).

The threats to this species on Lanai are browsing and habitat disturbance by axis deer; competition with the alien plant species *Psidium cattleianum, Myrica faya, Leptospermum scoparium, Pluchea symphytifolia* (sourbush), *Melinis minutiflora* (molasses grass), *Rubus rosifolius* (thimbleberry), and *Paspalum conjugatum* (Hilo grass); a very small number of extant individuals which can cause depressed reproductive vigor; and loss of appropriate pollinators (Service 1995; 57 FR 20772).

Hedyotis mannii

Hedyotis mannii, a short-lived perennial and a member of the coffee family (Rubiaceae). It is a perennial plant with smooth, usually erect stems 30 to 60 cm (1 to 2 ft) long which are woody at the base and four-angled or -winged. This species' growth habit; its quadrangular or winged stems; the shape, size, and texture of its leaves; and its dry capsule which opens when mature separate it from other species of the genus (Wagner *et al.* 1999).

Little is known about the life history of this plant. Reproductive cycles, longevity, specific environmental requirements, and limiting factors are unknown (Service 1996a).

Hedyotis mannii was once widely scattered on Lanai, West Maui, and Molokai (HINHP Database 2000). After a hiatus of 50 years, this species was rediscovered in 1987 by Steve Perlman on Molokai (HINHP Database 2000; Service 1996a). In addition, two populations, now numbering between 35 and 40 individual plants, were discovered on Lanai in 1991 in Maunalei and Hauola gulches (GDSI 2000; HINHP Database 2000; Service 1996a).

Hedyotis mannii typically grows on dark, narrow, rocky gulch walls and on steep stream banks in wet forests at 150 to 1,050 m (490 to 3,450 ft) in elevation (HINHP Database 2000; Service 1996a). Associated plant species include *Sadleria* sp., *Selaginella* sp., *Broussaisia arguta, Labordia* sp., *Cyrtandra* sp., *Scaevola* sp., *Freycinetia arborea, Blechnum occidentale, Pipturis* sp., *Carex meyenii, Pneumatopteris sandwicensis, Cibotium* sp. (hapuu), *Cyanea* sp. (haha), and *Psychotria* sp. (HINHP Database 2000).

The limited number of individuals of *Hedyotis mannii* makes it extremely vulnerable to extinction from random environmental events. Feral pigs and alien plants such as *Melinis minutiflora, Psidium cattleianum,* and *Rubus rosifolius* degrade the habitat of this species and contribute to its vulnerability (57 FR 46325).

Hibiscus brackenridgei

Hibiscus brackenridgei, a short-lived perennial and a member of the mallow family (Malvaceae), is a sprawling to erect shrub or small tree. This species differs from other members of the genus in having the following combination of characteristics: Yellow petals, a calyx consisting of triangular lobes with raised veins and a single midrib, bracts attached below the calyx, and thin stipules that fall off, leaving an elliptic scar. Two subspecies are currently recognized, *H. brackenridgei* ssp. *brackenridgei* and *H. brackenridgei* ssp. *mokuleianus* (Bates 1999).

Hibiscus brackenridgei is known to flower continuously from early February through late May, and intermittently at other times of year. Intermittent flowering may possibly be tied to day length (Service 1999). Little else is known about the life history of this plant. Pollination biology, longevity, specific environmental requirements, and limiting factors are unknown.

Historically, *Hibiscus brackenridgei* was known from Kauai, Oahu, Lanai, Maui, Molokai, and Hawaii (HINHP Database 2000; Service 1999). *Hibiscus*

brackenridgei was collected from an undocumented site on Kahoolawe though the subspecies has never been determined (Service 1999). Currently, *H. b.* ssp. *mokuleianus* is known from Oahu and from undocumented observations on Kauai (Bates 1999; Service 1999). *Hibiscus brackenridgei* ssp. *brackenridgei* is currently known from Lanai, Maui, and Hawaii. On Lanai, there are a total of three populations containing an unknown number of individuals, one population is known from Keamuku Road, one from a fenced area on the dry plains of Kaena Point, and a population that was initially outplanted and now appears to be reproducing naturally in Kanepuu Preserve (GDSI 2000; HINHP Database 2000; Wesley Wong, Jr., formerly of Hawaii Division of Forestry and Wildlife (DOFAW), *in litt.* 1998).

Hibiscus brackenridgei ssp. *brackenridgei* occurs in lowland dry to mesic forest and shrubland from sea level to 800 m (2,625 ft) in elevation (Bates 1999; HINHP Database 2000). Associated plant species include *Dodonea viscosa, Canthium odoratum, Eurya sandwicensis* (anini), *Isachne distichophylla* (ohe), and *Sida fallax* (HINHP Database 2000).

The primary threats to *Hibiscus brackenridgei* ssp. *brackenridgei* on Lanai are habitat degradation; possible predation by pigs, goats, mouflon sheep (*Ovis musimon*), cattle, axis deer, and rats; competition with alien plant species; road construction; fire; and susceptibility to extinction caused by naturally occurring events or reduced reproductive vigor (59 FR 56333).

Melicope munroi

Melicope munroi, a long lived perennial of the citrus family (Rutaceae), is a sprawling shrub up to 3 m (10 ft) tall. The new growth of this species is minutely hairy. This species differs from other Hawaiian members of the genus in the shape of the leaf and the length of the inflorescence (a flower cluster) stalk (Stone et al. 1999). Flowering time, pollination vectors, seed dispersal agents, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown.

Historically, this species was known from the Lanaihale summit ridge of Lanai and above Kamalo on Molokai. Currently, *Melicope munroi* is only known from the Lanaihale summit ridge on Lanai (HINHP Database 2000; GDSI 2000). There are four scattered populations totaling an estimated 300 to 800 individuals on the Lanaihale summit, head of Hauola gulch, Waialala gulch, and the ridge of Waialala gulch (HINHP Database 2000; 64 FR 48307).

Melicope munroi is typically found on slopes in lowland wet shrublands, at elevations of 790 to 1,020 m (2,600 to 3,350 ft). Associated native plant taxa include *Diplopterygium pinnatum, Dicranopteris linearis, Metrosideros polymorpha, Cheirodendron trigynum* (olapa), *Coprosma* sp., *Broussaisia arguta,* other *Melicope* sp., and *Machaerina angustifolia* (uki) (HINHP Database 2000).

The major threats to *Melicope munroi* on Lanai are axis deer and the alien plant taxa *Leptospermum scoparium* and *Psidium cattleianum* (HINHP Database 2000). Random environmental events also threaten the one remaining population (64 FR 48307).

Portulaca sclerocarpa

Portulaca sclerocarpa of the purslane family (Portulacaceae), is a perennial herb with a fleshy tuberous taproot which becomes woody and has stems up to about 20 cm (8 in.) long. The stalkless, succulent, grayish-green leaves are almost circular in cross-section. Dense tufts of hairs are located in each leaf axil (point of divergence between a branch or leaf) and underneath the tight clusters of three to six stalkless flowers grouped at the ends of the stems. Sepals (one of the modified leaves comprising a flower calyx) have membranous edges and the petals are white, pink, or pink with a white base. The hardened capsules open very late or not at all, and contain glossy, dark reddish-brown seeds. This species differs from other native and naturalized species of the genus in Hawaii by its woody taproot, its narrow leaves, and the colors of its petals and seeds. Its closest relative, *P. villosa,* differs mainly in its thinner-walled, opening capsule (Wagner *et al.* 1999).

This species was observed in flower during March 1977, December 1977, and June 1978. The presence of juveniles indicated that pollination and germination were occurring (Service 1996b). Pollination vectors, seed dispersal agents, longevity of plants and seeds, specific environmental requirements, and other limiting factors are unknown.

Historically and currently, *Portulaca sclerocarpa* is found on an islet off the south coast of the island of Lanai, and on the island of Hawaii. The population on Poopoo Islet off the coast of Lanai contains about 10 plants (HINHP Database 2000; GDSI 2000; Service 1996b). This species grows on exposed ledges in thin soil in coastal communities (Wagner *et al.* 1999; HINHP Database 2000).

The major threats to *Portulaca sclerocarpa* on Lanai are herbivory (feeding on plants) by the larvae of an introduced sphinx moth (*Hyles lineata*) (Frank Howarth, Bishop Museum, *in litt* 2000); competition from introduced plants; and fire (59 FR 10305).

Spermolepis hawaiiensis

Spermolepis hawaiiensis, a member of the parsley family (Apiaceae), is a slender annual herb with few branches. Its leaves, dissected into narrow, lance-shaped divisions, are oblong to somewhat oval in outline and grow on stalks. Flowers are arranged in a loose, compound umbrella-shaped inflorescence arising from the stem, opposite the leaves. *Spermolepis hawaiiensis* is the only member of the genus native to Hawaii. It is distinguished from other native members of the family by being a non-succulent annual with an umbrella-shaped inflorescence (Constance and Affolter 1999). Little is known about the life history of *S. hawaiiensis.* Reproductive cycles, longevity, specific environmental requirements, and limiting factors are unknown (Service 1999).

Historically, *Spermolepis hawaiiensis* was known from Kauai, Oahu, Lanai, and the island of Hawaii (HINHP Database 2000). Currently it is extant on Kauai, Oahu, Molokai, Lanai, West Maui, and Hawaii (59 FR 56333; HINHP Database 2000). On Lanai, this species is known from three populations of 350 to 400 individuals: in the southern edge of Kapoho Gulch, Kamiki Ridge, and around 274 m (900 ft.) downslope of Puu Manu (HINHP Database 2000; Robert Hobdy, DOFAW, pers. comm. 2000).

Spermolepis hawaiiensis is known from rocky, steep slopes growing on ledges and pockets between elevations of 335 and 396 m (1,100 and 1,300 ft). Associated native plant species include *Dodonea viscosa, Panicum* spp. (panic grass), *Heteropogon contortus* (pili grass), *Lipochaeta lavarum* (nehe), and *Reyoldsia sandwicensis* (ohe) (HINHP Database 2000; R. Hobdy, pers. comm. 2000).

The primary threats to *Spermolepis hawaiiensis* on Lanai are habitat degradation by feral goats, competition with various alien plants such as *Lantana camara;* and erosion, landslides, and rockslides due to natural weathering which result in the death of individual plants as well as habitat destruction (59 FR 56333; Service 1999; R. Hobdy, pers. comm. 2000).

Tetramolopium remyi

Tetramolopium remyi, a short-lived perennial member of the sunflower family (Asteraceae), is a much branched, decumbent (reclining, with the end ascending) or occasionally erect shrub up to about 38 cm (15 in.) tall. Its leaves are firm, very narrow, and with the edges rolled inward when the leaf is mature. There is a single flower head per branch. The heads are each comprised of 70 to 100 yellow disk and 150 to 250 white ray florets. The stems, leaves, flower bracts, and fruit are covered with sticky hairs. *Tetramolopium remyi* has the largest flower heads in the genus. Two other species of the genus are known historically from Lanai, but both have purplish rather than yellow disk florets and from 4 to 60 rather than 1 flower head per branch (Lowrey 1999).

Tetramolopium remyi flowers between April and January (Lowrey 1986). Field observations suggest that the population size of the species can be profoundly affected by variability in annual precipitation; the adult plants may succumb to prolonged drought, but apparently there is a seedbank in the soil that can replenish the population during favorable conditions (Lowrey 1986; Service 1995). Such seed banks are of great importance for arid-dwelling plants to allow populations to persist through adverse conditions. The aridity of the area, possibly coupled with human-induced changes in the habitat and subsequent lack of availability of suitable sites for seedling establishment, may be a factor limiting population growth and/or expansion. Requirements of this taxon in these areas are not known, but success in greenhouse cultivation of these plants with much higher water availability implies that, although these plants are drought-tolerant, perhaps the dry conditions in which they currently exist are not optimum. Individual plants are probably not long-lived (Lowrey 1986). Pollination is hypothesized to be possibly by butterflies, bees, or flies. Seed dispersal agents, environmental requirements, and other limiting factors are unknown (Lowrey 1986; Service 1995).

Historically, the species was known from the Lahaina area of West Maui and Lanai. Currently, *Tetramolopium remyi* is only known from two populations on Lanai: one near Awalua Road and the other near Awehi Road, with a total of approximately 26 plants (GDSI 2000; HINHP Database 2000).

Tetramolopium remyi is found in red sandy loam soil in dry *Dodonea viscosa-Heteropogon contortus* communities at an elevation of about 230 m (755 ft). Commonly associated native species include *Bidens mauiensis, Waltheria indica* (uha loa), *Wikstroemia oahuensis* (akia), and *Lipochaeta lavarum* (HINHP Database 2000).

Browsing by deer and mouflon sheep and competition from invading weedy species, primarily *Andropogon viginicus* (broomsedge) and *Panicum maximum* (guinea grass), are the main threats to the species on Lanai. The plants are tiny and can easily be displaced and eliminated by invading exotic species. Fire is also a potential threat (Service 1995; 56 FR 47686).

Vigna o-wahuensis

Vigna o-wahuensis, a member of the legume family (Fabaceae), is a slender twining perennial herb with fuzzy stems. Each leaf is made up of three leaflets which vary in shape from round to linear, and are sparsely or moderately covered with coarse hairs. Flowers, in clusters of one to four, have thin, translucent, pale yellow or greenish yellow petals. The two lowermost petals are fused and appear distinctly beaked. The sparsely hairy calyx has asymmetrical lobes. The fruits are long slender pods that may or may not be slightly inflated and contain 7 to 15 gray to black seeds. This species differs from others in the genus by its thin yellowish petals, sparsely hairy calyx, and thin pods which may or may not be slightly inflated (Geesink *et al.* 1999).

Additional information on the life history of this plant, reproductive cycles, longevity, specific environmental requirements, and limiting factors are generally unknown (Service 1999).

Historically, *Vigna o-wahuensis* was known from Niihau, Oahu, and Maui (HINHP Database 2000). Currently, *V. o-wahuensis* is known from the islands of Molokai, Maui, Lanai, Kahoolawe, and Hawaii. There are no currently known populations on Niihau or Oahu (HINHP Database 2000). On Lanai, it is known from a 1986 collection made on the ''windward slopes of Kanepuu'' (GDSI 2000; HINHP Database 2000; Joel Lau, HINHP, *in litt.* 2000).

While typically reported from dry grassland and shrubland on Kahoolawe, Molokai, and Hawaii, the plant community and associated species, elevation, and threats are unknown on Lanai (HINHP Database 2000; J. Lau, HINHP, *in litt.* 2000; 59 FR 56333).

A summary of populations and landownership for these 19 plant species on Lanai is given in Table 3.

TABLE 3.—SUMMARY OF POPULATIONS AND LANDOWNERSHIP FOR 19 SPECIES ON LANAI

Species	Number of current populations	Landownership		
		Federal	State	Private
Abutilon eremitopetalum	1			X
Bonamia menziesii	3			X
Centaurium sebaeoides	1			X
Clermontia oblongifolia ssp. *mauiensis*	1			X
Ctenitis squamigera	3			X
Cyanea grimesiana ssp. grimesiana	2			X
Cyanea macrostegia ssp. gibsonii	7			X
Cyrtandra munroi	2			X
Gahnia lanaiensis	3			X
Hedyotis mannii	2			X
Hedyotis schlechtendahliana var. *remyi*	3			X
Hibiscus brackenridgei	3			X
Labordia tinifolia var. *lanaiensis*	3			X
Melicope munroi	4			X
Portulaca sclerocarpa	1			X
Spermolepis hawaiiensis	3			X
Tetramolopium remyi	2			X
Vigna o-wahuensis	1			X

TABLE 3.—SUMMARY OF POPULATIONS AND LANDOWNERSHIP FOR 19 SPECIES ON LANAI—Continued

Species	Number of current populations	Landownership		
		Federal	State	Private
Viola lanaiensis	5	.....	.....	X

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, *Bonamia menziesii, Gahnia lanaiensis, Hedyotis mannii* (as *Hedyotis thyrsoidea* var. *thyrsoidea*), *Hibiscus brackenridgei* (as *Hibiscus brackenridgei* var. *brackenridgei,* var. *mokuleianus,* and var. ''from Hawaii''), *Portulaca sclerocarpa, Solanum incompletum* (as *Solanum haleakalense* and *Solanum incompletum* var. *glabratum,* var. *incompletum,* and var. *mauiensis*), *Vigna o-wahuensis* (as *Vigna sandwicensis* var. *heterophylla* and var. *sandwicensis*), and *Viola lanaiensis* were considered endangered; *Cyrtandra munroi* and *Labordia tinifolia* var. *lanaiensis* were considered threatened; and, *Abutilon eremitopetalum, Ctenitis squamigera, Cyanea macrostegia* ssp. *gibsonii,* Melicope munroi (as *Pelea munroi*), and *Tetramolopium remyi* were considered to be extinct.

On July 1, 1975, we published a notice in the **Federal Register** (40 FR 27823) of our 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 our intention to review the status of the plant taxa named therein. As a result of that review, on June 16, 1976, we 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, including all of the above taxa except *Cyrtandra munroi, Labordia tinifolia* var. *lanaiensis,* and *Melicope munroi.* 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, and a 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, we 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. We published updated notices of review for plants on December 15, 1980 (45 FR 82479), September 27, 1985 (50 FR 39525), February 21, 1990 (55 FR 6183), September 30, 1993 (58 FR 51144), February 28, 1996 (61 FR 7596), and September 19, 1997 (62 FR 49398). A summary of the status categories for these Lanai plant species in the 1980–1997 notices of review can be found in Table 4(a).

The 20 plants at issue in this proposed rule were listed as endangered species under the Act between 1991 and 1999. A summary of the listing actions can be found in Table 4(b). At the time 17 of these plants were listed, we determined that designation of critical habitat was not prudent because designation would increase the degree of threat to the species and/or would not benefit the plant. These not prudent determinations, along with 229 others, were challenged in *Conservation Council for Hawaii* v. *Babbitt* 2 F. Supp. 2d 1280 (D. Haw.1998). On March 9, 1998, the United States District Court for the District of Hawaii directed us to review the prudency determinations for 245 listed plant species in Hawaii, including these species (2 F. Supp. 2d 1280 (D. Haw. 1998)). Among other things, the court held that in most cases we did not sufficiently demonstrate that the species are threatened by human activity or that such threats would increase with the designation of critical habitat. The court also held that we failed to balance any risks of designating critical habitat against any benefits (*Id.* at 1283–1285). For example, the court suggested that, before concluding critical habitat would not be prudent, we should consider whether designation might prevent an inadvertent act of destruction by educating the public.

Regarding our determination that designating critical habitat would have no additional benefits to the species above and beyond those already provided through the section 7 consultation requirement of the Act, the court ruled that we failed to consider the specific effect of the consultation requirement on each species (*Id.* at 1286–88). In addition, the court stated that we did not consider benefits outside of the consultation requirements. In the court's view, these potential benefits include substantive and procedural protections. The court held that substantively, designation establishes a ''uniform protection plan'' prior to consultation and indicates where compliance with section 7 of the Act is required. Procedurally, the court stated that the designation of critical habitat educates the public and State and local governments and affords them an opportunity to participate in the designation (*Id.* at 1288). The court also stated that private lands may not be excluded from critical habitat designation even though section 7 requirements apply only to Federal agencies. In addition to the potential benefit of informing the public and State and local governments of the listing and of the areas that are essential to the species' conservation, the court found that there may be Federal activity on the private property in the future, even though no such activity may be occurring there at the present (*Id.* at 1285–88). On August 10, 1998, the court ordered us to publish proposed critical habitat designations or non-designations for at least 100 species by November 30, 2000, and to publish proposed designations or non-designations for the remaining 145 species by April 30, 2002.

At the time we listed *Hedyotis schlechtendahliana* var. *remyi, Labordia tinifolia* var. *lanaiensis,* and *Melicope munroi* (64 FR 48307), we determined that designation of critical habitat was prudent and that we would develop critical habitat designations for these three taxa, along with seven others from Maui, Molokai, Lanai, or Kahoolawe (the Maui Nui species), at the same time we developed the designations for the 245 Hawaiian plant species. In *Conservation Council for Hawaii* v. *Babbitt,* CIV No. 99—000283 HG (D. Haw. August 19, 1999, February 16, 2000, and March 28, 2000), the court ordered us to publish proposed critical habitat designations for these 10 Maui

Nui species by November 30, 2000, and to publish final critical habitat designations by November 30, 2001. This notice and proposed rule responds to the court's orders.

To comply with the court orders, between now and April 30, 2002, we plan to publish seven notices of determinations of whether critical habitat is prudent, along with proposed rules as appropriate, in the following groupings: Kauai and Niihau; Maui and Kahoolawe; Lanai; Molokai; Northwest Hawaiian Islands; Hawaii; and Oahu. Each notice will contain proposed prudency determinations for species occurring on that island for which prudency determinations have not previously been proposed. Each proposed rule will also contain proposed designations or non-designations of critical habitat for each plant species known to occur from that island. Thus, a species that occurs on multiple islands may have critical habitat proposed in multiple rules.

The proposed prudency determinations and proposed rules for Kauai and Niihau were published in the **Federal Register** on November 7, 2000 (65 FR 66807). Proposals for Maui and Kahoolawe are being published concurrently with this rule.

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 the species is determined to be endangered or threatened. Our 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. At the time each plant was listed, we determined that designation of critical habitat was prudent for three of these plants (*Hedyotis schlechtendahliana* var. *remyi, Labordia tinifolia* ssp. *lanaiensis,* and *Melicope munroi*) and not prudent for the other plants because it would not benefit the plant and/or would increase the degree of threat to the species.

On November 30, 1998, we published a notice in the **Federal Register** requesting public comments on our reevaluation of whether designation of critical habitat is prudent for the 245 Hawaiian plants at issue (63 FR 65805). The comment period closed on March 1, 1999, and was reopened from March 24, 1999, to May 24, 1999 (64 FR 14209). We received over 100 responses from individuals, non-profit organizations, the State of Hawaii's Division of Forestry and Wildlife, county governments, and Federal agencies (U.S. Department of Defense—Army, Navy, Air Force). Only a few responses offered information on the status of individual plant species or on current management actions for one or more of the 245 Hawaiian plants. While many of the respondents expressed support for the designation of critical habitat for 245 Hawaiian plants, more than 80 percent opposed the designation of critical habitat for these plants. In general, these respondents opposed designation because they believed it will cause economic hardship, chill cooperative projects, polarize relationships with hunters, or potentially increase trespass or vandalism on private lands. In addition, commenters also cited a lack of information on the biological and ecological needs of these plants which they believed may lead to designation based on guesswork. The respondents who supported the designation of critical habitat cited that designation will—(1) provide a uniform protection plan for the Hawaiian Islands; (2) promote funding for management of these plants; (3) educate the public and State government; and (4) protect partnerships with landowners and build trust.

In early February, 2000, we hand-delivered a letter to representatives of the private landowner on Lanai requesting any information considered germane to the management of any of the 245 plants on the island, and containing a copy of the November 30, 1998, **Federal Register** notice, a map showing the general locations of the plants on Lanai, and a handout containing general information on critical habitat. On April 4, 2000, we met with representatives of the landowner to discuss their current land management activities. In addition, we met with Maui County DOFAW staff and discussed their management activities on Lanai.

On November 7, 2000, we published the first of the court-ordered prudency determinations and proposed critical habitat designations or non-designations for Kauai and Niihau plants (65 FR 66807). Proposals for Maui and Kahoolawe plants are being published concurrently with this proposal. We proposed that critical habitat was prudent for nine species (*Bonamia menziesii, Centarium sebaeoides, Clermontia oblongifolia* ssp. *mauiensis, Ctenitis squamigera, Cyanea grimesiana* ssp. *grimesiana, Cyrtandra munroi, Hibiscus brackenridgei, Spermolepis hawaiiensis,* and *Vigna o-wahuensis*) from Lanai that also occur on Kauai, Niihau, Maui, and/or Kahoolawe.

TABLE 4(A).—SUMMARY OF CANDIDACY STATUS FOR PLANT SPECIES FROM LANAI

Species	**Federal Register** Notice of Review				
	12/15/80	9/27/85	2/20/90	9/30/93	2/28/96
Abutilon eremitopetalum	C1	C1	C1		
Bonamia menziesii	C1	C1	C1		
Centaurium sebaeoides			C1		
Clermontia oblongifolia ssp. *mauiensis*			C1		
Ctenitis squamigera	C1*	C1*	C1*		
Cyanea grimesiana ssp.*grimesiana*	C1	C1		C2	
Cyanea macrostegia ssp. *gibsonii*	C1	C1	C1		
Cyrtandra munroi	C2	C2	C1		
Gahnia lanaiensis	C1	C1	C1		
Hedyotis mannii	C1*	C1*	C1		
Hedyotis schlechtendahliana var. *remyi*			C2	C2	C
Hibiscus brackenridgei	C1	C1	C1		
Labordia tinifolia var. *lanaiensis*	C2	C2	3C	3C	
Melicope munroi	C1*	C1*	C2	C2	C
Phyllostegia glabra var. *lanaiensis*	C1	C1	C1		
Portulaca sclerocarpa	C1	C1	C1		
Spermolepis hawaiiensis			C1		

TABLE 4(A).—SUMMARY OF CANDIDACY STATUS FOR PLANT SPECIES FROM LANAI—Continued

Species	Federal Register Notice of Review				
	12/15/80	9/27/85	2/20/90	9/30/93	2/28/96
Tetramolopium remyi	C1	C1	C1		
Vigna o-wahuensis	C1	C1	C1		
Viola lanaiensis	C1	C1	C1		

Key:
C: Taxa for which the Service has on file sufficient information on the biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. (The 1996 Notice of Review discontinued the use of different categories of candidates (as described below; candidates were redefined as species meeting the definition of former C1 species.)
C1: Taxa for which the Service has on file enough sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species.
C1*: Taxa of known vulnerable status in the recent past that may already have become extinct.
C2: Taxa for which there is some evidence of vulnerability, but for which there are not enough data to support listing proposals at this time.
3A: Taxa for which the Service has persuasive evidence of extinction. If rediscovered, such taxa might acquire high priority for listing.

Federal Register Notices of Review

1980: 45 FR 82479
1985: 50 FR 39525
1990: 55 FR 6183
1993: 58 FR 51144
1996: 61 FR 7596

TABLE 4(B).—SUMMARY OF LISTING ACTIONS FOR PLANT SPECIES FROM LANAI

Species	Federal status	Proposed rule		Final rule	
		Date	**Federal Register**	Date	**Federal Register**
Abutilon eremitopetalum	E	09/17/90	55 FR 38236	09/20/91	56 FR 47686
Bonamia menziesii	E	09/14/93	58 FR 48012	11/10/94	59 FR 56333
Centaurium sebaeoides	E	09/28/90	55 FR 39664	10/29/91	56 FR 55770
Clermontia oblongifolia ssp. *mauiensis*	E	05/24/91	56 FR 23842	05/15/92	57 FR 20772
Ctenitis squamigera	E	06/24/93	58 FR 34231	09/09/94	59 FR 49025
Cyanea grimesiana ssp. *grimesiana*	E	10/02/95	60 FR 51417	10/10/96	61 FR 53108
Cyanea macrostegia ssp. *gibsonii*	E	09/17/90	55 FR 38236	09/20/91	56 FR 47686
Cyrtandra munroi	E	05/24/91	56 FR 23842	05/15/92	57 FR 20772
Gahnia lanaiensis	E	09/17/90	55 FR 38236	09/20/91	56 FR 47686
Hedyotis mannii	E	09/20/91	56 FR 47718	10/08/92	57 FR 46325
Hedyotis schlechtendahliana var. *remyi*	E	05/15/97	62 FR 26757	09/03/99	64 FR 48307
Hibiscus brackenridgei	E	09/14/93	58 FR 48012	11/10/94	59 FR 56333
Labordia tinifolia var. *lanaiensis*	E	05/15/97	62 FR 26757	09/03/99	64 FR 48307
Melicope munroi	E	05/15/97	62 FR 26757	09/03/99	64 FR 48307
Phyllostegia glabra var. *lanaiensis*	E	09/17/90	55 FR 38236	09/20/91	56 FR 47686
Portulaca sclerocarpa	E	12/17/92	57 FR 59951	03/04/94	59 FR 10305
Spermolepis hawaiiensis	E	09/14/93	58 FR 48012	11/10/94	59 FR 56333
Tetramolopium remyi	E	09/17/90	55 FR 38236	09/20/91	56 FR 47686
Vigna o-wahuensis	E	09/14/93	58 FR 48012	11/10/94	59 FR 56333
Viola lanaiensis	E	09/17/90	55 FR 38236	09/20/91	56 FR 47686

Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) the specific areas within the geographic 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 (ii) specific areas outside the geographic 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 that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as ''* * * the direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' Aside from the added protection that may be provided under section 7, the Act does not provide other forms of protection to lands designated as critical habitat. Because consultation under section 7 of the Act does not apply to activities on private or other non-Federal lands that do not involve a Federal nexus, critical habitat

designation would not afford any additional protections under the Act against such activities.

In order to be included in a critical habitat designation, the habitat must first be ''essential to the conservation of the species.'' Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (*i.e.*, areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Section 4 requires that we designate critical habitat at the time of listing and based on what we know at the time of the designation. When we designate critical habitat at the time of listing or under short court-ordered deadlines, we will often not have sufficient information to identify all areas of critical habitat. We are required, nevertheless, to make a decision and thus must base our designations on what, at the time of designation, we know to be critical habitat.

Within the geographic area occupied by the species, we will designate only areas currently known to be essential. Essential areas should already have the features and habitat characteristics that are necessary to sustain the species. We will not speculate about what areas might be found to be essential if better information became available, or what areas may become essential over time. If the information available at the time of designation does not show that an area provides essential life cycle needs of the species, then the area should not be included in the critical habitat designation. Within the geographic area occupied by the species, we will not designate areas that do not now have the primary constituent elements , as defined at 50 CFR 424.12(b), that provide essential life cycle needs of the species.

Our regulations state that, ''The Secretary shall designate as critical habitat areas outside the geographic area presently occupied by the species only when a designation limited to its present range would be inadequate to ensure the conservation of the species.'' (50 CFR 424.12(e)). Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species require designation of critical habitat outside of occupied areas, we will not designate critical habitat in areas outside the geographic area occupied by the species.

The Service's Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (Vol. 59, p. 34271), provides criteria, establishes procedures, and provides guidance to ensure that decisions made by the Service represent the best scientific and commercial data available. It requires Service biologists, to the extent consistent with the Act and with the use of the best scientific and commercial data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are critical habitat, a primary source of information should be the listing package for the species. Additional information may be obtained from a recovery plan, articles in peer-reviewed journals, conservation plans developed by states and counties, scientific status surveys and studies, and biological assessments or other unpublished materials (*i.e.* gray literature).

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, all should understand that critical habitat designations do *not* signal that habitat outside the designation is unimportant or may not be required for recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under Section 7(a)(1) and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the Section 9 take prohibition, as determined on the basis of the best available information at the time of the action. We specifically anticipate that federally funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Prudency Redeterminations

As previously stated, designation of critical habitat is not prudent when one or both of the following situations exist: (i) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat to the species; or (ii) such designation of critical habitat would not be beneficial to the species (50 CFR 424.12(a)(1)).

To determine whether critical habitat would be prudent for each of the eight species at issue, we analyzed the potential threats and benefits for each species in accordance with the court's order. One species, *Phyllostegia glabra* var. *lanaiensis,* known only from Lanai, is no longer extant in the wild. *Phyllostegia glabra* var. *lanaiensis* was last collected on ''northern Lanai'' on June, 6, 1914 (HINHP Database 2000). In addition, this species is not known to be in storage or under propagation. Therefore, we believe it may be extinct. Under these circumstances, we propose that designation of critical habitat for *Phyllostegia glabra* var. *lanaiensis* is not prudent because such designation would be of no benefit to this species. If this species is rediscovered, we may revise this proposal to incorporate or address new information as new data becomes available. See 16 U.S.C. 1532(5)(B); 50 CFR 424.12(f)).

Due to low numbers of individuals and/or populations and their inherent immobility, the other seven plants may be vulnerable to unrestricted collection, vandalism, or disturbance. However, we examined the evidence available for each of these taxa and have not, at this time, found specific evidence of taking, vandalism, collection or trade of these taxa or of similarly situated species. Consequently, while we remain concerned that these activities could potentially threaten these seven plant species in the future, consistent with applicable regulations (50 CFR 424.12(a)(1)(I)) and the court's discussion of these regulations, we do not find that any of these species are currently threatened by taking or other human activity, which threats would be exacerbated by the designation of critical habitat.

In the absence of finding that critical habitat would increase threats to a species, if there are any benefits to critical habitat designation, then a prudent finding is warranted. The potential benefits include: (1) Triggering section 7 consultation in new areas where it would not otherwise occur because, for example, it is or has become unoccupied or the occupancy is in question; (2) focusing conservation activities on the most essential areas; (3) providing educational benefits to State or county governments or private entities; and, (4) preventing people from causing inadvertent harm to the species.

In the case of these seven species, there would be some benefits to critical habitat. The primary regulatory effect of critical habitat is the section 7

requirement that Federal agencies refrain from taking any action that destroys or adversely affects critical habitat. While all of these species are located exclusively on non-Federal lands with limited Federal activities, there may be Federal actions affecting these lands in the future. While a critical habitat designation for habitat currently occupied by these species would not be likely to change the section 7 consultation outcome because an action that destroys or adversely modifies such critical habitat would also be likely to result in jeopardy to the species, there may be instances where section 7 consultation would be triggered only if critical habitat were designated. There may also be some educational or informational benefits to the designation of critical habitat. Educational benefits include the notification of land owner(s), land managers, and the general public of the importance of protecting the habitat of these species and dissemination of information regarding their essential habitat requirements.

Therefore, we propose that critical habitat is prudent for seven species (*Abutilon eremitopetalum, Cyanea macrostegia* ssp. *gibsonii, Gahnia lanaiensis, Hedyotis mannii, Portulaca sclerocarpa, Tetramolopium remyi,* and *Viola lanaiensis*) because the potential benefits of designating critical habitat essential for the conservation of these species outweigh the risks, resulting from human activity, of designation. We propose that designation of critical habitat is not prudent for one species, *Phyllostegia glabra* var. *lanaiensis,* since we believe it may be extinct, and because such a designation would not be beneficial to this species.

Primary Constituent Elements

In accordance with section 4(b)(2) of the Act and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider those physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. Such requirements include, but are not limited to, space for individual and population growth, and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing of offspring, germination, or seed dispersal; and, habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

As stated above in the discussion about each of the 19 species, very little is known about the specific physical and biological requirements of these species. As such, we are proposing to define the primary constituent elements on the basis of general habitat features of the areas in which the plant species are currently found, such as the type of plant community and their physical location (*e.g.,* steep rocky cliffs, talus slopes, stream banks) and elevation. Therefore, the descriptions of the physical elements of the locations of each of these species and the plant community associated with the species, as described in the **SUPPLEMENTARY INFORMATION:** *Discussion of the Plant Taxa* section above, constitute the primary constituent elements for these species.

The currently known primary constituent elements of critical habitat for *Vigna o-wahuensis* on Lanai are unknown because we are not able, at this time, to ascertain the specific location of *Vigna o-wahuensis* on Lanai. This species was last collected 14 years ago from the ''windward slopes of Kanepuu'' (HINHP Database 2000; J. Lau, *in litt.* 2000). We are not, therefore, designating critical habitat for *Vigna o-wahuensis,* on Lanai. However, critical habitat has been proposed for this species on Maui and Kahoolawe, and may be considered on the island of Hawaii. Future field surveys of this relatively large area encompassed by the ''windward slopes of Kanepuu'' may lead to a rediscovery of the location of this species and may enable us to determine the habitat components essential for the conservation of *Vigna o-wahuensis* on Lanai.

Methods for Selection of Areas for Proposed Critical Habitat Designations

We have defined primary constituent elements based on the general habitat features of the areas in which they currently occur such as the type of plant community in which the plants occur, their physical location (*e.g.,* steep rocky cliffs, talus slopes, stream banks), and elevation. The areas we propose to designate as critical habitat provide some or all of the habitat components essential for the conservation of 18 of the 19 plant species.

Critical habitat may also include areas outside the geographic area presently occupied by a species upon a determination that such areas are essential to the conservation of the species (16 U.S.C. 1532 (5)(A)(ii)). This may include, for example, potentially suitable unoccupied habitat that is important to the recovery of the species. We have not included such areas in the proposed designations for these 18 species because of our limited knowledge of the historical range (the geographical area outside the area presently occupied by the species), and our lack of more detailed information on the specific physical or biological features essential for the conservation of the species that would be needed, for instance, to determine where to reintroduce a species.

Historical (pre-1970), or even post-1970, records for a species may be based on herbarium specimens that contain only the most rudimentary collection information, such as only the name of the island from which the specimen was collected or a general place name (*e.g.,* north Lanai and Lanaihale). In the main Hawaiian Islands, climatic and ecological conditions such as rainfall, elevation, slope, aspect, *etc.,* may vary dramatically within a relatively short distance. Therefore, a simple place name does not provide adequate information on the physical and biological features that may have occurred there or may occur there now.

The unpredictable distribution of Hawaiian plant species also makes it difficult to designate potentially suitable unoccupied habitat. For example, currently a species may be known from northern and southern (or eastern and western) locations on an island but not from intervening locations in similar habitat. Based on the best available information, we are unable to determine whether a species once occurred in the intervening areas and disappeared from there prior to Polynesian or European times (thus never having been collected or documented there), or simply never occurred there.

We consider reintroduction (the planting of propagated individuals or seedlings into an area) to be an acceptable method to try to achieve plant species recovery. However, native plant reintroductions are difficult, and successful efforts are not common. We do not know enough about these 18 species to identify areas where reintroductions are likely to be successful. We will continue to support experimental efforts to reintroduce species that may eventually provide us with additional information on the physical and biological features essential to the conservation of these species, and thus, may eventually result in identification of unoccupied habitat for future designation.

As required by the Act and regulations (section 4(b)(2) and 50 CFR 424.12), we used the best scientific

information available to determine areas that contain those physical and biological features that are essential for the survival and recovery of the 18 plant species. This information included site-specific species information from the HINHP and our rare plant database, species information from the Center for Plant Conservation's (CPC) rare plant monitoring database housed at the University of Hawaii's Lyon Arboretum, recent biological surveys and reports, our recovery plans for 15 of these 18 species, discussions with botanical experts, and recommendations (see below) from the Hawaii and Pacific Plant Recovery Coordinating Committee (HPPRCC) (CPC *in litt.* 1999; HINHP Database 2000, HPPRCC 1998; Service 1995, 1996a, 1996b, 1997, 1998, 1999).

In 1994, the HPPRCC initiated an effort to identify and map habitat it believed to be important for the recovery of 282 endangered and threatened Hawaiian plant species. The HPPRCC identified these areas on most of the islands in the Hawaiian chain, and in 1999, we published them in our *Recovery Plan for the Multi-Island Plants* (Service 1999). Because the HPPRCC identified essential habitat areas for all listed, proposed, and candidate plant species and evaluated species of concern to determine if essential habitat areas would provide for their habitat needs as well, the HPPRCC's mapping of habitat is distinct from the regulatory designation of critical habitat, as defined by the Act. While these habitat maps are a planning tool to focus conservation efforts on the areas that may be most important to the conservation of Hawaii's listed plant species, as well as other plant species of concern, it does not substitute for the more exacting regulatory process of designating critical habitat. Therefore, the critical habitat designations proposed in this rule do not include all of the habitat identified by the HPPRCC. In addition, the HPPRCC expects there will be subsequent efforts to further refine the locations of important habitat areas and that new survey information or research findings may also lead to additional refinements (HPPRCC 1998).

For these 18 plant species from Lanai, currently occupied habitat was examined and critical habitat boundaries were delineated in such a way that locations with a high density of endangered plants could be depicted clearly (multi-species units). However, these multi-species critical habitat units are not homogenous or uniform in nature, and critical habitat units often encompass a number of plant community types.

To examine plant occurrences, every current (post-1970) location of every species was delineated within a 536 m (1,760 ft) radius circle with an additional 50 m (164 ft) added to the radius of each location, in order to insure enough area to provide for the proper ecological functioning of the habitat immediately supporting the plant, for a total of 586 m (1,924 ft) radius. This radius is consistent with the accuracy of the mapped locations of the plant(s), and is based on the standard mapping methodology for rare species used by the HINHP (1996). The additional 50 m (164 ft) is consistent with the guidelines identified in the recovery plans for these species for minimum-sized enclosures for rare plants (Service 1995, 1996a, 1996b, 1997, 1998, 1999). In cases where there were isolated species locations, a circular area with a radius of roughly 586 m (1,924 ft) is proposed as critical habitat (HINHP 1996; Service 1995, 1996a, 1996b, 1997, 1998, 1999).

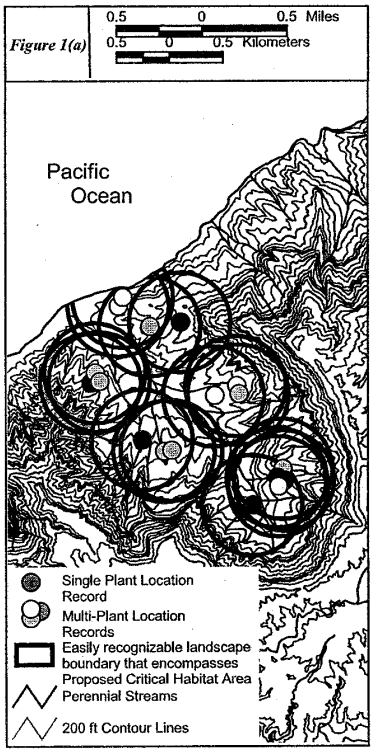
The manner in which we delineated each multi-species proposed critical habitat unit are as follows:

(1) Known current locations of each species were delineated using the guidelines explained above (Figure 1(a)).

(2) The perimeter boundaries of individual circular areas were connected to form unit area boundaries (Figure 1(b)).

(3) Unit area boundaries were delineated to follow significant topographic features (50 CFR 424.12(c)) such as coastlines, ridgelines, and valleys (Figure 1(c)).

These delineation methods were used to facilitate identification of boundary lines and to aid in implementation of on-the-ground conservation measures. In delineating critical habitat units we made an effort to avoid developed areas such as towns, agricultural lands, and other lands unlikely to contribute to the conservation of these 18 species. Within the critical habitat boundaries, adverse modification would only generally occur if the primary constituent elements are affected. Therefore, not all activities within critical habitat would trigger an adverse modification conclusion. Existing features and structures within proposed areas, such as buildings, roads, aqueducts, telecommunications equipment, arboreta and gardens, heiaus (pre-Christian place of worship, shrine), and other man-made features, do not contain, and are not likely to develop, constituent elements. Therefore, unless a Federal action related to such features or structures indirectly affected nearby habitat containing the primary constituent elements, operation and maintenance of such features or structures would not be impacted by the designation of critical habitat.



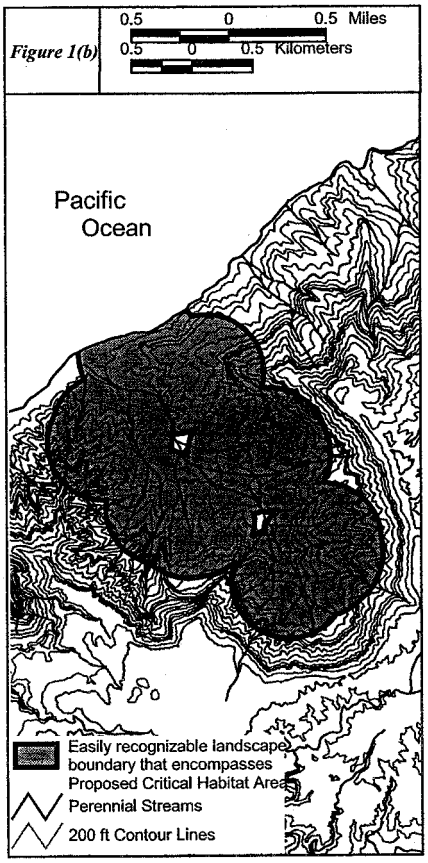


Figure 1(b)

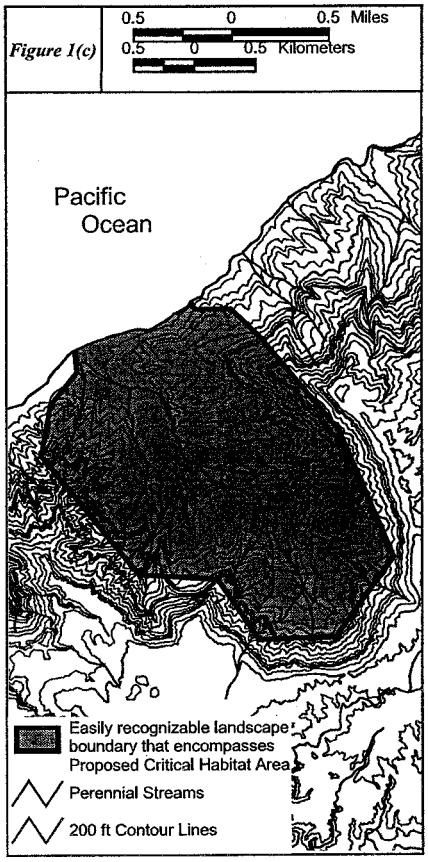


Figure 1(c)

All currently occupied sites containing one or more of the primary constituent elements considered essential to the conservation of these 18 plant species were examined to determine if additional special management considerations or protection are required above those currently provided. We reviewed all available management information on these plants at these sites including published reports and surveys; annual performance reports; forestry management plans; grants; memoranda of understanding and cooperative agreements; State of Hawaii, Division of Forestry and Wildlife (DOFAW) planning documents; internal letters and memos; biological assessments and environmental impact statements; and, section 7 consultations. Additionally, we contacted the major private landowner on Lanai by mail and we met with the landowner's representatives in April 2000 to discuss their current management for the plants on their lands. We also met with Maui County DOFAW office staff to discuss management activities they are conducting on Lanai.

Pursuant to the definition of critical habitat in section 3 of the Act, any area so designated must also require ''special managment considerations or protections.'' Adequate special management or protection is provided by a legally operative plan that addresses the maintenance and improvement of the essential elements and provides for the long-term conservation of the species. The Service considers a plan adequate when it meets all of the following three criteria: (1) The plan provides a conservation benefit to the species (*i.e.,* the plan must maintain or provide for an increase in the species' population or the enhancement or restoration of its habitat within the area covered by the plan; (2) the plan provides assurances that the management plan will be implemented (*i.e.,* those responsible for implementing the plan are capable of accomplishing the objectives, have an implementation schedule and/or have adequate funding to implement the management plan); and, (3) the plan provides assurances the conservation plan will be effective (*i.e.,* it identifies biological goals, has provisions for reporting progress, and is of a duration sufficient to implement the plan and achieve the plan's goals and objectives). If an area is covered by a plan that meets these criteria, it does not constitute critical habitat as defined by the Act.

In determining and weighing the relative significance of the threats that would need to be addressed in management plans or agreements, we considered the following:

(1) The factors that led to the listing of the species, as described in the final rules for listing each of the species. For all or nearly all endangered and threatened plants in Hawaii, the major threats include adverse impacts due to non-native plant and animal species. Direct browsing, digging, and trampling by ungulates, including pigs, goats, cattle, sheep, and deer, and direct competition from non-native plants have led to the decline of Hawaii's native flora (Cuddihy and Stone 1990; Loope 1998; Scott *et al.* 1986; Smith 1985; Stone 1985; Service 1995, 1996a, 1996b, 1997, 1998, 1999; Vitousek 1992; Wagner *et al.* 1985). Ungulate activity in most areas results in an increase of non-native plants because most of these non-native plants are able to colonize newly disturbed areas more quickly and effectively than Hawaii's native plants (Cuddihy and Stone 1990; Mack 1992; Scott *et al.* 1986; Smith 1985; Tunison *et al.* 1992; Service 1995, 1996a, 1996b, 1997, 1998, 1999).

(2) The recommendations from the HPPRCC in their 1998 report (''Habitat Essential to the Recovery of Hawaiian Plants''). As summarized in this report, recovery goals for endangered Hawaiian plant species cannot be achieved with ungulates (*e.g.,* pigs, goats, deer, and sheep) present in Essential Habitat Areas.

(3) The management actions needed for assurance of survival and ultimate recovery of Hawaii's endangered plants. These actions are described in our recovery plans for 15 of the 18 species (Service 1995, 1996a, 1996b, 1997, 1998, 1999), in the HPPRCC (1998) report, and in various other documents and publications relating to plant conservation in Hawaii (Cuddihy and Stone 1990; Mueller-Dombois 1985; Smith 1985; Stone 1985; Stone *et al.* 1992). These actions include, but are not limited to, the following: (1) Feral ungulate control; (2) non-native plant control; (3) rodent control; (4) invertebrate pest control; (5) fire control; (6) maintenance of genetic material of the endangered and threatened plant species; (7) propagation, reintroduction, and/or augmentation of existing populations into areas deemed essential for the recovery of these species; (8) on-going management of the wild, outplanted, and augmented populations; (9) habitat management and restoration in areas deemed essential for the recovery of these species; and (10) monitoring of the wild, outplanted, and augmented populations.

In general, taking all of the above recommended management actions into

account, the following management actions are ranked in order of importance. It should be noted, however, that, on a case-by-case basis, some of these actions may rise to a higher level of importance for a particular species or area, depending on the biological and physical requirements of the species and the location(s) of the individual plants. These actions include, but are not limited to, the following: (1) Feral ungulate control; (2) non-native plant control; (3) rodent control; (4) invertebrate pest control; (5) fire control; (6) maintenance of genetic material of the endangered and threatened plants species; (7) propagation, reintroduction, and/or augmentation of existing populations into areas deemed essential for the recovery of these species; (8) ongoing management of the wild, outplanted, and augmented populations; (9) maintenance of natural pollinators and pollinating systems, when known; (10) habitat management and restoration in areas deemed essential for the recovery of the species; (11) monitoring of the wild, outplanted, and augmented populations; (12) rare plant surveys; and (13) control of human activities and access.

As shown in Table 3, these 18 species of plants occur on private land on the island of Lanai. Information received in response to our two public notices, and meetings with representatives of the landowner and Maui County DOFAW staff, indicated that there is little on-going conservation management for these plants, except as noted below. Without management plans and assurances that the plans will be implemented, we are unable to find that the land in question does not require special management or protection.

One species (*Bonamia menziesii*) is reported from The Nature Conservancy of Hawaii's Kanepuu Preserve which is located in the northeast central portion of Lanai (GDSI 2000; HINHP Database 2000; The Nature Conservancy of Hawaii (TNCH) 1997). This preserve was established by a grant of a perpetual conservation easement from the private landowner to TNC and is included in the State's Natural Area Partnership (NAP) program, which provides matching funds for the management of private lands that have been permanently dedicated to conservation (TNCH 1997).

Under the NAP program, the State of Hawaii provides matching funds on a two-for-one basis for management of private lands dedicated to conservation. In order to qualify for this program, the land must be dedicated in perpetuity through transfer of fee title or a conservation easement to the State or a cooperating entity. The land must be managed by the cooperating entity or a qualified landowner according to a detailed management plan approved by the Board of Land and Natural Resources. Once approved, the 6-year partnership agreement between the State and the managing entity is automatically renewed each year so that there is always 6 years remaining in the term, although the management plan is updated and funding amounts are re-authorized by the board at least every 6 years. By April 1 of any year, the managing partner may notify the State that it does not intend to renew the agreement; however, in such case the partnership agreement remains in effect for the balance of the existing 6 year term, and the conservation easement remains in full effect in perpetuity. The conservation easement may be revoked by the landowner only if State funding is terminated without the concurrence of the landowner and cooperating entity. Prior to terminating funding, the State must conduct one or more public hearings. The NAP program is funded through real estate conveyance taxes which are placed in a Natural Area Reserve Fund. Participants in the NAP program must provide annual reports to the State Department of Land and Natural Resources (DLNR), and DLNR makes annual inspections of the work in the reserve areas. *See* Haw. Rev. Stat. Secs. 195–1–195–11, and Hawaii Administrative Rules Sec.13–210.

The management program within the preserve is documented in long-range management plans and yearly operational plans. These plans detail management measures that protect, restore, and enhance the rare plants and their habitats within the preserve (TNCH 1997, 1998, 1999). These management measures address the factors which led to the listing of this species including control of non-native species of ungulates, rodents, and weeds; and fire control. In addition, habitat restoration and monitoring are also included in these plans.

The primary goals within Kanepuu Preserve are to: (1) Control non-native species; (2) suppress wildfires; and (3) restore the integrity of the dryland forest ecosystem through monitoring and research. Specific management actions to address feral ungulates include the replacement of fences around some of the management units with Benzinal-coated wire fences; staff hunting and implementation of a volunteer hunting program with the DLNR. Additionally, a small mammal control program has been established to prevent small mammals from damaging rare native species and limit their impact on the preserve's overall native biota.

To prevent further displacement of native vegetation by non-native plants, a non-native plant control plan has been developed, which includes monitoring of previously treated areas, and the control of non-native plants in management units with restoration projects.

The fire control program focuses on suppression and pre-suppression. Suppression activities consist of coordination with State and county fire-fighting agencies to develop a Wildfire Management Plan for the preserve (TNCH 1998). Pre-suppression activities include mowing inside and outside of the fence line to minimize fuels.

A restoration, research and monitoring program has been developed at Kanepuu to create a naturally regenerating *Nestegis sandwicensis-Diospyros sandwicensis* dryland forest, and expand the current range of native-dominated vegetation. Several years of casual observation indicate that substantial natural regeneration is occurring within native forest patches in the deer-free units (TNCH 1999). A draft of the Kanepuu Restoration Plan was completed in June 1999. This plan identifies sites for rare plant outplanting and other restoration activities. Monitoring is an important component to measure the success or failure rate of the animal and weed control programs. Management of these non-native species control programs is continually amended to preserve the ecological integrity of the preserve.

Because this plant and its habitat within the preserve are protected and managed, this area is not in need of special management considerations or protection. Therefore, we have determined that the private land within Kanepuu Preserve does not meet the definition of critical habitat in the Act, and we are not proposing to designate this land as critical habitat. Should the status of this reserve change, for example, by non-renewal of the partnership agreement or termination of NAP funding, we will reconsider whether it meets the definition of critical habitat, and if so, we may propose to amend critical habitat to include the reserve at that time (50 CFR 424.12(g)).

We believe that Kanepuu Preserve is the only potential critical habitat area on Lanai at this time that does not require special management considerations or protection. However, we are specifically soliciting comments on the appropriateness of this approach. If we receive information during the public comment period that any of the

lands within the proposed designations are actively managed to promote the conservation and recovery of the 18 listed species at issue in this proposed designation, in accordance with long term conservation management plans or agreements, and there are assurances that the proposed management actions will be implemented and effective, we can consider this information when making a final determination of critical habitat. We are also soliciting comments on whether future development and approval of conservation measures (*e.g.,* Conservation Agreements, Safe Harbor Agreements) should trigger revision of designated critical habitat to exclude such lands and, if so, by what mechanism.

In summary, the proposed critical habitat areas described below constitute our best assessment of the physical and biological features needed for the conservation of these 18 plant species and the special management needs of the species, and are based on the best scientific and commercial information available and described above. We put forward this proposal acknowledging that we have incomplete information regarding many of the primary biological and physical requirements for these species. However, both the Act and the relevant court orders require us to proceed with designation at this time based on the best information available. As new information accrues, we may reevaluate which areas warrant critical habitat designation. We anticipate that comments received through the public review process and from any public hearings, if requested, will provide us with additional information to use in our decision-making process and in assessing the potential impacts of designating critical habitat for one or more of these species.

The approximate areas of proposed critical habitat, all under private ownership, are shown in Table 5. Proposed critical habitat includes habitat for these 18 species predominantly on the eastern side of Lanai in the Lanaihale area. Lands proposed as critical habitat have been divided into 11 units. A brief description of each unit is presented below.

Descriptions of Critical Habitat Units

Lanai A

The proposed unit Lanai A provides critical habitat for eleven species: *Clermontia oblongifolia* ssp. *mauiensis, Cyanea grimesiana* ssp. *grimesiana, Cyanea macrostegi* ssp. *gibsonii, Cyrtandra munroi, Ctenitis squamigera, Gahnia lanaiensis, Hedyotis mannii, Hedyotis schlechtendahliana* var. *remyi, Labordia tinifolia* var. *lanaiensis, Melicope munroi,* and *Viola lanaiensis.* This unit contains a total of 1,060 ha (2,619 ac). The land contained within this unit is owned solely by a private owner. The natural features found in this unit are portions of Hulopoe Gulch, Kaiholena Gulch, Puu Kilea, Hookio Gulch, Waialala Gulch, Kunoa Gulch, Puu None, Puu Alii, Puu Aalii, Hauola Gulch, Lanaihale, Puu Kole, Haalelepaakai, Waiakaiole Gulch, Puhielelu Ridge, Paliakoae Gulch, Waiapaa Gulch, Kapano Gulch, Kehewai Ridge, and Kahinahina Ridge. This unit is bound on the southwest by Kaluanui and Hii Flats.

TABLE 5.—APPROXIMATE PROPOSED CRITICAL HABITAT AREA BY UNIT, LANAI, MAUI COUNTY, HAWAII

Unit name	State	Private	Federal	Total
Lanai A	N/A	1,060 ha (2,619 ac)	N/A	1,060 ha (2,619 ac)
Lanai B	N/A	115 ha (284 ac)	N/A	115 ha (284 ac)
Lanai C	N/A	115 ha (284 ac)	N/A	115 ha (284 ac)
Lanai D	N/A	115 ha (284 ac)	N/A	115 ha (284 ac)
Lanai E	N/A	115 ha (284 ac)	N/A	115 ha (284 ac)
Lanai F	N/A	157 ha (389 ac)	N/A	157 ha (389 ac)
Lanai G	N/A	1 ha (2 ac)	N/A	1 ha (2 ac)
Lanai H	N/A	115 ha (285 ac)	N/A	115 ha (285 ac)
Lanai I	N/A	117 ha (289 ac)	N/A	117 ha (289 ac)
Lanai J	N/A	43 ha (106 ac)	N/A	43 ha (106 ac)
Total	N/A	1,953 ha (4,826 ac)	N/A	1,953 ha (4,826 ac)

Lanai B

The proposed unit Lanai B provides critical habitat for one species: *Spermolepis hawaiiensis*. This unit contains a total of 115 ha (284 ac). The land contained within this unit is owned solely by a private owner. The natural features found in this unit are small portions of Kawaiu and Kapoho Gulches.

Lanai C

The proposed unit Lanai C provides critical habitat for one species: *Tetramolopium remyi*. This unit contains a total of 115 ha (284 ac). The land contained within this unit is owned solely by a private owner. The natural features found in this unit are Mauna o Umi, Kaokai and portions of Awehi Gulch.

Lanai D

The proposed unit Lanai D provides critical habitat for one species: *Bonamia menziesii*. This unit contains a total of 115 ha (284 ac). The land contained within this unit is owned solely by a private owner. The natural feature found in this unit is a portion of Puhielelu Ridge.

Lanai E

The proposed unit Lanai E provides critical habitat for one species: *Abutilon eremitopetalum*. This unit contains a total of 115 ha (284 ac). The land contained within this unit is owned solely by a private owner. The natural features found in this unit are portions of Kehowai Ridge and Kahea Gulch.

Lanai F

The proposed unit Lanai F provides critical habitat for two species: *Centaurium sebaeoides* and *Hibiscus brackenridgei*. This unit contains a total of 157 ha (389 ac). The land contained within this unit is owned solely by a private owner. The natural features found in this unit are portions of Hinuhinu Pali, Naio Gulch, and Maunalei Gulch.

Lanai G

The proposed unit Lanai G provides critical habitat for one species: *Portulaca sclerocarpa*. This unit contains a total of 1 ha (2 ac). The land contained within this unit is owned solely by a private owner. This unit is Poopoo Islet.

Lanai H

The proposed unit Lanai H provides critical habitat for one species: *Tetramolopium remyi*. This unit contains a total of 115 ha (285 ac). The land contained within this unit is owned solely by a private owner.

Lanai I

The proposed unit Lanai I provides critical habitat for one species: *Spermolepis hawaiiensis*. This unit contains a total of 117 ha (289 ac). The land contained within this unit is owned solely by a private owner. The natural features found in this unit are portions of Kaonaohiokala Ridge, Kaa Gulch, Kamiki Ridge, and Palea Ridge.

Lanai J

The proposed unit Lanai J provides critical habitat for one species: *Hibiscus brackenridgei*. This unit contains a total of 43 ha (106 ac). The land contained within this unit is owned solely by a private owner. The natural feature found in this unit is Kaena Point.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat to the extent that the action appreciably diminishes the value of the critical habitat for the survival and recovery of the species. When multiple units of critical habitat are designated, each unit may serve as the basis of a jeopardy analysis if protection or different facets of the species' life cycle or its distribution are essential to the species as a whole for both its survival and recovery. Individuals, organizations, States, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding.

Under section 7(a) of the Act, 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 designated or proposed. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(4) and regulations at 50 CFR 402.10 requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory.

We may issue a formal conference report if requested by a Federal agency. Formal conference reports on proposed critical habitat contain a biological opinion that is prepared according to 50 CFR 402.14, as if critical habitat were designated. We may adopt the formal conference report as a biological opinion if the critical habitat is designated, if no significant new information or changes in the action alter the content of the opinion. See 50 CFR 402.10(d)).

If a species is listed or critical habitat is designated, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with us. Through this consultation, we would advise the agencies whether the permitted actions would likely jeopardize the continued existence of the species or adversely modify critical habitat.

When we issue a biological opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. Reasonable and prudent alternatives are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions under certain circumstances, including instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control has been retained or is authorized by law. Consequently, some Federal agencies may request reinitiation of consultation or conferencing with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

Section 4(b)(8) of the Act requires us to briefly describe and evaluate in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat would be those that alter the primary constituent elements to the extent that the value of critical habitat for both the survival and recovery of any one of the 18 species is appreciably reduced. We note that such activities may also jeopardize the continued existence of the species.

Activities that, when carried out, funded, or authorized by a Federal agency, may directly or indirectly destroy or adversely modify critical habitat include, but are not limited to:

(1) Overgrazing; maintenance of feral ungulates; clearing, cutting of native live trees and shrubs, whether by burning or mechanical, chemical, or other means (*e.g.,* woodcutting, bulldozing, construction, road building, mining, herbicide application, etc.); introducing or enabling the spread of non-native species; and taking actions that pose a risk of fire.

(2) Water diversion or impoundment, groundwater pumping, or other activity that alters water quality or quantity to an extent that wet forest or bog vegetation is significantly affected; and,

(3) Recreational activities that appreciably degrade vegetation.

To properly portray the effects of critical habitat designation, we must first compare the section 7 requirements for actions that may affect critical habitat with the requirements for actions that may affect a listed species. Section 7 prohibits actions funded, authorized, or carried out by Federal agencies from jeopardizing the continued existence of a listed species or destroying or adversely modifying the listed species' critical habitat. Actions likely to ''jeopardize the continued existence'' of a species are those that would appreciably reduce the likelihood of the species' survival and recovery. Actions likely to ''destroy or

adversely modify'' critical habitat are those that would appreciably reduce the value of critical habitat for the survival and recovery of the listed species.

Common to both definitions is an appreciable detrimental effect on both survival and recovery of a listed species. Given the similarity of these definitions, actions likely to destroy or adversely modify critical habitat would almost always result in jeopardy to the species concerned, particularly when the area of the proposed action is occupied by the species concerned. In those cases, the ramifications of its designation are few or none. Designation of critical habitat in areas occupied by any of these plants is not likely to result in a regulatory burden above that already in place due to the presence of the listed species. When critical habitat is designated in unoccupied areas, there can be an increase in regulatory requirements on Federal agencies. If occupied habitat becomes unoccupied in the future, there is a potential benefit to critical habitat in such areas.

Actions affected by designation of critical habitat may include, but are not limited to:

(1) Regulation of activities affecting waters of the United States by the Army Corps of Engineers (Corps) under section 404 of the Clean Water Act;

(2) Development requiring permits from Federal agencies such as Housing and Urban Development;

(3) Regulation of federally funded silviculture and forestry projects, and research by the U.S. Department of Agriculture (Forest Service);

(4) Regulation of airport improvement activities by the Federal Aviation Administration (FAA) jurisdiction;

(5) Road construction and maintenance by, or funded by, the U.S. Department of Transporation (DOT);

(6) Military training or similar activities of the U.S. Department of Defense (DOD);

(7) Federally funded importation of alien species for research, agriculture, and aquaculture, and the release or authorization of release of biological control agents by the U.S. Department of Agriculture;

(8) Regulation of activities affecting point source pollution discharges into waters of the United States by the Environmental Protection Agency (EPA) under section 402 of the Clean Water Act.;

(9) Hazard mitigation and post-disaster repairs funded by the Federal Emergency Management Agency (FEMA);

(10) Installation and maintenance of U.S. Coast Guard navigational aids;

(11) Construction of communication sites licensed by the Federal Communications Commission (FCC); and,

(12) Activities not mentioned above funded or authorized by the U.S. Department of Agriculture (Forest Service, Natural Resources Conservation Service), DOD, DOT, Department of Energy, Department of Interior (U.S. Geological Survey, National Park Service), Department of Commerce (National Oceanic and Atmospheric Administration) or any other Federal agency.

If you have questions regarding whether specific activities will constitute adverse modification of critical habitat, contact the Field Supervisor, Pacific Islands Ecological Services Field Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and plants and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Branch of Endangered Species, 911 N.E. 11th Avenue, Portland, Oregon 97232 (telephone 503/231–2063; facsimile 503/231–6243).

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species. We will conduct an analysis of the economic impacts of designating these areas as critical habitat prior to a final determination. When completed, we will announce its availability with a notice in the **Federal Register**, and we will reopen the comment period for 30 days at that time.

Public Comments Solicited

It is our intent that any final action resulting from this proposal be as accurate and as effective as possible. Therefore, we solicit comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry or any other interested party concerning this proposed rule.

In this proposed rule we do not propose to designate critical habitat on the private land within Kanepuu Preserve because this area is permanently dedicated to conservation and is managed for the benefit of the federally protected plant species found there. We believe that this area is not in need of special management considerations or protection and, therefore, does not meet the definition of critical habitat in the Act. We are, however, specifically soliciting comments on the appropriateness of this approach.

We invite comments from the public that provide information on whether lands within proposed critical habitat are currently being managed to address conservation needs of these listed plants. As stated earlier in this proposed rule, if we receive information that any of the areas proposed as critical habitat are adequately managed, we may delete such areas from the final rule, because they would not meet the definition in section 3(5)(A)(I) of the Act. In determining adequacy of management, we must find that the management effort is sufficiently certain to be implemented and effective so as to contribute to the elimination or adequate reduction of relevant threats to the species.

In determining whether an action is likely to be implemented, we would generally consider the following:

(1) Whether or not a management plan or agreement exists which specifies the management actions being implemented, or if implemented, the schedule for implementation;

(2) Whether there are responsible party(ies), and funding source(s) or other resources necessary to implement the actions, with a high level of assurance that the funding will be provided; and

(3) The authority and long-term commitment of the party(ies) to the agreement or plan to implement the management actions, as demonstrated, for example, by a legal instrument providing enduring protection and management of the lands.

In determining whether an action is likely to be effective, we would generally consider whether or not the plan is specific concerning the threats to be addressed by the management actions; whether such actions have been successful in the past; whether there are provisions for monitoring and assessment of the effectiveness of the management actions; and whether adaptive management principles have been incorporated into the plan.

We are aware that the private landowner on the island of Lanai may be considering the development and implementation of land management plans or agreements that may promote the conservation and recovery of endangered and threatened plant

species on the island of Lanai. We are soliciting comments in this proposed rule on whether current land management plans or practices applied within the areas proposed as critical habitat adequately address the threats to these listed species. We are also soliciting comments on whether future development and approval of conservation measures (*e.g.,* Conservation Agreements, Safe Harbor Agreements, etc.) should be excluded from critical habitat, and if so, by what mechanism.

In addition, we are seeking comments on the following:

(1) The reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act including whether the benefits of designation would outweigh the benefits of exclusion;

(2) The reasons why any particular area should or should not be designated as critical habitat for any of these species, as critical habitat is defined by section 3 of the Act (16 U.S.C. 1532 (5));

(3) Specific information on the amount and distribution of habitat for *Abutilon eremitopetalum, Bonamia menziesii, Centaurium sebaeoides, Clermontia oblongifolia* ssp. *mauiensis, Ctenitis squamigera, Cyanea grimesiana* ssp. *grimesiana, Cyanea macrostegia* ssp. *gibsonii, Cyrtandra munroi, Gahnia lanaiensis, Hedyotis mannii, Hedyotis schlechtendahliana* var. *remyi, Hibiscus brackenridgei, Labordia tinifolia* var. *lanaiensis, Melicope munroi, Portulaca sclerocarpa, Spermolepis hawaiiensis, Tetramolopium remyi, Vigna o-wahuensis*, and *Viola lanaiensis*, and their habitat; and what habitat is essential to the conservation of these species and why;

(4) Land use practices and current or planned activities in the subject areas and their possible impacts on proposed critical habitat;

(5) Any foreseeable economic or other impacts resulting from the proposed designations of critical habitat, including, any impacts on small entities or families; and

(6) Economic and other values associated with designating critical habitat for the above 18 plant species such as those derived from non-consumptive uses (*e.g.,* hiking, camping, birding, enhanced watershed protection, increased soil retention, ''existence values,'' and reductions in administrative costs).

Our practice is to make comments available for public review during regular business hours, including names and home addresses of respondents. Individual respondents may request that we withhold their home address from the rulemaking record, which we will honor to the extent allowable by law. In some circumstances, we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish for us to withhold your name and/or address, you must state this prominently at the beginning of your comment. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address, is available for public inspection in their entirety.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of such review is to ensure listing and critical habitat decisions are based on scientifically sound data, assumptions, and analyses. We will send copies of this proposed rule to these peer reviewers immediately following publication in the **Federal Register**. We will invite the peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed designations of critical habitat.

We will consider all comments and information received during the 60-day comment period on this proposed rule during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposal.

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand including answers to questions such as the following: (1) Are the requirements in the proposed rule clearly stated? (2) Does the proposed rule contain technical language or jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Is the description of the proposed rule in the ''Supplementary Information'' section of the preamble helpful in understanding the document? (5) What else could we do to make the proposed rule easier to understand?

Send a copy of any comments that concern how we could make this notice easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW, Washington, DC 20240. You may e-mail your comments to this address: Execsec@ios.doi.gov.

Required Determinations

1. Regulatory Planning and Review

In accordance with Executive Order 12866, this action was submitted for review by the Office of Management and Budget (OMB). We are in the process of preparing an economic analysis to determine the economic consequences of designating the specific areas identified as critical habitat. If our economic analysis reveals that the economic impacts of designating any area as critical habitat outweigh the benefits of designation, we may exclude those areas from consideration, unless such exclusion will result in the extinction of the species.

(a) While we will prepare an economic analysis to assist us in considering whether areas should be excluded pursuant to section 4 of the Act, at this time we do not believe this rule will have an annual economic effect of $100 million or adversely affect an economic sector, productivity, jobs, the environment, or other units of government. Therefore we do not believe a cost benefit and economic analysis is required.

These 18 plants were listed as endangered species between the years 1991 and 1999. The areas proposed for critical habitat are currently occupied by one or more of these species. Under the Act, critical habitat may not be adversely modified by a Federal agency action; critical habitat does not impose any restrictions on non-Federal persons unless they are conducting activities funded or otherwise sponsored, authorized, or permitted by a Federal agency (see Table 6 below). Section 7 requires Federal agencies to ensure that they do not jeopardize the continued existence of the species. Based upon our experience with the species and its needs, we conclude that any Federal action or authorized action that could potentially cause an adverse modification of the proposed critical habitat would currently be considered as ''jeopardy'' under the Act. Accordingly, the designation of currently occupied areas as critical habitat does not have any additional incremental impacts on what actions may or may not be conducted by Federal agencies or non-Federal persons that receive Federal authorization or

funding. Non-Federal persons that do not have a Federal ''sponsorship'' of their actions are not restricted by the designation of critical habitat (however, they continue to be bound by the provisions of the Act concerning ''take'' of the species).

(b) This rule will not create inconsistencies with other agencies' actions. As discussed above, Federal agencies have been required to ensure that their actions not jeopardize the continued existence of these 18 plant species since their listing between 1991 and 1999. The prohibition against adverse modification of critical habitat would not be expected to impose any additional restrictions to those that currently exist because all proposed critical habitat is currently occupied.

(c) This rule will not materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. Federal agencies are currently required to ensure that their activities do not jeopardize the continued existence of the species, and as discussed above we do not anticipate that the adverse modification prohibition resulting from critical habitat designation will have any incremental effects.

(d) This rule will not raise novel legal or policy issues. The proposed rule follows the requirements for determining critical habitat contained in the Act.

2. Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

In the economic analysis (under section 4 of the Act), we will determine whether designation of critical habitat will have a significant effect on a substantial number of small entities. As discussed under Regulatory Planning and Review above, this rule is not expected to result in any restrictions in addition to those currently in existence. As indicated on Table 5 (see ''Methods for Selection of Areas for Proposed Critical Habitat Designations'') we have designated privately owned property.

Within these areas, the types of Federal actions or authorized activities that we have identified as potential concerns are:

(1) Regulation of activities affecting waters of the United States by the Corps under section 404 of the Clean Water Act;

(2) Development on private or State lands requiring permits from other Federal agencies such as Housing and Urban Development;

(3) Regulation federally funded silviculture and forestry projects, and research by the U.S. Department of Agriculture (Forest Service);

(4) Regulation of airport improvement activities by the FAA jurisdiction;

(5) Road construction and maintenance by, or funded by, the DOT;

(6) Military training or similar activities of the DOD;

(7) Federally funded importation of alien species for research, agriculture, and aquaculture, and the release or authorization of release of biological control agents by the U.S. Department of Agriculture;

(8) Regulation of activities affecting point source pollution discharges into waters of the United States by the EPA under section 402 of the Clean Water Act;

(9) Hazard mitigation and post-disaster repairs funded by the FEMA;

(10) Installation and maintenance of U.S. Coast Guard navigational aids;

(11) Construction of communication sites licensed by the FCC; and,

(12) Activities not mentioned above funded or authorized by the U.S. Department of Agriculture (Forest Service, Natural Resources Conservation Service), DOD, DOT, Department of Energy, Department of Interior (U.S. Geological Survey, National Park Service), Department of Commerce (National Oceanic and Atmospheric Administration) or any other Federal agency.

Many of these activities sponsored by Federal agencies within the proposed critical habitat areas are carried out by small entities (as defined by the Regulatory Flexibility Act) through contract, grant, permit, or other Federal authorization. As discussed above, these actions are currently required to comply with the listing protections of the Act, and the designation of critical habitat is not anticipated to have any additional effects on these activities.

For actions on non-Federal property that do not have a Federal connection (such as funding or authorization), the current restrictions concerning take of the species remain in effect, and this rule would impose no additional restrictions.

3. Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951) and 512 DM 2, we understand that Federally recognized Tribes must be related to on a Government-to-Government basis. The 1997 Secretarial Order on Native Americans and the Act clearly states that Tribal lands should not be designated unless absolutely necessary for the conservation of the species. According to the Secretarial Order, ''Critical habitat shall not be designated in an area that may impact Tribal trust resources unless it is determined essential to conserve a listed species. In designating critical habitat, the Services shall evaluate and document the extent to which the conservation needs of a listed species can be achieved by limiting the designation to other lands.''

We determined that no Tribal lands are essential for any of the 18 plantsspecies for which critical habitat designation is proposed because none of these plants are known to occur on Tribal lands.

TABLE 6.—IMPACTS OF CRITICAL HABITAT DESIGNATION FOR 19 PLANTS FROM LANAI

Categories of activities	Activities potentially affected by species listing only	Additional activities potentially affected by critical habitat designation[1]
Federal Activities Potentially Affected[2].	Activities conducted by the Army Corps of Engineers, Department of Transportation, Department of Defense, Department of Agriculture, Environmental Protection Agency, Federal Emergency Management Agency, Federal Aviation Administration.	Activities by these Federal Agencies in any unoccupied critical habitat areas.

TABLE 6.—IMPACTS OF CRITICAL HABITAT DESIGNATION FOR 19 PLANTS FROM LANAI—Continued

Categories of activities	Activities potentially affected by species listing only	Additional activities potentially affected by critical habitat designation[1]
Private or other non-Federal Activities Potentially Affected[3].	Activities that require a Federal action (permit, authorization, or funding) and may remove or destroy habitat for these plants by mechanical, chemical, or other means (e.g., overgrazing, clearing, cutting native live trees and shrubs, water diversion, impoundment, groundwater pumping, road building, mining, herbicide application, recreational use etc.) or appreciably decrease habitat value or quality through indirect effects (*e.g.,* edge effects, invasion of exotic plants or animals, fragmentation of habitat).	Funding, authorization, or permitting actions by Federal Agencies in any unoccupied critical habitat areas.

[1] This column represents activities potentially affected by the critical habitat designation in addition to those activities potentially affected by listing the species.
[2] Activities initiated by a Federal agency.
[3] Activities initiated by a private or other non-Federal entity that may need Federal authorization or funding.

4. Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 804(2))

In the economic analysis, we will determine whether designation of critical habitat will cause (a) any effect on the economy of $100 million or more, (b) any increases in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions in the economic analysis, or (c) any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

5. Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*):

(a) This rule will not ''significantly or uniquely'' affect small governments. A Small Government Agency Plan is not required. Small governments will only be affected to the extent that any Federal funds, permits or other authorized activities must ensure that their actions will not adversely affect the critical habitat. However, as discussed above, these actions are currently subject to equivalent restrictions through the listing protections of the species, and no further restrictions are anticipated to result from critical habitat designation of occupied areas.

(b) This rule will not produce a Federal mandate of $100 million or greater in any year, that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments.

6. Takings

In accordance with Executive Order 12630, this rule does not have significant takings implications. A takings implication assessment is not required. As discussed above, the designation of critical habitat affects only Federal agency actions. The rule will not increase or decrease the current restrictions on private property concerning take of these 18 plant species. Due to current public knowledge of the species protection, the existing Section 9 prohibitions both within and outside of the designated areas, and the fact that critical habitat provides no incremental restrictions in areas of occupied critical habitat, we do not anticipate that property values will be affected by the critical habitat designations. Additionally, critical habitat designation does not preclude development of habitat conservation plans and issuance of incidental take permits. The landowner in areas that are included in the designated critical habitat will continue to have opportunity to utilize the property in ways consistent with State law and with the continued survival of the plant species.

7. Federalism

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. As discussed above, the designation of critical habitat in areas currently occupied by the 18 plant species would have little incremental impact on State and local governments and their activities. The designations may have some benefit to these governments in that the areas essential to the conservation of these species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are identified. While this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long range planning, rather than waiting for case-by-case section 7 consultation to occur.

8. Civil Justice Reform

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We propose to designate critical habitat in accordance with the provisions of the Act. The rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the 18 plant species.

9. Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any information collection requirements that requires OMB approval under the Paperwork Reduction Act.

10. National Environmental Policy Act

We have determined that an Environmental Assessment and/or an Environmental Impact Statement as defined by the National Environmental Policy Act of 1969 need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act, as amended. We published a notice outlining our reason for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited in this proposed rule is available upon request from the Pacific Islands Ecoregion Office (see **ADDRESSES** section).

Authors

The primary authors of this notice are Christa Russell, Michelle Stephens, and Marigold Zoll of the Pacific Islands Field Office (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, we propose 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: 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. In § 17.12(h) revise the entries for *Abutilon eremitopetalum, Bonamia menziesii, Centaurium sebaeoides, Clermontia oblongifolia* ssp. *mauiensis, Cyanea grimesiana* ssp. *grimesiana, Cyanea macrostegia ssp. gibsonii, Cyrtandra munroi, Gahnia lanaiensis, Hedyotis mannii, Hedyotis schlechtendahliana* var. *remyi, Hibiscus brackenridgei, Labordia tinifolia* var. *lanaiensis, Melicope munroi, Portulaca sclerocarpa, Spermolepis hawaiiensis, Tetramolopium remyi,* and *Viola lanaiensis* under ''FLOWERING PLANTS'' and *Ctentitis squamigera* under ''FERNS AND ALLIES'' to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
*	*	*	*	*	*		
Abutilon eremitopetalum.	none	U.S.A. (HI)	Malvaceae-Mallow	E	435	17.96(a)	NA.
*	*	*	*	*	*		
Bonamia menziesii	none	U.S.A. (HI)	Convolvulaceae Morning glory.	E	559	17.96(a)	NA.
*	*	*	*	*	*		
Centaurium sebaeoides.	Awiwi	U.S.A. (HI)	Gentianaceae-Gentian.	E	448	17.96(a)	NA.
*	*	*	*	*	*		
Clermontia oblongifoli ssp.*mauiensis.*	Oha wai	U.S.A. (HI)	Campanulaceae-Bell flower.	E	467	17.96(a)	NA.
*	*	*	*	*	*		
Cyanea grimesiana ssp. *grimesiana.*	Haha	U.S.A. (HI)	Campanulaceae-Bell flower.	E	592	17.96(a)	NA.
*	*	*	*	*	*		
Cyanea macrostegia ssp. *gibsonii.*	none	U.S.A. (HI)	Campanulaceae-Bell flower.	E	592	17.96(a)	NA.
*	*	*	*	*	*		
Cyrtandra munroi	Haiwale	U.S.A. (HI)	Gesneriaceae-African violet.	E	467	17.96(a)	NA.
*	*	*	*	*	*		
Gahnia lanaiensis	none	U.S.A. (HI)	Cyperaceae-Sedge	E	435	17.96(a)	NA.
*	*	*	*	*	*		
Hedyotis mannii	Pilo	U.S.A. (HI)	Rubiaceae-Coffee	E	480	17.96(a)	NA.
*	*	*	*	*	*		
Hedyotis sclechtendahliana var. *remyi.*	Kopa	U.S.A. (HI)	Rubiaceae-Coffee	E	441	17.96(a)	NA.
*	*	*	*	*	*		
Hibiscus brackenridgei.	Mao hau hele	U.S.A. (HI)	Malvaceae-Mallow	E	559	17.96(a)	NA.
*	*	*	*	*	*		
Labordia tinifolia, var. *lanaiensis.*	Kamakahala	U.S.A. (HI)	Mallow Loganiaceae-Logania.	E	666	17.96(a)	NA.
*	*	*	*	*	*		
Melicope munroi	Alani	U.S.A. (HI)	Rutaceae-Rue	E	666	17.96(a)	NA.

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
*	*	*	*	*	*		
Portulaca sclerocarpa.	Poe	U.S.A. (HI)	Portulacaceae-Purslane.	E	432	17.96(a)	NA.
*	*	*	*	*	*		
Spermolepis hawaiiensis.	none	U.S.A. (HI)	Apiaceae-Parsley	E	559	17.96(a)	NA.
*	*	*	*	*	*		
Tetramaloplium remyi.	none	U.S.A. (HI)	Asteraceae-Sunflower.	E	435	17.96(a)	NA.
*	*	*	*	*	*		
Viola lanaiensis	none	U.S.A. (HI)	Violaceae-Violet	E	435	17.96(a)	NA.
*	*	*	*	*	*		
FERNS AND ALLIES							
*	*	*	*	*	*		
Ctenitis squamigera	Pauoa	U.S.A. (HI)	Aspleniaceae-Spleenwort.	E	553	17.96(a)	NA.
*	*	*	*	*	*		

3. In § 17.96, as proposed to be amended at 65 FR 66865, November 7, 2000, add introductory text to paragraph (a)(1)(i), add paragraph (a)(1)(i)(E), and revise paragraphs (a)(1)(ii)(A) and (a)(1)(ii)(B) to read as follows:

§ 17.96 Critical habitat-plants.

(a) * * *

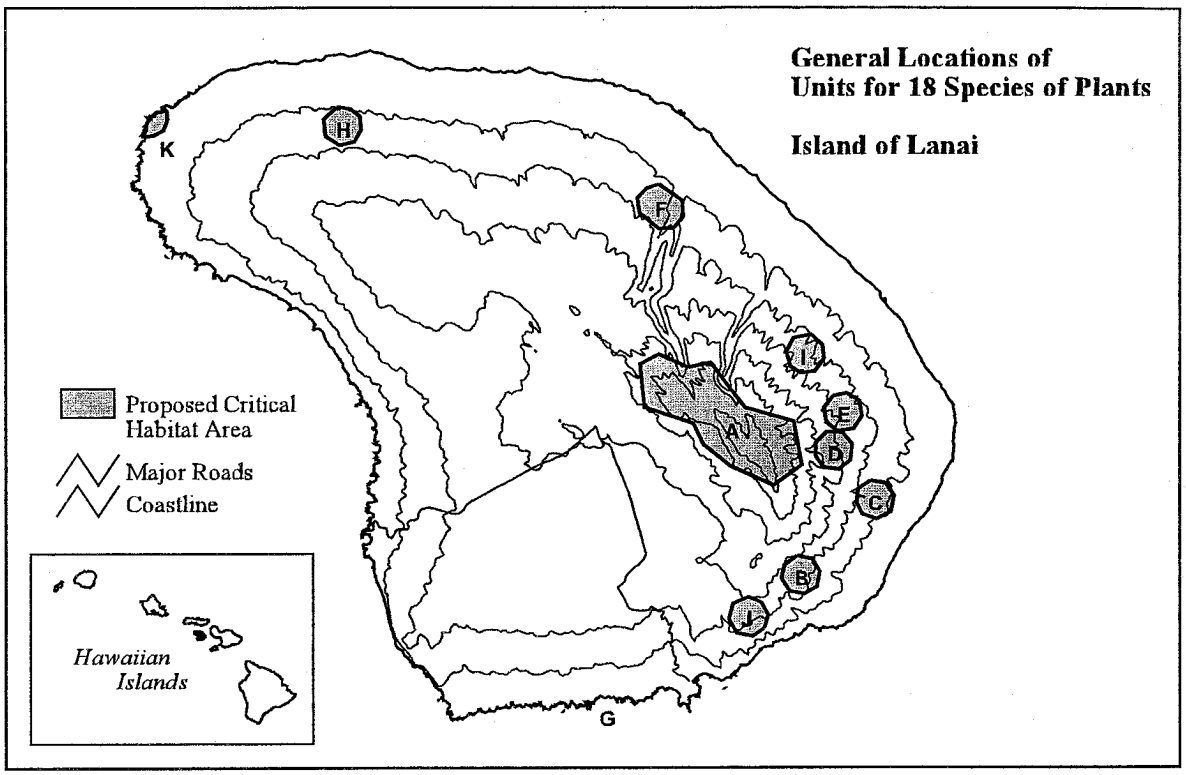
(1) * * *

(i) *Maps and critical habitat unit descriptions.* The following sections contain the legal descriptions of the critical habitat units designated for each of the Hawaiian islands. Existing features and structures within proposed areas, such as buildings, roads, aquaducts, telecommunication equipment, arboreta and gardens, heiaus (indigenous place of worship, shrine) and other man-made features do not contain, and are not likely to develop, the constituent elements described for each species in paragraphs (a)(1)(ii)(A) and (a)(1)(ii)(B) of this section. Therefore, these features or structures are not included in the critical habitat designation.

* * * * *

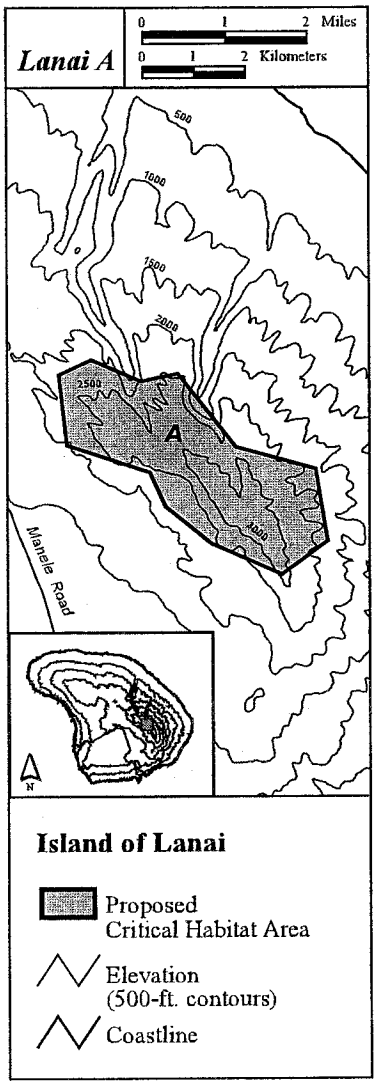
(E) *Lanai.* Critical habitat units are described below. Coordinates are in UTM Zone 4 with units in meters using North American Datum of 1983 (NAD83). The following map shows the general locations of the 10 critical habitat units designated on the island of Lanai.

Note: Map follows:


General Locations of
Units for 18 Species of Plants
Island of Lanai
Proposed Critical
Habitat Area
Major Roads
Coastline
Hawaiian
Islands
K
H
F
I
A
E
D
C
B
J
G

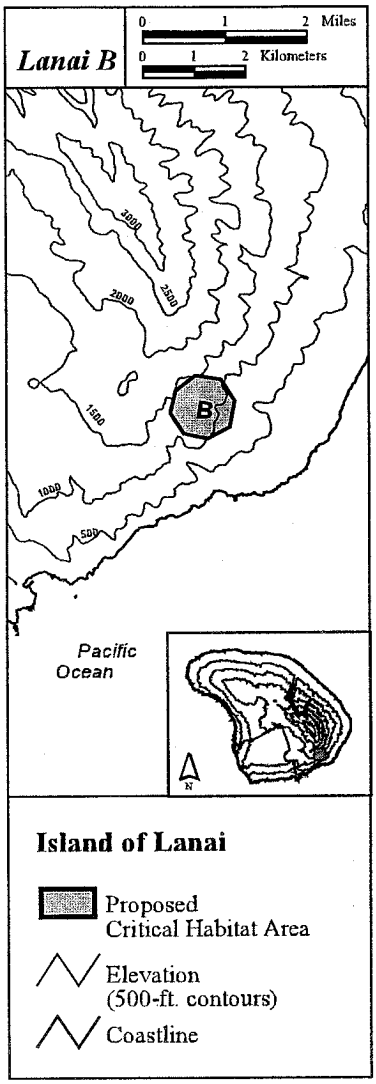
Critical Habitat Unit Lanai A: Area consists of the following twelve boundary points: 719712, 2305252; 720416, 2305409; 721551, 2303960; 723117, 2303521; 723365, 2302096; 722463, 2301441; 721071, 2302054; 720184, 2302791; 719869, 2303462; 718237, 2303992; 718088, 2305384; 718717, 2305682.

Note: Map follows:



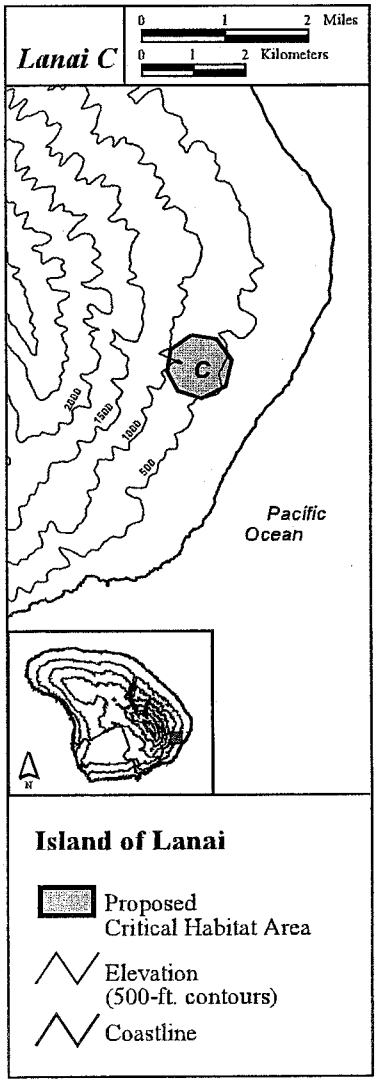
Critical Habitat Unit Lanai B: Area consists of the following eight boundary points: 723212, 2299127; 723720, 2299036; 723981, 2298623; 723882, 2298115; 723454, 2297882; 722989, 2297982; 722723, 2298390; 722832, 2298832.

Note: Map follows:



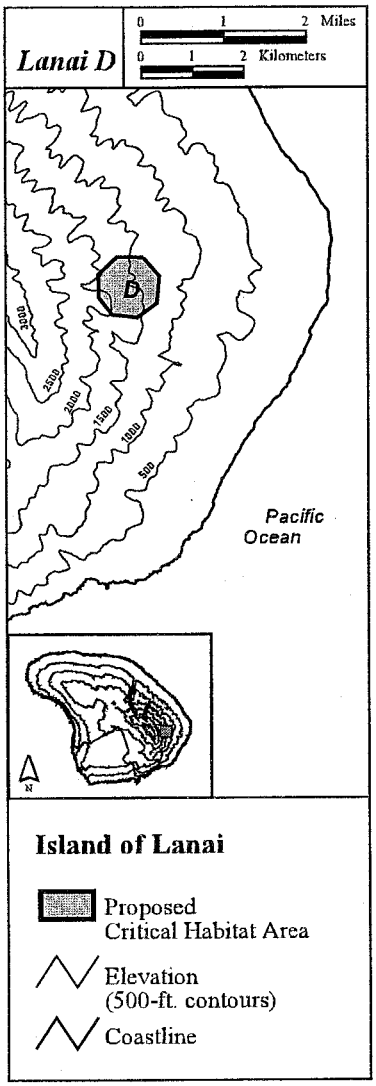
Critical Habitat Unit Lanai C: Area consists of the following eight boundary points: 725639, 2301587; 726128, 2301511; 726413, 2301098; 726299, 2300566; 725829, 2300338; 725373, 2300490; 725173, 2300870; 725244, 2301307.

Note: Map follows:



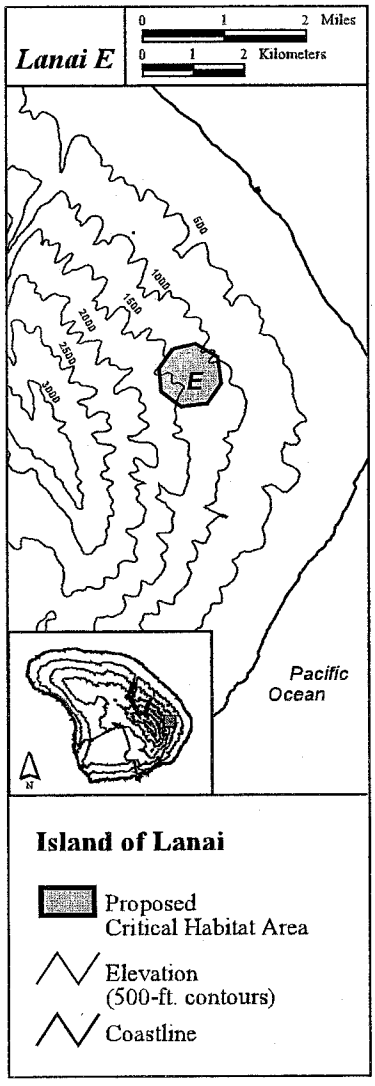
Critical Habitat Unit Lanai D: Area consists of the following eight boundary points: 724717, 2303155; 725040, 2302784; 724993, 2302257; 724598, 2301967; 724109, 2302029; 723848, 2302366; 723843, 2302827; 724204, 2303174.

Note: Map follows:



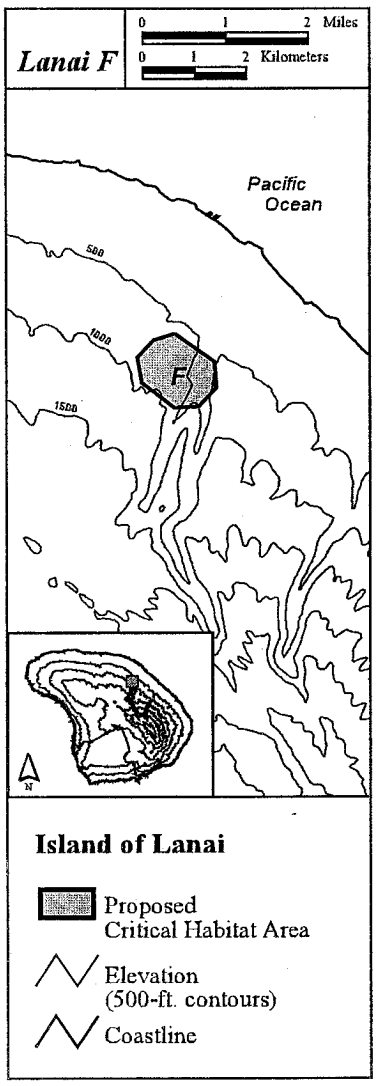
Critical Habitat Unit Lanai E: Area consists of the following eight boundary points: 724403, 2304342; 724854, 2304442; 725277, 2304171; 725353, 2303672; 725078, 2303269; 724560, 2303207; 724171, 2303501; 724128, 2303962.

Note: Map follows:



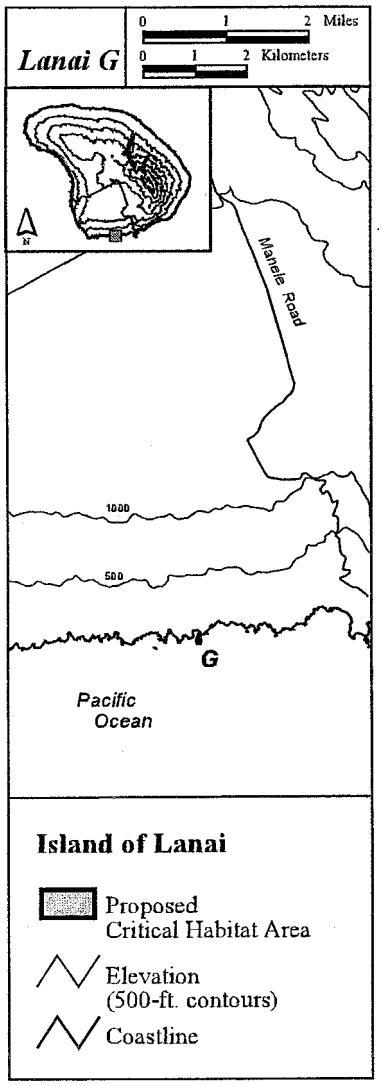
Critical Habitat Unit Lanai F: Area consists of the following eight boundary points: 718729, 2311275; 719495, 2310727; 719528, 2310199; 719189, 2309838; 718726, 2309815; 718081, 2310313; 718003, 2310809; 718302, 2311135.

Note: Map follows:



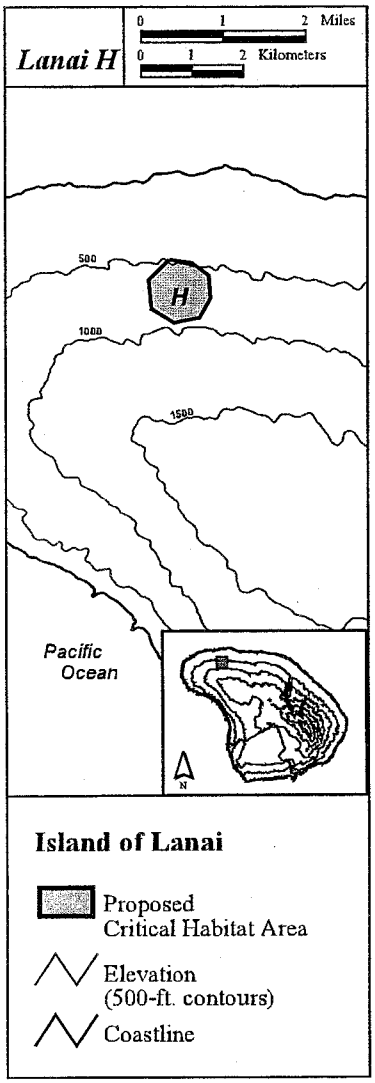
Critical Habitat Unit Lanai G: Area consists of the entire islet, located at UTM coordinate 716393, 2294193.

Note: Map follows:



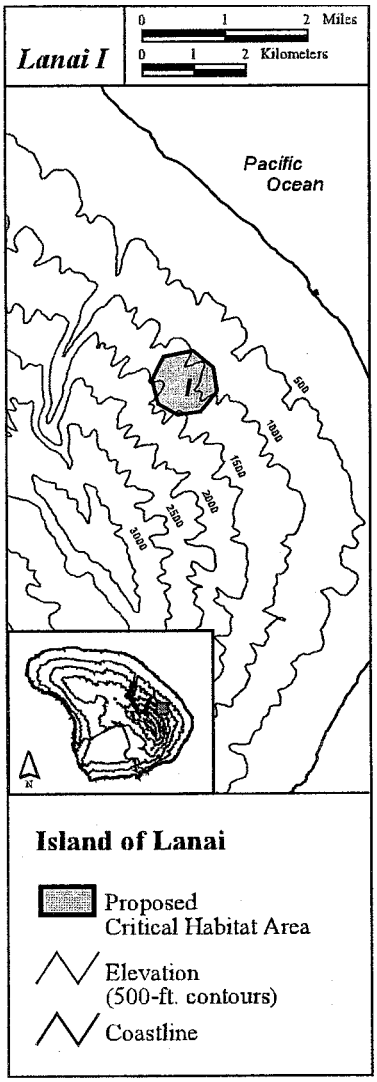
Critical Habitat Unit Lanai H: Area consists of the following eight boundary points: 708156, 2313789; 708625, 2313719; 708926, 2313485; 708965, 2313031; 708746, 2312649; 708254, 2312543; 707808, 2312824; 707750, 2313391.

Note: Map follows:



Critical Habitat Unit Lanai I: Area consists of the following eight boundary points: 724128, 2305536; 723819, 2305150; 723361, 2305089; 722997, 2305298; 722875, 2305767; 723096, 2306231; 723681, 2306330; 724062, 2306010.

Note: Map follows:



Critical Habitat Unit Lanai J: Area consists of the following eight points and the intermediate coastline: 702559, 2313776; 702658, 2313650; 702688, 2313348; 702566, 2313030; 702299, 2312864; 702063, 2312826; 701890, 2312877; 701888, 2312878.

Note: Map follows:

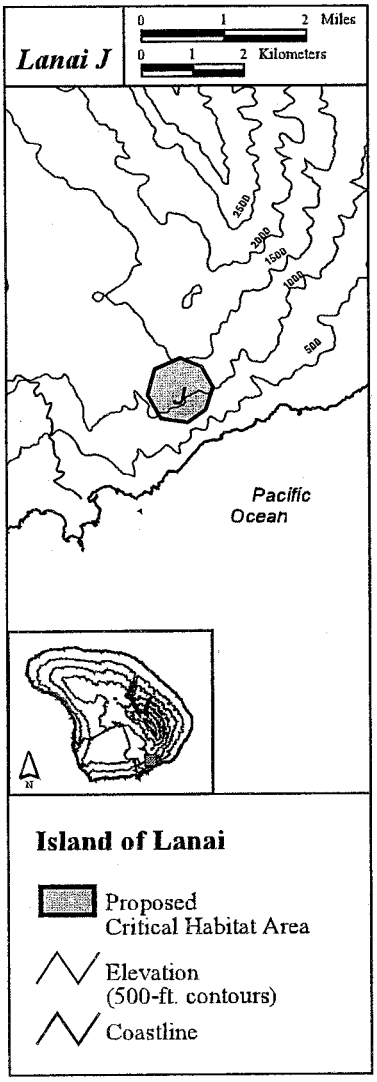


TABLE (A)(1)(I)(E)—PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR LANAI

Unit name	Species
Lanai A	*Clermontia oblongifolia* ssp. *mauiensis, Cyanea grimesiana* ssp. *grimesiana, Cyanea macrostegia* ssp. *gibsonii, Cyrtandra munroi, Ctenitis squamigera, Gahnia lanaiensis, Hedyotis mannii, Hedyotis schlechtendahliana* var. *remyi, Labordia tinifolia* var. *lanaiensis, Melicope munroi,* and *Viola lanaiensis.*
Lanai B	*Spermolepis hawaiiensis.*
Lanai C	*Teramolopium remyi.*
Lanai D	*Bonamia menziesii.*
Lanai E	*Abutilon eremitopetalum.*
Lanai F	*Centaurium sebaeoides* and *Hibiscus brackenridgei.*
Lanai G	*Portulaca sclerocarpa.*
Lanai H	*Teramolopium remyi.*
Lanai I	*Spermolepis hawaiiensis.*
Lanai J	*Hibiscus brackenridgei.*

(ii) *Hawaiian plants—Constituent elements.*

(A) *Flowering plants.*

Family Apiaceae: *Peucedanum sandwicense* (makou)

Kauai F, G, I, and M, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Peucedanum sandwicense* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Cliff habitats (a) in mixed shrub coastal dry cliff communities or diverse mesic forest and (b) containing one or more of the following associated native plant

species: *Hibiscus kokio, Brighamia insignis, Bidens* sp., *Artemisia* sp., *Lobelia niihauensis, Wilkesia gymnoxiphium, Canthium odoratum, Dodonaea viscosa, Psychotria* sp., *Acacia koa, Kokio kauaiensis, Carex meyenii, Panicum lineale, Chamaesyce celastroides, Eragrostis* sp., *Diospyros* sp., or *Metrosideros polymorpha;* and (2) elevations from sea level to above 915 m (3,000 ft).

Family Apiaceae: *Spermolepis hawaiiensis* (No Common Name)

i. Kauai B and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Spermolepis hawaiiensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) *Metrosideros polymorpha* forests or *Dodonaea viscosa* lowland dry shrubland containing one or more of the following associated plant species: *Eragrostis variabilis, Bidens sandvicensis, Schiedea spergulina, Lipochaeta* sp., *Cenchrus agrimonioides, Sida fallax, Doryopteris* sp., or *Gouania hillebrandii;* and (2) elevations of about 305 to 610 m (1,000 to 2,000 ft).

ii. Critical habitat on Lanai includes the Lanai units B, I, and J which are identified in the legal description in paragraph (a)(1)(i)(E) of this section. Within these units the primary constituent elements are the rocky, steep slopes containing ledges and pockets with one or more of the following associated native plant species: *Dodonea viscosa, Panicum* spp., *Heteropogon contortus, Lipochaeta lavarum,* or *Reyoldsia sandwicensis;* and elevations between 335 and 395 m (1,100 and 1,300 ft).

Family Apocynaceae: *Pteralyxia kauaiensis* (kaulu)

Kauai F, G, I, M, Q, T, and U, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Pteralyxia kauaiensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Diverse mesic or wet forests containing one or more of the following associated plant taxa: *Pisonia sandwicensis, Euphorbia haeleeleana, Charpentiera elliptica, Pipturus* sp., *Neraudia kauaiensis, Hedyotis terminalis, Pritchardia* sp., *Gardenia remyi, Syzygium* sp., *Pleomele* sp., *Cyanea* sp., *Hibiscus* sp., *Kokia kauaiensis, Alectryon macrococcus, Canthium odoratum, Nestegis sandwicensis, Bobea timonioides, Rauvolfia sandwicensis, Nesoluma polynesicum, Myrsine lanaiensis, Caesalpinia kauaiensis, Tetraplasandra* sp., *Acacia koa, Styphelia tameiameiae, Dodonaea viscosa, Gahnia* sp., *Freycinetia arborea, Psychotria mariniana, Diplazium sandwichianum, Zanthoxylum dipetalum, Carex* sp., *Delissea* sp., *Xylosma hawaiiense, Alphitonia ponderosa, Santalum freycinetianum, Antidesma* sp., *Diospyros* sp., *Metrosideros polymorpha, Dianella sandwicensis, Poa sandwicensis, Schiedea stellarioides, Peperomia macraeana, Claoxylon sandwicense,* or *Pouteria sandwicensis;* and (2) elevations between 250 to 610 m (820 to 2,000 ft).

Family Araliaceae: *Munroidendron racemosum* (No Common Name)

Kauai G, I, M, and N, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Munroidendron racemosum* on Kauai. Within these units the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep exposed cliffs or ridge slopes (a) in coastal or lowland mesic forest and (b) containing one or more of the following associated plant taxa: *Pisonia umbellifera, Canavalia galeata, Sida fallax, Brighamia insignis, Canthium odoratum, Psychotria* sp., *Nestegis sandwicensis, Tetraplasandra* sp., *Bobea timonioides, Rauvolfia sandwicensis, Pleomele* sp., *Pouteria sandwicensis,* or *Diospyros* sp.; and (2) elevations between 120 to 400 m (395 to 1,310 ft).

Family Asteraceae: *Dubautia latifolia* (na'ena'e)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Dubautia latifolia* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Gentle or steep slopes on well drained soil in (a) semi-open or closed, diverse montane mesic forest dominated by *Acacia koa* and/or *Metrosideros polymorpha* and (b) containing one or more of the following native plant species: *Pouteria sandwicensis, Dodonaea viscosa, Nestegis sandwicensis, Diplazium sandwichianum, Elaeocarpus bifidus, Claoxylon sandwicense, Bobea* sp., *Pleomele* sp., *Antidesma* sp., *Cyrtandra* sp., *Xylosma* sp., *Alphitonia ponderosa, Coprosma waimeae, Dicranopteris linearis, Hedyotis terminalis, Ilex anomala, Melicope anisata, Psychotria mariniana,* or *Scaevola* sp.; and (2) elevations between 800 to 1,220 m (2,625 to 4,000 ft).

Family Asteraceae: *Dubautia pauciflorula* (na'ena'e)

Kauai L, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Dubautia pauciflorula* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) lowland wet forest within stream drainages; and (2) elevations between 670–700 m (2,200–2,300 ft).

Family Asteraceae: *Hesperomannia lydgatei* (No Common Name)

Kauai F, L, and P, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Hesperomannia lydgatei* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Stream banks with rich brown soil and silty clay (a) in *Metrosideros polymorpha* or *Metrosideros polymorpha-Dicranopteris linearis* lowland wet forest and (b) containing one or more of the following associated native plant species: *Adenophorus* sp., *Antidesma* sp., *Broussaisia arguta, Cheirodendron* sp., *Elaphoglossum* sp., *Freycinetia arborea, Hedyotis terminalis, Labordia lydgatei, Machaerina angustifolia, Peperomia* sp., *Pritchardia* sp., *Psychotria hexandra,* and *Syzygium sandwicensis;* and (2) elevations between 410–915 m (1,345–3,000 ft).

Family Asteraceae: *Lipochaeta fauriei* (nehe)

Kauai G, I, and U, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Lipochaeta fauriei* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Moderate shade to full sun on the sides of steep gulches (a) in diverse lowland mesic forests and (b) containing one or more of the following native species: *Diospyros* sp., *Myrsine lanaiensis, Euphorbia haeleeleana, Acacia koa, Pleomele aurea, Sapindus oahuensis, Nestegis sandwicensis, Dodonaea viscosa, Psychotria mariniana, Psychotria greenwelliae, Kokia kauaiensis,* or *Hibiscus waimeae;* and (2) elevations between 480 and 900 m (1,575 and 2,950 ft).

Family Asteraceae: *Lipochaeta micrantha* (nehe)

i. Kauai I and M, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Lipochaeta micrantha* on Kauai. Within these units the currently known primary constituent elements of critical habitat for *Lipochaeta micrantha* var. *exigua* are habitat components that provide: (1) Cliffs, ridges, or slopes (a) in grassy, shrubby or dry mixed communities and (b) containing one or more of the following associated native plant species: *Artemisia australis, Bidens sandvicensis, Plectranthus parviflorus, Chamaesyce celastroides, Diospyros* sp., *Canthium odoratum, Neraudia* sp., *Pipturus* sp., *Hibiscus kokio, Sida fallax, Eragrostis* sp., or *Lepidium bidentatum;* and (2) elevations between 305–430 m (1,000–1,400 ft).

ii. Within these units, the currently known primary constituent elements of critical habitat for *Lipochaeta micrantha* var. *micrantha* are habitat components that provide: (1) Basalt cliffs, stream banks, or level ground (a) in mesic or diverse *Metrosideros polymorpha—Diospyros* sp. forest and (b) containing one or more of the following associated native plant species: *Lobelia niihauensis, Chamaesyce celastroides* var. *hanapepensis, Neraudia kauaiensis, Rumex* sp., *Nontrichium* sp. (kului), *Artemisia* sp., *Dodonaea viscosa, Antidesma* sp., *Hibiscus* sp., *Xylosma* sp., *Pleomele* sp., *Melicope* sp., *Bobea* sp., and *Acacia koa;* and (2) elevations between 610–720 m (2,000–2,360 ft).

Family Asteraceae: *Lipochaeta waimeaensis* (nehe)

Kauai B, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Lipochaeta waimeaensis* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Precipitous, shrub-covered gulch (a) in diverse lowland forest and (b) containing the native species *Dodonaea viscosa* or *Lipochaeta connata;* and (2) elevations between 350 and 400 m (1,150 and 1,310 ft).

Family Asteraceae: *Remya kauaiensis* (No Common Name)

Kauai G, I, and U, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Remya kauaiensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep, north or northeast facing slopes (a) in *Acacia koa—Metrosideros polymorpha* lowland mesic forest and (b) containing one or more of the following associated native plant species: *Chamaesyce* sp., *Nestegis sandwicensis, Diospyros* sp., *Hedyotis terminalis, Melicope* ssp., *Pouteria sandwicensis, Schiedea membranacea, Psychotria mariniana, Dodonaea viscosa, Dianella sandwicensis, Tetraplasandra kauaiensis,* or *Claoxylon sandwicensis;* and (2) elevations between 850 to 1,250 m (2,800 to 4,100 ft).

Family Asteraceae: *Remya montgomeryi* (No Common Name)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Remya montgomeryi* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep, north or northeast-facing slopes, cliffs, or stream banks near waterfalls (a) in *Metrosideros polymorpha* mixed mesic forest and (b) containing one or more of the following associated native plant species: *Lysimachia glutinosa, Lepidium serra, Boehmeria grandis, Poa mannii, Stenogyne campanulata, Myrsine linearifolia, Bobea timonioides, Ilex anomala, Zanthoxylum dipetalum, Claoxylon sandwicensis, Tetraplasandra* spp., *Artemisia* sp., *Nototrichium* sp., *Cyrtandra* sp., *Dubautia plantaginea, Sadleria* sp., *Cheirodendron* sp., *Scaevola* sp., or *Pleomele* sp.; and (2) elevations between 850 to 1,250 m (2,800 to 4,100 ft).

Family Asteraceae: *Tetramolopium remyi* (No Common Name)

Critical habitat includes the Lanai units C and H which are identified in paragraph (a)(1)(i)(E) of this section. Within these units the primary constituent elements are red sandy loam soil in dry *Dodonea viscosa-Heteropogon contortus* communities and including one or more of the following associated native plant species: *Bidens mauiensis, Waltheria indica, Wikstroemia oahuensis,* or *Lipochaeta lavarum;* and an elevation of about 230 m (755 ft).

Family Asteraceae: *Wilkesia hobdyi* (dwarf iliau)

Kauai G and J, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Wilkesia hobdyi* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Coastal dry cliffs or very dry ridges containing one or more of the following associated native plant species: *Artemisia* sp., *Wilkesia gymnoxiphium, Lipochaeta connata, Lobelia niihauensis, Peucedanum sandwicensis, Hibiscus kokio* ssp. *saint johnianus, Canthium odoratum, Peperomia* sp., *Myoporum sandwicense, Sida fallax, Waltheria indica, Dodonaea viscosa,* or *Eragrostis variabilis;* and (2) elevations between 275 to 400 m (900 to 1,310 ft).

Family Campanulaceae: *Brighamia insignis* (‘olulu)

Kauai E, G, and M, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, and Niihau B, identified in the legal descriptions in paragraph (a)(1)(i)(B) of this section, constitute critical habitat for *Brighamia insignis* on Kauai and Niihau. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Rocky ledges with little soil or steep sea cliffs (a) in lowland dry grasslands or shrublands with annual rainfall that is usually less than 170 cm (65 in.) and (b) containing one or more of the following native plant species: *Artemisia* sp., *Chamaesyce celastroides, Canthium odoratum, Eragrostis variabilis, Heteropogon contortus, Hibiscus kokio, Hibiscus saintjohnianus, Lepidium serra, Lipochaeta succulenta, Munroidendron racemosum,* or *Sida fallax;* and (2) elevations between sea level to 480 m (1,575 ft) elevation.

Family Campanulaceae: *Clermontia oblongifolia* ssp. *mauiensis* (oha wai)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the ridges in *Metrosideros polymorpha* dominated montane wet forest, and containing one or more of the following associated native plant species: *Coprosma* sp., *Clermontia* sp., *Hedyotis* sp., or *Melicope* sp.; and elevations between 800 and 900 m (2,625 and 2,950 ft).

Family Campanulaceae: *Cyanea asarifolia* (haha)

Kauai R and T, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Cyanea asarifolia* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Pockets of soil on sheer rock cliffs (a) in lowland wet forests and (b) containing one or more of the following

native plant species: *Hedyotis elatior, Machaerina angustifolia, Metrosideros polymorpha, Touchardia latifolia,* or *Urera glabra;* and (2) elevations between 330 to 730 m (1,080 to 2,400 ft).

Family Campanulaceae: *Cyanea grimesiana* ssp. *grimesiana* (haha)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the rocky or steep slopes of stream banks in mesic *Metrosideros polymorpha* forest or *Metrosideros polymorpha—Acacia koa* forest, and containing one or more of the following associated native plant species: *Antidesma* sp., *Bobea* sp., *Myrsine* sp., *Nestegis sandwicensis, Psychotria* sp., or *Xylosma* sp.; and elevations between 350 and 945 m (1,150 and 3,100 ft).

Family Campanulaceae: *Cyanea macrostegia* ssp. *gibsonii* (No Common Name)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the lower gulch slopes, gulch bottoms, and streambanks in lowland wet *Metrosideros polymorpha* forest or *Diplopterygium pinnatum-Metrosideros polymorpha* shrubland, and containing one or more of the following associated native plant species: *Dicranopteris linearis, Perrottetia sandwicensis, Scaevola chamissoniana, Pipturus* sp., *Antidesma* sp., *Freycinetia arborea, Psychotria* sp., *Cyrtandra* sp., *Broussaisia arguta, Cheirodendron* sp., *Clermontia* sp., *Dubautia* sp., *Hedyotis, Ilex anomala, Labordia* sp., *Melicope* sp., *Pneumatopteris* sp., or *Sadleria* sp.; and elevations between 760 and 970 m (2,490 and 3,180 ft).

Family Campanulaceae: *Cyanea recta* (haha)

Kauai K, O, P, and R, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Cyanea recta* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Gulches or slopes (a) in lowland wet or mesic *Metrosideros polymorpha* forest or shrubland and (b) containing one or more of the following native plant species: *Dicranopteris linearis, Psychotria* sp., *Antidesma* sp., *Cheirodendron platyphyllum, Cibotium* sp., or *Diplazium* sp.; and (2) elevations between 400 to 1,200 m (1,310 to 3,940 ft).

Family Campanulaceae: *Cyanea remyi* (haha)

Kauai L, P, R, and T, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Cyanea remyi* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Lowland wet forest or shrubland and containing one or more of the following native plant species: *Antidesma* sp., *Cheirodendron* sp., *Diospyros* sp., *Broussaisia arguta, Metrosideros polymorpha, Freycinetia arborea, Hedyotis terminalis, Machaerina angustifolia, Perrottetia sandwicensis, Psychotria hexandra,* or *Syzygium sandwicensis;* and (2) elevations between 360 to 930 m (1,180 to 3,060 ft).

Family Campanulaceae: *Cyanea undulata* (haha)

Kauai L, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Cyanea undulata* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Pristine, undisturbed sites along shady stream banks or steep to vertical slopes; and (2) elevations between 630 to 800 m (2,070 to 2,625 ft).

Family Campanulaceae: *Delissea rhytidosperma* (No Common Name)

Kauai F, G, and M, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Delissea rhytidosperma* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Well-drained soils with medium or fine-textured subsoil (a) in diverse lowland mesic forests or *Acacia koa* dominated lowland dry forests and (b) containing one or more of the following native species: *Euphorbia haeleeleana, Psychotria hobdyi, Pisonia* sp., *Pteralyxia* sp., *Dodonaea viscosa, Cyanea* sp., *Hedyotis* sp., *Dianella sandwicensis, Diospyros sandwicensis, Styphelia tameiameiae,* or *Nestegis sandwicensis;* and (2) elevations between 120 and 915 m (400 and 3,000 ft).

Family Campanulaceae: *Delissea rivularis* (‘oha)

Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Delissea rivularis* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes near streams (a) in *Metrosideros polymorpha—Cheirodendron trigynum* montane wet or mesic forest and (b) containing one or more of the following native plant species: *Broussaisia arguta, Carex* sp., *Coprosma* sp., *Melicope clusiifolia, M. anisata, Psychotria hexandra, Dubautia knudsenii, Diplazium sandwichianum, Hedyotis foggiana, Ilex anomala,* or *Sadleria* sp.; and (2) elevations between 1,100 to 1,220 m (3,610 to 4,000 ft).

Family Campanulaceae: *Delissea undulata* (No Common Name)

Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Delissea undulata* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) dry or mesic open *Sophora chrysophylla-Metrosideros polymorpha* forests containing one or more of the following native plant species: *Diospyros sandwicensis, Dodonaea viscosa, Psychotria mariniana, P. greenwelliae, Santalum ellipticum, Nothocestrum breviflorum,* or *Acacia koa;* and (2) elevations between 610–1,740 m (2,000–5,700 ft).

Family Campanulaceae: *Lobelia niihauensis* (No Common Name)

Kauai F, G, I, and J, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Lobelia niihauensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Exposed mesic mixed shrubland or coastal dry cliffs containing one or more of the following associated native plant species: *Eragrostis* sp., *Bidens* sp., *Plectranthus parviflorus, Lipochaeta* sp., *Lythrum* sp., *Wilkesia hobdyi, Hibiscus kokio* ssp. *saint johnianus, Nototrichium* sp., *Schiedea apokremnos, Chamaesyce celastroides, Charpentiera* sp., or *Artemisia* sp.; and (2) elevations between 100 to 830 m (330 to 2720 ft).

Family Caryophyllaceae: *Alsinidendron lychnoides* (kuawawaenohu)

Kauai G and H, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Alsinidendron lychnoides* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Montane wet forests (a) dominated by *Metrosideros polymorpha* and *Cheirodendron* sp., or by

Metrosideros polymorpha and *Dicranopteris linearis* and (b) containing one or more of the following native plant species: *Carex* sp., *Cyrtandra* sp., *Machaerina* sp., *Vaccinium* sp., *Peperomia* sp., *Hedyotis terminalis, Astelia* sp., or *Broussaisia arguta;* and (2) elevations between 1,100 and 1,320 m (3,610 and 4,330 ft).

Family Caryophyllaceae: *Alsinidendron viscosum* (No Common Name)

Kauai I, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Alsinidendron viscosum* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes (a) in *Acacia koa-Metrosideros polymorpha* lowland, montane mesic, or wet forest and (b) containing one or more of the following native plant species: *Alyxia olivaeformis, Bidens cosmoides, Bobea* sp., *Carex* sp., *Coprosma* sp., *Dodonaea viscosa, Gahnia* sp., *Ilex anomala, Melicope* sp., *Pleomele* sp., *Psychotria* sp., or *Schiedea stellarioides;* and (2) elevations between 820 and 1,200 m (2,700 and 3,940 ft).

Family Caryophyllaceae: *Schiedea apokremnos* (ma'oli'oli)

Kauai G and J, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Schiedea apokremnos* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Crevices of near-vertical coastal cliff faces (a) in sparse dry coastal shrub vegetation and (b) containing one or more of the following associated native plant species: *Heliotropium* sp., *Chamaesyce* sp., *Bidens* sp., *Artemisia australis, Lobelia niihauensis, Wilkesia hobdyi, Lipochaeta connata, Myoporum sandwicense, Canthium odoratum,* or *Peperomia* sp.; and (2) elevations between 60 to 330 m (200 to 1,080 ft).

Family Caryophyllaceae: *Schiedea helleri* (No Common Name)

Kauai I, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Schiedea helleri* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Ridges and steep cliffs (a) in closed *Metrosideros polymorpha-Dicranopteris linearis* montane wet forest, or *Metrosideros polymorpha-Cheirodendron* sp. montane wet forest, or *Acacia koa-Metrosideros polymorpha* montane mesic forest, and (b) containing one or more of the following associated native plant species: *Dubautia raillardioides, Scaevola procera, Hedyotis terminalis, Syzygium sandwicensis, Melicope clusifolia, Cibotium* sp., *Broussaisia arguta, Cheirodendron* sp., *Cyanea hirtella, Dianella sandwicensis, Viola wailenalenae,* or *Poa sandvicensis;* and (2) elevations between 1,065–1,100 m (3,490–3,610 ft).

Family Caryophyllaceae: *Schiedea kauaiensis* (No Common Name)

Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Schiedea kauaiensis* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes (a) in diverse mesic or wet forest and (b) containing one or more of the following associated plant taxa: Psychotria mariniana, *Psychotria hexandra, Canthium odoratum, Pisonia* sp., *Microlepia speluncae, Exocarpos luteolus, Diospyros* sp., *Peucedanum sandwicense,* or *Euphorbia haeleeleana;* and (2) elevations between 680–790 m (2,230–2,590 ft).

Family Caryophyllaceae: *Schiedea membranacea* (No Common Name)

Kauai G, I, and K, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Schiedea membranacea* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Cliffs or cliff bases (a) in mesic or wet habitats, (b) in lowland, or montane shrubland, or forest communities dominated by *Acacia koa, Pipturus* sp. or *Metrosideros polymorpha* and (c) containing one or more of the following associated native plant species: *Hedyotis terminalis, Melicope* sp., *Pouteria sandwicensis, Poa mannii, Hibiscus waimeae, Psychotria mariniana, Canthium odoratum, Pisonia* sp., *Perrottetia sandwicensis, Scaevola procera, Sadleria cyatheoides, Diplazium sandwicensis, Thelypteris sandwicensis, Boehmeria grandis, Dodonaea viscosa, Myrsine* sp., *Bobea brevipes, Alyxia olivaeformis, Psychotria greenwelliae, Pleomele* sp., *Alphitonia ponderosa, Joinvillea ascendens* ssp. *ascendens, Athyrium sandwichianum, Machaerina angustifolia, Cyrtandra paludosa, Touchardia latifolia, Thelypteris cyatheoides, Lepidium serra, Eragrostis variabilis, Remya kauaiensis, Lysimachia kalalauensis, Labordia helleri, Mariscus pennatiformis, Asplenium praemorsum,* or *Poa sandvicensis;* and (2) elevations between 520 and 1,160 m (1,700 and 3,800 ft).

Family Caryophyllaceae: *Schiedea nuttallii* (No Common Name)

Kauai M, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Schiedea nuttallii* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) diverse lowland mesic forest, often with *Metrosideros polymorpha* dominant, containing one or more of the following associated native plant species: *Antidesma* sp, *Psychotria* sp., *Perrottetia sandwicensis, Pisonia* sp., or *Hedyotis acuminata;* and (2) elevations between 415 and 790 m (1,360 and 2,590 ft).

Family Caryophyllaceae: *Schiedea spergulina* var. *leiopoda* (No Common Name)

Kauai C, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Schiedea spergulina* var. *leiopoda* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) bare rock outcrops or sparsely vegetated portions of rocky cliff faces or cliff bases (a) in diverse lowland mesic forests and (b) containing one or more of the following native plants: *Bidens sandvicensis, Doryopteris* sp., *Peperomia leptostachya,* or *Plectranthus parviflorus;* and (2) elevations between 180 and 800 m (590 and 2,625 ft).

Family Caryophyllaceae: *Schiedea spergulina* var. *spergulina* (No Common Name)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Schiedea spergulina* var. *spergulina* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Bare rock outcrops or sparsely vegetated portions of rocky cliff faces or cliff bases (a) in diverse lowland mesic forests and (b) containing one or more of the following associated plant taxa: *Heliotropium* sp., or *Nototrichium sandwicense;* and (2) elevations between 180 and 800 m (590 and 2,625 ft).

Family Caryophyllaceae: *Schiedea stellarioides* (laulihilihi (=ma'oli'oli))

Kauai I, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Schiedea stellarioides* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes (a) in closed *Acacia koa-Metrosideros polymorpha* lowland or montane mesic forest or shrubland and (b) containing one or more of the following native plant species: *Nototrichium* sp., *Artemisia* sp., *Dodonaea viscosa, Melicope* sp., *Dianella sandwicensis, Bidens cosmoides, Mariscus* sp., or *Styphelia tameiameiae;* and (2) elevations between 610 and 1,120 m (2,000 and 3,680 ft).

Family Convolvulaceae: *Bonamia menziesii* (No Common Name)

i. Kauai G and L, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Bonamia menziesii* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Dry, mesic or wet forests containing one or more of the following native plant species: *Metrosideros polymorpha, Canthium odoratum, Dianella sandwicensis, Diospyros sandwicensis, Dodonaea viscosa, Hedyotis terminalis, Melicope anisata, Melicope barbigera, Myoporum sandwicense, Nestegis sandwicense, Pisonia* sp., *Pittosporum* sp., *Pouteria sandwicensis,* or *Sapindus oahuensis;* and (2) elevations between 150 and 850 m (500 and 2,800 ft).

ii. Critical habitat on Lanai includes the Lanai unit D which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the dry *Nestegis sandwicensis-Diospyros sp.* forest or dry *Dodonea viscosa* shrubland containing one or more of the following associated native plant species: *Bobea* sp., *Nesoluma polynesicum, Erythrina sandwicensis, Rauvolfia sandwicensis, Metrosideros polymorpha, Canthium odoratum, Dianella sandwicensis, Diospyros sandwicensis, Hedyotis terminalis, Melicope anisata, Melicope barbigera, Myoporum sandwicense, Pisonia* sp., *Pittosporum* sp., *Pouteria sandwicensis,* or *Sapindus oahuensis;* and elevations between 150 and 853 m (490 and 2,800 ft).

Family Cyperaceae: *Cyperus trachysanthos* (pu'uka'a)

Kauai G, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, and Niihau A, identified in the legal descriptions in paragraph (a)(1)(i)(B) of this section, constitute critical habitat for *Cyperus trachysanthos* on Kauai and Niihau. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Wet sites (mud flats, wet clay soil, or wet cliff seeps) (a) on coastal cliffs or talus slopes and (b) containing the native plant species *Hibiscus tiliaceus;* and (2) elevations between 3 and 160 m (10 and 525 ft).

Family Cyperaceae: *Gahnia lanaiensis* (No Common Name)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the flat to gentle ridgecrest topography in lowland wet forest (shrubby rainforest to open scrubby fog belt or degraded lowland mesic forest), wet *Diplopterygium pinnatum-Dicranopteris linearis-Metrosideros polymorpha* shrubland or wet *Metrosideros polymorpha-Dicranopteris linearis* shrubland, and containing one or more of the following associated native plant species: *Doodia* sp., *Odontosoria chinensis, Ilex anomala, Hedyotis terminalis, Sadleria* sp., *Coprosma* sp., *Lycopodium* sp., *Scaevola* sp., or *Styphelia tameiameiae;* and elevations between 915 and 1,030 m (3,000 and 3,380 ft).

Family Euphorbiaceae: *Chamaesyce halemanui* (No Common Name)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Chamaesyce halemanui* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes of gulches (a) in mesic *Acacia koa* forests and (b) containing one or more of the following native plant species: *Metrosideros polymorpha, Alphitonia ponderosa, Antidesma platyphyllum, Bobea brevipes, Cheirodendron trigynum, Coprosma* sp., *Diospyros sandwicensis, Dodonaea viscosa, Elaeocarpus bifidus, Hedyotis terminalis, Kokia kauaiensis, Melicope haupuensis, Pisonia* sp., *Pittosporum* sp., *Pleomele aurea, Psychotria mariniana, Psychotria greenwelliae, Pouteria sandwicensis, Santalum freycinetianum,* or *Styphelia tameiameiae;* and (2) elevations between 660 to 1,100 m (2,165 to 3,610 ft).

Family Euphorbiaceae: *Euphorbia haeleeleana* (''akoko)

Kauai G, I, and U, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Euphorbia haeleeleana* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Lowland mixed mesic or dry forest that (a) is often dominated by *Metrosideros polymorpha, Acacia koa,* or *Diospyros* sp. and (b) containing one or more of the following native plant species: *Acacia koaia, Antidesma platyphyllum, Claoxylon* sp., *Carex meyenii, Carex wahuensis, Diplazium sandwichianum, Dodonaea viscosa, Erythrina sandwicensis, Kokia kauaiensis, Pleomele aurea, Psychotria mariniana, P. greenwelliae, Pteralyxia sandwicensis, Rauvolfia sandwicensis, Reynoldsia sandwicensis, Sapindus oahuensis, Tetraplasandra kauaiensis, Pouteria sandwicensis, Pisonia sandwicensis,* or *Xylosma* sp.; and (2) elevations between 205 and 670 m (680 and 2,200 ft).

Family Euphorbiaceae: *Flueggea neowawraea* (mehamehame)

Kauai F, G, and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Flueggea neowawraea* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Dry or mesic forests containing one or more of the following native plant species: *Alectryon macrococcus, Bobea timonioides, Charpentiera* sp., *Caesalpinia kauaiense, Hibiscus* sp., *Melicope* sp., *Metrosideros polymorpha, Myrsine lanaiensis, Munroidendron racemosum, Tetraplasandra* sp., *Kokia kauaiensis, Isodendrion* sp., *Pteralyxia kauaiensis, Psychotria mariniana, Diplazium sandwichianum, Freycinetia arborea, Nesoluma polynesicum, Diospyros* sp., *Antidesma pulvinatum,* A. *platyphyllum, Canthium odoratum, Nestegis sandwicensis, Rauvolfia sandwicensis, Pittosporum* sp., *Tetraplasandra* sp., *Pouteria sandwicensis, Xylosma* sp., *Pritchardia* sp., *Bidens* sp., or *Streblus pendulinus;* and (2) elevations of 250 to 1,000 m (820 to 3,280 ft).

Family Fabaceae: *Sesbania tomentosa* ('ohai)

Kauai J, identified in the legal description in paragraph (a)(1)(i)(A) of

this section, constitutes critical habitat for *Sesbania tomentosa* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Sandy beaches, dunes, soil pockets on lava, or pond margins (a) in coastal dry shrublands, or open *Metrosideros polymorpha* forests, or mixed coastal dry cliffs, and (b) containing one or more of the following associated native plant species: *Sida fallax, Heteropogon contortus, Myoporum sandwicense, Sporobolus virginicus, Scaevola sericea,* or *Dodonaea viscosa;* and (2) elevations between sea level and 12 m (0 and 40 ft).

Family Fabaceae: *Vigna o-wahuensis* (No common name)

The currently known primary constituent elements of critical habitat for *Vigna o-wahuensis* on Lanai are unknown.

Family Flacourtiaceae: Xylosma crenatum (No Common Name)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Xylosma crenatum* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Diverse *Acacia koa-Metrosideros polymorpha* montane mesic forest, or *Metrosideros polymorpha-Dicranopteris linearis* montane wet forest, or *Acacia koa-Metrosideros polymorpha* montane wet forest, and containing one or more of the following associated native plant species: *Tetraplasandra kauaiensis, Hedyotis terminalis, Pleomele aurea, Ilex anomala, Claoxylon sandwicense, Myrsine alyxifolia, Nestegis sandwicensis, Streblus pendulinus, Psychotria* sp., *Diplazium sandwichianum, Pouteria sandwicensis, Scaevola procera, Coprosma* sp., *Athyrium sandwichianum, Touchardia latifolia, Dubautia knudsenii, Cheirodendron* sp., *Lobelia yuccoides, Cyanea hirta, Poa sandwicensis,* or *Diplazium sandwichianum;* and (2) elevations between 975 to 1,065 m (3,200 to 3,4900 ft).

Family Gentianaceae: *Centaurium sebaeoides* (‘awiwi)

i. Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Centaurium sebaeoides* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Volcanic or clay soils or cliffs (a) in arid coastal areas and (b) containing one or more of the following native plant species; *Artemisia* sp., *Bidens* sp., *Chamaesyce celastroides, Dodonaea viscosa, Fimbristylis cymosa, Heteropogon contortus, Jaquemontia ovalifolia, Lipochaeta succulenta, Lipochaeta heterophylla, Lipochaeta integrifolia, Lycium sandwicense, Lysimachia mauritiana, Mariscus phloides, Panicum fauriei, P. torridum, Scaevola sericea, Schiedea globosa, Sida fallax,* or *Wikstroemia uva-ursi;* and (2) elevations above 250 m (800 ft).

ii. Critical habitat on Lanai includes the Lanai unit F which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the dry ledges which may or may not contain *Hibiscus brackenridgei;* and an elevation around 210 m (690 ft).

Family Gesneriaceae: *Cyrtandra cyaneoides* (mapele)

Kauai K, P, and R, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Cyrtandra cyaneoides* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes or cliffs near streams or waterfalls—(a) in lowland or montane wet forest or shrubland dominated by *Metrosideros polymorpha* or a mixture of *Metrosideros polymorpha* and *Dicranopteris linearis* and (b) containing one or more of the following native species: *Perrottetia sandwicensis, Pipturus* sp., *Bidens* sp., *Psychotria* sp., *Pritchardia* sp., *Freycinetia arborea, Cyanea* sp., *Cyrtandra limahuliensis, Diplazium sandwichianum, Gunnera* sp., *Coprosma* sp., *Stenogyne* sp., *Machaerina* sp., *Boehmeria grandis, Pipturus* sp., *Cheirodendron* sp., *Hedyotis terminalis,* or *Hedyotis tryblium;* and (2) elevations between 550 and 1,220 meter (1,800 and 4,000 ft).

Family Gesneriaceae: *Cyrtandra limahuliensis* (ha‘iwale)

Kauai A, F, K, L, O, P, Q, R, and T, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Cyrtandra limahuliensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Stream banks (a) in lowland wet forests and (b) containing one or more of the following native plant species: *Antidesma* sp., *Cyrtandra kealiea, Pisonia* sp., *Pipturus* sp., *Cibotium glaucum, Eugenia* sp, *Hedyotis terminalis, Dubautia* sp., *Boehmeria grandis, Touchardia latifolia, Bidens* sp., *Hibiscus waimeae, Charpentiera* sp., *Urera glabra, Pritchardia* sp., *Cyanea* sp., *Perrottetia sandwicensis, Metrosideros polymorpha, Dicranopteris linearis, Gunnera kauaiensis,* or *Psychotria* sp.; and (2) elevations between 245 and 915 m (800 and 3,000 ft).

Family Gesneriaceae: *Cyrtandra munroi* (ha iwale)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are rich, moist to wet, moderately steep talus slopes in diverse mesic forest, wet *Metrosideros polymorpha* forest, or mixed mesic *Metrosideros polymorpha* forest, and containing one or more of the following associated native plant species: *Diplopterygium pinnatum, Diospyros* sp., *Metrosideros polymorpha, Hedyotis acuminata, Clermontia* sp., *Alyxia oliviformis, Bobea* sp., *Coprosma* sp., *Dicranopteris linearis, Freycinetia arborea, Melicope* sp., *Myrsine* sp., *Perrottetia sandwicensis, Pipturus* sp., *Pittosporum* sp., *Pleomele* sp., *Pouteria sandwicensis, Psychotria* sp., *Sadleria* sp., *Scaevola* sp., *Xylosma* sp., or other *Cyrtandra* sp.; and elevations between 300 and 920 m (980 and 3,020 ft).

Family Lamiaceae: *Phyllostegia knudsenii* (No Common Name)

Kauai I, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Phyllostegia knudsenii* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) *Metrosideros polymorpha* lowland mesic or wet forest containing one or more of the following associated native plant species: *Perrottetia sandwicensis, Cyrtandra kauaiensis, Cyrtandra paludosa, Elaeocarpus bifidus, Claoxylon sandwicensis, Cryptocarya mannii, Ilex anomala, Myrsine linearifolia, Bobea timonioides, Selaginella arbuscula, Diospyros* sp., *Zanthoxylum dipetalum, Pittosporum* sp., *Tetraplasandra* spp., *Pouteria sandwicensis,* or *Pritchardia minor;* and (2) elevations between 865–975 m (2,840–3,200 ft).

Family Lamiaceae: *Phyllostegia wawrana* (No Common Name)

Kauai G, I, and R, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Phyllostegia wawrana* on Kauai. Within these units, the currently known primary constituent

elements of critical habitat are habitat components that provide: (1) *Metrosideros polymorpha* dominated lowland or montane wet or mesic forest with (a) *Cheirodendron* sp. or *Dicranopteris linearis* as co-dominants, and (b) containing one or more of the following associated native plant species: *Delissea rivularis, Diplazium sandwichianum, Vaccinium* sp., *Broussaisia arguta, Myrsine lanaiensis, Psychotria* sp., *Dubautia knudsenii, Scaevola procera, Gunnera* sp., *Pleomele aurea, Claoxylon sandwicense, Elaphoglossum* sp., *Hedyotis* sp., *Sadleria* sp., and *Syzygium sandwicensis;* and (2) elevations between 780–1,210 m (2,560–3,920 ft).

Family Lamiaceae: *Stenogyne campanulata* (No Common Name)

Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Stenogyne campanulata* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Rock faces of nearly vertical, north-facing cliffs (a) in diverse lowland or montane mesic forest and (b) containing one or more of the following associated native plant species: *Heliotropium* sp., *Lepidium serra, Lysimachia glutinosa, Perrottetia sandwicensis,* or *Remya montgomeryi;* and (2) an elevation of 1,085 m (3,560 ft).

Family Loganiaceae: *Labordia lydgatei* (kamakahala)

Kauai F, K, L, P, R, and T, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Labordia lydgatei* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) *Metrosideros polymorpha-Dicranopteris linearis* lowland wet forest containing one or more of the following associated native plant species: *Psychotria* sp., *Hedyotis terminalis* sp., *Cyanea* sp., *Cyrtandra* sp., *Labordia hirtella, Antidesma platyphyllum* var. *hillebrandii, Syzygium sandwicensis, Ilex anomala,* or *Dubautia knudsenii;* and (2) elevations between 635 and 855 m (2,080 to 2,800 ft).

Family Loganiaceae: *Labordia tinifolia* var. *lanaiensis* (kamakahala)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the lowland mesic forest with one or more of the following associated native plants: *Dicranopteris linearis* or *Scaevola chamissoniana;* and elevations between 710 and 1,020 m (2,330 and 3,345 ft).

Family Loganiaceae: *Labordia tinifolia* var. *wahiawaensis* (kamakahala)

Kauai L, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Labordia tinifolia* var. *wahiawaensis* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Streambanks (a) in lowland wet forests dominated by *Metrosideros polymorpha* and (b) containing one or more of the following associated species: *Cheirodendron* sp., *Dicranopteris linearis, Cyrtandra* sp, *Antidesma* sp., *Psychotria* sp., *Hedyotis terminalis*, or *Athyrium microphyllum*; and (2) elevations between 300 to 920 m (985 to 3,020 ft).

Family Malvaceae: *Abutilon eremitopetalum* (No Common Name)

Critical habitat includes the Lanai unit E which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the moderately steep north-facing slopes with red sandy soil and rock in lowland dry *Erythrina sandwicensis-Diospyros ferrea* forest and containing one or more of the following native plant taxa: *Canthium odoratum, Dodonaea viscosa, Nesoluma polynesicum, Rauvolfia sandwicensis, Sida fallax*, or *Wikstroemia* sp.; and elevations between 210 and 520 m (690 and 1,700 ft).

Family Malvaceae: *Hibiscadelphus woodii* (hau kuahiwi)

Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Hibiscadelphus woodii* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Basalt talus or cliff walls (a) in *Metrosideros polymorpha* montane mesic forest and (b) containing one or more of the following associated native plant species: *Bidens sandwicensis, Artemisia australis, Melicope pallida, Dubautia* sp., *Lepidium serra, Lipochaeta* sp., *Lysimachia glutinosa, Carex meyenii, Chamaesyce celastroides* var. *hanapepensis, Hedyotis* sp., *Nototrichium* sp., *Panicum lineale, Myrsine* sp., *Stenogyne campanulata, Lobelia niihauensis*, or *Poa mannii*; and (2) elevations around 915 m (3,000 ft).

Family Malvaceae: *Hibiscus brackenridgei* (mao hau hele)

Critical habitat includes the Lanai units F and J which are identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the lowland dry to mesic forest and shrubland containing one or more of the following associated native plant species: *Dodonea viscosa, Canthium odoratum, Eurya sandwicensis, Isachne distichophylla*, or *Sida fallax*; and elevations between sea level and 800 m (2,625 ft).

Family Malvaceae: *Hibiscus clayi* (Clay's hibiscus)

Kauai N, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Hibiscus clayi* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Slopes (a) in *Acacia koa* or *Diospyros* sp. -*Pisonia* sp.-*Metrosideros polymorpha* lowland dry or mesic forest and (b) containing one or more of the following associated native plant species: *Hedyotis acuminata, Pipturus* sp., *Psychotria* sp., *Cyanea hardyi, Artemisia australis*, or *Bidens* sp.; and (2) elevations between 230 to 350 m (750 to 1,150 ft).

Family Malvaceae: *Hibiscus waimeae* ssp. *hannerae* (koki'o ke'oke'o)

Kauai F, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Hibiscus waimeae* ssp. *hannerae* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) *Metrosideros polymorpha-Dicranopteris linearis* or *Pisonia* sp.-*Charpentiera elliptica* lowland wet or mesic forest and containing one or more of the following associated native plant species: *Antidesma* sp., *Psychotria* sp., *Pipturus* sp., *Bidens* sp., *Bobea* sp., *Sadleria* sp., *Cyrtandra* sp., *Cyanea* sp., *Cibotium* sp., *Perrottetia sandwicensis*, or *Syzygium sandwicensis*; and (2) elevations between 190 and 560 m (620 and 1,850 ft).

Family Malvaceae: *Kokia kauaiensis* (koki'o)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Kokia kauaiensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Diverse mesic forest containing one or more of the following

associated native plant species: *Acacia koa, Metrosideros polymorpha, Bobea* sp., *Diospyros sandwicensis, Hedyotis* sp., *Pleomele* sp., *Pisonia* sp., *Xylosma* sp., *Isodendrion* sp., *Syzygium sandwicensis, Antidesma* sp., *Alyxia olivaeformis, Pouteria sandwicensis, Streblus pendulinus, Canthium odoratum, Nototrichium* sp., *Pteralyxia kauaiensis, Dicranopteris linearis, Hibiscus* sp., *Flueggea neowawraea, Rauvolfia sandwicensis, Melicope* sp., *Diellia laciniata, Tetraplasandra* sp., *Chamaesyce celastroides, Lipochaeta fauriei, Dodonaea viscosa, Santalum* sp., *Claoxylon* sp., or *Nestegis sandwicensis*; and (2) elevations between 350–660 m (1,150–2,165 ft).

Family Myrsinaceae: *Myrsine linearifolia* (kolea)

Kauai F, G, H, I, L, and P, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Myrsine linearifolia* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) diverse mesic or wet lowland or montane *Metrosideros polymorpha* forest with (a) *Cheirodendron* sp. or *Dicranopteris linearis* as co-dominants, and (b) containing one or more of the following associated native plant species: *Dubautia* sp., *Cryptocarya mannii, Sadleria pallida, Myrsine* sp., *Syzygium sandwicensis, Machaerina angustifolia, Freycinetia arborea, Hedyotis terminalis, Cheirodendron* sp., *Bobea brevipes, Nothocestrum* sp., *Melicope* sp., *Eurya sandwicensis, Psychotria* sp., *Lysimachia* sp., *or native ferns*; and (2) elevations between 585 to 1,280 m (1,920 to 4,200 ft).

Family Orchidaceae: *Platanthera holochila* (No Common Name)

Kauai H, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Platanthera holochila* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) *Metrosideros polymorpha-Dicranopteris linearis* montane wet forest or *M. polymorpha* mixed bog containing one or more of the following associated native plants: *Myrsine denticulata, Cibotium* sp., *Coprosma ernodeoides, Oreobolus furcatus, Styphelia tameiameiae, or Vaccinium* sp.; and (2) elevations between 1,050 and 1,600 m (3,450 and 5,245 ft).

Family Plantaginaceae: *Plantago princeps* (laukahi kuahiwi)

Kauai G, K, P, and T, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Plantago princeps* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes, rock walls, or bases of waterfalls (a) in mesic or wet *Metrosideros polymorpha* forest and (b) containing one or more of the following associated native plant species: *Dodonaea viscosa, Psychotria* sp., *Dicranopteris linearis, Cyanea* sp., *Hedyotis* sp., *Melicope* sp., *Dubautia plantaginea, Exocarpos luteolus, Poa siphonoglossa, Nothocestrum peltatum, Remya montgomeryi, Stenogyne campanulata, Xylosma* sp., *Pleomele* sp., *Machaerina angustifolia, Athyrium* sp., *Bidens* sp., *Eragrostis* sp., *Lysimachia filifolia, Pipturus* sp., *Cyrtandra* sp., or *Myrsine linearifolia*; and (2) elevations between 480 to 1,100 m (1,580 to 3,610 ft).

Family Poaceae: *Panicum niihauense* (lau'ehu)

Kauai J, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Panicum niihauense* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Sand dunes (a) in coastal shrubland and (b) containing one or more of the following associated native plant species: *Dodonaea viscosa, Cassytha filiformis, Scaevola sericea, Sida fallax, Vitex rotundifolia*, or *Sporobolus* sp.; and (2) elevations of 100 m or less (330 ft).

Family Poaceae: *Poa mannii* (Mann's bluegrass)

Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Poa mannii* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Cliffs, rock faces, or stream banks (a) in lowland or montane wet, dry, or mesic *Metrosideros polymorpha* or *Acacia koa-Metrosideros polymorpha* montane mesic forest and (b) containing one or more of the following associated native plant species: *Alectryon macrococcus, Antidesma platyphyllum, Bidens cosmoides, Chamaesyce celastroides* var. *hanapepensis, Artemisia australis, Bidens sandwicensis, Lobelia sandwicensis, Wilkesia gymnoxiphium, Eragrostis variabilis, Panicum lineale, Mariscus phloides, Luzula hawaiiensis, Carex meyenii, C. wahuensis, Cyrtandra wawrae, Dodonaea viscosa, Exocarpos luteolus, Labordia helleri, Nototrichium* sp., *Schiedea amplexicaulis, Hedyotis terminalis, Melicope anisata, M. barbigera, M. pallida, Pouteria sandwicensis, Schiedea membranacea, Diospyros sandwicensis, Psychotria mariniana, P. greenwelliae*, or *Kokia kauaiensis*; and (2) elevations between 460 and 1,150 m (1,510 and 3,770 ft).

Family Poaceae: *Poa sandvicensis* (Hawaiian bluegrass)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Poa sandvicensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Wet, shaded, gentle or steep slopes, ridges, or rock ledges (a) in semi-open or closed, mesic or wet, diverse montane forest dominated by *Metrosideros polymorpha* and (b) containing one or more of the following associated native species: *Dodonaea viscosa, Dubautia* sp., *Coprosma* sp., *Melicope* sp., *Dianella sandwicensis, Alyxia olivaeformis, Bidens* sp., *Dicranopteris linearis, Schiedea stellarioides, Peperomia macraeana, Claoxylon sandwicense, Acacia koa, Psychotria* sp., *Hedyotis* sp., *Scaevola* sp., *Cheirodendron* sp., or *Syzygium sandwicensis*; and (2) elevations between 1,035 to 1,250 m (3,400 to 4,100 ft).

Family Poaceae: *Poa siphonoglossa* (No Common Name)

Kauai G, I, and U, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Poa siphonoglossa* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Shady banks near ridge crests (a) in mesic *Metrosideros polymorpha* forest and (b) containing one or more of the following associated native plant species: *Acacia koa, Psychotria* sp., *Scaevola* sp., *Alphitonia ponderosa, Zanthoxylum dipetalum, Tetraplasandra kauaiensis, Dodonaea viscosa, Hedyotis* sp., *Melicope* sp., *Vaccinium* sp., *Styphelia tameiameiae, Carex meyenii, Carex wahuensis*, or *Wilkesia gymnoxiphium*; and (2) elevations between 1,000 to 1,200 m (3,300 and 3,900 ft).

Family Portulacaceae: *Portulaca sclerocarpa* (po e)

Critical habitat includes the Lanai unit G which is identified in paragraph

(a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the exposed ledges with thin soil in coastal communities.

Family Primulaceae: *Lysimachia filifolia* (No Common Name)

Kauai T, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Lysimachia filifolia* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Mossy banks at the base of cliff faces within the spray zone of waterfalls or along streams in lowland wet forests and containing one or more of the following associated native plant species: mosses, ferns, liverworts, *Machaerina* sp., *Heteropogon contortus*, or *Melicope* sp.; and (2) elevations between 240 to 680 m (800 to 2,230 ft).

Family Rhamnaceae: *Gouania meyenii* (No Common Name)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Gouania meyenii* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Rocky ledges, cliff faces, or ridge tops (a) in dry shrubland or *Metrosideros polymorpha* lowland mesic forest and (b) containing one or more of the following native plant species: *Dodonaea viscosa, Chamaesyce* sp., *Psychotria* sp., *Hedyotis* sp., *Melicope* sp., *Nestegis sandwicensis, Bidens* sp., *Carex meyenii, Diospyros* sp., *Lysimachia* sp., or *Senna gaudichaudii*; and (2) elevations between 490 to 880 m (1,600 to 2,880 ft).

Family Rubiaceae: *Hedyotis cookiana* ('awiwi)

Kauai G, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Hedyotis cookiana* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Streambeds or steep cliffs close to water sources in lowland wet forest communities; and (2) elevations between 170 and 370 m (560 and 1,210 ft).

Family Rubiaceae: *Hedyotis mannii* (pilo)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the dark, narrow, rocky gulch walls or steep stream banks in wet forests, and containing one or more of the following associated native plant species: *Sadleria* sp., *Selaginella* sp., *Broussaisia arguta, Labordia* sp., *Cyrtandra* sp., *Scaevola* sp., *Freycinetia arborea, Blechnum occidentale, Pipturis* sp., *Carex meyenii, Pneumatopteris sandwicensis, Cibotium* sp., *Cyanea* sp., or *Psychotria* sp.; and elevations between 150 and 1,050 m (490 and 3,450 ft).

Family Rubiaceae: *Hedyotis schlechtendahliana* var. *remyi* (kopa)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the ridge crests in mesic windswept shrubland, and containing one or more of the following associated native plant species: *Metrosideros polymorpha, Dicranopteris linearis, Styphelia tameiameiae, Dodonaea viscosa, Odontosoria chinensis, Sadleria* sp., *Dubautia* sp., or *Myrsine* sp.; and elevations between 730 and 900 m (2,400 to 3,000 ft).

Family Rubiaceae: *Hedyotis st.-johnii* (Na Pali beach Hedyotis)

Kauai G and J, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Hedyotis st.-johnii* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Crevices of north-facing, near-vertical coastal cliff faces within the spray zone (a) in sparse dry coastal shrubland and (b) containing one or more of the following native plant species: *Myoporum sandwicense, Eragrostis variabilis, Lycium sandwicense, Heteropogon contortus, Artemisia australis* or *Chamaesyce celastroides*; and (2) elevations above 75 m (250 ft).

Family Rutaceae: *Melicope haupuensis* (alani)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Melicope haupuensis* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Moist talus slopes (a) in *Metrosideros polymorpha* dominated lowland mesic forests or *Metrosideros polymorpha-Acacia koa* montane mesic forest and (b) containing one or more of the following associated native plant species: *Dodonaea viscosa, Diospyros* sp., *Psychotria mariniana, P. greenwelliae, Melicope ovata, M. anisata, M. barbigera, Dianella sandwicensis, Pritchardia minor, Tetraplasandra waimeae, Claoxylon sandwicensis, Cheirodendron trigynum, Pleomele aurea, Cryptocarya mannii, Pouteria sandwicensis, Bobea brevipes, Hedyotis terminalis, Elaeocarpus bifidus, or Antidesma* sp; and (2) elevations between 375 to 1,075 m (1,230 to 3,530 ft).

Family Rutaceae: *Melicope knudsenii* (alani)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Melicope knudsenii* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Forested flats or talus slopes (a) in lowland dry or montane mesic forests and (b) containing one or more of the following associated native plant species: *Dodonaea viscosa, Antidesma* sp., *Metrosideros polymorpha, Xylosma* sp., *Hibiscus* sp., *Myrsine lanaiensis, Diospyros* sp., *Rauvolfia sandwicensis, Bobea* sp., *Nestegis sandwicensis, Hedyotis* sp., *Melicope* sp., *Psychotria* sp., or *Pittosporum kauaiensis*; and (2) elevations between 450 to 1,000 m (1,480 to 3,300 ft).

Family Rutaceae: *Melicope munroi* (alani)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the slopes in lowland wet shrublands, and containing one or more of the following native plant taxa: *Diplopterygium pinnatum, Dicranopteris linearis, Metrosideros polymorpha, Cheirodendron trigynum, Coprosma* sp., *Broussaisia arguta*, other *Melicope* sp., *or Machaerina angustifolia*; and elevations between 790 to 1,020 m (2,600 to 3,350 ft).

Family Rutaceae: *Melicope pallida* (alani)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Melicope pallida* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep rock faces (a) in lowland or montane mesic or wet forests or shrubland and (b) containing one or more of the following associated native plant species: *Dodonaea viscosa, Lepidium serra, Pleomele* sp., *Boehmeria grandis, Coprosma* sp., *Hedyotis terminalis, Melicope* sp., *Pouteria sandwicensis, Poa mannii, Schiedea membranacea, Psychotria mariniana, Dianella sandwicensis,*

Pritchardia minor, Chamaesyce celastroides var. *hanapepensis, Nototrichium* sp., *Carex meyenii, Artemisia* sp., *Abutilon sandwicense, Alyxia olivaeformis, Dryopteris* sp., *Metrosideros polymorpha, Pipturus albidus, Sapindus oahuensis, Tetraplasandra* sp., or *Xylosma hawaiiense*; and (2) elevations between 490 to 915 m (1,600 to 3,000 ft).

Family Rutaceae: *Zanthoxylum hawaiiense* (a'e)

Kauai I, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Zanthoxylum hawaiiense* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Lowland dry or mesic forests, or montane dry forest, (a) dominated by *Metrosideros polymorpha* or *Diospyros sandwicensis*, and (b) containing one or more of the following associated plant species: *Pleomele auwahiensis, Antidesma platyphyllum, Pisonia* sp., *Alectryon macrococcus, Charpentiera* sp., *Melicope* sp., *Streblus pendulinus, Myrsine lanaiensis, Sophora chrysophylla*, or *Dodonaea viscosa*; and (2) elevations between 550 and 730 m (1,800 and 2,400 ft).

Family Santalaceae: *Exocarpos luteolus* (heau)

Kauai G, H, I, L, and S, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Exocarpos luteolus* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Wet places bordering swamps; open, dry ridges (a) in lowland or montane *Metrosideros polymorpha* dominated wet forest communities and (b) containing one or more of the following native plant species: *Acacia koa, Cheirodendron trigynum, Pouteria sandwicensis, Dodonaea viscosa, Pleomele aurea, Psychotria mariniana, Psychotria greenwelliae, Bobea brevipes, Hedyotis terminalis, Elaeocarpus bifidus, Melicope haupuensis, Dubautia laevigata, Dianella sandwicensis, Poa sandvicensis, Schiedea stellarioides, Peperomia macraeana, Claoxylon sandwicense, Santalum freycinetianum, Styphelia tameiameiae*, or *Dicranopteris linearis*; and (2) elevations between 475 and 1,290 m (1,560 and 4,220 ft).

Family Sapindaceae: *Alectryon macrococcus* (mahoe)

Kauai G, I, and U, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Alectryon macrococcus* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Dry slopes or gulches (a) in *Diospyros* sp.-*Metrosideros polymorpha* lowland mesic forest, *Metrosideros polymorpha* mixed mesic forest, or *Diospyros* sp. mixed mesic forest, (b) containing one or more of the following native plant species: *Nestegis sandwicensis, Psychotria* sp., *Pisonia* sp., *Xylosma* sp., *Streblus pendulinus, Hibiscus* sp., *Antidesma* sp., *Pleomele* sp., *Acacia koa, Melicope knudsenii, Hibiscus waimeae, Pteralyxia* sp., *Zanthoxylum* sp., *Kokia kauaiensis, Rauvolfia sandwicensis, Myrsine lanaiensis, Canthium odoratum, Canavalia* sp., *Alyxia oliviformis, Nesoluma polynesicum, Munroidendron racemosum, Caesalpinia kauaiense, Tetraplasandra* sp., *Pouteria sandwicensis*, or *Bobea timonioides*; and (2) elevations between 360 to 1,070 m (1,180 to 3,510 ft).

Family Solanaceae: *Nothocestrum peltatum* ('aiea)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Nothocestrum peltatum* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Rich soil on steep slopes (a) in montane or lowland mesic or wet forest dominated by *Acacia koa* or a mixture of *Acacia koa* and *Metrosideros polymorpha*, and (b) containing one or more of the following associated native plant species: *Antidesma* sp., *Dicranopteris linearis, Bobea brevipes, Elaeocarpus bifidus, Alphitonia ponderosa, Melicope anisata, M. barbigera, M. haupuensis, Pouteria sandwicensis, Dodonaea viscosa, Dianella sandwicensis, Tetraplasandra kauaiensis, Claoxylon sandwicensis, Cheirodendron trigynum, Psychotria mariniana, P. greenwelliae, Hedyotis terminalis, Ilex anomala, Xylosma* sp., *Cryptocarya mannii, Coprosma* sp., *Pleomele aurea, Diplazium sandwicensis, Broussaisia arguta*, or *Perrottetia sandwicensis*; and (2) elevations between 915 to 1,220 m (3,000 to 4,000 ft).

Family Solanaceae: *Solanum sandwicense* ('aiakeaakua, popolu)

Kauai D, G, and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Solanum sandwicense* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Open, sunny areas (a) in diverse lowland or montane mesic or wet forests and (b) containing one or more of the following associated plants: *Alphitonia ponderosa, Ilex anomala, Xylosma* sp., *Athyrium sandwicensis, Syzygium sandwicensis, Bidens cosmoides, Dianella sandwicensis, Poa siphonoglossa, Carex meyenii, Hedyotis* sp., *Coprosma* sp., *Dubautia* sp., *Pouteria sandwicensis, Cryptocarya mannii, Acacia koa, Metrosideros polymorpha, Dicranopteris linearis, Psychotria* sp., or *Melicope* sp.; and (2) elevations between 760 and 1,220 m (2,500 and 4,000 ft).

Family Violaceae: *Isodendrion laurifolium* (aupaka)

Kauai G, I, and U, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Isodendrion laurifolium* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Diverse mesic or wet forest (a) dominated by *Metrosideros polymorpha, Acacia koa,* or *Diospyros* sp. and (b) containing one or more of the following associated native plant species: *Kokia kauaiensis, Streblus* sp., *Elaeocarpus bifidus, Canthium odoratum, Antidesma* sp., *Xylosma hawaiiense, Hedyotis terminalis, Pisonia* sp., *Nestegis sandwicensis, Dodonaea viscosa, Euphorbia haeleeleana, Pleomele* sp., *Pittosporum* sp., *Melicope* sp., *Claoxylon sandwicense, Alphitonia ponderosa, Myrsine lanaiensis,* or *Pouteria sandwicensis;* and (2) elevations between 490 and 820 m (1,600 and 2,700 ft).

Family Violaceae: *Isodendrion longifolium* (aupaka)

Kauai F, G, L, M, and P, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for Isodendrion longifolium on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Steep slopes, gulches, or stream banks (a) in mesic or wet *Metrosideros polymorpha* forests and (b) containing one or more of the following native species: *Dicranopteris linearis, Eugenia* sp., *Diospyros* sp., *Pritchardia* sp., *Canthium odoratum, Melicope* sp., *Cheirodendron* sp., *Ilex anomala, Pipturus* sp., *Hedyotis fluviatilis, Peperomia* sp., *Bidens* sp., *Nestegis sandwicensis, Cyanea hardyi, Syzygium* sp., *Cibotium* sp., *Bobea brevipes,*

Antidesma sp., *Cyrtandra* sp., *Hedyotis terminalis, Peperomia* sp., *Perrottetia sandwicensis, Pittosporum* sp., or *Psychotria* sp.; and (2) elevations between 410 to 760 m (1,345 to 2,500 ft).

Family Violaceae: *Viola helenae* (No Common Name)

Kauai L, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Viola helenae* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Stream banks or adjacent valley bottoms with light to moderate shade in *Metrosideros polymorpha-Dicranopteris linearis* lowland wet forest; and (2) elevations between 610–855 m (2,000–2,800 ft).

Family Violaceae: *Viola kauaiensis* var. *wahiawaensis* (nani wai'ale'ale)

Kauai L, identified in the legal description in paragraph (a)(1)(i)(A) of this section, constitutes critical habitat for *Viola kauaiensis* var. *wahiawaensis* on Kauai. Within this unit, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Open montane bog or wet shrubland containing one or more of the following native plant species: *Dicranopteris linearis, Diplopterygium pinnatum, Syzygium sandwicensis,* or *Metrosideros polymorpha;* and (2) elevations between 640 and 865 m (2,100 and 2,840 ft).

Family Violaceae: *Viola lanaiensis* (No Common Name)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent elements are the moderate to steep slopes from lower gulches to ridgetops, with a soil and decomposed rock substrate in open to shaded areas in *Metrosideros polymorpha-Dicranopteris linearis* montane mesic forest, lowland wet forest or lowland mesic shrubland, and containing one or more of the following associated native plants: ferns and short windswept shrubs, *Scaevola chamissoniana, Hedyotis terminalis, Hedyotis centranthoides, Styphelia* sp., *Carex* sp., *Ilex* sp., *Psychotria* sp., *Antidesma* sp., *Coprosma* sp., *Freycinetia* sp., *Myrsine* sp., *Nestegis* sp., *Psychotria* sp., or *Xylosma* sp.; and elevations between 670–975 m (2,200–3,200 ft).

(B) *Ferns and Allies.*

Family Aspleniaceae: *Ctenitis squamigera* (pauoa)

Critical habitat includes the Lanai unit A which is identified in paragraph (a)(1)(i)(E) of this section. Within this unit the primary constituent element is the forest understory in diverse mesic forest or scrubby mixed mesic forest, and containing one or more of the following associated native plant species: *Nestegis sandwicensis, Coprosma* sp., *Sadleria* sp., *Selaginella* sp., *Carex meyenii, Blechnum occidentale, Pipturus* sp., *Melicope* sp., *Pneumatopteris sandwicensis, Pittosporum* sp., *Alyxia oliviformis, Freycinetia arborea, Antidesma* sp., *Cyrtandra* sp., *Peperomia* sp., *Myrsine* sp., *Psychotria* sp., *Metrosideros polymorpha, Syzygium sandwicensis, Melicope* sp., *Wikstroemia* sp., *Microlepia* sp., *Doodia* sp., *Boehmeria grandis, Nephrolepis* sp., *Perrotettia sandwicensis,* or *Xylosma* sp.; and elevations between 380 and 917 m (1,250 and 3,010 ft).

Family Aspleniaceae: *Diellia pallida* (No Common Name)

Kauai G and I, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Diellia pallida* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Bare soil on steep, rocky, dry slopes (a) in lowland mesic forests and (b) containing one or more of the following native plant species: *Acacia koa, Alectryon macrococcus, Antidesma platyphyllum, Metrosideros polymorpha, Myrsine lanaiensis, Zanthoxylum dipetalum, Tetraplasandra kauaiensis, Psychotria mariniana, Carex meyenii, Diospyros hillebrandii, Hedyotis knudsenii, Canthium odoratum, Pteralyxia kauaiensis, Nestegis sandwicensis, Alyxia olivaeformis, Wilkesia gymnoxiphium, Alphitonia ponderosa, Styphelia tameiameiae,* or *Rauvolfia sandwicensis;* and (2) elevations between 530 to 915 m (1,700 to 3,000 ft).

Family Grammitidaceae: *Adenophorus periens* (pendant kihi fern)

Kauai F, G, K, L, P, and R, identified in the legal descriptions in paragraph (a)(1)(i)(A) of this section, constitute critical habitat for *Adenophorus periens* on Kauai. Within these units, the currently known primary constituent elements of critical habitat are habitat components that provide: (1) Well-developed, closed canopy that provides deep shade or high humidity (a) in *Metrosideros polymorpha-Cibotium glaucum* lowland wet forests, open *Metrosideros polymorpha* montane wet forest, or *Metrosideros polymorpha-Dicranopteris linearis* lowland wet forest, and (b) containing one or more of the following native plant species: *Athyrium sandwicensis, Broussaisia* sp., *Cheirodendron trigynum, Cyanea* sp., *Cyrtandra* sp., *Dicranopteris linearis, Freycinetia arborea, Hedyotis terminalis, Labordia hirtella, Machaerina angustifolia, Psychotria* sp., *Psychotria hexandra,* or *Syzygium sandwicensis;* and (2) elevations between 400 and 1,265 m (1,310 and 4,150 ft).

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Dated: November 30, 2000.

Kenneth L. Smith,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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