



## U.S. Fish & Wildlife Service

# Critical Habitat for 99 Plant Species from the Island of Oahu

Under the Endangered Species Act, the U.S. Fish and Wildlife Service is charged with designating critical habitat for threatened and endangered species whenever it is determined to be prudent and determinable. A proposed rule to designate critical habitat for 99 plant species on the island of Oahu was published in the Federal Register on May 28, 2002. Comments will be accepted through July 29, 2002.

### What critical habitat areas are you proposing on Oahu?

We are proposing critical habitat for 99 plant species on the island of Oahu (see attached list) in 25 units totaling 111,364 acres, or 29 percent of the island. Much of the acreage is in the Koolau and Waianae Mountains.

Fifty-two of these plant species are found only on Oahu. The remaining 47 species are also found on one or more other Hawaiian islands. For at least 40 species, fewer than 50 individual plants remain in the wild.

Critical habitat is not proposed for two species, *Pritchardia kaalae* (loulou) and *Cyrtandra crenata*. In the case of *Pritchardia kaalae*, we are concerned that the designation of critical habitat would increase threats from vandalism or collection of this palm species on Oahu. *Cyrtandra crenata* has not been seen recently in the wild, and there is no viable genetic material available to propagate and reintroduce the species into suitable habitat on Oahu.



A native of the Koolau Mountains, only three individual plants of *Lobelia monostachya* are known to exist in the wild.

Photo by Greg Koob/USFWS

### Who owns the lands on which critical habitat is being proposed?

Approximately 6 percent of the land proposed as critical habitat is under federal ownership or jurisdiction on Oahu. Designation of critical habitat is proposed on U.S. Army lands at Makua Military Reservation, Kawaihoa Training Area, Schofield Barracks Military Reservation and Schofield Barracks East Range,

Dillingham Military Reservation, and Kahuku Training Area; on Hawaii Army National Guard lands at Diamond Head Crater; on U.S. Navy lands at Naval Magazine Pearl Harbor Lualualei Branch and Naval Computer and Telecommunication Area Master Station Pacific Transmitting Facility at Lualualei; and on the U.S. Fish and Wildlife Service's Oahu Forest National Wildlife Refuge.



Photo by Greg Koob/USFWS

*Cyanea pinnatifida* or haha

Thirty-five percent of the land proposed as critical habitat is owned by the State of Hawaii, and the remaining 59 percent is on privately owned lands.

### **What are the existing land uses in the proposed critical habitat areas?**

The military lands identified above are used for training and other Department of Defense mission activities. The Fish and Wildlife Service's Oahu Forest National Wildlife Refuge is land that is set aside for the protection and management of natural forest communities on Oahu, including rare, endangered, and threatened species.

The remaining lands are also generally unsuitable for development, land uses, and activities due to their remote location, lack of access, and rugged terrain. In fact, more than 90 percent of the proposed critical habitat units on Oahu are within the State Conservation District, which strictly limits development and most other activities. Ten percent are in agricultural zones, and less than 1 percent are in urban areas.

### **How can the public comment on the proposed rule?**

The proposed rule can be accessed via the Internet at [http://www.access.gpo.gov/su\\_docs/index.html](http://www.access.gpo.gov/su_docs/index.html). A limited number of copies are available by calling the Fish and Wildlife Service in Honolulu at 541 3441.

Written comments on the proposed rule may be submitted by mail to the Field Supervisor, U.S. Fish and Wildlife Service, Pacific Islands Office, 300 Ala Moana Blvd., Room 3-122, Box 50088, Honolulu, HI 96850; or by delivering them to the same address. Comments may be submitted by electronic mail to [FWIPIE\\_Oahu\\_crithab@r1.fws.gov](mailto:FWIPIE_Oahu_crithab@r1.fws.gov).

If requested within 45 days after publication of the proposed rule, a public hearing and informational session will be scheduled on Oahu. Written and oral comments would be accepted at that time.

### **Why is the Service proposing critical habitat throughout Hawaii?**

In 1998, the United States District Court for the District of Hawaii directed the U.S. Fish and Wildlife Service to review the prudency determinations for 245 listed plant species in Hawaii, including 101 species on the island of Oahu. We also were ordered to publish proposed critical habitat designations or nondesignations for at least 100 species by November 30, 2000, and for the remaining 145 species by April 30, 2002.

As a result of a subsequent court order, we also included proposed critical habitat designations or nondesignations for 10 additional listed plants from Maui Nui (Maui, Molokai, Kahoolawe, and Lanai). To comply with these orders, we are publishing 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, Northwestern Hawaiian Islands, Hawaii, and Oahu. This proposed rule for critical habitat designation on Oahu is the last of the seven proposed rules required by the court orders.

Within one year of publication of the proposed rules we must publish our final determinations, which will take into account comments received during the public comment period on the proposed rules, the economic analyses, and any new pertinent scientific information.

### **What are the threats to these species?**

Competition from introduced plant species; habitat destruction by feral and domestic animals; agricultural, military, and residential development; and predation by cattle, insects, and rats have all contributed to bringing these plants close to extinction.

### **What is critical habitat?**

Critical habitat is the term used in the Endangered Species Act to



Photo by Greg Koob/USFWS

*Cyanea grimesiana* ssp. *grimesiana* or haha

define those areas of habitat that are known to be essential for an endangered or threatened species to recover and that require special management or protection. The ultimate goal of the Endangered Species Act is to restore healthy populations of listed species within their native habitats so that they can be removed from the list of threatened and endangered species.

### **How does the designation of critical habitat increase protection for threatened and endangered species?**

If critical habitat is designated for a species, all Federal agencies must consult with the Fish and Wildlife Service to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat. In addition, designation of critical habitat focuses attention on those areas that are important to species recovery.

### **How does critical habitat affect private landowners and State lands?**

Critical habitat designation does not affect activities on State or private lands unless some sort of Federal permit, license, or funding is involved. Activities such as farming, grazing, logging, hunting, and other recreational uses generally are not affected by critical habitat designation, even if the landowner's property is within the geographical boundaries of critical habitat.

The designation has no impact on individual, city, county, or State actions if there is no Federal involvement, nor does it signal any intent of the Federal government to acquire or control the land.

### **How does critical habitat affect Federal agencies?**

Federal agencies are required to ensure that any activity they fund, carry out, or authorize is not likely to jeopardize the survival of a listed species or destroy or adversely modify its critical habitat. By consulting with the Fish and Wildlife Service, an agency can usually minimize or avoid any potential conflicts with listed species and their critical habitat, and the proposed project may be undertaken. Most projects proceed unaffected.

### **How do you determine what areas to designate as critical habitat?**

We consider the species' current range (*i.e.*, areas in which the species currently exists) and historic range (*i.e.*, areas that the species formerly occupied within recent memory). Then, we identify features of the habitat that are needed for the species to live and reproduce.

Examples of features of the habitat or requirements that are generally considered are:

- space for individual and population growth 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
  - areas that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.
- In this critical habitat proposal, we specifically considered the following habitat features: type of plant community, associated native plant species, locale (*e.g.*, steep rocky cliffs, talus slopes, streambanks), and elevation.

### **Are potential economic impacts considered?**

Yes. Although decisions to place species on the threatened or endangered list must be based solely on biological grounds, potential economic and social effects of critical habitat designations are analyzed and considered before the designations are completed.

An area may be excluded from proposed critical habitat if the Secretary of the Interior finds that the benefits of an exclusion outweigh the conservation benefits of including the area. However, excluding an area from a critical habitat designation is allowed only if doing so will not lead to the extinction of the species.

A draft economic analysis based on this proposal is under development and will be made available for public review. We do not anticipate the designation of critical habitat on the island of Oahu will have any significant economic impacts.

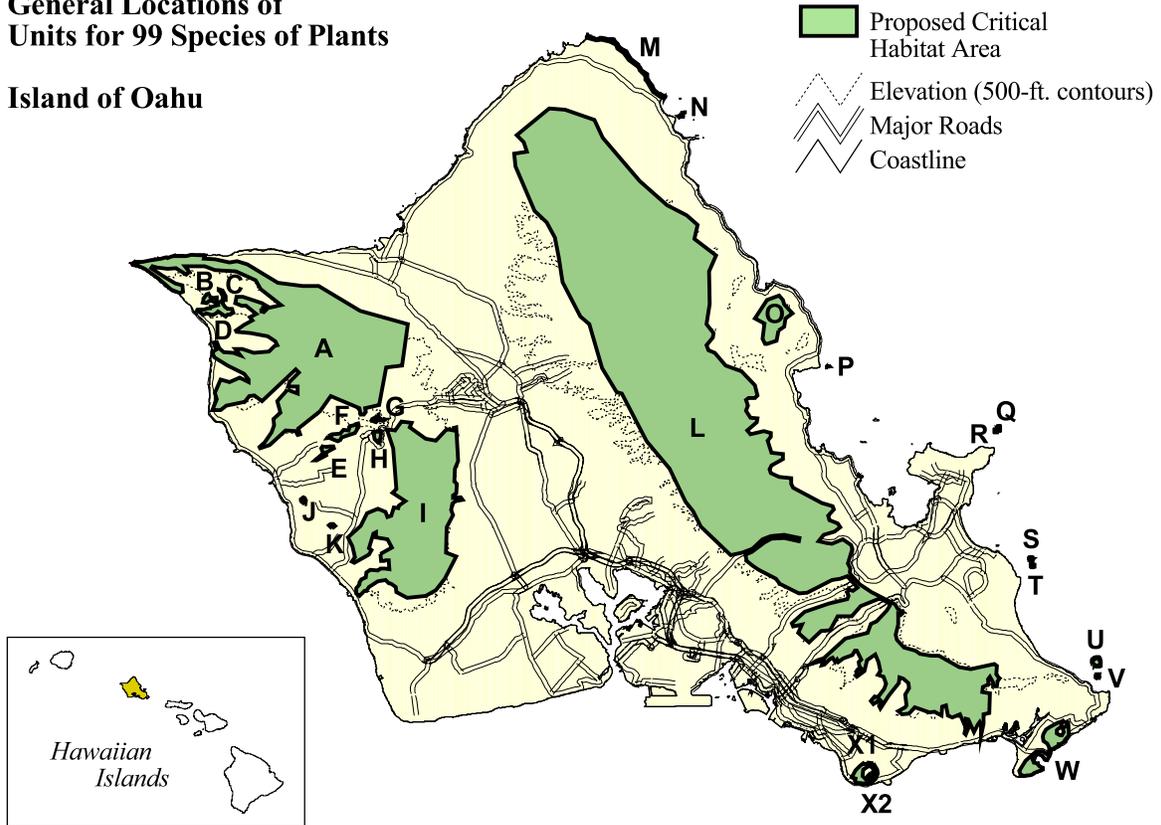


*Hedyotis parvula* is found only in Oahu's Waianae Mountain range.

Photo by Greg Koob/USFWS

## General Locations of Units for 99 Species of Plants

### Island of Oahu



### Proposed Critical Habitat Units on the Island of Oahu

Unit	State/Local Lands	Private Lands	Federal Lands	Total
Oahu A	14,278 acres	4,698 acres	2,036 acres	21,013 acres <sup>1</sup>
Oahu B	83 acres			83 acres
Oahu C	35 acres			35 acres
Oahu D	271 acres			271 acres
Oahu E	94 acres			94 acres
Oahu F	109 acres		91 acres	200 acres
Oahu G			40 acres	40 acres
Oahu H			68 acres	68 acres
Oahu I	2,813 acres	7,552 acres	2,258 acres	12,623 acres
Oahu J			25 acres	25 acres
Oahu K			18 acres	18 acres
Oahu L	19,617 acres	52,313 acres	2,371 acres	74,301 acres
Oahu M	<1 acre	245 acres		246 acres <sup>1</sup>
Oahu N	12 acres			12 acres
Oahu O	455 acres	611 acres		1,066 acres
Oahu P	3 acres			3 acres
Oahu Q	3 acres			3 acres
Oahu R	15 acres			15 acres
Oahu S	12 acres			12 acres
Oahu T	9 acres			9 acres
Oahu U	67 acres			67 acres
Oahu V	10 acres			10 acres
Oahu W	839 acres	<1 acre		840 acres <sup>1</sup>
Oahu X	311 acres			311 acres
<b>Totals</b>	<b>39,037 acres</b>	<b>65,420 acres</b>	<b>6,907 acres</b>	<b>111,364 acres</b>

<sup>1</sup>Area differences due to digital mapping discrepancies between TMK data and USGS coastline or difference due to rounding

**Summary of Island Distribution of 99 Species from the Island of Oahu  
for Which Critical Habitat is Proposed**

Species	Island Distribution						
	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii	NW Isles, Kahoolawe, Niihau
<i>Abutilon sandwicense</i> (No common name)		C					
<i>Adenophorus periens</i> (pendant kihi fern)	C	H	C	H	H	C	
<i>Alectryon macrococcus</i> (mahoe)	C	C	C		C		
<i>Alsinidendron obovatum</i> (No common name)		C					
<i>Alsinidendron trinerve</i> (No common name)		C					
<i>Bonamia menziesii</i> (No common name)	C	C	H	C	C	C	
<i>Cenchrus agrimonioides</i> (kamanomano)		C		H	C		NW Isles (H)
<i>Centaurium sebaeoides</i> (awiwi)	C	C	H	C	C		
<i>Chamaesyce celastroides</i> var. <i>kaenana</i> (akoko)		C					
<i>Chamaesyce deppeana</i> (akoko)		C					
<i>Chamaesyce herbstii</i> (akoko)		C					
<i>Chamaesyce kuwaleana</i> (akoko)		C					
<i>Chamaesyce rockii</i> (akoko)		C					
<i>Colubrina oppositifolia</i> (kauila)		C			C	C	
<i>Ctenitis squamigera</i> (pauoa)	H	C	C	C	C	H	
<i>Cyanea acuminata</i> (haha)		C					
<i>Cyanea crispa</i> (haha)		C					
<i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> (haha)		C	C	C	C		
<i>Cyanea grimesiana</i> ssp. <i>obatae</i> (haha)		C					
<i>Cyanea humboltiana</i> (haha)		C					
<i>Cyanea koolauensis</i> (haha)		C					
<i>Cyanea longiflora</i> (haha)		C					
<i>Cyanea pinnatifida</i> (haha)		H					
<i>Cyanea st.-johnii</i> (haha)		C					
<i>Cyanea superba</i> (haha)		C					
<i>Cyanea truncata</i> (haha)		C					
<i>Cyperus trachysanthos</i> (puukaa)	C	C	H	H			Ni (H)
<i>Cyrtandra dentata</i> (haiwale)		C					
<i>Cyrtandra polyantha</i> (haiwale)		C					
<i>Cyrtandra subumbellata</i> (haiwale)		C					
<i>Cyrtandra viridiflora</i> (haiwale)		C					
<i>Delissea subcordata</i> (No common name)		C					
<i>Diellia erecta</i> (No common name)	H	C	C	H	C	C	
<i>Diellia falcata</i> (No common name)		C					
<i>Diellia unisora</i> (No common name)		C					
<i>Diplazium molokaiense</i> (No common name)	H	H	H	H	C		
<i>Dubautia herbstobatae</i> (naenae)		C					
<i>Eragrostis fosbergii</i> (No common name)		C					
<i>Eugenia koolauensis</i> (nioi)		C	H				
<i>Euphorbia haeleleana</i> (akoko)	C	C					
<i>Flueggea neowawraea</i> (mehamehame)	C	C	H		C	C	
<i>Gardenia mannii</i> (nanu)		C					
<i>Gouania meyenii</i> (No common name)	C	C					
<i>Gouania vitifolia</i> (No common name)		C			H	C	
<i>Hedyotis coriacea</i> (kioele)		H			C	C	
<i>Hedyotis degeneri</i> (No common name)		C					
<i>Hedyotis parvula</i> (No common name)		C					
<i>Hesperomannia arborescens</i> (No common name)		C	C	H	C		
<i>Hesperomannia arbuscula</i> (No common name)		C			C		
<i>Hibiscus brackenridgei</i> (mao hau hele)	R	C	H	C	C	C	
<i>Isodendron laurifolium</i> (aupaka)	C	C					
<i>Isodendron longifolium</i> (aupaka)	C	C					
<i>Isodendron pyrifolium</i> (wahine noho kula)		H	H	H	H	C	Ni (H)
<i>Labordia cyrtandrae</i> (kamakahala)		C					
<i>Lepidium arbuscula</i> (anaunau)		C					
<i>Lipochaeta lobata</i> var. <i>leptophylla</i> (nehe)		C					
<i>Lipochaeta tenuifolia</i> (nehe)		C					
<i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> (No common name)		C					
<i>Lobelia monostachya</i> (No common name)		C					

**Species**

**Island Distribution**

	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii	NW Isles, Kahoolawe, Niihau
<i>Lobelia niihauensis</i> (No common name)	C	C					Ni (H)
<i>Lobelia oahuensis</i> (No common name)		C					
<i>Lysimachia filifolia</i> (No common name)	C	C					
<i>Mariscus pennatiformis</i> (No common name)	H	H			C	H	NW Isles (C) Ni (H)
<i>Marsilea villosa</i> (ihiihi)		C	C				
<i>Melicope lydgatei</i> (alani)		C					
<i>Melicope pallida</i> (alani)	C	C					
<i>Melicope saint-johnii</i> (alani)		C					
<i>Myrsine juddii</i> (kolea)		C					
<i>Neraudia angulata</i> (No common name)		C					
<i>Nototrichium humile</i> (kului)		C			H		
<i>Peucedanum sandwicense</i> (makou)	C	C	C		C		
<i>Phlegmariurus nutans</i> (wawaeiole)	H	C					
<i>Phyllostegia hirsuta</i> (No common name)		C					
<i>Phyllostegia kaalaensis</i> (No common name)		C					
<i>Phyllostegia mollis</i> (No common name)		C	H		C		
<i>Phyllostegia parviflora</i> (No common name)		C			H	H	
<i>Plantago princeps</i> (laukahi kauhiwi)	C	C	C		C	H	
<i>Platanthera holochila</i> (No common name)	C	H	C		C		
<i>Pteris lidgatei</i> (No common name)		C	H		C		
<i>Sanicula mariversa</i> (No common name)		C					
<i>Sanicula purpurea</i> (No common name)		C			C		
<i>Schiedea hookeri</i> (No common name)		C			H		
<i>Schiedea kaalae</i> (No common name)		C					
<i>Schiedea kealiae</i> (No common name)		C					
<i>Schiedea nuttallii</i> (No common name)	C	C	C		H		
<i>Sesbania tomentosa</i> (ohai)	C	C	C	H	C	C	Ni (H), Ka (C), NW Isles (C)
<i>Silene lanceolata</i> (No common name)	H	C	C	H		C	
<i>Silene perlmantii</i> (No common name)		H					
<i>Solanum sandwicense</i> (popolo aiakeakua)	C	H					
<i>Spermolepis hawaiiensis</i> (No common name)	C	C	C	C	C	C	
<i>Stenogyne kanehoana</i> (No common name)		C					
<i>Tetramolopium filiforme</i> (No common name)		C					
<i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> (No common name)		C		H			
<i>Tetraplasandra gymnocarpa</i> (oheohe)		C					
<i>Trematalobelia singularis</i> (No common name)		C					
<i>Urera kaalae</i> (opuhe)		C					
<i>Vigna o-wahuensis</i> (No common name)		H	C	C	C	C	Ni (H), Ka (C)
<i>Viola chamissoniana</i> ssp. <i>chamissoniana</i> (olopu)		C					
<i>Viola oahuensis</i> (No common name)		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

U.S. Fish and Wildlife Service  
 Pacific Islands Fish and Wildlife Office  
 300 Ala Moana Blvd., Room 3-122  
 Honolulu, Hawaii 96850  
 808 541 3441  
 May 2002

*Our mission is working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of American people.*



*Marsilea villosa* or `ihi `ihi

Photo by Greg Koob/USFWS