



U.S. Fish & Wildlife Service

Critical Habitat for 83 Plant Species from Kauai and Niihau

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 listed species on the islands of Kauai and Niihau was published in the *Federal Register* in November 2000.

Comments received during the public review period and beyond led to extensive changes in the proposal. Rather than publish a final rule, we are publishing a revised proposed rule to allow interested parties the opportunity to again submit comments.

What changes were made from the original proposed rule?

Our November 2000 proposal has been significantly revised in response to new biological information and public comments received. These changes are summarized below; more detailed information can be found in the revised proposed rule.

Critical habitat was determined to be prudent for additional species:

- Critical habitat for *Phyllostegia waimeae* was determined to be “not prudent” in the November 2000 rule based on the fact that this species had not been seen recently in the wild and no viable genetic material was known to exist. Information provided during the comment period indicates *Phyllostegia waimeae* has been rediscovered on Kauai. We have reconsidered our earlier finding and determined that critical habitat is prudent for this species.

- Critical habitat is determined to be prudent for four species (*Achyranthes mutica*, *Isodendrion pyriformis*, *Phlegmariurus nutans*, and *Solanum*



Brighamia insignis or olulu

incompletum) that no longer occur on Kauai but are reported from one or more other islands. However, for three of these species (*Achyranthes mutica*, *Isodendrion pyriformis*, and *Solanum incompletum*), critical habitat has not been designated on Kauai or Niihau because we were unable to identify essential areas for their conservation on these islands.

Critical habitat was proposed for additional species:

- Critical habitat is proposed at this time for six species (*Ctenitis squamigera*, *Diellia erecta*, *Diplazium molokaiense*, *Ischaemum*

byrone, *Mariscus pennatiformis*, and *Phlegmariurus nutans*) that once occurred on Kauai and are reported from one or more other islands. The revised Kauai critical habitat proposal includes unoccupied areas on Kauai that are essential to their conservation.

Critical habitat for four other species that once occurred on Kauai and Niihau (*Hibiscus brackenridgei*, *Phlegmariurus manni*, *Silene lanceolata*, and *Vigna o-wahuensis*) was determined to be prudent in other proposed rules but is not proposed on Kauai and Niihau because we could not determine habitat essential to their conservation on these islands.



Delissea rhytidosperma

Photo by Greg Koob/USFWS

A new method for identifying critical habitat was used:

In the November 2000 proposal, most of the areas proposed as critical habitat were currently occupied by one or more of the listed plant species. At that time, we believed we did not have sufficient information about the plants' historical range or their needs for survival and recovery to include unoccupied areas. Numerous commenters on that proposal not only provided more detailed information, but also reminded us that existing occupied habitat may not be sufficient to allow for the recovery of these plants.

In response to these comments, the revised proposal designates habitat representative of the known geographic and elevational range of each species; the proposed critical habitat units allow for expansion of existing wild populations and reestablishment of wild populations within historic ranges; and boundaries were delineated so that overlapping occupied or potentially suitable unoccupied habitat units were combined within multi-species units.

We also adjusted and refined previously identified critical habitat units to more accurately follow natural topographic features and to avoid nonessential landscape features (agricultural crops, urban or rural

development) that do not support these listed species.

So what are you now proposing on Kauai?

We are proposing critical habitat for 83 plant species (see attached list). Critical habitat is not proposed for 7 species once found on Kauai and Niihau because they no longer occur on these islands, and we are unable to determine habitat that is essential to their conservation on these islands. Critical habitat is not prudent and therefore not proposed for 3 species of native palms or loulou because publishing maps of their locations may lead to vandalism or overcollection. Critical habitat was determined to be not prudent for 2 additional species because they have not been seen recently in the wild and no viable genetic material is known.

Fifteen critical habitat units totaling approximately 99,206 acres are being proposed on Kauai, mostly concentrated in the northwestern part of the island. One unit of 697 acres is proposed on Niihau. A map depicting these areas and acreage figures by unit is attached to this fact sheet.

How can the public comment on this revised proposed rule?

Due to the significant interest expressed on Kauai regarding critical habitat designation, we have already scheduled a public hearing on the revised proposed rule. It will be held from 6 p.m. to 8 p.m. on Wednesday, February 13, 2002, at the Radisson Kauai Beach Resort, 4331 Kauai Beach Drive, Lihue, Kauai. An informational session during which you may ask questions, review maps, and receive other information will be held prior to the public hearing from 3:30 p.m. to 4:30 p.m.

You may also submit written comments 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.

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 95 species on the islands of Kauai and Niihau. 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 will also include proposed critical habitat designations or nondesignations for 10 recently listed Maui Nui plant species. To comply with these orders, 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, Northwestern Hawaiian Islands, Hawaii, and Oahu.

Four of these proposals have been published in the *Federal Register* to date: the Kauai and Niihau proposed rule published on November 7, 2000; the Maui and Kahoolawe proposed rule published on December 18, 2000; the Lanai proposed rule published on December 27, 2000; and the Molokai proposed rule published on December 29, 2000.

All of these proposed rules are being revised and will be republished as proposed rules. The remaining three packages for the Northwestern Hawaiian Islands, Hawaii, and Oahu will be published by April 30, 2002.

What is critical habitat?

Critical habitat is the term used in the Endangered Species Act to 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. Remember that 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 critical habitat 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 the November 2000 proposal was released for public review and comment in March 2001. That analysis is now being revised and will also be made available for public review. We do not anticipate the designation of critical habitat on Kauai and Niihau will have any significant economic impacts.



Cyanea assarifolia or haha

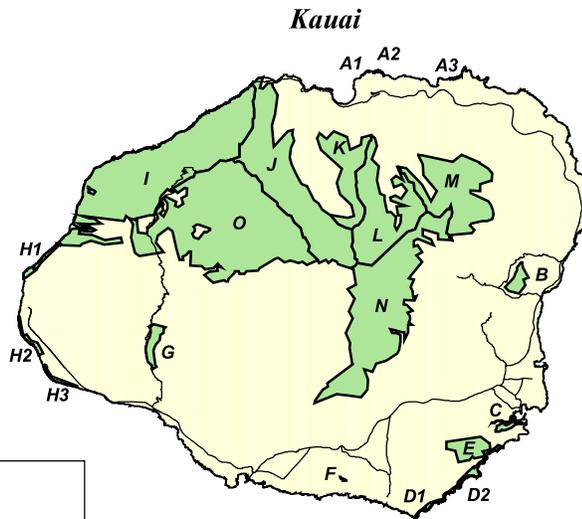
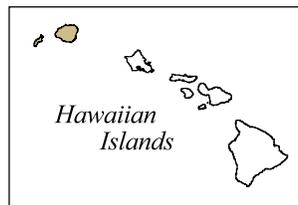
General Locations of Units for 83 Species of Plants

Islands of Kauai and Niihau

 Proposed Critical Habitat Area

 Major Roads

 Coastline



Approximate Area of Critical Habitat Units by Land Ownership

Unit	State/Local Lands	Private Lands	Federal Lands	Total
Kauai A		38 acres		38 acres
Kauai B	669 acres			669 acres
Kauai C	< 1 acre	239 acres		239 acres
Kauai D	4 acres	625 acres		629 acres
Kauai E		1,390 acres		1,390 acres
Kauai F		12 acres		12 acres
Kauai G	784 acres			784 acres
Kauai H	275 acres		537 acres	812 acres
Kauai I	20,326 acres	29 acres		20,355 acres
Kauai J	898 acres	12,783 acres		13,681 acres
Kauai K	1,774 acres	2,556 acres		4,330 acres
Kauai L	8,333 acres	85 acres		8,418 acres
Kauai M	3,606 acres	4,554 acres		8,160 acres
Kauai N	6,704 acres	9,603 acres		16,307 acres
Kauai O	23,355 acres	27 acres		23,382 acres
Kauai Totals	66,728 acres	31,941 acres	537 acres	99,206 acres
Niihau A		697 acres		697 acres
Grand Totals	66,728 acres	32,638 acres	537 acres	99,903 acres

**Summary of Island Distribution of 83 Species from Kauai and Niihau
for Which Critical Habitat is Proposed**

Species	Island Distribution						NW Isles, Kahoolawe, Niihau
	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii	
<i>Adenophorus periens</i> (pendent kihi fern)	C	H	C	R	H	C	
<i>Alectryon macrococcus</i> (mahoe)	C	C	C		C		
<i>Alsinidendron lychnoides</i> (kuawawaunohu)	C						
<i>Alsinidendron viscosum</i> (NCN)	C						
<i>Bonamia menziesii</i> (NCN)	C	C	H	C	C	C	
<i>Brighamia insignis</i> (olulu)	C						Ni (C)
<i>Centaurium sebaeoides</i> (awiwi)	C	C	C	C	C		
<i>Chamaesyce halemanui</i> (NCN)	C						
<i>Ctenitis squamigera</i> (pauoa)	H	C	C	C	C	H	
<i>Cyanea asarifolia</i> (haha)	C						
<i>Cyanea recta</i> (haha)	C						
<i>Cyanea remyi</i> (haha)	C						
<i>Cyanea undulata</i> (NCN)	C						
<i>Cyperus trachysanthos</i> (puukaa)	C	C	H	H			Ni (C)
<i>Cyrtandra cyaneoides</i> (mapele)	C						
<i>Cyrtandra limahuliensis</i> (haiwale)	C						
<i>Delissea rhytidosperra</i> (NCN)	C						
<i>Delissea rivularis</i> (oha)	C						
<i>Delissea undulata</i> (NCN)	C				H	C	Ni (H)
<i>Diellia erecta</i> (asplenium-leaved diellia)	C	H	C	H	C	C	
<i>Diellia pallida</i> (NCN)	C						
<i>Diplazium molokaiense</i> (NCN)	H	H	H	H	C		
<i>Dubautia latifolia</i> (naenae)	C						
<i>Dubautia pauciflorula</i> (naenae)	C						
<i>Euphorbia haeleeeleana</i> (akoko)	C	C					
<i>Exocarpos luteolus</i> (heau)	C						
<i>Flueggea neowawraea</i> (mehamehame)	C	C	H		C	C	
<i>Gouania meyenii</i> (NCN)	C	C					
<i>Hedyotis cookiana</i> (awiwi)	C	H	H			H	
<i>Hedyotis st. johnii</i> (Na Pali beach hedyotis)	C						
<i>Hesperomannia lydgatei</i> (NCN)	C						
<i>Hibiscadelphus woodii</i> (hau kuahiwi)	C						
<i>Hibiscus clayi</i> (Clay's hibiscus)	C						
<i>Hibiscus waimeae</i> ssp. <i>hannerae</i> (kokio keokeo)	C						
<i>Ischaemum byrone</i> (Hilo ischaemum)	C	H	C		C	C	
<i>Isodendrion laurifolium</i> (aupaka)	C	C					
<i>Isodendrion longifolium</i> (aupaka)	C	C					
<i>Kokia kauaiensis</i> (kokio)	C						
<i>Labordia lydgatei</i> (kamakahala)	C						
<i>Labordia tinifolia</i> var. <i>wahiawaensis</i> (kamakahala)	C						
<i>Lipochaeta fauriei</i> (nehe)	C						
<i>Lipochaeta micrantha</i> (nehe)	C						
<i>Lipochaeta waimeaensis</i> (nehe)	C						
<i>Lobelia niihauensis</i> (NCN)	C	C					Ni (H)
<i>Lysimachia filifolia</i> (NCN)	C	C					
<i>Mariscus pennatiformis</i> (NCN)	H	H			C	H	NW (C)
<i>Melicope haupuensis</i> (alani)	C						

Species	Island Distribution						
	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii	NW Isles, Kahoolawe, Niihau
<i>Melicope knudsenii</i> (alani)	C				C		
<i>Melicope pallida</i> (alani)	C	C					
<i>Munroidendron racemosum</i> (NCN)	C						
<i>Myrsine linearifolia</i> (kolea)	C						
<i>Nothocestrum peltatum</i> (aiea)	C						
<i>Panicum niihauense</i> (lau ehū)	C						Ni (H)
<i>Peucedanum sandwicense</i> (makou)	C	C	C		C		
<i>Phlegmariurus nutans</i> (wawaeiole)	H	C					
<i>Phyllostegia knudsenii</i> (NCN)	C						
<i>Phyllostegia waimeae</i> (NCN)	C						
<i>Phyllostegia wawrana</i> (NCN)	C						
<i>Plantago princeps</i> (laukahi kuahiwi)	C	C	C		C	H	
<i>Platanthera holochila</i> (NCN)	C	H	C		C		
<i>Poa mannii</i> (Mann's bluegrass)	C						
<i>Poa sandwicensis</i> (Hawaiian bluegrass)	C						
<i>Poa siphonoglossa</i> (NCN)	C						
<i>Pteralyxia kauaiensis</i> (kaulu)	C						
<i>Remya kauaiensis</i> (NCN)	C						
<i>Remya montgomeryi</i> (NCN)	C						
<i>Schiedea apokremnos</i> (maolioli)	C						
<i>Schiedea helleri</i> (NCN)	C						
<i>Schiedea kauaiensis</i> (NCN)	C						
<i>Schiedea membranacea</i> (NCN)	C						
<i>Schiedea nuttallii</i> (NCN)	C	C	C		R		
<i>Schiedea spergulina</i> var. <i>leiopoda</i> (NCN)	C						
<i>Schiedea spergulina</i> var. <i>spergulina</i> (NCN)	C						
<i>Schiedea stellarioides</i> (NCN)	C						
<i>Sesbania tomentosa</i> (ohai)	C	C	C	H	C	C	NW (C), Ka (C), Ni (H)
<i>Solanum sandwicense</i> (aiakeakua, popolo)	C	H					
<i>Spermolepis hawaiiensis</i> (NCN)	C	C	C	C	C	C	
<i>Stenogyne campanulata</i> (NCN)	C						
<i>Viola helenae</i> (NCN)	C						
<i>Viola kauaiensis</i> var. <i>wahiawaensis</i> (nani wai ale)	C						
<i>Wilkesia hobdyi</i> (dwarf iliau)	C						
<i>Xylosma crenatum</i> (NCN)	C						
<i>Zanthoxylum hawaiiense</i> (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