

competition with alien plants. The small population size of one individual with its limited gene pool also comprises a serious threat to this species. This proposal, if made final, would implement the Federal protection and recovery provisions provided by the Act.

DATES: Comments from all interested parties must be received by August 26, 1994. Public hearing requests must be received by August 11, 1994.

ADDRESSES: Comments and materials concerning this proposal should be sent to Robert P. Smith, Field Supervisor, Pacific Islands Field Office, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, Room 6307, P.O. Box 50167, Honolulu, Hawaii 96850. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Marie M. Brueggemann, at the above address (808/541-3441).

SUPPLEMENTARY INFORMATION:

Background

Delissea undulata was first described by Charles Gaudichaud-Beaupre from specimens he collected in the Hawaiian Islands ("Isles Sandwich") in 1819 (St. John 1959). He chose the specific epithet to refer to the undulating margins of the leaves. F.E. Wimmer named a specimen J.F. Rock collected in 1911 from Kanahaha, Kona, as *Cyanea arctidentata*, which H. St. John later moved to the genus *Delissea* (St. John 1959, Wimmer 1943). St. John also named a specimen collected in 1968 from the southern Kona District as *D. konaensis* (St. John 1986). The current treatment of the family (Lammers 1988, 1990) considers all of the above species to be synonymous with *D. undulata*. Lammers recognizes three subspecies of *D. undulata*: subsp. *niihauensis*, subsp. *kauaiensis*, and subsp. *undulata* (Lammers 1988, 1990).

Delissea undulata of the bellflower family (Campanulaceae) is a palm-like tree with unbranched woody stems 2 to 10 meters (m) (6 to 30 feet (ft)) tall. The leaves are long and narrow or elliptic with long petioles and undulate or flat, toothed margins, about 5 to 21 centimeters (cm) (2 to 8 inches (in)) long and 3 to 10 cm (1 to 4 in) wide. The flowering stalk bears 5 to 20 greenish-white, slightly down-curved flowers 1.6 to 2.5 cm (0.6 to 1.0 in) long with one or two small knobs on the upper surfaces. The fruits are ovoid to globose purple berries 0.6 to 1.2 cm (0.2 to 0.4 in) long. The three subspecies of *D. undulata* can be distinguished from

each other by leaf shape and leaf margin characteristics: subsp. *kauaiensis* has ovate leaves with flat, sharply toothed margins; subsp. *niihauensis* has leaves with heart-shaped bases and shallow roundly toothed margins; and subsp. *undulata* has narrower, lance-shaped leaves with undulating margins and spreading, pointed teeth (Lammers 1988, 1990). The species *D. undulata* is distinguished from closely related species in this genus by its broader leaf bases, larger flowers, and larger berries (Lammers 1990).

Historically, *D. undulata* is known from Niihau, Kauai, Maui, and Hawaii. Subspecies *kauaiensis* was collected west of the Hanapepe River on the island of Kauai by A.A. Heller in 1895 and has not been relocated (Hawaii Heritage Program (HHP) 1991a, Heller 1897, Lammers 1988). Subspecies *niihauensis* was collected twice in the 1800's on the island of Niihau and has not been located since (HHP 1991b, Hillebrand 1888, St. John 1959). Both of these subspecies are considered extinct (HHP 1991a, 1991b; Lammers 1990). *Delissea undulata* subsp. *undulata* was reported from four valleys of southwestern Maui in the 1800's, and from the Kona region of the island of Hawaii (HHP 1991c1 to 1991c9). This subspecies was observed in 1971 at Puu Lehua and was subsequently thought to be extinct (HHP 1991c6, Lammers 1990). However, one individual plant was discovered on April 24, 1992, at Puu Waawaa, at a previously unreported location on Hualalai on the island of Hawaii (Jon Giffin, Hawaii Department of Land and Natural Resources (Hawaii DLNR), *in litt.* 1993).

Delissea undulata grows primarily in dry and mesic forests at about 1,000 to 1,750 m (3,300 to 5,700 ft) elevation (Lammers 1990; J. Giffin, *in litt.*, 1993). The substrate is a thin organic soil layer over 'a'a or pahoehoe lava (Department of Geography 1983). The only known individual grows on the brink of a collapsed lava tube at 1070 m (3520 ft) elevation. The vegetation is open *Sophora chrysophylla* (mamane)-*Metrosideros polymorpha* ('ohia) forest with such associated species as *Santalum ellipticum* ('iliahi) and *Acacia koa* (koa). The endangered species *Nothocestrum breviflorum* ('aiea) also is found in the area of the one remaining individual of *D. undulata*. Introduced plants in the area include *Pennisetum clandestinum* (kikuyu grass), *Passiflora mollissima* (banana poka), and *Senecio mikanoides* (German ivy) (J. Giffin, *in litt.*, 1993).

The greatest immediate threats to the survival of *D. undulata* are damage from domestic and feral herbivores and

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AC56

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Plant *Delissea undulata* (No Common Name)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes endangered species status pursuant to the Endangered Species Act of 1973, as amended (Act), for the plant *Delissea undulata* (No Common Name). This species is known only from one individual, located on the island of Hawaii. The greatest immediate threats to the survival of this species are habitat degradation and predation by domestic and feral mammals, fire, and

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competition with alien plants. Fire, whether started naturally or by arson, poses a serious threat to the population. The small population size of one individual with its limited gene pool also comprises a serious threat to this species (J. Giffin, *in litt.*, 1993).

Previous Federal Action

Federal action on this species began as a result of section 12 of the Endangered Species Act (16 U.S.C. 1531 *et seq.*), which directed the Secretary of the Smithsonian Institution to prepare a report on plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the **Federal Register** (40 FR 27823) accepting the report as a petition within the context of section 4(c)(2) (now section 4(b)(3)(A)) of the Act, and giving notice of its intention to review the status of the plant taxa named therein. In this and subsequent notices, *D. undulata* var. *undulata* was included as extinct, and *D. undulata* var. *argutidentata* was included as endangered. As a result of this review, on June 16, 1976, the Service published a proposed rule in the **Federal Register** (41 FR 24523) to determine approximately 1,700 vascular plant species, including *D. undulata*, endangered pursuant to section 4 of the Act. In 1978, amendments to the Act required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice in the **Federal Register** (44 FR 70796) of the withdrawal of that portion of the June 16, 1976, proposal that had not been made final, along with four other proposals that had expired.

The Service published an updated Notice of Review for plants on December 15, 1980 (45 FR 82480), including *D. undulata* as a category 1 candidate, meaning that the Service had substantial information indicating that a listing proposal was appropriate. In the updated Notice of Review for plants on September 27, 1985 (50 FR 39525), and February 21, 1990 (55 FR 6183), *D. undulata* was included as a Category 1* candidate, meaning that the Service had substantial information indicating that this taxon was vulnerable in the recent past but may already have become extinct. Section 4(b)(3)(B) of the 1982 amendments to the Act, requires the Secretary to make findings on certain pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all

petitions pending on October 13, 1982, be treated as having been newly submitted on that date. The latter was the case for *D. undulata* because the Service had accepted the 1975 Smithsonian report as a petition. On October 13, 1983, the Service found that the listing of the species was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Notification of this finding was published on January 20, 1984 (49 FR 2485). Such a finding requires the petition to be recycled, pursuant to section 4(b)(3)(C)(i) of the Act. The finding was reviewed in October of 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, and 1992. Publication of the present proposal constitutes the final 1-year finding.

Summary of Factors Affecting the Species

Section 4 of the Act and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Delissea undulata* Gaud. (No Common Name) are as follows:

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

The habitat of *Delissea undulata* has undergone extreme alteration because of past and present land management practices, including deliberate and accidental alien mammal and plant introductions and agricultural development. Natural disturbances such as the collapse of lava tubes also destroy habitat and can have a significant effect on small populations of plants. Competition with alien plants as well as destruction of individuals and modification of habitat by introduced animals are the primary threats facing this species.

Beginning with Captain James Cook in 1792, early European explorers introduced livestock, which became feral, increased in number and range, and caused significant changes to the natural environment of Hawaii. The 1848 provision for land sales to individuals allowed large-scale agricultural and ranching ventures to begin. Land was cleared for these enterprises to such a great extent that climatic conditions began to change and the amount and distribution of rainfall were altered (Wenkam 1969).

Past and present impacts of introduced alien animals are the

primary factor in altering and degrading vegetation and habitats on the island of Hawaii as well as on Kauai and Maui, where populations of *D. undulata* previously existed. Feral ungulates trample and eat native vegetation and disturb open areas. This causes erosion and allows the invasion of alien plant species (Cuddihy and Stone, 1990; Wagner *et al.* 1990). *Delissea undulata* is threatened by habitat degradation resulting from introduced ungulates (e.g., cattle, goats, sheep, and pigs). Habitat degradation by these ungulates threatens the only known individual plant, any potential natural germination of seedlings, as well as potential suitable habitat occurring throughout the historic range of the species.

Cattle (*Bos taurus*), native to Europe, northern Africa, and southwestern Asia, were introduced to the Hawaiian Islands in 1793. Large feral herds developed as a result of restrictions on killing cattle decreed by King Kamehameha I. Large ranches in the tens of thousands of acres were created on Maui and Hawaii. Much of the land used in these private enterprises was leased from the State or was privately owned. Feral cattle formerly existed on Maui and damaged the forests there. Feral cattle are presently found on the island of Hawaii, and ranching is still a major commercial activity there. Cattle eat native vegetation, trample roots and seedlings, cause erosion, create disturbed areas into which alien plants invade, and spread seeds of alien plants in their feces and on their bodies. The forest becomes degraded to grassland pasture in areas grazed by cattle, and plant cover is reduced for many years following removal of cattle from an area. Several alien grasses and legumes purposely introduced for cattle forage have become noxious weeds (Cuddihy and Stone 1990, Tomich 1986). Cattle have altered and degraded the vegetation of much of Hawaii, including the areas where *D. undulata* may have formerly grown, and where it is still known to exist (Tomich 1986; J. Giffin, *in litt.*, 1993). Hunting of feral cattle is no longer allowed in Hawaii (Hawaii DLNR 1985).

Goats (*Capra hircus*), native to the Middle East and India, were successfully introduced to the Hawaiian Islands in 1792, and currently there are populations on Kauai, Oahu, Molokai, Maui, and Hawaii. On Kauai, feral goats have been present in drier, more rugged areas since 1820; they still occur in Waimea Canyon. On Hawaii, goats damage low elevation dry forest, montane parkland, subalpine woodlands, and alpine grasslands. Goats are managed in Hawaii as a game

animal, but many herds populate inaccessible areas where hunting has little effect on their numbers. Goat hunting is allowed year-round or during certain months, depending on the area (Hawaii DLNR n.d., 1985). Goats browse on introduced grasses and native plants, especially in drier and more open ecosystems. They also trample roots and seedlings, cause erosion, and promote the invasion of alien plants. They are able to forage in extremely rugged terrain and have a high reproductive capacity (Cuddihy and Stone 1990, Culliney 1988, Tomich 1986). *Delissea undulata* currently is threatened by goats that use the area where the single known individual exists (J. Giffin, *in litt.*, 1993).

Sheep (*Ovis aries*) became firmly established on the island of Hawaii (Tomich 1986) following their introduction almost 200 years ago (Cuddihy and Stone 1990). Like feral goats, sheep roam the upper elevation dry forests, including Puu Waawaa, causing damage similar to that of goats (Stone 1985). Sheep have decimated vast areas of native forest and shrubland on Hawaii. Sheep threaten the habitat of *D. undulata* (Cuddihy and Stone 1990; J. Giffin, *in litt.*, 1993) as well as individual plants.

Pigs (*Sus scrofa*) are originally native to Europe, northern Africa, Asia Minor, and Asia. European pigs, introduced to Hawaii by Captain James Cook in 1778, became feral and invaded forested areas, especially wet and mesic forests and dry areas at high elevations. They currently are present on Kauai, Oahu, Molokai, Maui, and Hawaii and inhabit rain forests and grasslands. Pig hunting is allowed on all islands either year-round or during certain months, depending on the area (Hawaii DLNR n.d., 1985). While rooting in the ground in search of the invertebrates and plant material they eat, feral pigs disturb and destroy vegetative cover, trample plants and seedlings, and threaten forest regeneration by damaging seeds and seedlings. They disturb soil substrates and cause erosion, especially on slopes. Alien plant seeds are dispersed in their hooves and coats as well as through their digestive tracts, and the disturbed soil is fertilized by their feces, helping these plants to establish (Cuddihy and Stone 1990, Smith 1985, Stone 1985, Tomich 1986, Wagner *et al.* 1990). Feral pigs pose a threat to *D. undulata* and its habitat (J. Giffin, *in litt.*, 1993).

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

Unrestricted collecting for scientific or horticultural purposes and excessive

visits by individuals interested in seeing rare plants could result from increased publicity. This is a potential threat to *Delissea undulata*, which is represented by only one known individual. The species is of some horticultural and ornamental interest. Taking and vandalism are potential threats that could result from increased specific publicity.

C. Disease or Predation

Cattle, goats, pigs, and sheep have been reported in the area where *Delissea undulata* is known to occur. As this taxon is not known to be unpalatable to these ungulates, predation is a probable threat where these animals have been reported. The lack of seedlings and the occurrence of the only known individual in an area less accessible to ungulates seem to indicate the effect that browsing mammals, especially cattle, have had in restricting the distribution of this plant. Though not legally obligated to protect the species, the State fenced the one individual to protect it from further damage by ungulates (J. Giffin, *in litt.*, 1993). See Factor D.

Of the four species of rodents which have been introduced to the Hawaiian Islands, the species with the greatest impact on the native flora and fauna is probably the roof or black rat (*Rattus rattus*), which now occurs on all the main Hawaiian Islands around human habitations, in cultivated fields, and in dry to wet forests. Roof rats, and to a lesser extent house mouse (*Mus musculus*), Polynesian rat (*R. exulans*), and Norway rat (*R. norvegicus*) eat the fruits of some native plants, especially those with large, fleshy fruits. Many native Hawaiian plants produce their fruit over an extended period of time, and this produces a prolonged food supply which supports rodent populations. It is probable that rats damage the fleshy fruit of *D. undulata*. Introduced game birds also may eat the fruits (J. Giffin, *in litt.*, 1993).

D. The Inadequacy of Existing Regulatory Mechanisms

The only known population of *Delissea undulata* occurs on State land. The species is not presently listed as an endangered species by the State of Hawaii. Therefore no State regulatory protection is in effect for this species. State laws relating to the conservation of biological resources allow for the acquisition of land as well as the development and implementation of programs concerning the conservation of biological resources (HRS, sect. 195D-5(a)). Hawaii's Endangered Species Act states, "Any species of

aquatic life, wildlife, or land plant that has been determined to be an endangered species pursuant to the [Federal] Endangered Species Act shall be deemed to be an endangered species under the provisions of this chapter . . ." (HRS, sect. 195D-4(a)). Federal listing would automatically invoke listing under Hawaii State law, which prohibits taking of endangered plants in the State and encourages conservation by State agencies (HRS, sect. 195D-4). The State also may enter into agreements with Federal agencies to administer and manage any area required for the conservation, management, enhancement, or protection of endangered species (HRS, sect. 195D-5(c)). If listing were to occur, funds for these activities could be made available under section 6 of the Federal Act (State Cooperative Agreements).

Conservation district lands (HRS, sect. 205-4) are regarded, among other purposes, as necessary for the protection of endemic biological resources and the maintenance or enhancement of the conservation of natural resources. Requests for amendments to district boundaries or variances within existing classifications can be made by government agencies and private landowners (HRS, sect. 205-4). The Hawaii Department of Land and Natural Resources is mandated to initiate changes in conservation district boundaries to include "the habitat of rare native species of flora and fauna within the conservation district" (HRS, sect. 195D-5.1). Hawaii environmental policy, and thus approval of land use, is required by law to safeguard ". . . the State's unique natural environmental characteristics . . ." (HRS, sect. 344-3(1)) and includes guidelines to "protect endangered species of individual plants and animals . . ." (HRS, sect. 344-4(3)(A)). Federal listing, because it automatically invokes State listing, would also trigger these other State regulations protecting *D. undulata*. Federal listing as endangered would offer additional protection to this species since it would be a violation of the Act for any person to remove, cut, dig up, damage, or destroy any such plant in an area not under Federal jurisdiction in knowing violation of State law or regulation or in the course of any violation of a State criminal trespass law.

E. Other Natural Or Manmade Factors Affecting Its Continued Existence

The fact that there is only one remaining individual of *Delissea undulata* increases the potential for extinction from stochastic events. The limited gene pool may depress

reproductive vigor, or a single human-caused or natural environmental disturbance could destroy the only known extant individual. This constitutes a major threat to *D. undulata*.

Natural changes to habitat and substrate can result in the death of individual plants as well as the destruction of their habitat. This especially affects the continued existence of taxa or populations with limited numbers and/or narrow ranges and is often exacerbated by human disturbance and land use practices (See Factor A). Additional collapse of the lava tube where the only known individual of *D. undulata* occurs is a potential threat to this species (J. Giffin, *in litt.*, 1993).

Three species of introduced plants threaten *D. undulata*. The historic native flora of Hawaii consisted of about 1,000 species, 89 percent of which were endemic. Of the total native and naturalized Hawaiian flora of 1,817 species, 47 percent were introduced from other parts of the world and nearly 100 species have become pests (Smith 1985, Wagner *et al.* 1990). Naturalized, introduced species degrade the Hawaiian landscape and compete with native plants for space, light, water, and nutrients (Cuddihy and Stone 1990). Some of these species were brought to Hawaii by various groups of people, including the Polynesian immigrants, for food or cultural reasons. Plantation owners, alarmed at the reduction of water resources for their crops caused by the destruction of native forest cover by grazing feral animals, supported the introduction of alien tree species for reforestation. Ranchers intentionally introduced pasture grasses and other species for agriculture, and sometimes inadvertently introduced weed seeds as well. Other plants were brought to Hawaii for their potential horticultural value (Cuddihy and Stone 1990, Wenkam 1969).

Passiflora mollissima (banana poka), a woody vine, poses a serious problem to mesic forests on Kauai and Hawaii by covering trees, reducing the amount of light that reaches trees as well as understory, and causing damage and death to trees by the weight of the vines. Animals, especially feral pigs, eat the fruit and distribute the seeds (Cuddihy and Stone 1990, Escobar 1990). *P. mollissima* is a threat to *D. undulata* and its habitat (J. Giffin, *in litt.*, 1993).

Senecio mikanioides (German ivy) is another vine that poses a serious threat to mesic and dry forests on Hawaii. It is becoming established on Maui as well. *Senecio mikanioides* may be capable of establishing itself over vast areas of the

island of Hawaii, including most of Hualalai. The vine covers the forest canopy, which can result in structural damage and the reduction of available light. *Senecio mikanioides* also can form a significant ground cover in native forests of the southern Kona region of Hawaii where it may limit native plant reproduction (Cuddihy and Stone 1990). *Senecio mikanioides* threatens *D. undulata* and its habitat (J. Giffin, *in litt.*, 1993).

Pennisetum clandestinum (Kikuyu grass), an aggressive, fire adapted, perennial grass introduced to Hawaii as a pasture grass, withstands trampling and grazing and has naturalized on four Hawaiian Islands in dry to mesic forest. It produces thick mats which choke out other plants and prevent their seedlings from becoming established. It has been declared a noxious weed by the U.S. Department of Agriculture (7 CFR 360) (O'Connor 1990, Smith 1985). Because Hawaiian plants were subjected to fire during their evolution only in areas of volcanic activity and from occasional lightning strikes, they are not adapted to recurring fire regimes and are unable to recover well following a fire. Fires may result from natural causes, or they may be accidentally or purposely set by people. Vegetation on the slopes of Hualalai is particularly vulnerable to fire due to the extensive invasion of *P. clandestinum*. Alien plants are often better adapted to fire than native plant species, and some fire-adapted grasses have become widespread in Hawaii. Native shrubland can thus be converted to land dominated by alien grasses. The presence of such species in Hawaiian ecosystems greatly increases the intensity, extent, and frequency of fire, especially during drier months or drought. Fire-adapted alien species can reestablish in a burned area, resulting in a reduction in the amount of native vegetation after each fire. Fire can destroy dormant seeds as well as mature plants and seedlings, even in steep or inaccessible areas. The only known individual of *D. undulata* occurs in an area heavily grazed by cattle, and is offered some protection from fires since the cattle reduce the fuel load of *P. clandestinum*. However, fire remains a potentially serious threat to the only known individual of *D. undulata*, its potential regeneration, and other suitable habitat (J. Giffin, *in litt.*, 1993).

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by *D. undulata* in determining to propose this rule. Based on this evaluation, the preferred action is to list *D. undulata* as endangered. Only one individual of this

species is known to exist, and it is threatened by habitat degradation by feral ungulates and alien plants, fire, and lack of legal protection. Small population size makes this species particularly vulnerable to reduced reproductive vigor and/or extinction from stochastic events. Because this species is in danger of extinction throughout all of its range, it fits the definition of endangered as defined in the Act.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is listed as endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for this species. Such a determination would result in no known benefit to *Delissea undulata*. The extant population is on State land; State government agencies can be alerted to the presence of the plant without the publication of critical habitat descriptions and maps. The publication of such descriptions and maps would potentially increase the degree of threats from taking or vandalism because a live specimen of *D. undulata* would be of interest to curiosity seekers or collectors of rare plants. Taking prohibitions are difficult to enforce, and publication of critical habitat descriptions and maps would make *D. undulata* more vulnerable to taking and increase enforcement problems. All involved parties and landowners have been notified of the importance of protecting this species' habitat. Protection of the species' habitat will be addressed through the recovery process. There are no known Federal activities within the currently known habitat of this species. Therefore, the Service finds that designation of critical habitat for this species is not prudent at this time, because such designation would increase the degree of threat from vandalism, collecting, or other human activities and because it is unlikely to aid in the conservation of this species.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing results in public awareness and conservation actions by Federal, State, and local agencies, private organizations, and individuals. Harold L. Lyon Arboretum of the

University of Hawaii at Manoa is propagating seeds collected from the one remaining individual as part of an *ex situ* conservation program. The Arboretum has over 300 seedlings growing as part of this conservation program, and has sent approximately 20 individuals to the State's Hawaii forestry district for experimental outplanting in the Puu Waawaa area (Charles H. Lamoureux, Harold L. Lyon Arboretum at University of Hawaii and J. Giffin, pers. comms.). The Act provides for possible land acquisition and cooperation with the State and requires that recovery actions be carried out for all listed species. Since *Delissea undulata* is known to occur on State land, cooperation between Federal and State agencies is necessary to provide for its conservation. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7 of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer informally with the Service 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. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to insure 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 formal consultation with the Service. No Federal involvement is known or anticipated that would affect *D. undulata*, as the only known site is on State owned land.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered plants. All prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply to *D. undulata*. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial

activity, sell or offer for sale in interstate or foreign commerce, remove and reduce to possession an endangered plant species from areas under Federal jurisdiction, maliciously damage or destroy any such species on any area under Federal jurisdiction, or remove, cut, dig up, damage, or destroy any such species on any other area in knowing violation of any State law or regulation or in the course of any violation of a State criminal trespass law. Certain exceptions apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered plants under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation and survival of the species. It is anticipated that few trade permits would ever be sought or issued because the species is uncommon in cultivation and is very rare in the wild.

Requests for copies of the regulations regarding listed plants and inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 NE 11th Avenue, Portland, Oregon 97232-4181 (503) 231-6131.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;
- (2) the location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;
- (3) additional information concerning the range, distribution, and population size of this species; and
- (4) current or planned activities in the subject area and their possible impacts on this species.

The final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to a

final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Pacific Islands Field Supervisor (see ADDRESSES section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein, as well as others, is available upon request from the Field Supervisor, Pacific Islands Field Office (see ADDRESSES section).

Author

The primary author of this proposed rule is Marie M. Bruegmann 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, and Transportation.

Proposed Regulation Promulgation

Accordingly, it is hereby proposed 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; Public Law 99-625, 100 Stat. 3500; unless otherwise noted.

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

§ 17.12 Endangered and threatened plants.

* * * * *
(h) * * *

| Species | | Historic range | Status | When listed | Critical habitat | Special rules |
|----------------------------------|-------------|-------------------|--------|-------------|------------------|---------------|
| Scientific name | Common name | | | | | |
| Campanulaceae—Bellflower family: | | | | | | |
| <i>Delissea undulata</i> | None | U.S.A. (HI) | E | | NA | NA |

Dated: June 6, 1994.

Mollie H. Beattie,

Director, Fish and Wildlife Service.

[FR Doc. 94-15540 Filed 6-24-94; 8:45 am]

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