

50 CFR Part 17

RIN 1018-AB52

Endangered and Threatened Wildlife and Plants: Proposed Endangered Status for *Lepanthes eltoensis* and *Cranichis ricartii*, Two Endemic Puerto Rican Orchids

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine *Lepanthes eltoensis* and *Cranichis ricartii* to be endangered species pursuant to the Endangered Species Act (Act) of 1973, as amended. Both *Lepanthes eltoensis* and *Cranichis ricartii* are orchids endemic to mountain forests in Puerto Rico. *Lepanthes eltoensis* is a small epiphytic orchid which grows on trunks at upper elevations in the Luquillo Mountains of eastern Puerto Rico. Only two populations, approximately 140 individuals, are known today from the palo colorado and dwarf forests of these mountains. *Cranichis ricartii*, a terrestrial orchid, has been found at only three locations in the Maricao Forest of western Puerto Rico. Both species are threatened by forest management practices, hurricane damage, and collection. This proposal, if made final, would implement the Federal protection and recovery provisions afforded by the Act for *Lepanthes eltoensis* and *Cranichis ricartii*. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by December 10, 1990. Public hearing requests must be received by November 26, 1990.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boquerón, Puerto Rico 00622. Comments and materials received will be available for public inspection, by appointment, at this office during normal business hours, and at the Service's Southeast Regional Office, suite 1282, 75 Spring Street, SW., Atlanta, Georgia 30303.

FOR FURTHER INFORMATION CONTACT: Ms. Susan Silander at the Caribbean Field Office address (809/851-7297) or Mr. Thomas Turnipseed at the Atlanta Regional Office address (404/331-3583 or FTS 841-3583).

SUPPLEMENTARY INFORMATION:

Background

Lepanthes eltoensis was described by William Stimson in 1969 (Stimson 1969) in his study of the genus *Lepanthes* in Puerto Rico. All species belonging to this genus had previously been considered to be conspecific with *L. selenitepala* until it was recognized that the variability observed in the field indicated the presence of several species. *L. eltoensis* was named for the El Toro Trail in the Luquillo Mountains, the only location from which this species was known (Vivaldi et al. 1981). The orchid has been reported from three locations, the palm forest to the east of El Toro, and the palo colorado and dwarf forests to the west and south of this same peak. Collectors apparently eliminated the palm forest population between 1969 and 1975.

Lepanthes eltoensis is a small, epiphytic orchid found growing on moss-covered trunks of upper elevation

forests in the Luquillo Mountains. The orchid is approximately 4 centimeters tall, with numerous, slender, 3 to 7 sheathed stems terminated by a single leaf. Leaves are 9 to 24 millimeters long and 4 to 9 millimeters wide, entire, chartaceous, and obovate to oblanceolate. The inflorescence is a long peduncled flat raceme, about $\frac{1}{3}$ as long as the leaves, and usually appressed to the back of these leaves. The sepals are narrowly deltoid to deltoid-lanceolate, ciliate, and acute at the apices. The dorsal sepal is 3.2 to 3.8 millimeters long and 1.2 to 2.0 millimeters wide, 3-nerved, and slightly adnate to the 2-nerved lateral sepals, which are about 3 millimeters long and 1.0 to 1.6 millimeters wide. The petals are transversely 2-lobed, 1 nerved, and reddish. The posterior lobes are somewhat longer than the anterior, the lip is 3-lobed, and the lateral lobes linear-ovate and about 1 millimeter long and .25 millimeters wide. *Lepanthes eltoensis* is distinguished from other members of the genus by its obovate to oblanceolate leaves, the ciliate sepals, and the length of the inflorescence (Vivaldi et al. 1981).

In the Luquillo Mountains *Lepanthes eltoensis* has been reported from the sierra palm, palo colorado, and dwarf forest associations, all at elevations greater than 850 meters. It has been reported from several species of trees, all supporting abundant mosses and liverworts. Relative humidity in these forests ranges from 90 to 100 percent and cloud cover is continuous during evening hours and the majority of the day. Annual precipitation ranges from 313 to 450 centimeters in the mountains. Igneous rocks cover the majority of the area.

Although this is an inconspicuous orchid, collectors apparently devastated the original population known from the

sierra palm forest (Vivaldi et al. 1981). All known populations are found within the Caribbean National Forest (managed by the U.S. Forest Service) where collecting is not permitted, but these inaccessible areas are difficult to monitor. All known individuals occur along the El Toro Trail and a small trail to the south, and may be impacted by forest management practices, including trail maintenance and shelter construction. Hurricane Hugo (1989) recently devastated this National Forest, and although the storm apparently did not affect any of the known host trees, it did create numerous gaps along the El Toro Trail, felling huge trees. The extreme rarity of this orchid makes the species extremely vulnerable to the loss of any one individual.

Cranichis ricartii, a small terrestrial orchid, was first discovered by Ruben Padrón and Dr. Juan Ricart in 1979 in the Maricao Commonwealth Forest of the western mountains of Puerto Rico. In this Forest it is found growing in humus of moist serpentine scrub forests of montane ridges at elevations above 680 meters. Found growing with *Cranichis tenuis*, this new species was described in 1989 (Ackerman 1989). In the Maricao Forest it has been reported from three locations, but it has not been observed at all of these sites every year. A total of approximately 30 individual plants have been observed (R. Padrón, personal communication). Selective cutting and the establishment of plantations in the Maricao Commonwealth Forest continue to be proposed as a management alternative.

Plants of *Cranichis ricartii* may reach 27 centimeters in height. The roots are few, fleshy, cylindrical and villous. The several leaves are basal, erect, and about 2 to 3 centimeters long. The green, spreading blades are ovate to broadly elliptic, and 21 to 35 millimeters long and 14 to 20 millimeters wide. Inflorescences are terminal, scapose, spicate, and pubescent. The raceme is many flowered and may reach up to 10 centimeters in length. Flowers are small, erect, non-resupinate, and green. The dorsal sepal is elliptic, obtuse, and about 1.8 millimeters long and 1.0 millimeter wide. The lateral sepals are broadly ovate, obtuse, adpressed to the lip, and about 1.9 millimeters long and 1.1 millimeters wide. The petals are filiform-oblancoate, 1.9 millimeters long 0.2 millimeters wide, reflexed and adressed along the margins of the dorsal sepal but becoming somewhat free with age. The lip is green with a white margin, simple, short-clawed, pinched near the base, fleshy, essentially glabrous, and 2.0 to 2.5

millimeters long. The column is short, stout, and conspicuously winged. The fruit is an ellipsoid capsule, 5 to 7 millimeters long (Ackerman 1989).

Lepanthes eltorensis was recommended for Federal listing by the Smithsonian Institution (Ayensu and DeFilipps 1978). The species was included among the plants being considered as endangered or threatened species by the Service, as published in the **Federal Register** (45 FR 82480) dated December 15, 1980; the November 28, 1983, update (48 FR 53680) of the 1980 notice; and the revised notices of September 27, 1985 (50 FR 39526), and February 21, 1990 (55 FR 6184). The species was designated Category 1 (species for which the Service has substantial information supporting the appropriateness of proposing to list them as endangered or threatened) in each of the four notices. *Cranichis ricartii* was recommended for listing by Dr. James Ackerman, University of Puerto Rico, during a September 1988 meeting concerning the revision of candidate plant species list in Puerto Rico and the U.S. Virgin Islands.

In a notice published in the **Federal Register** on February 15, 1983 (48 FR 6752), the Service reported the earlier acceptance of the new taxa in the Smithsonian's 1978 book as under petition within the context of section 4(b)(3)(A) of the Act, as amended in 1982. The Service subsequently made petition findings in each October from 1983 to 1989 that listing *Lepanthes eltorensis* was warranted but precluded by other pending listing actions of a higher priority, and that additional data on vulnerability and threats were still being gathered. This proposed rule constitutes the final 1-year finding in accordance with section 4(b)(3)(B)(ii) of the Act.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) 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 endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Lepanthes eltorensis* Stimson and *Cranichis ricartii* Ackerman are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. Although *Lepanthes eltorensis* and *Cranichis ricartii* are both found in protected

areas, the Caribbean National Forest and the Maricao Commonwealth Forest, forest management practices such as the establishment and maintenance of plantations, selective cutting, trail maintenance, and shelter construction may affect these orchids. The extreme rarity of both these species makes the loss of any one individual even more critical.

B. Overutilization for commercial, recreational, scientific, or educational purposes. Both these orchids are small and easily overlooked; however, taking has been documented for *Lepanthes eltorensis*. Although plant collecting is prohibited in the Caribbean National Forest, as it is in the Maricao Commonwealth Forest, Vivaldi et al. (1981) reported that collectors had apparently eliminated the population which was known in the palm forest. Scars were evident in more than 50 palms.

C. Disease or predation. Disease and predation have not been documented as factors in the decline of this species.

D. The inadequacy of existing regulatory mechanisms. The Commonwealth of Puerto Rico has adopted a regulation that recognizes and provides protection for certain Commonwealth listed species. However, *Lepanthes eltorensis* and *Cranichis ricartii* are not yet on the Commonwealth list. Federal listing would provide immediate protection and, if the species are ultimately placed on the Commonwealth list, it would enhance their protection and possibilities for funding needed research.

E. Other natural or manmade factors affecting its continued existence. Probably the most important factor affecting *Lepanthes eltorensis* and *Cranichis ricartii* in Puerto Rico is their limited distribution. Only two populations of *Lepanthes* and three of *Cranichis* are currently known to exist. *Cranichis* flowers in the fall, and preliminary studies indicate that seed set was only 32 percent, suggesting that the pollination mechanism may be inefficient. Hurricane Hugo recently devastated the Caribbean National Forest, creating microclimatic conditions unfavorable for *Lepanthes eltorensis* by causing numerous canopy gaps in the areas of the known populations. Because so few individuals are known to occur, the risk of extinction is extremely high.

The Service has carefully assessed the best scientific and commercial information available regarding the past present, and future threats faced by these species in determining to propose

this rule. Based on this evaluation, the preferred action is to list *Lepanthes eltorensis* and *Cranichis ricartii* as endangered. Only two populations are known for *Lepanthes* and three for *Cranichis*. Collecting is known to have severely impacted one population of *Lepanthes*. Habitat modification, altering microclimatic conditions, may dramatically affect both these species. Therefore, endangered rather than threatened status seems an accurate assessment of the species' condition. The reasons for not proposing critical habitat for this species are discussed below in the "Critical Habitat" section.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for these species at this time. The number of individuals of *Lepanthes eltorensis* and *Cranichis ricartii* are sufficiently small that vandalism and collection could seriously affect the survival of these species. Publication of critical habitat descriptions and maps in the **Federal Register** would increase the likelihood of such activities. The Service believes that Federal involvement in the areas where these plants occur can be identified without the designation of critical habitat. All involved parties and landowners have been notified of the location and importance of protecting these species' habitats. Protection of these species' habitats will also be addressed through the recovery process and through the section 7 jeopardy standard.

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 practices. Recognition through listing encourages and results in conservation actions by Federal, Commonwealth, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the Commonwealth, and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, 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) 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 subsequently listed, 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 formal consultation with the Service. No critical habitat is being proposed for *Lepanthes eltorensis* and *Cranichis ricartii*, as discussed above. Federal involvement relates to activities to be conducted by the U.S. Forest Service in the Caribbean National Forest.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any endangered plant, transport it in interstate or foreign commerce in the course of commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. In addition, for endangered plants, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the removal, cutting, digging up, or damaging or destroying of endangered plants in knowing violation of any Commonwealth law or regulation, including Commonwealth criminal trespass law. Certain exceptions can apply to agents of the Service and Commonwealth 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 species under certain circumstances. It is anticipated that few trade permits for *Lepanthes*

eltorensis and *Cranichis ricartii* will ever be sought or issued, since the species is not known to be in cultivation and is uncommon in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, room 432, Arlington, Virginia 22201 (703/358-2104).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of 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 *Lepanthes eltorensis* and *Cranichis ricartii*;
- (2) The location of any additional populations of *Lepanthes eltorensis* and *Cranichis ricartii*, 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 and distribution of these species; and
- (4) Current or planned activities in the subject areas and their possible impacts on *Lepanthes eltorensis* and *Cranichis ricartii*.

Final promulgation of the regulation of *Lepanthes eltorensis* and *Cranichis ricartii* will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of 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 filed within 45 days of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boquerón, Puerto Rico 00622.

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

Ackerman, James D. 1989. *Prescotia* and *Cranichis* of Puerto Rico and the Virgin Islands. *Lindleyana* (1):42-47

Ayensu, E.S., and R.A. Defilipps. 1978. Endangered and threatened plants of the United States. Smithsonian Institution and World Wildlife Fund. Washington, DC. xv + 403 pp.

Stimson, W. 1969. A revision of the Puerto Rican species of *Lepanthes* (Orchidaceae). *Brittonia* 21: 332-345.

Vivaldi, J.L., R.O. Woodbury, and H. Diaz-Soltero. 1981. Status report on *Lepanthes eltorensis* Stimson. Submitted to U.S. Fish and Wildlife Service, Atlanta, Georgia. 31 pp.

Author

The primary author of this proposed rule is Ms. Susan Silander, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boquerón, Puerto Rico 00622 (809/851-7297).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record-keeping 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; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under Orchidaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	special rules
Scientific name	Common name					
Orchidaceae—Orchid Family:						
<i>Cranichis ricartii</i>	None	U.S.A. (PR)	E		NA	NA
<i>Lepanthes eltorensis</i>	None	U.S.A. (PR)	E		NA	NA

Dated: September 14, 1990.

Richard N. Smith,
 Acting Director, Fish and Wildlife Service.
 [FR Doc. 90-23834 Filed 10-9-90; 8:45 am]
 BILLING CODE 4310-55-M