

Department of Energy Organization Act, Pub. L. 95-91 (42 U.S.C. 7254), sec. 201 of the Federal Civilian Employee and Contractor Travel Expenses Act of 1985 (41 U.S.C. 420) and sec. 1534 of the Department of Defense Authorization Act, 1986, Pub. L. 99-145 (42 U.S.C. 7256a), as amended.

*Section 970.1509-7 [Amended]*

8. Subsection 970.1509-7 is amended by removing "915.971-5(f)" in paragraphs (a) and (c) and adding in its place "915.971-5(h)".

*Section 970.31 [Amended]*

9. The heading of subpart 970.31 is amended by removing "Costs" and adding in its place "Cost".

*Section 970.5204-15 [Amended]*

10. Subsection 970.5204-15 is amended at paragraph (b), second sentence, in (2), by removing "with" and adding in its place "which"; and at paragraph (c), second sentence by removing "made" and adding in its place "make".

*Section 970.5204-55 [Amended]*

11. Subsection 970.5204-55 is amended at paragraph (c), fifth sentence, by removing "subcontractor" and adding in its place "contractor".

*Section 970.7103 [Amended]*

12. Section 970.7103 is amended at paragraph (c)(3) by removing "970.7103(b)(4)" and adding in its place "970.7103(c)(4)".

*Section 970.7104-12 [Amended]*

13. Subsection 970.7104-12 is amended at paragraph (f) by removing "970.7103(b)(5)" and adding in its place "970.7103(c)(5)".

*Section 970.7104-39 [Amended]*

14. Subsection 970.7104-39 is amended by removing "Mangement" and adding in its place "Management".

[FR Doc. 93-13572 Filed 6-8-93; 8:45 am]  
BILLING CODE 6450-01-P

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**RIN 1018-AB83**

**Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Four Endemic Puerto Rican Ferns**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines *Adiantum vivesii* (no common name), *Elaphoglossum serpens* (no common name), *Polystichum calderonense* (no common name), and *Tectaria estremerana* (no common name) to be endangered species pursuant to the Endangered Species Act (Act) of 1973, as amended. *Adiantum vivesii* and *Tectaria estremerana* have each been reported from only one locality in the limestone hills of northern Puerto Rico. *Elphoglossum serpens* is found at a single site in the montane dwarf forest of the summit of Cerro Punta in the central mountains, *Polystichum calderonense* is known from only two localities, Monte Guilarte Commonwealth Forest and Cerrote Pñuelas.

Threats to these ferns, depending on the species, include the potential for habitat destruction and modification, impacts from forest management, hurricane damage, and possible collection. This final rule will implement the Federal protection and recovery provisions afforded by the Act for *Adiantum vivesii*, *Elaphoglossum serpens*, *Polystichum calderonense*, and *Tectaria estremerana*.

**EFFECTIVE DATE:** July 9, 1993.

**ADDRESSES:** The complete file for this rule is available for inspection, by appointment, during normal business hours at the Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boqueron, Puerto Rico 00622, and at the Service's Southeast Regional Office, suite 1282, 75 Spring Street, NW., Atlanta, Georgia 30303.

**FOR FURTHER INFORMATION CONTACT:** Ms. Marelisa Rivera at the Caribbean Field Office address (809/851-7297) or Mr. Dave Flemming at the Atlanta Regional Office address (404/331-3583).

**SUPPLEMENTARY INFORMATION:**

**Background**

*Adiantum vivesii* was described by Dr. George R. Proctor in 1985 from specimens collected by Mr. Miguel Vives and Mr. William Estremera at Barrio San Antonio in the municipality of Quebradillas (Proctor 1989). At present, the species is only known from this locality. A single colony of an estimated 1000 plants, or growing apices, has been reported from the locality (Proctor 1991). This species occurs in a deeply shaded hollow at the base of north-facing limestone cliffs at a lower to middle elevation of approximately 250 meters.

*Adiantum vivesii* is a gregarious colonial fern with creeping, nodose, and 2.5-3.0 mm thick rhizomes. The fronds are distichous and erect-spreading,

approximately 0.5 cm apart and 45-71 cm long. The stipes or stalks are lustrous purple-black, 25-46 cm long, irregularly branched and have hairlike scales. The frond's blades are broad and irregular, 20-28 cm long, and 23-35 cm broad. The rachis and costae are more densely covered with hairlike scales than the stipe. The blades have 2 or 3 alternative or sometimes subopposite pinnae, with a larger terminal one. These are lance-oblong, 13-20 cm long, and 3.5-5 cm broad. The terminal pinna may be up to 7 cm broad, stalked, and is often somewhat inequilateral. Each pinna has 10-13 pairs of alternate, narrowly oblong-falcate pinnule, which are unequally cuneate at the base. The outer sterile margins of the pinna are irregularly serrulate and the tissue is dull green on both sides. Five elliptic to linear sori are borne along the basal half of acroscopic margin and they are close or contiguous but distinct. The indusoid is gray-brown, turgid, with an erose margin (Proctor 1989).

*A. vivesii* occurs on privately owned land, and is known from only a single locality (Proctor 1991). Clearing or development of this area would result in elimination of the only known population. Also, this species could be an attractive item for collectors.

*Elaphoglossum serpens* was described by Maxon in 1947 from specimens on tree trunks at Monte Jayuya (Liogier and Martorell 1982), but the fern is now extirpated from this site due to construction of a communication facility. It was later found by Roy O. Woodbury and others on the summit of Cerro Punta (Proctor 1991). Most of the plants at the latter site have been destroyed by the construction of telecommunications towers (Proctor 1991). At present, 22 plants are known from the summit area, all occurring on the mossy trunks of only 6 trees (Proctor 1991). These trees are found in a patch of a montane dwarf forest at an elevation of about 1300 meters. This patch of forest is all that has survived the encroachment of telecommunication towers, and was badly damaged in 1989 by Hurricane Hugo (Proctor 1991).

*Elaphoglossum serpens* is an epiphytic fern with a wide-creeping, 1.5-2 mm thick rhizome. The apex and nodes bear lustrous reddish-brown scales with ciliate margins which are lanceolate to attenuate and 3-4 mm long. This species has only a few, distant, and erect fronds. Sterile fronds are 7-19 cm long and the stipes, from 3.5-11 cm in length, are usually as long or longer than the blades. The blades are ovate, 3.5-8 cm long and 2-3.5 cm broad, obtuse at the apex, cuneate at the base. The veins are free, reaching the

margins of the blades. The coriaceous tissue is opaque with only scattered scales on the abaxial side. The fertile fronds are 8.5–18 cm long, and in contrast to the sterile fronds the stipes are about three times longer than the blades. The blades are lanceolate to elliptic-oblong with rounded or blunt apex, 2.5–4.5 cm long and 1–1.5 cm broad.

*Polystichum calderonense* was described by Dr. George Proctor in 1985 from specimens collected from the summit of La Silla de Calderón, Monte Guilarte Commonwealth Forest, in the municipality of Adjuntas (Proctor 1989). A second population was found in 1987 on Cerrote de Peñuelas, in the municipality of Peñuelas, by Dr. Proctor with Dr. Haneke (Proctor 1991). At present this species is known to occur only at these two localities. The plants grow on moist, shaded, non-calcareous ledges on mountain tops at elevations of 1009–1150 meters. Fifty-seven individual plants are known from the two localities: 45 (including juveniles) on La Silla de Calderón and 12 on Cerrote Peñuelas (Proctor 1991).

Both sites were identified by Proctor (1991) as vulnerable to indiscriminate cutting or fires. In Peñuelas, the plants are on private land which may be affected by industrial or residential development.

*Polystichum calderonense* is an evergreen terrestrial fern. It has a curved-ascending, 7 mm thick rhizome which is clothed at the apex with lanceolate to oblong, curved, shining black, marginate scales up to 10 mm long. Its fronds are erect to spreading and may reach 60 cm in length. The twice-pinnate blades are lanceolate, 25–40 cm long, 6–14 cm broad, and narrowed and truncate at the apex. Blades terminate in a scaly proliferous bud which is somewhat narrowed toward the base. This species has 30–36 pairs of oblique, short-stalked pinnae. It has a characteristic 4–7 cm long and 0.9–1.3 cm broad middle pinnae, with 8–10 pairs of free pinnules. The tissue is dark green, rigid, and opaque. From 1 to 5 sori are found dorsally on the veins of each pinnule, but are not clearly arranged in rows. The sori are covered by a light brown, deciduous, thin indusium.

*Tectaria estremerana* was described by Proctor and Evans in 1984 from specimens collected by William Estremora at Barrio Esperanza, Arecibo, in the vicinity of the Arecibo Radio Telescope (Proctor 1988). This species is found in moist shaded humus on and among limestone boulders on a wooded rocky hillside at an elevation of 250–300 meters (Proctor 1989). This fern is

known only from this site, where a total of 23 individual plants were found. The site is about 200 meters south of the Arecibo Radio Telescope, and any expansion or development of the facilities may adversely affect the habitat of this endemic fern (Proctor 1991).

*Tectaria estremerana* has a woody, erect, 10–15 mm thick rhizome. The rhizome's apex bears a dense tuft of erect, brown, glabrous, narrowly deltate-attenuate scales about 15 mm long and 0.5–0.8 mm wide at the base. This fern has several loosely fasciculate, 65–80 cm long fronds. The light orange-brown stipes are shorter or nearly as long as the blades and are covered with pale jointed hairs. Scales up to 12 mm long clothe the base. The blades are oblong-ovate, 35–41 cm long, 20–25 cm broad below the middle, and acuminate at the pinnatifid apex. The rachis, the costae, and the costules are softly puberulous with articulate hairs on both sides. This fern has 3–4 pairs of free pinnae, and has several distal divisions which are more or less adnate. The basal pair of pinnae is deltate-oblong, strongly inequilateral, 12–13 cm long, coarsely lobate or subpinnatifid. The lobes are from 9 to 13 mm broad except for the larger basal basiocopic ones. Its tissue is firmly herbaceous and glabrous, but the margins are ciliate. The sori are located nearer to the midvein than the margin of the pinna-lobes.

*Adiantum vivesii*, *Elaphoglossum serpens*, *Polystichum calderonense*, and *Tectaria estremerana* were recommended for Federal listing in an interagency workshop held to discuss candidate plants in September 1988. The species were subsequently included as Category 1 (species for which the Service has substantial information supporting the appropriateness of proposing to list them as endangered or threatened) in the February 21, 1990 (55 FR 6184) notice review. A proposed rule to list these four species was published July 14, 1992 (57 FR 31167).

#### Summary of Comments and Recommendations

In the July 14, 1992, proposed rule and associated notifications, all interested parties were requested to submit factual reports of information that might contribute to the development of a final rule. Appropriate agencies of the Commonwealth of Puerto Rico, Federal agencies, scientific organizations, and other interested parties were requested to comment. A newspaper notice inviting general public comment was published in the San Juan Start on August 1, 1992. Two letters of comment were received and

are discussed below. A public hearing was neither requested nor held.

The Puerto Rico Department of Natural Resources, Natural Heritage Division, supported the listing of *Adiantum vivesii*, *Elaphoglossum serpens*, *Polystichum calderonense*, and *Tectaria estremerana* as endangered species. The Department mentioned that these four plant species are currently considered critical in their Natural Diversity Inventory.

The U.S. Forest Service provided comments, but did not indicate either support or objection to listing the species.

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Adiantum vivesii*, *Elaphoglossum serpens*, *Polystichum calderonense*, and *Tectaria estremerana* should be classified as endangered species. Procedures found at 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 were followed. 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 *Adiantum vivesii* Proctor, *Elaphoglossum serpens* Maxon & Maxon ex Maxon, *Polystichum calderonense* Proctor, and *Tectaria estremerana* Proctor & Evans, are as follows:

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

Destruction and modification of habitat may be the most significant factors affecting the numbers and distribution of these four endemic ferns. Three of the species (*Adiantum vivesii*, *Elaphoglossum serpens*, and *Tectaria estremerana*) are each known from only one site, all of which are privately owned lands. The construction of communications facilities at Monte Jayuya destroyed the only other known population of *Elaphoglossum serpens*, and similar facilities encroach upon the population at Cerro Punta. It appears that this species is in extreme danger of extinction.

Although *Polystichum calderonense* occurs within the Guilarte Commonwealth Forest, this population may be affected by forest management practices. These four fern species are rare, extremely restricted in distribution, and very vulnerable to habitat destruction or modification. The

Wildlife Service, 4401 Fairfax Drive, room 432, Arlington, Virginia 22203 (703/358-2104).

**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**

Liogier, H.A., and L.F. Martorell. 1982. Flora of Puerto Rico and adjacent islands: a systematic synopsis. University of Puerto Rico, Río Piedras, Puerto Rico. 342 pp.  
 Proctor, G.R. 1988. Status of Puerto Rican Endemic Ferns. List presented in the Interagency Workshop on candidate plant

species. Caribbean Islands National Wildlife Refuge, Boquerón, Puerto Rico.  
 Proctor, G.R. 1989. Ferns of Puerto Rico and the Virgin Islands. The New York Botanical Garden, Bronx, New York. 389 pp.  
 Proctor, G.R. 1991. Puerto Rican Plant Species of Special Concern; Status and Recommendations. Publicación Científica Miscelánea No. 2, Departamento de Recursos Naturales, San Juan, Puerto Rico. 196 pp.

**Author**

The primary author of this proposed rule is Ms. Marelisa Rivera, 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 recordkeeping requirements, Transportation.

**Regulations Promulgation**

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal

Regulations, is amended 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. Amend § 17.12(h) by adding the three new families, "Dryopteridaceae—Wood fern family", "Lomariopsidaceae—Vine fern family", and "Adiantaceae—Maidenhair family", in alphabetical order, and by adding the following entries, in alphabetical order under the three new families as indicated, 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					
Adiantaceae—Maidenhair family:						
<i>Adiantum vivesii</i> .....	None .....	U.S.A. (PR) .....	E	504	NA	NA
Dryopteridaceae—Wood fern family:						
<i>Polystichum calderonense</i> .	None .....	U.S.A. (PR) .....	E	504	NA	NA
<i>Tectaria estremerana</i> ..	None .....	U.S.A. (PR) .....	E	504	NA	NA
Lomariopsidaceae—Vine fern family:						
<i>Elaphoglossum serpens</i> .	None .....	U.S.A. (PR) .....	E	504	NA	NA

Dated: May 7, 1993.  
 Richard N. Smith,  
 Acting Director, Fish and Wildlife Service.  
 [FR Doc. 93-13517 Filed 6-8-93; 8:45 am]  
 BILLING CODE 4310-55-M

**DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**50 CFR Part 630**  
**[Docket No. 910640-1140; I.D. 060393B]**  
**Atlantic Swordfish Fishery**  
**AGENCY:** National Marine Fisheries Service (NMFS), NOAA, Commerce.  
**ACTION:** Closure of the Atlantic swordfish drift gillnet fishery.  
**SUMMARY:** NMFS closes the drift gillnet fishery for swordfish in the Atlantic

Ocean, including the Gulf of Mexico and Caribbean Sea. NMFS has determined that the first semi-annual quota for swordfish that may be harvested by drift gillnet will be reached on or before June 14, 1993. This closure is necessary to prevent the catch of swordfish by drift gillnet vessels from exceeding the quota.  
**EFFECTIVE DATE:** Closure is effective 0001 hours, local time, June 15, 1993, through 2359 hours, local time, June 30, 1993.  
**FOR FURTHER INFORMATION CONTACT:** Richard B. Stone, 301-713-2347.  
**SUPPLEMENTARY INFORMATION:** The Atlantic swordfish fishery is managed