

**50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Two Florida Plants**

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

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to determine endangered status under the Endangered Species Act of 1973 (Act), as amended, for two plants of north-central Hernando County in central Florida. *Campanula robinsiae* (Brooksville bellflower) is restricted to the margins of ponds and is threatened by residential development, mining, and drainage of its habitats. *Justicia cooleyi* (Cooley's water-willow) is restricted to hardwood forests and is threatened by clearance of the forests for pastures, residential development, and limestone mining. Critical habitat is not proposed. The known populations of these plants are on private, State, and federally owned lands. This proposal, if made final, would implement the protection and recovery provisions afforded by the Act, as amended for these two plants. The Service seeks data and comments from the public on this proposal.

**DATES:** Comments from all interested parties must be received by November 14, 1988. Public hearing requests must be received by October 27, 1988.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Field Supervisor, Jacksonville Field Office, U.S. Fish and Wildlife Service, 3100 University Boulevard South, Jacksonville, Florida 32216. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Mr. David J. Wesley, Field Supervisor, at the above address (telephone 904/791-2580 or FTS 946-2580).

**SUPPLEMENTARY INFORMATION:****Background**

The Brooksville bellflower is a member of the bellflower family (Campanulaceae). It was discovered on the north slope of Chinsegut Hill in Hernando County, Florida, by John K. Small and Mrs. Raymond Robins in the spring of 1924 and was named *Campanula robinsiae* by Small (1926), who later transferred the plant to his new genus *Rotanthea* (Small 1933). Later, Shetler (1963) returned the plant to *Campanula* while noting that it was possibly a Eurasian species that had been introduced, perhaps accidentally, to Chinsegut Hill. Field work in the 1980's by Nancy Morin, Steven Leonard, Stanwyn Shetler, and others showed that the plant is not restricted to moist areas on Chinsegut Hill, but is primarily found on moist ground at the edges of

two ponds near the hill. Now that the bellflower's habitat is better known, it has become apparent that the plant is a native, narrowly endemic species (Wunderlin personal communication 1985).

*Campanula robinsiae* is an annual herb with a slender taproot and slender, angled stems 1-15 centimeters (0.43-6.0 inches) tall. The largest leaves are at the base of the plant, ovate to elliptic, and 6-12 millimeters (.24-.47 inch) long. Leaves farther up the stem are narrower and shorter. The flowers are solitary with the sepals 1.0-2.5 millimeters (.04-.10 inch) long and the pale blue bell-shaped corolla 7-8 millimeters (.28-.31 inch) wide. Flowering is in March and April. The only other bellflower in Florida is *Campanula floridana*, a widespread species with shorter sepals and a longer corolla (Perkins 1979, Wunderlin *et al.* 1980a, Wunderlin 1982). *Campanula robinsiae* is one of a number of low plants that occupy the edges of ponds; its abundance apparently fluctuates considerably from year to year depending on water levels. The ponds are adjacent to pastures grazed by cattle.

Cooley's water-willow is a member of the acanthus family (Acanthaceae). Specimens were collected in 1924 and 1934 by John K. Small and colleagues, and in 1957 by George Cooley. Monachino and Leonard (1959) recognized these specimens as a new species, *Justicia cooleyi*, distinct from the two other native water-willows in central Florida. Meagher (1974) confirmed this view. *Justicia cooleyi* is a

rhizomatous perennial herb with upright, quadrangular stems and usually less than 40 centimeters (16 inches) tall. The leaves are up to 5 centimeters (2 inches) long. The flowers are borne on forked, zigzag branches slightly longer than the leaves. The petals are fused into a two-lipped corolla with the lower lip slightly longer, 7-8 millimeters (.28-.31 inch) long. The lower lip is mottled lavender and white. The rest of the corolla is bright lavender-rose. Flowering occurs from August to December. A capsule 1.2 centimeters (.47 inch) long develops from the flower (Kral 1983, Perkins 1979).

The first collection of this water-willow was made in a "low hammock" or hardwood forest near Mascotte in Lake County. All subsequent collections have been from north central Hernando County on sand to clay soils that range from moist to seasonally wet. Some sites are on low rises in wet hammocks or swamps; most are on uplands or hills with trees such as southern magnolia, black gum, sweet gum, live oak, laurel oak, pignut hickory, cabbage palm, flowering dogwood, and yaupon holly. The understory may contain many ferns, woodland grasses, and sedges.

The extensive outcrops of limestone rock and the sinkholes in the Hernando County forests are unusual in the Florida peninsula and provide excellent habitat for ferns, including the tropical hammock fern (*Blechnum occidentale*), and the draft spleenwort (*Asplenium pumilum*), both considered endangered by the State. The terrestrial nodding-cap orchids *Triphora latifolia* and *Triphora craigheadii* are both endemic to hardwood forests in this part of Florida. Both are listed as threatened by the State and are candidates for Federal listing. Florida crabgrass (*Digitaria floridana*), a non-weedy endemic species that is a candidate for Federal listing, also occurs in these forests (data from Florida Natural Areas Inventory, September 1987).

Portions of the hardwood forests have been cleared for pastures. Selective cutting of trees for timber or to improve grazing for livestock probably does not adversely affect *Justicia cooleyi*, which is known to occur on a periodically mowed highway right-of-way (Kral 1983, file reports from The Nature Conservancy and the Florida Natural Areas Inventory, Wunderlin *et al.* 1980b).

The presently known localities for both *Campanula robinsiae* and *Justicia cooleyi* are all on part of the Brooksville Ridge, a region with "the most irregular surface to be found in any area of comparable size in peninsular Florida" (White 1970). The region has few surface

streams, most drainage being to ponds and prairies in depressions and into sinkholes. Phosphate mining occurred in the area in the past; today, large limestone quarries produce both soft and hard rock, and cattle pasturing is widespread. Also residential development is increasing in the area.

Section 12 of the Endangered Species Act of 1973 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) that accepted the report as a petition in the context of section 4(c)(2) (now section 4(b)(3)) of the Act, as amended. 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 recommended by the Smithsonian Report to be endangered species pursuant to section 4 of the Act. *Campanula robinsiae* and *Justicia cooleyi* were included in the Smithsonian Report; the July 1, 1975, notice; and the June 6, 1976, proposal.

The 1978 Endangered Species Act Amendments required that all proposals over 2 years old be withdrawn, except that a 1-year grace period was given to proposal already over 2 years old. On December 10, 1979, the Service published a notice of withdrawal of the June 6, 1976, proposal, along with four other proposals which had expired (44 FR 70796).

On December 15, 1980, the Service published a notice of review for plants (45 FR 82479), which included *Campanula robinsiae* as a category-1 candidate (a species for which data in the Service's possession indicate listing is appropriate). *Justicia cooleyi* was included as a category-2 candidate (a species for which data in the Service's possession indicate listing is possibly appropriate, but for which additional biological information is needed to support a proposed rule). A supplement to the 1980 notice of review published on November 28, 1983 (48 FR 53640) treated *Campanula robinsiae* as a category-2 candidate, based on uncertainty about the taxonomic status of the plant (Shelter 1963, Wunderlin *et al.* 1980a). *Justicia cooleyi* was treated as a category-1 candidate, based on a status report received from Wunderlin *et al.* (1980b). An updated notice of review published on September 27, 1985 (50 FR 39525), maintained these two plants as candidates in the same categories: 2-*Campanula robinsiae*, 1-*Justicia cooleyi*. A letter from Wunderlin (*in litt.* 1985),

received too late for the updated notice, suggested that recent field work on *Campanula robinsiae* had generated "sufficient information to prepare a proposal for listing the species as endangered."

Section 4(b)(3)(B) of the Act, as amended in 1982, 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 all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Campanula robinsiae* and *Justicia cooleyi* because the Service had accepted the 1975 Smithsonian report as a petition. On October 13, 1983, October 12, 1984, October 11, 1985, October 10, 1986, and October 9, 1987, the Service found that the petitioned listing of these species was warranted, and that, although pending proposals had precluded their proposal, expeditious progress was being made to list these species. Publication of the present proposal constitutes the final 1-year finding that is required on or before October 13, 1988.

#### 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 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 *Campanula robinsiae* Small (Brooksville bellflower), and for *Justicia cooleyi* Monachino and Leonard (Cooley's water-willow) are as follows:

A. *The present or threatened destruction, modification, or curtailment of their habitats or ranges.* The known localities for *Justicia cooleyi* and *Campanula robinsiae* are in north central Hernando County, including Annutteliga Hammock near U.S. Highway 98. Some of the original hardwood forest in this area has been converted to pastures, as shown on topographic maps. Limestone quarries occupy at least ten square miles. A residential subdivision occupies 26 square miles, including part of Annutteliga Hammock. Smaller subdivisions and rural residences are encroaching on other areas of forest. Hernando County was the second fastest-growing county in the nation from 1980 to 1986, growing by 74.8

percent in the period, according to a Census Bureau report (*The New York Times*, September 1, 1987). The University of Florida, Bureau of Economic and Business Research confirms that this rapid growth is continuing, with the 1987 population estimated to have increased 79.3 percent over 1980, for a total of 79,718 (*Jacksonville Times-Union*, August 26, 1987).

*Justicia cooleyi* is native to the hardwood forest in Hernando County, although two of the seven known sites are in modified forest, one on a wide highway right-of-way among a group of trees and the other in an unusual seepage area in a cattle pasture on Chinsegut Hill. The small number of known sites, despite searches by capable field botanists (including Steven Leonard for the Florida Natural Areas Inventory), indicates that any further loss of suitable habitat would seriously threaten the continued existence of the species.

*Campanula robinsiae* is known to occur only at three sites. One site, with few plants is in the seepage area with *Justicia cooleyi* on Chinsegut Hill. The site has been used as a pasture for many years and no changes in land management are anticipated. The two principal populations are at the margins of two "prairies" or ponds with seasonally fluctuating water levels. Changes in land use in the watersheds surrounding the prairies have the potential to affect water levels in the ponds by increasing the quantity of runoff; runoff water from developed areas may also be contaminated by petroleum products, fertilizers, and herbicides. Therefore, while there appears to be little danger of destruction of this plant's habitat, adverse modification of the habitat constitutes a serious threat to *Campanula robinsiae*.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** *Justicia cooleyi* is not of interest as an ornamental (Robert McCartney, pers. comm. 1986), but it occurs at the same site as a rare fern that is vulnerable to collection by fern enthusiasts, so it is inadvisable to publicize the exact localities of the *Justicia*.

The Florida National Areas Inventory treats data on *Campanula robinsiae* as sensitive because the plant is restricted to only 3 sites and it is vulnerable to overcollecting and vandalism.

**C. Diseases or Predation.** Not applicable.

**D. The inadequacy of existing regulatory mechanisms.** *Justicia cooleyi* and *Campanula robinsiae* are listed as endangered under the Preservation of

Native Flora of Florida Act (Section 581.185-187, Florida Statutes), which regulates taking, transport, and sale of plants but does not provide habitat protection. *Justicia cooleyi* is protected on the Nature Conservancy's Robins Memorial Forest Preserve, and this private and public conservation organization is seeking to conserve both species on private land through its landowner contact program. Listing under the Act will augment private conservation measures for these plants.

**E. Other natural or manmade factors affecting their continued existence.** The restricted geographic ranges of these plants, and their specialized habitats, exacerbate the risks posed by the preceding four factors, making it very possible that either species could become extinct in the absence of organized conservation measures.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by *Campanula robinsiae* and *Justicia cooleyi* in determining to propose this rule. Based on this evaluation, the preferred action is to list both species as endangered. Both plants are narrowly endemic to a geographic area where agriculture, mining, and residential development have already altered a large portion of the original vegetation. Because there is no rangewide provision to ensure protection of the remaining habitat, both species are in danger of becoming extinct in all or a significant portion of their ranges. Critical habitat is not proposed for either species for the reasons described in the next section.

#### Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *Campanula robinsiae* or *Justicia cooleyi* at this time. Publication of critical habitat descriptions and maps would increase the degree of threat from trampling or taking by vandals and curiosity seekers. Publication of precise localities for *Campanula robinsiae* is especially undesirable because the plant is restricted to three very small areas that could easily be damaged or ruined by trampling or collecting.

Designation of critical habitat affects only Federal agencies. The only Federal agency which manages land in the habitats of these plants is the U.S. Department of Agriculture (Subtropical

Agricultural Research Station). Past management by this agency has not adversely affected the plants. Adequate future protection can be assured on the two Federally-owned tracts without determining critical habitat. All involved parties and land owners will be notified of the location and importance of protecting this species habitat. Because designation of critical habitat increase the threat of taking or other human activity, and offers no protection not provided by the listing alone, the Service finds that designation of critical habitat is not prudent for *Justicia cooleyi* or *Campanula robinsiae* at the present time.

#### 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, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States 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 taking and harm 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 listed subsequently, 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.

Because most sites for the two plants are privately or State owned, the

Service anticipates few conferences or consultations, unless Federal ownership or mineral rights is found to extend beneath or near one of the sites and if phosphate mining or limestone quarrying is proposed in such areas. Otherwise, the only Federal land on which they are known to occur at present is managed by the Department of Agriculture whose past practices have been consistent with the needs of the species.

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, would 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 this species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. Certain exceptions can 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 species under certain circumstances. It is anticipated that few trade permits would ever be sought or issued, because neither *Campanula robinsiae* nor *Justicia cooleyi* is raised for horticultural purposes. 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, P.O. Box 27329, Central Station, Washington, DC 20038-7329 (202/343-4955).

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will be 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 proposal are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any

threat (or lack thereof) to *Campanula robinsiae* or *Justicia cooleyi*;

(2) The location of any additional populations of these 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 and distribution of these species; and

(4) Current or planned activities in the range and habitats of these species and their possible impacts on these species.

Final promulgation of the regulation on these species 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 date of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Jacksonville Field Office, Fish and Wildlife Service, 3100 University Boulevard South, Jacksonville, Florida 32216.

#### 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 (49 FR 49244).

#### References Cited

- Kral, R. 1983. *Justicia cooleyi*. Pages 1057-1060 in R. Kral, A report on some rare, threatened, or endangered forest-related vascular plants. USDA Forest Service, Technical Publication R8-TP2, x+1305 pp.
- Meagher, M.B. 1974. Biosystematic investigations in the genus *Justicia* (Acanthaceae). Ph.D. dissertation. University of South Florida. Tampa, Florida. 300 pp.
- Monachino, J., and E.C. Leonard. 1959. A new species of *Justicia* from Florida. *Rhodora* 61:183-187.
- Perkins, K. 1979. *Justicia cooleyi*. Pp. 97-98 in Rare and endangered biota of Florida, Vol 5: Plants. University Presses of Florida, Gainesville.
- Rollins, R.C., and R.A. Howard. 1987. A tribute to George R. Cooley (May 29, 1896-

September 27, 1986). *Systematic Botany* 12:444-448.

Shetler, S.G. 1963. A checklist and key to the species of *Campanula* native or commonly naturalized in North America. *Rhodora* 65:319-337.

Small, J.K. 1926. A new bellflower from Florida. *Torreyana* 28:35-36.

Small, J.K. 1933. *Manual of the southeastern flora*. University of North Carolina Press, Chapel Hill. 1554 pp.

Ward, D.B. 1978. Keys to the flora of Florida. No. 7: Campanulaceae. *Phytologia* 39:1-12.

White, W.A. 1970. The geomorphology of the Florida peninsula. Florida Dept. of Natural Resources, Bureau of Geology. *Geological Bulletin* No. 51. 164 pp.

Wunderlin, R.P. 1982. Guide to the vascular plants of central Florida. University Presses of Florida, Gainesville. 472 pp.

Wunderlin, R.P., D. Richardson, and B. Hansen. 1980a. Status report on *Campanula robinsiae*. Unpublished report prepared for U.S. Fish and Wildlife Service. 14 pp.

Wunderlin, R.P., D. Richardson, and B. Hansen. 1980b. Status report on *Justicia cooleyi*. Unpublished report prepared for U.S. Fish and Wildlife Service. 21 pp.

#### Author

The primary author of this proposed rule is David Martin, Jacksonville Field Office, U.S. Fish and Wildlife Service, 3100 University Boulevard South, Jacksonville, Florida 32216 (904/791-2580 or FTS 946/2580).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Proposed Regulations Promulgation

#### PART 17—[AMENDED]

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:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order, 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					
Acanthaceae—Acanthus family: <i>Justicia coolyi</i> .	Cooley's water-willow .....	U.S.A. (FL).....	E	.....	NA	NA
Campanulaceae—Bellflower family: <i>Campanula robinsiae</i> .	Brooksville bellflower .....	U.S.A. (FL).....	E	.....	NA	NA

Dated: August 11, 1988.

Susan Recce,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 88-20615 Filed 9-9-88; 8:45 am]

BILLING CODE 4310-55-M