

Federal Communications Commission.
Karl A. Kensinger,
*Chief, Allocations Branch, Policy and Rules
 Division, Mass Media Bureau.*
 [FR Doc. 89-17508 Filed 7-26-89; 8:45 am]
 BILLING CODE 6712-01-M

47 CFR Part 73

[MM Docket No. 88-459; RM-6330]

Radio Broadcasting Services; Battle Ground, IN

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document allots FM Channel 254A to Battle Ground, Indiana, as that community's first local broadcast service, in response to a petition for rule making filed by Linda Kuenzie. Coordinates utilized for Channel 254A at Battle Ground are 40-31-09 and 86-50-56. With this action, the proceeding is terminated.

DATES: Effective September 5, 1989: The window period for filing applications on Channel 254A at Battle Ground, Indiana, will open on September 6, 1989, and close on October 6, 1989.

FOR FURTHER INFORMATION CONTACT: Nancy Joyner, Mass Media Bureau, (202) 634-6530.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Report and Order, MM Docket No. 88-459, adopted June 28, 1989, and released July 21, 1989. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Dockets Branch (Room 230), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, (202) 857-3800, 2100 M Street, NW., Suite 140, Washington, DC 20037.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

PART 73—[AMENDED]

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments is amended under Indiana, by adding Battle Ground, Channel 254A.

Federal Communications Commission.
Karl A. Kensinger,
*Chief, Allocations Branch, Policy and Rules
 Division, Mass Media Bureau.*
 [FR Doc. 89-17510 Filed 7-26-88; 8:45 am]
 BILLING CODE 6712-01-M

47 CFR Part 73

[MM Docket No. 88-379; RM-6354]

Radio Broadcasting Services; Havana and Madison, FL

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: The Commission at the request of Ed Winton ("petitioner"), substitutes Channel 285C2 for Channel 285A at Havana, Florida, and modifies the license for Station WMLO(FM) to specify operation on the higher class channel, and substitutes Channel 274A for Channel 285A at Madison, Florida, and modifies the license for Station WOOP(FM) to specify the new channel at Madison. Channel 285C2 can be allotted to Havana in compliance with the Commission's minimum distance separation requirements with a site restriction of 15.3 kilometers (9.5 miles) east to avoid a short-spacing to Station WOAB(FM), Channel 285A, Ozark, Alabama, and to unused Channel 287A at Chattahoochee, Florida. The coordinates for this allotment are North Latitude 30-34-43 and West Longitude 84-15-59. Channel 274A can be allotted to Madison, Florida in compliance with the Commission's minimum distance separation requirements. The coordinates for this allotment are North Latitude 30-28-06 and West Longitude 83-24-30. With this action, this proceeding is terminated.

EFFECTIVE DATE: September 5, 1989.

FOR FURTHER INFORMATION CONTACT: Nancy J. Walls, Mass Media Bureau, (202) 634-6530.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order, MM Docket No. 88-379, adopted June 28, 1989, and released July 21, 1989. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Dockets Branch (Room 230), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, (202) 857-3800, 2100 M Street, NW., Suite 140, Washington, DC 20037.

List of Subjects in 47 CFR Part 73 Radio broadcasting.

PART 73—[AMENDED]

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments for Florida is amended for Havana by removing Channel 285A and adding Channel 285C2, and for Madison by removing Channel 285A and adding Channel 274A.

Karl A. Kensinger,
*Chief, Allocations Branch, Policy and Rules
 Division, Mass Media Bureau.*
 [FR Doc. 89-17509 Filed 7-26-89; 8:45 am]
 BILLING CODE 6712-01-M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB23

Endangered and Threatened Wildlife and Plants; Endangered Status for Four Florida Plants

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines endangered status under the Endangered Species Act of 1973, as amended (Act), for four plants of central Florida: *Campanula robinsiae* (Brooksville bellflower), *Justicia cooleyi* (Cooley's water willow), *Liatrix ohlingerae* (scrub blazing star), and *Ziziphus celata* (Florida ziziphus). All four plants are threatened by habitat loss due to residential and agricultural land development. *Justicia cooleyi* is also threatened by limestone mining. Only two small populations of *Ziziphus celata* are known to exist, so it is especially vulnerable to extinction. This rule implements the protection and recovery provisions afforded by the Act for these four plants.

EFFECTIVE DATE: August 28, 1989.

ADDRESSES: The complete file for this rule is available for inspection during normal office hours, by appointment, at the Jacksonville Field Office, U.S. Fish and Wildlife Service, 3100 University Boulevard South, Suite 120, Jacksonville, Florida 32216.

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

Campanula robinsiae, 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 *Rotantha* (Small 1933). 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 (Missouri Botanical Garden), Steven Leonard (Florida Natural Areas Inventory), Stanwyn Shetler (Smithsonian Institution), 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 (R.P. Wunderlin, University of South Florida, personal communication 1985; N. Morin, personal communication 1987).

Campanula robinsiae is an annual herb with a slender taproot and slender, 4-angled stems 1 to 15 centimeters (0.4 to 6.0 inches) tall. The largest leaves are at the base of the plant, ovate to elliptic, about 6 millimeters (0.24 inch) long, and 5 millimeters wide. Leaves farther up the stem are narrower and shorter. Many of the flowers are cleistogamous (closed, self-pollinating) and inconspicuous. The chasmogamous (open, cross-pollinating) flowers are solitary with the sepals 1.0 to 2.5 millimeters (0.04 to 0.10 inch) long and the deep purple bell-shaped corolla 7 to 8 millimeters (0.28 to 0.31 inch) wide. Flowering is in March and April. The seeds are the smallest recorded for the North American members of *Campanula* (Shetler and Morin 1986). 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.

Justicia coleyi, 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 coleyi*, distinct from the two other native water-willows in central Florida. Meagher (1974) confirmed this view. *Justicia coleyi* is a rhizomatous perennial herb with upright, quadrangular stems and is 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 to 8 millimeters (0.28 to 0.31 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 (0.47 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, sweetgum, live oak, laurel oak, pignut hickory, cabbage palm, flowering dogwood, and yaupon holly. The understory may contain many ferns, woodland grasses, and sedges. The area has long attracted botanists (Rollins and Howard 1987).

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 dwarf 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*), and 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 coleyi*, 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 coleyi* are on a portion 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 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.

Liatris ohlingerae, scrub blazing star, is a perennial herb of the aster family (Asteraceae, also known as Compositae). It was first collected in 1922 in Highlands County, Florida, by John K. Small; it was also collected in 1922, southeast of Frostproof, Polk County, Florida, by Mrs. F.E. Ohlinger. Blake (1923) placed the plant in the blazing star genus, naming it *Lacinaria ohlingerae*, with the Frostproof site as the type locality. Small (1924) created a new genus for this plant, which became *Ammopursus ohlingerae*. Robinson (1934) reinstated scrub blazing star in the large genus of the blazing stars as *Liatris ohlingerae*, changing the genus name in keeping with adoption of *Liatris* as a conserved name under the International Code of Botanical Nomenclature. Gaiser's (1946) treatment of *Liatris* and Cronquist's (1980) floristic treatment of the aster family in the Southeast retain this plant in the genus *Liatris*, although Lakela (1964) argued in favor of reinstating *Ammopursus* as a genus of only one species. Cronquist gives three common names for *Liatris*: blazing star, gay feather, and button snakeroot. Members of the genus that are sold as cut flowers or as garden perennials are usually called blazing stars. Wunderlin et al. (1980c) mention "sand torch" as a name for *Liatris ohlingerae*.

Liatris ohlingerae is an erect, usually unbranched perennial herb, up to 1 meter (3 feet) tall. The leaves are very narrow, only 1 to 2.5 millimeters (0.04 to 0.10 inches) wide. The several flower heads are usually separated from each other on the stem; they are large compared to the rest of the genus, up to 2 centimeters (0.8 inch) broad and 3 centimeters (1.2 inch) from base to tips of the flowers. The flowers are bright

pinkish purple. The plant flowers from July through September and October (Kral 1983).

Liatris ohlingerae has been collected frequently because of its brilliant flowers. A study of the central Florida sand pine scrub by Christman (1988) shows 93 known localities for the plant (71 of them in Highlands County), with a geographic range from Lake Blue near Auburndale and Catfish Creek (north of Highway 60 east of Lake Wales) in Polk County (N. Bissett, The Natives, Davenport, Florida, personal communications 1988), south along the Lake Wales Ridge (and U.S. Highway 27) through Sebring to the Archbold Biological Station in Highlands County. The distribution of *Liatris ohlingerae* overlaps or encompasses the distributions of 10 federally listed plants of the scrub habitat, and it parallels especially closely the distributions of *Hypericum cumulicola* (endangered), *Polygonella basiramia* (endangered), and *Prunus geniculata* (endangered). A site at Archbold Biological Station is protected; a site at Saddle Blanket Lakes is being purchased by the State. A small site may be added to Highlands Hammock State Park. Sites in Arbuckle State Park and the adjoining Arbuckle State Forest (both recently acquired) are protected.

Liatris ohlingerae is restricted to sand pine scrub vegetation, a vegetation that is restricted to Florida and has its greatest floristic richness on the Lake Wales Ridge. Scrub vegetation occurs on excessively drained sand soils, usually on sites that, under presettlement conditions, were provided a degree of natural fire protection by a nearby lake or swamp (Christman 1988). Scrub vegetation is dominated by evergreen shrubs including oaks (such as the endemic *Quercus inopina*), with variable numbers of sand pine (*Pinus clausa*). Sandy open spaces between large shrubs are occupied by small shrubs such as *Conradina brevifolia* and *Dicerandra frutescens* (both members of the mint family, the latter federally listed as endangered), *Polygonella myriophylla* (of the buckwheat family), and numerous small herbs including *Bonamia grandiflora* (of the morning glory family, threatened), *Nolina brittoniana* (agave family), and a few grasses such as *Schizachyrium niveum* (a bluestem grass endemic to central Florida).

Christman (1988) lists 39 plant taxa that are virtually restricted to scrub vegetation. Of these taxa, 33 are present on the Lake Wales Ridge, which appears to have the greatest number of endemic plant species in any single habitat in

Florida. The State's two other major regions of plant endemism are the Apalachicola lowlands in northwest Florida and tropical Dade and Monroe Counties. Florida has the greatest degree of plant endemism in eastern North America (Muller et al., in press).

Ziziphus celata, Florida ziziphus, was first collected by Ray Garrett in 1948 on sand dunes near Sebring; a second specimen was collected by Leonard J. Brass in the company of Garrett, presumably from the same locality. Garrett consulted with Erdman West and Lilian Arnold at the University of Florida, but neither could identify the plant. West had an illustration prepared.

Over the years, attempts were made to identify the shrub (which belongs to the family Rhamnaceae or buckthorns) and to relocate the shrub in the wild, with no success. Finally, Walter Judd noted the similarity of Garrett's specimen to several shrubs from the southwestern United States and Mexico. Judd and Hall (1984) proposed that Garrett's specimen represented a new species, which they named *Ziziphus celata*, most closely related to *Ziziphus obtusifolia* (lotebush, white crucillo, or gray thorn of the deserts of southern California, Arizona, New Mexico, Texas, and Mexico) and to *Ziziphus parryi* (California lotebush of southern California and Baja California) (Benson and Darrow 1981). Subsequently, Brass's specimen was found at the herbarium of the Archbold Biological Station, and the illustration prepared under West's direction was also found (Wunderlin et al. 1985).

In late July 1987, Kris R. DeLaney found a population of the Florida ziziphus in Polk County, Florida (Wunderlin et al. 1987). He found a second population in Highlands County in the fall of 1988, after extended searches funded by the Florida Nongame Wildlife Program (DeLaney et al., in press).

Ziziphus celata is a shrub up to 1.5 meters (5 feet) high. Stems occur in groups and appear to be interconnected by extensive root systems (DeLaney personal communication 1989). Branches are zigzagged and bear short, straight, spiny branchlets. Leaves are alternate, deciduous, with blades that are oblong-elliptic to obovate, dark glossy green above, lighter dull green beneath, 4.5 and 21 millimeters (0.18 to 0.83 inch) long, and 3 to 13 millimeters (0.12 to 0.5 inches) wide. Leaves have rounded tips, cuneate bases, and entire margins (Wunderlin et al. 1987). Flowers are axillary and solitary but appear fascicled. They have five sepals, which are green in color, and have five white

petals somewhat clasping an equal number of stamens. The floral disc is thickened and surrounds the ovary (Judd and Hall 1984). The fruit is a drupe (DeLaney et al., in press). *Ziziphus celata* may be recognized in the field by its small, dark, glossy green, entire leaves on conspicuously zigzag spiny branches. Larger specimens tend to be covered with lichens (Wunderlin et al. 1987).

Only two populations of *Ziziphus celata* are known, despite intensive floristic surveys of the Lake Wales Ridge in recent years. The first site consists of about 30 stems in two groups on approximately two acres on the Lake Wales Ridge in Polk County. The site is on Avon Park Fine Sand, an excessively drained deep sand soil. The site appears to represent a transition between sand pine scrub vegetation and longleaf pine (*Pinus palustris*) vegetation with turkey oak (*Quercus laevis*). The site has evergreen oaks, *Carya floridana* (scrub hickory), *Bumelia tenax* (a buckthorn), *Prunus geniculata* (scrub plum, endangered), and many herbs, including *Berlandiera subacaulis* (a yellow daisy), *Bonamia grandiflora* (Florida bonamia, threatened), *Bulbostylis* sp. (a small sedge), *Liatris ohlingerae*, *Licania michauxii* (gopher apple), *Paronychia chartacea* (papery whitlow wort, threatened), and *Warea carteri* (Carter's mustard, endangered) (Wunderlin et al. 1987). The second population is larger.

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 the Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the **Federal Register** (40 FR 27823) of its acceptance of the report as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act, and of its intention thereby to review the status of the plant taxa it contained. On June 16, 1976, the Service published a proposed rule (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*, *Justicia cooleyi*, and *Liatris ohlingerae* were included in the Smithsonian Report; the July 1, 1975, notice; and the June 16, 1976, proposal.

On December 15, 1980, the Service published a notice of review for plants (45 FR 82480), which included *Campanula robinsiae* and *Liatris ohlingerae* as category 1 candidates (taxa for which data in the Service's

possession indicate listing is warranted). *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 (Shetler 1963, Wunderlin et al. 1980a). *Justicia cooleyi* was treated as a category 1 candidate, based on a status report by Wunderlin et al. (1980b). An updated notice of review published on September 27, 1985 (50 FR 39526), maintained the three species as candidates in the same categories: *Campanula robinsiae*, category 2; *Justicia cooleyi* and *Liatris ohlingerae*, category 1. A letter from R. Wunderlin (*in litt.* 1985), received too late for the notice of review, suggested that recent field work on *Campanula robinsiae* had generated "sufficient information to prepare a proposal for listing the species as endangered." The listing of *Liatris ohlingerae* as an endangered species is based on the information available in 1980, augmented by field work conducted by Gary Schultz for the Florida Natural Areas Inventory and by Steven Christman (1988), plus recent information on the rate of development of the two counties.

In the September 27, 1985, notice of review, the newly-described *Ziziphus celata* was designated a category 2* candidate (the asterisk indicates that the taxon is possibly extinct). Subsequent discovery of another herbarium specimen and extant populations of the ziziphus have confirmed that this is a valid species that merits listing.

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 that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Campanula robinsiae*, *Justicia cooleyi*, and *Liatris ohlingerae*, 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 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.

On September 12, 1988 (53 FR 35215), the Service published a proposal to list *Campanula robinsiae* and *Justicia cooleyi* as endangered species. On September 28, 1988 (53 FR 37818), the Service published a proposal to list *Liatris ohlingerae* and *Ziziphus celata* as endangered species. The foregoing proposals constituted the final findings required for these species.

Summary of Comments and Recommendations

In the September 1988 proposed rules, all interested parties were requested to submit factual information that might contribute to the development of a final rule. Appropriate State of Florida agencies, county governments, Federal agencies, scientific organizations, and interested parties were contacted and requested to comment. Notices inviting public comment were published in "The Sun-Journal," Brooksville, for *Campanula robinsiae* and *Justicia cooleyi* (October 1, 1988), and in the "Polk County Democrat" (October 13, 1988) and the "Sebring News-Sun" (October 16, 1988) for *Liatris ohlingerae* and *Ziziphus celata*.

Comments were received from three State agencies, one Federal agency, two plant nurseries, and one private conservation organization.

The administrator of Withlacoochee State Forest (Division of Forestry, Florida Department of Agriculture and Consumer Service) requested further information on *Campanula robinsiae* and *Justicia cooleyi* and volunteered assistance in searching for populations of these species in the Forest (where neither species is currently known). The research leader at the U.S. Department of Agriculture, Subtropical Agricultural Research Station, provided additional information on the distribution of *Justicia* at the Station. He noted that current forage and livestock research at the Station appears compatible with protecting the habitat of *Justicia*, and possibly of *Campanula* (which they were not able to find this year).

The Florida Department of Agriculture and Consumer Services and the Florida Game and Fresh Water Fish Commission supported Federal listing of *Liatris ohlingerae* and *Ziziphus celata*.

Two horticulturists who operate native plant nurseries in Davenport, Florida, and in Aiken, South Carolina, commented on *Liatris ohlingerae* and *Ziziphus celata*. One (from Florida) noted that *Liatris ohlingerae* has been successfully grown from seed and established at a mine reclamation site. This horticulturist also noted that there

is no great commercial demand for *Liatris* and that it is not a profitable crop. Both horticulturists took exception to the wording of the proposal's treatment of critical habitat. Only two or three specialized nurseries deal with rare Florida scrub plants, and none would consider digging endangered species from the wild, nor taking seeds or cuttings if it would jeopardize the plant. Both requested that the critical habitat wording be altered to avoid before-the-fact criticism of the nurseries, and one suggested that propagation, and those able to effect it, should be regarded in the final rule under "Available Conservation Measures" as being beneficial, rather than as a negative factor under "Summary of Factors Affecting the Species." The Service concurs that propagation by nurseries does not threaten these four species, and acknowledges the useful data and other assistance that nurseries have provided. The portions of the final rule dealing with critical habitat and the factors affecting the species have been altered to reflect these comments. However, the section dealing with available conservation measures only covers Federal measures specified in the Endangered Species Act, and does not include other actions that can be taken by states or private parties.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Campanula robinsiae*, *Justicia cooleyi*, *Liatris ohlingerae* and *Ziziphus celata* should be classified as endangered species. Procedures found at section 4(a)(1) of the 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 endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their applications to *Campanula robinsiae* Small (Brooksville bellflower), *Justicia cooleyi* Monachino & E. Leonard (Cooley's water-willow), *Liatris ohlingerae* (S.F. Blake) B. Robinson (scrub blazing star), and *Ziziphus celata* Judd & Hall (Florida ziziphus) 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 Annatteliga 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 and associated holding ponds occupy at least 10 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 during this 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). The proposed Suncoast Corridor tollroad, part of a Tampa-Jacksonville corridor, which would pass west of Brooksville, would encourage population growth in Hernando County.

Justicia cooley is native to hardwood forests 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, 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 a 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*.

Liatris ohlingerae is restricted to sand pine scrub vegetation on the Lake Wales Ridge and the nearby Auburndale area in Highlands and Polk Counties, Florida. Sand pine scrub vegetation occurs elsewhere in these counties and the rest

of the State, but lacks *Liatris ohlingerae*. The Lake Wales Ridge is a major citrus producing area, and the towns along the Ridge are growing rapidly. In Highlands County, 64 percent of the xeric vegetation (scrub, scrubby flatwoods, and longleaf pine-turkey oak vegetation) present before settlement had been destroyed by 1981. An additional 10 percent of the xeric vegetation was moderately disturbed, primarily by building roads to create housing subdivisions (Peroni and Abrahamson 1985). Christman (1988), using different methodology, estimated that "ancient" scrub originally occupied about 80,000 acres on the Lake Wales, Lake Henry, and Winter Haven ridges; about two-thirds of the ancient scrub has been lost. Remaining tracts of scrub on the Lake Wales Ridge in Polk and Highlands counties are rapidly being developed for citrus groves, housing developments, and businesses (Christman 1988; Fred Lohrer, Archbold Biological Station, personal communication 1985; James Duane, Executive Director, Central Florida Regional Planning Council, personal communication 1988).

Many of the remaining stands of scrub are on vacant lots, patches of land isolated by railroad tracks, or other fragments of the original vegetation. Some of the few remaining large areas of scrub are found in subdivisions where lots were sold to absentee owners, but houses were not built. The fragmented land ownership, the difficulty of contacting landowners, and informal use of such subdivisions as trash dumps and recreation areas make conservation of the vegetation difficult. *Liatris ohlingerae* does not occur in federally owned sand pine scrub vegetation on the Avon Park Air Force Range. The plant does occur at these tracts owned by or being purchased by the State of Florida: Arbuckle State Park and Arbuckle State Forest in Polk County, Highlands Hammock State Park and the Saddle Blanket Lakes tract in Highlands County. It also occurs on the private Archbold Biological Station.

The relatively large number of known localities for *Liatris ohlingerae* is misleading. Because it has conspicuous flowers and is easily identified, it has been collected very frequently, much like *Polygonella myriophylla*, a distinctive species of the same habitat. Many of the known sites for the blazing star have already been destroyed, but no exact count is available. Although the blazing star is still locally abundant, most of the extant sites are small, and sites are disappearing very rapidly. For example, in January of 1988, Christman (personal communication 1988) prepared

for The Nature Conservancy a list of ten sites that collectively could constitute a network of preserves for the central Florida scrub flora; by late March, three of the sites had changed hands, including one that had been considered relatively secure.

Ziziphus celata was first collected near Sebring at a site that has not been relocated, unless it is the site found in 1988 by DeLaney. One of the two known existing populations consists of about 30 stems. Most or all of the stems may be from a single rootstock. The site is privately owned. It was nearly destroyed in 1988 because the owner was required to clear the native vegetation in order to continue to qualify for an agricultural exemption from the usual property tax rate. The site is now temporarily protected (Wunderlin et al. 1987; R. Wunderlin, personal communication 1988). Property tax policies thus threaten this and other native plant species. DeLaney and Wunderlin, funded by the Florida Nongame Wildlife Program, searched for more populations in 1988 but found only one.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* *Justicia cooleyi* is not of interest as an ornamental (Robert McCartney, personal communication 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 *Justicia cooleyi*.

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

Liatris ohlingerae has been tested by a Dutch firm for cultivation as a cut flower because of its exceptionally large flower heads that are more pinkish than those of other members of the genus (S. Wallace, Bok Tower Gardens, personal communication 1988). This activity does not threaten the species, which is easily grown from seed. Although other members of the genus *Liatris* are popular in North America as garden perennials, this species does not appear to be threatened by present or foreseeable trade in native plants.

Ziziphus celata is one of the rarest shrubs in North America. Unrestricted scientific collecting or excessive visits could seriously affect the two populations.

C. *Disease or predation.* Not applicable.

D. *The inadequacy of existing regulatory mechanisms.* *Campanula*

robinsiae, *Justicia cooleyi*, and *Liatris ohlingerae* are listed as endangered by the Preservation of Native Flora of Florida Act (§ 581.185-187, Florida Statutes), which regulates taking, transport, and sale of plants but does not provide habitat protection. *Ziziphus celata* is proposed for addition to the State list by the Florida Legislature in 1989. Listing under the Act augments State and private conservation measures for these plants by providing for habitat protection through section 7 and recovery planning.

E. *Other natural or manmade factors affecting their continued existence.* Restriction to specialized habitats and to small geographic ranges tends to intensify any adverse effects on any rare plant. This is the case for *Campanula robinsiae*, *Justicia cooleyi*, and *Liatris ohlingerae*, and is exacerbated by the loss of habitat which has already taken place. *Ziziphus celata* may be threatened by loss of genetic diversity because the existing populations may consist of only a few clones (genets).

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 make this rule final. Based on this evaluation, the preferred action is to list these four plant species as endangered. Their limited remaining habitats and vulnerability to human activities indicate that all four species are in danger of extinction throughout all or significant portions of their ranges, and therefore fit the Act's definition of endangered.

Critical Habitat

Section 4(a)(3) of the Act requires, to the maximum extent prudent and determinable, that the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for these four plant species at this time. Federal, State and local agencies can be alerted to the presence of these species through the resources of the Florida Natural Areas Inventory and Regional Planning Councils, including geographic information systems that provide much more detailed information than critical habitat descriptions and maps. Publication of critical habitat descriptions and maps would increase the degree of threat from taking or vandalism. *Campanula robinsiae* is restricted to three sites that could easily be damaged by trampling or collecting. *Liatris ohlingerae* is an attractive plant that could be vulnerable to transplanting

from the wild to home gardens. Live specimens of *Ziziphus celata* might be of interest to a limited number of hobbyists. Removal of attractive plants, or plant curiosities, from the wild by collectors and hobbyists has been a serious problem for many years in south Florida. In addition, efforts to conserve the scrub habitat of *Liatris ohlingerae*, *Ziziphus celata*, and other plant species have already provoked some landowners to preemptively destroy the vegetation. The Central Florida Regional Planning Council and other agencies are seeking to provide incentives for landowners to maintain scrub. Designating critical habitat could unduly alarm landowners, undermining these conservation efforts.

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. 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 any critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) require Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed 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.

Most of the currently known sites for the four plant species are on privately owned land. The only known Federal ownership is for some populations of *Campanula robinsiae* and *Justicia cooleyi* on a U.S. Department of Agriculture research station, whose past management practices have been consistent with the needs of both species. The Station's staff knows of

their presence. Both species also occur on protected State land. The currently known sites for *Liatris ohlingerae* are on private land, except for two owned by, or being purchased by the State. The two currently known sites for *Ziziphus celata* are on private land. The State of Florida is aware of the need to conserve both species. There is no Federal involvement currently on State or private lands in the area. Populations of *Liatris ohlingerae* that extend onto State-owned highway rights-of-way may be subject to Federal involvement if the U.S. Department of Transportation (Federal Highway Administration) should provide funds for maintenance or construction. Federal mortgage programs may be subject to section 7 review, including those of U.S. Department of Agriculture (Farmers Home Administration), Veterans Home Administration, and the U.S. Department of Housing and Urban Development (Federal Housing Administration loans). The supply of electricity to new housing developments may be subject to Federal involvement through the Rural Electrification Administration.

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, 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 a commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it and reduce it to possession from areas under Federal jurisdiction. In addition, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction of listed plants on Federal lands and also prohibit removing, cutting, digging up, or damaging or destroying them in knowing violation of any State law or regulation, including State criminal trespass laws. 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. There is no commercial trade in *Campanula robinsiae*, *Justicia cooleyi*, or *Ziziphus celata*, and no known interstate commercial trade within the United States in *Liatris ohlingerae*. The Service

anticipates few, if any, requests for permits. 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 3507, 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

A complete list of all references cited herein is available upon request from the Service's Jacksonville Field Office (see "ADDRESSES" above).

Author

The primary author of this proposed rule is Mr. David Martin, Jacksonville Field Office, U.S. Fish and Wildlife Service, 3100 University Boulevard South, Suite 120, 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).

Regulations Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of

Chapter I, Title 50 of the Code of Federal Regulations, is amended 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; Pub. L. 100-478, 102 Stat. 2306; Pub. L. 100-653, 102 Stat. 3825 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the families 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					
Acanthaceae—Acanthus family:						
<i>Justicia cooleyi</i>	Cooley's water-willow	U.S.A. (FL)	E	356	NA	NA
Asteraceae—Aster family:						
<i>Liatris ohlingerae</i>	Scrub blazing star	U.S.A. (FL)	E	356	NA	NA
Campanulaceae—Bellflower family:						
<i>Campanula robinsiae</i>	Brooksville bellflower	U.S.A. (FL)	E	356	NA	NA
Rhamnaceae—Buckthorn family:						
<i>Ziziphus celata</i>	Florida ziziphus	U.S.A. (FL)	E	356	NA	NA

Dated: June 12, 1989.
Susan Recce Lamson,
Acting Assistant Secretary for Fish and Wildlife and Parks.
[FR Doc. 89-17593 Filed 7-26-89; 8:45 am]
BILLING CODE 4310-55-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 661

[Docket No. 90515-9115]

Ocean Salmon Fisheries Off the Coasts of Washington, Oregon, and California

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.
ACTION: Notice of inseason adjustments.

SUMMARY: NOAA announces adjustments to the commercial ocean salmon management measures in the exclusive economic zone (EEZ) from Cape Falcon to Orford Reef Red Buoy, Oregon, beginning 0001 hours local time, July 18, 1989. For the subarea between Cape Falcon and Cascade Head, Oregon, a single daily landing limit per vessel of 50 coho salmon is established, and all loads which have been caught in this subarea must be landed north of Cascade Head. For the subarea between Cascade Head and Orford Reef Red Buoy, Oregon, a ratio restriction of 1 chinook salmon for every 2 coho salmon landed is established, the first 2 coho salmon may be landed without a chinook salmon, and all loads which have been caught in this subarea must be landed south of Cascade Head. The Director, Northwest Region, NMFS (Regional Director), has determined that the adjustments are necessary to prolong the all-species commercial

seasons in these subareas and to provide for equitable distribution of harvest among Oregon ports. This action is intended to allow maximum harvest of ocean salmon quotas established for the 1989 season.

DATES: These inseason adjustments to the commercial management measures in the EEZ from Cape Falcon to Orford Reef Red Buoy, Oregon, are effective at 0001 hours local time, July 18, 1989. (The subarea from Cape Arago to Orford Reef Red Buoy, Oregon, is closed July 14-31 as regularly scheduled.) Actual notice to affected fishermen was given prior to that time through a special telephone hotline and U.S. Coast Guard notice-to-mariners broadcasts as provided by 50 CFR 661.20, 661.21, and 661.23 (as amended May 1, 1989). Public comments on this notice will be accepted through August 8, 1989.

ADDRESS: Comments may be mailed to Rolland A. Schmitt, Director,