

## *Euphorbia telephioides* (Telephus spurge) Recovery Action Plan



*Euphorbia telephioides* (telephus spurge)

U.S. Fish and Wildlife Service, Southeast Region – Panama City, Florida Ecological Services Field Office, August 14, 2009

■ **Target:** Work with Partners to Implement Recovery Actions to Improve the Species Status.

### **Telephus spurge:**

Status: Threatened

Recovery Priority Number: 2c (high degree of threat/high recovery potential)

Recovery Plan: Recovery Plan for four plants of the lower Apalachicola Region, Florida: *Euphorbia telephioides* (telephus spurge), *Macbridea alba* (white birds-in-a-nest), *Pinguicula ionantha* (Godfrey's butterwort), and *Scutellaria floridana* (Florida skullcap), 1994

5-year Review: completed in March 2008

Other: Listed as threatened on May 8, 1992 (57 FR 19813)

### **Threats:**

Present or threatened destruction, modification or curtailment of its habitat or range: Habitat modification (timbering, residential and commercial development, and fire management and suppression) is the primary threat identified in the Recovery Plan for telephus spurge, and remains the main threat to date for this plant. Conversion of much of the forest land to pulpwood plantations (clearcutting, mechanical site preparation, and pine plantations) has possibly extirpated some populations. Development pressures in the Florida panhandle are intensive; urbanized land is projected to increase two-fold in the near future. Many *E. telephioides*' locations are found along a major highway (US 98), and road widening and new roads continue to negatively affect the species through habitat loss and modification. Lack of fire, and subsequent growth of shrubs and saplings in the understory, inhibits *E. telephioides* emergence.

Overutilization for commercial, recreational, scientific, or educational purposes: There is no evidence to suggest that this factor is a threat.

**Disease or predation:** There is no evidence to suggest that disease or predation are threats. Biocontrol agents have been released to control the weed leafy spurge, *Euphorbia esula*. This species does not occur in Florida, but if this weed reaches this area and one or more of the biocontrol agents is released (or dispersers naturally), these insects could threaten *E. telephioides* populations; unless their diets are so selective that they do not feed on it.

**Inadequacy of existing regulatory mechanisms:** Limited protection of listed plants from take is provided by the Endangered Species Act; protection for plants on private lands is not provided. Several populations of *E. telephioides* occur on private timberland and road rights-of-way (ROW). The State requires permission of private landowners for collecting state-listed plants from their property. Highway ROW maintenance activities are not always reviewed for threatened and endangered species impact. However, if there is a federal-sponsored activity affecting protected species, then the Service can recommend consultation. These current regulations are inadequate.

**Telephus Spurge Recovery Action Plan**

**Current Status:** *Euphorbia telephioides* is mainly threatened by habitat destruction. Urban development, timbering, and inadequate fire management, i.e., fire suppression, are the main pressures reducing or eliminating individual populations. Where fire management is implemented, it stimulates the emergence of individuals and maintains healthy, stable populations.

Recent surveys throughout the three counties have increased the number of occurrences. In many of these populations, the total numbers of plants are numerous (see population section), and can be maintained with adequate management and conservation. The plant's distribution has remained stable, and few long-term extirpations have been documented. Consultation under section 7 of the Act has resulted in minimizing impacts from development. In general, the plants seem to be well adapted to fire-prone habitats and no problems have been detected with disease, predation or reproduction.

The species occurs on both private and public lands. Plants occurring on US 98 ROWs are maintained by the Florida Department of Transportation, and recent surveys found the species in excellent condition in a few Bay and Franklin County sites. Most of the private land has been converted to pine plantation and urban development. Since fire has been suppressed from these lands, a dense hard wood understory is present, inhibiting this species. As an endemic species restricted to three counties with populations occurring on private lands and ROWs, telephus spurge is threatened by intense development pressures where urbanized land is projected to increase two-fold in the near future, focusing new development along roadways especially in Bay County. Therefore, permanent protection and management are necessary to conserve this species.

**Target:** Work with Partners to Implement Recovery Actions to Improve the Species Status.

**Measures:**

**Actions:**

<b>RA=Recovery Action; 1<sup>st</sup> # = priority; 2<sup>nd</sup> # = task.</b>	<b>FY 09</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY12</b>	<b>FY 13</b>	<b>Costs</b>	<b>Responsible Parties and Notes</b>
Land acquisition of selected private land RA 1.3			X	X	X	\$500K	FWS, land managers

Conduct surveys/inventories on potentially new sites RA 1.33		X	X	X	X	\$20,000 / year	FWS (for developing the model), universities, land managers, FNAI
Coordinate conservation practices with the FDOT highway rights-of-way (ROW) for Franklin County RA 2		X	X	X	X	\$12,000	FWS, FDOT, land managers
Protect, and manage the existing habitat and populations RA 3.1, 3.2		X	X	X	X	\$15,000	Ongoing, land managers
Garden propagation ( <i>ex-situ</i> program). RA 5		X	X	X		\$5,000	Bok Sanctuary, Lake Wales, Florida
Conduct population genetic studies	X	X				\$9,000	FWS, University of Georgia
Establish and implement a monitoring program: Demographic studies	X	X	X			\$72,000 /	FWS, land managers, students
The recovery plan should be updated to define objective measurable criteria and better address the five factors.				X	X		FWS

**Role of other Agencies:**

Drs. Hamrick, and Dorset from the University of Georgia, Athens, GA assisted in determining the levels and distribution of genetic diversity within and among populations of *E. telephioides*. The information obtained from this research determined which populations are priorities for conservation. Using this information, the Historic Bok Sanctuary, Lake Wales, Florida will collect seeds from the identified populations, and will maintain a germplasm for potential reintroduction efforts. Coordination with the Florida Department of Transportation, the Florida Fish and Wildlife Conservation Commission, and the St. Joe Timberland Company will be seek for developing actions to protect and manage several populations identified as priorities for conservation.

**Role of Other ESA Programs:** Consultation under section 7 of the Act has resulted in minimizing impacts from development.

**Role of Other FWS Programs:** None.

**Revised Action Plan Due:** August 2014