

ETONIA ROSEMARY

Conradina etonia



Photo of Etonia Rosemary plant.
Photo courtesy of Shirley Denton.



Photo of Etonia Rosemary flowering plant.
Photo courtesy of Shirley Denton.

FAMILY: Lamiaceae (Mint family)

STATUS: Endangered (*Federal Register*, July 12, 1993)

DESCRIPTION AND REPRODUCTION: The Etonia rosemary is a shrub that grows up to 1.5 meters (5 feet) and has numerous, frequently arching primary branches. The leaves have margins that are tightly rolled to the underside. The dull green upper side of the leaf is covered with short, downy hairs and numerous minute glands. The lower side is slightly paler and concave with tiny hairs that are very dense even on the midrib. The midrib, at the base of a strong median groove on the upper surface, is strongly raised on the lower surface and has two to four strong branch nerves on each side, a characteristic unique to this species of *Conradina*.

Clusters of three to seven flowers are produced from all or most nodes from the midstem up. The flower's characteristic corolla tube is sharply bent above the middle. The sepals form two lips. The upper lip is three-toothed and upswept while the lower lip with two teeth is split almost to the base. The corolla is strongly two-lipped with a lavender-blue to lavender-rose corolla tube and throat. The upper lip is uniformly lavender and the lower lip and throat have a broad longitudinal zone of white or cream mottled with spots and streaks of deep purple. The four stamens consist of a shorter pair extending almost to the tip of the upper lip and a longer pair extending slightly beyond, arching outward and downward. The pollen sacs on the anthers are dark purple with white hairs. The S-shaped style extends beyond the anthers. Generally, four brown, egg-shaped nutlets are produced. Flowering occurs from early spring to late fall.

RANGE AND POPULATION LEVEL: The only occurrences of Etonia rosemary are near Florahome in Putnam County, Florida. Etonia rosemary currently exists on 13 sites on public land and 6 sites on private land. The publicly owned sites are located within Etoniah Creek State Forest and Dunns Creek State Park. Etoniah Creek State Forest is an 8,622 acre forest originally acquired in 1996 as part of the Etoniah / Cross Florida Greenway Conservation and Recreation Lands (CARL) project and is managed by the Florida Division of Forestry. The privately-owned

sites in Etonia Creek State Forest containing Etonia rosemary consists of several sub-acre to acre lots platted for development. Plants are located along the unpaved, sandy roadsides within the undeveloped subdivision. The subdivision is surrounded by Etoniah Creek State Forest. The state is in the process of purchasing select lots owned by willing sellers.

Dunns Creek State Park has been in state ownership since 2001. The 2004 surveys for Etonia rosemary at Dunns Creek located eight populations, with a total number of plants from 850-1000. Several populations could not be located due to the hurricane damage caused from the 2004 hurricanes which caused downed sand pines and prevented access to historical sites.

A survey of Etonia rosemary at Etoniah Creek State Forest was conducted November 2004 and 1,767 plants were counted. This was down from the 2003 survey which documented 1,938 plants. The decrease in the number of plants was caused from hurricane damage to several sites that contained large Etonia rosemary populations.

HABITAT: The Etonia rosemary is found in deep white-sand scrub dominated by sand pine and shrubby oaks, including Chapman oak (*Quercus chapmanii*), scrub live oak (*Q. geminata*), myrtle oak (*Q. myrtifolia*), and some turkey oak (*Q. laevis*). Plants of this genus are generally most abundant in natural openings or artificial clearings rather than in the scrub. These mints respond positively to disturbance, which, historically, was probably fire.

REASONS FOR CURRENT STATUS: Etonia rosemary is apparently restricted to very limited areas of deep white-sand scrub with shrubby oaks and sand pines on dry soils. Habitat loss and fire suppression resulting in closure of overstory vegetation are important limiting factors.

MANAGEMENT AND PROTECTION: Little is known about the biology and habitat requirements of the Etonia rosemary. The plant requires light (but can persist in light shade of openings in scrub) and responds to disturbance. Given this, its management will involve restoring and maintaining an appropriate stage of scrub habitat succession through prescribed burning or mechanical disturbance. Studies are currently being conducted by the Florida Division of Forestry's Endangered Plant Conservation Program to determine the species' response to various management treatments such as fire and mechanical disturbance. Once the correct treatment is identified it can be applied to all Etonia rosemary sites in public ownership.

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For more information please contact:

Annie Dziergowski
U.S. Fish and Wildlife Service
6620 Southpoint Drive South, Suite 310
Jacksonville, Florida 32216
904/232-2580
annie_dziergowski@fws.gov

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