

Common Name: DWARF GOAT'S RUE

Scientific Name: Tephrosia mohrii (Rydberg) Godfrey

Other Commonly Used Names: pineland hoary-pea

Previously Used Scientific Names: Tephrosia virginiana (Linnaeus) Persoon var. mohrii

(Rydberg) D. B. Ward, Cracca mohrii Rydberg

Family: Fabaceae/Leguminosae (pea)

**Rarity Ranks:** G3/S1?

State Legal Status: Special Concern

Federal Legal Status: none

Federal Wetland Status: none

**Description:** Perennial **herb** with an erect, hairy **stem** usually less than 6 inches (15 cm) tall, sometimes up to 12 inches (30 cm) tall. Leaves with 15 - 20 pairs of leaflets, each **leaflet**  $\frac{3}{8}$  -  $\frac{3}{4}$  inch (1 - 2 cm) long, oval with a tiny point at the tip. **Flower clusters** are shorter than the leaves, usually held in the angles of leaf and stem (rarely at the top of the stem). **Flowers** about  $\frac{3}{4}$  inch (2 cm) long, with two dark pink wing petals enclosing a keel petal, and a showy, erect banner petal, pink or yellow streaked with pink. **Fruit** a flat pod,  $\frac{1}{2}$  - 2 inches (4 - 5 cm) long.

**Similar Species:** Some botanists consider this species to be the same as the common goat's rue (*Tephrosia virginiana*), which is more than 8 inches (20 - 70 cm) tall and has leaflets which are usually longer than  $\frac{3}{8}$  inch (1 - 3.3 cm) long. It has larger flowers with a yellow standard petal. Its flower clusters, which are longer than the leaves, are held at the top of the stem as well as in the angle between leaf and stem.

**Related Rare Species:** Golden hoary-pea (*Tephrosia chrysophylla*, Special Concern) occurs in sandhills, scrub, or dry pine flatwoods in Charlton and McIntosh counties. It is a creeping, matforming herb with leaflets covered in soft, golden hairs. Its flower changes from white to pink to red.

**Habitat:** Sandhills, scrub, dry pine flatwoods.

**Life History:** Dwarf goat's-rue is a perennial herb that reproduces sexually; little else is known about its reproduction. In other pea family species with similar flowers, the flowers are pollinated by large bees, such as honeybees and bumblebees, which are attracted by the showy banner petal and directed by pollen guides (darker pink lines) on the banner toward the center of the flower. The weight of these large insects presses down the keel petal, creating an opening for the bee and exposing the brush-tipped style. As the bee probes for nectar at the base of the banner petal, its underside contacts the brushy tip of the style where pollen, released from the anthers while the flower was still in bud, has accumulated. The pollen sticks to the bee and is carried to another flower. Dwarf goat's rue fruit is a flattened "bean" pod that splits along both sides to release numerous small seeds. The seeds are probably dispersed by small animals.

**Survey Recommendations:** Surveys are best conducted during flowering (April–June).

Range: Georgia, Florida, and Alabama.

**Threats:** Conversion of habitat to pine plantations, agriculture, and developments. Fire suppression and encroachment by woody species.

Georgia Conservation Status: Only 3 populations are known, none on conservation lands.

**Conservation and Management Recommendations:** Apply prescribed fire every 2 - 3 years. Avoid mechanical disturbances such as clearing and forestry site preparation.

## **Selected References:**

Chafin, L.G. 2007. Field guide to the rare plants of Georgia. State Botanical Garden of Georgia and University of Georgia Press, Athens.

Godfrey, R.K. and R. Kral. 1958. Observations on the Florida flora. Brittonia 10: 169-170.

Isely, D. 1990. Vascular flora of the southeastern United States, Vol. 3, Part 2, Leguminosae (Fabaceae). University of North Carolina Press, Chapel Hill.

Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. Technical Publication R8-TP2. United States Forest Service, Atlanta.

NatureServe. 2008. NatureServe Explorer. Arlington, Virginia. http://www.natureserve.org/explorer

Proctor, M. and P. Yeo. 1972. The pollination of flowers. Taplinger Publishing Company, New York.

Weakley, A.S. 2008. Flora of the Carolinas, Virginia, Georgia, northern Florida, and surrounding areas. University of North Carolina Herbarium, Chapel Hill. http://www.herbarium.unc.edu/flora.htm

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## **Date Compiled or Updated:**

L. Chafin, Sept. 2008: original account K. Owers, Feb. 2010: added pictures

