



Common Name: CAROLINA GOLDEN BANNER

Scientific Name: *Thermopsis villosa* (Walter) Fernald & Schubert

Other Commonly Used Names: Aaron's-rod, Blue Ridge golden-banner, hairy false lupine, Carolina bushpea

Previously Used Scientific Names: *Thermopsis caroliniana* M.A. Curtis

Family: Fabaceae/Leguminosae (pea)

Rarity Ranks: G3?/S1?

State Legal Status: Special Concern

Federal Legal Status: none

Federal Wetland Status: none

Description: Field Description: Perennial **herb** up to 6½ feet (2 meters) tall, with few or no branches. **Leaves** with 3 oval **leaflets**, 2⅜ - 3½ inches long (6 - 9 cm) and 1½ inches (4 cm) wide, with hairy lower surfaces. **Leaf stalks** 1⅛ - 2⅜ inches (3 - 6 cm) long, with a pair of oval, leafy **stipules**, at least 1½ inches (4 cm) long and 1 - 2 inches (1 - 2.5 cm) wide, clasping the stem at the base of the leaf stalk. **Flower cluster** an elongated spike with a densely hairy stalk at the top of the stem. **Flowers** about ¾ inch (2 cm) long, bright yellow, typical pea-flower-shaped, with an erect, rounded, notched banner petal and 2 wing petals enclosing 2 keel petals; the banner petal is shorter than the wings; calyx is densely hairy. **Flower stalk** about ⅛ inch (3 mm) long with a pair of hairy, oval **bracts**, about ⅜ inch long, at the base of the stalk. **Fruit** an oblong, flattened pod about 2 inches (4 - 5 cm) long, densely hairy, upright, and pressed against the stem.

Similar Species: Rattlebox (*Crotalaria* spp.) flowers have banner petals larger than the wings, and its pods are inflated.

Related Rare Species: Ash-leaved bush-pea (*Thermopsis fraxinifolia*) and downy bush-pea (*T. mollis*), both Special Concern, occur in dry, oak-pine forests in north Georgia. Their stipules are less than 1⅜ inch long and do not clasp the stem. Their pods usually spread away from the stem.

Habitat: Openings in floodplains, woodland edges, and road banks, often in sandy soil.

Life History: Carolina golden banner is a perennial herb that reproduces sexually and probably also vegetatively by the spread of rhizomes. Its flowers are pollinated by bees and butterflies and must be cross-pollinated in order to produce fruit. Seeds are dispersed by gravity and small animals.

Survey Recommendations: Surveys are best conducted during flowering (mid-May–mid-June).

Range: Mountains of Georgia, Tennessee, and North Carolina. It has escaped from cultivation in Virginia, Maryland, and West Virginia.

Threats: Clearcutting of forests; conversion of habitat to pine plantations, pastures, and developments; use of herbicides in right-of-way maintenance.

Georgia Conservation Status: Approximately 10 populations have been documented in the last century, most in the Chattahoochee National Forest; only a few plants have been seen in recent years, mostly along roadsides.

Conservation and Management Recommendations: Avoid herbicide use in roadside right-of-way maintenance; time mowing to avoid flowering and fruiting period. Avoid clearcutting in upland and floodplain forests. Use fire and hand-clearing to maintain sunny openings and edges.

Selected References:

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Date Compiled or Updated:

L. Chafin, Jan. 2009: original account

K. Owers, Feb. 2010: added pictures

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