



Common Name: BOYKIN'S LOBELIA

Scientific Name: *Lobelia boykinii* Torrey & Gray ex A. de Candolle

Other Commonly Used Names: none

Previously Used Scientific Names: *Dortmanna boykinii* (Torrey & Gray ex A. de Candolle) Kuntze

Family: Campanulaceae (bellflower)

Rarity Ranks: G2G3/S2S3

State Legal Status: Special Concern

Federal Legal Status: none

Federal Wetland Status: OBL

Description: Perennial **herb** spreading by underground stems (**rhizomes**), with erect, usually unbranched, aboveground **stems** 20 - 33 inches (50 - 85 cm) tall, often spongy at the base. **Leaves** needle-like, up to 1 inch (2.5 cm) long, sometimes with a few tiny callused teeth; leaves are usually shed from the lower stem by flowering time. **Flower cluster** at the top of the stem, with 10 - 25 flowers. **Flowers** up to $\frac{1}{2}$ inch (1.2 cm) long, white to pale blue with a white center, with a 3-lobed lower lip and 2 erect, narrow, pointed lobes; **flower stalk** about $\frac{3}{8}$ inch (1 cm) long with 1 tiny, thread-like bract at the base. **Fruit** a capsule about $\frac{1}{8}$ inch (0.3 cm) across.

Similar Species: Canby's lobelia (*Lobelia canbyi*) stems are usually branched just below the flower cluster and are not spongy-thickened at the base; its flower stalk has 2 tiny bracts, one of them longer than the flower stalk. Nuttall's lobelia (*L. nuttallii*) stems are branched and not spongy at the base. Neither of these species spreads by underground stems.

Related Rare Species: None in Georgia.

Habitat: Cypress - black gum depression ponds, limesink depression ponds, Carolina Bays, wet pine savannas and flatwoods, wet ditches.

Life History: Boykin's lobelia is a perennial herb that reproduces sexually as well as vegetatively by the spread of underground stems (rhizomes); it is the only member of the genus *Lobelia* to produce rhizomes and form colonies. It is an obligate out-crosser, meaning that it depends on cross-pollination of its flowers by insects in order to set fruit and produce seed; in one study, insect pollinators (primarily bees and bee flies) were scarce, probably due to pesticide applications in nearby fields. The loss of insect pollinators may lead to a greater dependence on vegetative reproduction and, as the size of the clonal colony increases, to a wider separation between genetically different individuals, thus reducing cross-pollination and genetic diversity.

Survey Recommendations: Surveys are best conducted during flowering (May–July).

Range: Georgia, Florida, Alabama, Mississippi, North Carolina, Delaware, and New Jersey.

Threats: Reduction of insect pollinators by pesticide spraying in fields near populations. Clearing, draining, and filling wetlands. Lowering of water table by excessive withdrawal for irrigation. Fire suppression. Destruction of wetland transition zones by building roads and firebreaks in ecotones. Possible reduction in genetic diversity due to clonal growth and obligate outcrossing breeding system.

Georgia Conservation Status: Twenty-eight populations have been discovered but only 15 have been seen in recent years, most on conservation lands.

Conservation and Management Recommendations: Establish pesticide-free buffers around populations. Protect depression wetlands from clearing, draining, and filling. Protect natural water table levels from excessive drawdown. Allow fires in adjacent uplands to periodically burn into and across wetlands. Avoid placing firebreaks in the transition zones between uplands and wetlands.

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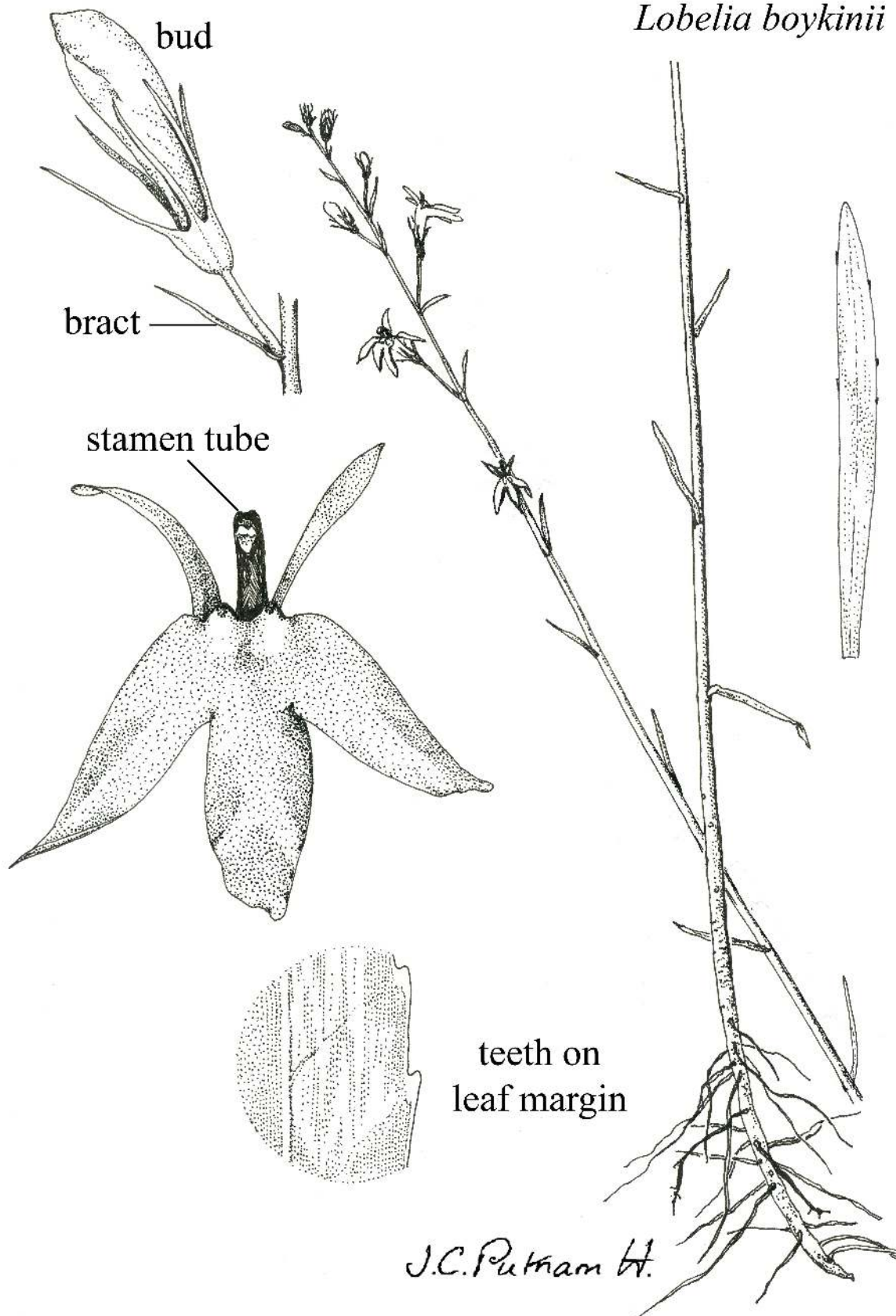
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Date Compiled or Updated:

L. Chafin, May 2007: original account

K. Owers, Feb. 2010: added pictures

BOYKIN'S LOBELIA
Lobelia boykinii





Inflorescence



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