

Lycopus virginicus L.

Standardized Common Name: Bugleweed

Other Common Names: Sweet Bugleweed, Virginia Bugleweed, Wood Betony

Family: Lamiaceae (Labiatae)

Taxonomy: Eleven of the fifteen species of *Lycopus* are native to North America, including *L. virginicus*. This species is native to the eastern United States, and its range overlaps considerably with that of *L. uniflorus* Michx. These two species are so similar that they were formerly considered to be a single species, and the synonyms *L. communis* E. P. Blickn. and *L. membranaceus* E. P. Blickn. apply in part to both. In the broad latitudinal range where both species are found, they interbreed freely, creating a large hybrid zone of intermediates often called *L. xsherardii* Steele. This results in significant gene flow between the parental species, so genetic “purity” cannot be expected. *L. cokeri* Ahles ex Sorrie, which is restricted to the Carolinas, also resembles these species so closely that it was not granted specific status until recently.

Description: Perennial herb, spreading from branching stolons. Stems erect, quadrangular, pubescent with long ascending hairs. Leaves opposite, ovate, 6–9(–15) cm long, 2–5 cm broad; base cuneate to attenuate, petiole winged; apex acute to acuminate; margins coarsely serrate; upper surface with scattered hairs especially on veins; lower surface sometimes purplish and pubescent with short hairs, with longer hairs on veins, glandular-punctate. Inflorescences axillary, verticillate, bracteate; bracts linear, <1 mm long, purplish, pubescent. Calyx tubular to campanulate with a short tube and long lobes, 1.0–1.5(–2.0) mm long; lobes 4(–5), equal, acute to obtuse. Corolla white, 1.8–2.5(–3.0) mm long, tubular; 4(–5)-lobed, lobes erect, upper lobe sometimes emarginate. Stamens 2, contained within corolla; anthers 2-loculed. Style gynobasic. Fruit 4 nutlets, 1.4–1.9 mm long, 0.6–1.2 mm broad, with a toothed corky crest.

Parts in Commerce: Leaves and flowers

Identification:

Leaves

- Leaves ovate, 6–9(–15) cm long, 2–5 cm broad
- Leaf margins serrate, not deeply sinuate
- Leaf base narrowing to short, winged petiole
- Apex acute to acuminate
- Lower epidermis glandular-dotted, sometimes pubescent with very short hairs, sometimes purple
- Upper epidermis sparsely pubescent
- Longer hairs along veins of both leaf surfaces

Flowers

- Inflorescence bracts tiny, inconspicuous, linear
- Calyx 1.0–1.5(–2.0) mm long; lobes 4(5), acute or rarely obtuse
- Calyx may be minutely pubescent especially near margins
- Corolla white, 1.8–2.5(–3.0) mm long
- Corolla lobes 4 (sometimes 5, or with the adaxial lobe emarginate), erect, not spreading
- Stamens 2, contained within corolla

Adulterants: *Lycopus* is unusual among labiates in having only two fertile stamens, each 2-loculed; inflorescences in axillary whorls; and a very small white corolla that is almost radially symmetrical and often 4-lobed. These features, combined with the leaf shape and presence of glands, should serve to identify the genus. Several other species are found in commerce (cf. *Lycopus europaeus* L.), and substitution of other American species for *L. virginicus* could occur in wild-collected material. Fruit characters are considered taxonomically important, but as the plant is traditionally harvested early in the flowering period, mature fruits will seldom be present. Most of the American species have calyx teeth that are over 1 mm long and acuminate to awl-shaped, rather than acute to obtuse. Also, several of these have leaf margins that are sinuate, pinnatifid, or with long backward-pointing teeth. *L. virginicus*, *L. uniflorus*, hybrids of those two, and *L. cokeri* share serrate

leaf margins and short, acute to obtuse calyx teeth. They can be distinguished as follows:

L. uniflorus: Leaves lanceolate to narrowly ovate with 4–7 teeth per side, versus usually 6–11 in *L. virginicus*. Calyx and corolla lobes 5; stamens protruding from corolla.

L. cokeri: Leaves subsessile, more densely pubescent and glandular. Calyx lobes 4–5, unequal; corolla lobes 4, 1 erect, 3 spreading

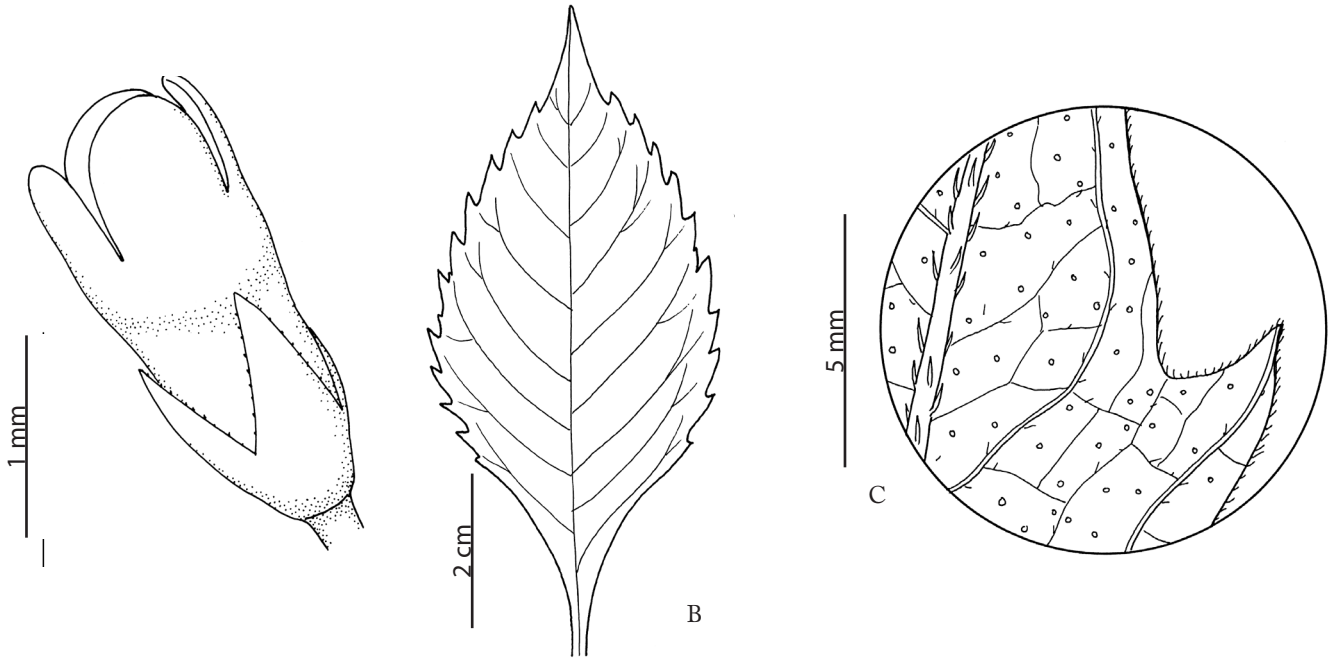


Figure 42: a–c, *Lycopus virginicus* flower, leaf, and close-up of lower surface of leaf.

Hybrid plants (“*L. ×sherardii*”) are intermediate between *L. uniflorus* and *L. virginicus*. Another species that merits particular mention is *L. americanus* Mulh. ex Barton (American Bugleweed); its major differences from *L. virginicus* are as follows:

References:

Fernald ML. *Gray’s Manual of Botany*, 8th ed. New York: American Book Company; 1950:1245–1247.

Henderson NC. A taxonomic revision of the genus *Lycopus* (Labiatae). *Am Midl Naturalist*. 1962;68:95–138.

Sorrie BA. Notes on *Lycopus cokeri* (Lamiaceae). *Castanea*. 1997;62:119–126.

	L. americanus	L. virginicus
Leaf shape	Variable, often narrow; lower leaves broader and sinuate or pinnatifid near base	Ovate; margins serrate
Inflorescence bracts	Lanceolate, to 3 mm long, midrib forming awn, gland-tipped hairs along margins	Linear, <1 mm long, inconspicuous
Calyx	Lobes 5, equal, apices awl-shaped	Lobes 4, short, acute or obtuse
Corolla	Tubular-campanulate; lobes nearly equal, spreading, sometimes weakly bilabiate; stamens protruding from corolla	Tubular; lobes erect, adaxial lobe often emarginate; stamens contained within corolla