

# Garlic Mustard



May

S. Ross



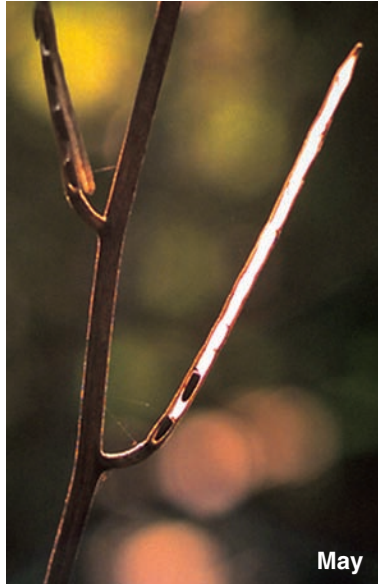
May

J. Meade



May

J. Shimp



May

H. Wilson



May

J. Shimp



**Alliaria petiolata** (Bieb.) Cavara & Grande **ALPE4**

**Plant.** Cool-season biennial forb with a slender taproot found in small to extensive colonies. Basal rosettes of leaves in the first year remaining green during winter and producing one to several 2- to 4-foot (60- to 120-cm) tall flower stalks in the second year, and then dying after seed formation in midsummer. Dead plants remain standing after June as long slender seedstalks with many upturned thin seed capsules and a characteristic crook at the stalk base. A faint to strong garlic odor emitted from all parts of the plant when crushed, becoming milder as fall approaches.

**Stem.** Erect, slightly ridged, light green, hairless above and hairy below. One to several stems from the same rootstock.

**Leaves.** Early basal rosette of kidney-shaped leaves and later alternate heart-shaped to triangular leaves, 1.2 to 3.6 inches (3 to 9 cm) long and 1 to 4 inches (2.5 to 10 cm) wide. Margins shallow to coarsely wavy toothed. Tips elongated on stem leaves. Petioles 0.4 to 3 inches (1 to 8 cm) long and reduced upward.

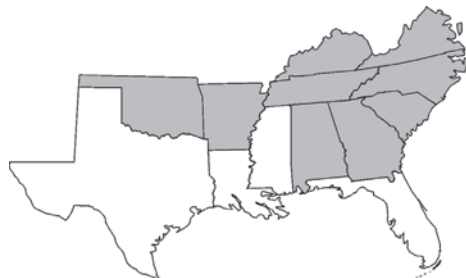
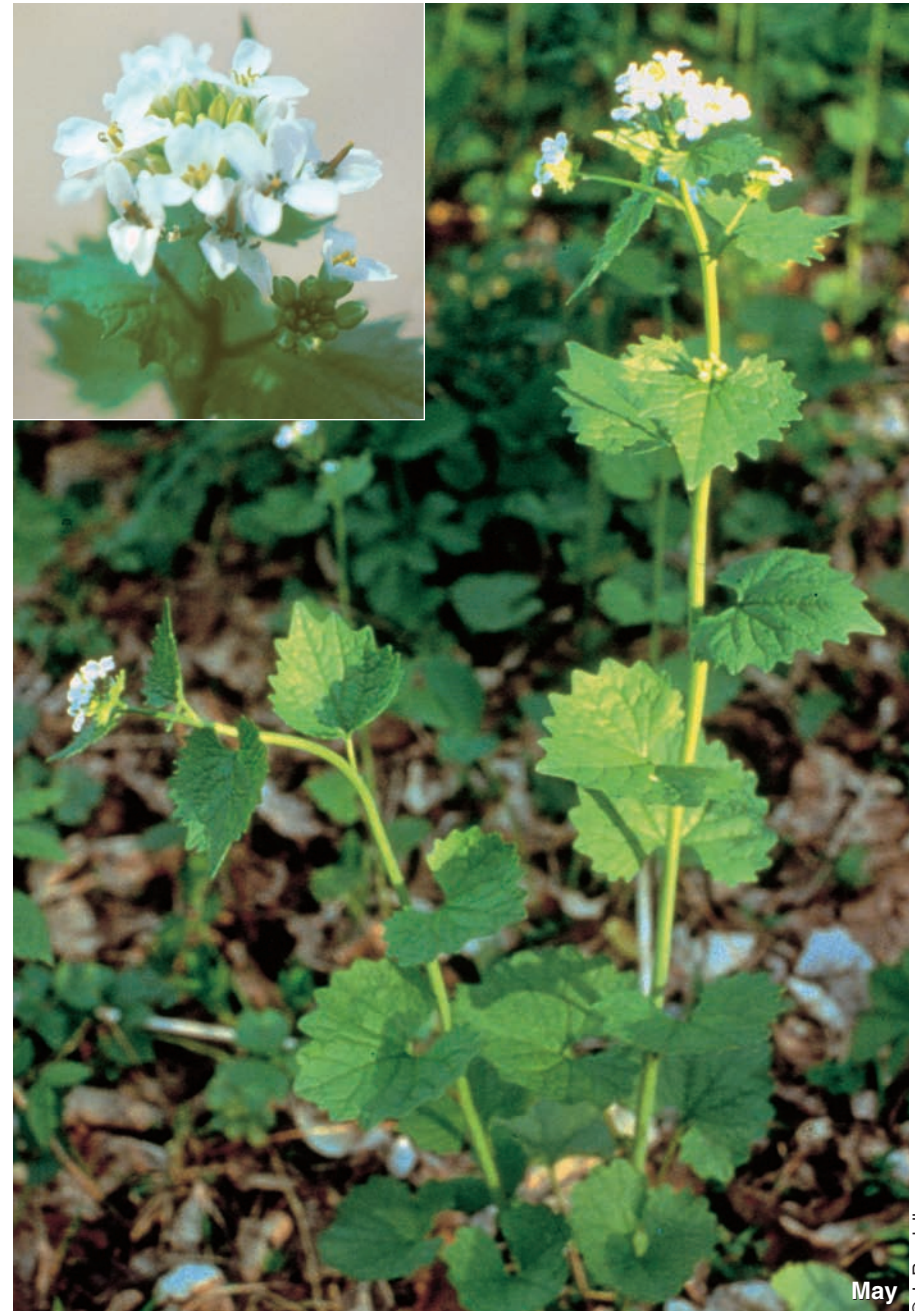
**Flowers.** April to May. Terminal, tight clusters of small white four-petaled flowers, each 0.2 to 0.3 inch (5 to 7 mm) long and 0.4 to 0.6 inch (10 to 14 mm) wide. Flowering progressing upward as seedpods form below.

**Fruit and seeds.** May to June. Four-sided, erect-to-ascending, thin pod, 1 to 5 inches (2.5 to 12 cm) long and 0.06 inch (1.5 mm) wide. Initially appearing to be stem branches that are alternately whorled along the stalk. Green ripening to tan and papery, exploding to expel tiny black seeds arranged in rows.

**Ecology.** Occurs in small to extensive colonies on floodplains, under forest canopies, and at forest margins and openings. Shade tolerant. Capable of ballistic seed dispersal of up to 10 feet (3 m). Spreads by human-, animal-, and water-dispersed seeds, which lie dormant for 2 to 6 years before germinating in spring. Experiences year to year variations in population densities. Allelopathic, emitting chemicals to kill surrounding plants and microbes.

**History and use.** Introduced from Europe in the 1800s and first sighted as an escaped weed in 1868 on Long Island, NY. Originally cultivated for medicinal use, but no known value now.

States with suspected infestations are shown in gray.

**Garlic Mustard****6002**

May

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FORBS



# Shrubby Lespedeza





***Lespedeza bicolor* Turcz. LEBI2**

Synonyms: bicolor lespedeza, bicolor, shrub bushclover

**Plant.** Perennial much branched, leguminous forb or ascending shrub, 3 to 10 feet (1 to 3 m) in height with three-leaflet leaves, many small purple-to-white pea flowers, and single-seeded pods from a woody rootcrown. Dormant brown plants remain upright most of the winter.

**Stem.** Arching branched, upright-to-ascending stems, 0.2 to 0.8 inch (0.5 to 2 cm) in diameter. Often gray green. Appressed hairy to hairless.

**Leaves.** Alternate, three-leaflet leaves. Each leaflet elliptic to ovate with a hairlike tip, 0.8 to 2 inches (2 to 5 cm) long and 0.4 to 1.2 inches (1 to 3 cm) wide. Lower surface lighter green than upper surface. Petioles 0.8 to 1.6 inches (2 to 4 cm) long. Stipules narrowly linear, 0.04 to 0.3 inch (1 to 8 mm) long.

**Flowers.** June to September. Clusters (racemes) 4 to 6 inches (10 to 15 cm) long—each subtended by a tiny ovate bract—of 5 to 15 well-spaced, pealike flowers. Each flower 0.3 to 0.4 inch (8 to 11 mm) long, growing from upper leaf axils and beyond the upper leaves. Petals usually rosy purple in center and often grading to lighter shades, but can vary to white. Calyx (sepals) sparsely to very hairy with lobes 0.1 to 0.2 inch (2.5 to 4.5 mm) long.

**Fruit and seeds.** August to March. Flat legume pod 0.2 to 0.3 inch (6 to 8 mm) long, broadly elliptic with pointed hairlike tip. Green becoming gray and densely appressed hairy. Single black seed 0.12 to 0.16 inch (3 to 4 mm) long.

**Ecology.** Planted widely in forest openings for wildlife food plots and soil stabilization to later encroach into adjoining stands. Reproduces and spreads even under a medium-to-dense overstory. Spread encouraged by burning. Leguminous nitrogen fixer.

**History and use.** Introduced from Japan as an ornamental in the late 1800s. Later programs promoted use for wildlife food and soil stabilization and improvement. Still planted for quail food plots.

States with suspected infestations are shown in gray.

**Shrubby Lespedeza****6052**



# Chinese Lespedeza





***Lespedeza cuneata* (Dum.-Cours.) G. Don** LECUSynonym: *sericea lespedeza*

**Plant.** Perennial ascending-to-upright leguminous forb, 3 to 6 feet (1 to 2 m) in height, with one-to-many leafy slender stems often branching at midplant, three-leaflet leaves, and tiny whitish flowers. Plant arising from a woody rootcrown. Dormant brown plants remaining upright during most of the winter.

**Stems.** Often gray green with lines of hairs along the stem.

**Leaves.** Alternate, crowded and numerous, three-leaflet leaves. Each leaflet oblong to linear with a hairlike tip, 0.4 to 0.8 inch (1 to 2 cm) long and 0.1 to 0.3 inch (3 to 8 mm) wide. Green above and dense whitish hairy to light gray green beneath. Hairy petioles 0.2 to 0.6 inch (5 to 15 mm) long, absent for upper leaves. Stipules narrowly linear.

**Flowers.** July to September. Clusters of 1 to 3 pealike flowers crowded in upper leaf axils. Flowers white with purple marks, 0.1 to 0.3 inch (4 to 7 mm) long and shorter than leaves. Hairy five-lobed calyx shorter than petals.

**Fruit and seeds.** October to March. Flat ovate to round single-seeded legume pod 0.12 to 0.15 inch (3 to 4 mm) wide. Pods clustered in terminal axils, scattered along the stem, and clasped by persistent sepals. Green becoming tan.

**Ecology.** Occurs in new and older forest openings, dry upland woodlands to moist savannas, old fields, right-of-ways, and cities. Flood tolerant. Forms dense stands by sprouting stems from rootcrowns that prevent forest regeneration and land access. Cross- and self-pollinates. Spreads slowly from plantings by seeds that have low germination, but remain viable for decades. Nitrogen fixer.

**Resembles** native lespedeza, *L. virginica* (L.) Britt., which grows in tufted clumps instead of infestations, has crowded clusters of pink-purple to violet flowers and somewhat larger leaflets 0.6 to 1.2 inches (1.5 to 3 cm) long, and brown stems.

**History and use.** Introduced from Japan in 1899—first near Arlington, VA, and soon afterwards in north-central Tennessee—and escaped. Benefited from government programs that promoted plantings for erosion control. Still planted for quail food plots, soil stabilization, and grazing. Plant improvement breeding programs still underway.

States with suspected infestations are shown in gray.

**Chinese Lespedeza****6053**

July

T. Bodner

FORBS



# Tropical Soda Apple



C. Bryson



C. Bryson



C. Bryson



J. Everest



J. Everest



***Solanum viarum*** Dunal **SOVI2**

**Plant.** Upright, thorny perennial subshrub or shrub, 3 to 6 feet (1 to 2 m) in height, with leaves shaped like oak leaves, clusters of tiny white flowers, and green-to-yellow golf-ball size fruit. Fruit sweet smelling and attractive to livestock and wildlife. Remains green over winter in most southern locations.

**Stem.** Upright-to-leaning, much branched, hairy, covered with broad based white-to-yellow thorns.

**Leaves.** Alternate, 4 to 8 inches (10 to 20 cm) long and 2 to 6 inches (5 to 15 cm) wide. Margins deeply lobed (shaped like oak leaves). Velvety hairy with thorns projecting from veins and petioles. Dark green with whitish midveins above and lighter green with netted veins beneath.

**Flowers.** May to August (year-round in Florida). Terminal small clusters of five-petaled white flowers. Petals first extended, then becoming recurved. Yellow-to-white stamen projecting from the center.

**Fruit and seeds.** June to November (year-round in Florida). Spherical, hairless, pulpy berry 1 to 1.5 inches (2.5 to 4 cm). Mottled green ripening to yellow. Each berry producing 200 to 400 reddish-brown seeds.

**Ecology.** Occurs on open to semishady sites. Viable seed in green or yellow fruit but not in white fruit. Reaches maturity from seed within 105 days. Persists by green stems or rootcrowns in warmer areas. Rapidly spreading by cattle and other livestock transportation and by wildlife-dispersed seeds as well as seed-contaminated hay, sod, and machinery.

**Resembles** horsenettle, *S. carolinense* L., an 8- to 30-inch (20- to 80-cm) forb, which has similar but smaller fruit, long elliptic-to-ovate lobed leaves 3 to 5 inches (8 to 12 cm) long and 1 to 3 inches (2.5 to 8 cm) wide, and prickly yellow spines on stems and lower leaf veins.

**History and use.** Native to Argentina and Brazil and introduced into Florida in the 1980s. No known use. A Federal listed noxious weed with an eradication program underway.

States with suspected infestations are shown in gray.



**Tropical Soda Apple**

**6095**

