

Tree-of-Heaven

TREES



***Ailanthus altissima* (P. Mill.) Swingle AIAL**

Synonyms: ailanthus, Chinese sumac, stinking sumac, paradise-tree, copal-tree

Plant. Deciduous tree to 80 feet (25 m) in height and 6 feet (1.8 m) in diameter, with long pinnately compound leaves and circular glands under lobes on leaflet bases. Strong odor from flowers and other parts, sometimes likened to peanuts or cashews.

Stem. Twigs stout, chestnut brown to reddish tan, and smooth-to-velvety with light dots (lenticels) and heart-shaped leaf scars. Buds finely hairy, dome-shaped, and partially hidden by the leaf base. Branches light gray to dark gray, smooth and glossy, with raised dots becoming fissures with age. Bark light gray and rough with areas of light-tan fissures.

Leaves. Alternate, odd- or even-pinnately compound, 10 to 41 leaflets on 1- to 3-foot (30 to 90 cm) light-green to reddish-green stalks with swollen bases. Leaflets lanceolate and asymmetric and not always directly opposite, each 2 to 7 inches (5 to 18 cm) long and 1 to 2 inches (2.5 to 5 cm) wide. Long tapering tips and lobed bases with one or more glands beneath each lobe (round dots). Margins entire. Dark green with light-green veins above and whitish green beneath. Petioles 0.2 to 0.5 inch (5 to 12 mm) long.

Flowers. April to June. Large terminal clusters to 20 inches (50 cm) long of small, yellowish-green flowers, with five petals and five sepals. Male and female flower on separate trees.

Fruit and seeds. July to February. Persistent clusters of wing-shaped fruit with twisted tips on female trees, 1 inch (2.5 cm) long. Single seed. Green turning to tan then brown.

Ecology. Rapid growing, forming thickets and dense stands. Both shade and flood intolerant and allelopathic. Colonizes by root sprouts and spreads by prolific wind- and water-dispersed seeds. Viable seed can be produced by 2- and 3-year-old plants.

Resembles hickories, *Carya* spp., and sumacs, *Rhus* spp., but neither has glands at leaflet bases. Hickories distinguished by a braided bark, sumacs by shrub shape.

History and use. Introduced in 1784 from Europe, although originally from Eastern China. Ornamental.

States with suspected
infestations are
shown in gray.

**Tree-of-Heaven****0341**

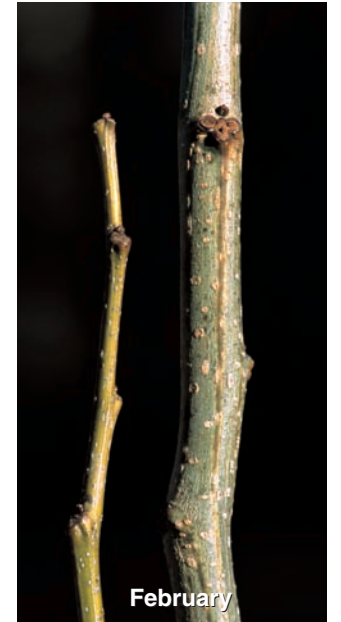
July

Silktree, Mimosa

TREES



T. Bodner



***Albizia julibrissin* Durazz. ALJU**

Synonym: silky acacia

Plant. Deciduous leguminous tree 10 to 50 feet (3 to 15 m) in height with single or multiple boles, smooth light-brown bark, feathery leaves, and showy pink blossoms that continually yield dangling flat pods during summer. Pods persistent during winter.

Stem. Twigs slender to stout, lime green turning shiny grayish brown with light dots (lenticels). No terminal bud. Bark glossy, thin, light brown turning gray with raised corky dots and dashes.

Leaves. Alternate, bipinnately compound 6 to 20 inches (15 to 50 cm) long with 8 to 24 pairs of branches and 20 to 60 leaflets per branch, feathery and fernlike. Leaflets asymmetric, 0.4 to 0.6 inch (1 to 1.5 cm) long, dark green, with midvein nearer and running parallel to one margin. Margins entire.

Flowers. May to July (and sporadically to November). Terminal clusters at the base of the current year's twigs, each with 15 to 25 sessile flowers 1.4 to 2 inches (3.5 to 5 cm) long. Pom-pom like with numerous filaments, bright-pink feathery tufts with white bases. Fragrant.

Fruits and seeds. June to February. Legume pods in clusters, flat with bulging seeds, each pod 3 to 7 inches (8 to 18 cm) long, splitting in winter along the edges to release 5 to 10 oval seeds. Initially light green turning dark brown in fall and whitish tan in winter.

Ecology. Occurs on dry-to-wet sites and spreads along stream banks, preferring open conditions but also persisting in shade. Seldom found above 3,000 feet (900 m). Forms colonies from root sprouts and spreads by abundant animal- and water-dispersed seeds. Seeds remain viable for many years. Nitrogen fixer.

Resembles honeylocust, *Gleditsia triacanthos* L., which has longer leaflets—1 inch (2.5 cm) long. Seedlings resemble partridge pea, *Chamaecrista fasciculata* (Michx.) Greene, an annual plant with once pinnately compound leaves.

History and use. A traditional ornamental introduced from Asia in 1745. Potential use for forage and biofuel.

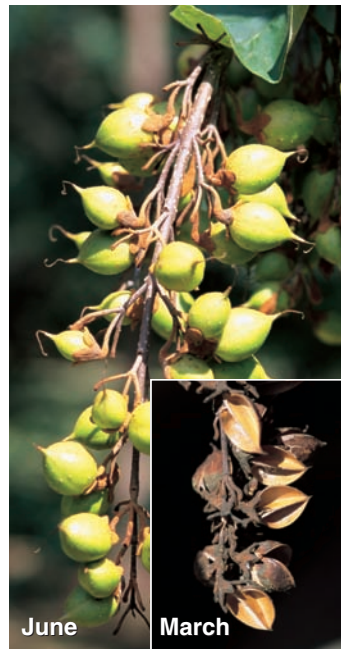
States with suspected infestations are shown in gray.

**Silktree, Mimosa****0345**

June

Princesstree, Paulownia

TREES



Paulownia tomentosa (Thunb.) Sieb. & Zucc. ex Steud. **PATO2**

Synonym: empresstree

Plant. Deciduous tree to 60 feet (18 m) in height and 2 feet (60 cm) in diameter with large heart-shaped leaves, fuzzy hairy on both sides, showy pale-violet flowers in early spring before leaves, and persistent pecan-shaped capsules in terminal clusters in summer to winter. Abundant flower buds present on erect stalks over winter.

Stem. Twigs and branches stout, glossy gray brown and speckled with numerous white dots (lenticels). No terminal bud. Lateral leaf scars raised, circular, and becoming larger, dark, and sunken. Bark light-to-dark gray, roughened, and becoming slightly fissured. Stem pith chambered or hollow and wood white.

Leaves. Opposite, heart-shaped and fuzzy hairy on both surfaces, 6 to 12 inches (15 to 30 cm) long and 5 to 9 inches (13 to 23 cm) wide. Leaves larger on resprouts, 16 to 20 inches (40 to 50 cm) across, with extra tips often extending at vein tips. Petioles rough hairy, 2 to 8 inches (5 to 20 cm) long.

Flowers. April to May. Covered with showy erect panicles of pale-violet flowers before leaves in early spring, tubular with five unequal lobes. Fragrant. Flower buds fuzzy, linear, and becoming ovoid in summer and persistent on erect stalks over winter.

Fruit and seeds. June to April. Terminal clusters of pecan-shaped capsules 1 to 2 inches (2.5 to 5 cm) long and 0.6 to 1 inch (1.5 to 2.5 cm) wide. Pale green in summer turning to tan in winter and eventually black and persistent into spring. Capsules splitting in half during late winter to release tiny winged seeds.

Ecology. Common around old homes, on roadsides, riparian areas, and forest margins in infested areas. Infrequently planted in plantations. Spreads by wind- and water- dispersed seeds. Invades after fire, harvesting, and other disturbances. Forms colonies from root sprouts.

Resembles southern catalpa, *Catalpa bignonioides* Walt., and northern catalpa, *C. speciosa* (Warder) Warder ex Engelm., which have leaves with sparsely hairy upper surfaces and rough hairy lower surfaces and long slender, persistent beans.

History and use. Introduced in the early 1800s from East Asia. Has been widely planted as an ornamental and grown in scattered plantations for speculative high-value wood exports to Japan.

States with suspected infestations are shown in gray.

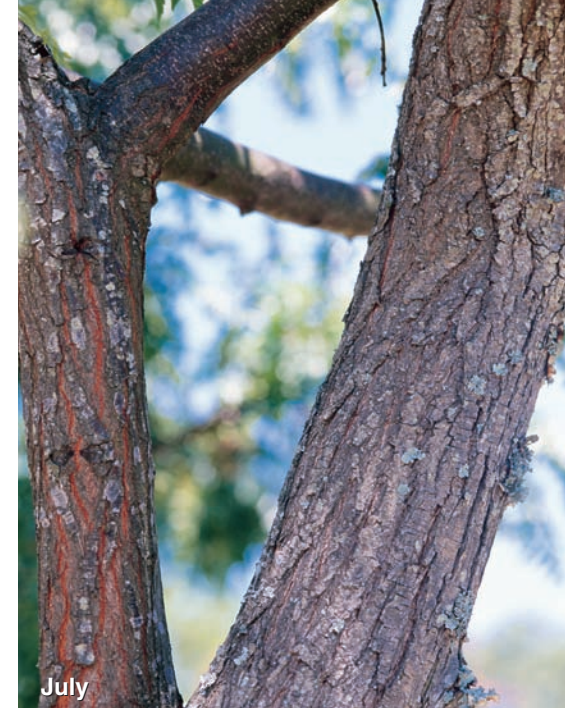
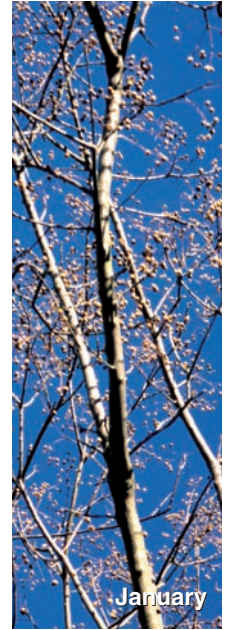
**Princesstree, Paulownia****0712**

Chinaberrytree

TREES



T. Bodner



***Melia azedarach* L. MEAZ**

Plant. Deciduous tree to 50 feet (15 m) in height and 2 feet (60 cm) in diameter, much branched with multiple boles, lacy dark-green leaves having a musky odor, and clusters of lavender flowers in spring yielding persistent, poisonous yellow berries.

Stem. Twigs stout, glossy greenish-brown with light dots (lenticels). No terminal bud. Numerous broad, V-shaped, raised leaf scars with three bundle scars below a domed fuzzy bud. Bark dark chocolate brown and becoming increasingly fissured with age. Wood soft and white.

Leaves. Alternately whorled, bipinnately compound, 1 to 2 feet (30 to 60 cm) long and 9 to 16 inches (23 to 40 cm) wide. Leafstalk lime green with base slightly clasping stem. Each leaflet lanceolate with tapering tips, 1 to 3 inches (2.5 to 8 cm) long and 0.5 to 1.2 inches (1 to 3 cm) wide. Margins varying from entire to coarsely crenate to serrate and wavy. Glossy dark green with light-green midvein above and pale green with lighter-green midvein beneath, becoming golden yellow in fall.

Flowers. March to May. Showy panicles from lower axils of new stems. Five pinkish-lavender to whitish petals, stamens united in dark-purple tube. Five green sepals. Fragrant.

Fruit and seeds. July to January. Berrylike spherical drupe 0.5 to 0.7 inch (1.2 to 1.8 cm) wide persisting through winter and containing a stone with one to six seeds. Light green turning yellowish green then yellowish tan. Poisonous to humans and livestock.

Ecology. Common on roadsides, at forest margins, and around old homesites but rare at high elevations. Semishade tolerant. Forms colonies from root sprouts or sprouts from root collars, and spreads by bird-dispersed abundant seeds.

Resembles common elderberry, *Sambucus canadensis* L., a spreading crowned shrub with once pinnately compound leaves, margins finely serrate, and green to dark-purple berries in flat-topped clusters.

History and use. Introduced in the mid-1800s from Asia. Widely planted as a traditional ornamental around homesites. Extracts potentially useful for natural pesticides.

States with suspected infestations are shown in gray.

**Chinaberrytree****0993**

June

November

Tallowtree, Popcorn tree

TREES

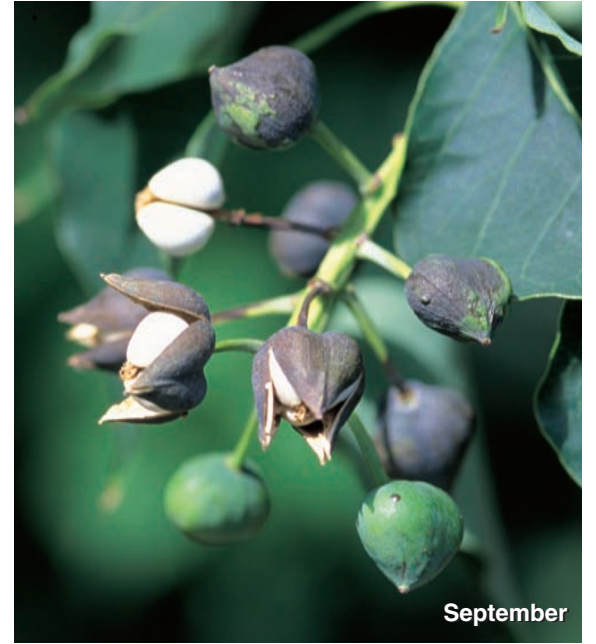


June

T. Bodner



September



September



December



September



November

F. Nation

***Triadica sebifera* (L.) Small TRSE6**

Synonym: Chinese tallowtree, *Sapium sebiferum* (L.) Roxb.

Plant. Deciduous tree to 60 feet (18 m) in height and 3 feet (90 cm) in diameter, with heart-shaped leaves, dangling yellowish spikes in spring yielding small clusters of three-lobed fruit that split to reveal popcorn-like seeds in fall and winter.

Stem. Terminal clusters of flowers and fruits result in whorled branching from lateral buds below fruit clusters. Twigs lime green turning gray with scattered brownish dots (lenticels) later becoming striations. Numerous semicircular leaf scars becoming raised with age. Bark light gray and fissured. Sap milky.

Leaves. Alternately whorled, distinctively heart-shaped with a rounded wide-angled base and a short or long attenuate tip. Blades 2 to 3 inches (5 to 8 cm) long and 1.5 to 2.5 inches (4 to 6 cm) wide. Dark-green with light-green mid- and lateral veins and turning yellow to red in fall. Hairless, lime-green petioles 1 to 3 inches (2.5 to 8 cm) with two tiny glands on upper side of juncture between blade and petiole (requires magnification).

Flowers. April to June. Slender, drooping spikes to 8 inches (20 cm) long of tiny flowers. Yellowish-green sepals but no petals. Female flowers at base and males along the spike.

Fruit and seeds. August to January. Small terminal clusters of three-lobed capsules (occasionally four to five lobed), each 0.5 to 0.75 inch (1.2 to 2 cm) across. Dark green in summer becoming black and splitting to reveal three white-wax coated seeds 0.3 inch (0.8 cm) long and 0.2 inch (0.5 cm) wide. Resemble popcorn and remain attached until winter.

Ecology. Invades stream banks, riverbanks, and wet areas like ditches as well as upland sites. Thrives in both freshwater and saline soils. Shade tolerant, flood tolerant, and allelopathic. Increasing widely through ornamental plantings. Spreading by bird- and water-dispersed seeds and colonizing by prolific surface root sprouts.

Resembles cottonwoods, *Populus* spp., which have wavy margined leaves and flaking bark.

History and use. Introduced from China to South Carolina in the 1700s and then in significant numbers to the gulf coast in the early 1900s. Plantings for seed oil recommended by the U.S. Department of Agriculture during 1920 to 1940. Ornamentals still sold and planted. Waxy seeds traditionally used to make candles. Honey plant for beekeeping.

States with suspected infestations are shown in gray.

**Tallowtree, Popcorn tree****0994**

Russian Olive

TREES



P. Breen



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P. Breen



P. Breen



P. Breen



P. Breen

***Elaeagnus angustifolia* L. ELAN**

Synonym: oleaster

Plant. Deciduous, thorny tree or shrub to 35 feet (10 m) in height with a single bole, many long narrow leaves, and many yellow fruit covered with minute silvery scales.

Stem. Twigs slender, thorny, and silver scaly becoming glossy and greenish. Branches smooth and reddish brown. Pith pale brown to orange brown. Bark dark brown and densely fissured.

Leaves. Alternate, long lanceolate to oblanceolate measuring 1.5 to 4 inches (4 to 10 cm) long and 0.4 to 1.2 inches (1 to 3 cm) wide. Margins entire (rarely toothed). Green to slightly silvery above with dense silver scales beneath. Petioles short and silvery.

Flowers. April to July. Axillary clusters, each with 5 to 10 silvery-white to yellow flowers. Tubular with four lobes. Fragrant.

Fruit and seeds. August to October. Drupelike, hard fleshy fruit 0.5 inch (1.2 cm) wide and long, resembling an olive. Light green to yellow (sometimes tinged with red). One nutlet in each fruit.

Ecology. Found as scattered plants in forest openings, open forests, and along forest edges. Thrives in sandy floodplains. Shade intolerant. Spreads by bird- and other animal-dispersed seeds. A nonleguminous nitrogen fixer.

Resembles silverthorn or thorny olive, *E. pungens* Thunb., which is an evergreen with brown scaly and hairy twigs, flowers in late fall producing few reddish silver-scaly drupes in spring. **Also resembles** autumn olive, *E. umbellata* Thunb., which has leaves with nonscaly upper surfaces in summer, flowers in early summer, and many reddish, rounded berries in fall and early winter.

History and use. Native to Europe and western Asia, a recent (early 1900s) arrival in the upper part of the Southeast. Initially planted as a yard ornamental, for wind-breaks, surface mine reclamation, and wildlife habitat.

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infestations are
shown in gray.

**Russian Olive****0997**

Summer