

Bradford Pear (*Pyrus calleryana*)

Native to China & Taiwan

Plant: Upright-branched tree; pyramidal to columnar in youth tends to spread with age; 30 to 50 feet tall

Leaves: Simple; alternate; leathery, glossy, and dark green

Flower: White with five petals; three-quarter-inch wide; appears in early spring in dense corymbs; does not smell good

BARK Brown and shiny when young; gray-brown, furrowed in maturity

Distribution and Habitat: Bradford pear occurs throughout the eastern U.S. from New Jersey to Illinois and south to Texas. It grows best in full sun but will tolerate some shading and drought.



Japanese Stiltgrass (*Microstegium vimineum*)

Plant: Reclining, loosely branching annual to 3 ft

Leaves: Long, alternating lance-shaped leaves (1 - 3") with off-center midribs

Flower: Spikes which grow from leaf axils and from the apex of the grass stem.

Seed: Ellipsoid grain 2.8-3.0 mm (1/8 in) long; abundant seed production may occur infrequently. Seed bank of at least 3 years. Seeds mature and are dispersed in late fall.

Habitat: Native to tropical Asia. Introduced into the U.S. in 1919. Shade tolerant. Preference for shady areas (closed canopy forests, especially riparian areas) but found in high light areas (roadsides, ditches, forest borders, and fields).



Chinese Bushclover (*Lespedeza cuneata*)

Leaves: Compound leaves have 3 leaflets that are narrowly oblong and pointed, with awl-shaped spines and wedge-shaped bases; leaflets are covered with densely flattened hairs, giving a grayish-green or silvery appearance.

Flower: Flowers small (about $\frac{1}{4}$ in.) creamy white to pale yellow with central purple spots, single or in clusters of 2-4 in axils of upper and median leaves in summer

Seed: The fruit is a legume pod containing one seed. Seeds tiny, bean-shaped, yellow to light brown

Habitat: Found in fields, prairies, floodplains, pond borders, stream banks, swamps, meadows, open woodlands, roadsides and other disturbed grounds, prefers full sun and is not tolerant of much shade.



English Ivy (*Hedera helix*)

Leaves: Alternate, dark green, waxy, somewhat leathery; extremely variable leaf forms, from unlobed to 3-5 lobed; typically green with whitish veins.

Flower: Flowering occurs in late summer to early fall, typically under full sun conditions; flowers are small, greenish-yellow and occur in globular starburst type inflorescences at tips of flowering stems; fruits are black with a fleshy outer layer and stone-like seeds.

Spread: Vigorous growth at tip of stems; and by seed which is consumed by birds and dispersed to new areas; fruits contain glycosides that may be mildly toxic and cause some birds to regurgitate them; new plants grow easily from cuttings or stem fragments that make contact with the soil.

Habitat: Flourishes under shady to full sun conditions in soils that are moderately fertile and moist but it is intolerant of drought and salinity. Habitats invaded include forest openings and edges, fields, cliffs, steep slopes, and disturbed areas.



Autumn Olive (*Elaeagnus umbellata*)

Leaves: Alternate; deciduous; egg or lance-shaped, smooth margined, dull green above and often with brown scales beneath.

Flower: Flowers occur in June and July; aromatic, pale yellow, fused at the base with 4 petals pointed at the tips; fruits are produced August through October; small, red-brown to pink and dotted with brown or silvery scales; abundant.

Spread: By seed that is dispersed by birds and mammals; some vegetative propagation also occurs.

Distribution & Habitat: Found from Maine to Virginia and west to Wisconsin in grasslands, fields, open woodlands and other disturbed areas. It is drought tolerant and thrives in a variety of soil and moisture conditions. Capable of fixing nitrogen in its roots, it can grow on bare mineral substrates.



Princess Tree (*Paulownia tomentosa*)

Plant: Medium-sized deciduous tree that grows to 30-60 ft. in height; twigs are stout, green to brown, and have many lenticels; bark is thin, gray-brown with shallow features.

Leaves: Paired, large, hairy on upper surfaces, broadly oval to heart-shaped and sometimes shallowly three-lobed.

Flowers, fruits and seeds: Flowers are showy, pale violet and fragrant and produced in conspicuous upright clusters in spring before the leaves appear; fruit is a four-compartmented oval capsule containing thousands of small winged seeds; capsules green, becoming brown and dry as they mature and persist through the winter.

Spreads: By seed which is abundant and easily transported long distances by wind and water; a single tree is estimated to produce twenty million seeds; seeds germinate easily in suitable soil; seedlings grow and mature quickly, producing flowers within 8-10 years.

Distribution and Habitat: Occurs throughout much of the eastern United States from Texas to New England where it can be found growing along roadsides, stream banks and forest edges. It tolerates infertile and acid soils and drought conditions and adapts to a wide variety of habitats.



Mimosa Tree (*Albizia julibrissin*)

Plant: Small deciduous tree that grows 10-50 ft. in height and often has multiple trunks; the bark is light brown, nearly smooth, thin and has lens-shaped spots along the stem.

Leaves: Alternate, twice-pinnately compound, fern-like.

Flowers, fruits and seeds: Flowers are pink, fragrant and look like pom-poms; flowering occurs in early summer; fruits are flat 6 in. long seed pods that develop in the late summer.

Spreads: By seed and vegetative growth.

Distribution and Habitat: Silk tree occurs from California across the southern United States to New York. It grows in disturbed areas such as roadsides, forest edges and various open habitats. It is a hardy plant that tolerates a variety of soil and moisture conditions, enhanced by the ability of its roots to produce nitrogen.



Multiflora Rose (*Rosa multiflora*)

Plant: Multi-stemmed shrub, sometimes climbing vine, with arching stems and recurved thorns.

Leaves: Divided into five to eleven sharply toothed leaflets; leaf stalks with fringed stipules (paired wing-like structures).

Flowers, fruits and seeds: Clusters of showy, fragrant, white to pinkish, 1 in. wide flowers appear during May; small bright red fruits, or rose hips, develop during the summer and remain on the plant through the winter.

Spreads: By seed and by forming new plants from the tips of arching canes that can root where they contact the ground. An average plant produces an estimated one million seeds per year, which remain viable in the soil for up to 20 years.

Distribution and Habitat: Occurs throughout the eastern half of the United States and in Washington and Oregon. It tolerates a wide range of soil, moisture and light conditions and is able to invade fields, forests, prairies, some wetlands and many other habitats.



White Mulberry (*Morus alba*)

Plant: Deciduous tree, 30-50 ft. tall; young bark, inner bark and bark along the roots is bright orange; older bark is grey with narrow irregular fissures; bark splits easily; stems are glabrous to pubescent, not thorny.

Leaves: Alternate, simple, glossy above, toothed, unlobed or lobed with one or many, sometimes deep lobes; upper leaf surface glossy, glabrous or slightly scabrous; lower leaf surface glabrous, or slightly pubescent on the veins and in the vein axils only.

Flowers, fruits and seeds: Flowers are produced in Spring; male and female flowers are on separate plants; male flowers are small, green and occur in 1-2 in. long catkins; female flowers are inconspicuous and crowded in short spikes; fruits form from female flowers; fruits are multiple-seeded berries that range in color from black to pink to white when ripe; contain abundant seed--a single tree is estimated to produce twenty million seeds!

Spreads: By seed which is consumed by wildlife and deposited in new locations.

Distribution and Habitat: White mulberry is widespread in the U.S., occurring in every state of the lower 48 except for Nevada. It invades old fields, urban lots, roadsides, forest edges, and other disturbed areas.



Japanese Honeysuckle (*Lonicera japonica*)

Plant: Perennial, deciduous to semi-evergreen twining vine; stems are pubescent and reddish brown to light brown.

Leaves: Paired (opposite), ovate to oblong-ovate, about 1-3 in. long by $\frac{1}{2}$ - $1\frac{1}{2}$ in. wide, entire-margined except for young leaves which are often deeply toothed.

Flowers, fruits and seeds: Flowers are bi-lobed, white turning yellow, highly fragrant and with nectar, produced in June; fruits are black, about $\frac{1}{4}$ in. diameter, paired, produced in the fall.

Spreads: By seed that is dispersed by birds.

Distribution and Habitat: Japanese honeysuckle is one of the most recognizable and well established ornamental vines in the U.S. It is documented to occur and reported to be invasive throughout the eastern U.S. from Maine to Florida and west to Wisconsin and Texas, with scattered occurrences in the Southwest. It is adapted to a wide variety of habitats from full sun to shade.



Oriental Bittersweet (*Celastrus orbiculatus*)

Plant: Deciduous, woody, twining vine, sometimes occurring as a trailing shrub; stems of older plants can reach 4 in. in diameter.

Leaves: Alternate, glossy and rounded with finely toothed margins.

Flowers, fruits and seeds: Abundant clusters of small greenish flowers emerge from most leaf axils; globular, green to yellow fruits split open at maturity to reveal fleshy red-orange arils that cover the seeds; seeds germinate in late spring.

Spreads: By seed, which is dispersed to new areas by many species of birds and by people who are not responsible when disposing of faded bittersweet wreaths and other floral decorations; it expands locally by stolons and rhizomes and through root suckering (the ability to send shoots up from the roots).

Distribution and Habitat: Oriental bittersweet has been reported to be invasive from Maine to North Carolina west to Wisconsin and Missouri. It occurs in forest edges, open woodlands, fields, hedgerows, coastal areas, salt marshes and disturbed lands. While often found in more open, sunny sites, its tolerance of shade allows it to invade forested areas.



Japanese Knotweed (*Fallopia japonica*)

Plant: Upright, shrubby, herbaceous perennial 4-10 ft. tall with stems that are smooth, stout and hollow; stem leaf junctures are swollen and surrounded by a membranous sheath called an “ocrea” which is typical of the family.

Leaves: Variable; about 6 in. long by 3-4 in. wide, broadly oval to somewhat triangular with a truncated base and a tapered tip.

Flowers, fruits and seeds: Tiny greenish to white colored flowers occur in attractive sprays in summer; fruits are winged on three sides; seeds are triangular, dark brown, shiny and about 1/10 in. long.

Spreads: By seed and by vegetative means through growth of long, stout rhizomes; can be transported long distances by water as a contaminant in fill-dirt, or on the soles of shoes; escapes from gardens and landscaped areas through discarded cuttings.

Distribution and Habitat: Japanese knotweed occurs across the U.S. and has been reported to be invasive in natural areas throughout the northeast into Georgia and west to Missouri, with additional infestations in Oregon and Washington. It can tolerate a wide variety of challenging conditions, including deep shade, high salinity, high heat, and drought.



Chinese Privet (*Ligustrum obtusifolium*)

Plant: Deciduous or semi-evergreen shrubs that grow from 8-20 ft. tall; trunks with multiple stems with long leafy branches; the presence or absence of hairs and type of hairs on stems is helpful in distinguishing species.

Leaves: Opposite, simple, entire, short-stalked, ranging in length from 1-3 in. and varying in shape from oval, elliptic to oblong.

Flowers, fruits and seeds: Flowers small, white and tubular with four petals and occur in clusters at branch tips; fragrant; late spring to early summer (May to July); length of corolla tube length ranges from 1/10 in. (Chinese) to 1/4 in. (border); anthers exceed the corolla lobes (Chinese and California); fruit is small black to blue-black oval to spherical drupe (i.e., a fleshy fruit with 1-several stony seeds inside), mature late summer to fall.

Spreads: By birds that consume fruits and excrete seeds undamaged in new locations; can spread locally through root sprouting.

Distribution and Habitat: Chinese Privet has been reported to be invasive in the eastern U.S. and nationwide. They thrive in floodplains, fields, disturbed forests and forest edges.



Common Bamboo (*Bambusa vulgaris*)

Plant: Woody stems 3-4 in. diameter with hollow centers and solid joints; grow to heights of 16-40 ft.

Leaves: Strap-shaped and tapering with pointed tips, tough, somewhat papery or leathery, up to 10 in. long and 1-2 in. across.

Flowers, fruits and seeds: Flowering is infrequent and unpredictable; flowers are grasslike and not especially showy.

Spreads: By vegetative means through vigorous rhizomatous growth.

Distribution and Habitat: Bamboos are woody reed-like grasses that have a shrubby growth habit. Common bamboo is a popular ornamental that was introduced and planted widely and is available in the nursery trade. Giant or switch cane (*Arundinaria gigantea*) is the only species of bamboo native to the U.S. It is found throughout the Southeast just into southern Maryland and is about the size of Pseudosasa.



Vasey Grass (*Paspalum Urvillei*)

Plant: Vasey's grass is a perennial bunch-type warm season grass that grows up to 7 ft tall.

Leaves: Leaves are long and narrow with entire margins, indented midrib, and pointed tips. Leaf margin are crinkled. Leaf blades grow up to 15 inches long and half an inch wide. Leaves are mostly hairless, except some long hairs near their narrow bases.

Flowers, fruits and seeds: The flowers have up to 4-30 erect branches. Flower growth occurs during the months of May-Nov. Spikelets are pubescent. Seeds are orange to brown, oval in shape and 2 to 3mm long and contains parts of the flower spikelets.

Distribution and Habitat: Frequently found in disturbed areas throughout Louisiana and Texas. An exotic grass, native to South America, that is now widespread in the eastern United States. Vasey's grass is typically found growing in ditches, along streams, and around lakes and ponds as well as other moist places. It requires high amounts of annual rainfall. It can tolerate fire, drought, and flooding



Nandina (*Nandina domestica*)

Plant: Small, erect shrub that grows up to 8 ft. (2.4 m) tall.

Leaves: Leaves are alternate, large, bi- or tri-pinnately compound with small, 1-2 in. (2.5-5.1 cm) long leaflets. The older stems have bark with long, linear furrows. The overlapping leaf sheaths give the main stem the appearance of bamboo, hence the name.

Flowers, fruits and seeds: Flowering occurs in the spring, when small, white flowers develop in large panicles at the ends of the stems. Flowers have 3-6 reflexed petals. Fruits are green berries that mature to a bright red and are very attractive to birds.

Distribution and Habitat: Invades forests throughout the Southeast United States. Shade tolerant, which allows it to invade forest edges and interiors. It is native to eastern Asia and India and was first introduced to North America in the early 1800s. It has been planted widely as an ornamental and often escapes from old plantings.



Autumn Virginsbower or Clematis (*Clematis terniflora*)

Plant: Climbing, deciduous to semi-evergreen, perennial vine.

Leaves: Opposite, compound 3 leaflets; leaflets are 2-3 in. long and have entire (non-toothed) margins.

Flowers, fruits and seeds: Flowers are produced late summer through fall; flowers are white with four petals; seeds are produced in profusion and are showy due to long, silvery-gray, feather-like hairs attached.

Spreads: By wind-dispersed seed.

Distribution and Habitat: Sweet autumn virginsbower is documented to occur in much of the eastern U.S. from Minnesota to Vermont, south to Texas and Florida. It has been reported to be invasive in Alabama, Delaware, Florida, Georgia, Illinois, Maryland, New Jersey, North Carolina, South Carolina, Tennessee and Virginia, although it is probably invasive in additional states where it occurs. It prefers full sun but can tolerate partial shade.



Chinese Wisteria (*Wisteria sinensis*)

Plant: Deciduous, woody twining vine that climbs up tree trunks in a clockwise direction; stems are stout, smooth gray-brown and covered with fine white hairs. Older plants can grow to 15 in. or more in diameter.

Leaves: Alternate, compound, 6-10 in. long with 9-11 (7-13) leaflets; leaflets egg-shaped with wavy-margins and strongly tapering tips.

Flowers, fruits and seeds: Flowering occurs in April before leaf expansion; flowers are lavender to purple, occur in pendulous racemes or clusters 6-8 (up to 12) in. long, and open mostly all at once; individual flowers are 0.8-0.9 in. long on 0.6-0.8 in. long stalks (pedicels); fruits are green to brown velvety seedpods 4-6 in. long, narrowed toward the base with constrictions between the 1-3 flat, round seeds; fruits begin to appear midsummer and persist for a long time on the vine.

Spreads: By seed which, in riparian areas, can be transported by water; vegetatively by producing stolons (above-ground stems) that produce shoots and roots at short intervals.

Distribution and Habitat: Found extensively throughout the eastern U.S., Chinese wisteria has been reported to be invasive in at least 19 states from Massachusetts to Illinois south to Texas. Wisteria prefers full sun, but established vines will persist and reproduce in partial shade. Vines climb trees, shrubs and manmade structures. It is tolerant of a variety of soil and moisture regimes but prefers deep, loamy, well drained soils. Infestations are commonly found along forest edges, roadsides, ditches, and rights-of-way.

