

Great Swamp National Wildlife Refuge Invasive Species Key

Winged Euonymus



- Simple, opposite leaves, football shaped. Turns bright red in fall.
- Stems have raised, rectangular wings
- Fruit capsule-shaped, red, and four to a cluster

Multiflora Rose (*Rosa multiflora*)



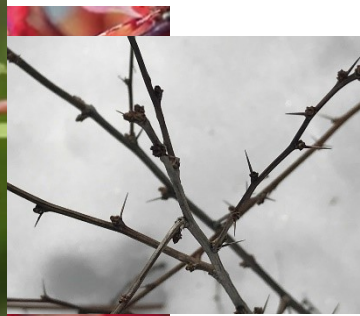
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- Compound, alternate,
- Stipules (base of stem) this feature
- ½ inch wide white flowers and ¼ inch red fruits
- Downward-facing thorns



leaflets toothed
looks hairy; no native roses have

Japanese Barberry



- Leaves in whorled clusters, bright green and without teeth
- Abundant pale-colored flowers and ⅓ inch red berries

- Single thorns run alternately up stem

(as opposed to similar species with multiple thorns)

- Early spring leaf-out and bright red foliage in the fall

Purple Loosestrife



- Tall columns of purple flowers; can reach heights of 5 feet or more

- Flowers form at the ends of spikes along a square, woody stem
- Opposite or whorled leaves
- Grows in dense stands in wetlands

Autumn Olive (*Elaeagnus umbellata*)



- Tall shrub (up to 20ft) with smooth, elliptical leaves and woody branches
- Silvery undersides of simple, alternate leaves
- Abundant glossy, round, red fruits with silvery dots

Tree of Heaven (*Ailanthus altissima*)



- Fast-growing tree with smooth, elephantine bark
- Alternate, compound leaves with many leaflets
- Leaves are mostly smooth with a paired bump at the base
- Dioecious species (males and females differ); females have maple-like fruits

- Strong rancid peanut butter smell if branch is broken
- Host tree of the invasive Spotted Lanternfly

Oriental Bittersweet



- Leaves on this vine are alternate, glossy with small teeth
- In fall, leaves turn yellow and remain on vine later into season
- Have small, yellowish flowers that typically occur near leaf axil
- Bright red fruits with a vivid yellow capsule

Japanese Wisteria



- Long, compound leaves with 10+ leaflets, alternate arrangement
- Vibrant, sweet-smelling purple flowers that hang down in clusters
- Typically blooms in spring

- Seed pods are fuzzy and brown unlike smooth pods of native species
- Woody vine climbs tree counter-clockwise; can lead to tree girdling
- Can reach heights of 20-30 feet

Japanese Honeysuckle (*Lonicera japonica*)



- Leaves are opposite and smooth, except new growth, which is lobed
- Flowers start out white but become progressively creamier/yellow
- Fragrant, tube-shaped flower with five petals
- Fruits are round, ¼ inch, glossy and dark, ringing around the axils
- Fast-growing vine that can girdle trees

Mugwort



- Alternate leaves with deep lobes
- Silvery and hairy below with light green, smooth leaves above

- Tends to grow in large clumps that spread through rhizomic growth
- Emits an earthy, herb-like scent when leaves are crushed
- Brown or purple stems with long, straight ridges

Mile-A-Minute



- This vine has alternate, bright-green, spade-shaped leaves
- Clusters of bell-shaped, yellow-green flowers
- Fruit is a ¼ inch blue, green, or purple berry seen in clusters at vine ends
- Central vein and stems have abundant barbs
- Annual species able to grow 6 inches in a single day and spreads by seed

Porcelain Berry



- Alternate heart-shaped or lobed (3-5) leaves
- Bright robin-egg blue or purple berries that are hard to the touch
- Has small, yellow-green flowers in spring
- Leaf underside has small hairs
- Bark is woody and contains small lenticels

Chinese Silver Grass



- Leaves alternate up the stem
- Tall, perennial grass (up to 12 feet in height)
- Center of long leaf (up to 18 inches) is silver
- Showy seed clusters in feathery bunches through summer, seeds in fall
- Extremely flammable and capable of causing large-scale fires

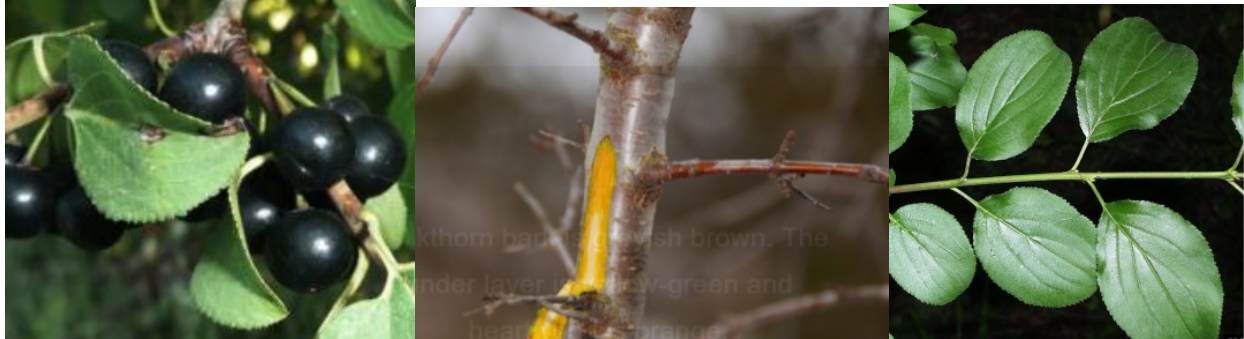
Japanese Angelica



- Large clusters (12-18 inches) of small, creamy, off-white flowers
- Fruits are rings of dark purple to black berries
- Can reach heights of over 10 feet
- Leaves are alternate, compound

- The stem is covered in sharp thorns

Common Buckthorn



- Leaves are finely toothed, opposite, and have 2-3 pairs of long veins
- Dark grey bark with lenticels
- Internal wood is bright yellow and orange
- Berries are pea-sized, start green and darken to black in fall
- Flowers are fragrant; greenish yellow with 4 petal-like sepals
- Twigs often have single, sharply pointed thorn on terminal end

Glossy Buckthorn



- Clumps of stems occur when young; mature shrubs have single main trunk
- Has silver, circular lenticels on bark
- Leaves are smooth, entire, glossy, and have 8-9 curving veins
- Internal wood is yellow and orange

- Berries transition from green to red early; ripe berries are dark purple
- Unlike Common Buckthorn, lacks terminal thorn on twig ends
- Five-petaled, greenish-white flowers by the base of the leaf
- Leaves remain on shrub well into the fall

Japanese Knotweed



- Bamboo-like shoots with reddish exterior
- Seeds are small (1/10 inch), white, and winged
- Long (2-7 inches), spade-shaped leaves
- In fall, leaves yellow and wilt, revealing long, bamboo-like, hollow stems
- Long clusters (up to 10 cm) of small, creamy flowers
- Stands of knotweed can reach 5-8 feet high

Japanese Stiltgrass

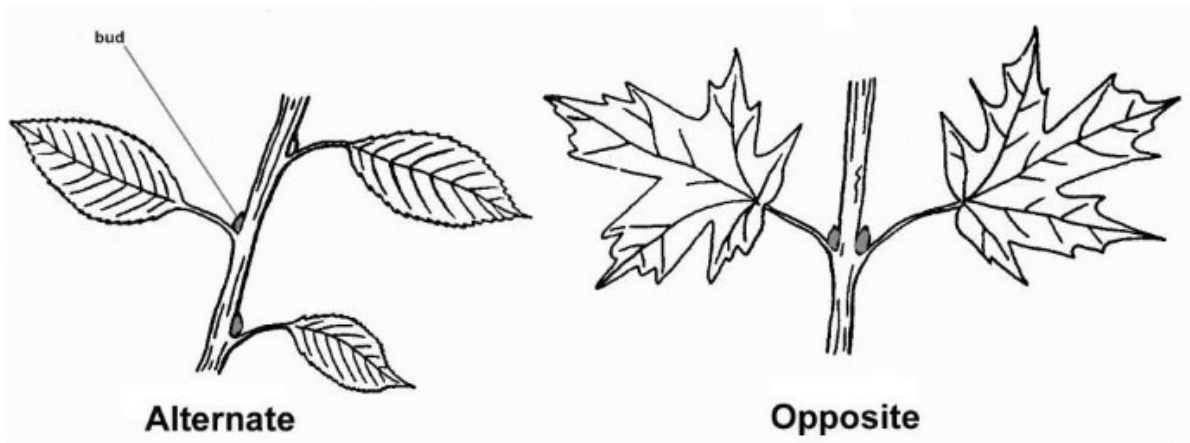


- This annual grass has an off-center, silvery midvein
- Alternate branching, stout, lance-like leaves
- Shallow root system, easily pulled out

- 2-3 feet in height
- Columns of small, sticky seeds are capable of remaining viable for 3-5 years

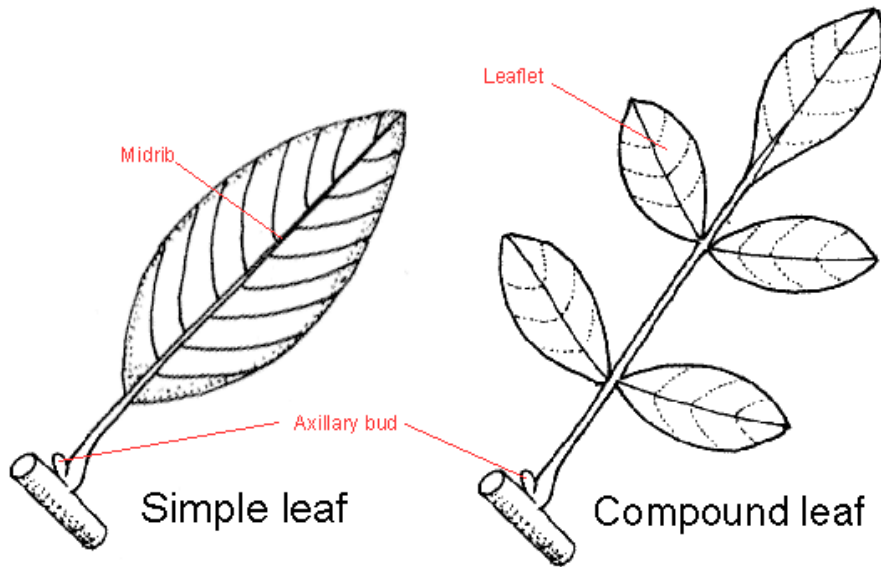
Botanical Terminology

Opposite vs Alternate:

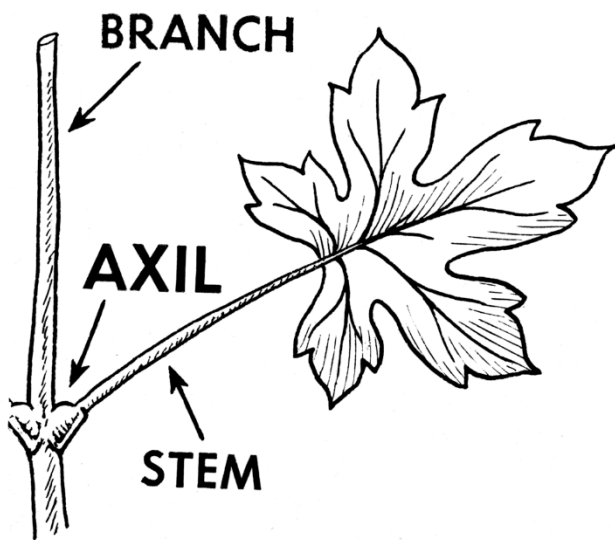










Refers to placement of bud on plant. Opposite is directly across, and alternate is diagonally across.

Compound vs Simple Leaf:

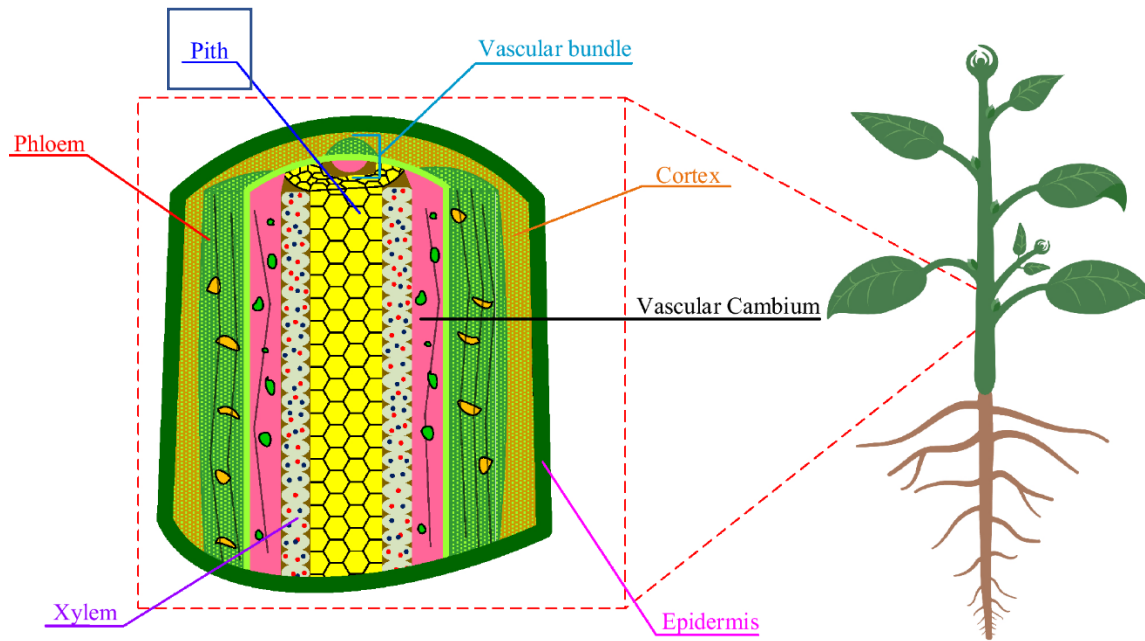


Refers to whether a single leaf (simple) or multiple leaflets (compound) originate from a single bud

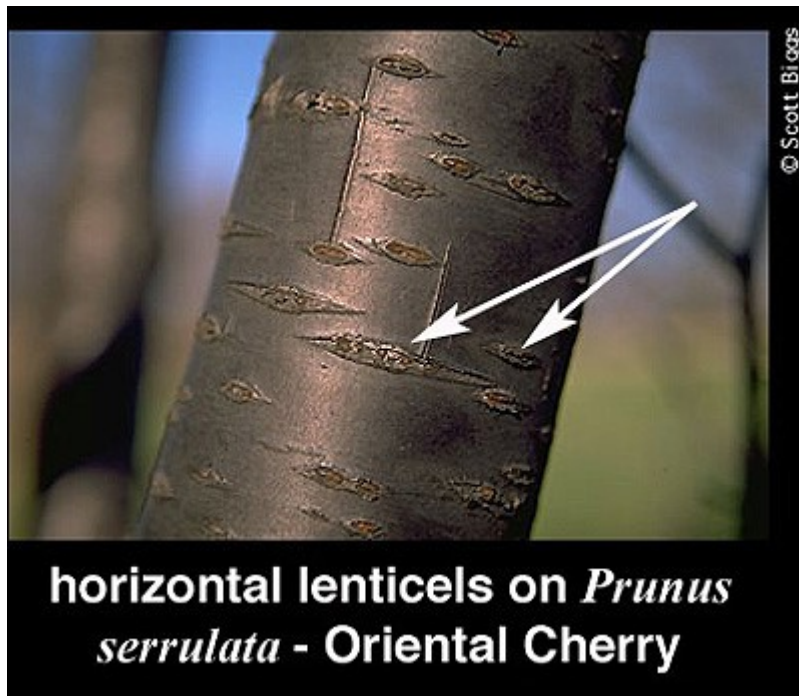


PARTS OF THE LEAF			
			
leaf	petiole	blade	midrib vein
			
side veins	stipules	margin	apex

Pith: Center of a stem or root used for transporting/storing nutrients



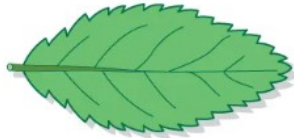
Lenticels: openings within the bark/stem of a plant which allow for increased gas exchange



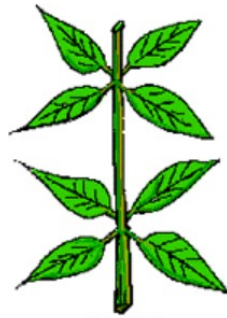
Leaf shape:



smooth



toothed



Whorled



lobed



Leaves come in a variety of different shapes, including entire (smooth-edged), serrated (toothed, or double-toothed), lobed (leaves with either rounded or pointed protrusions)