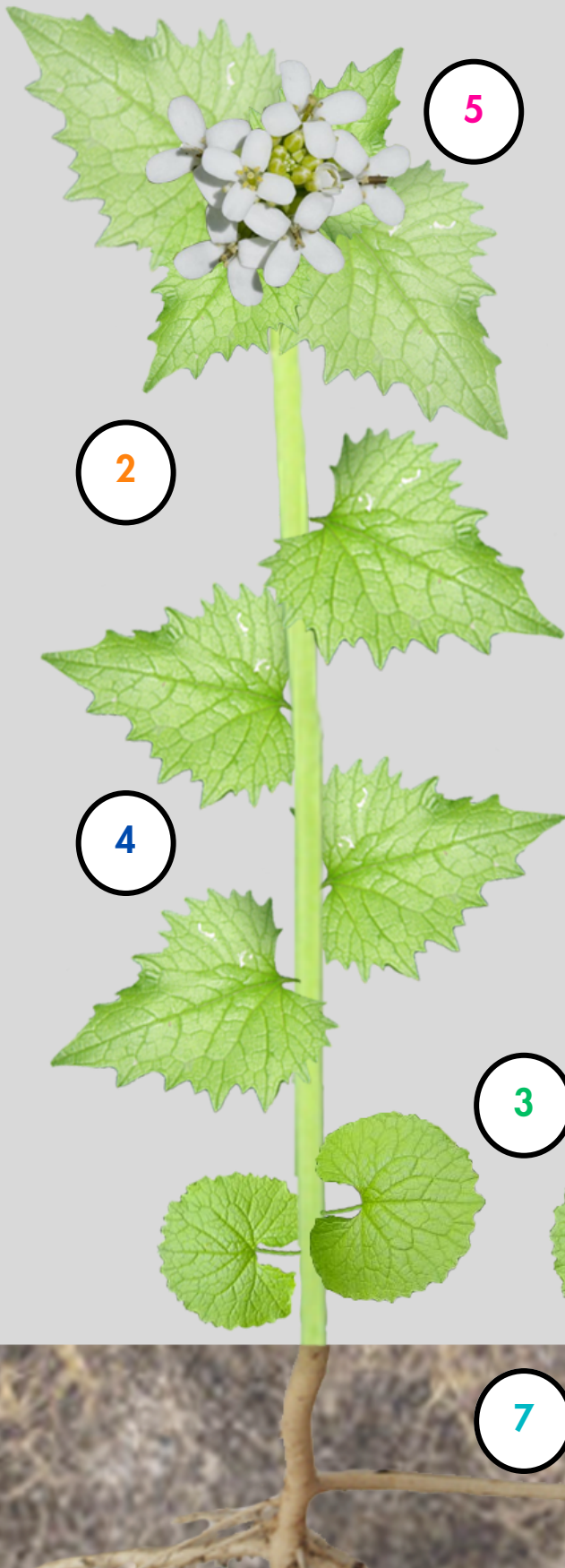


Garlic Mustard



Garlic Mustard (*Alliaria petiolata*) is a species of herbaceous plant native to Europe, introduced into the US during the early 1800s. It invades the forest understory, decreasing plant and animal biodiversity.

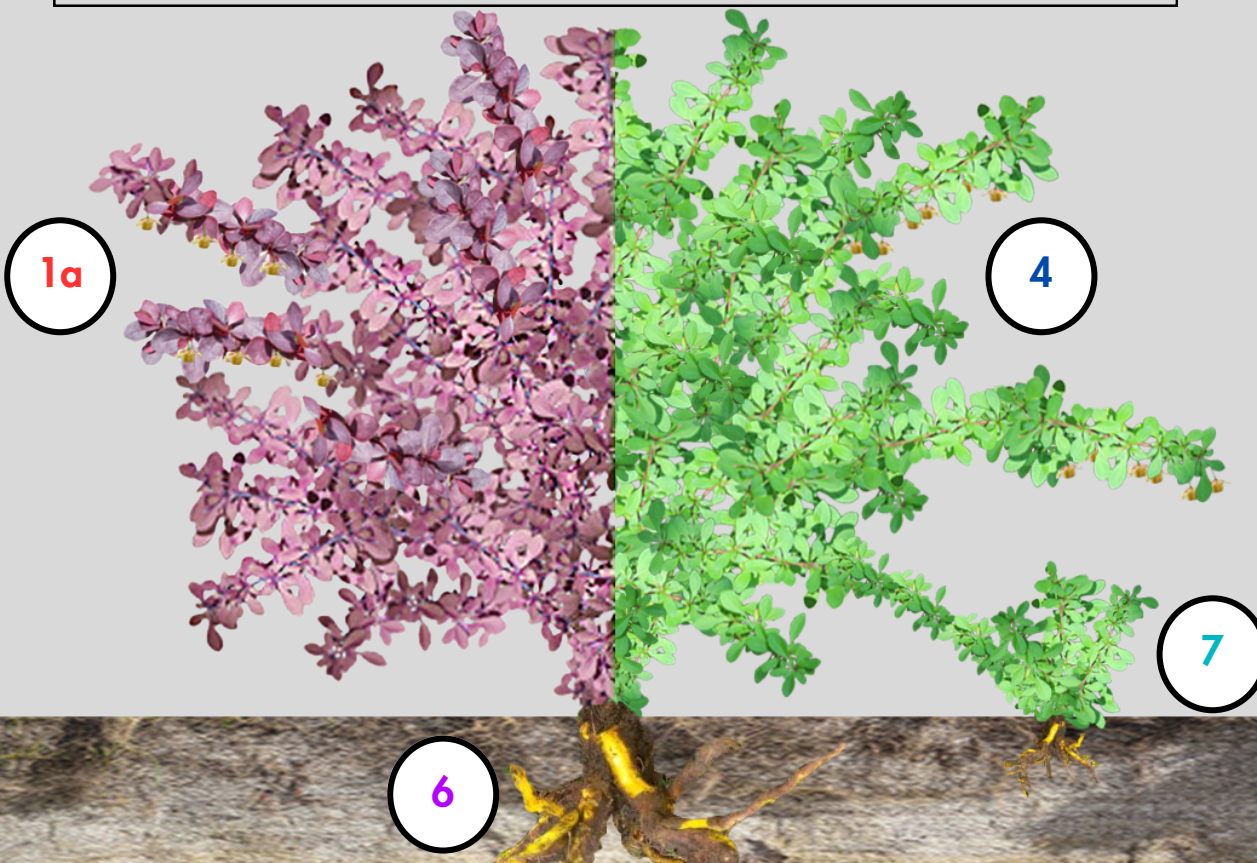
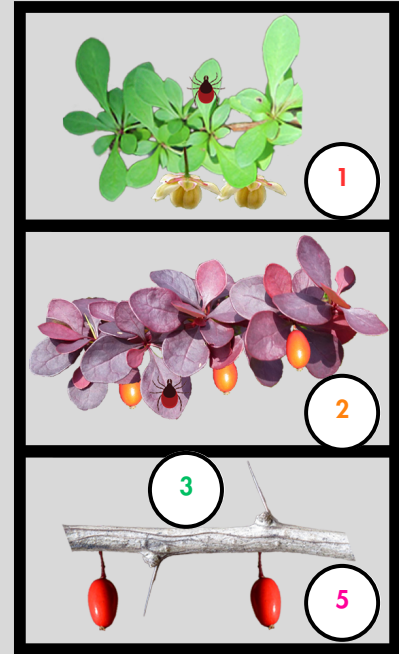
- ***A. petiolata* produces chemicals** and bitter toxins that poison the surrounding soil and protect itself against herbivores. It spreads prolifically because the chemicals prevent the growth of native plants in the surrounding area.
- ***A. petiolata* is a biennial herb** with a shorter first-year (0-1') ground-level stage (#1) and a taller second-year (2-3') rosette-flowering stage (#2).
- **The leaves** have scalloped edges and are kidney-shaped (#3) on the first-year rosette and triangular-shaped (#4) on the second-year stem.
- **White four-petaled flowers** bloom at the top of the stem (#5) in late April - May in the second year and produce seeds in May - July.
- **Long seedpods** form (#6) at the top of the plant during its second year and disperse seeds when touched.
- **Shallow S-shaped roots** anchor *A. petiolata* in place and will regrow the plant from the root base if the stem is damaged (#7).
- **Remove the plant** before it flowers or seeds. Pull straight up from the bottom of the stalk to dislodge the roots. Dispose of the plant in a large garbage bag instead of compost to prevent the possibility of reseeding.



Japanese Barberry

Japanese Barberry (*Berberis thunbergii*) is a thorny bush native to Japan, introduced to the US in 1875 to create large thickets on property lines for privacy. *B. thunbergii* forms dense thickets with arching stems that can create new growth when the branch touches the ground. *B. thunbergii* outcompetes native plants, is tolerant to most soil and light conditions, and can provide a haven for Lyme-carrying ticks due to its dense foliage and supply of berries for infected mice.

- ***B. thunbergii* have thick spoon-shaped leaves** (1.5") with smooth edges. The leaves are green/purple during the spring and summer (#1, #1a) but turn maroon/red in the fall (#2).
- ***B. thunbergii* stems have simple spines** that line each branch and protect the plant from herbivory (#3). The American Barberry (*Berberis canadensis*) which is a native *Berberis* species has three thorns per cluster.
- ***B. thunbergii* blooms in April** with groups of 2 - 4 yellow and white bell-like flowers that hang along the branch (#4). The flowers of *B. canadensis* bloom in a raceme orientation (attached to a single stem).
- **Red oblong berries** (#5) form in July and will stay on the plant through the winter until the berries are eaten or fall from spring foliage. These berries are toxic to humans and pets but edible to rodents that can carry Lyme.
- **Roots are thick**, orange in coloration, and form a right angle under the soil (#6). Cloned plants can sprout from preexisting roots or through layering (#7).
- **To remove *B. thunbergii***, cut the plant stem close to the ground before it flowers or fruits to stunt its growth. Remove any branches and new growth seasonally to weaken the roots. Remove the roots from the ground and place all stems and sprouts away from the soil.





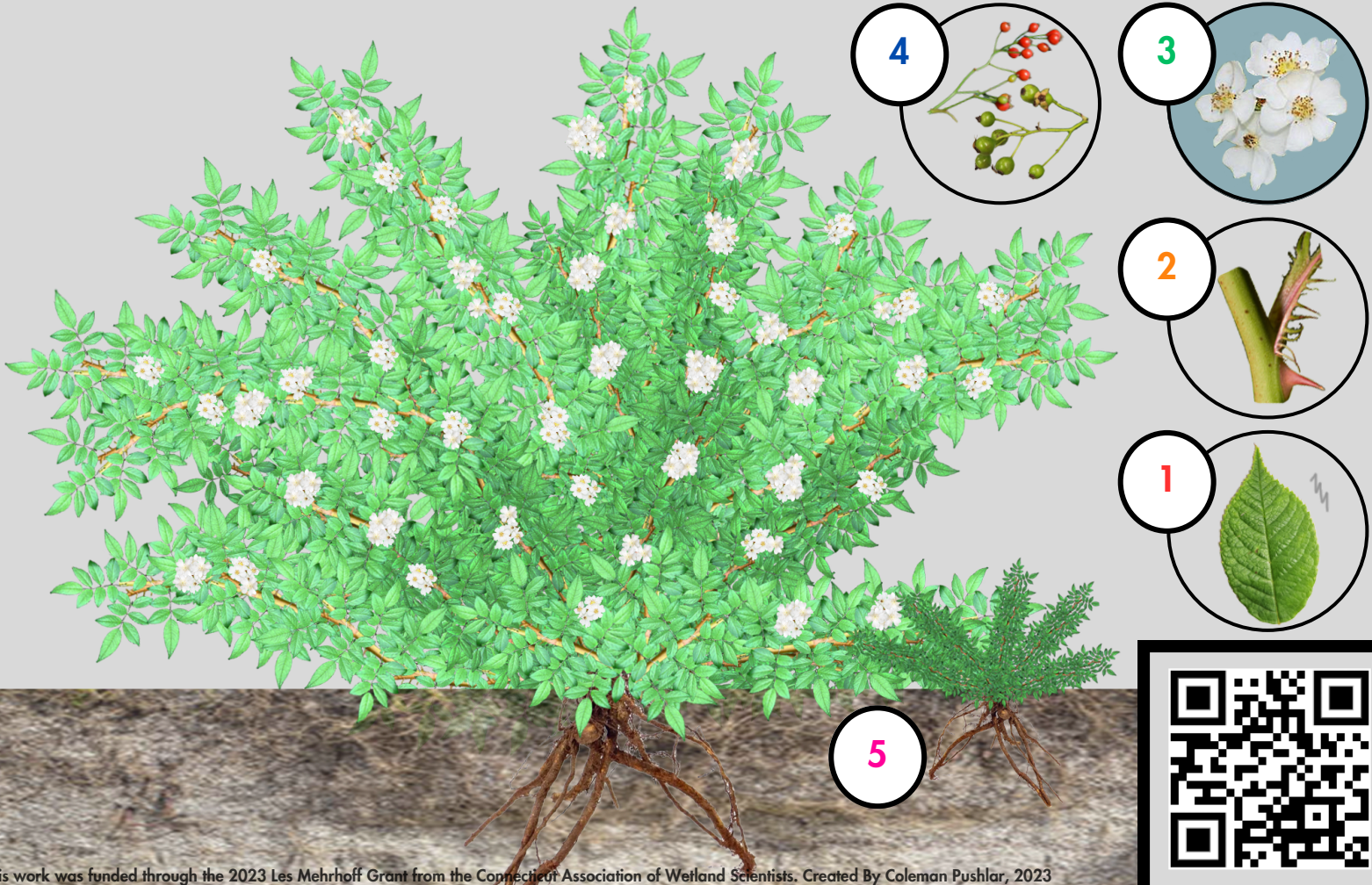
NORTHWEST
CONSERVATION
DISTRICT
www.nwcd.org

Invasive Plant Diagram

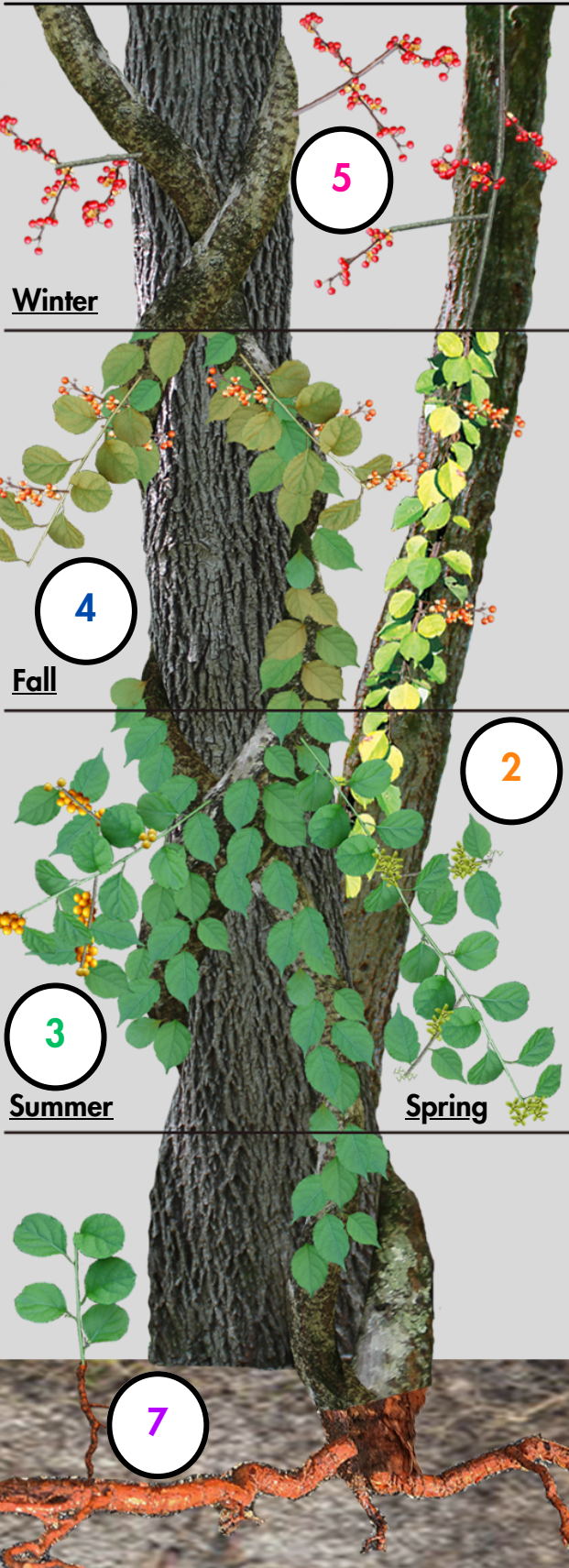
Multiflora Rose

Multiflora Rose (*Rosa multiflora*) is a woody rose shrub native to Japan, introduced into the US in the early 1800s for soil erosion control, pasture fencing, and oriental planting. *R. multiflora* forms dense thickets that displace native plant species, prevent animal travel, and cover the forest floor and edges with thorns.

- ***R. multiflora* produces millions of seeds**, has asexual reproduction with arching stems (roots on branches), tolerates cold temperatures, survives in most light and soil conditions, and grows at a rate of 1 - 2 ft each week to reach a height of 10 - 15 ft and 9 - 13 ft across.
- ***R. multiflora* have pinnate compound leaves** with an odd number of leaves on each stem. Leaves are serrated (toothed) and spear-shaped with hairs on the underside (#1).
- ***R. multiflora* have fringed stipules** (spikes) (#2) at the base of each leaf group and thorns that line the mature plant stems. The younger stems are green, while the older stems become brown with a layer of bark.
- **Between May and June** white/pink five-petaled flowers (#3) bloom in small groups of 2 - 3 thus the name multiflora.
- ***R. multiflora* produces green oblong berries** (#4) in June, which become noticeable as they turn red into the winter.
- **Roots are deep within the soil**, with new sprouts forming when arching stems touch the ground (#5) in a process called layering.
- **To remove *R. multiflora***, cut near the stem base, cover the stump with a tarp to block light, and remove any arching stem roots from around the plant. Remove new shoots until *R. multiflora* is weak enough to be pulled from the ground with a chain or shovel. Do not leave any roots or branches touching the ground.

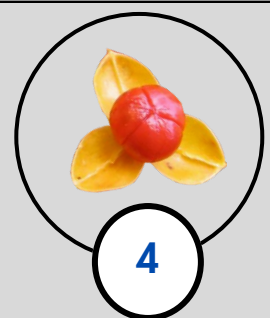
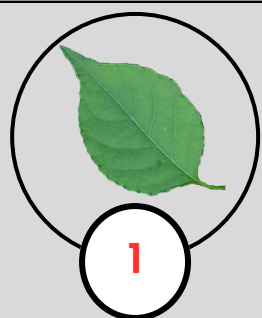


Oriental Bittersweet



Oriental Bittersweet (*Celastrus orbiculatus*) is a woody vine native to China, Korea, and Japan, introduced into the US during the 1860s as an ornamental plant. *C. orbiculatus* is a fast-growing plant that sprouts in early spring and climbs trees and other tall objects to search for sunlight.

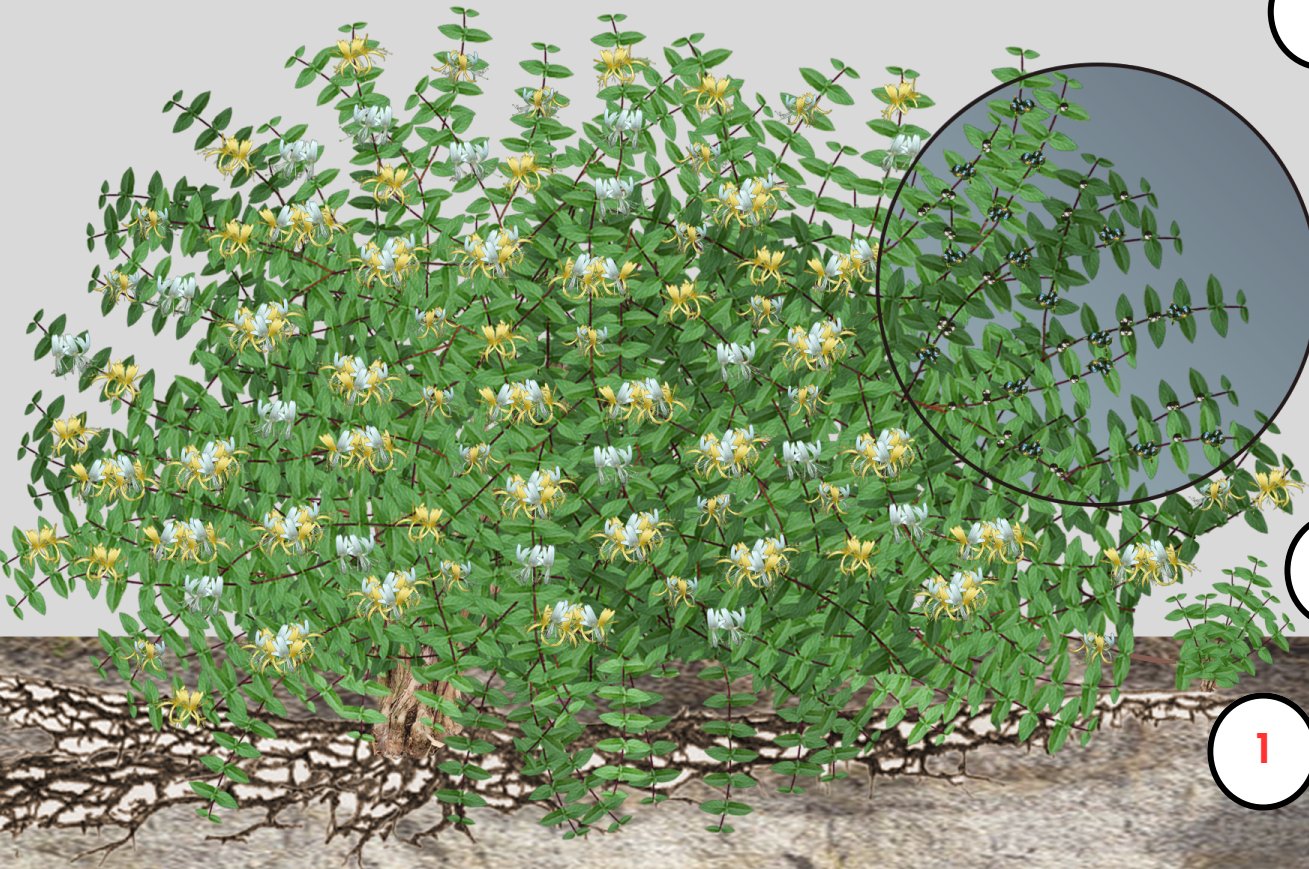
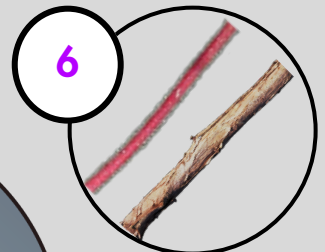
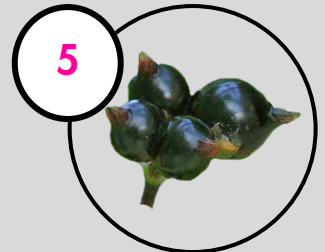
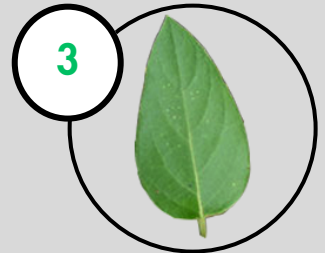
- **The berries** are edible to a few species of birds but are toxic to pets and people. *C. orbiculatus* girdle and weaken trees while climbing, leaving the tree susceptible to ice, wind, and insects. Vines can grow over 100 feet tall, 5 or more inches in diameter, and weigh hundreds of pounds on a tree.
- ***C. orbiculatus* have rounded-ribbed leaves (#1)**, some with an elongated point, that line the vine and branches in an alternate orientation. The leaves are green during spring and summer but turn yellow and brown before other plants in the early fall.
- ***C. orbiculatus* have greenish-yellow five-petaled flowers (#2)** at the base of each leaf, along the plant's extended branches. American Bittersweet (*Celastrus scandens*) have white flowers at the end of each offshoot instead.
- **Smooth green-yellow berries (#3)** appear at the end of the summer season. In the fall months, the berry shells open to reveal a shiny red color (#4). (Only for the female plant)
- **The stem is woody** and has a cracked fishnet texture (#5) that wraps and leaves indentations on the branches and trunks of trees.
- **The roots are orange** and spread horizontally within the soil (#6). *C. orbiculatus* can vegetatively sprout from their roots (#7) if the plant is cut or damaged above the surface.
- **To remove *C. orbiculatus***, cut once at eye level and another near the vine base. Use a weed wrench to pull roots up and out of the ground, or continue to remove all reappearing stems to weaken roots.



Japanese Honeysuckle

Japanese Honeysuckle (*Lonicera japonica*) is a semi-evergreen deciduous twining vine/bush native to eastern Asia. It was introduced to the US in 1806 for soil erosion control and as an ornamental plant.

- ***L. japonica* covers and chokes vegetation**, absorbs remaining water/nutrients from the ground, and prevents native plant species growth. *Lonicera* spread through rhizomes (#1) and nodes (#2) along the vine length, allowing it to anchor to a different location.
- **In the US**, *L. japonica* can grow 30ft each year in warm tropical climates, but climate changes have allowed it to grow in northern temperate zones.
- ***L. japonica* has short-stemmed**, paired glossy green football-shaped leaves (#3) that extend along the vine. Their leaves change to lavender and brown in the fall and may drop in colder winters.
- **The flowers** have an irregular trumpet-like appearance with five total white petals (#4). These flowers bloom from April - July, then change into a creamy yellow color.
- ***L. japonica* produces small round berries** in late summer that change from green to blue-black (#5) going into fall. These berries are toxic to people and pets.
- **Young *L. japonica* stems** are reddish and fuzzy, while mature stems are brown and have a wood texture (#6).
- **The roots** can be 6-12 inches deep and extend laterally by almost 8 feet from the stem.
- **To remove *L. japonica***, use pruners or a saw to cut close to the base of the plant before it flowers or fruits, remove all leaves and vines from the area, and place them into a garbage bag. Remove the roots using a weed wrench or pull straight up from the base.


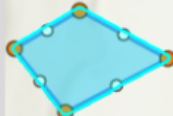



Once you Find an Invasive

Document your invasive species findings on Survey123. Surveys help the NWCD map outbreaks and removal programs.

NWCD INVASIVE SURVEY LINK



- SCAN LINK TO OPEN SURVEY
 - OPEN LINK IN BROWSER OR APP
 - TYPE NAME, EMAIL, DATE, AND TIME
 - SPECIFY INVASIVE SPECIES AND QUANTITY
- SKETCH
AREA:
1.  CLICK
 2.  PLACE POINTS
 3.  CLICK OK
- TAKE PHOTOS AND CLICK SUBMIT

We need your help to fight against these invasive species to protect our CT wilderness.

FOR MORE INFORMATION ABOUT
INVASIVES VISIT THE WEBSITE



**NORTHWEST
CONSERVATION
DISTRICT**
www.nwcd.org

NWCD RESOURCES LINK



This survey is for invasive plants and insects for the Northwest Conservation District. Funding for this survey was through the 2023 Les Mehrhoff Grant from the Connecticut Association of Wetland Scientists.