

Stop the Invasion! - Three Rivers Park District

Your assistance is needed in the war against invasive plants!

Invasive: An alien plant species (non-native) that is capable of rapid spread into relatively undisturbed natural communities and that, once established, causes adverse ecological impacts within the invaded community. Their introduction does or is likely to cause economic or environmental harm or harm to human, animal, or plant health.



Infested area of Oriental Bittersweet (*Celastrus orbiculatus*)
<http://www.mda.state.mn.us/plants/badplants/orientalbittersweet.aspx>

Invasive plants are a major threat on a national scale. In the United States, about 3 million acres are lost to invasive plants each year (twice the area of Delaware). The economic cost of invasive plants is estimated at more than \$34 billion per year, and the costs continue to grow. Now is the time to act to reduce the threat of invasive plants in our region.

Prevention, as well as early detection and rapid response, are the first line of defense against new introductions. The sooner invasive plants are detected, the easier and more probable it is to control or eradicate them. This is where we need YOU! Will you join the front lines of our defense team?

Please join in the battle by learning to identify invasive plant species and report new sightings. The main objective is to further document new threats of invasive plant species. See attached directions for submitting sightings and a species **"Watch List"** that includes terrestrial plant species that have been either rarely documented within the Park District at low levels or found in nearby areas.

More abundant and wide spread invasive species such as Buckthorn, Honeysuckle, Canada Thistle, and Garlic Mustard are being prioritized for control through different methods. Please only report new threats and avoid submission of already highly infested areas. If in doubt please feel free to contact Missy.Anderson@threeriversparks.org.

DO NOT report Poison Ivy, as this species is native and would not be considered a new threat at this time.

How to report NEW invasive plant species found within Three Rivers Park District:

So, you are pretty sure you have found an invasive plant that is new to the Park District. Now the question is how to report it. Photos and an email with a description are always great, but there is a tool available to everyone that makes this process much easier. EDDMapS is a nation-wide program designed to promote early detection and mapping of invasive species. The reporting process is outlined below and with just a few mouse clicks (or taps on a smart phone – yes there are smartphone apps too!) you can submit your observations. The best thing about EDDMapS is that you submit location information along with your report, which makes field verification much easier. Once you report something it gets channeled to me and in this way we can maintain one site for all invasive species reports for the Park District.

Visit: <http://www.eddmaps.org/midwest/> for information about smart phone app for the Midwest, EDDMapS Midwest/GLEDN and various training documents.

Please visit the following website: <http://www.eddmaps.org/>

Invasive Species Mapping Made Easy!

Register for an account: (instructions here <https://bugwoodcloud.org/CDN/eddmaps/tools/EDDMapSweb.pdf>)

The image shows a screenshot of the EDDMapS website's registration page. The page has a green header with the EDDMapS logo and navigation links: Home, Report Sightings, Distribution Maps, Species Information, Tools & Training, My EDDMapS, About, Login, and Register. The main content area is a white box titled "Register" containing the following form fields:

- *First name**: First Name
- *Last Name**: Last Name
- Organization**: Organization
- Email address**: Email
- Verify Email address**: (Re-enter Email)
- *Password**: Password
- *Verify Password**: (Re-enter password)
- Unit / Department**: Unit / Department
- Phone Number**: Phone Number


Once signed on the next page will ask you to select a **State/Area**, here you can select Minnesota, which once selected will bring you to the **“Report an Invasive Species Occurrence”** page.

Start by first selecting the species by typing in the name (either common or scientific) and a drop down should appear allowing you to select the species you are reporting. Proceed to enter as much information as possible in all fields.

You can enter location information by manually entering coordinates or once you select the county you can use the Google Map window to move the marker to the observation location.

****Make sure to drag the red marker to the location of the observation****

Switching to satellite view will also help you to further confirm the location once further zoomed in:

<input type="text" value="06/10/2016"/>	<input type="text" value="0.059"/> acres
Gross Area (?) : <input type="text" value="Select One"/>	Habitat (?) : <input type="text" value="Select One"/>
Canopy Closure (?) : <input type="text" value="Select One"/>	Abundance : <input type="text" value="Select One"/>
Plant Description:	
<input type="checkbox"/> Mature <input type="checkbox"/> Sapling/Immature <input type="checkbox"/> Seedling/Rosette <input type="checkbox"/> In Flower <input type="checkbox"/> In Fruit <input type="checkbox"/> Seeds <input type="checkbox"/> Dormant/Dead <input type="checkbox"/> Unknown	
Location	
State: <input type="text" value="Minnesota"/>	County: <input type="text" value="Hennepin County"/>
Site Name (?) : <input type="text"/>	
Latitude (?) : <input type="text" value="45.0284113669142"/>	Longitude (?) : <input type="text" value="-93.44092547893524"/>
<small>Must be expressed in Decimal Degrees (XX.XXXX), and DATUM NAD83/WGS84.</small>	<small>Must be expressed in Decimal Degrees (XX.XXXX), and DATUM NAD83/WGS84.</small>
<input type="button" value="lat/long conversion tools"/>	<input type="button" value="place marker at position"/>
<input type="button" value="clear map"/>	
Location Description/Nearest Address:	
<input type="text"/>	
Ownership: <input type="text" value="Select One"/>	
<small>* If reporting infestation on private land, be sure to have landowner's permission.</small>	
Private (?) : <input type="radio"/> Yes <input checked="" type="radio"/> No	
	

Images

If more than one plant or small patch of plants is present, a polygon can be drawn to represent the infested area.

Pictures are highly encouraged to help with identification of all entries. Be sure to include your name in the **“Additional Information”** section along with you job title/department and any comments. If you do want follow up confirmation please include this request in this section.

Once everything is completed to the best of your knowledge you will then need to hit **“Submit Report”** at the bottom.

Please identify as a Three Rivers Parks District Volunteer **ONLY** when sites are found on Three Rivers Parks District property. If using GLEDN app, you can enter this information under **“Notes”** or set **“User Group”** to Three Rivers Park District in your profile.

Early Detection is Key to Success!

Please patrol for these "Watch List" Species:

Porcelain berry (*Ampelopsis brevipedunculata*)

Brown knapweed (*Centaurea jacea*)

Meadow knapweed (*Centaurea moncktonii*)

Yellow star thistle (*Centaurea solstitialis*)

Black swallow-wort (*Vincetoxicum nigrum*)

Grecian foxglove (*Digitalis lanata*)

Common teasel (*Dipsacus fullonum*)

Cutleaf teasel (*Dipsacus laciniatus*)

Giant hogweed (*Heracleum mantegazzianum*)

Japanese hops (*Humulus japonicus*)

Diffuse knapweed (*Centaurea diffusa*)

Houndstongue (*Cynoglossum officinale*)

Giant knotweed (*Fallopia sachalinense*)

Dalmatian toadflax (*Linaria dalmatica*)

Poison hemlock (*Conium maculatum*)

Please map new sites of these species when found:

Japanese barberry (*Berberis thunbergii*)

Common barberry (*Berberis vulgaris*)

Narrowleaf bittercress (*Cardamine impatiens*)

Oriental bittersweet (*Celastrus orbiculatus*)

Wild parsnip (*Pastinaca sativa*)

Common tansy (*Tanacetum vulgare*)

Japanese hedge parsley (*Torilis japonica*)

Winged burning bush (*Euonymus alatus*)

Autumn olive (*Elaeagnus umbellatum*)

Orange hawkweed (*Hieracium aurantiacum*)

Plumeless thistle (*Carduus acanthoides*)

Black locust (*Robinia pseudoacacia*)

Japanese knotweed (*Fallopia japonica*)

Amur cork tree (*Phellodendron amurense*)

Porcelain berry, also known as Amur peppervine, is a new invader to Minnesota. It is a deciduous, woody perennial vine originally from Northeast Asia in the temperate regions of Japan, Korea, and China. This woody vine grows well in most soils, especially forest edges where there is full sunlight to partial shade. The vines are able to climb up trees and shrubs shading out native vegetation by forming a dense blanket of growth. In spite of its aggressiveness in some areas, it is still used in the horticultural trade due to its colorful berries. These fruits attract birds and other small animals that eat the berries and disperse the seeds in their droppings. This species has not been detected within Three Rivers Park District but sightings have been confirmed in the metro area.



Flowers: Inconspicuous, greenish-white flowers bloom in clusters opposite the leaves. Bloom time June through August.

Stem/Bark: Young twigs hairy, stems smooth with lenticels and older bark is ridged and furrowed.

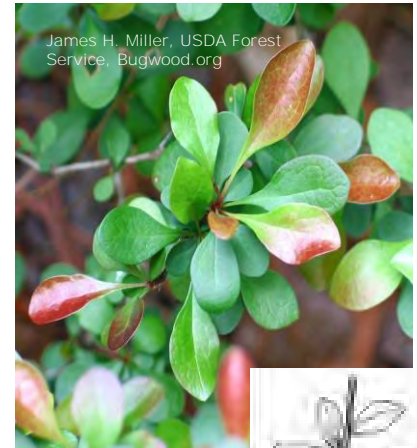
Fruit: Appears in September-October and are colorful, shiny clustered berries and are a range of colors from pink to purple to blue with white and gray spots; flesh is white.

Leaves: Climbing tendrils opposite of dark green leaves – shapes vary from heart to palmately lobed to dissected.

Similar species: Native grapes (*Vitis* spp.) are also woody vines but with shredding bark when mature. **Stem pith is brown compared to porcelain berry's white pith and the fruit of native grapes are green, black, or purple and watery.**

Characters at a glance: Woody vine with tendrils that has simple, alternate, dark green leaves. Have hard, small fruits with a crackled or speckled appearance resembling porcelain.

Japanese barberry is a small woody shrub that usually grows to about two to three feet tall and whose native range is throughout Japan. It has a very sharp spine at each node along its arching stems and can grow in almost any type of habitat. Once established, barberry can form dense stands displacing native plants and reducing wildlife habitat and forage. White-tailed deer avoid browsing barberry, preferring to feed on native plants. This shrub was introduced as an ornamental and is still widely sold today. Three Rivers Park District has confirmed sizeable infestations at Lake Rebecca, Carver & Murphy-Hanrehan Park Reserves with isolated sites reported from other parks in the District.



Flowers: Yellow-white flowers are about one third of an inch wide, and are solitary or in small clusters of 2-4 blossoms. Bloom time is May-June.

Fruit: The bright-red fruits mature in mid-summer and hang from the bush during autumn into winter. The berries are small, oblong, and found singly or in clusters.

Leaves: The smooth-edged leaves range from oval to spoon-shaped and are clustered in tight bunches close to the branches. The single spines bear small leaves in their axils.

Similar species: Can be confused with two other types of barberry, such as European barberry (*Berberis vulgaris*).

European barberry
(*Berberis vulgaris*)
Noxious Weed



Narrow-leaf bittercress, also known as bushy rock-cress, is a new invader to Minnesota. The plant is a biennial plant in the mustard family that grows in moderately sunny to densely shaded areas. This invasive bittercress has been primarily found in woodlands near the Mississippi River in St. Paul. Because this plant can germinate in water, it uses rivers to transport viable seeds long distances. Has been located within Three Rivers Park District, there are large populations at Lake Rebecca along the bike paths and new reports from Hyland and Silverwood.



Flowers: Small (0.1 inch), white 4-parted flowers. White petals may not be present. Bloom time May to August.

Stem: Erect and smooth and hairless (glabrous).

Fruit: Similar to other mustard family members, seed pods are long and slender. Seed ripens from May to September and is dispersed short distances from plants.

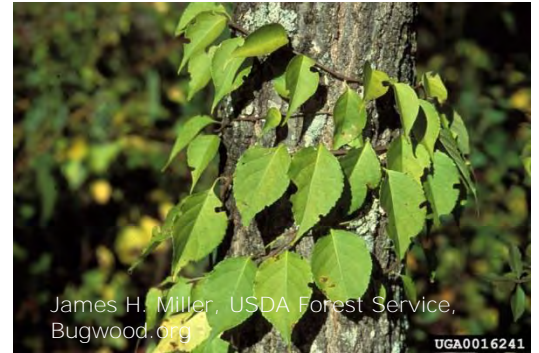
Leaves: Basal rosette leaves are pinnately compound with 3-11 round lobed leaflets. Alternate leaves on flowering stems, while still pinnately compound, likely will not have rounded lobes but 6-20 lance or arrowhead shaped leaflets. Edges of flowering stem leaves may be smooth or sharply toothed.

**A distinctive characteristic can be found at the point where leaves attach to stems, look for narrow pointed ears (auricles) that grasp and may extend beyond stems.

Similar species: This species also resembles sand bittercress and Pennsylvania bittercress. Other *Cardamine* spp. do not have auricles.

Characters at a glance: compound leaves with toothed or lobed leaflets; extensions of leaf base straddling stem (auricles present).

Oriental bittersweet is originally from the temperate regions of Japan, Korea, and China. This woody vine grows best in full sun but easily germinates in low light, making it capable of invading a wide variety of habitats. It forms a mat that can completely cover existing vegetation displacing native plants. Oriental bittersweet girdles trees that it climbs, which can eventually kill the tree, making its effect on forests devastating. Infestations have been found at Elm Creek, Lake Rebecca, Crow Hassan, Baker, Carver and Mississippi Gateway within Three Rivers, and along Rush Creek and Dakota Rail Regional Trails.



Flowers: Axillary (located where leaves attach to the stem). Greenish and very small, 3-4 per cluster. Usually male and female flowers on separate plants. Bloom May to early June.

Stems: Medium brown to brown **striated bark, can reach 4" in diameter.** Roots are bright orange.

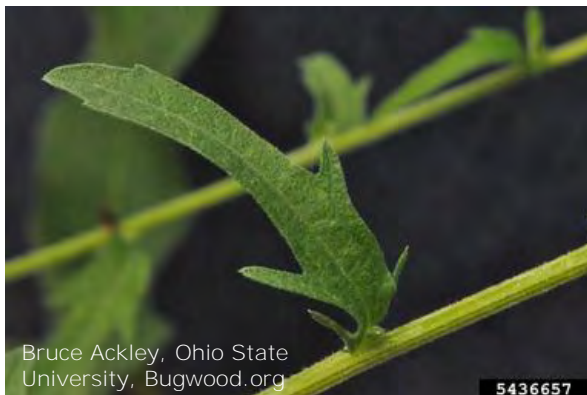
Fruit: Round and change in color from green to yellow/orange as they mature. Once ripe, the outer covering (capsule) opens to show fleshy red berry (aril) in fall. Female plants produce fruits clustered in leaf axils which persist through winter.

Leaves: Alternate, simple, vary in shape from oblong to almost round. Leaf size is also variable from **2-5" long to 1.4-2" wide.** Leaf margins have rounded teeth. Leaves retained late into fall.

Similar species: Oriental bittersweet is related to the native, American bittersweet (*Celastrus scandens*) and the two plants are similar. One characteristic that can be used to distinguish between the two is the position of flowers or fruits on the stem. American bittersweet has flowers and fruits that form only at the tips of branches; Oriental bittersweet, has flowers and fruits that are in smaller clusters in the leaf axils all along the length of the stem. The American bittersweet flowers are whiter in color and have yellow anthers/pollen, while Oriental bittersweet flowers are greener with paler creamy white anthers/pollen.

Characters at a glance: climbing woody vine with simple, alternate leaves; yellow and red fruit in the fall.

Brown knapweed is a perennial plant in the Aster family with a woody root crown that grows 20 to 48 inches tall, branching near the top. Brown knapweed prefers moist, cooler conditions than other knapweed species. It can be found growing in grasslands, open woods, meadows, pastures, woodland clearings, and in cutover areas of forest. Plants can tolerate partial shade. Brown knapweed is native to Europe and currently reported from Northern Minnesota.



Stem: Ridged and may have purple stripes

Flowers: The brown bracts of the inflorescence give this plant its common name. Bloom time is from June to October, when rose to purple flowers appear in 1-1.25 in. wide, solitary heads at the tips of the branches.

Fruit: Brown knapweed produces small light brown, plumeless seeds; about 12 per head.

Leaves: simple, alternate, green foliage typically has a wavy, entire margin (no lobes on leaf edge). Basal leaves or lower 1/3 of the plant may have lobes or teeth near the base of the lance-shaped leaf and are larger than the lance-shaped leaves above.

Similar species: Compare to other invasive knapweeds listed; meadow, spotted, and brown. These 3 plants fall in what is often referred to as the knapweed complex. Suggestion is to concentrate on what is spotted knapweed – otherwise leave identification to a botanist. Can be distinguished by knapweed bract tips; meadow – long fringe; spotted – dark tip, short fringe; brown – brown, tan papery edge.

Characters at a glance: branched stems, each with solitary, terminal purplish head of flowers.



Three Rivers

PARK DISTRICT

Meadow knapweed, from Europe, is a perennial hybrid of black and brown knapweeds. The upright stems grow from 20 to 40 inches tall and branch near the middle. Primarily reproduces by seed, but root and crown fragments can re-sprout when disturbed. Seeds are carried in rivers, streams, in hay or by vehicles along roadsides. Meadow knapweed out competes native plant and pastures species and reduces available forage for wildlife and livestock. Found mostly in Northern Minnesota, with reports as far south as Pine County.



Flowers: Pink to purple, $\frac{3}{4}$ inch wide flowers are solitary and terminal to stems. Bracts beneath flower heads are light brown, fringed (appearing insect-like) becoming coppery and shiny at maturity. Bloom time June to September.

Seed: Small ($\frac{1}{8}$ inch) light brown seeds are topped by a small line of short hairs.

Leaves: Simple, alternate, dark green color, basal leaves/lower stem leaves are un-lobed (maybe shallow lobes, or toothed) and up to 6 inches long by 1 inch wide. Farther up the stem, leaves are small and linear.



From left to right, heads of brown, meadow and black knapweed with bract details.
Illustration by Cindy Roche

Similar species: Compare to other invasive knapweeds listed; meadow, spotted, and brown knapweed. These 3 plants fall in what is often referred to as the knapweed complex. Suggestion is to concentrate on what is spotted knapweed – otherwise leave identification to a botanist. Can be distinguished by knapweed bract tips; meadow – long fringe; spotted – dark tip, short fringe; brown – brown, tan papery edge.

Characters at a glance: branched stems with relatively showy solitary, terminal purplish heads of flowers.

Yellow star-thistle, a member of the knapweeds, is a strong invader. Due to a lack of tufting on some seeds, reliance is on animals and humans for movement any distance from parent plants. It is an annual plant that grows 2 to 3 feet tall and is **toxic to horses causing "chewing disease"**. Introduced from the Mediterranean region, it has adapted to a wide range of habitats and environmental conditions. Not yet detected in Minnesota, but found in small numbers in Wisconsin, South Dakota, and Iowa.



Flowers: Approximately 1 inch long flowers with substantial $\frac{3}{4}$ inch yellowish spines emanating from bracts beneath flowers. Flowers are terminal and solitary on stems. Bloom time is June to August.

Seed: Each terminal flower produces between 35-80 plumeless or plumed seeds.

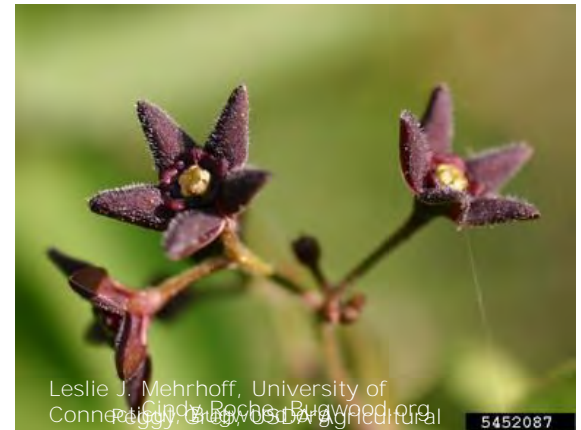
Leaves: Basal leaves are lobed, dandelion-like at about 8 inches. Plants start as a biennial or winter annual with a basal rosette the first season. Mature plants are described as bushy with a grayish or bluish cast to otherwise green color.



Similar species: Yellow star thistle rosettes can resemble dandelions with deeply lobed leaves and species in mustard family. May need the plant to bolt for positive ID, but once bolted, look for winged (flattened) stems, with gray green foliage. Once the plant has flowered, the spiny bracts make it hard to mistake for anything else.

Characters at a glance: branched stems with solitary, terminal yellow heads of flowers with spiny bracts.

Black swallow-wort is an herbaceous, perennial vine, **growing up to 7'.** It grows unbranched and twining. A member of the milkweed family, it is the only family member in Minnesota has a vining habit. Long distance wind dispersal of seeds can begin in late July and seed viability is potentially 5 years. This plant prefers full sun in upland soils. Currently not reported within Three Rivers Park District but has been sighted in Hennepin and Ramsey County.



Flowers: Clustered small (1/4 inch) dark purple flowers with five downy petals. Bloom time is June to July.

Seed: Slender pods, taper to a point. Pods are described as milkweed-like and at maturity split open to release flattened seed carried on the wind by downy, filamentous fibers.

Leaves: Opposite, shiny and dark green foliage has a smooth (toothless) edge terminated by a pointed tip. Leaves are somewhat oval at 3-4 inches long by 2-3 inches wide.



Similar species: Bittersweets (*Celastrus* spp.) have alternate leaves and distinct fruit. Greenbriers (*Smilax* spp.) have very prickly vines; honeysuckles (*Lonicera* spp.) have distinct flowers and typically smaller, hairy leaves.

Characters at a glance: opposite leaves; small dark flowers; fruit a slender pod, vine.

Grecian foxglove is an herbaceous, perennial beginning its first year as a basal rosette with a single flower stalk from 2-5 feet tall in subsequent years. Each flower produces numerous seeds that are viable for up to four years. Small winged seeds are easily transported by birds, animals, human activity as well as wind and water. **All parts of the plant are poisonous to humans and livestock in both fresh and dried forms.** Grecian foxglove is listed as a Prohibited-Eradicate noxious weed in Minnesota, and currently reported in Dakota, Hennepin, Washington and Wabasha County.



Flowers: Many tubular flowers attached to a central stalk (raceme) with bloom progression from the bottom to the top of the stalk. Flowers have a brown or purple veined upper hood and a creamy-white, elongated lower lip. Bloom time is June to July.

Seed: Seed capsules are 2-parted and split to release tiny reddish-brown seed with 3-4 years viability. The hook-covered seed pods are easily caught on clothing or fur.

Leaves: Alternate, smooth, stalkless upper leaves with toothless edges are narrow (lance-shaped). Basal leaves are more oval with rounded tips and are densely woolly.

Similar species: Grecian foxglove is often mistaken for common mullein (*Verbascum thapsus*) when dry and the common garden foxglove (*D. purpurea*). Common mullein grows much taller, has large spear-like leaves that are covered in hairs, and has bright non-tubular yellow flowers. Garden foxglove looks similar to Grecian but lacks woolly hairs on the stem and flower calyx, in addition to exhibiting a more diverse range of flower colors.

Characters at a glance: Alternate, lance-shaped leaves with a stalk of numerous whitish, tube-shaped flowers.

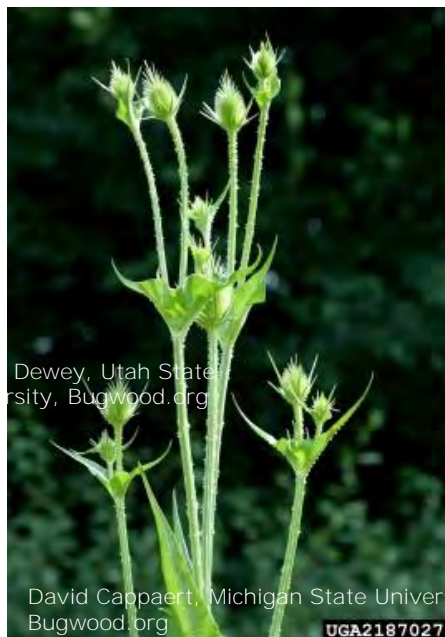
Common teasel, herbaceous, monocarpic perennial (plant dies after bearing fruit), first identifiable as a basal rosette. At maturity 2-7 feet tall with erect, ridged and prickly stems. The plant creates a substantial tap root, up to 24 inches long by 1 inch wide at the crown. Each flower head can produce upwards of 2000 seeds with germination success of 30-80%. Common teasel is listed as a Prohibited-Eradicate noxious weed in Minnesota, and currently reported in Winona, Wright, Nobles, Hennepin and Mower County.



Flowers: Many small white to lavender purple flowers, 4-parted and irregular. Flowers arranged in a dense, cylindrical head up to 4 inches tall and 1½ inches wide. Stiff and spiny flower bracts may be taller than flower head. Bloom time is June to October.

Seed: Each floret or small flower produces one capsule containing a grayish-brown, slightly hairy seed.

Leaves: On upright stems-opposite, stalkless (sessile), cup-forming, up to 12 inches long by 3 inches wide, hairless, yellowish to reddish-green, lance-shaped with a wavy edged margin. Central leaf vein forms a whitish line on top with stout prickles below.



Similar species: Cutleaf teasel (*Dipsacus laciniatus*) has deeply lobed leaves and white flowers, but is otherwise very similar to common teasel.

Cutleaf teasel is an herbaceous, monocarpic perennial (plant dies after bearing fruit), first identifiable as a basal rosette. Matures to 2-7 feet tall with erect, ridged and prickly stems. **Cutleaf teasel is a threat to Minnesota's pastures and natural areas, native to Europe, introduced in 1700s for both industrial and ornamental purposes.** The fabric industry placed teasel on spindles then spun fabrics across to raise the nap of fibers. Cutleaf teasel is a Prohibited-Eradicate noxious weed and has been reported in 13 counties, including the metro area.



Flowers: Many white to lavender purple flowers, 4-parted and irregular. Dense, cylindrically clustered heads up to 4 inches tall and 1½ inches wide. Spiny, stiff flower bracts are not taller than the flower cluster. Bloom time is July to September.

Seed: Each floret or small flower produces one capsule containing a grayish-brown, slightly hairy seed.

Leaves: On upright stems-opposite, stalkless (sessile), cup-forming, up to 12 inches long by 3 inches wide, hairless, lance-shaped, lobed with sinuses cut almost to the midrib. Prominent leaf vein with stout prickles below.

Similar species: Cutleaf teasel (*Dipsacus laciniatus*) has deeply lobed leaves and white flowers, but is otherwise very similar to common teasel.

Giant hogweed is an herbaceous, biennial giant at 10-15 feet tall (potentially 20 feet). When flowering the second year, 2-4 inch hollow stalks are a mottled reddish-purple with sturdy bristles. **Plant sap causes severe photo dermatitis, with severe blistering and swelling.** A single flower head can produce upwards of 1500 seeds. Despite not being present in Minnesota, this is a Prohibited-Eradicate noxious weed with the closest occurrences currently in WI and MI.



Flowers: Large, flat umbels of small white florets together creating massive displays up to 2½ feet in diameter.

Seed: Seed is large, flattened, with visible brown resin canals.

Leaves: Alternate, up to 5 feet across, compound leaves with 3 deeply incised (cut) leaflets which may be further divided. The leaf stalks, underside of leaves and stems are covered with coarse white hairs.



Similar species: *Angelica (Angelica atropurpurea)*, which has a smooth, purple stem, rarely exceeds 8ft tall, and has round, white flowers. Cow parsnip (*Heracleum lanatum*) rarely exceeds 6 ft and has a flat flower cluster 1 ft. wide and palmately lobed leaves. Hairs on the underside of its leaf are soft, wavy, shiny, and about 1 mm long. **Leaves of cow parsnip are not deeply incised and can reach 2.5' across.**

Japanese hop, is an herbaceous, annual vine (twines counter-clockwise) trailing on the ground or climbing vegetation and infrastructure. Stems are covered with downward pointing prickles. Unlike, common hops, a related species, Japanese hops are not utilized for beer production. This Prohibited-Eradicate noxious weed is mostly in Southeastern MN and the goal is to eradicate infestations before Japanese hop vines spread and become a serious weed issue in the rest Minnesota.



Flowers: Male flowers and female flowers are on separate plants. Flowers are small and greenish to reddish, not showy. Male flowers are branched clusters (panicles) while the female flowers are drooping structures that are rather plump and composed of overlapping reddish bracts or scales (hops). Bloom time is July to August.



Seed: Single flattened seeds from each female flower. Each inflorescence produces several seeds that mature in September.

Leaves: Opposite, 2-5 inches long and almost as wide, with 5-7 (maybe 9) palmate lobes. Leaves are rough and edges are toothed. Two bracts (stipules) are at leaf stalk bases and the leaf stalks (petioles) are as long, or longer than the leaves. Compare to common hops; typically 3-lobed occasionally 5.

Similar species: Common hops (*H. lupulus*) are similar but have more rounded leaves with 0-3 lobes and are perennial. Sometimes bur cucumber (*Sicyos angulatus*) and wild cucumber (*Echinocystis lobata*) are mistaken for Japanese hops, but can be distinguished because they do not have hooked, downward-pointing hairs on the leaves and stems and have tendrils on the stem.

Dalmatian toadflax is a short lived herbaceous perennial up to 4 feet tall. Base may be woody and plant is often branched with waxy stems and leaves. Native to the Mediterranean region it was introduced as an ornamental to the west coast of North America in late 1800s. Infestations in Minnesota are mostly in the northwestern part of the state. Currently not reported in Three Rivers Park District.



Flowers: Erect spike-like racemes of yellow flowers with orangey center markings. Flowers are 1-1½ inches long with slender spurs extending downward from the back. Bloom time is May to September.

Seed: On average 140-250 winged seeds are contained in ½ inch long pods.

Leaves: Alternate leaves 1-3 inches in length clasp stems, are wider and more heart-shaped than similarly flowered butter-and-eggs (*L. vulgaris*).



Similar species: Butter-and-eggs (*Linaria vulgaris*) is similar in appearance, but has more linear pointed leaves, and is generally a smaller plant.

Wild parsnip is an herbaceous plant native to Europe and Asia. This plant is a perennial that typically grows to heights of 4 to 6 feet tall and reproduces by seed. Seeds are spread by animal and human activity or wind and water movement. Wild parsnip is highly invasive and can out compete native vegetation, creating large monocultures and displacing native animal and plant habitat. **This plant is harmful to humans if the skin comes in contact with the plant's sap in the presence of sunlight.** Currently the park district has known infestations of this Prohibited-Control species in all Park Reserves except Crow-Hassan, as well as several Regional Parks and trails.



Flowers: Many 5-petaled, small yellow flowers on wide, flat umbels of 2 to 6 inches. Bloom time is June to July.

Leaves: Basal rosette leaves can be 6 inches in height and are pinnately compound with 5-15 leaflets. Flowering stalk leaves are alternate, 2-5 leaflets that become smaller near the top of the stem. Leaflets are coarsely toothed, sinuses cut to varying depths creating lobes of various sizes. The base of the leaf stalks wrap or clasp the grooved stem.

Caution! Use protective clothing, goggles or face mask, contact with the sap of the plant can cause phytophotodermatitis - severe blistering and swelling when combined with exposure to sunlight.

Similar species: Compare to native golden alexanders (*Zizia* spp.) which have smooth, shiny stems compared to the grooved stem of wild parsnip.

Characters at a glance: Yellow flat umbel flower with grooved flowering stalk potentially reaching 5 feet.

Common tansy is an herbaceous, perennial reaching 2-5 feet in height. Native to Europe and Asia this plant was introduced to the United States as a garden plant and for medicinal purposes. It can spread into pastures, reducing overall pasture productivity because animals are reluctant to eat it. Common tansy is prevalent throughout the northern ½ to ¾ of Minnesota and continues to spread to the Iowa border. Minnesota does have the plant listed as a Prohibited – Control noxious weed; efforts must be made to prevent seed maturation and dispersal of plants into new areas. Smaller infestations have been reported throughout Three Rivers Park District.



Flowers: Single stems support multi-branched, flat clusters of bright yellow button-like flowers. Each ¼ - ½ inch wide button is comprised of many small florets and the flower heads, like the leaves, are strongly aromatic. Bloom time is July to October.



Leaves: Alternate, pinnately divided, toothed on edges and 2-12 inches long, typically smaller near the top of plants. Leaves are strongly aromatic when crushed.

Caution! The alkaloids contained in common tansy are toxic to livestock and humans if consumed in quantity. Toxins can also be absorbed through skin so gloves are recommended when handling or pulling this plant.

Similar species: Compare to native goldenrods (*Solidago spp.*) which have ray flower petals and common tansy lacks ray petals surrounding the flower heads.

Characters at a glance: stems appear woody, alternate, aromatic, fern like leaves, and yellow button flowers lacking typical ray petals.



Three Rivers PARK DISTRICT

Japanese hedge parsley is a biennial herb that grows 2-4 feet tall when flowering in its second year. This plant threatens woodland and savannas. It tends to spread very quickly in areas high in human or animal traffic due to the fact that the fruits grab hold of nearly any fabric and any hairy appendage which happens to be exposed. This species is abundant in Wisconsin and has been found in the metro area and is in Lake Rebecca, Hyland and Elm Creek Park Reserves.



Dan Tenaglia, MissouriPlants.com, Bugwood.org

5350085



Dan Tenaglia, MissouriPlants.com, Bugwood.org

5350082

Flowers: Flowers are tiny and white, growing in small, open, flat-topped umbels. Has 2 or more bracts at base of each umbel. Blooms in July and August.

Seed: The small fruit, ripens quickly, and is covered in hooked hairs that attach to clothing and fur.

Leaves: First year plants have low-growing, parsley-like rosettes that stay green until late fall. Second-year leaves are alternate, compound, fern-like, 2-5 inches long and slightly hairy.



Dan Tenaglia, MissouriPlants.com, Bugwood.org

5350083

Similar species: Queen Anne's lace or wild carrot (*Daucus carota*; non-native)—a widespread weed in Wisconsin—has similar finely-divided leaves, but leaves and stems are quite hairy and when crushed smell like carrots. Other look-alikes include wild chervil (*Anthriscus sylvestris*; invasive), caraway (*Carum carvi*; non-native), poison hemlock (*Conium maculatum*; invasive), Chinese hemlock parsley (*Conioselinum chinense*; native), sweet cicely (*Osmorhiza* spp.; native) and spreading hedge parsley. Spreading hedge-parsley (*Torilis arvensis*; invasive) is not currently known in Minnesota, but nationally is more common than *T. japonica*. It looks very similar to Japanese hedge-parsley but lacks the pointed bracts at the base of each umbel.

Japanese knotweed is a semi-woody perennial with hollow, bamboo-like stems. It rapidly grows and spreads to form a thick, dense hedge that can reach a height of 10 ft. Seed production does not always occur, but shoots arise from rhizomes that form an extensive underground reservoir, making this plant extremely difficult to eradicate. Commonly planted as an ornamental, it is most aggressive in riparian areas, but can occupy a variety of disturbed habitats where light levels are high. Several varieties, cultivars, and a hybrid with giant knotweed exist. Both Japanese and giant knotweed are listed as a Specially Regulated noxious weeds in Minnesota. Japanese knotweed is currently reported from many counties in the state, including the metro area. There are isolated sites in Baker and Elm Creek Park Reserves.



Flowers: **small (1/8" across)** whitish to pinkish tubes with 5 petals. Male and female flowers are sometimes separate. The flowers are arranged in a branching cluster/spike arising from the leaf axils. Bloom time is late August- September.

Seed: Seed production uncommon. Female/perfect flowers produce a small greenish-tan, winged structure, each with a single 3-angled shiny, black-brown fruit that is less than 1/4-inch long.

Leaves: Alternate along the stem with smooth margins and mostly hairless surfaces. The leaves are 3 to 6 inches long and 2 to 4 1/2 inches wide. Leaves are broadly oval shaped with pointed tips and flattened bases. Leaf stalks are long and often have pinkish hues like the stem.



From left: Japanese, Bohemian, giant knotweed



Photo: Clackamas County SWCD

Similar species: *F. sachalinensis*, or giant knotweed, is similar but grows taller and has much larger leaves. The base of the leaf in giant knotweed is rounded and more heart shaped, while in Japanese knotweed it is flatter. Giant knotweed is documented in N. and SE MN. There is a hybrid between Japanese knotweed and giant knotweed, called *Fallopia x bohemica* or Bohemian knotweed which has intermediate characteristics; thus far it is limited to a few sites in MN.

Orange hawkweed is an herbaceous perennial that grows from a basal rosette of hairy leaves. It produces one or more nearly leafless stems up to 24 inches in height that are topped with one or a cluster of dandelion-like orange flower heads. The leaves, stem and bracts of this plant have noticeable long hairs. This native of Europe can invade open areas, disturbed sites and roadsides by rapidly spreading and forming a colony from runners, underground stems and seed. The largest infestations of this plant in the state are in Northern Minnesota; Elm Creek, Crow-Hassan and Baker Park Reserves have populations that are actively being treated.



Flowers: The flower heads are often in a cluster of up to 7 heads. The heads are less than an inch wide and are made up of numerous bright orange flowers. The bracts surrounding each flowering head are covered with long, glandular hairs. Bloom time is June-August.

Seed: Each flowering head produces 12-30 columnar fruits that are small and dark, topped with a tuft of white bristles. Seeds remain viable in soil for up to 7 years.

Leaves: Are mostly basal, 2 to 6 inches long and 1 inch wide with a smooth edge and tip that is either pointed or rounded. The stem may have 1 or 2 smaller leaves with alternate attachment. The leaves are covered in long white hairs



Field of meadow and orange hawkweed

Similar species: When not flowering, orange hawkweed does resemble other invasive (non-native) hawkweeds, such as meadow hawkweed (*Hieracium caespitosum*). There are also several hawkweeds that are native in Minnesota and these can be differentiated by tendency to occur as single plants, not colonies and leafy stems.

Autumn olive is a multi-stemmed woody shrub that grows up to 20 feet tall. In the past, this Asian-native was commonly planted for wildlife. It is an abundant fruit producer, and can germinate and grow in both sun and shade. Beyond shading out natives and reducing diversity, as a nitrogen fixer, this plant can degrade entire plant communities that are adapted to low nutrient levels. Although listed in other states, it is not listed as a noxious weed in Minnesota. The largest known infestations of this plant at Three Rivers are in Crow-Hassan, Lake Rebecca and Baker Park Reserves, but it has also been mapped at Elm Creek and Hyland.



Flowers: The flowers hang in clusters of 1-8 from the leaf axils. Flowers are fragrant, cream to yellow-colored, and funnel-shaped up to ½ inch long with 4 pointed petals. The buds and flower stalks are covered in pale scales. Bloom time is May-June.

Seed: The fruit is fleshy -oval-shaped, berry-like and covered with scales. It is less than ½ inch long and ripens to a red color in the fall. Each fruit holds a single seed.

Leaves: Alternate, 1 to 3 inches long and 1 inch wide with a smooth, wavy edge and blunt tip. The leaves have silvery-white and brown scales on both surfaces and are silvery underneath.

Similar species: Resembles close relative, non-native Russian olive (*Elaeagnus angustifolia*), which more of a tree form, has narrower leaves that are silvery on both sides and larger, yellow fruits. In the same family, Buffaloberry (*Shepherdia canadensis*) is a native shrub that has opposite leaves.

Poison hemlock is a biennial herbaceous plant that grows up to 8 feet tall in its 2nd year. It is native to Europe and **all portions of the plant are highly poisonous to humans and livestock**. An abundant seed-producer, it can form dense patches that displace native vegetation. This plant can be found in open habitats with low-lying wet areas like ditches, pastures and along streams. Poison hemlock is Prohibited-Eradicate noxious weed in Minnesota. There are known infestations of this plant in 16 counties in MN, including the metro area. To date it has not been found at Three Rivers Park District.



Flowers: White flat clusters or umbels with 5 petals of unequal size. Bloom June to August. Plants can reach 3 to 8 feet. Has multiple clusters of flowers per stem.

Stems: Main stems are green with purple spots. Stems can persist through the winter.

Seed: Small oval shaped pods covered with ridges.

Leaves: Fern like leaflets make up 2-3 times compound leaves that are triangular in shape.



Similar species: Queen Anne's lace or wild carrot (*Daucus carota*; non-native)—a widespread weed in Wisconsin—has similar finely-divided leaves, but leaves and stems are quite hairy and when crushed smell like carrots. Other look-alikes include wild chervil (*Anthriscus sylvestris*; invasive), caraway (*Carum carvi*; non-native), Chinese hemlock parsley (*Conioselinum chinense*; non-native), sweet cicely (*Osmorhiza* spp.; native) and spreading hedge parsley.

Amur cork tree is a medium sized dioecious tree species, whose female plants can produce 1000s of seeds. It is native to Asia and was brought over for use as boulevard and yard trees. It is a threat to native woodlots because of its allelopathic ability which suppresses native tree and shrub regeneration. It has been show to decrease oak and hickory regeneration due to its competitive nature. It can grow in either full sun or densely shaded areas. Currently it has only been found in Carver Park Reserve but is a species to look out for.



Photo Credit: James M



Leaves: opposite and pinnately compound with 5-11 leaflets, dark green color. Crushed leaves give off turpentine smell
Leaf scars are horseshoe shaped.

Bark: Outer bark has a corky or spongy texture and is light gray. Inner bark is bright yellow.

Fruit: pea-sized fruits that turn from green to black.



Similar species: Black walnut (*Juglans nigra*; native) similar compound leaves but walnut is alternate, fruit is a large nut not a drupe. Butternut (*Juglans cinerea*; native) similar leaves but is alternate with fuzzy buds. Smooth and staghorn sumac, (*Rhus glabra* and *Rhus typhina*; native) similar leaves but sumacs will typically be smaller in diameter and height when full grown.

