



North Country
Cooperative
Invasive Species
Management
Area



Fighting Invasives, Protecting Assets, Restoring Habitats

Serving the counties of
Lake, Mason, Missaukee, Osceola and Wexford

Quick Reference ID Guide to High Priority Invasive Species

This project was funded in part with funds from the Michigan Invasive Species Grant Program through the Departments of Natural Resources, Environmental Quality, and Agriculture and Rural Development

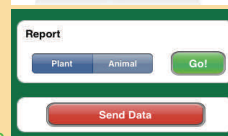
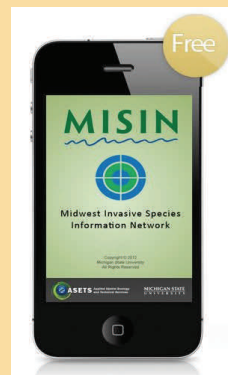
Help NCCISMA protect nature for future generations in our five-county region: Lake, Mason, Missaukee, Osceola, and Wexford, by reporting all invasive species found to www.misin.msu.edu/report or through the free MISIN smartphone app.



Once you download the free MISIN app, register for an account online at <http://www.misin.msu.edu> and you are ready to start reporting!

- Open the app
- Click on "Plants" or "Animals"
- Click "Go!"
- Select habit of species you are reporting
- Select species
- Click "Report Presence"
- Estimate area and density
- Take a picture
- Click "Save"

When you are done reporting for the day click "Send Data" from the Home page of the app.



Visit the NCCISMA webpage at www.NorthCountryInvasives.org
Call NCCISMA at (231) 429-5072

Stop Invasive Phragmites Spread!



Habitat

Invasive phragmites grows in wetlands, roadside ditches, stream/river banks, lakeshore edges, and other wet areas. Pulling, cutting, mowing, or burning may increase the rate of spread of this plant! Call for help with identification and control.

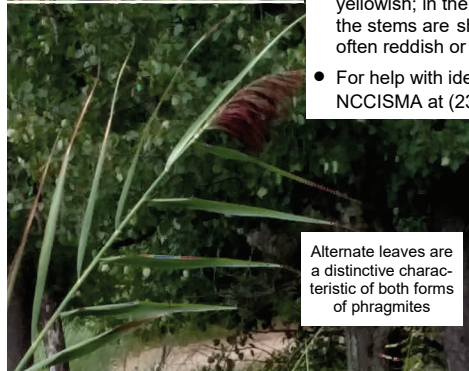
Description

- Huge grass 6-13 feet tall
- Leaves attached alternately up the stem
- Dull, yellowish-green in color
- Large flowering heads at the end of each stem appear purplish at first, but turn light brown and fluffy after dropping seeds
- Holds flowers through winter
- Spread by seeds, and rhizomes - below ground stems that sprout new plants
- Even small rhizome fragments broken off (e.g., with pulling), grow into new plants
- Forms dense single species stands
- ID complicated because it is similar to native phragmites (see reverse)



Leslie J. Mehrhoff, Bugwood.org

Invasive phragmites has 2,000 seeds per seed-head



Alternate leaves are a distinctive characteristic of both forms of phragmites

Native vs. Invasive Phragmites

- Invasive phragmites forms very dense stands. The native variety has sparsely scattered stems.
- When dry, the sheaths (leaves wrapped around stems) of native phragmites pull off easily, whereas on the invasive plant they hold more tightly.
- The stems of invasive phragmites are dull and often yellowish; in the native variety, the stems are shiny and are often reddish or purple.
- For help with identification call NCCISMA at (231) 429-5072.



Invasive phragmites

Leslie J. Mehrhoff, Bugwood.org



Small fragments of roots broken off or left from pulling can grow new plants and cause spread

Leslie J. Mehrhoff, Bugwood.org

Look For & Report Flowering Rush!



Habitat

Flowering rush usually grows in waters less than 10 feet deep. It tends to inhabit wetlands along rivers and lakes, and can also grow in ditches with persistent standing water. It clogs waterways and is known to harbor the snails that host the swimmer's itch parasite. Be sure to report immediately if found!

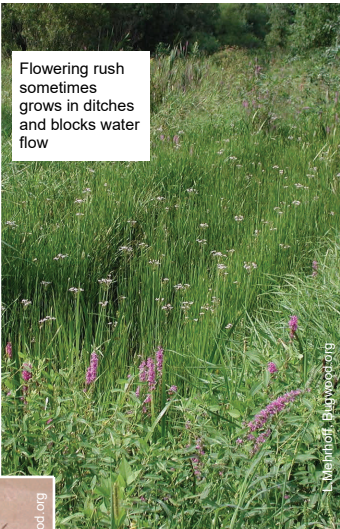
Description

- Stout grass-like plant
- Leaves of flowering rush are triangular like a sedge
- Flowering stems are round like a rush
- Triangular leaves tend to be twisted toward the upper tip
- 3/4" to 1" pink flowers resemble tiny lilies
- Flowers grow in a cluster at the end of stems
- bloom time is mid-summer
- Roots are rhizomes with vegetative bulbils that can break off and form new plants
- Hard to ID when not in bloom - Call NCCISMA if in doubt: (231) 429-5072



Seeds can float and stay viable for a long time

John M. Randall, TNC, Bug-



Flowering rush sometimes grows in ditches and blocks water flow

L.Mehrhoff, Bugwood.org

L.Mehrhoff, Bugwood.org



DNR Wildlife Division



Roots form bulbils that break off and sprout new plants

L. Mehrhoff, Bugwood.org



Suzan Campbell

Leaves of flowering rush are triangular in cross section (left) and sometimes grow in a spiral (right)



Keep Baby's Breath off the Landscape!



Shaun Howard, TNC

Habitat

Baby's breath occurs in sunny, sandy locations, primarily on lakeshores, dunes, prairies, and barrens. It also occurs on sandy roadsides, in ditches, and along railroad embankments. Sometimes planted as an ornamental in flower gardens, it is known to escape cultivation and colonize disturbed sites.

Description

- Multitude of tiny white/pink flowers
- The same plant you know from commercial floral shop bouquets, corsages, and boutonnieres
- Greyish-green foliage and narrow, pointed leaves
- Related to carnations, it has the same type of stems, jointed at the leaf axils
- Stems tend to break off and roll in the wind, disbursing the seeds
- A single baby's breath plant produces up to 14,000 seeds!
- Roots can grow 12 feet deep



Seed packs are still sold in Michigan!
Please do not plant this!!



Dave Dister

The stem is attached to the taproot four inches below the soil. Removal of the plant requires severing the plant from the root far below this.



Dave Dister

Prized for its pretty little flowers, after their peak the plants are an eyesore on the landscape.



Dave Dister

Portion of tap-root

Be on the Look-out for Knotweed!



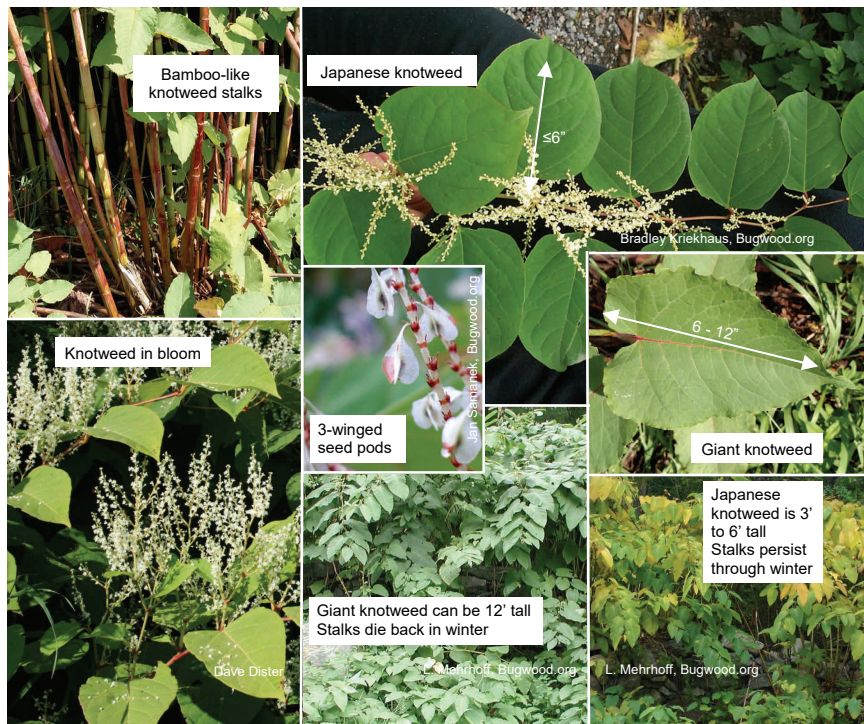
Tom Heutte, USDA Forest Service, Bugwood.org

Habitat

Sometimes called Michigan bamboo, Japanese and giant knotweed are found in home landscaping and fencerows on farms. The knotweeds are known to invade natural areas from these purposeful plantings. These plants can tolerate a variety of moisture and soil types, and sunny to shady conditions.

Description

- Stems look like bamboo - they are round and rigid and usually about 3/4" in diameter
- Stems have swollen nodes that separate hollow chambers within the stem
- Stems sometimes have a mottled appearance
- Range in height from about 3 to 12 feet
- Simple leaves have a pointed tip and alternate up the stem
- Bloom late summer through fall
- Numerous greenish white flowers grow in clusters at the leaf axils and at stem ends
- Three-winged seed pods



Seek and Destroy Swallow-worts!



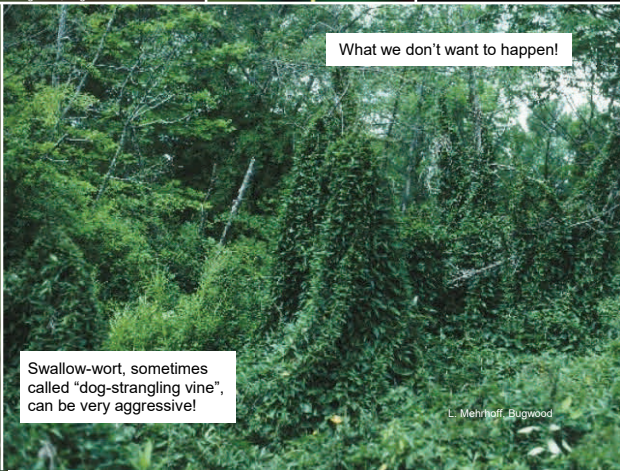
Habitat

Pale and black swallow-wort grow in a variety of light and soil conditions. They invade open prairies and farm fields but can also grow in shaded forests. Their roots emit substances that are lethal to other plants. Swallow-wort plants are known to be toxic to mammals, including livestock.

Description

- Seedpods resemble those of milkweed
- Grows as a vine
- Dark-green, narrow, waxy leaves grow opposite each other on the stem
- Leaves give off strong herbal scent when crushed
- Five-petaled flowers grow in small clusters in leaf axils (where leaves attach to the stem)
- Bloom time June-August
- Flowers give off mild rotting odor
- Narrow seed pods are 1 1/2" - 2 3/4" long
- Seed pods split open to reveal seeds and cotton
- Roots are rhizomes, meaning they can sprout new plants

H. Faubert, Bugwood.org



Catch European Frog-bit Early!



Habitat

European frog-bit is a floating aquatic plant that grows primarily in slow moving water. Infestations start along the edges of rivers, lakes, and wetlands, and are known to spread and cover large areas of shallow open water. It is also known to infest ditches and block drainage. European frog-bit can tangle in boat motors, inhibit fish movement, and block birds that dive for their food. There is no known effective control for large infestations, but it can be controlled if caught early. If found report immediately!

Description

- Forms dense, thick mats just below the water's surface.
- Above water portion of the plant resembles miniature water lilies
- Leaves are 1/2" - 2 1/4" wide
- Undersides of leaves are sometimes red/purple
- Blooms in mid-summer
- White flowers have three petals and a yellow center
- Spreads by stolons and turions (see reverse)

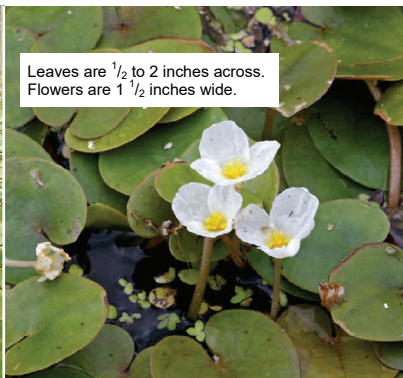


DNR Wildlife Division



Floating mats of frog-bit have a mass of tangled roots beneath.

DNR Wildlife Division



Leaves are 1/2 to 2 inches across. Flowers are 1 1/2 inches wide.

Christian Fischer



DNR Wildlife Division



One way frog-bit spreads is by stolons. These are shoots with baby plants on the ends -- just like what you see with spider-plants or strawberries.

Christian Fischer



Christian Fischer

Turions (above) are fertile buds that grow on the stolons at a rate of 100 per plant per year. They drop off in the fall and remain dormant until spring when they sprout into new plants.

Get Rid of Garlic Mustard!



Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Habitat

Garlic mustard often invades forests, where it can outcompete all native vegetation and form dense monocultures. Able to also grow in full sun, it is sometimes found in prairies and along roadsides. It spreads readily with disturbance along trails or due to road grading.

Description

- Distinctive garlic scent when leaves are crushed
- Small, white, four-petaled flowers in clusters
- Blooms late April through early June
- Long, skinny seed pods, 1 to 3 inches long, are opposite each other and numerous on the stem
- 1st year the plants form rosettes that stay low to the ground, with scalloped rounded leaves that resemble violets
- 2nd year plants have toothed leaves with pointed tips and grow from 2 inches to 3 feet tall
- Only 2nd year plants flower and produce seeds



Chris Evans, Bugwood.org



Chris Evans, Bugwood.org

Each seed pod contains about 16 seeds



Seedlings

Leslie J. Mehrhoff, Bugwood.org



First year rosettes have rounded scalloped leaves

Tom Heutte, Bugwood.org



Chris Evans, Bugwood.org



Pointy leaves on second year plant

Steven Katovich, Bugwood.org

Report These Forest Invaders!

Hemlock Woolly Adelgid

Kills hemlock trees from the bottom up

Infested trees look grayish & lose needles



J.M. Randall, Bugwood.org

Woolly tufts at base of needles present October to June & needed for positive ID

USDA Forest Service, Bugwood.org

Oak Wilt

Rapid loss of leaves in summer

Wilting occurs from top down

**DO NOT Cut or Prune Oak
April 15 - July 15**



J. O'Brien, Bugwood.org

Leaves bronze from tip to base

Joseph O'Brien, USDA Forest Service, Bugwood.org

Report Asian Long-Horned Beetle!

Insects seen late spring to fall
K.R. Law, Bugwood.org

Exit holes are perfectly round & larger than a pencil
Joe Boggs, Bugwood.org

Females dig pits on trees to lay eggs in
D. Haugen, Bugwood

There may be piles of sawdust at the trunk base or in branch crotches
PA-DCNR, Forestry, Bugwood.org

Sometimes sawdust hangs out of holes or cracks in the bark
K.R. Law, Bugwood.org

Adults feed on leaf veins and twigs
PA-DCNR, Bugwood.org

Dean Morewood, Bugwood.org

If any of these Forest Pests are Found or Suspected Report Immediately to Your Local Conservation District Forester or call 1-800-292-3939