



INVASIVE SPECIES

2022 CALENDAR

Minnesota Invasive Species Advisory Council

Advisory Council

This calendar was produced and distributed by the Minnesota Invasive Species Advisory Council (MISAC). MISAC is a statewide entity that:

- Promotes communication and cooperation among organizations involved in invasive species issues.
- Coordinates outreach on invasive species.
- Supports statewide and multi-state conferences related to invasive species issues.
- Supports trainings and field visits related to invasive species.
- Recognizes outstanding and noteworthy work related to invasive species and encourages such work through the Carol Mortensen Award.
- Advocates for research and management for the species and pathways deemed greatest risk.

The MISAC website (www.mninvasives.org) provides additional information about invasive species in Minnesota. This website is a gateway to invasive species information including species profiles, contact information for experts in Minnesota, and links to other related websites.

MISAC Mission Statement

To provide leadership to prevent the spread and reduce the harmful impacts of aquatic and terrestrial invasive species to Minnesota landscapes, economies, and the citizens of the State of Minnesota by promoting invasive species awareness, prevention, and management through research, education, and regulation in cooperation with local, state, tribal, and federal partners.



Invasive Species Threats

Invasive species are nonnative plants, animals, and pathogens that cause environmental damage, economic loss, or harm to human health. These pests can displace native species, harm habitats, and degrade natural, managed, and agricultural landscapes.

In addition to harming our natural resources, invasive pests can pose serious economic threats to major Minnesota industries such as agriculture, tourism, and forestry. Some estimates peg the economic damage of invasive pests in the U.S. at more than \$130 billion a year.

Public awareness and action are the keys to preventing the spread of invasive species. Please use the information in this calendar to help inform Minnesotans about the invasive species problem and how they can take action in the challenge to reduce invasive species spread and harm.

Find contact information for four agencies with invasive species responsibilities in Minnesota on the back of this calendar. These agencies, as well as other MISAC members, can provide informational products such as brochures, species identification cards, and videos about invasive species.

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The information contained in this document is current as of the date of publication. Because laws can change, it is important to check to see if there have been any changes or updates to applicable laws and regulations.

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888-646-6367 | 651-296-6157 | www.mndnr.gov

This information can be made available in alternative formats such as large print, braille or audio tape by emailing info.dnr@state.mn.us or by calling 651-296-6157.

Printed on recycled paper containing 10 percent post-consumer waste and vegetable-based ink. Minnesota-made paper.

Report Invasive Species

One of the keys for a rapid response to invasive species is the early identification of new occurrences. Please report occurrences of invasive species in Minnesota to the following:

- Minnesota Department of Agriculture (MDA) Arrest the Pest at: 888-545-6684 or arrest.the.pest@state.mn.us to report invasive plants, insects, or diseases such as Palmer amaranth, Asian longhorn beetle, gypsy moth, boxwood blight, and sudden oak death.
- Minnesota Department of Natural Resources (DNR) Invasive Species Program at: 651-259-5100 or 888-646-6367 to report invasive aquatic plants or wild animals such as Eurasian watermilfoil, zebra mussels, invasive carp, round goby, nonnative jumping worms, and mute swans.
- EDDMapS Midwest website or Great Lakes Early Detection Network (GLEDN) app at: www.eddmaps.org/midwest
- Or, as specified for individual species in this calendar.

MISAC Members

The Minnesota Invasive Species Advisory Council includes these members: 1854 Treaty Authority, Carver County Water Management Organization, Fond du Lac Band of Lake Superior Chippewa, Lake County Soil & Water Conservation District, Leech Lake Band of Ojibwe, Hennepin County Public Works, Meeker County, Metropolitan Mosquito Control District (MMCD), Minneapolis Park and Recreation Board, Minnesota Aquatic Invasive Species Research Center (MAISRC), Minnesota Association of County Agricultural Inspectors (MACAI), Minnesota Board of Water and Soil Resources (BWSR), Minnesota Department of Agriculture (MDA), Minnesota Department of Natural Resources (MN DNR), Minnesota Department of

Transportation (MN DOT), Minnesota Invasive Terrestrial Plants and Pests Center (MITPPC), Minnesota Nursery and Landscape Association (MNLA), National Park Service (NPS), St. Croix River Association, The Nature Conservancy, Three Rivers Park District (TRPD), University of Minnesota—Weed Science, University of Minnesota—Extension, University of Minnesota Sea Grant Program, U.S. Customs and Border Protection (CBP), U.S. Department of Agriculture—Animal Plant Health Inspection Service—Plant Protection and Quarantine (APHIS-PPQ), U.S. Department of Agriculture—National Resources Conservation Service (NRCS), U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), and Wildlife Forever.





DOG DETECTORS AND EDUCATORS

Photo: Minnesota Department of Natural Resources

JANUARY

What is the problem?

Invasive species can be difficult to detect. If they are not found and removed from outdoor gear and water-related equipment, they can be introduced to new areas.

How can dogs help?

Dogs are trained to use their incredible sense of smell to locate and respond to the odor of invasive species.

The Minnesota DNR has used dogs in the K9 Unit to detect zebra mussels for more than a decade. The dogs and their conservation officer partners work statewide at public accesses, AIS check stations, and high-use areas to conduct inspections of water-related equipment. Unlike humans, dogs don't need to see zebra mussels to locate them. The dogs' powerful sense of smell means they can search boats, lifts, docks, and other water-related equipment in a fraction of the time it takes humans. When zebra mussels are found, the equipment is thoroughly cleaned to prevent them from spreading to new lakes.

In addition to locating zebra mussels, the dogs spread awareness to lake users and others about ongoing AIS issues and concerns in our waterways. Along with their enforcement work, the dogs and their handlers serve education and public relations functions, in part by conducting demonstrations to promote AIS awareness and reduce the spread of invasive species.

In the United States, dogs are assisting in many areas of conservation, from detecting invasive species such as zebra mussels, emerald ash borer, and invasive plants to detecting rare and endangered animals.

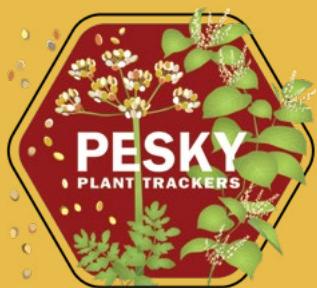
Further information:

www.dnr.state.mn.us/enforcement/k9/index.html

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	1 New Year's Day
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22 Martin Luther King Jr. Day
23	24	25	26	27	28	29
30	31					



Japanese knotweed flowers



PESKY PLANT TRACKERS



Volunteer looks for new Japanese knotweed shoots among last year's stems.

FEBRUARY

Pesky Plant Trackers is a community science project focused on the phenology of wild parsnip (*Pastinaca sativa*) and Japanese knotweed (*Polygonum cuspidatum*). The project's goal is to build tools that improve the timing and outcomes of invasive plant management.

What is phenology?

Phenology is the study of recurring events in the life cycles of living organisms. These events—such as flowering in plants and migration in birds—are tied to weather and climate. Phenology data are used to study effects of climate change, predict allergy seasons, schedule invasive species management, and more.

What does a volunteer do?

Each volunteer observes their selected plant(s) at least once a week. They use the *Nature's Notebook* app to document developments such as shoots emerging, flowers opening, and fruits ripening.

Who can volunteer?

Volunteering works best if wild parsnip or Japanese knotweed grows near you, in an accessible, convenient place. For help locating a plant to observe, visit peskyplants.umn.edu/locate

Why wild parsnip and knotweed?

These plants displace native biodiversity and degrade habitats. Wild parsnip sap can burn skin. Land managers who treat infestations must time activities to coincide with plant life cycles. However, with weather variations and a changing climate, optimal timing is difficult to predict.

Join the project:

peskyplants.umn.edu

Funding for this project is provided by the Minnesota Invasive Terrestrial Plants and Pests Center through the Minnesota Environment and Natural Resources Trust Fund.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31 	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
Valentine's Day						
20	21	22	23	24	25	26
Presidents' Day						
27	28	1	3	3	4	5



ST. LOUIS AREA PHRAGMITES TECH TEAM

Photos: Brandon Van Tassel, Community Action Duluth Stream Corps

MARCH

What is *Phragmites*?

Phragmites is a wetland grass that forms dense colonies. Minnesota has a native subspecies of *Phragmites* (*Phragmites australis* subsp. *americanus*) and an invasive subspecies native to Europe (*Phragmites australis* subsp. *australis*).

The St. Louis Area *Phragmites* Tech Team:

After a Great Lakes Indian Fish & Wildlife Commission (GLIFWC) survey in 2013 found multiple populations of non-native *Phragmites* along the St. Louis River estuary, GLIFWC initiated a project to control and eventually eradicate it from northeast Minnesota. The Tech Team manages this effort. GLIFWC began spot-treating populations along the Wisconsin side of the river in 2016 and a contract was awarded to Community Action Duluth's Duluth Stream Corps for control on the Minnesota side.

Since 2017, significant effort has gone into getting permission from private landowners to treat non-native *Phragmites* on their lands. The Tech Team enlisted the support of the Duluth Seaway Port Authority, railroads and industrial landowners, local land managers, schools, and state and local governments. The infested area has dropped from over 13 acres to less than 4 acres. As of 2021, almost all small sites had no evidence of non-native *Phragmites* for at least two years.

The Tech Team is planning to continue coordination with partners and expand its operations to conserve Minnesota's Lake Superior watershed.

Further information:

- www.stlouisriver.org/ais-phragmites-control
- www.maisrc.umn.edu/phragmites

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
27	28	1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
Daylight Savings Time Begins		St. Patrick's Day					
20	21	22	23	24	25	26	
Spring Equinox							
27	28	29	30	31	1	2	

LILY LEAF BEETLE

Lilocerus lili

Keys to ID:

- Adults: Scarlet red body with black head, antennae, and legs and about $\frac{1}{2}$ inch long
- Eggs: Irregular-shaped and laid in rows of 2-16 that appear as reddish colored lines on the underside of leaves
- Larvae: Bumpy and black (because they cover themselves with their own excrement, likely to protect themselves from predators and parasitoids)



APRIL

What is it?

Lily leaf beetle is a bright red, leaf feeding beetle in the family Chrysomelidae.

Origin:

Europe and Asia

Impacts:

True lilies, *Lilium* species and *Fritillaria* species, are the primary hosts for lily leaf beetle. The immature stage (larvae) and adults can both cause damage by eating the leaves, stems, flowers, and flower buds. However, the larvae cause the most damage and can completely defoliate host plants.

Status:

The lily leaf beetle was first found in North America in Montreal, Canada, in the 1940s. It can now be found in most Canadian provinces, in the northeastern U.S., Wisconsin, Iowa, and Washington state. Lily leaf beetle was first reported in Minnesota in July 2020.

Where to look:

Look for bright red adult beetles on the leaves and stems of host plants in mid spring. Eggs can be found in lines on the undersides of leaves. Larvae can also be found on the undersides of leaves.

Regulatory classification:

Lily leaf beetle is not regulated in Minnesota.

Means of spread:

Lily leaf beetles are strong fliers and are also spread from one area to another through the sale and movement of host plants.

How can people help?

If you think you have an infestation of lily leaf beetle, please report it at Arrest.The.Pest@state.mn.us or EDDMapS.org

Further information:

www.mda.state.mn.us/lilyleafbeetle

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
					Tax Day	
17	18	19	20	21	22	23
Easter						
24	25	26	27	28	29	30
					Arbor Day	



GREAT LAKES AQUATIC INVASIVE SPECIES LANDING BLITZ

Photo: Minnesota Department of Natural Resources

What is it?

The Great Lakes Aquatic Invasive Species Landing Blitz is an annual, two-week event where hundreds of partners across the Great Lakes region promote the need to *Stop Aquatic Hitchhikers!*, Clean-Drain-Dry boats and equipment, and dispose of unwanted bait in the trash.

It teaches boaters and anglers about their risks for spreading aquatic invasive species (AIS) at public and private boat accesses across the Great Lakes region. Thousands of people are becoming part of the solution.

In Minnesota, the event is organized by the University of Minnesota Sea Grant Program and the Minnesota Department of Natural Resources Watercraft Inspection Program as part of a multi-state effort led by Great Lakes regional partners.

Where is it?

- “The Blitz” takes place at water accesses across Minnesota and the Great Lakes region, thanks to community partners including soil and water conservation districts, county AIS programs, tribal agencies, lake associations, non-profits, and others.
- Across Great Lakes states in 2020:
 - › Over 1,000 public and private accesses participated, resulting in 110,000 watercraft inspections.
 - › Agency staff, watercraft inspectors, and volunteers educated 128,000 people.
 - › 50 media outlets covered events and millions watched, listened, and read about AIS prevention efforts.
 - › Social media reached 830,000 people.
#GLAISBlitz was seen by over 141,000 users.

Further information:

Visit www.glc.org/work/blitz to find 2022 dates and a community partner near you!

MAY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Arbor Month in MN Begins	2	3	4	5	6	7
8 Mother's Day	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1  CLEAN IN CLEAN OUT™	2	3	4
Memorial Day						



Tick species in Minnesota that bite people and transmit disease

American dog tick or wood tick (native)

- Widely distributed
- Transmits: Tularemia and Rocky Mountain spotted fever
- Adult appearance: Brown with silvery-white marks in the center of the tick's back

Blacklegged tick or deer tick (native)

- Widely distributed
- Transmits: Lyme disease, anaplasmosis, ehrlichiosis, babesiosis, and Powassan virus
- Adult appearance: Orange-red body with black legs

Lone star tick (invasive)

- Spotty distribution across Minnesota
- Transmits: Ehrlichiosis, Heartland virus, and tularemia
- Adult appearance: Single white dot on the tick's back

TICK SAFETY



JUNE

Risks:

- Whether you are out recreating or managing invasive species, keep yourself safe from tick bites.
- Minnesota has native and invasive ticks that can cause diseases.

Preventing tick bites:

- Ticks in Minnesota are active from spring through fall, so prevention measures should be practiced any time the temperature is above freezing.
- **Seal ticks out:** Wear tight-fitting and tucked-in clothing. Seal pant leg openings with gaiters, socks, or rubber boots.
- **Permethrin:** Apply permethrin by following label directions or wear permethrin-treated clothing. Wearing permethrin-treated outer layers of clothing provides the best level of protection.
- **Repellents:** Use EPA-registered insect repellents such as DEET, picaridin, and IR3535®.
- **Tick checks:** Check your clothing and body for ticks after being outdoors and remove them immediately. Use a hand-held or full-length mirror to view all parts of your body.
- **Wash:** Shower right away after being outdoors.
- **Dry:** Dry clothes on high heat for 10 minutes.

Tick removal:

- Slowly remove ticks with tweezers or other devices by pinching the tick close to the skin. Pull upward with steady even pressure. Wash bite area with alcohol or soap and water.
- Consult your healthcare provider if you develop symptoms such as fever, chills, aches, pains, or rash within a few weeks of a bite.

Further information:

www.health.state.mn.us/diseases/tickborne

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19 Juneteenth National Independence Day Father's Day	20	21	22	23	24	25
26	27	28	29	30	1	2

GOLDEN CLAM

Corbicula fluminea

Keys to ID:

- A small clam with a rounded triangle-shaped shell.
- Shells can be green or yellowish-brown to dark brown.
- Clams can grow up to 2 inches wide.
- Shells have raised, concentric growth rings on the outside of the shell.



JULY

What is it?

Golden clam is a small clam.

Origin:

Eastern and southern Asia

Impacts:

Golden clams can cause aquatic food web destabilization, harm to native mussels, and clog water intake pipes.

In areas with optimal conditions, golden clam densities can reach thousands per square meter, dominating the ecological communities of lake and river bottoms.

Status:

Golden clams have been found in most mainland U.S. states, with most infestations concentrated in the southeast. In Minnesota, they are largely restricted to the St. Croix and Mississippi Rivers. Their discovery in Briggs Lake, Sherburne County, raised concerns about the species' ability to survive Minnesota winters and the risk of future spread.

Where to look:

Golden clams burrow into the substrate of lakes and streams, preferring sand and gravel over hard surfaces or muddy bottoms.

Regulatory classification (agency):

Under consideration for listing as a prohibited invasive species (DNR).

Means of spread:

Juveniles can be dispersed in motorboat livewells, bilge water, and bait buckets.

How can people help?

- Always clean, drain, and dry boats and any in-water equipment.
- Report any sightings to the Minnesota DNR or EDDMapS.org

Further information:

nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=92

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						



Black swallow-wort



Pale swallow-wort



Rough potato

Black swallow-wort and pale swallow-wort

- Flower: Five triangular petals. Black swallow-wort has dark purple petals and pale swallow-wort has light pink to fuchsia petals.
- Leaf: Opposite, 1-3 inches long, dark green and glossy.
- Fruit: Smooth pods release seeds with silky filament at the tip.

Keys to ID

Rough potato

- Flower: Five long and curled petals, white to light pink with hairs.
- Leaf: Opposite, heart-shaped leaves, 2-5 inches long.
- Fruit: Spiked pods open to release seeds with silky filament.



INVASIVE VINING MILKWEEDS

AUGUST

What is it?

Three invasive vining milkweeds: black swallow-wort (*Cynanchum louiseae*), pale swallow-wort (*Cynanchum rossicum*), and rough potato (*Metaplexis japonica*).

Origin:

Europe and Asia

Impacts:

Invasive milkweeds are harmful to monarch butterflies. Monarch caterpillars feed on many milkweed species and most do not survive on invasive milkweeds. These vining plants can displace native milkweeds and reduce habitat for monarchs. Once established, invasive milkweeds quickly spread and are hard to control.

Status:

All three species have been found in Minnesota.

Where to look:

These species can thrive in a variety of habitats including full sun and shade. They are most noticeable along forest edges where they climb and smother adjacent structures and vegetation.

Regulatory classification (agency):

Black swallow-wort is a prohibited noxious weed on the eradicate list (MDA). Pale swallow-wort and rough potato are not regulated.

Means of spread:

Like native milkweeds, fluffy filaments attached to the seed enable it to be moved by the wind.

How can people help?

- Plant native milkweeds.
- Report any non-native milkweeds at Arrest.The.Pest@state.mn.us or EDDMapS.org

Further information:

www.mda.state.mn.us/swallowwort

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3



GOLDFISH

Carassius auratus

Keys to ID:

- Can be gold, orange, olive, brown, or black
- 6-12 inches long with large scales
- Long dorsal fin along their backs, with one serrated spine at the front of the fin



What is it?

Goldfish are a domesticated version of crucian carp.

Origin:

East Asia

Impacts:

Goldfish can stir up sediments, uproot plants while feeding, and compete with native fish for food and habitat. They reproduce rapidly and are hardy, surviving low-oxygen conditions in winter.

Status:

Goldfish have been found in about 30 lakes and ponds in the Twin Cities metro area and various other locations across Minnesota.

Where to look:

Look for spots of “gold” color in lakes and ponds. After many generations in the wild, goldfish lose their bright orange coloring and become brown, olive, or white, making them harder to see.

Regulatory classification (agency):

Goldfish are listed as a regulated invasive species (DNR). It is illegal to release them into the environment.

Means of spread:

Goldfish are common household pets and get into public waters when released by pet owners who no longer want them or cannot care for them.

How can people help?

- Never dump aquariums or release aquarium pets, plants, or water into lakes, rivers, or ponds.
- Rehome or humanely dispose of unwanted goldfish. Contact the Minnesota Aquarium Society, other aquarium hobbyists through social media groups and online forums, pet stores, or your local veterinarian for rehoming opportunities or guidance on humane disposal.

Further information:

nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=508

SEPTEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	31	1	2	3
	 Habitattitude™ PROTECT OUR ENVIRONMENT DO NOT RELEASE FISH AND AQUATIC PLANTS  www.Habitattitude.net					
4	5	6	7	8	9	10
		Labor Day				
11	12	13	14	15	16	17
18	19	20	21	22	23	24
				Fall Equinox		
25	26	27	28	29	30	1



CONSTRUCTION PATHWAY

OCTOBER

Impacts:

Invasive species can be introduced or spread on construction equipment or in materials brought to a construction project. Equipment gets dirty with soil containing weed seeds or earthworm egg cases, potentially moving species like wild parsnip (*Pastinaca sativa*) and jumping worms (*Amyntas* species). Gypsy moths (*Lymantria dispar*) may lay egg masses on equipment. Aquatic invasive species may be moved if the work is happening in wet areas or waterways.

How can people help?

- Check each project site for invasive species prior to construction activity. Plan how to avoid those areas or how to prevent their spread within the site.
- Minimize disturbance to avoid creating areas where invasive plants are likely to establish.
- Preserve existing native vegetation to the extent possible.
- If bringing in materials, determine if those materials are free of invasive species. Use seed, mulch, soil, gravel, and other materials that are invasive species-free or have a low likelihood of containing invasive species.
- Require that construction equipment arrive clean. All visible plants, seeds, mud, and soil should be removed from the equipment before it arrives on site.
- When work is completed, clean off construction equipment before it is moved to a new site.
- Do not move soil, dredge material, or raw wood products that may harbor invasive species from infested sites.
- After construction, inspect sites for invasive species that may have been introduced and remove those species to prevent establishment.

Further information:

www.dnr.state.mn.us/invasives/dnrlands.html

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26  STOP INVASIVE SPECIES IN YOUR TRACKS. WORK.CLEAN.GO.	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11 Indigenous People's Day	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	Halloween 31	2022 Upper Midwest Invasive Species Conference October 24-27 Green Bay, Wisconsin				

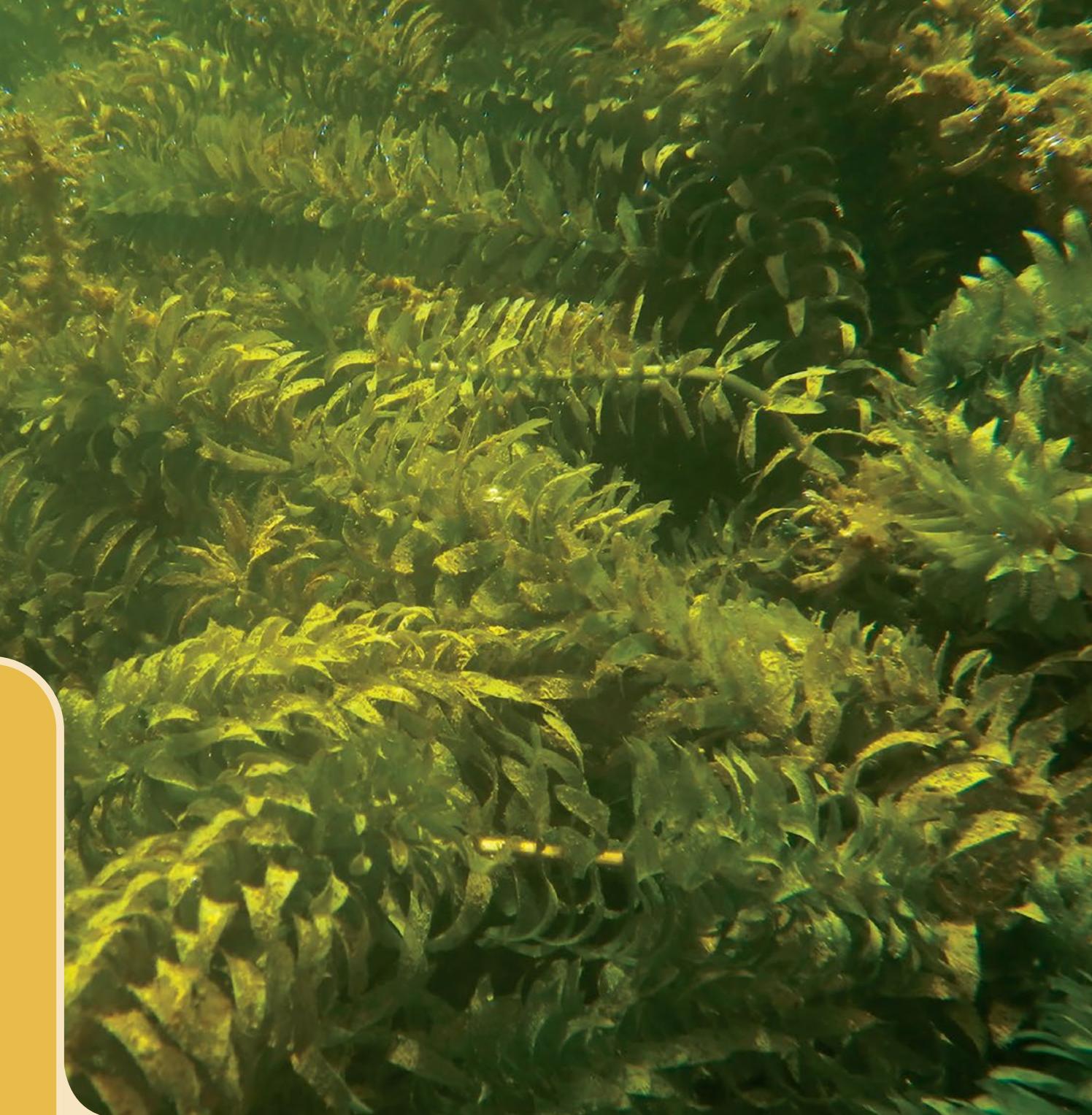


BRAZILIAN WATERWEED

Egeria densa

Keys to ID:

- Leaves occur in whorls of four to six.
- Leaf edges are minutely serrated (may require magnification to see serrations).
- When present, flowers are white with three petals.



What is it?

Brazilian waterweed is a submerged aquatic plant.

Origin:

South America including Brazil, Argentina, and Uruguay

Impacts:

Dense Brazilian waterweed stands can cause physical impacts to waterways by restricting movement and trapping sediment. It can also interfere with navigation and recreational use of waterways. It can outcompete native plants for resources and reduce suitable habitat for native animal nesting and shelter.

Status:

As of 2021, there were no known populations of Brazilian waterweed in Minnesota. A population found in a small Hennepin County lake in 2007 was one of few examples of successful eradication of an invasive aquatic plant population in Minnesota.

Where to look:

In particular, look in public access areas (walk-in or boat launches) where people may be able to easily dump unwanted aquarium pets and plants.

Regulatory classification (agency):

Brazilian waterweed is a regulated invasive species (DNR). It is illegal to release this plant into the environment.

Means of spread:

- Dumping of aquarium plants. Brazilian waterweed is a popular aquatic plant in the aquarium trade and has been introduced in some areas through dumping of aquaria.
- Hitchhiking on water-related equipment.

How can people help?

- Never dump aquarium or water garden plants or animals into a natural waterway.
- Dispose of unwanted aquarium plants in the garbage.

Further information:

- www.dnr.state.mn.us/invasives/aquaticplants/brazilianelodea
- nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=1107

NOVEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1	2	3	4	5
6	7	8	9	10	11	12
Daylight Savings Time Ends		Election Day	Veterans Day			
13	14	15	16	17	18	19
20	21	22	23	24	25	26
Thanksgiving				Day After Thanksgiving		
27	28	29	30	1	2	3
 Habitattitude™ PROTECT OUR ENVIRONMENT DO NOT RELEASE FISH AND AQUATIC PLANTS				   www.Habitattitude.net		

CLIMATE CHANGE:

*Implications for invasive
species management*

Japanese honeysuckle vine

Keys to ID:

- Woody vine that can grow 30 feet long
- Opposite leaves
- Paired white to yellow tubular flowers bloom along the stem



Climate change poses challenges for preventing and managing invasive species. Species range shifts are one of many interactions with climate change invasive species managers will face.

Example species:

Japanese honeysuckle vine (*Lonicera japonica*) is a fast-growing woody vine that wraps around shrubs and small trees and can shade out native plants growing in the understory. As of 2021, it had not been found in Minnesota. It is thought that climate change may extend Minnesota's growing season, allowing this species to expand its range and establish along open woodlands, grasslands, and roadsides. For this reason, Japanese honeysuckle vine is a prohibited noxious weed on the eradicate list (MDA).

Strategies for climate resilient prevention and management:

- Prevent the introduction of invasive species through known pathways. Collaborate with regulatory authorities, industry, neighboring managers, and other partners to strengthen prevention measures.
- Manage for healthy ecosystems to reduce invasive species establishment and impacts. This can include restoring fire regimes, preventing nutrient runoff, and restoring native species diversity.
- Manage invasive species according to site-specific goals. Consult published literature to learn about the potential impacts of invasive species found. Prioritize control of species most likely to cause damage at your site and in accordance with state regulations. Monitor impacts and results of your management efforts.
- Consult formal risk assessments for guidance. Risk assessments can inform early detection monitoring, regulation, and recommended management actions. Organizations can conduct periodic species risk assessments at multiple spatial scales to inform early detection monitoring and regulation.

Further information:

Minnesota State Management Plan for Invasive Species at mninvasives.org

DECEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
Christmas			Christmas Eve			
			New Year's Eve			



For more information about invasive species in Minnesota

Aquatic Plants and Animals

Minnesota Department of Natural Resources
Invasive Species Program
651-259-5100

U.S. Fish and Wildlife Service
612-713-5114

University of Minnesota Sea Grant Program
218-726-8712

Terrestrial Plants and Insects

Minnesota Department of Agriculture
Invasive Species Program
888-545-6684

