## INVASIVE SPECIES

## 2023 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 introduction and spread of aquatic and terrestrial invasive species and reduce their harmful impacts on Minnesota landscapes, economies, and the people 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 non-native 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 the public about the invasive species problem and how they can take action 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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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 Report a Pest at: 888-545-6684 or reportapest@state.mn.us to report invasive plants, insects, or diseases such as Palmer amaranth, Asian longhorn beetle, emerald ash borer, 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, jumping worms and mute swans.
- EDDMapS website or EDDMapS app at: www.eddmaps.org
- Or, as specified for individual species in this calendar.

#### **MISAC Members**

The Minnesota Invasive Species Advisory Council includes these members: 1854 Treaty Authority, Association of Minnesota Counties, Carver County Water Management Organization, Conservation Corps of Minnesota and Iowa, Fond du Lac Band of Lake Superior Chippewa, Grand Portage Band of Lake Superior Chippewa, Lake County Soil & Water Conservation District, Leech Lake Band of Ojibwe, Meeker County AIS, Metropolitan Mosquito Control District, Minnesota Aquatic Invasive Species Research Center, Minnesota Association of County Agricultural Inspectors, Minnesota Department of Agriculture, Minnesota Department of Natural Resources, Minnesota Department of Transportation, Minnesota Invasive Terrestrial Plants and Pests Center, Minnesota Lakes and Rivers Advocates, Minnesota Nursery and Landscape Association, The Nature Conservancy, Three Rivers Park District, University of Minnesota, University of Minnesota—Extension, University of Minnesota Sea Grant Program, U.S. Customs and Border Protection, U.S. Department of Agriculture—Animal Plant Health Inspection Service—Plant Protection and Quarantine, U.S. Department of Agriculture—National Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. National Park Service, Wild Rivers Conservancy, and Wildlife Forever.



## DON'T PACK A PEST

Do a survey

Graat BONT PACK [[23]

Pack Aware, Smart and Safe

## ADEMIC TRAVELER Jart. Pack Safe. Pack Aware.

our food supply and natural resources. veling, always declare agricultural items.

Student ambassadors for Don't Pack a Pest for Academic Travelers share information.

#### What is the problem?

Invasive species can be brought to the United States by travelers and negatively impact America's crops, forests, ecosystems, community landscapes, and backyard gardens. Invasive insects, snails, slugs, mites, microscopic worms, and diseases can travel in meat, dairy, plants, fruits, and vegetables. Pests and diseases can be carried on live animals, hunting trophies, and natural wood products.

#### What is Don't Pack a Pest?

Don't Pack a Pest is a national campaign led by federal and state agencies to prevent invasive species from entering the United States through ports of entry. The program exists to teach international travelers how to pack smart and declare agricultural goods in their passenger luggage.

#### What is Don't Pack a Pest for Academic Travelers?

This national campaign focuses on teaching student and faculty travelers how to prevent the introduction of invasive species. From 2005-2015, Customs and Border Protection documented 121,000 violations by international students in four West Coast airports. The U.S. hosts the largest number of international students of any country. Supported by the University of Minnesota's Sea Grant Program and Extension Global Initiatives Program, the campaign works with Minnesota schools, which host more than 24,000 international and study-abroad students.

#### How can people help?

Declare all agricultural and food items to custom officials when returning from international travel.

#### Further information:

- Don't Pack a Pest for Academic Travelers: seagrant. oregonstate.edu/outreach-and-engagement/ invasive-species/dont-pack-a-pest-academictravelers
- Don't Pack a Pest: www.dontpackapest.com/

# JANUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 New Year's Day	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16 Martin Luther King Jr. Day	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1 Don't Pack a Pest	2	3	4

Spotted lanternfly nymphs

## SPOTTED LANTERNFLY

Lycorma delicatula

#### Keys to ID:

- Adults have black-spotted forewings; scarlet, black and white hindwings; and yellow along the sides of the abdomen.
- Young insects are black with white spots, becoming red with white spots before molting to adults.
- Egg masses are yellowish-brown or grayish, covered with a gray, waxy coating.



Photos-Above: Eric R. Day, Virginia Polytechnic Institute and State University, Bugwood.org; Main: Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org

#### What is it?

Spotted lanternfly is a planthopper in the family Fulgoridae.

#### Origin:

China and parts of southeast Asia

#### Impacts:

Spotted lanternfly feeds on the sap of many host plants, including grape, apple, maple, and walnut. Its feeding stresses and eventually kills plants. It secretes honeydew that promotes the growth of sooty mold and attracts other pests.

#### Status:

As of summer 2022, spotted lanternfly has not been found in Minnesota. It is found in 11 eastern states, the closest being Ohio.

#### Where to look:

In spring, spotted lanternfly can be found on trunks and branches of host plants. In late summer and fall, adults may be found on buildings, telephone poles, or other structures. They gather near dusk in large groups on trunks and stems of plants. Egg masses can be found on any surface, including household items and firewood.

#### Regulatory classification:

As of 2022, spotted lanternfly is not regulated in Minnesota.

#### Means of spread:

Spread is primarily by people moving material containing egg masses, including household items and imported woody plants and wood products.

#### How can people help?

- Learn to identify spotted lanternfly.
- Report sightings to **reportapest@state.mn.us** or 888-545-6684.
- Before moving outdoor materials and equipment, inspect them and clean off any egg masses.

#### Further information:

www.mda.state.mn.us/plants-insects/spottedlanternfly

# FEBRUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14 Valentine's Day	15	16	17	18
19	20 Presidents' Day	21	22	23	24	25
26	27	28	1 <b>REPORT</b> <b>PEST</b> www.mda.state.mn.us/reportapet	2	3	4

## RED SWAMP CRAYFISH

Procambarus clarkii

#### Keys to ID:

- Coloration can vary widely through breeding for aquarium use, often dark red to black when raised for food purposes
- Bumps on elongate claws
- Wedge-shaped stripe on top of abdomen

Crayfish chimney

#### What is it?

Crayfish, sometimes also known as Louisiana crawfish.

#### Origin:

Southern United States

#### Impacts:

- Destroys aquatic plant beds
- Displaces native crayfish species
- Competes with fish for prey
- Causes major declines in amphibian, invertebrate, and waterfowl populations
- Damages shorelines, levees, dams, and other infrastructure due to burrowing

#### Status:

Not present in Minnesota waters as of 2022, although two were removed from Lake Tilde in Clay County in 2016.

#### Where to look:

Along shorelines, look for large "chimneys" of sand or soil.

#### Regulatory classification (agency):

Red swamp crayfish is a prohibited invasive species (DNR). It is unlawful to possess, import, purchase, transport, or introduce these species.

#### Means of spread:

- Release or escape of crayfish purchased for "crawfish boils."
- Release of fishing bait and home and classroom pets.

#### How can people help?

- For "crawfish boils," the DNR can connect people with local crayfish harvesters and farmers or provide a permit for frozen or boiled red swamp crayfish.
- Report the use of live red swamp crayfish to the DNR.
- Never release non-native species into the environment.

#### Further information:

- www.dnr.state.mn.us/invasives/ais/crayfishconsumption.html
- www.dnr.state.mn.us/invasives/responsibleconsumers.html

# MARCH

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

## SOYBEAN APHID BIOCONTROL INSECT

Aphelinus certus

A parasitic wasp (left) and a soybean aphid.

# APRIL

#### What is the problem?

The soybean aphid (*Aphis glycines*), originally native to Asia, is the most serious insect pest of soybeans in Minnesota. Modern control centers around the use of insecticides, which are expensive and risky to native pollinators. After the arrival of soybean aphid in the year 2000, applications of insecticides increased from 1% to 70% of soybean acreage. Many growers are eager for more environmentally sustainable and cost-effective solutions.

#### How can biocontrol help?

The parasitic wasp *Aphelinus certus* is one important natural enemy of the soybean aphid and may help provide control. Like the aphid, it was inadvertently introduced to the U.S. from Asia in the past decade. *A. certus* now presents a potential alternative to exclusive chemical control, and an addition to integrated pest management (IPM) practices. The tiny *A. certus* lays an egg inside a soybean aphid. The egg hatches and the larva devours the aphid, killing it. *A. certus* can produce many generations of offspring between June and September.

#### How can farmers help support biological control?

- Reduce tillage and reduce insecticide use. Studies indicate *A. certus* overwinters in soybean fields, so reducing tillage after harvesting soybeans likely increases the local population of this biological control agent.
- Follow University of Minnesota Extension guidelines regarding scouting for aphids and pesticide application thresholds.

#### Further information:

mitppc.umn.edu/project/biological-control-soybeanaphid

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

## LIVE BAIT PATHWAY

DOMINATOR 175 CS

MN 3532 KM

#### What is the problem?

People can introduce invasive species (fish, crayfish, worms, etc.), parasites, or pathogens by improperly handling live bait. The bait may be non-native, or invasive species and pathogens can go unseen inside bait containers. Diseases such as VHS can directly impact game fish species. Bait contaminated with invasive carp, zebra mussels, or faucet snails can harm native aquatic communities. Earthworms are non-native and damage forest ecosystems.

#### Regulations related to live bait include:

- It is illegal to release live bait in the water or on shore.
- It is illegal to bring live minnows and leeches into Minnesota from out of state.
- It is illegal to transport water away from a water body.
- With few exceptions, bait cannot be harvested from lakes and rivers listed as infested with aquatic invasive species.
- A DNR minnow dealer license requires annual invasive species training and allows licensees to harvest baitfish and leeches from Minnesota lakes and rivers for commercial purposes.

#### How can people help?

- Properly handle, transfer, and dispose of live bait every fishing trip.
- Dispose of all unwanted bait in the trash.
- To keep leftover live baitfish: Bring extra dechlorinated water with you. Before leaving the water access, drain your bait container on the ground and refill it with the dechlorinated water.
- Know that 94% of Minnesota anglers agree that preventing the spread of invasive species is the right thing to do and 80% properly dispose of live baitfish.

#### Further information:

- www.mndnr.gov/AIS
- www.mndnr.gov/fishingregs
- maisrc.umn.edu/baitfish-risk



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

## SIBERIAN PEASHRUB

#### Caragana arborescens

#### Keys to ID:

- Small tree or large shrub up to 18 feet tall
- Small, compound leaves with 8-12 pairs of leaves
- Yellow, pea-shaped flowers that bloom in May and June
- Brown seed pods 1-2 inches long

#### What is it?

Siberian peashrub is a shrub or small tree.

#### Origin:

China, Kazakhstan, Mongolia, Russia (Siberia)

#### Impacts:

Spreads in forest understories, savannas, and forest margins.

#### Status:

Siberian peashrub is extremely cold hardy, so it was a popular choice for windbreaks and shelterbelts in northern Minnesota. It is adaptable to many soil conditions and has allelopathic properties, giving it a competitive advantage. It can form large colonies, which prevent native woodland species from germinating. In Minnesota, Siberian peashrub has spread beyond where it was planted.

#### Where to look:

Shelterbelts, windbreaks, edges of fields and woodlands, forest understories, savannas, and in poor soils.

#### Regulatory classification (agency):

Siberian peashrub is a Restricted Noxious Weed (MDA). The importation, sale, and transportation of propagating parts is prohibited. One cultivar is exempted from the noxious weed listing: Green Spires<sup>®</sup> Caragana–Caragana 'Jefarb.'

#### Means of spread:

Siberian peashrub produces large amounts of viable seed which is dispersed by birds and animals.

#### How can people help?

- Report infestations to EDDMapS.org
- Remove infestations when possible.
- Plant native species as windbreaks.

#### Further information:

- www.mda.state.mn.us/siberian-peashrub
- www.dnr.state.mn.us/invasives/terrestrialplants/ woody/siberianpeashrub.html (includes native substitutes)

# JUNE

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

## PERSONAL WATERCRAFT PATHWAY

Photo: Minnesota Department of Natural Resources

# JULY

#### What is it?

A personal watercraft is a small recreational watercraft that the operator stands on or rides. Personal watercrafts are small and light when compared to other motorized watercraft and are easily trailered from one waterbody to another. The unique designs of personal watercrafts require special inspection procedures to minimize the risk of spreading aquatic invasive species.

#### Tips for inspecting personal watercraft:

- Intake grate: Personal watercraft have inboard jet engines that pull water through a grate and push it out through a nozzle at the stern. The intake grate should be inspected closely and any plants or aquatic invasive species stuck against the grate should be removed.
- Seat: Thoroughly inspect the outside of a personal watercraft and also inspect for water and aquatic invasive species that can be trapped under the seat. Remove the seat cover and the cover in front of the handlebars (if present) to inspect these compartments. Any aquatic invasive species found should be removed by hand. Drain any residual water.
- Foot wells: During your inspection, be sure to check the foot wells for trapped water, plants, and aquatic invasive species. Water can be removed with a sponge or a towel.
- Jet system: Once the personal watercraft is removed from the water, additional water trapped within the jet system can be pushed out by running the personal watercraft for fives seconds or less while lightly revving the throttle.

#### Further information:

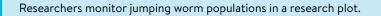
www.dnr.state.mn.us/invasives/preventspread\_ watercraft.html

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

## JUMPING WORM RESEARCH

#### Keys to ID

- **Behavior:** When agitated, jumping worms thrash wildly and can drop their tails.
- Life cycle: Jumping worms have an annual life cycle; they hatch from eggs in cocoons in the soil in spring, mature by mid-summer, reaching lengths of 4-6 inches, and die in late fall.
- **Clitellum:** The clitellum (the ring/band that wraps around the body of an earthworm) starts about 14 segments from the head.



#### Species:

"Jumping worms" is a term used for several closely related species of worms, including *Amynthas agrestis*, *A. loveridgei*, and *A. tokioensis*.

#### Challenge:

Jumping worms are relatively new to Minnesota. They live in the top few inches of the soil, which they turn into loose granules like coffee grounds or cat litter, making it hard for plants to take root and causing soil erosion.

#### **Current research efforts:**

Researchers at the University of Minnesota are studying jumping worms. They aim to characterize the extent of the jumping worm population in Minnesota, the mechanisms of spread, environmental limitations to survival, potential control methods, and impacts on native ecosystems and soils. Researchers are engaging Master Gardeners, Master Naturalists and members of the public to help map spread. An experiment in jumping worm control is underway at the University of Minnesota Landscape Arboretum, using several environmentally friendly chemicals and mechanical treatments. Researchers are also comparing soil characteristics and native plant diversity in areas infested and not infested with jumping worms.

#### Goal:

Researchers hope to discover ways to manage jumping worm populations, and to provide guidance to minimize their spread and impacts on gardens and native ecosystems.

#### Further information:

- Identification and reporting training module: jwp.cfans.umn.edu/
- UMN Extension website: extension.umn.edu/ identify-invasive-species/jumping-worms
- MN DNR website: www.dnr.state.mn.us/invasives/ terrestrialanimals/jumping-worm/index.html

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

# AUGUST

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
20	21	22	23	24	25	26
27	28	29	30	31	1 ENVIRO AND NATURA TRUST	2 DINMENT LARSOURCES FUND

## PET AND PLANT RELEASE PATHWAY

Photo: Minnesota Department of Natural Resources

# SEPTEMBER

#### What is the problem?

Activities involving live organisms, like gardening or keeping home or classroom pets, have led to invasive species introductions. Many species sold for aquaria and gardens have been found to be invasive in Minnesota or other Great Lakes states. Species are often mislabeled or unlabeled. Sellers have also reported receiving "hitchhiker" organisms that arrived unexpectedly in shipments. Many invasive species can also be purchased online, and hobbyists often do not know which species present risk of invasion. Substantial educational outreach from invasive species professionals, businesses, and hobbyists is needed to prevent invasive species introductions through pet and plant releases.

#### Example species:

- "Football-sized" goldfish were found in Keller Lake in Burnsville, Minnesota, in 2021.
- Zebra mussels were found contaminating aquarium moss balls in 2021.

#### How can people help?

- Never release non-native animals into the environment.
- Choose native or low-risk species when making purchases.
- Dispose of unwanted bait in the trash and unwanted aquatic plants in the trash or compost. Never dispose of your home or yard terrestrial plants in natural areas (keep them on-site or use compost facilities).
- Contact a local pet store, veterinarian, or hobbyist club for re-homing options if you have a pet or plant you can no longer care for.

#### Further information:

www.dnr.state.mn.us/invasives/trade-pathways.html

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30 Habitatti Protect our envir Do Not Release FISH and ac IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	RONMENT JUATIC PLANTS	1	2
3	4 Labor Day	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23 Fall Equinox
24	25	26	27	28	29	30

# YARD WASTE<sup>1</sup>KEEP RIGHT COMPOST-STRAIGHT AHEAD • Bags & Con • Garbage • Brush & Tre • Tires • or Any Other Help preserve the use of State law allows v Turn In Po DEPOSIT GRA

## YARD WASTE PATHWAY

Photo: Minnesota Department of Natural Resources

#### Species:

Invasive plants and their seeds, as well as earthworms and their egg cases, can be spread when yard waste is moved. Seeds of ornamental shrubs such as Japanese barberry (Berberis thunbergia), garden weeds such as Canada thistle (Cirsium arvense), and new earthworm species such as jumping worms (Amynthas species) are examples of species that could be moved along with yard waste.

#### Regulatory classification:

The movement of noxious weeds and their propagating parts is prohibited by the Minnesota Department of Agriculture, except for disposal at a designated disposal site.

#### Means of spread:

- If yard waste is dumped in a natural area, it may introduce invasive species to the site.
- If yard waste is brought to a central yard waste collection site that is not composting at high temperatures, the species may be spread to new areas when people come to the site to pick up finished compost to take home.

#### How can people help?

- Never dispose of yard waste in natural areas, as you may be introducing invasive species to those sites.
- If your property has jumping worms, keep yard waste on-site if possible.
- Find out if your yard waste facility follows the process for further reducing pathogens. This process gets compost hot enough to kill invasive plants, their seeds, earthworms, and egg cases.

#### Further information:

- MDA noxious weed disposal: www.mda.state. mn.us/plants/pestmanagement/weedcontrol/ disposalnoxweed
- Jumping worm information: www.dnr.state.mn.us/ invasives/terrestrialanimals/jumping-worm/index. html

# OCTOBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9 Indigenous Peoples' Day	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31 Halloween	1	2 Play Clean Go	3 STOP INVASIVE SPECIES IN YOUR TRACKS. PlayCleanGo.org	4

## **YELLOW IRIS**

### Iris pseudacorus

#### Keys to ID:

- Bright yellow flowers with three large, drooping sepals and three smaller petals
- Fan-like cluster of lance-shaped leaves
- Sharply thickened ridge going up the center of each leaf

#### What is it?

Yellow iris is an emergent wetland plant.

#### Origin:

Europe, Asia, and North Africa

#### Impacts:

Yellow iris can create dense stands that outcompete important native wetland plants. These stands can also narrow waterways and impede water flow. Yellow iris is toxic if ingested by livestock and other animals. *Caution: Contact with yellow iris sap can cause skin irritation.* 

#### Status:

Yellow iris has been found in Minnesota, including in the Twin Cities metro region, along the St. Croix River, and in Northeastern Minnesota.

#### Where to look:

Look for yellow iris along riverbanks, shorelines, and wet ditches.

#### Regulatory classification (agency):

Yellow iris is a regulated invasive species (DNR). It is illegal to release yellow iris into the environment.

#### Means of spread:

Yellow iris was first introduced as an ornamental planting. It has spread from intentional and unintentional releases from landscaping and water gardens. Yellow iris produces seeds that can float down waterways to spread to new areas. Fragments of underground stems are also capable of producing new plants.

#### How can people help?

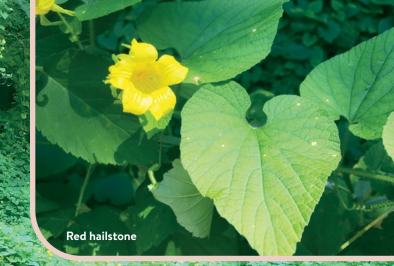
- Dispose of unwanted aquatic plants in the trash or compost.
- Never dump plants into lakes, rivers, ditches, or wetlands.
- Consider native plants for your home landscaping and water gardens.

#### Further information:

www.dnr.state.mn.us/invasives/aquaticplants/yellowiris/ index.html

# NOVEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
5 Daylight Saving Time Ends	6	7 Election Day	8	9	10 Veterans Day Observed	11 Veterans Day
12	13	14	15	16	17	18
19	20	21	22	23 Thanksgiving	24 Day After Thanksgiving	25
26	27	28	29	30	1	2



## GUIDING PRINCIPLES FOR COMMON NAMES

Dense population of red hailstone growing along a stream.

#### What is the issue?

While every species has a scientific name, they also generally have common names that are used in non-scientific communication. Sometimes species have common names that are inappropriate or create barriers to inclusive conversation, such as those based on places, people, or derogatory slang. Multiple organizations have been revisiting the common names of species with an eye to inclusion and appropriateness. Using effective common names can improve engagement with invasive species issues.

#### What is the University of Minnesota doing about it?

In 2018, the University of Minnesota Extension Invasive Species Community of Practice realized it needed to improve some of the common names of emerging invasive species in Minnesota. This launched a multi-year effort that included Extension's Foreign Born Affinity Group, the Minnesota Invasive Terrestrial Plants and Pests Center, and the Minnesota Aquatic Invasive Species Research Center. After several years of work, listening, soul searching, and revisions, the Community of Practice created principles to improve common names and best practices for implementation of those principles. Extension educators with species expertise started applying these principles to new-to-Minnesota invasive species and encouraged others to use them.

#### What's next?

The University of Minnesota team has been able to get acceptance for about 18 new species names on platforms including EDDMapS, iNaturalist, and Minnesota Wildflowers as well as among researchers and others working in these fields. The names include freshwater golden clam, red hailstone, and rustic jumping worm.

#### How can you help?

Consider how can you help make invasive species education and outreach more welcoming and implement those changes.

# DECEMBER

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 Winter Solstice	22	23
24 Christmas Eve New Year's Eve 31	25 Christmas	26	27	28	29	30























#### 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

