

# Invasive Species

2007  
CALENDAR

# Invasive Species Threats to Minnesota

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

Minnesota is presently battling a number of invasive pests including spiny waterflea, musk thistle, and common tansy shown in this calendar. There are also many new invasive species that could arrive and cause problems. The list of potential invaders includes yellow starthistle, bighead carp, silver carp, sirex woodwasp, and hydrilla.

In addition to harming the recreational value of our natural resources, invasive pests pose serious economic threats to major Minnesota industries such as agriculture, tourism, and forestry. Nationwide, some estimates peg the economic damage of invasive pests at more than \$100 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 what they can do to take action in the challenge to reduce invasive species spread and harm.

## Minnesota Invasive Species Advisory Council

This calendar was produced and distributed by the Minnesota Invasive Species Advisory Council (MISAC). MISAC is a statewide entity formed in response to Presidential Executive Order 13112 on invasive species and the national Invasive Species Management Plan that encouraged states to plan and take action on invasive species.

The purposes of MISAC are:

- to facilitate statewide coordination and cooperation on invasive species—including the review of information concerning the current status, management, and spread of terrestrial and aquatic invasive insect, plant, animal, and pathogen species into and within Minnesota;
- to work cooperatively to prevent new introductions, identify, and locate invasive species;
- to contain established introductions; to manage invasions and take other actions in order to minimize invasive species impacts within Minnesota; and
- to address these and other existing needs by maximizing available resources.

MISAC's co-chairs, from the Minnesota Departments of Agriculture and Natural Resources, represent the state agencies that are responsible for coordinating the management of invasive species in the state. In addition, the Council includes these members: Bailey Nurseries, Great River Greening, Leech Lake Band of Ojibwe, Minneapolis Park and Recreation Board, Minnesota Association of County Agricultural Inspectors, Minnesota Board of Water and Soil Resources, Minnesota Crop Improvement Association, Minnesota Department of Transportation, Minnesota Farm Bureau, Minnesota Forestry Association, Minnesota Golf Course Superintendents' Association, Minnesota Native Plant Society, Minnesota Nursery and Landscape Association, Minnesota Sea Grant, Minnesota Shade Tree Advisory Committee, The Nature Conservancy, Superior National Forest, USDA-Animal and Plant Health Inspection Service, USDA-Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Forest Service, University of Minnesota-College of Agriculture, Food and Environmental Sciences and the College of Natural Resources.



# Help Report Locations of Invasive Species

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

- MISAC Web site at: [www.mda.state.mn.us/misac/reporting.htm](http://www.mda.state.mn.us/misac/reporting.htm)
- “Arrest the Pest” Hotline at: (651) 201-MOTH (metro) or 1-888-545-MOTH (toll free). Please call the hotline to report suspicious pest species arriving on plants or articles from foreign countries or other states and for the latest updates on invasive species such as the gypsy moth, soybean rust, sudden oak death, Asian longhorned beetle, emerald ash borer, bark beetles, and other destructive insect, plant, and disease pest species.
- DNR Invasive Species Program at: (651) 259-5100 (metro) or 1-888-MINNDNR (elsewhere) to report invasive aquatic plants or wild animals such as Eurasian watermilfoil, zebra mussels, Asian carp, round goby, non-native deer, swans, and mute swans.

# Information Sources

In addition to this calendar, MISAC’s Web site can provide much information about invasive species, particularly those in Minnesota. This Web site is a gateway to invasive species information including many invasive species profiles, contact information for invasive species experts in Minnesota, and links to other related Web sites.

MISAC Web site

[www.mda.state.mn.us/misac](http://www.mda.state.mn.us/misac)

The Web sites or pages of several MISAC members also have information about invasive species:

DNR Web pages

[www.dnr.state.mn.us/invasives](http://www.dnr.state.mn.us/invasives)

MDA Web pages

[www.mda.state.mn.us/pestsweeds.htm](http://www.mda.state.mn.us/pestsweeds.htm)

Minnesota Sea Grant

[www.seagrants.umn.edu/exotics/index.html](http://www.seagrants.umn.edu/exotics/index.html)

USDA-APHIS

[www.invasivespeciesinfo.gov](http://www.invasivespeciesinfo.gov)

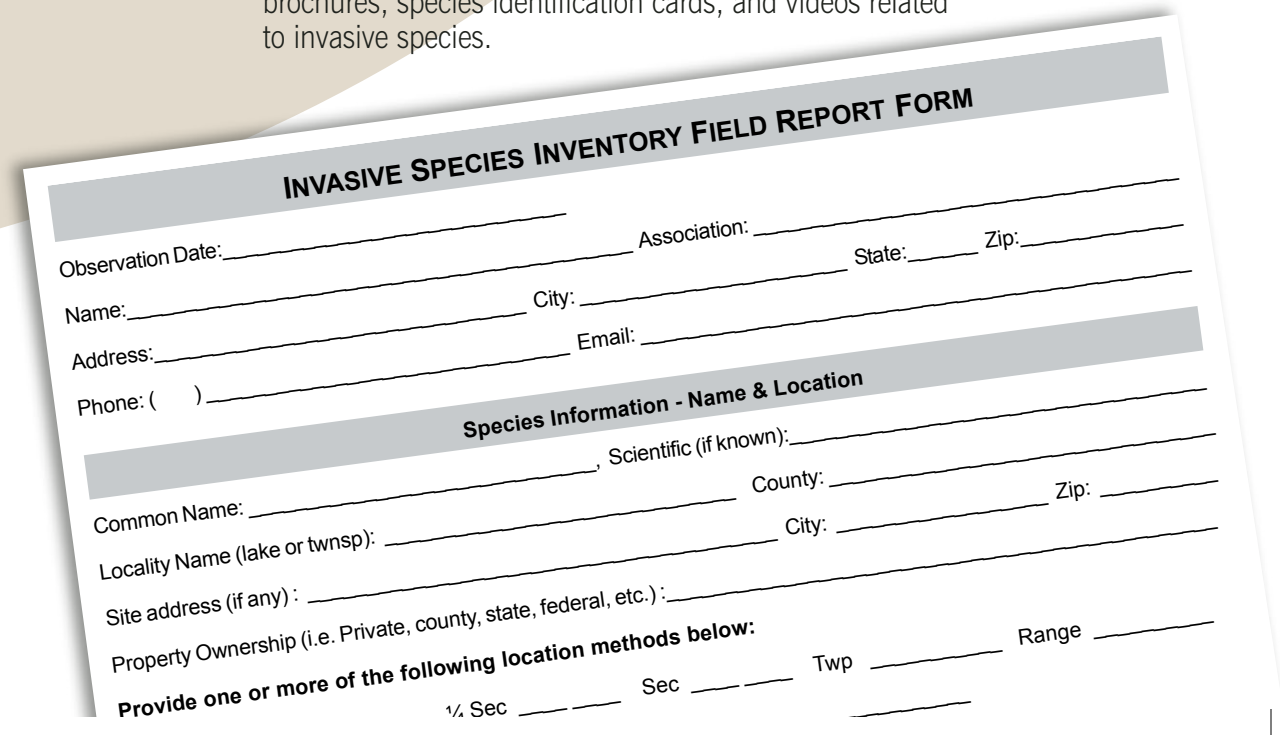
U.S. Fish and Wildlife Service

[www.fws.gov/midwest/fisheries/topic-ans.htm](http://www.fws.gov/midwest/fisheries/topic-ans.htm)

USDA-Forest Service

[www.fs.fed.us/invasivespecies](http://www.fs.fed.us/invasivespecies)

On the back of the calendar, we have included contact information for six agencies with invasive species responsibilities in Minnesota. These agencies, as well as other MISAC members, can provide informational products such as brochures, species identification cards, and videos related to invasive species.



**INVASIVE SPECIES INVENTORY FIELD REPORT FORM**

Observation Date: \_\_\_\_\_ Association: \_\_\_\_\_

Name: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Phone: ( ) \_\_\_\_\_

**Species Information - Name & Location**

Common Name: \_\_\_\_\_ Scientific (if known): \_\_\_\_\_

Locality Name (lake or twosp): \_\_\_\_\_ County: \_\_\_\_\_ Zip: \_\_\_\_\_

Site address (if any): \_\_\_\_\_ City: \_\_\_\_\_

Property Ownership (i.e. Private, county, state, federal, etc.): \_\_\_\_\_

**Provide one or more of the following location methods below:**

1/4 Sec \_\_\_\_\_ Sec \_\_\_\_\_ Twp \_\_\_\_\_ Range \_\_\_\_\_

# Rusty Crayfish

**Rusty crayfish on a river bottom.**

Photo: Bernard Sietman

**Keys to ID:** The carapace (outer covering) usually has a pair of rusty-colored spots. Claws often have black bands at the tips.



Photo: Minnesota Sea Grant

# 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 Martin Luther King Jr. Birthday Observed	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## Rusty Crayfish

*Oronectes rusticus*

**Species:** A crustacean that grows up to 5 inches long.

**Origin:** Native to the Ohio River basin.

**Impacts:** Rusty crayfish are aggressive invaders. They can harm native fish communities by feeding on their eggs and young, driving out or hybridizing with

native crayfish, and eliminating aquatic vegetation.

**Status:** They spread to several states and Ontario, Canada. Rusty crayfish were discovered in Minnesota around 1960 and are confirmed in about 50 waters, mostly in central and northern counties.

**Where to look:** They can infest lakes, rivers, streams, and wetlands.

**Regulatory classification (agency):** Rusty crayfish is a *regulated invasive species* (DNR), which means release into

the wild is illegal. Licensed anglers may collect any crayfish for use as bait on the same water body. They may harvest up to 25 pounds of any crayfish for personal consumption. Selling live crayfish for bait or aquarium use is illegal.

**Means of spread:** They likely spread by people dumping bait buckets and aquariums, and through commercial aquaculture activities.

### How can people help?

- Learn to identify rusty crayfish.
- Inspect and remove aquatic plants and

animals from recreational gear.

- Never release crayfish, fish, or plants from one body of water into another.
- Complete the reporting form found at [www.mda.state.mn.us/misac/reporting.htm](http://www.mda.state.mn.us/misac/reporting.htm)
- Report infestations to the DNR Invasive Species Program.

**Further information:** Contact University of Minnesota Sea Grant or DNR Invasive Species Program.

**Keys to ID:**

The adult male has feathery antennae and is light beige to dark brown with black jagged bands on its forewings. The adult female is white with brown zig-zag markings on its wings and cannot fly.



Photo: Kimberly Thelen Creemers

## Gypsy Moth

**Keys to ID:**

The large beetle has a distinctive black background and white or yellowish markings. Adults chew large round exit holes through the bark; females also chew v-shaped pits where they lay eggs. Larvae are very large; they are found in tunnels deep in the wood.



Photo: Kenneth R. Law

## Asian Longhorned Beetle

**Keys to ID:**

The metallic green adult can be difficult to find. However, the distinctly segmented larva is relatively easy to locate by peeling back the bark of infested trees. D-shaped exit holes and serpentine galleries under the bark indicate emerald ash borer activity.

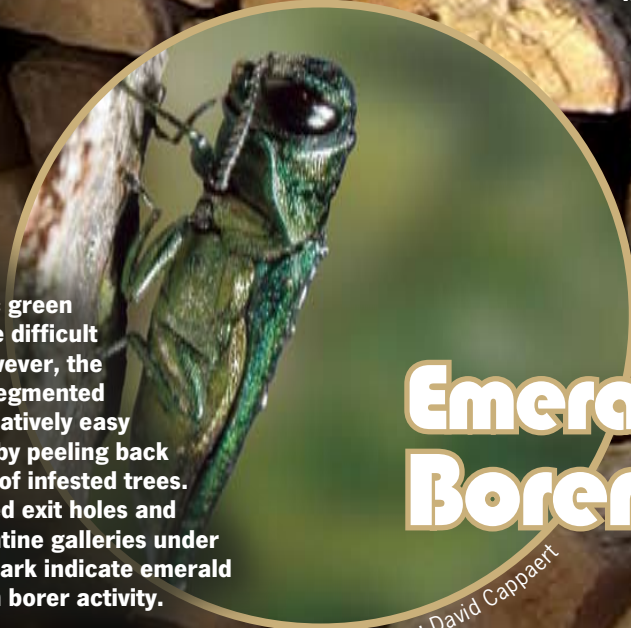


Photo: David Cappaert

## Emerald Ash Borer

Firewood is a vector, or pathway, of spread for many invasive insects.

# FIREWOOD PATHWAY

# FEBRUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2 Groundhog Day	3
4	5	6	7	8	9	10
11	12 Lincoln's Birthday	13	14 Valentine's Day	15	16	17
18	19 President's Day Washington's Birthday	20	21	22	23	24
25 National Invasive Weed Awareness Week	26 National Invasive Weed Awareness Week	27 National Invasive Weed Awareness Week	28 National Invasive Weed Awareness Week			

**Species:** These are examples of invasive insects spread by transporting firewood and other objects.

**Origin:** Native to Europe and Asia.

**Impacts:** Emerald ash borer causes high mortality of ash trees. Asian longhorned beetle larvae tunnel in the wood of many tree species such as maple, poplar, elm, and birch and can cause heavily infested trees to die. Gypsy moth can defoliate over 300 species of trees and shrubs. Besides these three pests, firewood

can move many other damaging insect and disease pests such as the fungi that cause oak wilt and Dutch elm disease.

**Status:** Emerald ash borer and Asian longhorned beetle are not known to exist in Minnesota. Gypsy moth is invading the state from eastern states, but is not yet permanently established. To date, known infestations have been treated by the Minnesota Department of Agriculture and U.S. Fish and Wildlife Service.

**Where to look:** Look for bark cracks and D-shaped holes caused by emerald ash borer on ash trees that have recently died or are in poor health. Asian

longhorned beetles create large round exit holes in wood. Buff-colored velvety egg masses of gypsy moth can be found on plant materials, firewood, and outdoor furniture.

**Regulatory classification (agency):** The DNR is proposing to prohibit the use of firewood transported to state parks and other DNR lands. These insects are *federally quarantined pests* (USDA-APHIS).

**Means of spread:** People unintentionally move these species long distances through the transport of firewood and other objects stored outdoors.

**How can people help?**

- Leave your firewood at home.
- Buy locally harvested firewood when away from home.
- Buy only what you need—leave unused firewood for the next camper.
- Never move uncertified nursery stock across state lines.
- Complete the reporting form found at [www.mda.state.mn.us/misac/reporting.htm](http://www.mda.state.mn.us/misac/reporting.htm).

**Further formation:** For more information, contact MDA.

# Bighead Carp and Silver Carp

**Silver carp jumping in an Illinois river.**

Photo: James Janega

**Keys to ID:**  
Both species have  
low-set eyes below  
the mouth and large  
upturned mouths  
without barbels.



Photo: David Riecks, UIUC/IL-IN Sea Grant



# MARCH

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

## Bighead and Silver Carp

*Hypophthalmichthys nobilis* and *H. molitrix*

**Species:** Large filter-feeding fishes. Bighead carp weigh up to 110 pounds; silver carp weigh up to 60 pounds.

**Origin:** Native to China, they were imported in the 1970s for use in aquaculture ponds to control plankton. By the early 1980s, both species had escaped into open waters in southern states.

**Impacts:** They eat massive amounts of plankton—microscopic plants and animals that are also eaten by young native fish, adult paddlefish, and mussels. This competition for food could result in fewer and smaller sport fish. Silver carp can leap up to 10 feet out of the water when disturbed by sounds of watercraft. Jumping carp can injure boaters, personal watercraft operators, and water skiers.

**Status:** There are no known populations in Minnesota. However, bighead are in the Mississippi River and its tributaries downstream of Pool 12 in Iowa. Silvers

are also in the Mississippi and its tributaries further downstream.

**Where to look:** They often feed in schools at the water's surface. Silver carp jump when disturbed by boats.

**Regulatory classification (agency):** They are a *prohibited invasive species* in Minnesota (DNR).

**Means of spread:** The juveniles look similar to gizzard shad and other native baitfish, so they could be spread through the use or release of live bait.

### How can people help?

- Do not use bait taken from infested waters.
- Report sightings and bring fish to the local DNR office.

**Further information:** For more information, visit [www.asiancarp.org/idkeys.asp](http://www.asiancarp.org/idkeys.asp).

# Japanese Knotweed

Photo: Jay Rendall

**Keys to ID:**  
Grows to 10 feet;  
reddish-brown stems,  
smooth, stout hollow and  
swollen at the joint where  
the leaf meets the stem.  
Leaves are about 6 inches  
long and 3 to 4 inches  
wide. The panicles of tiny  
greenish-white flowers  
bloom in late summer.

**Japanese knotweed growing along a Minnesota lakeshore.**

Photo: Jay Rendall

# APRIL

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

## Japanese Knotweed

*Fallopia japonica*

**Species:** A shrub-like, perennial herbaceous plant.

**Origin:** Native to Asia, it was intentionally introduced into Minnesota as an ornamental and for erosion control.

**Impacts:** Japanese knotweed forms dense thickets that suppress native vegetation

and greatly alter natural ecosystems.

**Status:** It has escaped cultivation and is known to be in several metro and two northern Minnesota counties.

**Where to look:** It can be found growing in riparian areas such as stream banks and lakeshores, and also along roadsides.

**Regulatory classification (agency):** Japanese knotweed is not regulated in Minnesota.

**Means of spread:** It spreads primarily by vegetative means with the help of its long, stout rhizomes. It is often transported to new sites as a contaminant in fill. Escapees from neglected yards and discarded cuttings are common means of dispersal.

### How can people help?

- Don't plant as an ornamental.
- Remove plants from your property.

**Management information:** For management recommendations, visit [www.dnr.state.mn.us/invasives/terrestrialplants/herbaceous/japaneseknotweed.html](http://www.dnr.state.mn.us/invasives/terrestrialplants/herbaceous/japaneseknotweed.html).

# Spiny Waterflea



**Key to ID:**  
Adults range from  
1/4" to 5/8" long.  
Spiny waterfleas have  
a single long "tail"  
with small spines  
along its length.



**Spiny waterflea attached to a fishing line.**

Photo: Jeff Gunderson

Photo: Gary Montz

# MAY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 May Day	2	3	4	5
6	7	8	9	10	11	12 MN Walleye Opener
13 Mother's Day	14	15	16	17	18	19 Armed Forces Day
20	21	22	23	24	25	26
27	28 Memorial Day Observed	29	30	31		

## Spiny Waterflea

*Bythotrephes longimanus*

**Species:** Zooplankton (microscopic animals) that have a long barbed tail.

**Origin:** Native to Europe and Asia, they were introduced into the Great Lakes by ballast water discharged from oceangoing ships. They were first discovered in Lake Ontario in 1982 and spread to Lake Superior in 1987.

**Impacts:** Spiny waterfleas eat other zooplankton including Daphnia, which are an important food for native fishes. In some lakes, they caused the decline or elimination of some species of native zooplankton. They can clog eyelets of fishing rods and prevent fish from being landed.

**Status:** They have spread throughout the Great Lakes and are established in some inland lakes and rivers in Minnesota.

**Where to look:** They collect in gelatinous globs on fishing lines and downrigger cables. They prefer deep lakes,

but can be found in shallow lakes and rivers.

### Regulatory classification (agency):

Spiny waterfleas are a *regulated invasive species* in Minnesota (DNR). Introduction into another water body is prohibited.

**Means of spread:** They can spread by attaching to fishing lines, downriggers, anchor ropes, and fishing nets. Female waterfleas can carry eggs that resist drying and freezing, and can establish a new infestation. They also can be unintentionally transported in bilge water, bait buckets, or livewells.


### How can people help?

- Learn to recognize them.
- Inspect and remove gelatinous material from fishing lines.
- Drain water before transporting boats, personal watercraft, and bait containers.

**Further information:** Contact Minnesota Sea Grant or DNR Invasive Species Program.

# Musk Thistle

(Nodding Thistle)



**Keys to ID:**  
First year of growth is a spiny rosette. Rosettes “bolt” and develop into mature plants that reach 6 feet tall. It has flat, solitary reddish-purple flowers up to 1 inch in diameter at the tip of each branched stem. The flower is surrounded by needle-like bracts, and is often so large that it bends the stem.

**Musk thistle flowers in bloom.**

Photo: Roger Becker



Photo: Anthony Coriell

# JUNE

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

## Musk Thistle (Nodding Thistle)

*Carduus nutans L.*

**Species:** A tall, spiny biennial forb.

**Origin:** Native to Europe and Asia, it was likely introduced into Minnesota in the early 1900s via contaminated livestock hay/bedding and mulch used in road development.

**Impacts:** Musk thistle plants are extremely spiny

and unpalatable to most livestock and grazing wildlife species. It forms dense monocultures in overgrazed pastures, upland ecosystems, and roadsides if left untreated.

**Status:** Musk thistle is found throughout the southern half of Minnesota and is extremely prevalent in the southernmost two-tiers of counties.

**Where to look:** It is found in pastures, conservation reserve program (CRP) lands, gravel pits, prairies, and along roadsides, fence rows, and field margins. Musk thistle flowers in late May and June.

## Regulatory classification (agency):

It is a *prohibited noxious weed* in Minnesota (MDA).

**Means of spread:** Musk thistle spreads by seed. Mowing roadsides after seed development in late June and July can spread this plant over large distances.

**How can people help?** Locate mature second-year "bolted" plants and cut them in mid- or late May, prior to flowering and seed production, to prevent spread. Musk thistle has numerous stiff spines, so wear heavy leather or canvas gloves if you plan to handle this plant.

**Further information:** Contact MDA Weed Integrated Pest Management Project or visit [www.mda.state.mn.us/weedcontrol](http://www.mda.state.mn.us/weedcontrol).

# Yellow Starthistle

**Yellow starthistle infested field in western U.S.**

Photo: Steve Dewey

**Keys to ID:**  
Plants are gray-green to bluegreen, and grow from 6 inches to 5 feet in height. Flowers are bright yellow with sharp spines surrounding the base. Stems and leaves are covered with cottony wool.

Photo: Stephen Ausmus



# JULY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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	24	25	26	27	28
29	30	31				

## Yellow Starthistle

*Centaurea solstitialis* L.

**Species:** An annual herbaceous plant.

**Origin:** Native to Africa, temperate Asia, and Eurasia, it likely was introduced into the U.S. through contaminated alfalfa in the mid-1800s.

**Impacts:** It chokes out the native plants, reducing biodiversity and wildlife habitat and forage.

Another concern associated with the plant is "chewing disease" that develops in horses that have eaten yellow starthistle. This disease affects the nervous system of horses and is usually fatal.

**Status:** It is not known to exist in Minnesota. Yellow starthistle is most concentrated in California, where the plant infests nearly 12 million acres of rangeland and wildland. It is also reported to be invasive in natural areas of Idaho, Oregon, New Jersey, Utah, and Washington.

**Where to look:** Yellow starthistle is found typically in full sunlight and deep, well-drained soils, where annual rainfall is between 10-60 inches, and is commonly found on roadsides, rangeland, wildlands, hay fields, and pastures.

**Regulatory classification (agency):** It is not a regulated pest in Minnesota.

**Means of spread:** It is spread by animals and human activities. Vehicles, contaminated crop seed, hay or soil, and road maintenance, contribute greatly to the plant's rapid and long-distance spread.

### How can people help?

- Remove plants from your property.
- Report infestations to the DNR Invasive Species Program using the reporting form found at [www.mda.state.mn.us/misac/reporting.htm](http://www.mda.state.mn.us/misac/reporting.htm).

**Management information:** For management recommendations, visit [www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7402.html](http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7402.html).

# Common Tansy

**A field invaded by common tansy.**

Photo: Monika Chandler

**Keys to ID:**  
Tansy grows 3 to 6 feet tall, has fern-like leaves, and flat-topped clusters of yellow button-like flowers that bloom from July to September. Multiple upright reddish stems form a bushy plant.



Photo: Monika Chandler

# AUGUST

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			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	

## Common Tansy

*Tanacetum vulgare*

**Species:** A perennial herbaceous plant.

**Origin:** Native to Europe and Asia, tansy was brought to the U.S. by early colonists from Europe for culinary, medicinal, and ornamental uses, then escaped from cultivation. It has spread to almost every state in the continental U.S.

**Impacts:** Tansy is toxic to humans and some livestock if ingested in large quantities. It forms dense stands that inhibit the growth of desirable vegetation resulting in the loss of quality forage, wildlife habitat, and native plants. Reforestation efforts can be hindered by tansy outcompeting saplings.

**Status:** Tansy is present in at least 37 Minnesota counties.

**Where to look:** It can be found in open areas such as roadsides, pastures, natural areas, and along ditches and streams.

### Regulatory classification (agency):

Tansy is classified as a *secondary noxious weed* (MDA) and as a *prohibited noxious weed* in Beltrami, Cass, Itasca, and Koochiching counties in Minnesota.

**Means of spread:** The seeds are lightweight and easily moved by wind, water, wildlife, equipment, etc. Mowing spreads the seeds and may cause the plant to flower multiple times rather than a single time per year.

### How can people help?

- Do not plant tansy as an ornamental.

- Control small infestations early, either by hand pulling wearing gloves or using herbicides. Either method will require follow-up treatments.
- Contact your University of Minnesota Extension Agent for herbicide recommendations.

**Further information:** Contact the MDA Weed Integrated Pest Management Project or visit [www.mda.state.mn.us/weedcontrol](http://www.mda.state.mn.us/weedcontrol).

# Non-native Subspecies of Common Reed

**Non-native subspecies of common reed along a lakeshore.**

Photo: Jay Rendall

## **Keys to ID:**

**Stems of natives are smooth; introduced are ribbed and visible with the naked eye.**

**Leaf sheath of native is easy to remove or falls off; introduced is difficult to remove. Flower head of native is sparse; introduced is dense.**

Photo: Jay Rendall

# SEPTEMBER

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

## Non-native Subspecies of Common Reed

*Phragmites australis* subsp. *australis*

**Species:** This plant is a non-native subspecies of the native perennial grass *Phragmites australis* subsp. *americanus* (Saltonstall, P.M. Peterson and Soreng). It can grow over 12 feet high in dense stands.

**Origin:** The introduction of non-native subspecies of

common reed into the U.S. likely occurred in the early part of the 1800s at east coast ports.

**Impacts:** Mixed wetland plant communities are replaced by near monocultures of non-native common reed, resulting in changed ecosystem processes and associated detrimental impacts on native wildlife.

**Status:** The non-native has entirely replaced native common reed populations in New England, has spread to the West, and also is becoming prevalent in the Midwest. There are few known

populations in Minnesota—some in the Twin Cities area and near Duluth.

**Where to look:** It typically grows in wetlands and other moist soil habitats.

**Regulatory classification (agency):** It is not currently a regulated pest in Minnesota.

**Means of spread:** It spreads via movement of construction and maintenance equipment, wind, and water.

**How can people help?**

- Look for this plant in moist soil habitats.

- Complete the reporting form found at [www.mda.state.mn.us/misac/reporting.htm](http://www.mda.state.mn.us/misac/reporting.htm).
- Eliminate small populations.
- Report infestations to the DNR Invasive Species Program using reporting form found at [www.mda.state.mn.us/misac/reporting.htm](http://www.mda.state.mn.us/misac/reporting.htm).

**Further information:** Visit [www.invasiveplants.net/phragmites](http://www.invasiveplants.net/phragmites) and [www.nps.gov/plants/alien/fact/phau1.htm](http://www.nps.gov/plants/alien/fact/phau1.htm).

# Faucet Snail

(Mud Bithynia)



**Keys to ID:**  
Adults reach up to  
1/2-inch in length,  
light brown to black,  
with 4 to 5 whorls and  
a cover on the shell  
opening.

**Faucet snails attach to hard objects in water.**

Photo: Jim Nissen

Photo: Kristin Herrmann

# OCTOBER

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

## Faucet Snail (Mud Bithynia)

*Bithynia tentaculata*

**Species:** An aquatic snail.

**Origin:** Native to Europe, it was introduced into Lake Michigan around 1870, probably through ship ballast water.

**Impacts:** This snail is an intermediate host for intestinal parasites that cause mortality of ducks and coots. They also outcompete native snail species.

**Status:** It has been reported around the Great Lakes, in southern Quebec, Canada, and east to the Washington, D.C. area. It has been found in many areas of eastern Wisconsin and has recently established in the Mississippi River near Winona, Minnesota. It is unclear if it is in other Minnesota waters.

**Where to look:** It is found on rocky shorelines, river and lake bottoms, and aquatic vegetation.

**Regulatory classification (agency):** It is not a regulated pest.

**Means of spread:** It is spread by attaching to aquatic plants, boats, and equipment.

### How can people help?

- Report new locations.
- Inspect and remove aquatic plants, animals, and mud from boats and equipment before transporting from one water body to another.

**Further information:** Contact the Minnesota State University-Mankato, Department of Biological Sciences at 507/389-1280 or [robert.sorensen@mnsu.edu](mailto:robert.sorensen@mnsu.edu)

# Black Swallow-wort

(Climbing Milkweed)

**Black swallow-wort plants.**

Photo: Peter Dziuk

**Keys to ID:**  
Twining stems;  
leaves are simple,  
dark green, oblong  
and pointed; small  
(1/4-inch) purplish-  
black flowers with  
yellow centers bloom  
in June and July; 1-1/2  
to 3-inch long seed  
pods are slender and  
tapering similar to  
other milkweeds.

Photo: Peter Dziuk



# NOVEMBER

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

## Black Swallow-wort (Climbing Milkweed)

*Cynanchum louiseae*, *Vincetoxicum nigrum*,  
*Cynanchum nigrum*

**Species:** A twining perennial vine in the milkweed family.

**Origin:** Native to southwestern Europe, it was intentionally introduced into North America as an ornamental in the 1900s.

**Impacts:** Vines wind around other vegetation, outcompeting native wildflowers and young trees and can form dense stands in shrubby areas. According to laboratory research, when Monarch butterflies lay eggs on black swallow-wort, the resulting larvae experience a high rate of mortality.

**Status:** It occurs in northeastern United States and Canada, west to Nebraska and Kansas; also in California.

**Where to look:** Black swallow-wort is most commonly found in heavily-shaded woodlands, but has recently become

invasive in disturbed, open areas along roads and in fields.

**Regulatory classification (agency):** It is not a regulated pest in Minnesota.

**Means of spread:** Like native milkweeds, the tufted seed is spread by wind.

### How can people help?

- Look for this plant in late summer when plants turn yellow and pods stand out.
- Remove the pods and burn them to prevent seed dispersal.

**Further information:** Contact the MDA "Arrest the Pest Hotline": (651) 201-6684 (metro) or 1-888-545-6684 (toll free).

# Sirex Woodwasp

**An adult sirex woodwasp.**

Photos: Dennis Haugen

**Keys to ID:**  
Body is dark metallic blue, males have orange band in middle of abdomen; legs reddish-yellow with black feet (tarsi), males have black hind legs; antennae entirely black.



Photo: Steve Valley

# DECEMBER

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

## Sirex woodwasp

*Sirex noctilio*

**Species:** A non-native insect in the woodwasp or horntail family.

**Origin:** Native to Europe, Asia, and northern Africa, it is a pest of pine plantations in New Zealand, Australia, southern South America, and South Africa. The first infestation in North America was detected in May 2005 near Oswego, New York.

**Impacts:** The sirex woodwasp attacks and kills pine trees, especially stressed trees in plantations. In the Southern Hemisphere, it has caused up to 80 percent tree mortality in susceptible plantations. It kills the tree by introducing a symbiotic fungus and toxic mucus during oviposition. Developing larvae feed only on this fungus.

**Status:** Detection and delimiting surveys are underway across the United States and Canada. Infestations have been found in western New York, northern Pennsylvania, and southern Ontario, Canada. It has not been detected in Minnesota.

**Where to look:** Dense (overstocked) pine plantations with canopy closure.

**Regulatory classification (agency):** It is a *proposed regulated invasive species* (USDA-APHIS).

**Means of spread:** Long-range movement is likely through infested logs and untreated lumber. Adults are good fliers and natural movement is expected to be 20 to 25 miles per year.

### How can people help?

- Collect and report any suspect woodwasps.

- Collect and report suspected woodwasps to MDA using the reporting form found at [www.mda.state.mn/misac/reporting.htm](http://www.mda.state.mn/misac/reporting.htm)
- Early detection is important in implementing a successful biological control program.

**Further information:** Contact DNR Forestry or MDA.

**For information about invasive species in  
Minnesota, contact:**

Aquatic Plants and Animals  
Minnesota Department of Natural Resources-  
Invasive Species Program  
**(651) 259-5100**

University of Minnesota-Sea Grant Aquatic Invasive  
Species Information Center  
**(218) 726-8712**

U.S. Fish and Wildlife Service  
**(612) 713-5114**

Terrestrial Plants and Insects  
Minnesota Department of Agriculture-Invasive  
Species Unit  
**(651) 201-6328**

USDA-Animal and Plant Health Inspection Service  
**(612) 725-1722**

Minnesota Department of Natural Resources-Division  
of Forestry  
**(651) 259-5300**

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Minnesota Department of Natural Resources

Rusty Crayfish  
Firewood Pathway  
Bighead and Silver Carp  
Japanese Knotweed  
Spiny Waterflea  
Musk Thistle  
Yellow Starthistle  
Common Tansy  
Common Reed  
Faucet Snail  
Black Swallow-wort  
Sirex Woodwasp