Aquatic Invasive Species Identification Review

Citizen Lake Monitoring Network, Water Action Volunteers, University of Wisconsin-Extension, Wisconsin Department of Natural Resources, Wisconsin First Detector Network

Zoom

May 27, 2020

Overview

- Introduction
- Submersed aquatic plants
- Aquatic/wetland animals
- Riparian plants
- Upland wetland plants
- Question and answers

Invasive species rule – NR 40

The invasive species rule (Wis. Adm. Code ch. NR 40) makes it illegal to possess, transport, transfer, or introduce certain invasive species in Wisconsin without a permit. Everyone is responsible to comply with these regulations. What you need to do as an individual, business, or organization may vary depending on your type of work and activities. The regulated species list and the details of the rule are shown in the tabs below.

View the full text of the invasive species rule [exit DNR].

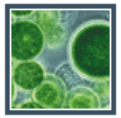
What the rule does | **Species list** | Compliance | Business resources | Background

Regulated species list

The invasive species rule regulates species from several groups. You can browse the list by species groups below to learn more about each regulated species and methods of identification and control. You can also view and print a complete list of the regulated species [PDF] or a list of plants only [PDF].

Regulated invasive species by group


Plants


Algae and cyanobacteria


Aquatic invertebrates (except crayfish)


Fish and crayfish


Terrestrial and aquatic vertebrates (except fish)


Terrestrial invertebrates and plant disease-causing microorganisms


Fungus

Invasive species

Learn
about invasive species in Wisconsin.

Subscribe
to the invasive species rules and regulations email list.

Report
an invasive species in your area.

Order
invasive species publications.

Laws & Policies

- Invasives Rule – NR 40
- Boats & Bait
- Firewood
- Permits & Licenses
- VHS

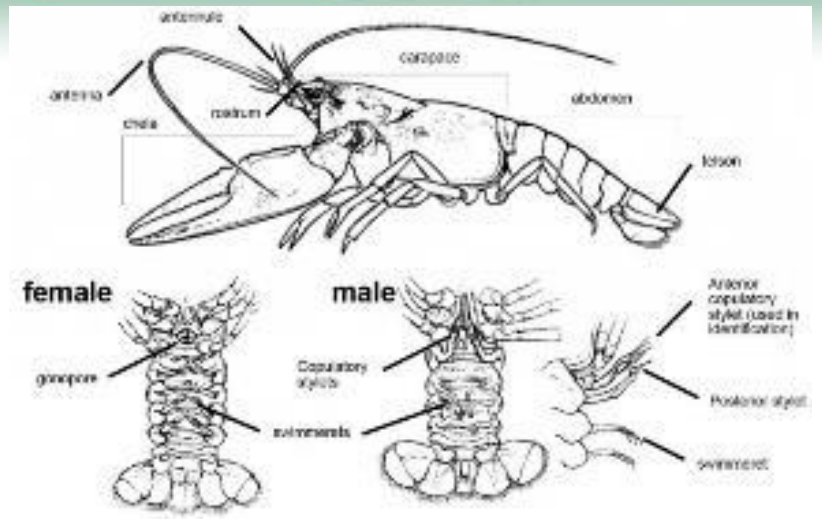
Related links

- Official NR 40 rule [exit DNR]
- Compiled NR 40 species list [PDF]
- Printable NR 40 plant list [PDF]
- Plant list for nurseries [PDF]

Updates by email

- Invasive species rules
- Aquatic invasives
- Forest insects and diseases
- Terrestrial invasives

Identification



Phenology

Life Stage

- dormant or bare branches
- green vegetation present
- flowers present
- mature fruits or seeds present

Life Stage refers to the life stage of the species that is most dominant and/or most easily detectable in a given month.

Detectability

- undetectable
- low
- medium
- high

Detectability refers to how easy it is to find and/or identify the species in a given month.

Lakes & AIS Mapping Tool

Bureau of Water Quality, Environment Management Division

Basic Tools | Identify Tools | Drawing & Measuring | Find Location | Maps & Data | Boater Movement | Help

Show Layers | Show Legend — Table of Contents

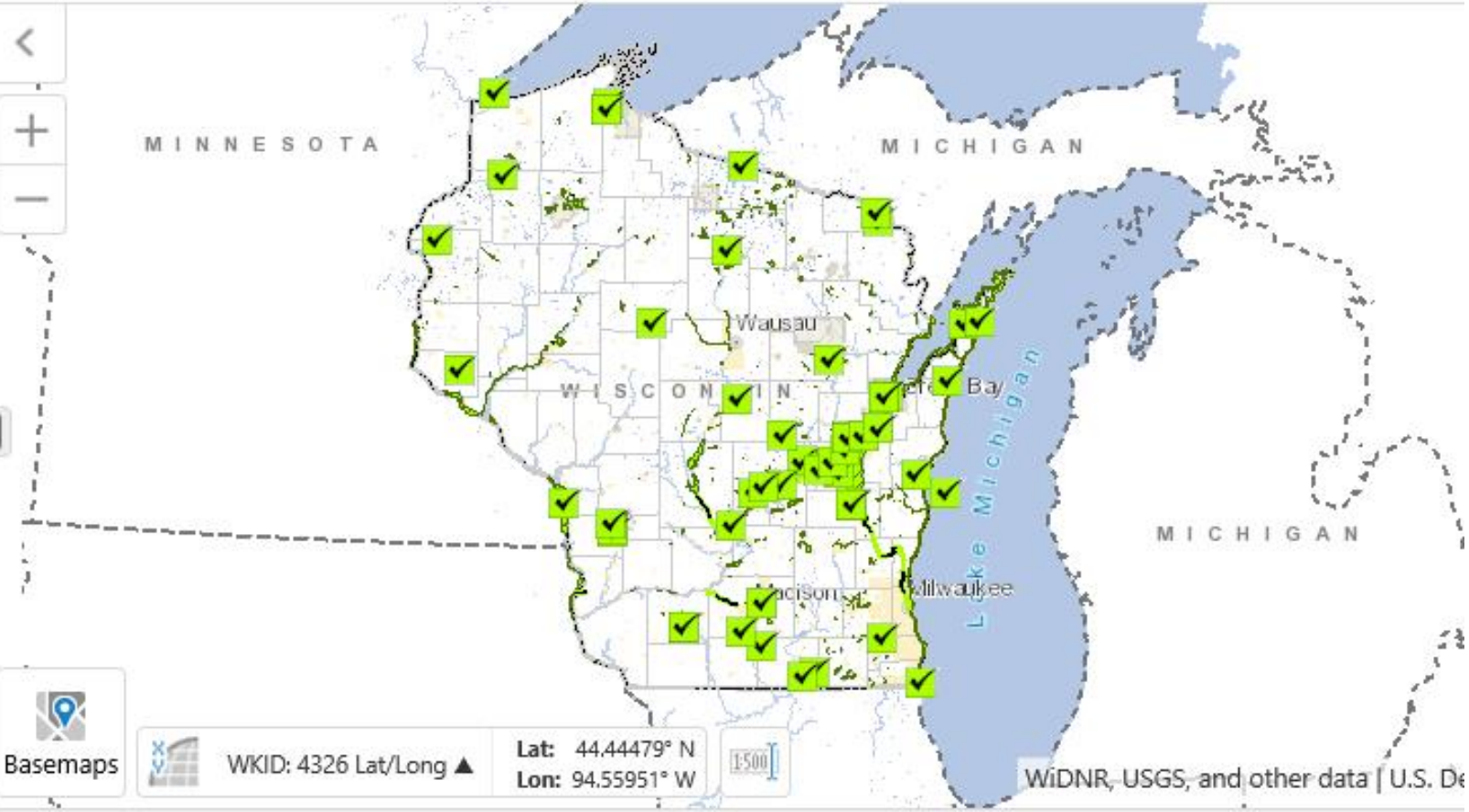
Pan | Zoom In | Zoom Out | Full State | Previous Extent | Bookmarks — Navigation

Get Info | Print Map | Help | Feedback — Other Tools & Actions

Layers

Filter Layers... | Filter

- Eurasian Water-Milfoil (Myriophyllum spiactum)
  - Verified (Eurasian Water-Milfoil)
    - Verified EWM Points
    - Verified EWM Lines
    - Verified EWM Areas
  - No Longer Observed (Eurasian Water-Milfoil)



DNR Home | DNR Lakes | Enter Data into SWIMS

Submergent & Floating Invasive Plants

Paul Skawinski

Extension Lakes / UWSP

Scientific Name	Common Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cabomba caroliniana	Carolina fanwort	○	○	○	○	◔	◑	●	●	●	◔	○	○
Egeria densa	Brazilian waterweed	○	○	○	○	◔	◑	●	●	●	◑	○	○
Eichhornia crassipes	floating water hyacinth	○	○	○	○	◔	◑	●	●	●	●	○	○
Hydrilla verticillata	hydrilla	○	○	○	◔	◔	◑	●	●	●	◑	○	○
Hydrochorus morsus-ra..	European frog-bit	○	○	○	○	◔	◑	●	●	●	◔	○	○
Myriophyllum aquaticum	parrot feather	○	○	○	○	◔	◑	●	●	●	◑	○	○
Myriophyllum spicatum	Eurasian watermilfoil	○	○	○	○	◔	◑	●	●	●	◑	○	○
Najas minor	brittle naiad	○	○	○	○	○	○	◑	●	●	◔	○	○
Nitellopsis obtusa	starry stonewort	○	○	○	○	○	◑	●	●	●	◑	○	○
Nymphoides peltata	yellow floating heart	○	○	○	◔	◔	◔	◑	●	●	◑	○	○
Pistia stratiotes	water lettuce	○	○	○	○	○	◔	◑	●	●	◑	○	○
Potamogeton crispus	curly-leaf pondweed	◔	◔	◔	◑	●	●	●	◔	◔	◔	◔	◔
Trapa natans	water chestnut	○	○	○	○	◔	◔	◑	●	●	●	○	○

Life Stage

- dormant or bare branches
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Life Stage refers to the life stage of the species that is most dominant and/or most easily detectable in a given month.

Detectability

- ○ undetectable
- ◔ low
- ◑ medium
- ● high

Detectability refers to how easy it is to find and/or identify the species in a given month.

Carolina Fanwort

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Leaves opposite, held apart by short stalks
- Tiny, floating leaves may be present
- Flowers 6-parted, white

WI Known Distribution

No existing populations currently known in WI,
never documented here.

NATIVE

Water Marigold

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Leaves whorled or opposite, not separated by a long stalk
- Emergent leaves serrated
- Flowers yellow

Brazilian Waterweed

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Leaves in whorls of 4-8, serrated on edges
- Flowers rare, white, 3 petals, floating on thin stalks

WI Known Distribution

No existing populations currently known in WI;
one population formerly in Portage County.

Hydrilla

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Leaves in whorls of 4-8, serrated on edges and under midveins
- Tubers present in sediments
- Flowers rare, white, floating on thin stalks

WI Known Distribution

No existing populations currently known in WI;
one population formerly in Marinette Co (2009)

NATIVE

Common Waterweed

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Leaves in whorls of 3, not serrated on edges or under midveins

Water Hyacinth

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Leaves floating with inflated bases; very waxy and round
- Flowers very showy, on stalks above the cluster of leaves
- Long, purplish roots underneath

WI Known Distribution

No existing populations currently known in WI

NATIVE

Wild Calla

Photo: Paul Skawinski,

- Base of leaf not inflated. Leaves emerge from a creeping stem that originates on shore.
- Singular flower spike with a white hood around it.

European Frog-bit

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Leaves in floating clusters, like small (2-3”) lily pads
- Leaf inflated at base
- Flowers white, 3 petals

WI Known Distribution

No existing populations currently known in WI,
never documented here.

NATIVE

Watershield

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Leaves have no notch
- Slimy coating usually present on stem and underside of leaves

Parrot Feather

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Submergent leaves highly divided, narrow.
- Emergent leaves less divided, waxy and thickened
- Flowers produced in the axils of the emergent leaves

WI Known Distribution

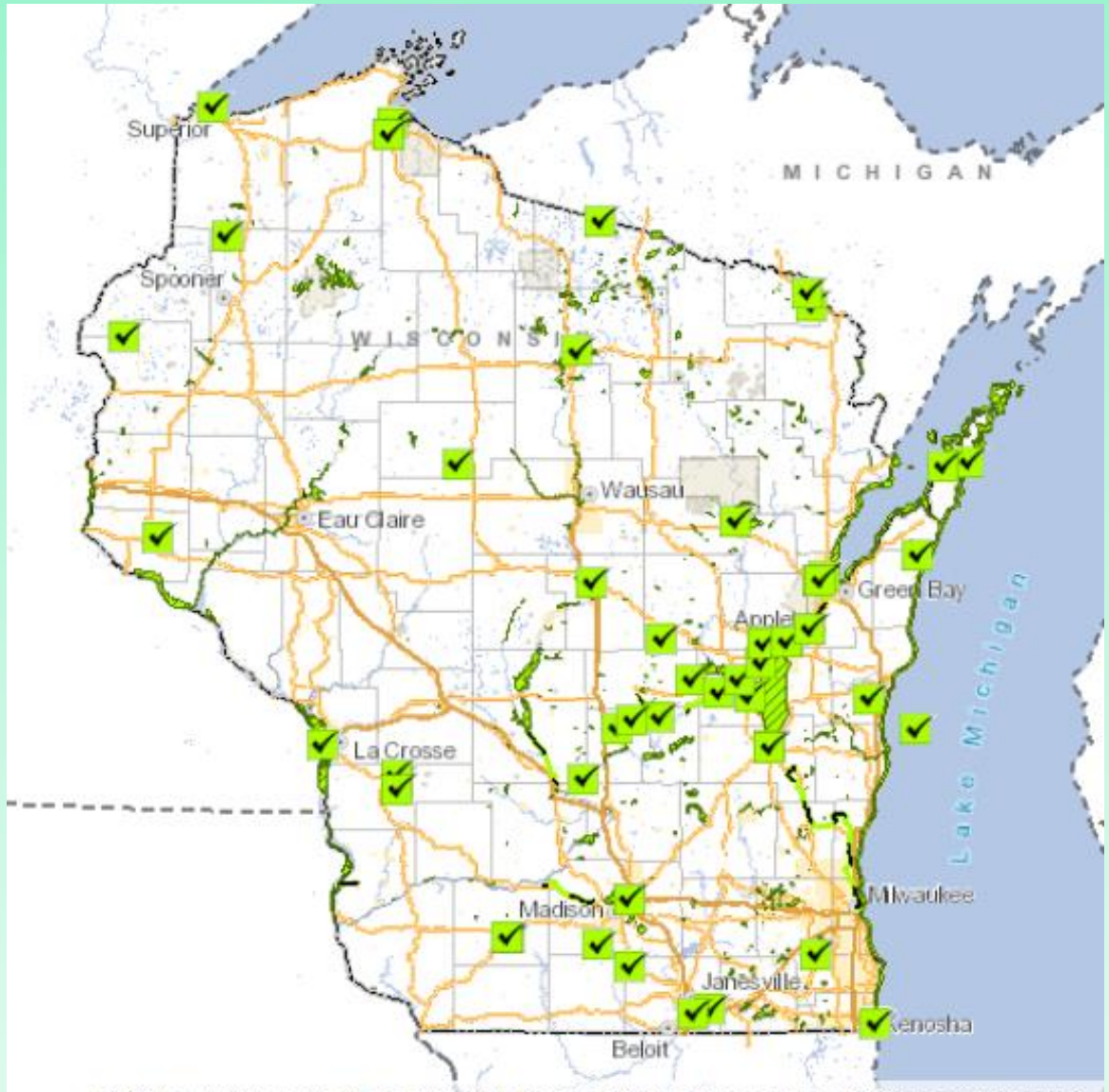
No existing populations currently known in WI;
populations previously found in Dane County
and Mississippi River Pool 5.

Eurasian Water-milfoil

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- First found in WI in 1960s
- Currently found in 845 WI lakes & streams (April 2018)
- Can form dense mats - interferes with water recreation
- Can spread from small fragments

WI Known Distribution



Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

Adventitious roots
develop on fragments

Photo: Paul Skawinski, UWEX Lakes

Northern watermilfoil
Myriophyllum sibiricum

Eurasian watermilfoil
Myriophyllum spicatum

Brittle Naiad

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Entirely submergent, no floating or emergent leaves.
- Leaves curving downward, brittle, slightly serrated on edges
- Seeds produced in leaf axils

WI Known Distribution

By County | By Waterbody | By Species | By Year | Open In Excel

Waterbody	Status	Waterbody ID Code (WBIC)	County	Year First Found	Details
Buffalo Lake	Verified	168000	Marquette	2014	Details
Crooked Lake	Verified and Vouchered			2019	Details
Green Bay [Duck Creek]	Verified and Vouchered	20		2017	Details
Lake Andrea	Verified and Vouchered	733850	Kenosha	2014	Details
Lake Puckaway	Verified	158700	Green Lake, Marquette	2013	Details
Mason Lake	Verified	5028689	Adams, Marquette	2009	Details
Storrs Lake	Verified and Vouchered	780300	Rock	2007	Details

NATIVE

Other Naiads (*Najas* spp.)

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

Slender naiad (*N. flexilis*)

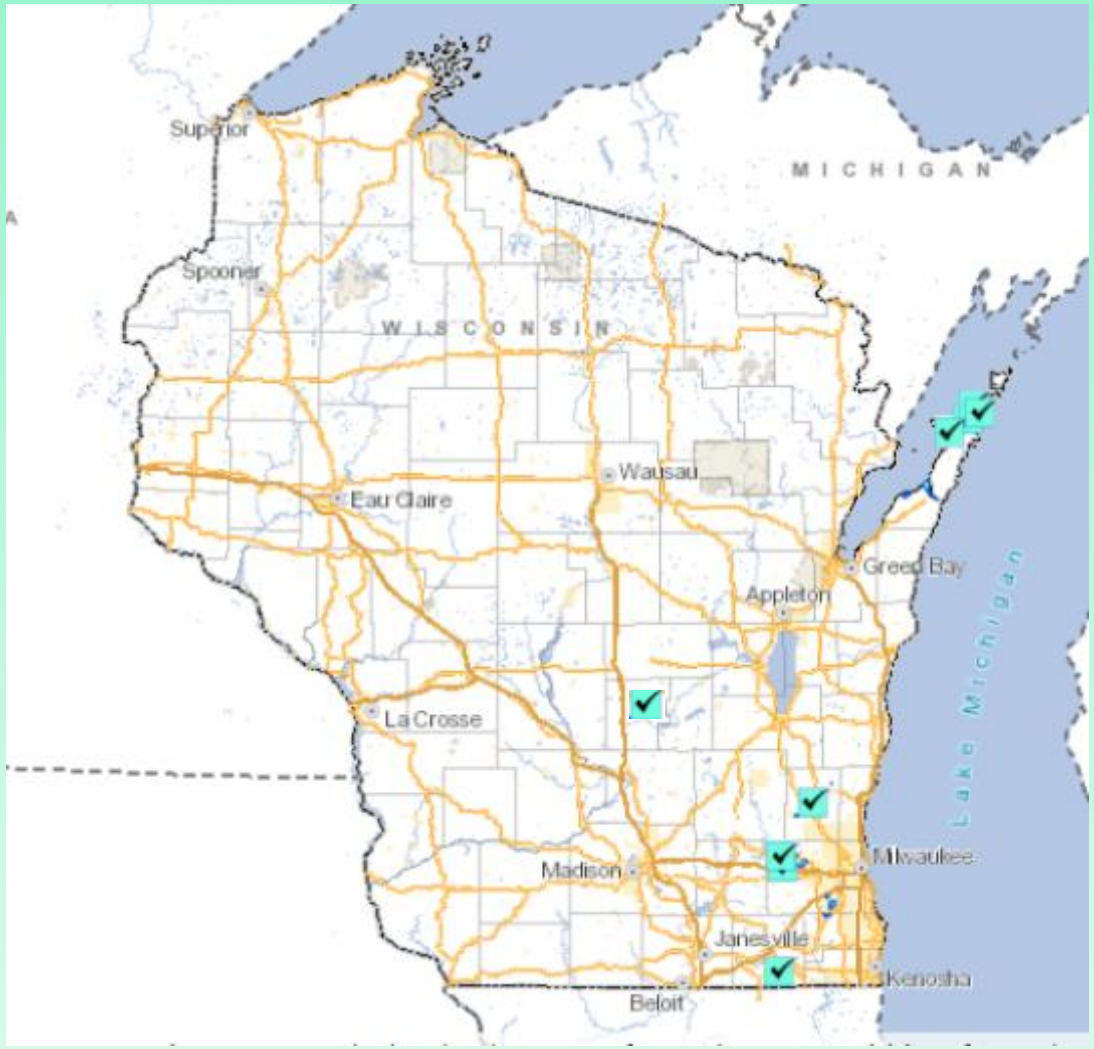
Spiny naiad (*N. marina*)

Starry Stonewort

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Leaves/branchlets whorled, smooth and bright green, with a long bract on some branchlets near the top of the plant
- Star-shaped bulbils produced in the sediments on clear threads

WI Known Distribution



Big Muskego Lake	Verified and Vouchered	762400	Waukesha	2015	Details
Channel around High Cliff Park (Sturgeon Bay, WI)	Verified	5535907	Door	2016	Details
Ellison Bay/Lake Michigan	Verified		Door	2016	Details
Fish Creek (Green Bay)	Verified and Vouchered	20	Door	2016	Details
Geneva Lake	Verified and Vouchered	758300	Walworth	2018	Details
Green Lake	Verified and Vouchered	5030877	Washington	2016	Details
Lake Emery	Verified and Vouchered	168800	Marquette	2019	Details
Lake Michigan - Rowleys Bay Access	Verified and Vouchered	20		2016	Details
Little Cedar Lake	Verified and Vouchered	25100	Washington	2018	Details
Little Muskego Lake	Verified and Vouchered	762700	Waukesha	2014	Details
Little Sturgeon Bay	Verified and Vouchered	100400	Door	2016	Details
Long Lake	Verified and Vouchered	761100	Racine	2015	Details
Nemahbin Lakes Boat Ramp	Verified and Vouchered	827000	Waukesha	2019	Details
Okauchee Lake	Verified and Vouchered	850300	Waukesha	2019	Details
Pewaukee Lake	Verified and Vouchered	772000	Waukesha	2019	Details
Pike Lake	Verified and Vouchered	858300	Washington	2015	Details
Silver Lake	Verified and Vouchered	36200	Washington	2015	Details
Sister Bay/Green Bay Access	Verified		Door	2016	Details
Sturgeon Bay	Verified and Vouchered	88	Door	2016	Details
Wind Lake	Verified	761700	Racine	2017	Details

NATIVE Slender Stonewort

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Very delicate
- Branchlets ("leaves") generally symmetrically forking at ends
- No bulbils produced in the sediments

Yellow Floating Heart

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Leaves floating, with wavy edges
- Spreads by rhizomes
- Flowers yellow, held above the surface
- Seedheads oval-shaped, seeds with many bristles

WI Known Distribution

Water Lettuce

Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Leaves dull-green, very soft and fuzzy, in floating clusters
- Tiny flowers located in the center of the clusters
- Long roots dangle underneath

WI Known Distribution

No existing populations currently known in WI

Curly-leaf Pondweed

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

- Introduced through ballast water, aquarium dumping, and/or during common carp stocking programs
- Typically grows from October - June
- Releases nutrients into water column when it dies off – contributes to algae blooms

Curly-leaf Pondweed

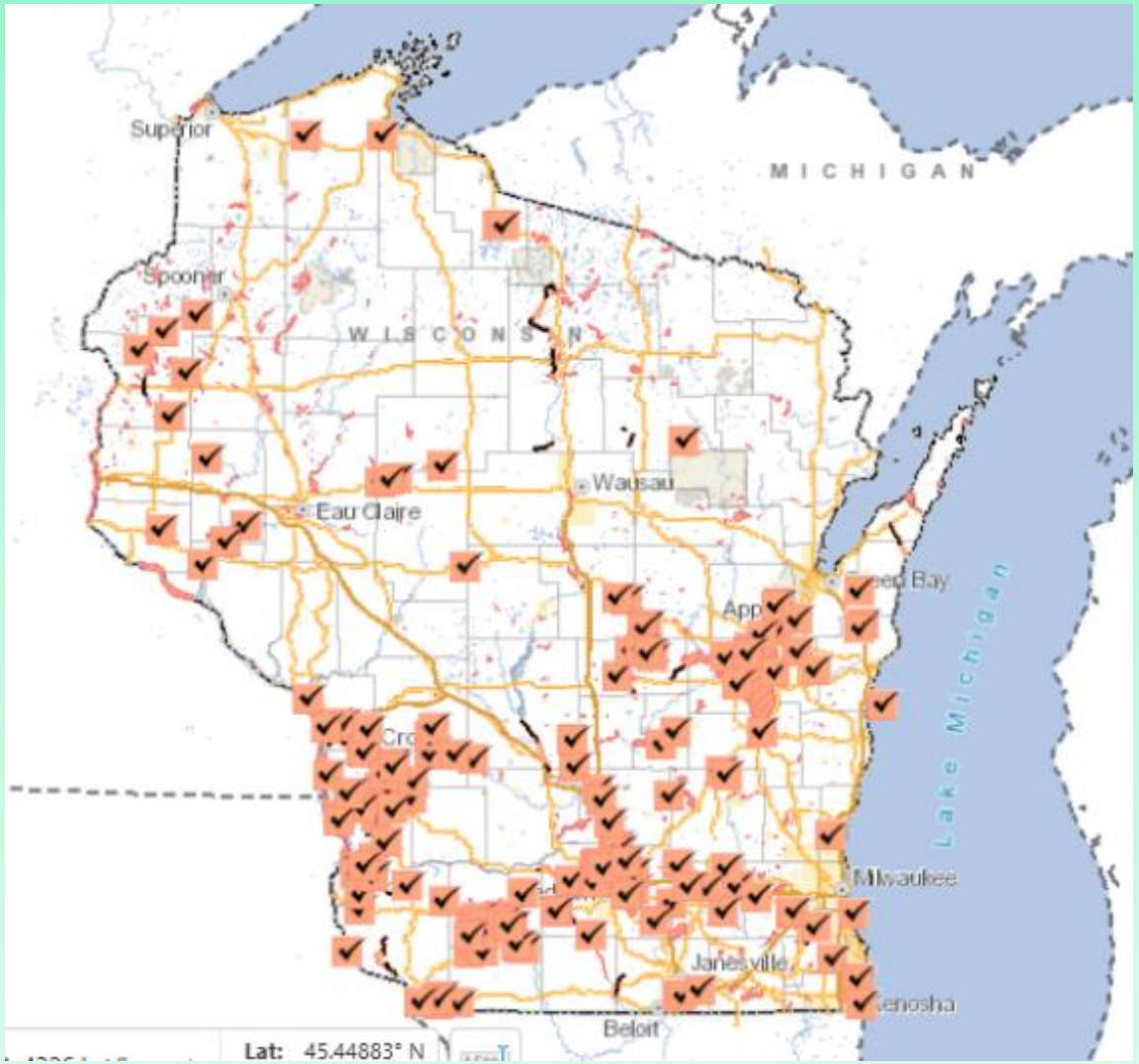
Photos: Paul Skawinski, *Aquatic Plants of the Upper Midwest*

- Documented in 916 WI lakes and rivers (April 2018)
- Spreads by rhizomes and turions

Curly-leaf Pondweed

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

WI Known Distribution



NATIVE

Other Pondweeds

Photos: Paul Skawinski,
Aquatic Plants of the Upper Midwest

Clasping-leaf pondweed
(*P. richardsonii*)

Fern pondweed
(*P. robbinsii*)

Water Chestnut

Photo: Ken Karol, NY Botanical Garden

Photo: Paul Skawinski

- Floating leaves waxy, with serrated edges, produced in floating clusters
- Roots dangling down underneath, in whorled clusters
- Flowers small, produced in center of clusters
- Fruits very hard and spiny

WI Known Distribution

No existing populations currently known in WI,
never documented here.

Aquatic Invasive Animals

ILANA HAIMES

WATER ACTION VOLUNTEERS COORDINATOR

DATA MGMT AND SPECIAL PROJECTS

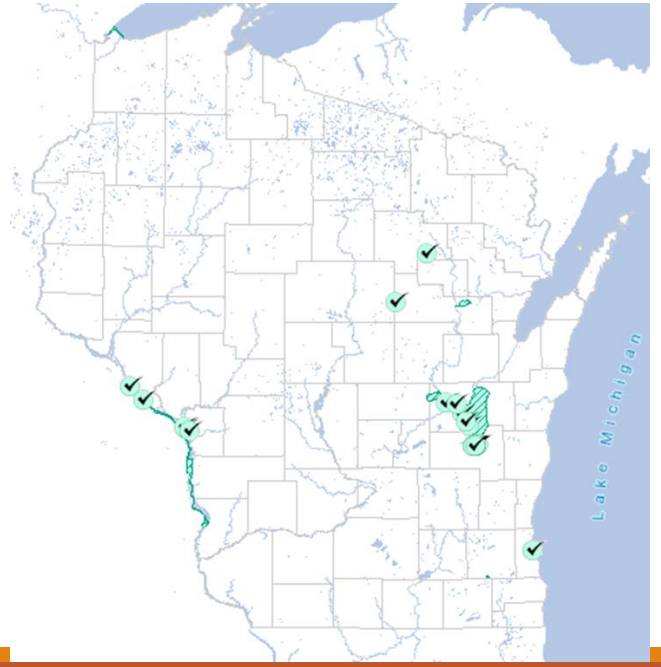
DEPT. OF NATURAL RESOURCES

List of Species

- Faucet Snail
- Spiny Waterflea
- Chinese Mystery Snail
- Banded Mystery Snail
- Asian Clam
- Quagga Mussel
- Zebra Mussel
- Round Goby
- Rusty Crayfish
- Red Swamp Crayfish
- New Zealand Mudsnail

WISCONSIN DEPT. OF NATURAL RESOURCES

Photo by River Alliance of Wisconsin



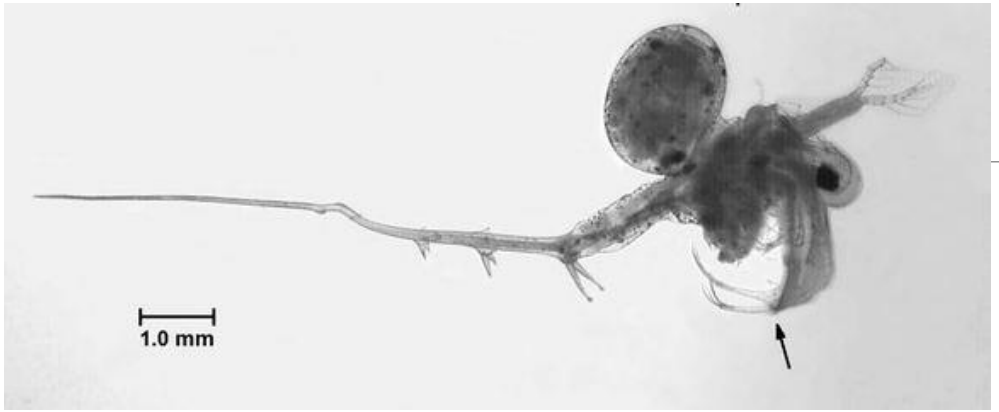
Faucet Snail *(Bithynia tentaculata)*

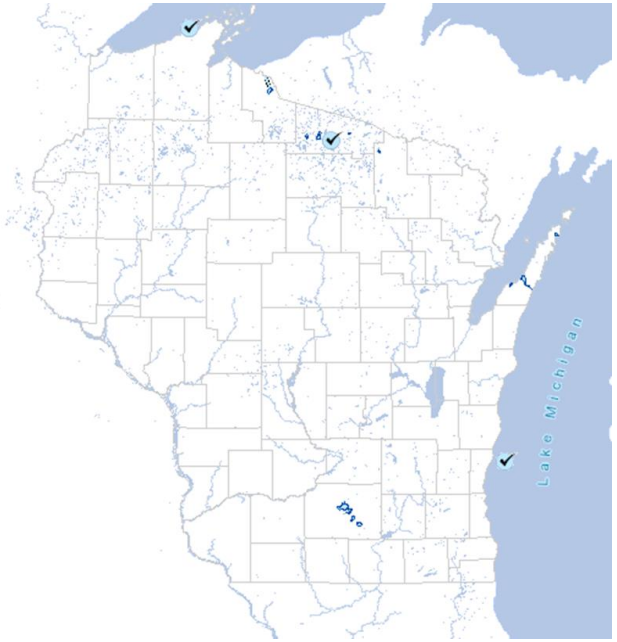
- Right-handed opening
- Oval
- 5-6 whorls
- Aperture less half the height
- Operculum with concentric rings

WISCONSIN
DEPT. OF NATURAL RESOURCES

Spiny Waterflea *(Bythotrephes longimanus)*

Photo by J. Liebig, NOAA GLERL, 2001





- ¼” to ½”
- Translucent
- Long spine
- Dark black eye

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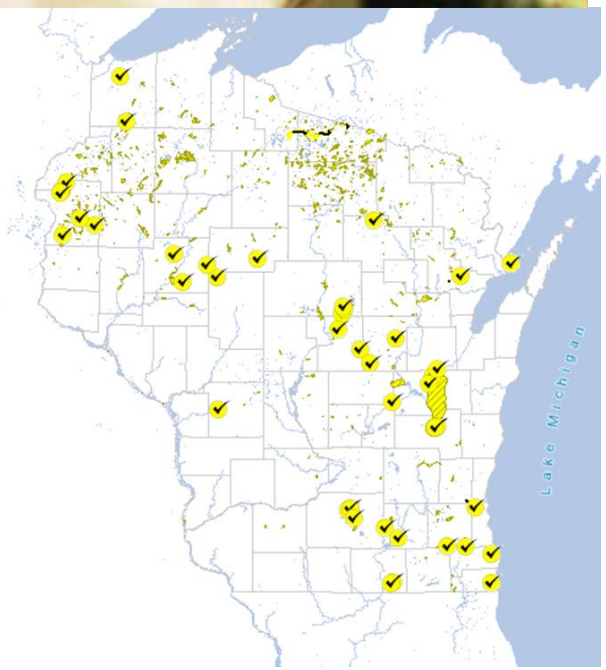
Chinese Mystery Snail *(Cipangopaludina chinensis malleata)*

Photo from Kemongsa Science In Picture, 1993



- Smooth shell
- Olive green banding
- 6-7 whorls
- Up to 2”
- Deep grooves between whorls

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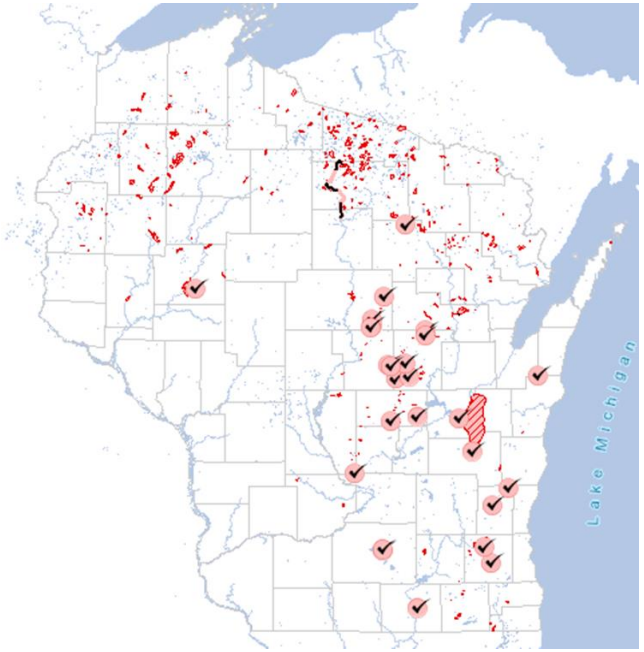
DEPT. OF NATURAL RESOURCES

Photo by Paul Skawinski



Banded Mystery Snail *(Viviparus geogianus)*

- 1-1½” long
- 1” wide
- Right hand opening
- Distinct horizontal bands across shell

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Native Look Alike: Brown Mystery Snail *(Campeloma decisum)*

Photo from Burch 1982 and Turgeon et al. (1998)

- Olive green shell
- Width to height ratio generally smaller than in Chinese or Banded Mystery Snails
- Usually no larger than 1½”

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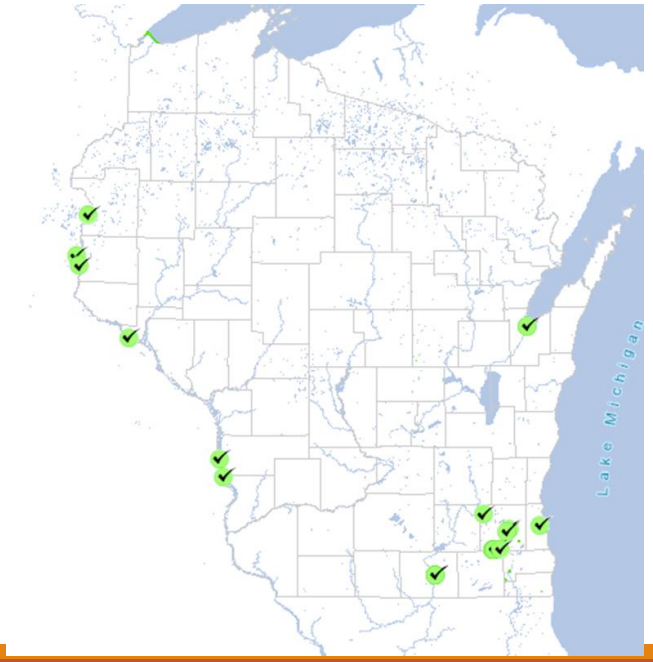
Photo from US Geological Survey, Bugwood.org



Asian Clam *(Corbicula fluminea)*

- Bivalve
- Elevated concentric rings
- Light purple inside shells

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Native Look Alike: Fingernail Clam *(Sphaeriidae)*

Photo from *Freshwater Mussels of the Upper Mississippi River*

- Smooth outer surface
- Very fine, close spaced concentric lines
- Teeth small and often obscure
- No larger than ¾”

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Photo by John Karl, UMN SeaGrant

Lateral View

Quagga Mussel *(Dresseina bugensis)*

- Rounded
- Byssal near back
- Asymmetric

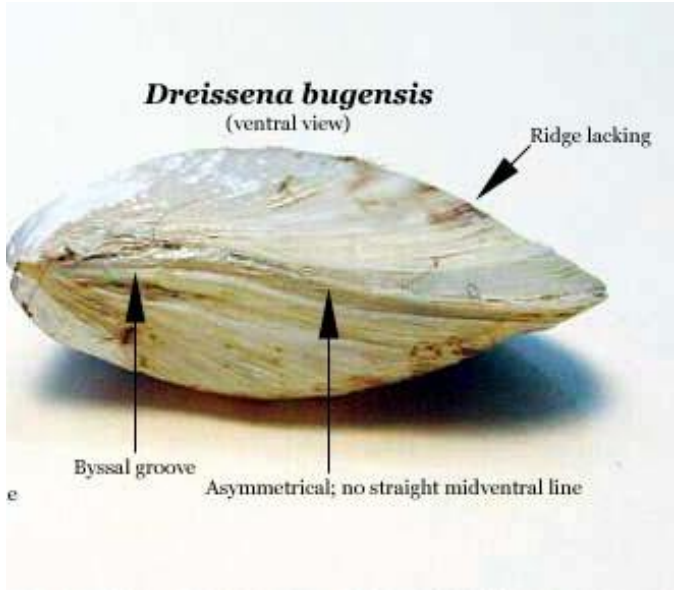


Photo by Myriah Richerson

WISCONSIN
DEPT. OF NATURAL RESOURCES

Photo from John Karl, UMN SeaGrant

Zebra Mussel *(Dreissena polymorpha)*

- Flat
- Byssal central
- Symmetric

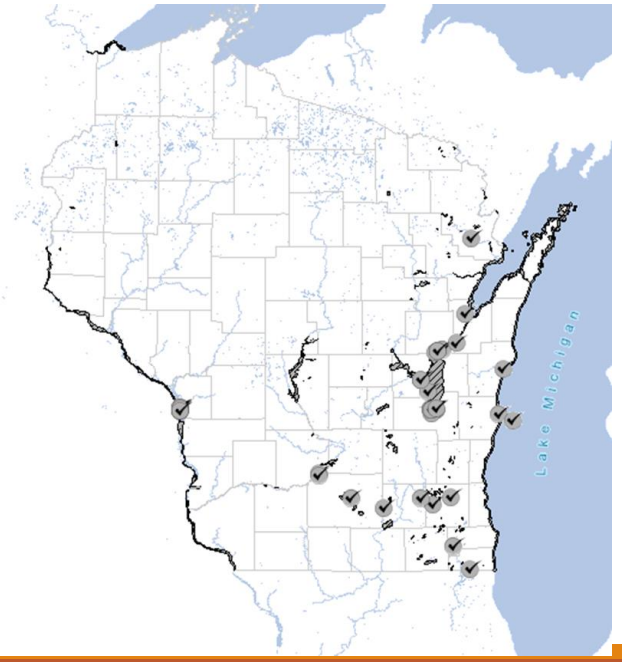


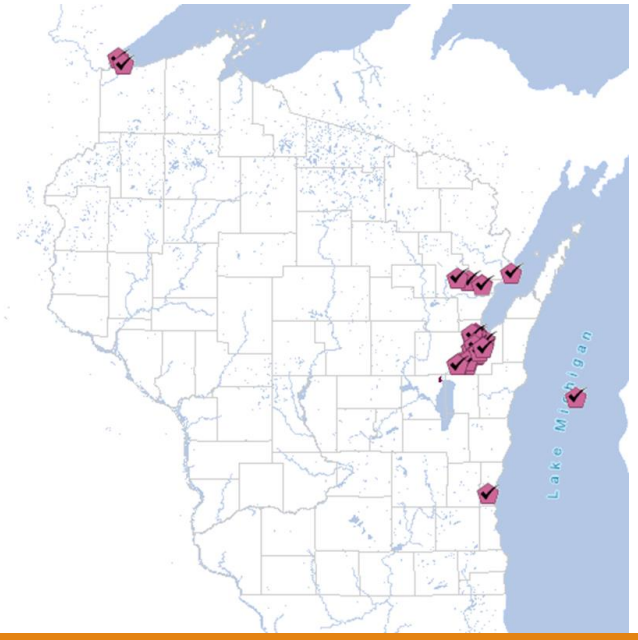
Photo by Myriah Richerson

WISCONSIN DEPT. OF NATURAL RESOURCES

Photo from Zak Slagle, Ohio DNR

Round Goby *(Noegobius melanostomus)*

- Suction cup-like pelvic fin
- Solid slate gray when young
- 3-6” long



WISCONSIN
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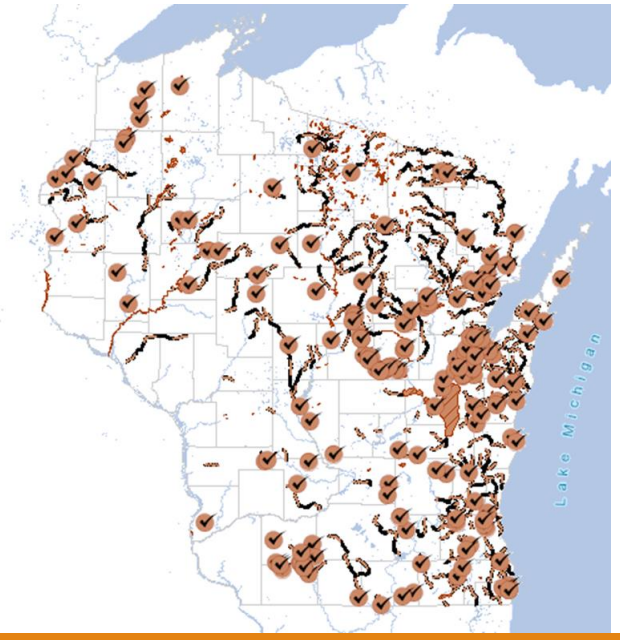
Photo from Wisconsin DNR



Rusty Crayfish *(Orconectes rusticus)*

- Larger claws than other species
- Rusty-colored spots on either side of the body
- Black bands on claw tips

WISCONSIN
DEPT. OF NATURAL RESOURCES

Photo by Paul Skawinski

Red Swamp Crayfish *(Procambarus clarkia)*

- Dark red with raised bright red spots
- 2-5”
- Black wedge-shaped stripe on abdomen

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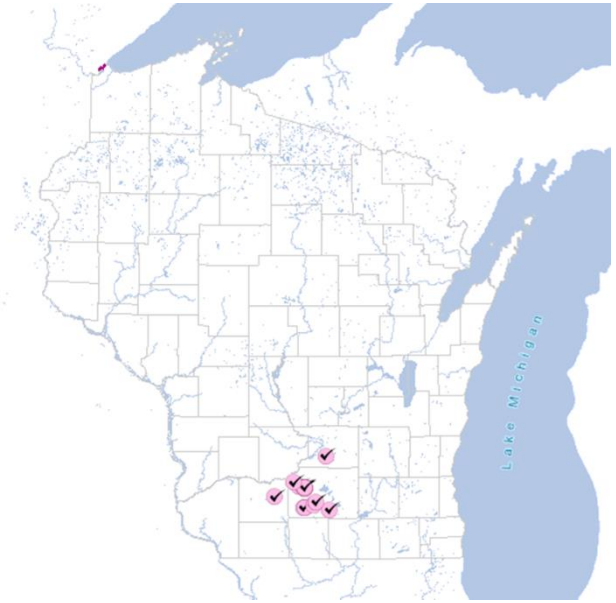
Native Look Alike: White River Crayfish *(Procambarus acutus acutus)*

Photo by Paul Skawinski

- Dark red body, but can be brown with mottling
- Long narrow claws
- No space between claws when closed

WISCONSIN DEPT. OF NATURAL RESOURCES

Photos by Larry Mayer and Daniel Gustafson



New Zealand Mudsnail *(Potamopyrgus antipodarum)*

- Right handed
- 7-8 whorls
- 4-6 mm
- Operculum
- Asexual reproduction via cloning

WISCONSIN
DEPT. OF NATURAL RESOURCES

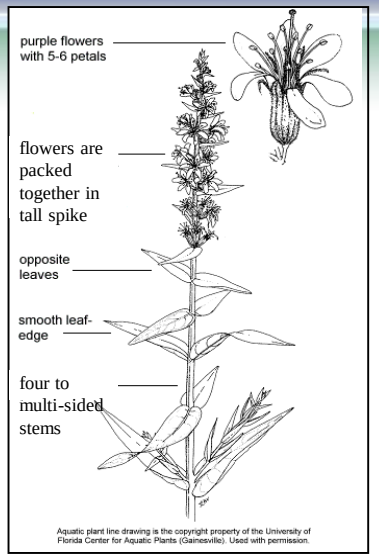
Riparian Invasive Plants

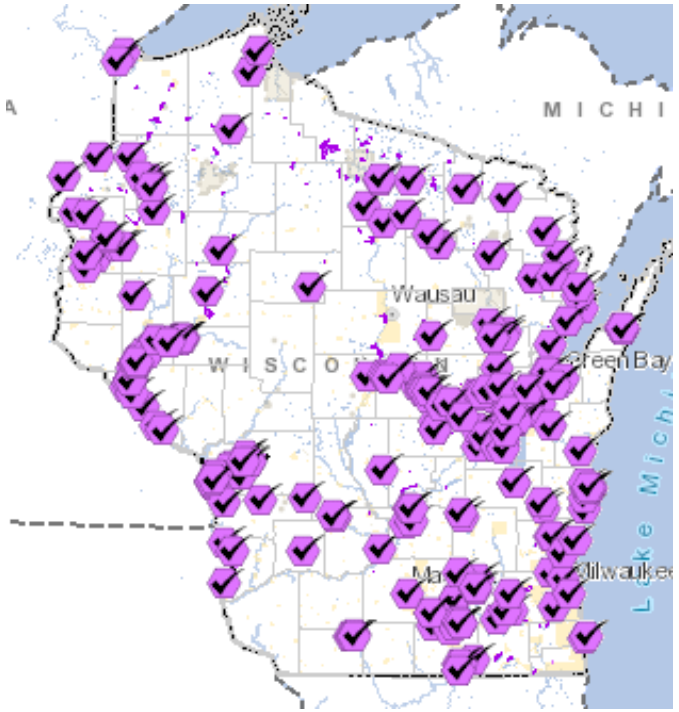
- Purple loosestrife
- Yellow iris
- Flowering rush
- Java waterdropwort
- Reed mana grass
- Narrow-leaf cattail
- Hybrid cattail
- Graceful cattail
- Southern cattail

Purple loosestrife

(*Lythrum salicaria*)

- 3-7 feet tall
- Square, semi-woody stems
- Opposite leaves
- 5-7 petal flowers
- No petiole





Look A-Likes

Fireweed
(*Chamerion angustifolium*)

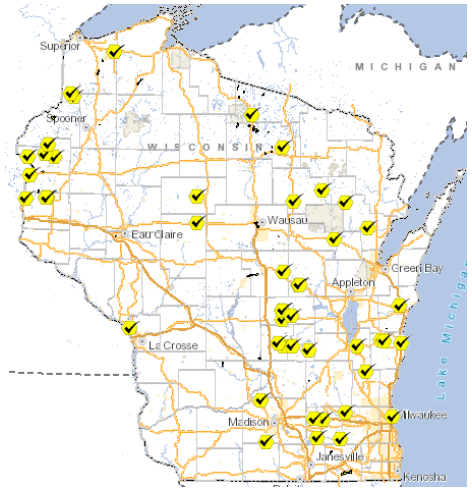
Gayfeather
(*Liatris spicata*)

Blue vervain
(*Verbena hasta*)

Yellow Iris

(*Iris pseudacorus*)

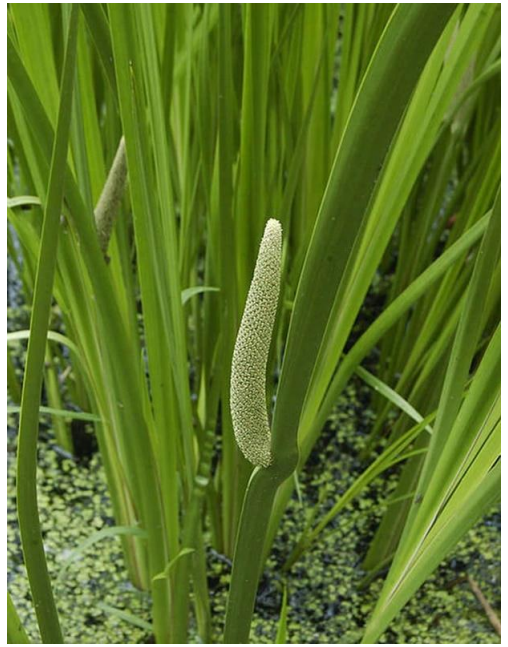
- Showy yellow flower 3-4 inches wide with 3 petals
- Broad sword-shaped leaves upright and stiff
- 3-4 feet tall



Look A-Likes

Blue flag iris
(*Iris versicolor*)

Cattail
(*Typha* spp.)

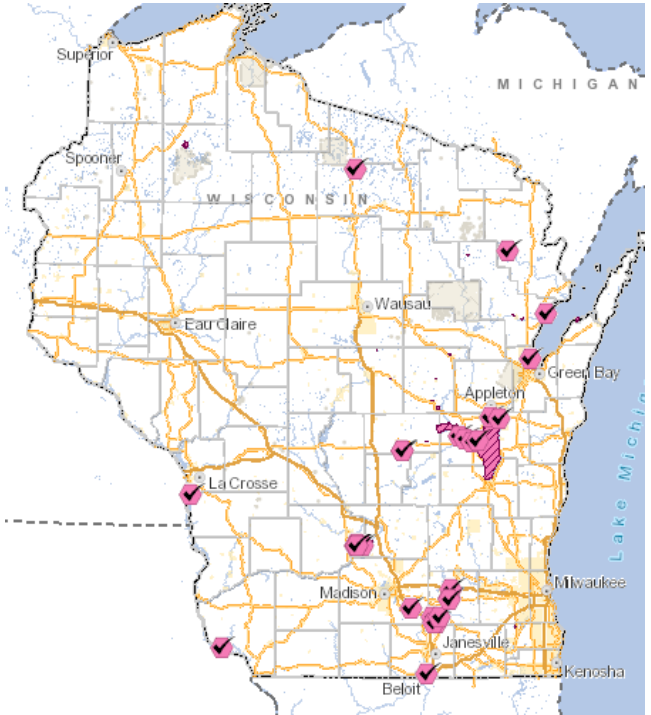


Sweet flag
(*Acorus* spp.)

Flowering Rush

(*Butomus umbellatus*)

- Africa & Eurasia
- 3 pink flowers & 3 sepals in umbels
- 3-sided stem



Flowering Rush

(*Butomus umbellatus*)

- Stem spongy triangle with cupped base
- Small bulbs on roots

Look A-Likes

- Bur-reed
(*Sparganium* spp.)

Java water dropwort

(*Oenanthe javanica*)

- Also called: Vietnamese parsley, Japanese parsley, Chinese celery, water celery
- Creeping perennial

Java water dropwort

(*Oenanthe javanica*)

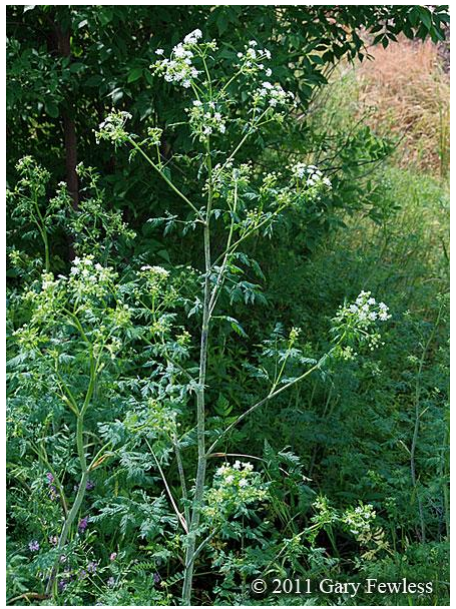
- Flat parsley
- 1-2 pinnate leaves 4-12” long 3-8” wide
- “Flamingo” cultivar with white to pink edges

Java water dropwort

(*Oenanthe javanica*)

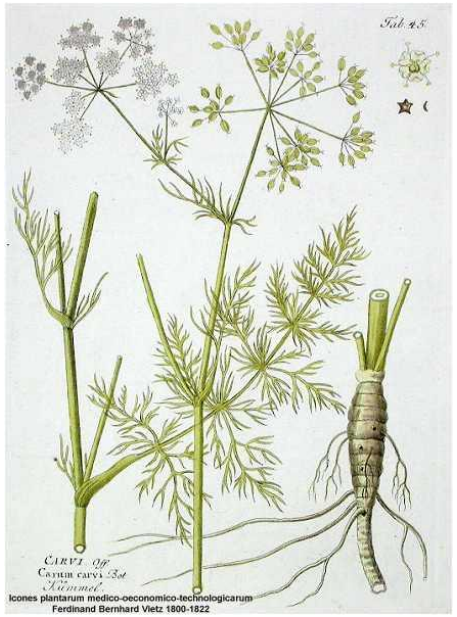
- Umbel of tiny white flowers 1-2”
- Hollow jointed stems

Look A-Likes



Poison-hemlock
(*Conium maculatum*)

Wild Chervil
(*Anthriscus sylvestris*)



Caraway
(*Carum carvi*)

Bishop's goutweed
(*Aegopodium podagraria*)

- Also: Chinese hemlock parsley (native), sweet cicely (native)

Java water dropwort

(*Oenanthe javanica*)

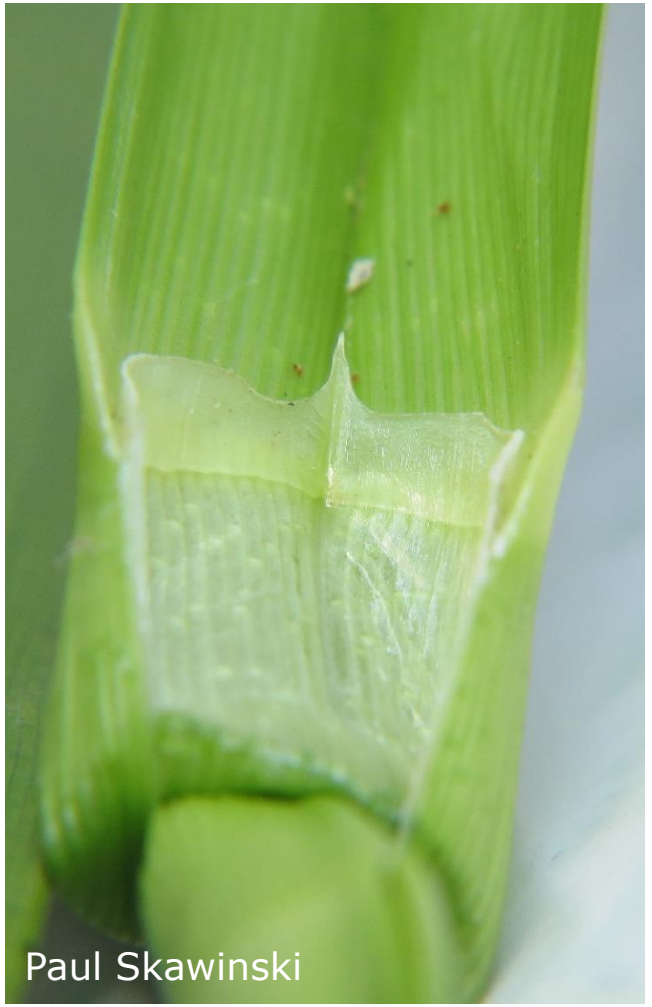
Seattle
Columbia
Snake
MOUNTAINS
Missouri
Lake Superior
Mississippi
Lake Huron
Ottawa
Montreal
Toronto
GREAT PLAINS
Chicago
Detroit
Boston
New York
Philadelphia
Denver
UNITED STATES
St Louis
Arkansas
Ohio
Washington
APPALACHIAN MOUNTAINS
Atlanta
Dallas
Houston
Rio Grande
Monterrey
Gulf of Mexico
Miami

Reed Manna Grass
(Glyceria maxima)

- Rhizomatous
- Inflorescence open panicle

Reed Manna Grass
(Glyceria maxima)

- Genus has:
  - Angular bend in leaf
  - Detached ligule



Reed Manna Grass
(Glyceria maxima)

- Genus has:
  - Closed sheaths

Reed Manna Grass
(Glyceria maxima)

- Genus has:
  - Upper glumes 1 vein
  - Parallel veins on lemma

Look-alikes

Characteristic	*Glyceria maxima*	*Glyceria grandis*
Leaf blade width	8-18 mm	6–12 mm
Leaf sheath edge texture	Scaberulous	Smooth
Upper glume length	3-4 mm	1.5-2.5 mm

Look-alikes

Characteristic	*Glyceria maxima*	*Glyceria grandis*
Leaf blade width	8-18 mm	6–12 mm
Leaf sheath edge texture	Scaberulous	Smooth
Upper glume length	3-4 mm	1.5-2.5 mm


Jason Granberg

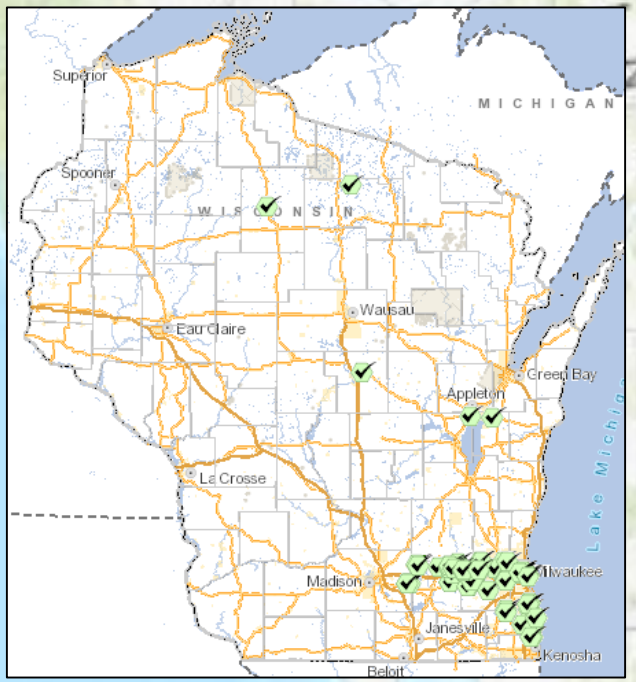
Jason Granberg


Jason Granberg


Jason Granberg

Reed Manna Grass

(Glyceria maxima)



Cattails

Native

Non-native

- Native - male and female flowers are connected
- Non-native – gap between male and female flowers
- Genetics show NOT ALWAYS TRUE

Narrow-leaved cattail
(*Typha angustifolia*)

- **Leaves:** 4-10 mm wide, taller than flower spike.
- **Stems:** 1-3 m tall
- **Flowers:** Male and female portions of spike separated by 2-4 cm gap; **spike <6”**

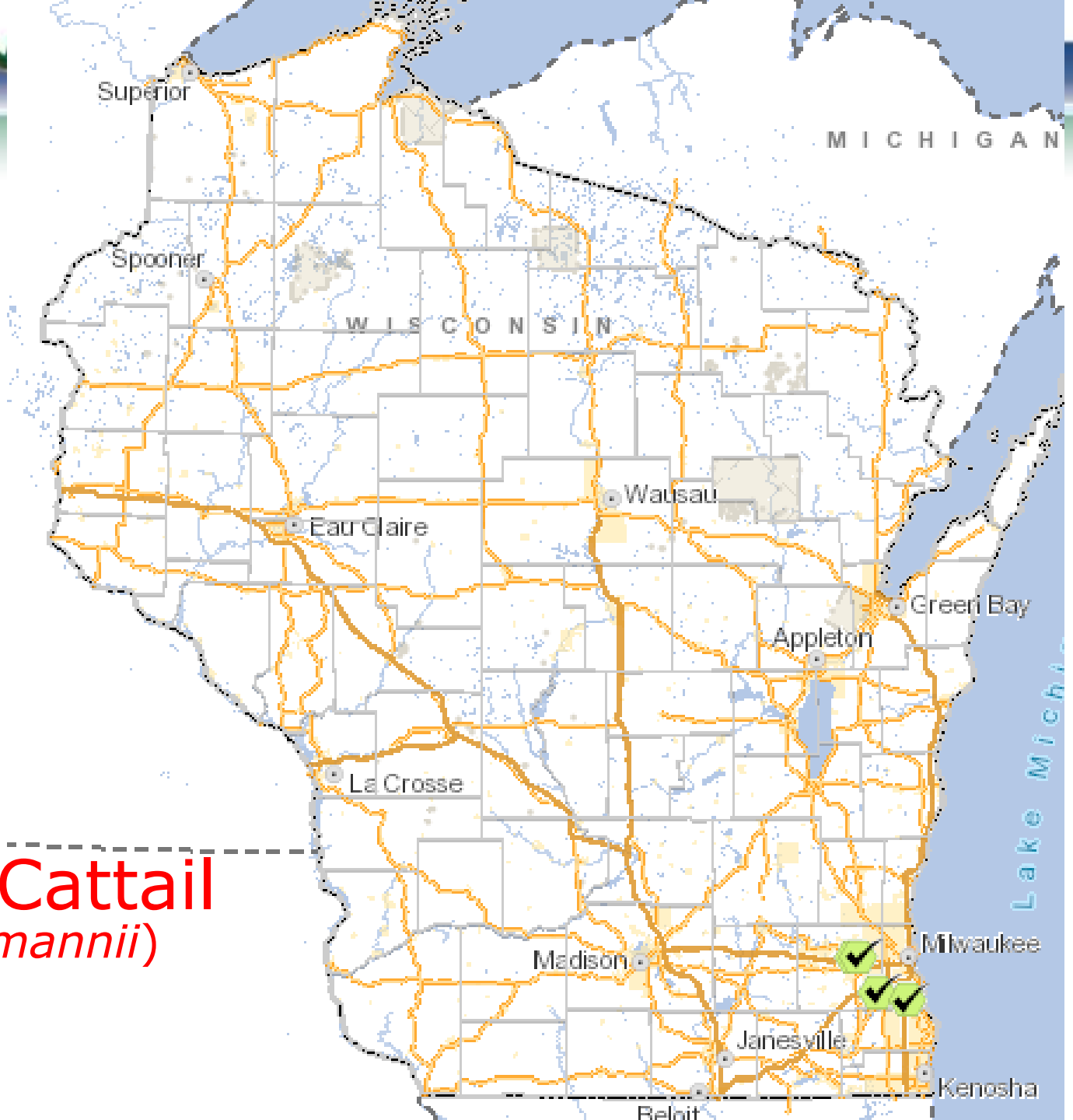
Hybrid cattail
(*Typha x glauca)*

- **Leaves:** Variable, between broadleaf and narrowleaf in width.
- **Stems:** 2-3 m tall
- **Flowers:** Male and female flowers separated by 2-4 cm gap; **spike >6”**

Graceful Cattail

(*Typha laxmannii*)

- Up to 3-5 feet
- Yellowish male flowers at top and greenish female flowers up to **2 inches** below.
- Flower/seed spike generally **more compact**.



Graceful Cattail

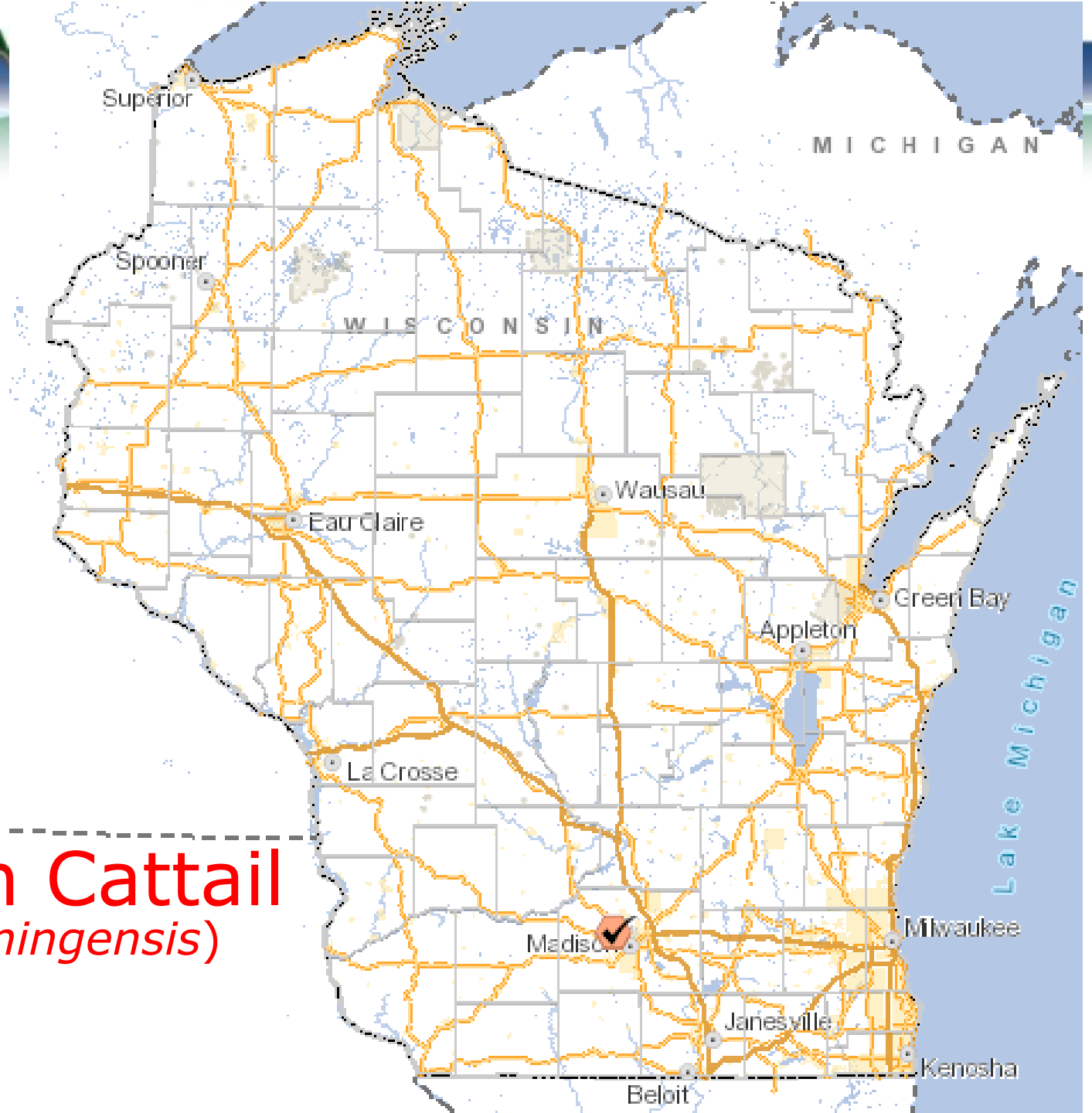
(*Typha laxmannii*)

Southern Cattail

(*Typha domingensis*)

- **Leaves:** Pale yellow-green, <5/8” wide. Best distinguished in all seasons by small brown glands on inner leaf sheath ~1-10 cm from base.
- **Flowers**: yellow, male flowers and lower cinnamon brown, sausage-shaped section of female flowers**.** There is a gap around 2.5-5 cm between male and female flowers.
- **Stems:** Stems are pithy, simple, erect and 5-13 feet tall.


Galen Smith



Southern Cattail

(*Typha domingensis*)

Wisconsin
Department of Natural Resources

Scientific Name	Common Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Butomus umbellatus	flowering rush	○	○	○	○	◔	●	●	●	◑	◔	○	○
Glyceria maxima	reed manna grass	○	○	○	◔	◔	◑	●	●	●	◑	○	○
Iris pseudacorus	yellow iris	○	○	○	◔	●	●	◑	◔	◔	◔	○	○
Lythrum salicaria	purple loosestrife	○	○	○	◔	◑	◑	●	●	●	◑	○	○
Typha angustifolia	Narrow-leaf cattail	◔	◔	◔	◔	◔	●	●	●	●	●	◑	◔

Life Stage

- dormant or bare branches
- green vegetation present
- flowers present
- mature fruits or seeds present

Life Stage refers to the life stage of the species that is most dominant and/or most easily detectable in a given month.

Detectability

- ○ undetectable
- ◔ low
- ◑ medium
- ● high

Detectability refers to how easy it is to find and/or identify the species in a given month.

Scientific Name	Common Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cirsium palustre	marsh thistle	○	○	○	◔	◔	●	●	●	◑	◔	○	○
Conium maculatum	poison hemlock-flowering year	○	○	○	◔	◑	●	●	◑	◑	◔	○	○
	poison hemlock-rosette	○	○	○	◔	◔	○	○	◔	◔	◔	◔	○
Epilobium hirsutum	hairy willow herb	○	○	○	○	◔	◑	◑	●	●	◕	○	○
Fallopia spp.	perennial knotweeds	◕	◕	◕	◔	◔	◑	◑	●	●	●	◑	◑
Heracleum mantegazzianum	giant hogweed-flowering year	○	○	○	◑	●	●	●	●	●	◑	○	○
	giant hogweed-rosette	○	○	◔	◔	◔	◔	◔	◔	◔	◔	○	○
Humulus japonicus	Japanese hop	○	○	○	◔	◔	◔	◑	◑	●	●	◕	◕
Phragmites australis	common reed	◑	◑	◑	◑	◑	◑	●	●	●	●	◑	◑
Ranunculus ficaria	lesser celandine	○	○	◔	●	●	○	○	○	○	○	○	○
Thladiantha dubia	golden creeper	○	○	○	○	◔	●	●	●	●	◑	◕	○

Upland Plants

Life Stage

- dormant or bare branches
- green vegetation present
- flowers present
- mature fruits or seeds present

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Detectability

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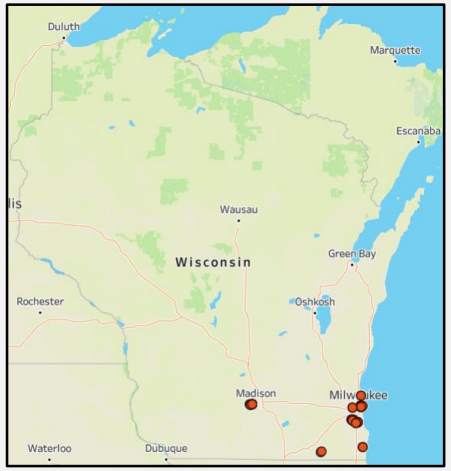
- ◔ low
- ◑ medium
- ● high

Detectability refers to how easy it is to find and/or identify the species in a given month.

Lesser Celandine (*Ranunculus ficaria*)

- Spring ephemeral ground cover
- Glossy green kidney-shaped leaves
- One flower per stalk; 3 green sepals at base of flower
- Whitish bulbils on stems
- Tubers

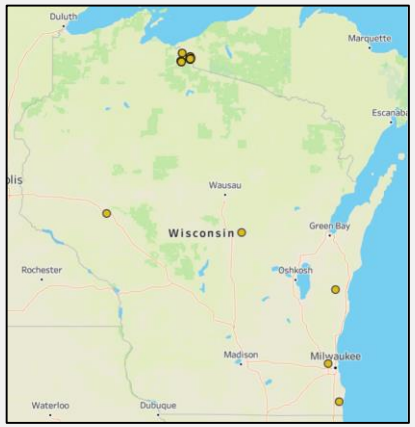


Native look alike:
Marsh Marigold (*Caltha palustris*)

- Grows in clusters
- Larger than lesser celandine
- 2-5 flower per stalk
- No green sepals below flower
- No bulbils or tubers

Giant Hogweed (*Heracleum mantegazzianum*)

- 8-20’ tall, hollow, ridged stems covered in coarse white hairs + purple mottling
- Leaves 1-5’ wide, palmately lobed; underside covered in coarse white hairs
- Umbels of white flowers, up to 20” wide, May- July

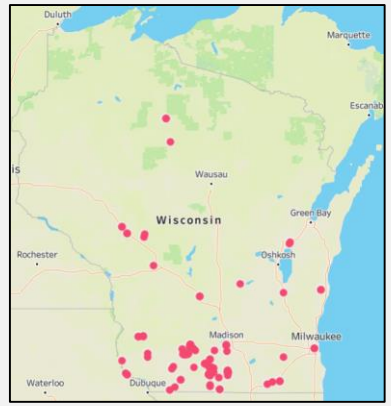


Native look alike:
Cow parsnip (*Heracleum maximum*)

- 4-10’ tall, hairy stems not mottled with purple
- Umbels up to 8” wide, blooms May – July
- Leaves to 18”

Poison Hemlock *(Conium maculatum)*

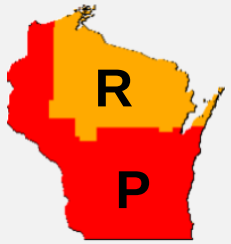
- 3-10’ hollow, ridged, hairless stems with purplish mottling
- 8-16” long broadly triangular compound leaves with unpleasant odor. Veins end at tips of teeth.
- 4-6” umbels of small 5-petaled white flowers; May – Aug.
- Ridged, flat seeds



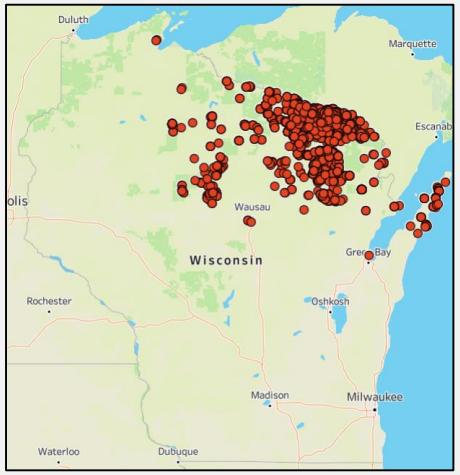
Native look alike:
Water Hemlock (*Cicuta maculata*)

- Leaves with veins that end in notches between teeth
- 3-6’ tall
- Blooms June – Aug.

European Marsh Thistle (*Cirsium palustre*)



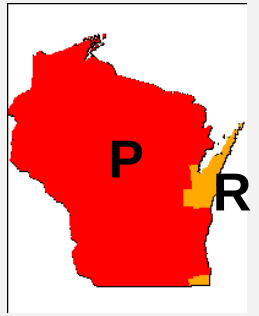
- Clusters of 12+ flowers up to ¾" wide, June-July
- Bracts with spiny tips
- Rosette leaves spiny; hairy on underside
- 4-5' tall stem with spiny wings



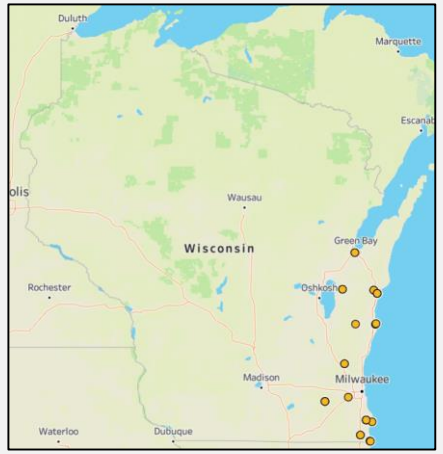
Native look alike: Marsh/Swamp Thistle (*Cirsium muticum*)

- Bracts with white stripe, no spiny tips
- Stems not spiny

Hairy Willowherb (*Epilobium hirsutum*)



- 3-6′ tall, branching stems covered in soft hairs
- Opposite, stalkless leaves; toothed; prominent central vein
- ¾″ pink flowers with 4 notched petals; mid-late summer
- Seed pod 2-3″ tubular capsule; seeds with tufts of silky hairs
- Native fireweed (*E. angustifolium*) has alternate leaves

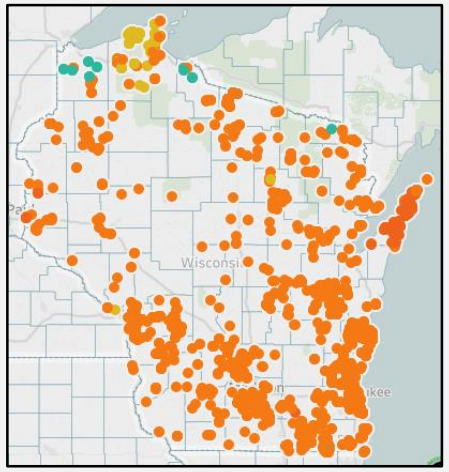


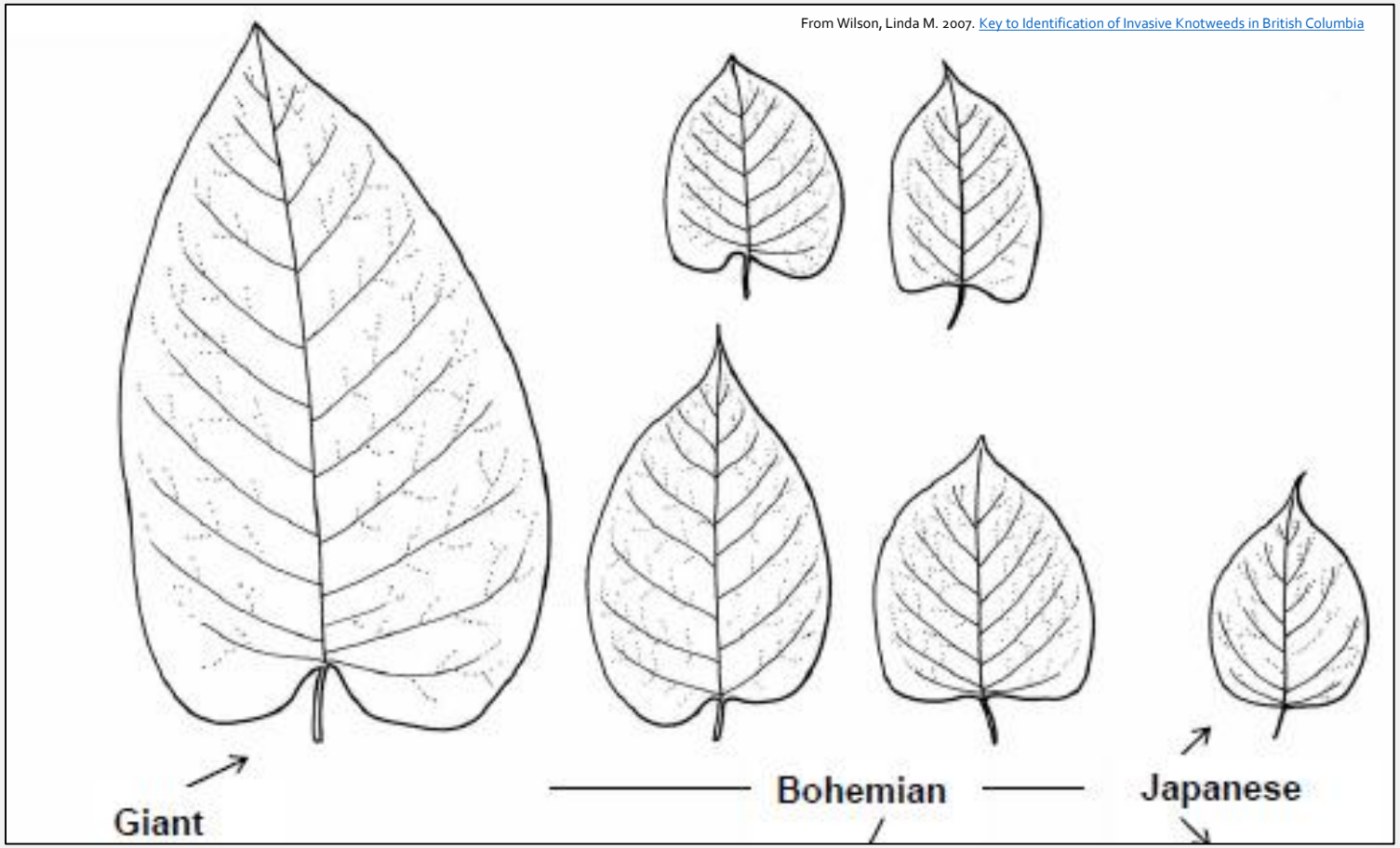
Native look alike: Fireweed (*Epilobium angustifolium*)

- Alternate leaves, mostly toothless

Perennial Knotweeds (*Fallopia spp.* or *Polygonum spp.*)

- Perennial, bamboo-like
- Arching stems with swollen nodes
- Alternate, spade-shaped leaves
- Plume-like clusters of tiny green to white flowers, August - September

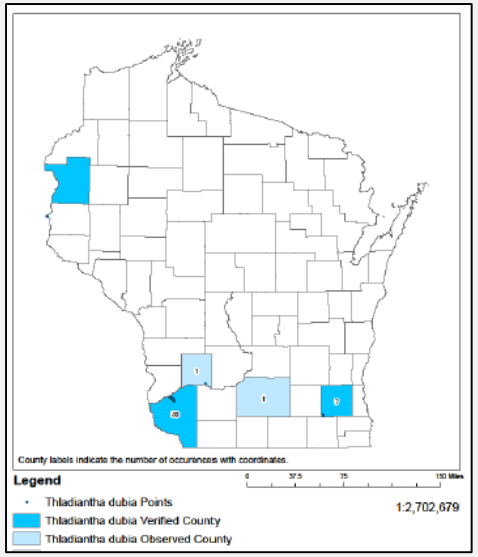




Species	Classification	Stem	Leaves
Japanese knotweed (*Fallopia japonica*)	Restricted	Multiple branches; up to 10 ft tall	4-6" long; squared off leaf base
Giant knotweed (*Fallopia sachalinensis*)	Prohibited	Few or no branches; 10-20+ ft tall	6-14" long; heart-shaped base
Bohemian knotweed (*Fallopia x bohemicum*)	Prohibited	Few to several branches; 6-10 ft tall	4-6+" long; base intermediate between squared off and heart-shaped

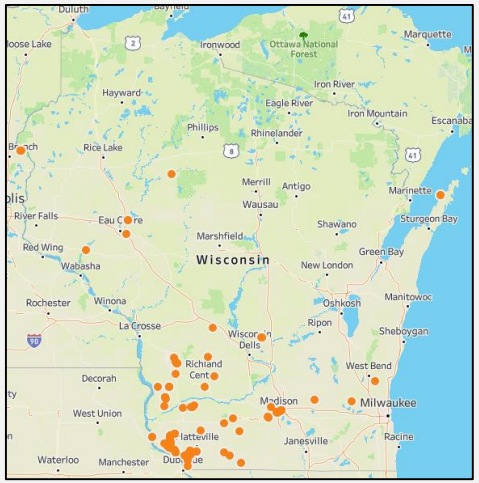
Goldencreeper (*Thladiantha dubia*)

- Perennial, herbaceous vine
- Grows from tubers, climbs with tendrils
- Hairy leaves, 2-6”
- 1” yellow flowers, July – Sept
- Hairy green to red fruit, up to 2” long



Japanese Hops (*Humulus japonicus*)

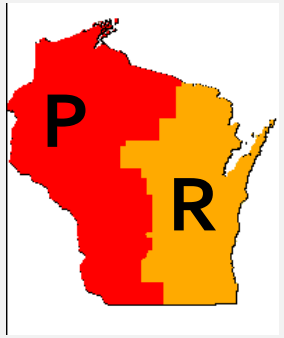
- Annual herbaceous vine; up to 35 ft long
- Leaves with 5+ lobes; petioles longer than leaf blade
- Stipules fringed in hairs
- Downward pointing prickly hairs on stems



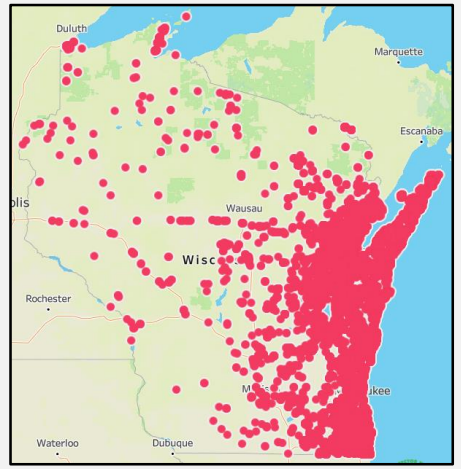
Native look alike: Common Hops (*Humulus lupulus*)

- Perennial herbaceous vine
- Grows up to 35 ft long
- Leaves with 3-5 lobes; petioles shorter than leaf blade; stipules not fringed in hairs
- Sparse downward pointing hairs

Common reed (*Phragmites australis*)



- Perennial grass grows up to 15’+ tall
- Rigid, rough stems
- Dense clones in wet areas
- Leaves bluish-gray green; stay on stems in winter
- Feathery flowerheads, July – Sept.



	Native	Non-native
Stem color	shiny reddish	dull tan
Leaf persistence	fall off easily	persists
Ligule length	0.4-1.0 mm	0.1-0.4 mm
Lower glume length	4-7 mm	2.6-4.2 mm
Habit	scattered stems	dense stands
Habitats	fens, sedge meadows shorelines	ditches, disturbed sites, saline habitats, Great Lakes shores

MICHIGAN FLORA ONLINE. A. A. Reznicek, E. G. Voss, & B. S. Walters. July 2010. University of Michigan. Web. August 23, 2010.


Phragmites australis subsp. *australis*
ligule .1 to .4 mm long
excluding fringe of hairs
Phragmites australis subsp. *americanus*
ligule .4 to 1+ mm long
excluding fringe of hairs
© 2015 Katy Chayka
2015 © Peter M. Dziuk


Phragmites australis
subsp. *australis*
lower sheaths
tight,
stem rough,
dull green to
tan
Phragmites australis
subsp. *americanus*
lower sheaths
loose,
stem smooth,
somewhat shiny
maroon to tan
© 2015 Katy Chayka
2015 © Peter M. Dziuk

Japanese Stiltgrass (*Microstegium vimineum*)

- Annual grass, 1-3’ tall or spreading in mat
- Asymmetrical, alternate leaves 2-3” long, spread along stem, pointed at both ends with silvery stripe on midvein
- 1-3” flower spikes, mid-September

Native look alike: Whitegrass (*Leersia virginica*)

- Longer/ narrower leaves
- No silvery midvein

Scientific Name	Common Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cirsium palustre	marsh thistle	○	○	○	◔	◔	●	●	●	◑	◔	○	○
Conium maculatum	poison hemlock-flowering year	○	○	○	◔	◑	●	●	◑	◑	◔	○	○
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Epilobium hirsutum	hairy willow herb	○	○	○	○	◔	◑	◑	●	●	◕	○	○
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	giant hogweed-rosette	○	○	◔	◔	◔	◔	◔	◔	◔	◔	○	○
Humulus japonicus	Japanese hop	○	○	○	◔	◔	◔	◑	◑	●	●	◕	◕
Phragmites australis	common reed	◑	◑	◑	◑	◑	◑	●	●	●	●	◑	◑
Ranunculus ficaria	lesser celandine	○	○	◔	●	●	○	○	○	○	○	○	○
Thladiantha dubia	golden creeper	○	○	○	○	◔	●	●	●	●	◑	◕	○

Upland Plants

Life Stage

- dormant or bare branches
- green vegetation present
- flowers present
- mature fruits or seeds present

Life Stage refers to the life stage of the species that is most dominant and/or most easily detectable in a given month.

Detectability

- ○ undetectable
- ◔ low
- ◑ medium
- ● high

Detectability refers to how easy it is to find and/or identify the species in a given month.

dnr.wi.gov search “invasives”

Search or Keywords

Report invasive species

We are working to keep invasive species out of Wisconsin. Early reports of new populations allow us to respond rapidly and control invasives before they spread into new areas. Select from the tabs below to report invasive species you have found.

Aquatic, Shoreline and Wetland | **Terrestrial** | **NR40 species**

Aquatic, Shoreline and Wetland

Check to see if the suspected invasive species has been previously reported on that waterbody or wetland. Search by waterbody or by species. Or, for a mapping tool and instructions, click here. If the invasive species is not known to occur in the waterbody or wetland where you found it, report it to your Regional DNR Aquatic Invasive Species Coordinator by following the steps below. Report every suspected wetland invasive species not associated with a waterbody, except reed canary grass (unless the latter is a new, small stand adjacent to an un-infested, natural wetland).

If it’s a new plant or animal other than a fish
If it’s a new fish
If it’s already known to be in the waterbody or wetland

If it is a plant:

- Take a digital photo(s) of the plant in the setting where it was found. Using a camera or smartphone, try to capture details such as flowers, leaf shape, leaf and stem arrangement, and fruits. Include a common object in the photo such as a dollar bill, coin or pencil for a size scale, or stand next to tall plants.
- If possible, collect 5 – 10 intact specimens to ensure precise identification. Try to get the root system and all leaves, as well as seed heads and flowers when present. Place in a ziplock bag with a damp paper towel. Place on ice and store in a refrigerator as soon as possible.

Invasive species

Learn
about invasive species in Wisconsin.

Subscribe
to the invasive species rules and regulations email list.

Report
an invasive species in your area.

Order
invasive species publications.

Take action

- Reporting
- Prevention
- Best management practices
- Control
- Get involved locally

Contact information
DNR invasive species staff

Identification Resources

- Guides:
  - NR40 species factsheets
  - CLMN Wisconsin Aquatic Invasive Species Early Detectors Handbook
  - WIFDN website
  - Water Action Volunteers

Questions?

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Anne Pearce
Wisconsin First Detector Network
Anne.Pearce@wisc.edu

Music with a Message

https://erc.cals.wisc.edu/music

Preventing the Spread of Aquatic Invasive Species

ARCHIVES

META

- Log in