

Riverine Early Detectors protecting Wisconsin's flowing waters

Project RED



RIVER ALLIANCE
of WISCONSIN



Agenda

- Introduction to Invasive Species
- Species of Concern
- Break
- Monitoring Protocols
- Reporting Data Online
- Sending Samples/Photographs for Verification
- Taking Action

Project RED Steps

A screenshot of a data entry form with various fields and a table. The form includes sections for 'Project Name', 'Location', 'Date', and 'Species'. The table has columns for 'Date', 'Species', 'Count', and 'Notes'. The form is titled 'Project RED Data Entry Form'.

1. Paddle/Wade & Look for Invasives
2. ID & Collect/Photo Specimens
3. Verify your Findings
4. Share your Findings

Intro to Invasives: Definitions

NON-NATIVE

An organism that is not indigenous to a given area and **has been accidentally or deliberately transported to a new location** by human activity

INVASIVE

A subset of non-native species and **are likely to cause harm to the economy, environment, or human health**

How do they impact rivers?



What's at stake?



Species of Concern

PLANTS AND ALGAE

- Japanese knotweed
- Japanese hops
- Flowering rush
- Phragmites
- Purple loosestrife
- Yellow iris
- Eurasian watermilfoil
- Yellow floating heart
- Curly-leaf pondweed
- Hydrilla
- Brazilian waterweed
- Water Lettuce
- Water Hyacinth
- Reed manna grass
- Didymo

ANIMALS

- Faucet snail
- New Zealand mudsnail
- Zebra mussel
- Quagga mussel
- Red swamp crayfish
- Asian clam

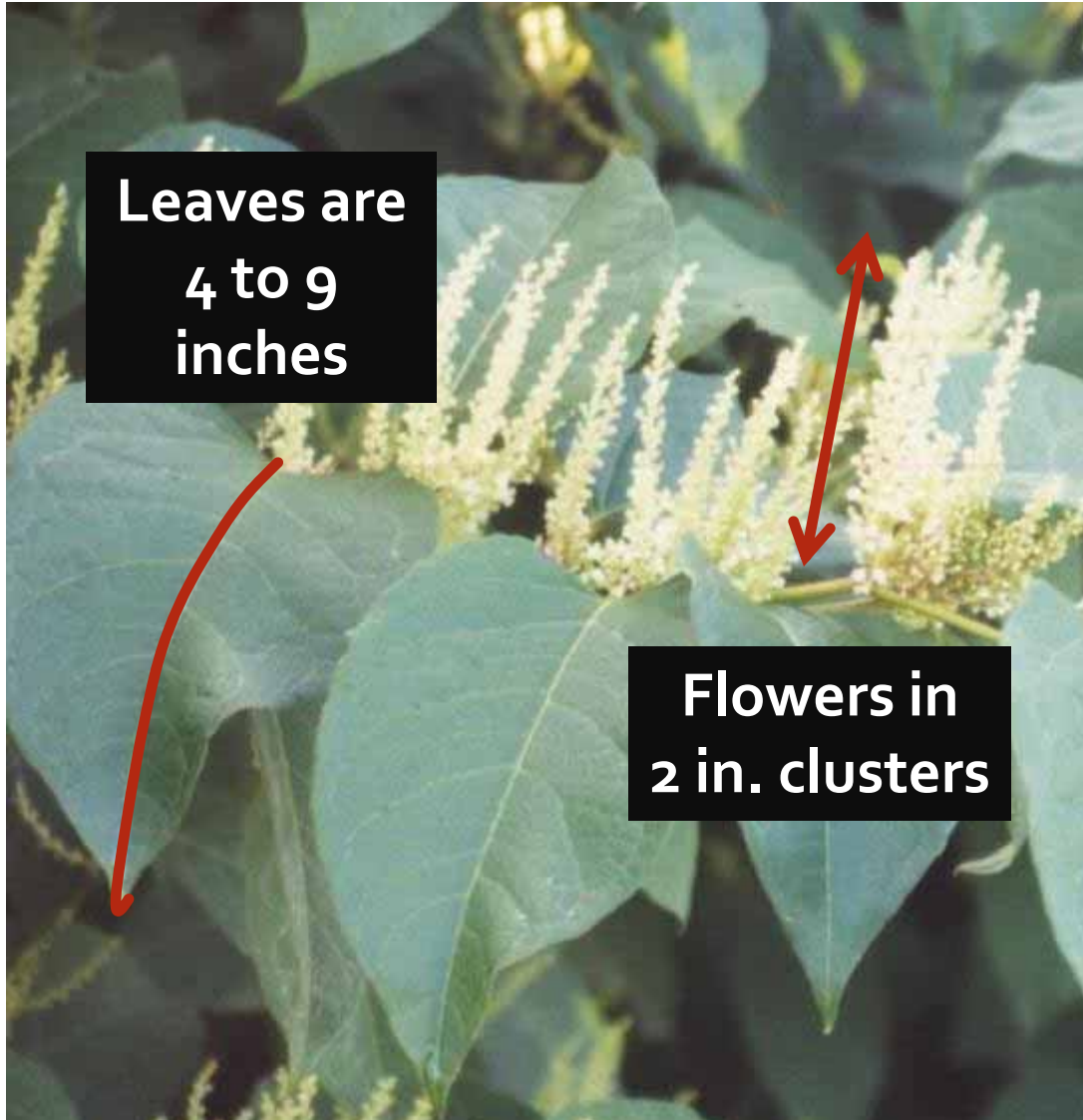
Japanese Knotweed

- Perennial
- 5 to 10 feet
- ornamental



Sheboygan River

Japanese Knotweed



Hollow stems more brittle than bamboo



Japanese Knotweed seeds



Impacts: alters stream's nutrients and hydrology

- Sequesters nitrogen (nutrients) in rhizomes before leaf fall,
- Providing litter of lower nutritional quality, impacting the productivity of macroinvertebrates
- Can alter the hydrology of a stream year round

Yellow Iris (*Iris pseudacorus*)

- Typically 3 – 4 feet tall
- Spreads by seed and vegetatively
- Seeds float
- All parts of the plant are poisonous
- Flowers May



Yellow Iris (*Iris pseudacorus*)



Yellow Iris (*Iris pseudacorus*)

- 6-angled, egg shaped fruit capsule
- About 120 seeds per capsule



Non-native vs. Native

YELLOW IRIS

- Yellow Flower
- 6 sided seed pod
- Seed capsule opens at maturity



BLUE FLAG IRIS

- Blue Flower
- 3 sided seed capsule
- Seed capsule does not open



Japanese hops (*Humulus japonicus*)

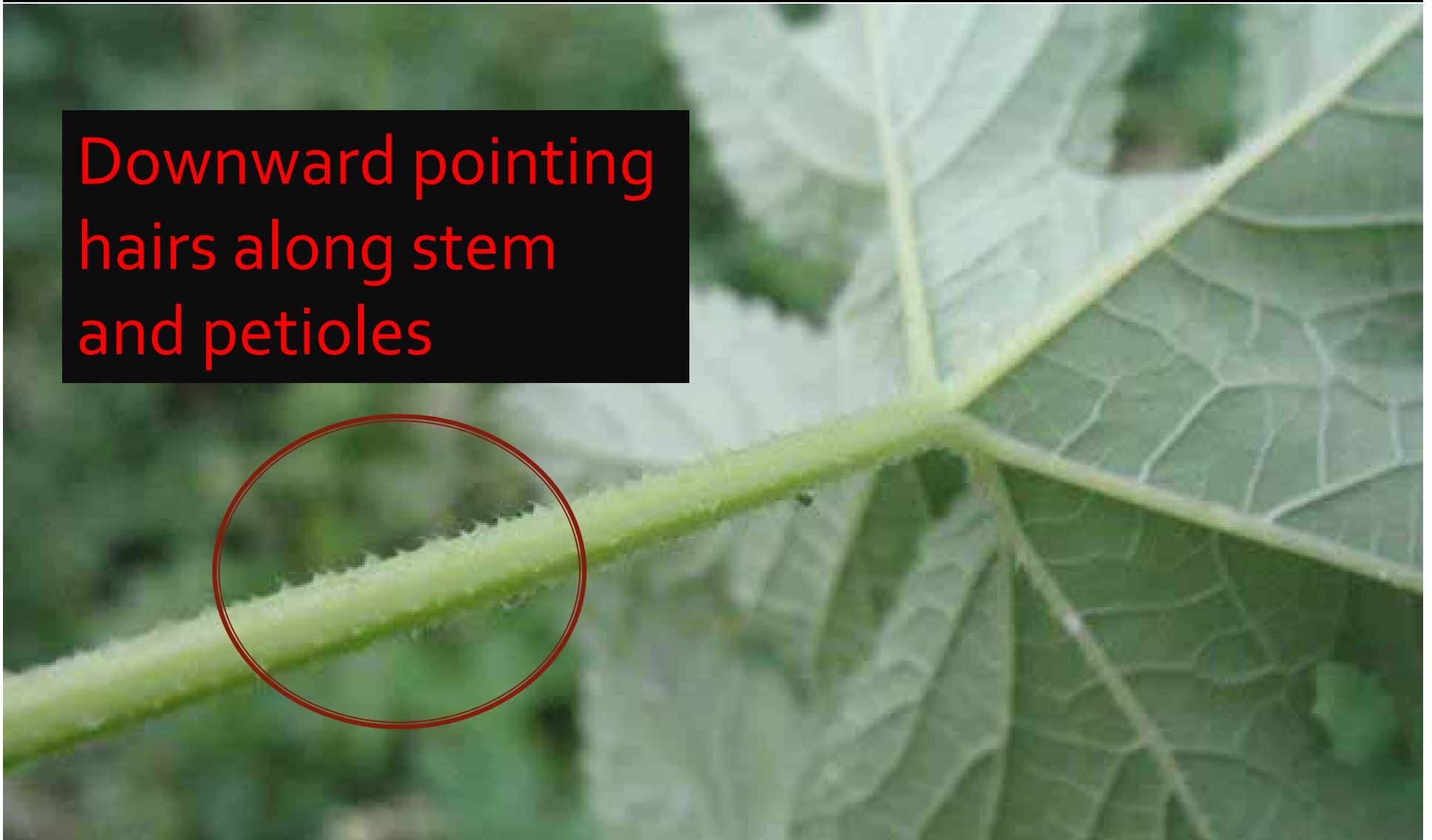


Japanese hops (*Humulus japonicus*)



Japanese hops (*Humulus japonicus*)

Downward pointing
hairs along stem
and petioles





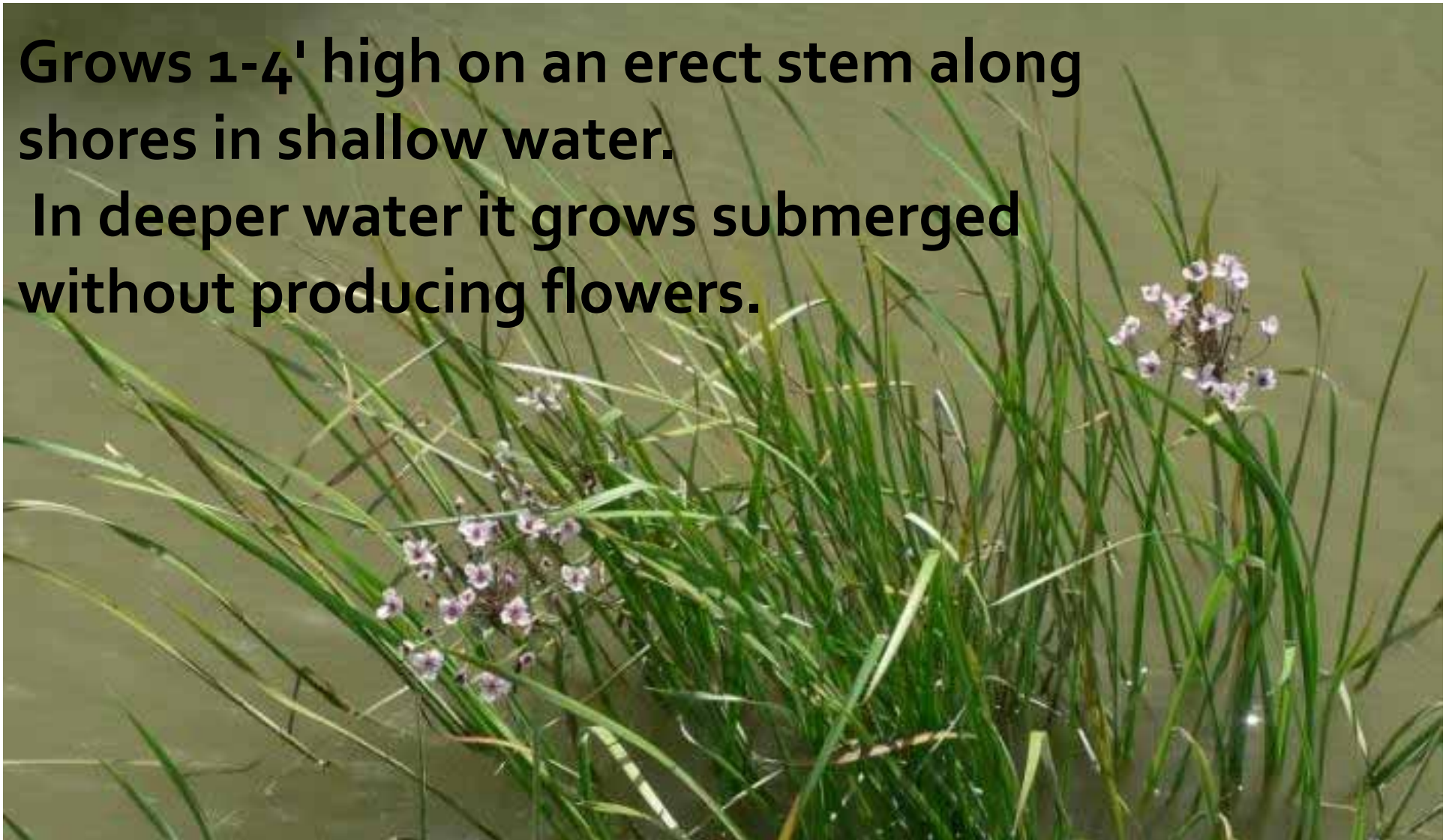
Flowering rush (*Butomus umbellatus*)



Emergent or submerged

Grows 1-4' high on an erect stem along shores in shallow water.

In deeper water it grows submerged without producing flowers.



American Bur-reed (native) vs Flowering Rush



**Flowering Rush lacks cross veins evident in the
bur-reed and arrowhead**

Impact: outcompetes native shoreland vegetation

Can grow in deeper and faster moving water than most native emergents.



Phragmites (*Phragmites australis*)



Sheboygan River

Common Reed Grass



- Tall Grass
- 10 -20 inch leaves



Native vs. Nonnative



Nonnative stems:

Dull

Rough

Tan

Ribbed

No Black Spots

Purple Loosestrife (*Lythrum salicaria*)

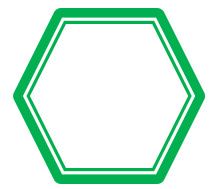
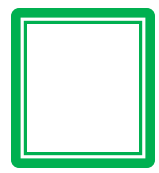


3 to 9 feet



5 – 6
Petals

Smooth leaves
1 – 4 inches long



Semi-woody
stem with edges

Steeplebush



Smartweed



Fireweed

Eurasian Water-milfoil



7 native milfoils in Wisconsin

EWM easily confused with northern water milfoil

Eurasian Water-milfoil



Native milfoil typically has 7 to 10 pairs

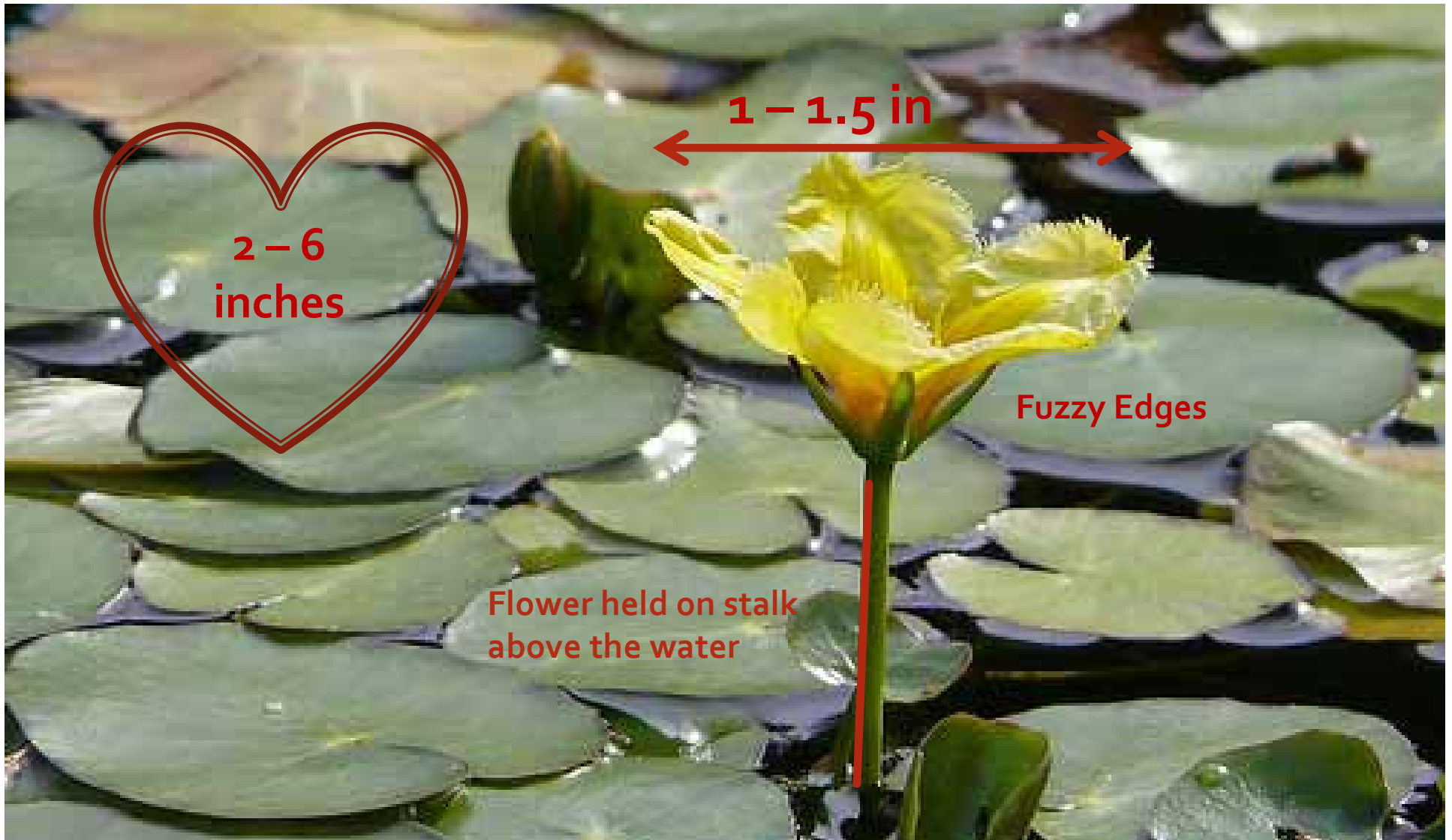
Native Northern Watermilfoil or Eurasian?



**Native Northern
Watermilfoil or
Eurasian?**



Floating Yellow Heart (*Nymphoides peltata*)

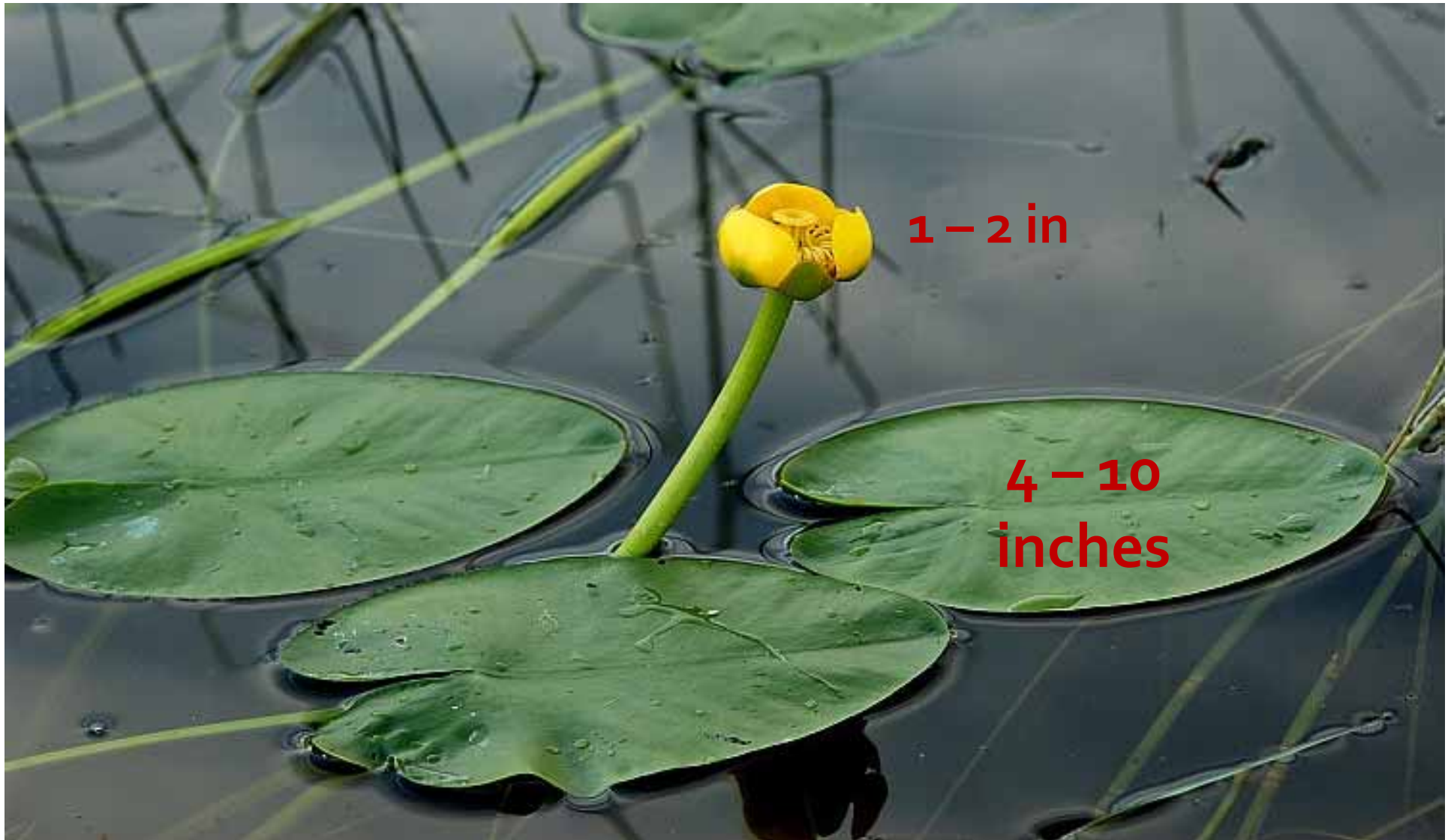


Current Distribution

- Marinette, Dane and Walworth Counties
- Landscaping/Water Gardens
- Prohibited species
- Shades out natives
- Causes low dissolved oxygen



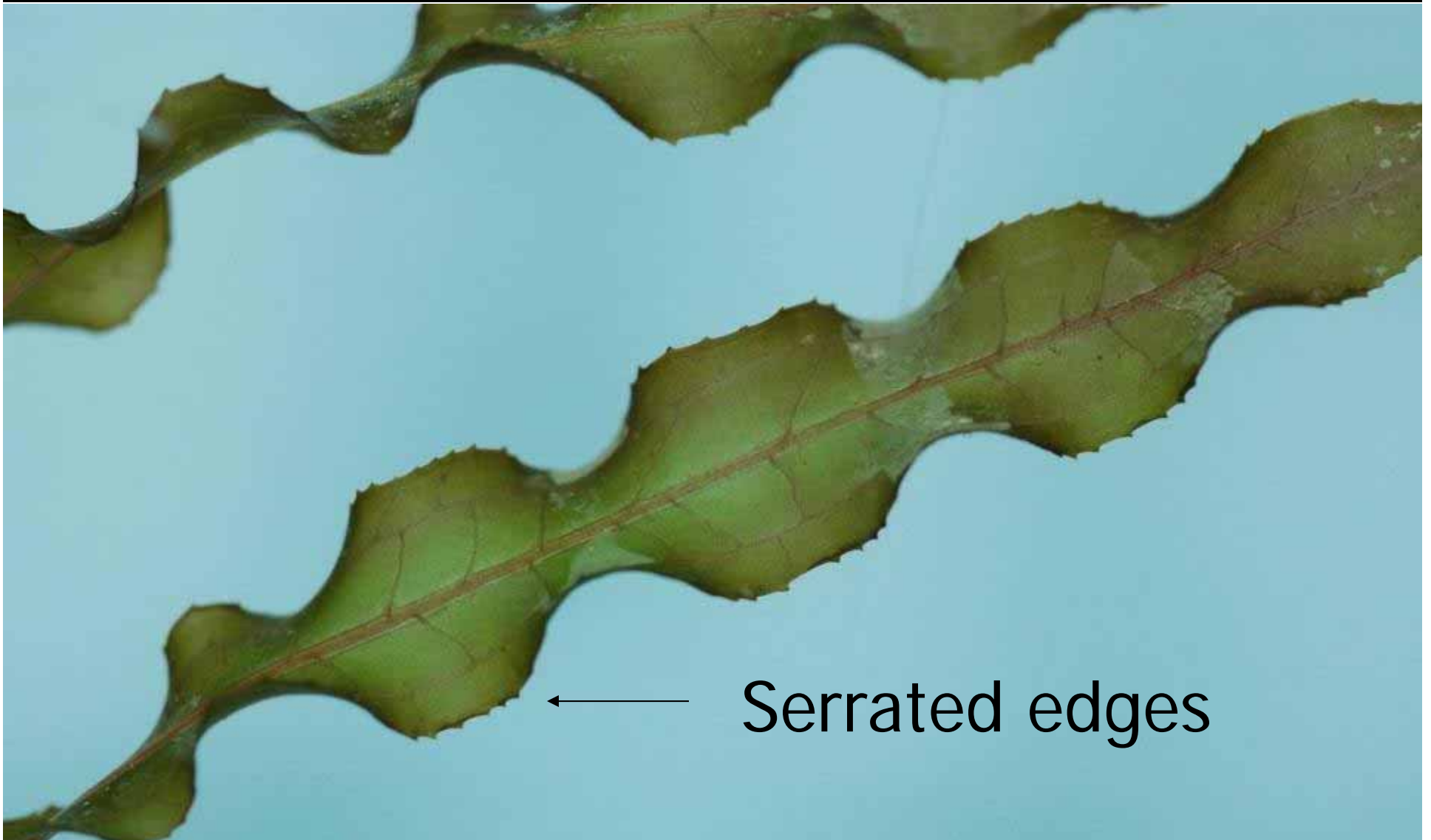
Native Yellow Pond Lily or Spadderdock



**Curly-leaf Pondweed
(*Potamogeton crispus*)**



Curly-leaf Pondweed



← Serrated edges

Curly-leaf Pondweed turion

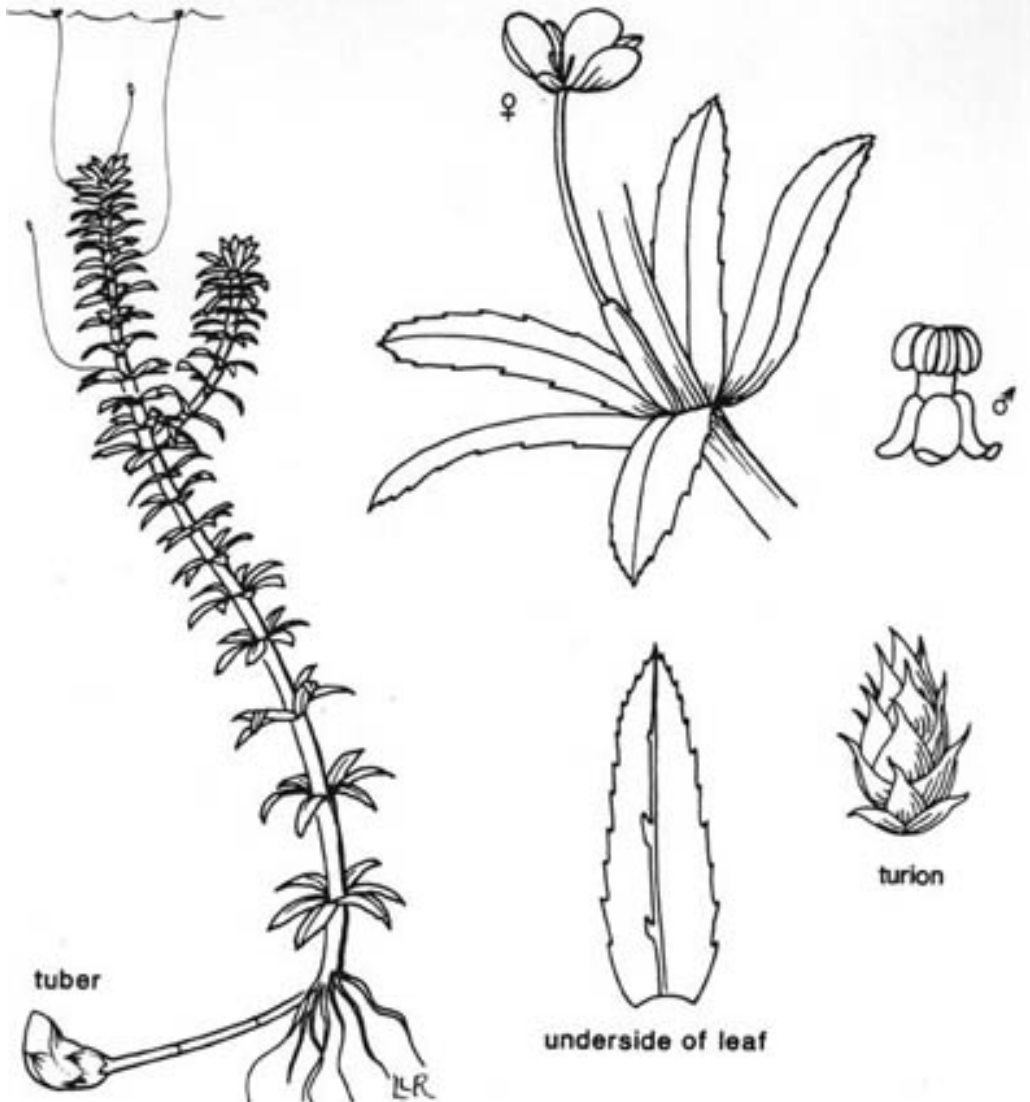


Hydrilla (*Hydrilla verticillata*)



- Found in private pond in Marinette County
- Up to 30 feet strands
- 4 to 8 leaves whorled around stem

HyDRILLa



- Spines
- Serrated Leaves
- 4 to 8 Leaves in Whorl

Brazilian Waterweed (*Egeria densa*)

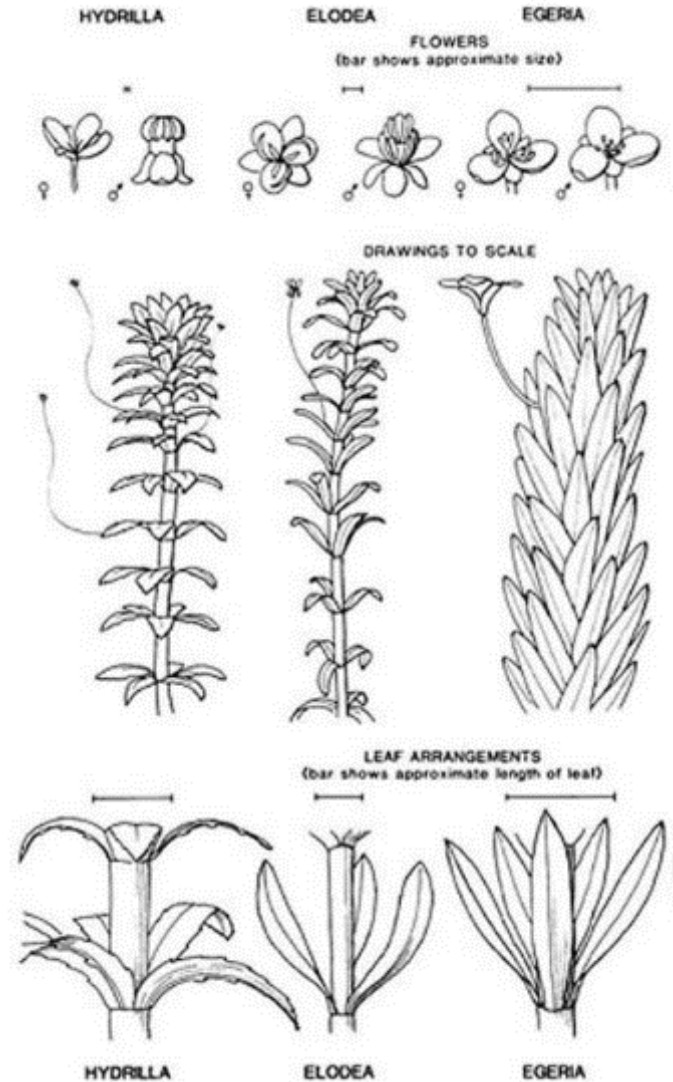


- Easily confused with Hydrilla
- No spines
- 4 – 8 leaves whorled around stem
- Small white flowers with 3 petals

Beefy Brazilian waterweed vs. Wimpy Wisconsin elodea



Elodea (native), hyDRILLA and Brazilian waterweed



Water Lettuce



- Perennial
- Free-floating
- Forms Dense Mats

Water Lettuce



Water lettuce
Pistia stratiotes
Photo by Ann Murray
© 2001 University of Florida

Leaves

- Light green
- Hairy
- Ridged

Flowers

- Inconspicuous

Roots

- Feathery
- Hanging
- Submerged

Water Hyacinth



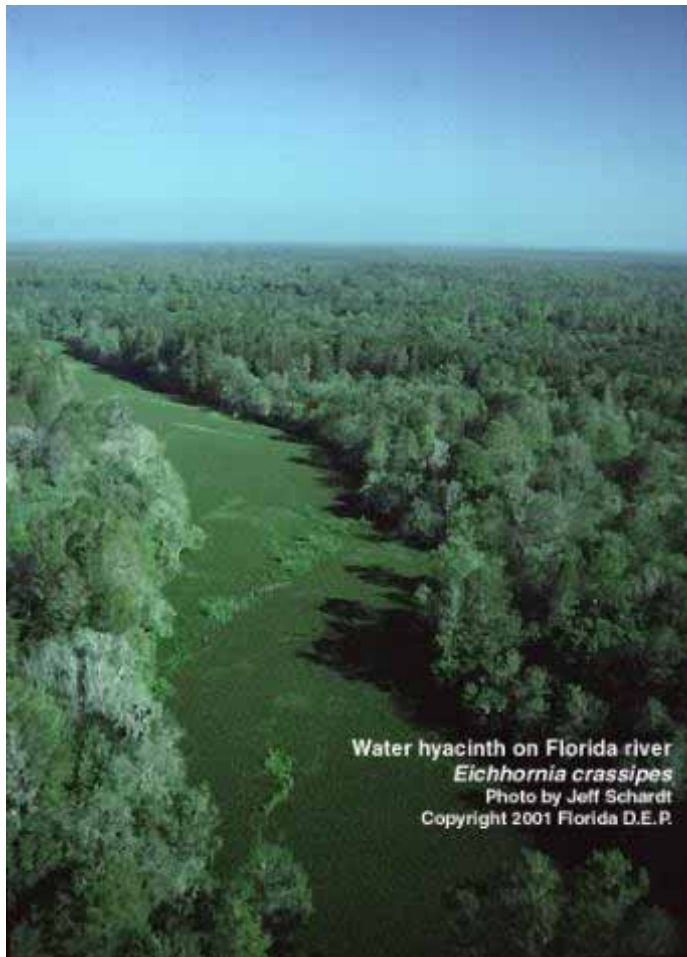
- Perennial
- Floating
- Forms dense rafts

Water hyacinth

- Rounded leaves up to 6 inches wide
- Glossy, waxy green
- Bulbous, spongy leaf stems
- Showy, lavender-blue flowers
- 8 – 12 flowers in a 12 inch long spike



Water lettuce and hyacinth clogging a river in Florida



Water hyacinth on Florida river
Eichhornia crassipes
Photo by Jeff Schardt
Copyright 2001 Florida D.E.P.

- A healthy acre of water hyacinths can weigh up to 200 tons!
- Hyacinth populations can double in 6 days

Reed Manna Grass/*Glyceria maxima*

- Perennial grass
- Forms dense stands
- Mainly found in Southeast WI, but has been found in other regions as well

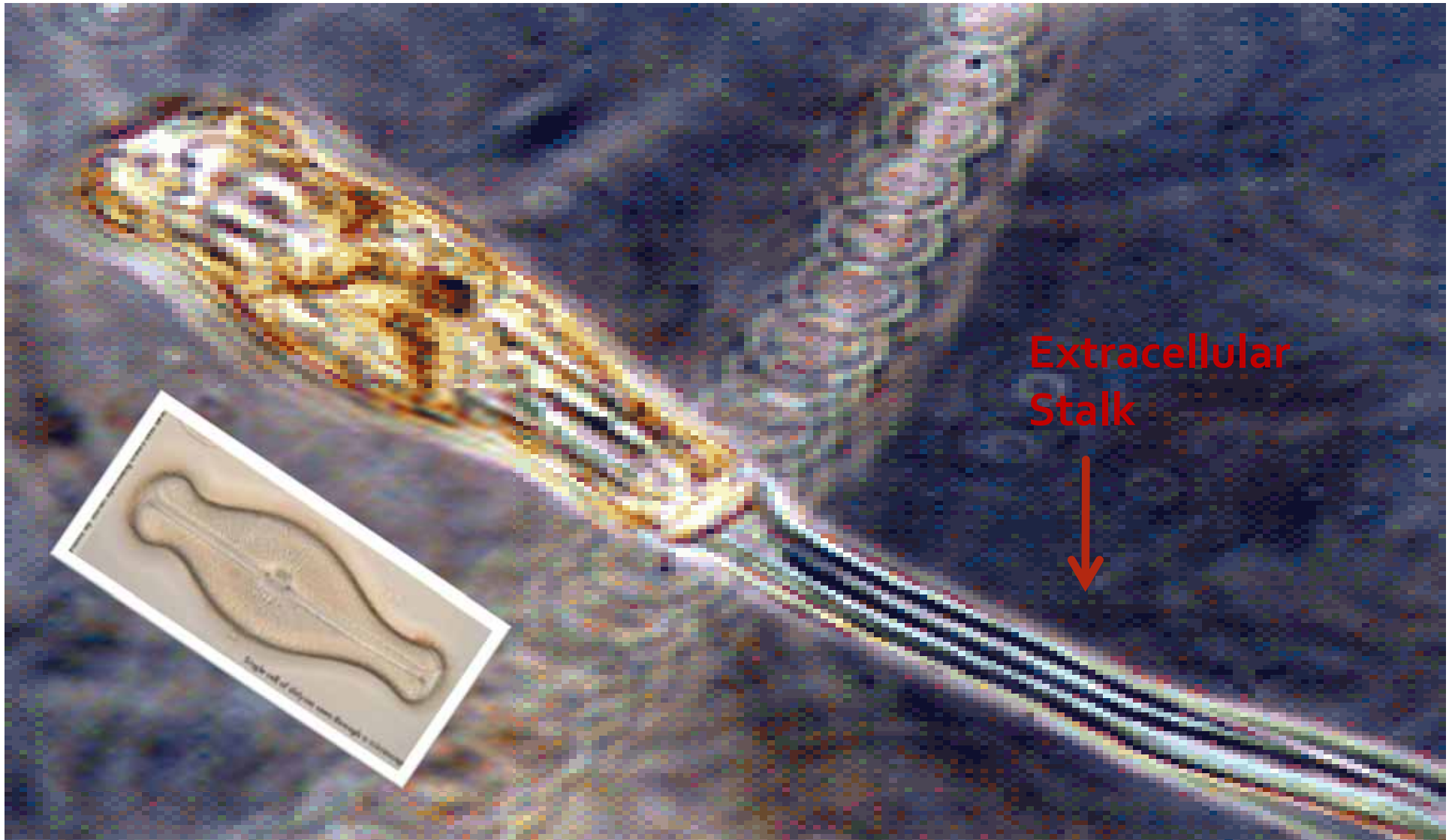


Reed Manna Grass/*Glyceria maxima*

- Angular blades
- Closed leaf sheaths
- Upper glumes have 1 vein, and conspicuous veins on lemmas
- Leaves end in boat shaped tips
- Common name “rough mannagrass” due to leaves feeling like sharkskin



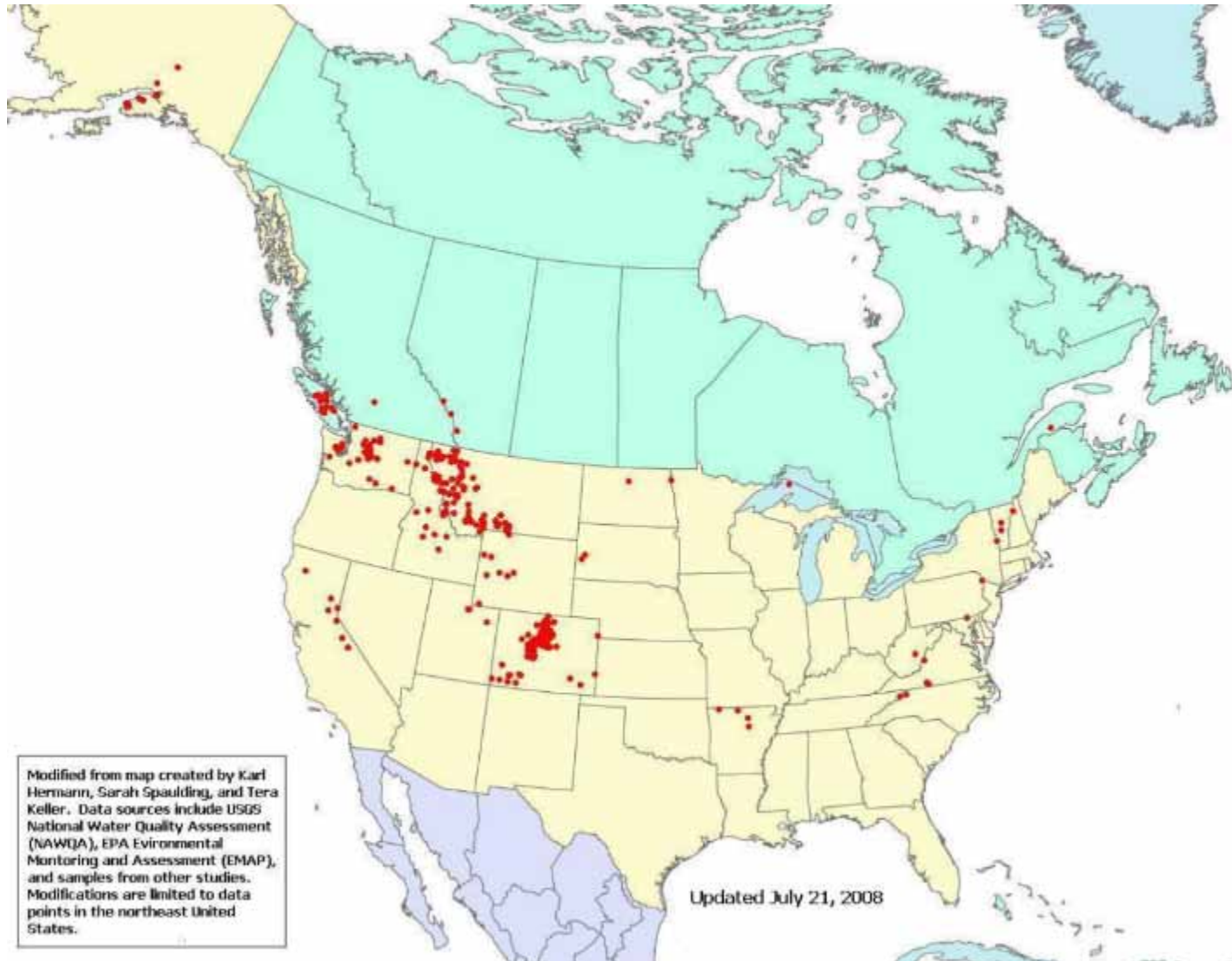
Didymo/Rock Snot





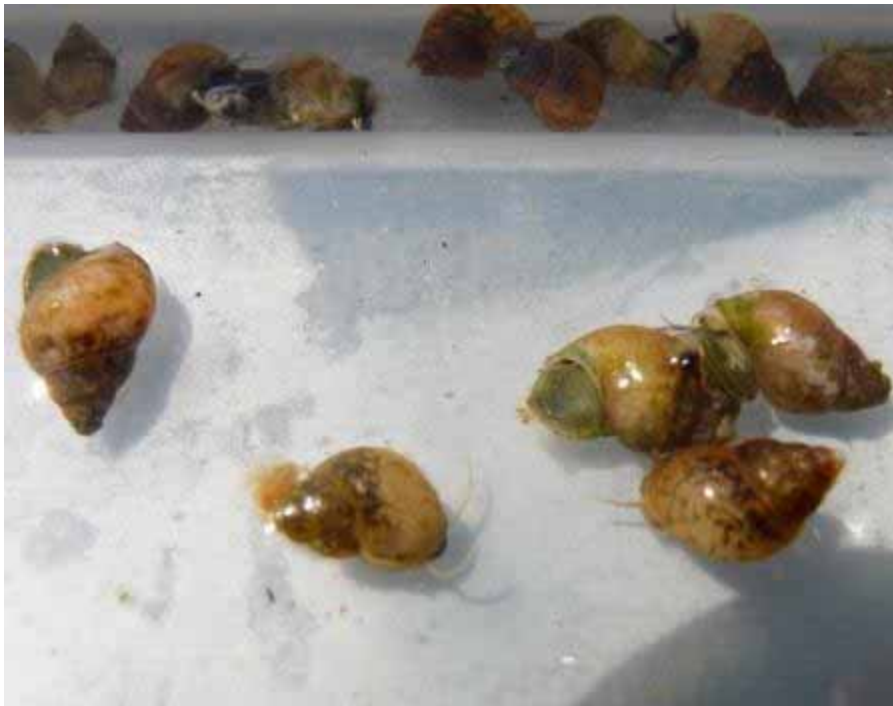
**It is unpleasant to the senses, a nuisance to anglers,
disrupts the natural benthic communities.**

Distribution of Didymo

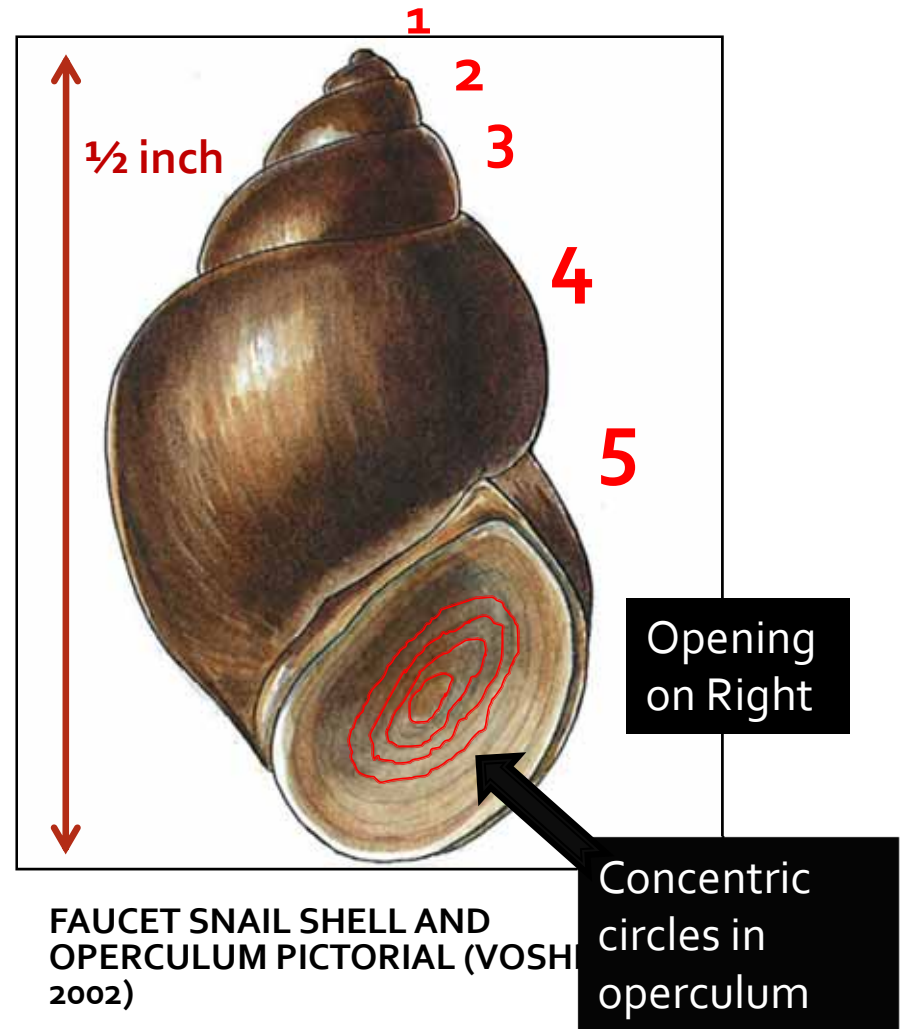


**Spreading
on boots of
wading
anglers**

Faucet Snail (*Bythinia tentaculata*)

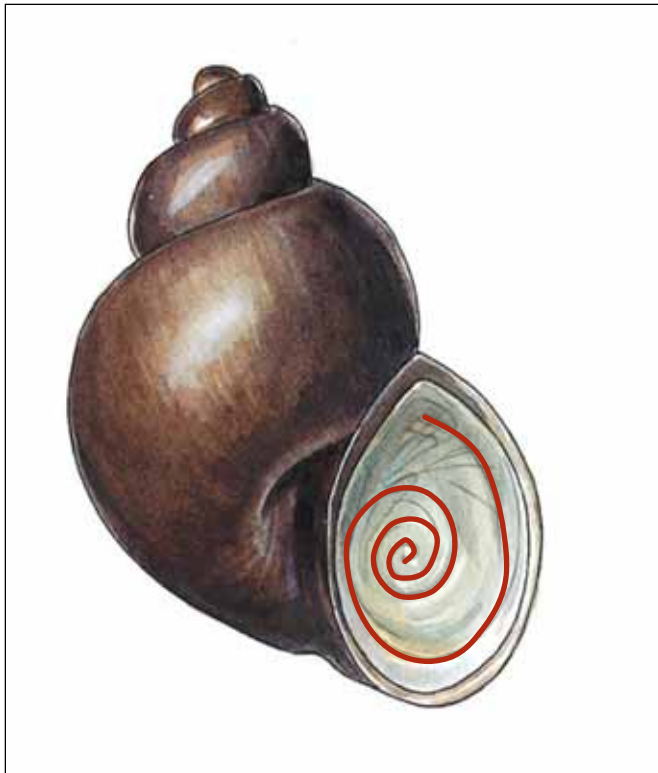


FAUCET SNAILS, SPECIMENS FROM LAKE WINNIBIGOSHISH, MINNESOTA



FAUCET SNAIL SHELL AND OPERCULUM PICTORIAL (VOSH 2002)

How do these native snails differ from the faucet snail?



PICTORIALS OF HYBORBIID, LYMNAIED, AND PHYSID SNAILS
(VOSHELL, 2002).

Mystery snails in Wisconsin



Impact: large die-offs of waterfowl



Sickly coots caught in the roiling waters of a Mississippi Dam. Photo by Rick DeWitte.

- Intermediate host to fluke worm that **bores through diving ducks' intestine**, causing internal bleeding
- Have **killed tens of thousands of scaup, coot, and ring-billed ducks** on Upper Miss R. Wildlife Refuge, and in Minnesota

New Zealand mudsnails

(Potamopyrgus antipodarum)



DIME

3 to 6 mm

New Zealand mudsnail

(Potamopyrgus antipodarum)



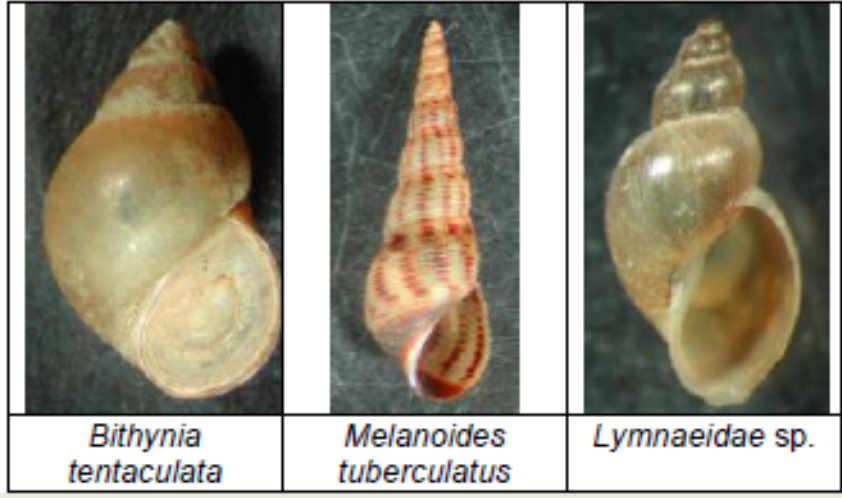
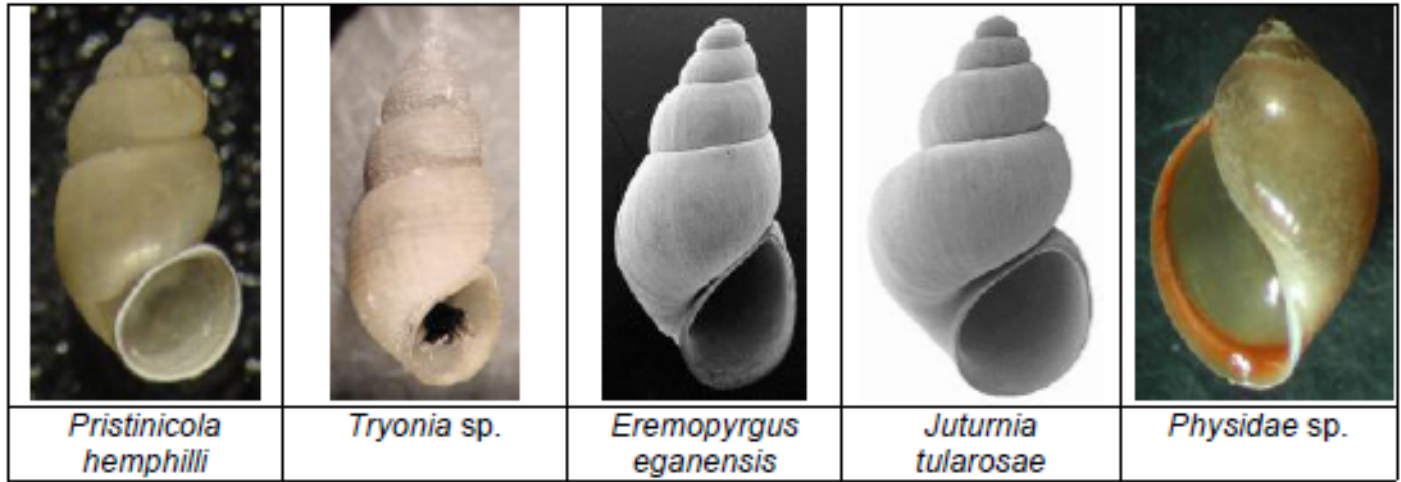
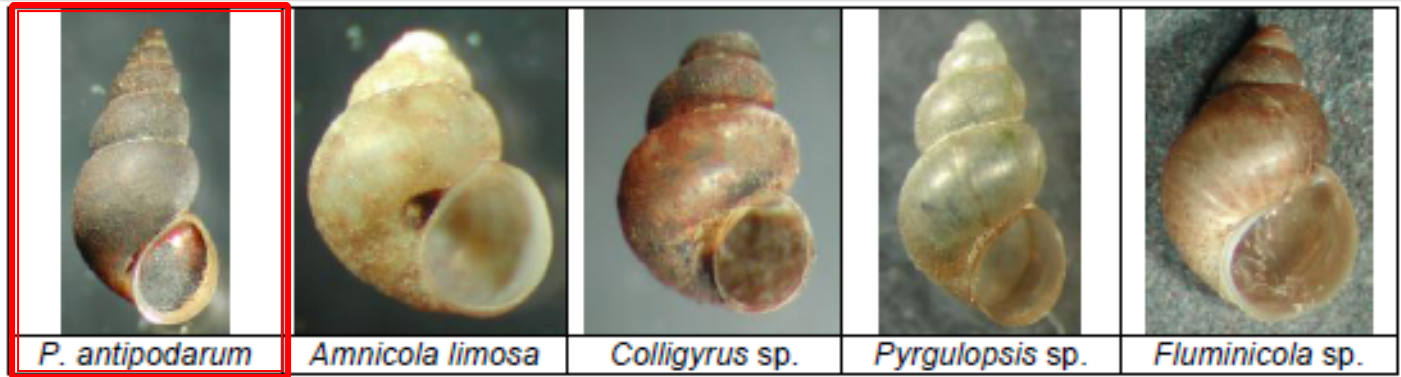
1/10 to 1/4 inch long

Operculum present

Light to dark brown

**Cone shaped shell with
5-6 whorls**

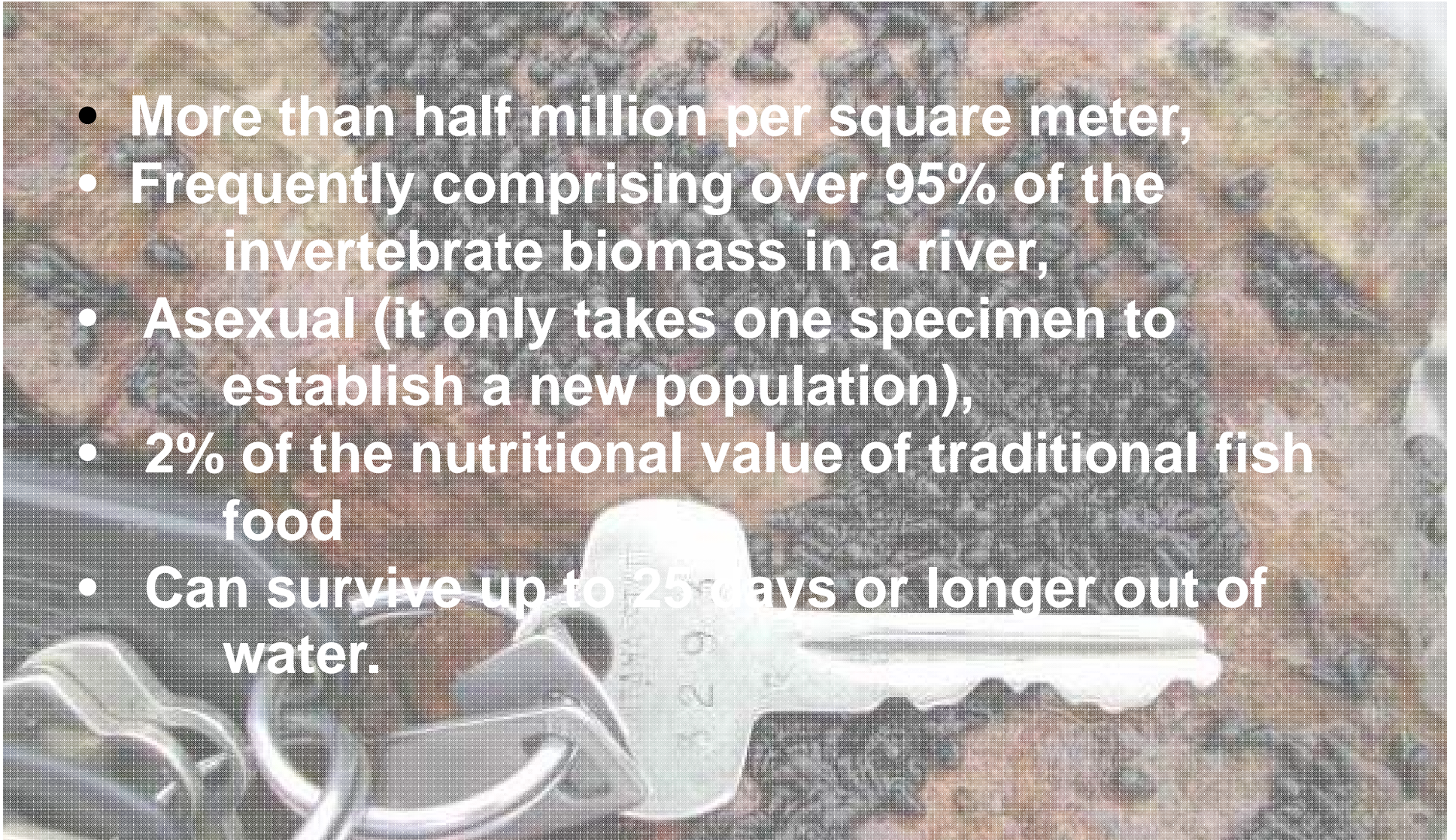
**Raised carina (keel) on
whorls**



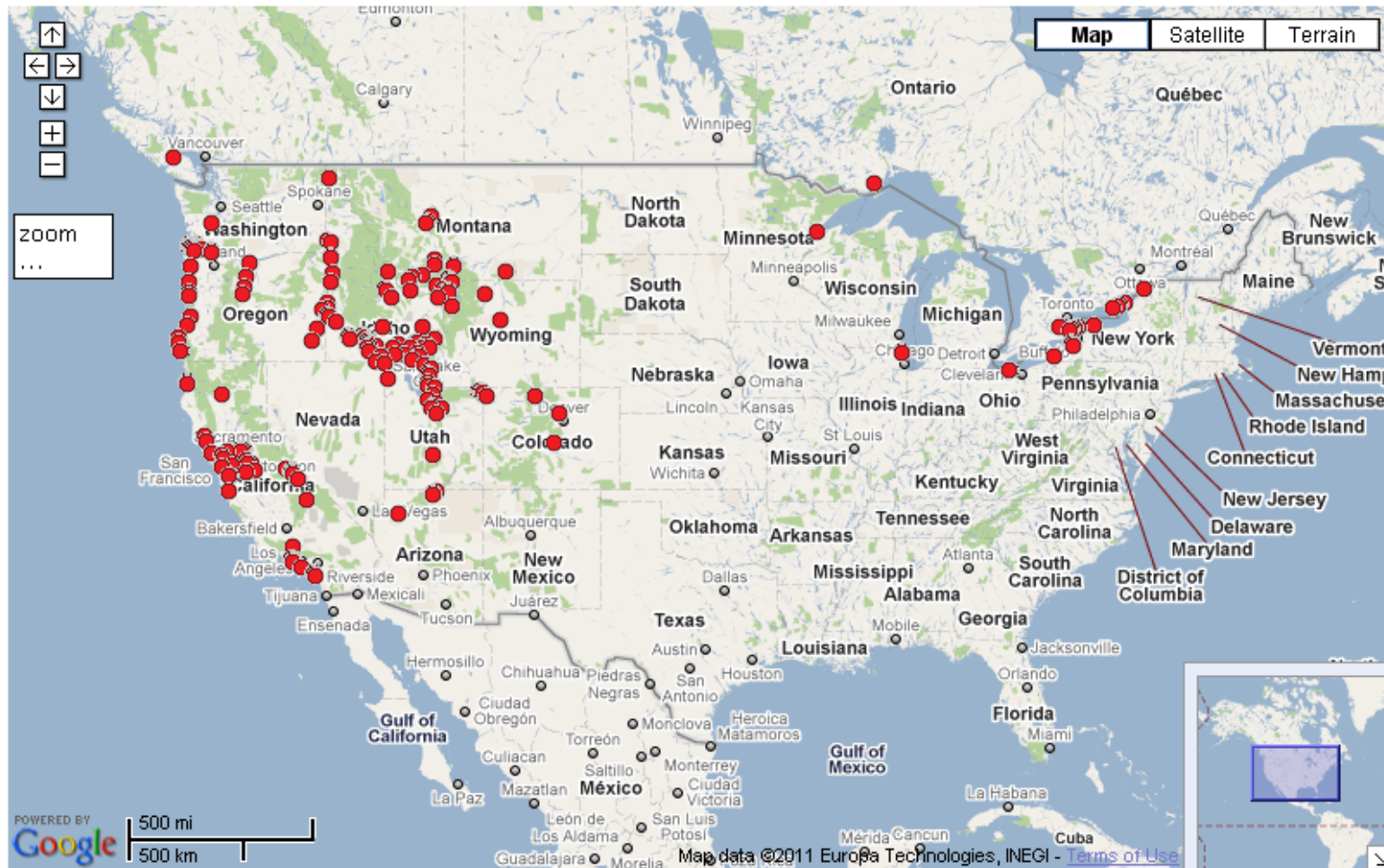
Other snails native to N. America that are easily mistaken for New Zealand mudsnails.

Impacts: less healthy fisheries

- More than half million per square meter,
- Frequently comprising over 95% of the invertebrate biomass in a river,
- Asexual (it only takes one specimen to establish a new population),
- 2% of the nutritional value of traditional fish food
- Can survive up to 25 days or longer out of water.



Distribution of New Zealand mudsnail

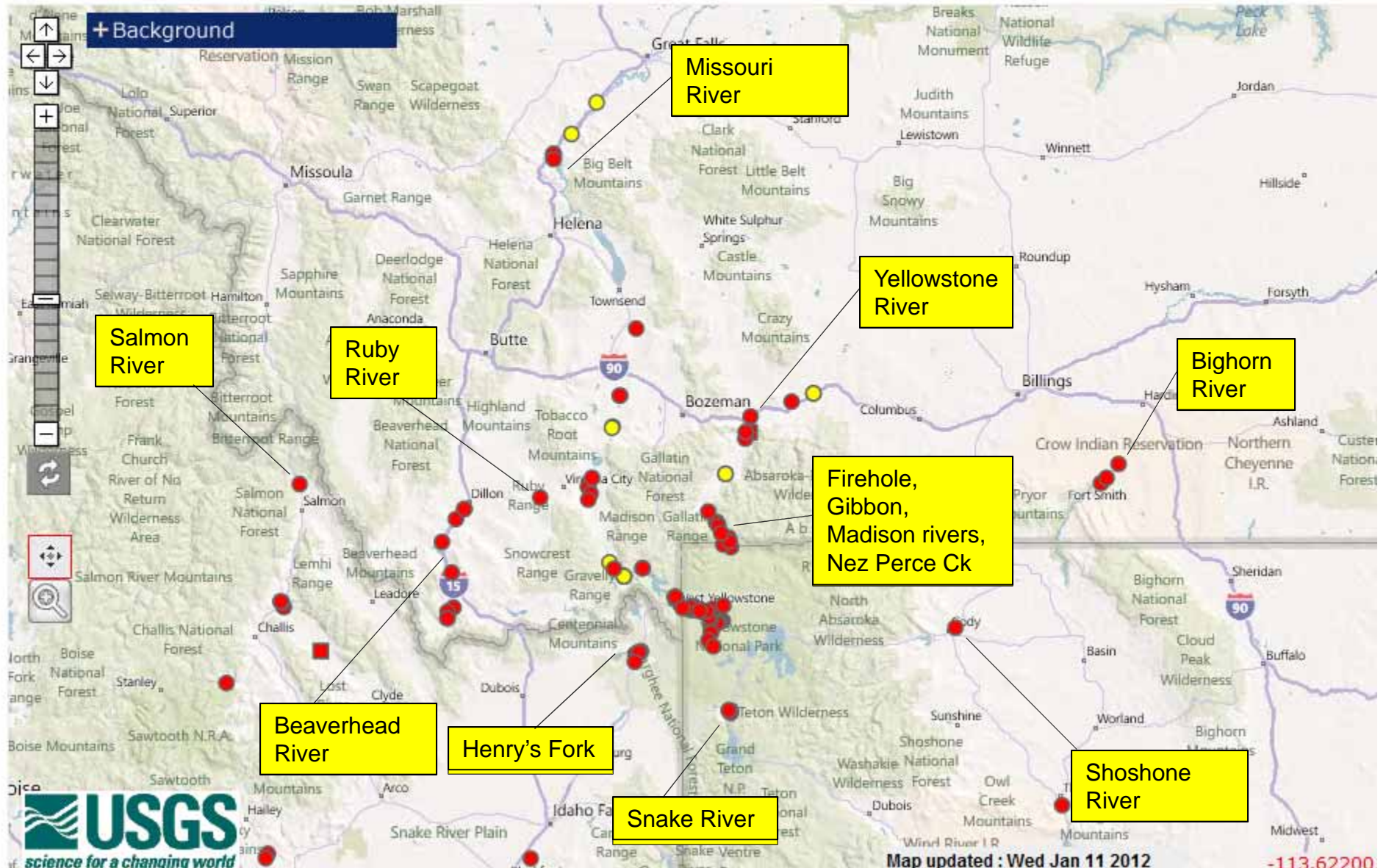


Suggested citation: Benson, A. J. 2011. New Zealand mudsnail sightings distribution. Retrieved 2/24/2011 from newzealandmudsnaildistribution.aspx.



Potamopyrgus antipodarum
(New Zealand mudsnail)
Mollusks-Gastropods
Exotic to United States

New Zealand mudsnail U.S. distribution (2012)



Zebra Mussel
(Dreissena polymorpha)



Zebra Mussels On Native Milfoil



Quagga Mussels
(Dreissena bugensis)



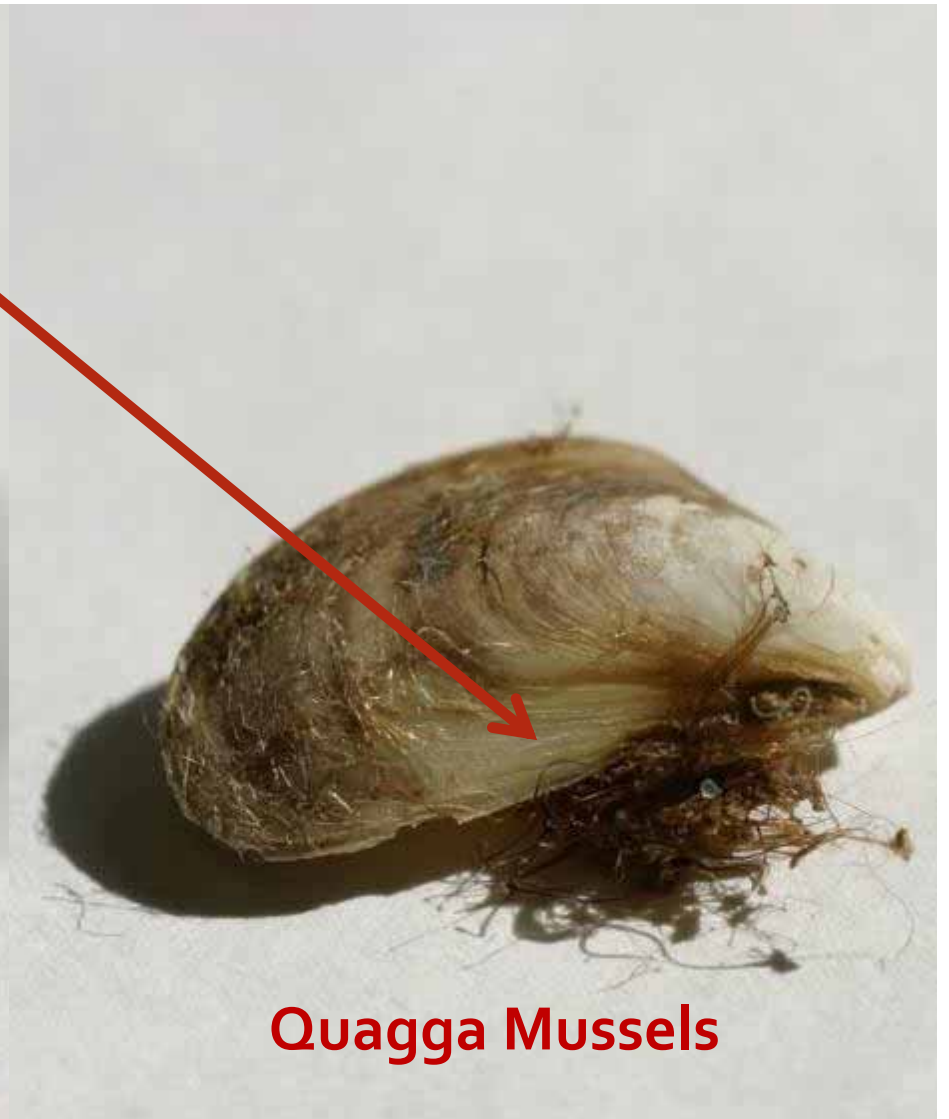
Native (*Amblema plicata*) with Zebra mussels



Bissell threads are bad news.

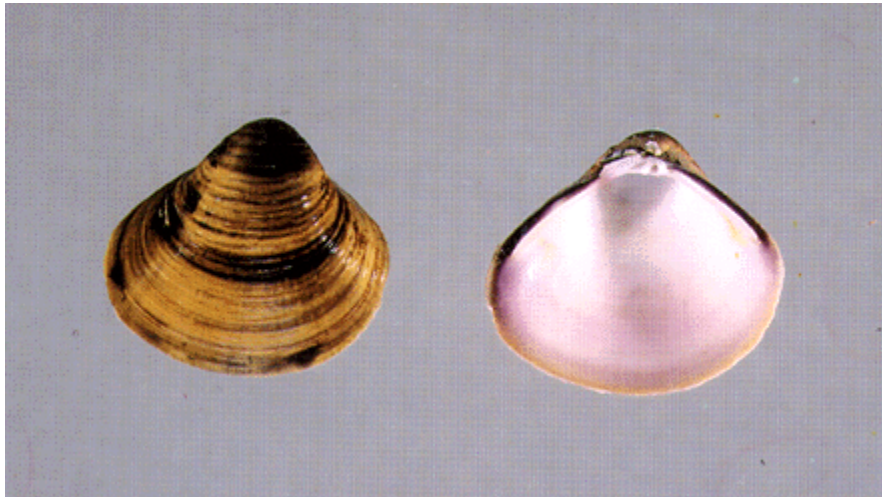


Zebra Mussels



Quagga Mussels

Asian clam



- Adults range from 1 to 2 inches in length
- Yellow-green to brown shells
- Thick concentric rings on the shell
- Top and bottom shells almost identical
- Shells are normally thick and hard to crush
- Inside of the shell ranges from white to purple/blue



Native fingernail clam

- Adults normally less than 1 inch in length
- Yellow-green to brown shells
- Thin or no concentric rings on the shell
- **Shells are normally thin and easy to crush**
- Inside of the shell is white.

Louisiana Red Swamp Crayfish (*Procambarus clarkii*)

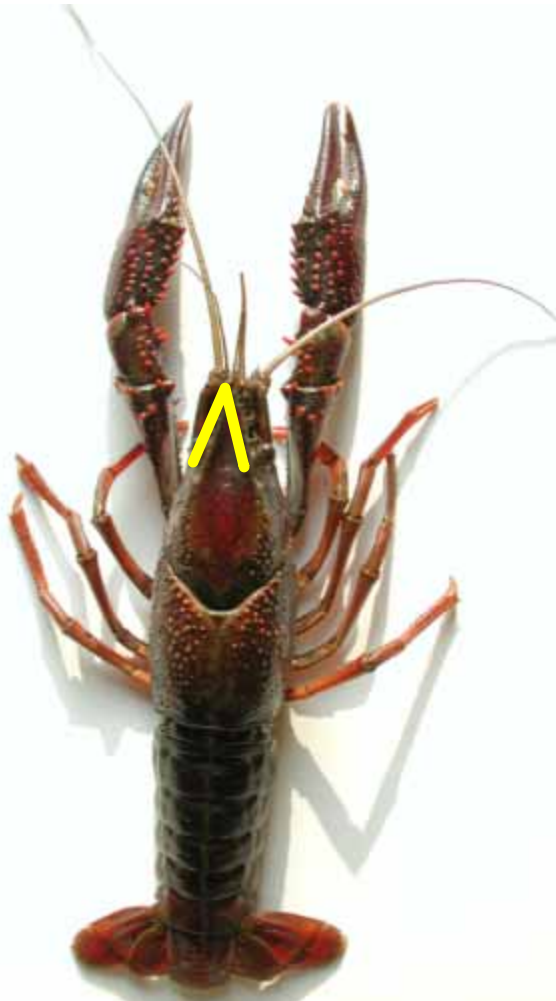


Omnivorous

- Aquatic plants
- Snails
- Insects
- Fish and amphibian eggs
- Young fish and amphibians



Identifying crayfish



Red Swamp



© K. Johnson 2008

White River
(native)

Slight gap
between
seams on
back

Black
strip on
tail



Rusty

Distribution of red swamp crayfish in Wisconsin

- Germantown and Kenosha
- Found in 2009



Other Species

Regulated Aquatic Invasive Plants in WI

Please report any prohibited species (as indicated by the red frame box) to the WDNR.
 Report by email to: Invasive.Species@wi.gov or by phone at: (608) 266-6437
 OR to find out more information, for information on reporting restricted species and whom to contact go to:
<http://dnr.wi.gov/invasives/aquatic/whattodo/>



For more information about NR 40 (WI's Invasive Species Rule), Restricted, or Prohibited species:
 please visit: www.dnr.wi.gov/invasives/classification

Author: Jennifer Wengeman
 Graphic Designer: Kristine Neumann
 Date: 01/20/14/15

DNR PUB-WT-R25-2011



The Wisconsin Department of Natural Resources provides equal opportunity in its employment programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to: Equal Opportunity Office, Department of Natural Resources, P.O. Box 28000

This publication is available in alternative format (large print, Braille, audio tape, etc.) upon request. (608) 261-4300, 261-7174. Design and Layout by Bonnie Reichen

Common Wetland Invasive Plants In WI

Please report prohibited species (as indicated by red on the maps) and all other species marked with an asterisk (*) when found in or near wetlands or shores. Provide the following data: exact location, land ownership (if known), population size, a photo or voucher specimen, and your contact information.

To report a sighting: send an email to: Invasive.Species@wi.gov or CALL 608-267-5066



 Restricted Species
 Prohibited/Restricted Species
 Prohibited Species
 Species without a map are not regulated by NR 40 (WI's Invasive Species Rule)

 Tree
 Vine
 Grass
 Shrub
 Forb

 SOMEWHAT WET (Floodplain forests, Seasonally flooded basins)
 WET (Wet meadows, Shrub swamps, Wooded swamps)
 VERY WET (Deep marsh, Shallow marsh)

Break



How to look for invasives:

- Canoeing/Kayaking
- Wading
- Driving Bridge Surveys



When to look for invasives:

MAY	JUNE	JULY	AUGUST	SEPTEMBER
curly-leaf pondweed snails and mussels didymo	flowering rush curly-leaf pondweed Eurasian water-milfoil snails and mussels didymo	purple loosestrife common reed Japanese hops flowering rush Eurasian water-milfoil hydrilla Brazilian waterweed snails and mussels didymo	Japanese knotweed purple loosestrife common reed Japanese hops flowering rush Eurasian water-milfoil hydrilla Brazilian waterweed snails and mussels didymo	Japanese knotweed purple loosestrife common reed Japanese hops hydrilla Brazilian waterweed snails and mussels Didymo



Where to look for invasives:

Boat Launches and Other Access Points



Reporting your Findings



The screenshot shows a data entry form with various fields for recording field data. The form includes sections for 'Project Information', 'Field Data', and 'Species Data'. The 'Species Data' section contains a table with columns for 'Date', 'Time', 'Location', 'Abundance', 'Sex', and 'Age'. The table has several rows of data, some of which are partially filled out.

Date	Time	Location	Abundance	Sex	Age
05/21/11	10:00	100m upstream	1	♂	AD
05/21/11	10:05	100m upstream	1	♂	AD
05/21/11	10:10	100m upstream	1	♂	AD
05/21/11	10:15	100m upstream	1	♂	AD
05/21/11	10:20	100m upstream	1	♂	AD
05/21/11	10:25	100m upstream	1	♂	AD
05/21/11	10:30	100m upstream	1	♂	AD
05/21/11	10:35	100m upstream	1	♂	AD
05/21/11	10:40	100m upstream	1	♂	AD
05/21/11	10:45	100m upstream	1	♂	AD
05/21/11	10:50	100m upstream	1	♂	AD
05/21/11	10:55	100m upstream	1	♂	AD
05/21/11	11:00	100m upstream	1	♂	AD
05/21/11	11:05	100m upstream	1	♂	AD
05/21/11	11:10	100m upstream	1	♂	AD
05/21/11	11:15	100m upstream	1	♂	AD
05/21/11	11:20	100m upstream	1	♂	AD
05/21/11	11:25	100m upstream	1	♂	AD
05/21/11	11:30	100m upstream	1	♂	AD
05/21/11	11:35	100m upstream	1	♂	AD
05/21/11	11:40	100m upstream	1	♂	AD
05/21/11	11:45	100m upstream	1	♂	AD
05/21/11	11:50	100m upstream	1	♂	AD
05/21/11	11:55	100m upstream	1	♂	AD
05/21/11	12:00	100m upstream	1	♂	AD

1. Record a data point for each occurrence
2. Take a sample or photo
3. Fill out the datasheet
4. Submit for verification & entry

Recording Data in the Field

- GPS Locations are important
- GPS units are stored at technology libraries around the state.
- Smartphones can be used but coverage may vary

Technology Libraries - Borrow A GPS Unit

Wisconsin is fortunate to have citizens who care about our natural resources. There are several citizen-based monitoring (CBM) programs that use data collected by volunteers (for a list of programs, please check out the [CBM website](#).) Technology libraries have been established throughout the state that lend one or more Garmin eTrex Legend GPS units to be used in monitoring any type of natural resource whether or not that monitoring is part of a CBM program. One benefit of becoming a member of a program is that they have protocols developed for monitoring specific resources (water, insects, reptiles, invasive plants, etc.). Here is a list of the technology library locations where GPS units are available:

Beaver Creek Reserve Contact: Sarah Staus 81 County Hwy K Oak Creek, WI 53474 (715) 877-2212 2 GPS units available	Calumet County Courthouse Contact: Diane Schauer 205 Court Street Chilton, WI 53014 (820) 648-2361 2 GPS units available	Door County S&WD Contact: Bill Schuster 421 Nebraska Street Sturgeon Bay, WI 54235 (820) 746-2214 1 GPS unit available
Gr. Sauk CWMA (UW-EX Baraboo) Contact: John Esp 505 Broadway Baraboo, WI 53913 (888) 355-3250 2 GPS units available	Kickapoo Valley Reserve Contact: Sasha Urban 85611 State Hwy 131 LaFarge, WI 54639 (888) 625-2060 2 GPS units available	Lakeshore Nature Preserve Contact: Cathy Bruner 1217 University Avenue Madison, WI 53706 (608) 265-0275 2 GPS units available





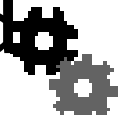
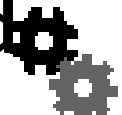
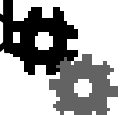
Invasive Plant Association of Wisconsin
<http://ipaw.org/TheSolution/Monitoring/GPSUnits.aspx>

Using a GPS



Setup Menu

Correct Settings

- Datum  Time
- WGS84
- Units  Units
- Units   Heading
- Decimal degrees  System
- hddd.ddddd  System
- Ex: 38.889722, -77.008889  System

06:47:16^P
30-MAR-01

Project RED Field Data Collection Sheet

Name		Phone		Email	
Street Address			City		State Zip
Organization			Waterbody		Date
Start Time	End Time	Start Latitude ¹		Start Longitude	
Description of Start Location (ex. CTH K Bridge)					
End Latitude			End Longitude		
Description of End Location					

Check all of the species you looked for: Japanese knotweed purple loosestrife phragmites Japanese hops flowering rush hydrilla Brazilian waterweed
 Eurasian watermilfoil curlyleaf pondweed yellow floating heart yellow iris didymo zebra mussel quagga mussel New Zealand mudsnail faucet snail
 red swamp crayfish Asian clam water lettuce water hyacinth, other _____

STEP 1: Record locations of invasive species using a GPS unit (datum WGS84). Check photo or sample if one was taken.

ID#	Species	Latitude	N	Longitude	w	Area	M ²	<input type="checkbox"/> Photo	<input type="checkbox"/> Sample
ID#	Species	Latitude	N	Longitude	w	Area	M ²	<input type="checkbox"/> Photo	<input type="checkbox"/> Sample
ID#	Species	Latitude	N	Longitude	w	Area	M ²	<input type="checkbox"/> Photo	<input type="checkbox"/> Sample
ID#	Species	Latitude	N	Longitude	w	Area	M ²	<input type="checkbox"/> Photo	<input type="checkbox"/> Sample
ID#	Species	Latitude	N	Longitude	w	Area	M ²	<input type="checkbox"/> Photo	<input type="checkbox"/> Sample
ID#	Species	Latitude	N	Longitude	w	Area	M ²	<input type="checkbox"/> Photo	<input type="checkbox"/> Sample
ID#	Species	Latitude	N	Longitude	w	Area	M ²	<input type="checkbox"/> Photo	<input type="checkbox"/> Sample

Step 2: Send your photograph or sample to an expert for verification.

RESULTS

Name of Verifier	Date Received	ID# of Samples/Photos	ID# of Positives	ID# of Negatives

Step 3: Data was entered into SWIMS on _____ by _____

Date

Name

Return a copy of the completed form to the Laura MacFarland 107 Sutliff Ave., Rhinelander, WI 54501. For further assistance contact the River Alliance of Wisconsin at (608) 257-2424. All trip data is valuable to us even if you did not find any invasive species.

Version 3.0 (5/14)

Project RED Field Data Collection Sheet

Name Laura MacFarland		Phone 608-257-2424	Email lmacfarland@wisconsinrivers.org	
Street Address 107 Sutliff Ave		City Rhinelanders	State WI	Zip 54501
Organization River Alliance of Wisconsin		Waterbody Clear Creek	Date June 16, 2014	
Start Time 1pm	End Time 2:30pm	Start Latitude ¹ 48.876543	Start Longitude -89.123456	
Description of Start Location (ex. CTH K Bridge) CTH K Bridge				
End Latitude 48.12224		End Longitude -89.00009		
Description of End Location Hwy 8 Bridge near County Park				

Check all of the species you looked for: Japanese knotweed purple loosestrife phragmites Japanese hops flowering rush hydrilla Brazilian waterweed Eurasian watermilfoil curlyleaf pondweed yellow floating heart yellow iris didymo zebra mussel quagga mussel New Zealand mudsnail faucet snail red swamp crayfish Asian clam water lettuce water hyacinth, other _____

STEP 1: Record locations of invasive species using a GPS unit (datum WGS84). Check photo or sample if one was taken.

ID#	Species	Latitude	N Longitude	w Area	M ²	Photo	Sample
1	purple loosestrife	48.88888	-89.14823	5	M ²	<input type="checkbox"/>	<input type="checkbox"/>
2	Japanese knotweed	48.93347	-89.17998	20	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>

Step 2: Send your photograph or sample to an expert for verification.

RESULTS

Name of Verifier	Date Received	ID# of Samples/Photos	ID# of Positives	ID# of Negatives
Sue Q. Expert	6/17/14	1 and 2	1	2

Step 3: Data was entered into SWIMS on June 18, 2014 by Laura MacFarland

Date

Name

Collecting a Sample

PHOTOGRAPH



- Object for scale
- All parts
- Multiple pictures

SPECIMEN



- All parts
- 5 – 10 specimens
- Keep cool and damp

Verification (WDNR)

Milwaukee Area (Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington, Waukesha)

Heidi Bunk, 262-574-2130, heidi.bunk@wi.gov

Green Bay Area (Marinette, Menominee, Oconto, Shawano)

Brenda Nordin, 920-662-5141, brenda.nordin@wi.gov

Green Bay Area (Brown, Calumet, Door, Fond Du Lac, Kewaunee, Manitowoc, Outagamie)

Mary Gansberg, 920-662-5489 mary.gansberg@wi.gov

Oshkosh Area (Green Lake, Marquette, Waupaca, Waushara, Winnebago)

Ted Johnson, 920-424-2104 tedm.johnson@wi.gov

Madison Area (Columbia, Dane, Dodge, Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, Sauk)

Susan Graham, 608-275-3329, susan.graham@wi.gov

Woodruff Area (Iron, Vilas, Oneida)

Kevin Gauthier, 715-356-5211, kevin.gauthiersr@wi.gov

Rhineland Area (Florence, Forest, Langlade, Lincoln, Price, Taylor)

Jim Kreitlow, 715-365-8947, james.kreitlow@wi.gov

Verification (WDNR)

Spooner Area (Ashland, Bayfield, Burnett, Douglas, Washburn)

Pamela Toshner, 715-635-4073, pamela.toshner@wi.gov

Spooner Area (Barron, Polk, Rusk, Sawyer)

Alex Smith, 715-635-4142, alex.smith@wi.gov

Eau Claire Area (Adams, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, La Crosse, Marathon, Monroe, Pepin, Pierce, Portage, St. Croix, Trempealeau, Vernon, Wood)

Jodi Lepsch, 715-838-8385, jodi.lepsch@wi.gov

Project RED Field Data Collection Sheet

Name Laura MacFarland		Phone 608-257-2424	Email lmacfarland@wisconsinrivers.org	
Street Address 107 Sutliff Ave		City Rhinelanders	State WI	Zip 54501
Organization River Alliance of Wisconsin		Waterbody Clear Creek	Date June 16, 2014	
Start Time 1pm	End Time 2:30pm	Start Latitude ¹ 48.876543	Start Longitude -89.123456	
Description of Start Location (ex. CTH K Bridge) CTH K Bridge				
End Latitude 48.12224		End Longitude -89.00009		
Description of End Location Hwy 8 Bridge near County Park				

Check all of the species you looked for: Japanese knotweed purple loosestrife phragmites Japanese hops flowering rush hydrilla Brazilian waterweed Eurasian watermilfoil curlyleaf pondweed yellow floating heart yellow iris didymo zebra mussel quagga mussel New Zealand mudsnail faucet snail red swamp crayfish Asian clam water lettuce water hyacinth, other _____

STEP 1: Record locations of invasive species using a GPS unit (datum WGS84). Check photo or sample if one was taken.

ID#	Species	Latitude	N Longitude	w Area	M ²	Photo	Sample
1	purple loosestrife	48.88888	-89.14823	5	M ²	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Japanese knotweed	48.93347	-89.17998	20	M ²	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>
ID#	Species	Latitude	N Longitude	w Area	M ²	<input type="checkbox"/>	<input type="checkbox"/>

Step 2: Send your photograph or sample to an expert for verification.

RESULTS

Name of Verifier	Date Received	ID# of Samples/Photos	ID# of Positives	ID# of Negatives
Sue Q. Expert	6/17/14	1 and 2	1	2

Step 3: Data was entered into SWIMS on June 18, 2014 by Laura MacFarland

Date

Name

We want to know where you monitored!

- Please complete a field data sheet and enter your data into SWIMS even if you did not find an invasive species
- Two Options for Datasheets:
 - Send to your Project RED Trainer or Statewide Coordinator
 - Enter into DNR SWIMS program yourself

Entering Data into SWIMS

Surface Water Integrated Monitoring System

Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)



Enter your User ID and Password to sign in

User ID

jwjonesRA

Password

Sign In

DNR Staff:

Log in with your Oracle ID and Password

Volunteers and Others:

Our log-in screen has changed. Log in with your Wisconsin User ID and Password above.

[Forgot your password?](#)

[Get a Wisconsin User ID and Password](#)



**Get your WAMS ID and Password at
<https://on.wisconsin.gov/WAMS/home>**

Before you can enter data....

- Self Registration
- Activate your account after you receive and email from www.wisconsin.gov
- EMAIL aperdzock@wisconsinrivers.org
 - Let her know that you will be contributing Project RED data
 - Provide her with your USER ID

Firefox | Wisconsin Department of Natural Resources | dnr.wi.gov

Alert: Due to high water, State Highway 75 is closed between Highway 142 and County Highway K and several trails within Richard Bong Sta

Business | Licenses & Regulations | Recreation | Education | Topics | Contact | Join Us



SWIMS [HELP](#)

Quick tasks

- | | | |
|---------------------------------------|-------------------------------|--|
| Reserve a campsite | Where to fish | Order tree seedlings |
| Online license center | Burn permits | Register boat/ATV/snow |

Popular links

- | | | |
|---|-------------------------------------|-------------------------------------|
| Parks and recreation | Spring hearings | Ask the experts |
| Natural Resources Board | Green Tier | Today's air quality |
| Conservation Congress | Deer trustee report | Public input |

Top news

- [Wisconsin regular inland game fish season opens Saturday, May 4](#)
- [Comments sought on Lake Michigan fisheries management plan update](#)

[Features](#) | [Weekly News](#) | [News releases](#) | [Outdoor Report](#) | [All news](#)

Get Reacquainted - Wisconsin fish are

0:00 / 0:32

Your fishy friends miss you! Hook up again

Surface Water Integrated Monitoring System (SWIMS)

Welcome to the Surface Water Integrated Monitoring System (SWIMS), a Wisconsin DNR information system that holds chemistry (water, sediment), physical, and biological (macroinvertebrate, aquatic invasives) data.

SWIMS is the state's repository for water and sediment monitoring data collected for Clean Water Act work and is the source of data sharing through the federal [Water Quality Exchange Network](#) [Exit DNR]. DNR Fisheries and Water Quality Biologists use the system to locate monitoring stations, providing a gateway to final, reviewed fisheries management datasets housed at the U.S. Geological Survey. SWIMS is also the data system that citizen volunteers use to document water monitoring results for our state's lakes, streams and wetlands.



Little St.Germain Lake, L. Helmuth



Access the system

General SWIMS Users log in [here with your WAMS ID and Password](#). Questions? Email [Molli MacDonald](#)

Citizen Based Stream and Lakes Volunteer Monitors used SWIMS to record their data since 2007!! For more information about these outstanding monitoring programs see the links below. A special note: When entering your Citizen Lake Monitoring data online, please use our new address: <http://dnr.wi.gov/lakes/clmn-data>.

Firefox Welcome to SWIMS

prodoasjava.dnr.wi.gov/swims/myProjects.html?viewType=details&planId=40860792&taskSel=2¤tLevel=0&isGrant=N&externalUserPower=Y

Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)

My Projects Find Data Submit Data Stations Forms Reports, Maps, and Documents Manage Data

My Projects

- Clean Boats, Clean Waters - River Alliance (Lower Wisconsin River)
- Project RED Trainings
- River and Stream Access Invasive Species Signage
- Project Riverine Early Detectors (RED) - Statewide
- Project Riverine Early Detectors (Project RED)

Tasks

- Enter Data
- View/Edit Data

Project Details

- Project Details
- Project RED Website
- Field Data Collection Sheet
- Instructions for Using a GPS
- Instructions for Entering Data
- Project RED E-Newsletter

Project Riverine Early Detectors (Project RED)

Project Details

Project ID	ProjectRED
Start Date	01/01/2009
Description	Wisconsin's rivers are vulnerable to invasion by a number of invasive species from Eurasian r your river is detecting invasives early when it is still possible to isolate or eradicate the infest money and time it will take. Volunteers are invaluable for early detection. During a free traini foot for 15 species of concern. Project RED (Riverine Early Detectors) is a collaboration betw National Institute for Invasive Species Science and the River Alliance of Wisconsin.

Currently, you are logged in.
For security purposes, you will be logged off automatically after 15 minutes of inactivity, or you can log out now.



Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)

- My Projects
- Find Data
- Submit Data
- Stations
- Forms
- Reports, Maps, and Documents
- Manage Data

Create Monitoring Data

Fields denoted with an asterisk (*) are REQUIRED.

Project * Project Riverine Early Detectors (Project RED) Selected Project: Project Riverine Early Detectors (Proje

Data Collectors * Laura MacFarland Selected Collectors: Laura MacFarland

Station * 10034547, Tomahawk River - Dam on Willow Flowage to Swamp Lake Rd Bridge Show Map Selected Station: Tomahawk River - Dam on Willow Flow

Start Date * Select Date

Time

Form * Project Riverine Early Detection



Optional Fields

I want to enter latitude and longitude on the next page (optional)

End Date Select

Time

Comments

Fill in the weather here, lake or streamside observations, wildlife spotted, names of additional helpers etc..

- Save and Return
- Save
- Next

Currently, you are logged in.
For security purposes, you will be logged off automatically after 15 minutes of inactivity, or you can log out now.

Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)

My Projects Find Data Submit Data Stations Forms Reports, Maps, and Documents Manage Data

Create Monitoring Data

Fields denoted with an asterisk (*) are REQUIRED.

Project *	<input type="text" value="Project Riverine Early Detectors (Project RED)"/>	Selected Project:	Project Riverine Early Detectors (Proje
Data Collectors *	<input type="text" value="Laura MacFarland"/>	Selected Collectors:	Laura MacFarland
Station *	<input type="text" value="10034547, Tomahawk River - Dam on Willow Flowage to Swamp Lake Rd Bridge"/>	Selected Station:	Tomahawk River - Dam on Willow Flow
Start Date *	<input type="text" value="10034543, Ahnapee River - Washington Rd Bridge north approx 0.5 miles"/>		
Time	<input type="text" value="10034550, Badfish Creek - Bridge on CTH 138 to Bridge on Casey Rd - North of Cooksville"/>		
Form *	<input type="text" value="10037426, Bark River - Cty Rd N to Rock River"/>		
Optional Fields	<input type="checkbox"/>		
End Date	<input type="text" value="10037481, Blue River - Biba Rd to Forest Rd"/>		
Time	<input type="text" value="10034447, Cedar Creek - Covered Bridge Road to Boy Scout Park in Cedarburg"/>		
Comments	<input type="text" value="10037020, Crayfish River - Hubbleton to River Bend Resort"/>		
	<input type="text" value="10037021, Crayfish River - River Bend Resort to Milford"/>		
	<input type="text" value="10037480, Fennimore Fork - Neff Rd to Cty Rd M"/>		
	<input type="text" value="10038026, Flambeau River (North Fork) - Nine Mile Landing to Deadman Slough Landing"/>		
	<input type="text" value="10037755, Flambeau River - Holt's Landing to Park Falls"/>		
	<input type="text" value="10037754, Flambeau River - Turtle Flambeau Flowage to Holt's Landing"/>		
	<input type="text" value="10038218, Gran Grae Creek - Off Gran Grae Rd from Hwy 60"/>		
	<input type="text" value="10037479, Grant River - Cty Rd A to Hwy 133"/>		
	<input type="text" value="10037482, Kickapoo River - Ontario to Bridge #7"/>		
	<input type="text" value="10033438, Location Specified On Next Page"/>		
	<input type="text" value="10037853, Manitowish River - CTH N to Island Lake"/>		
	<input type="text" value="10038076, Manitowish River Hwy 51- Hwy 47"/>		
	<input type="text" value="10037379, Menominee River - Camels Clearing to Woods Rd"/>		
	<input type="text" value="10037381, Menominee River - Cowboy Lake to Sportsman Lane"/>		
	<input type="text" value="10037564, Menominee River - Edgewater Resort to Cowboy Lake"/>		

Save and Return Save Next

Currently, you are logged in.
For security purposes, you will be logged off automatically after 15 minutes of inactivity, or you can log out now.

Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)

My Projects Find Data Submit Data Stations Forms Reports, Maps, and Documents Manage Data

Create Monitoring Data

Fields denoted with an asterisk (*) are REQUIRED.

Project *	<input type="text" value="Project Riverine Early Detectors (Project RED)"/>	Selected Project:	Project Riverine Early Detectors (Proje
Data Collectors *	<input type="text" value="Laura MacFarland"/>	Selected Collectors:	Laura MacFarland
Station *	<input type="text" value="10034543, Ahnapee River - Washington Rd Bridge north approx 0.5 miles"/>	Selected Station:	Ahnapee River - Washington Rd Bridge
Start Date *	<input type="text" value="10037020, Crayfish River - Hubbleton to River Bend Resort"/>		
Time	<input type="text" value="10037021, Crayfish River - River Bend Resort to Milford"/>		
Form *	<input type="text" value="10037480, Fennimore Fork - Neff Rd to Cty Rd M"/>		
Optional Fields	<input type="checkbox"/>		
End Date	<input type="text" value="10038026, Flambeau River (North Fork) - Nine Mile Landing to Deadman Slough Landing"/>		
Time	<input type="text" value="10037755, Flambeau River - Holt's Landing to Park Falls"/>		
Comments	<input type="text" value="10037754, Flambeau River - Turtle Flambeau Flowage to Holt's Landing"/>		
	<input type="text" value="10038218, Gran Grae Creek - Off Gran Grae Rd from Hwy 60"/>		
	<input type="text" value="10037479, Grant River - Cty Rd A to Hwy 133"/>		
	<input type="text" value="10037482, Kickapoo River - Ontario to Bridge #7"/>		
	<input type="text" value="10033438, Location Specified On Next Page"/>		
	<input type="text" value="10037853, Manitowish River - CTH N to Island Lake"/>		
	<input type="text" value="10038076, Manitowish River Hwy 51- Hwy 47"/>		
	<input type="text" value="10037379, Menominee River - Camels Clearing to Woods Rd"/>		
	<input type="text" value="10037381, Menominee River - Cowboy Lake to Sportsman Lane"/>		
	<input type="text" value="10037564, Menominee River - Edgewater Resort to Cowboy Lake"/>		
	<input type="text" value="10037380, Menominee River - Woods Rd. to Vagabond Park"/>		
	<input type="text" value="10037485, Menomonee River - Hwy 57 to Milwaukee River"/>		
	<input type="text" value="10037301, Menomonee River - Hwy Q to Hwy 41"/>		
	<input type="text" value="10037483, Namekagon River - Hwy K to Howell Landing"/>		
	<input type="text" value="10037302, Oconomowoc River - Hwy Q to 0.5 miles North"/>		

Save and Return Save Next



Currently, you are logged in.
For security purposes, you will be logged off automatically after 15 minutes of inactivity, or you can log out now.

Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)

- My Projects
- Find Data
- Submit Data
- Stations
- Forms
- Reports, Maps, and Documents
- Manage Data

Create Monitoring Data

Fields denoted with an asterisk (*) are REQUIRED.

Project *	<input type="text" value="Project Riverine Early Detectors (Project RED)"/>	Selected Project:	Project Riverine Early Detectors (Proje
Data Collectors *	<input type="text" value="Laura MacFarland"/>	Selected Collectors:	Laura MacFarland
Station *	<input type="text" value="10033438, Location Specified On Next Page"/>	Selected Station:	Location Specified On Next Page
Start Date *	<input type="text" value="04/10/2013"/> <input type="button" value="Select Date"/>		
Time	<input type="text" value="1"/> <input type="text" value="00"/> <input type="text" value="PM"/>		
Form *	<input type="text" value="Project Riverine Early Detection"/>		

Optional Fields

I want to enter latitude and longitude on the next page (optional)

End Date	<input type="text" value="4/10/2013"/> <input type="button" value="Select"/>
Time	<input type="text" value="6"/> <input type="text" value="00"/> <input type="text" value="PM"/>

Comments

Fill in the weather here, lake or streamside observations, wildlife spotted, names of additional helpers etc..

- Save and Return
 - Save
 - Next
- 

Currently, you are logged in.
For security purposes, you will be logged off automatically after 15 minutes of inactivity, or you can log out now.

Home -> Fieldwork Event and Result Form

Fields denoted with an asterisk (*) are REQUIRED.

Fieldwork event data can be corrected later after submitting parameter results below.

You Are Entering Data For: Project: **Project Riverine Early Detectors (Project RED)**
 Start Date Time: **04/10/2013 02:00 PM**
 Station: **10033438 - Location Specified On Next Page**

Project Riverine Early Detection

	Parameter	Result	Units	Method
Location Monitored	Waterbody Name (*)	North Fork Frozen River		
	Start Latitude (ex. 43.074747)	43.074747		
	Start Longitude (ex. -89.384625)	-89.384625		
	Start Location Description (*)	Winter Drive		
	End Latitude (ex. 43.074747)	43.074747		
	End Longitude (ex. -89.384625)	-89.384625		
	End Location Description	Co Hwy BRR		
Species Looked For	Japanese Knotweed	YES ▾		
	Purple Loosestrife	NO ▾		
	Phragmites	YES ▾		
	Japanese Hops	NO ▾		
	Flowering Rush	NO ▾		
	Hydrilla	NO ▾		
	Brilliant Waterweed	NO ▾		
	Water-Milfoil	NO ▾		
	Spiny Leaf Pondweed	NO ▾		
	Water Floating Heart	NO ▾		
	Worm	NO ▾		
	Zebra Mussels	NO ▾		
	Quagga Mussels	NO ▾		
	New Zealand Mudsnail	NO ▾		
	Red Swamp	NO ▾		
Faucet Snail	NO ▾			
Other Species	Polar Bears			

I Didn't Find Anything

I Found Something to Report!

Wisconsin Department of Natural Resources

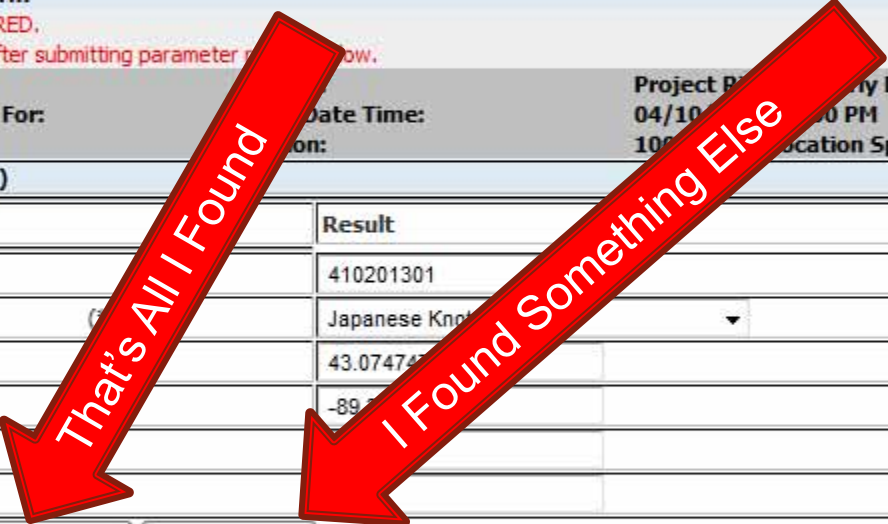
Surface Water Integrated Monitoring System (SWIMS)

My Projects Find Data Submit Data Stations Forms Reports, Maps, and Documents Manage Data

Home -> Fieldwork Event and Result Form
Fields denoted with an asterisk (*) are REQUIRED.
Fieldwork event data can be corrected later after submitting parameter information.

You Are Entering Data For: **Rivers/Streams Early Detection (Site 1)**
Date Time: 04/10/2012 10:00 PM
Project: **Project Red Early Detectors (Project RED)**
Location: 1000 Location Specified On Next Page

Parameter	Result	Units	Method
ID#	410201301		
Species Name	Japanese Knotweed		
Latitude (ex. 43.074747)	43.074747	DECIMAL DEGREES	
Longitude (ex. -89.384625)	-89.384625	DECIMAL DEGREES	
Area		METERS SQUARE	
Additional Comments			



Next Date Next Station Save and Return to List Enter Next ID#

Currently, you are logged in.
For security purposes, you will be logged off automatically after 15 minutes of inactivity, or you can log out now.



Success Story: Taking Action



Friends of Badfish found this stand of Japanese Knotweed at Riley Rd.



Educated landowner, DNR, and community



Cut and burned dead material



Cut twice; sprayed once or injected



Native Planting

1200 Native Grass Plugs



Prevent the Spread

**INSPECT, CLEAN & DRY
BAG ANY SPECIMENS IMMEDIATELY
WORK DOWNSTREAM
LOSE THE FELT SOLED BOOTS**



Pledge

- Pledge to monitor a river or stream this year
- Complete this form and turn it in prior to leaving
- You will receive it in the mail reminding you to get out on the water!

Riverine Early Detector's Pledge

Whereas, invasive species threaten the health of Wisconsin's rivers and the plants and animals that rely upon them for habitat and nourishment, I pledge to monitor

(river/stream)

at least twice a year by watercraft or at areas of potential introduction, bridge abutments, boat launches, and areas of disturbance.

I will monitor from _____

(description of start location)

to _____

(description of end location)

I pledge to have any suspect plants or animals I find verified by a professional.

I pledge to report any invasive species found within the river corridor by submitting my data online in SWIMS or sending my completed datasheet to the River Alliance, as soon as possible.

Signature _____ Date _____

Name: _____

Organization/Agency: _____

Mailing Address: _____

Telephone: _____

Email: _____

Training Survey

- **Your feedback is of great value!**
- **Please take a few minutes to fill out the form provided, so that we can improve this free service.**

THANK YOU!

Amanda Perdzock

(608) 257-2424 x111

aperdzock@wisconsinrivers.org

www.wisconsinrivers.org



RIVER ALLIANCE
of WISCONSIN