

Citizen Lake Monitoring Network

Lakes Convention

April 2011

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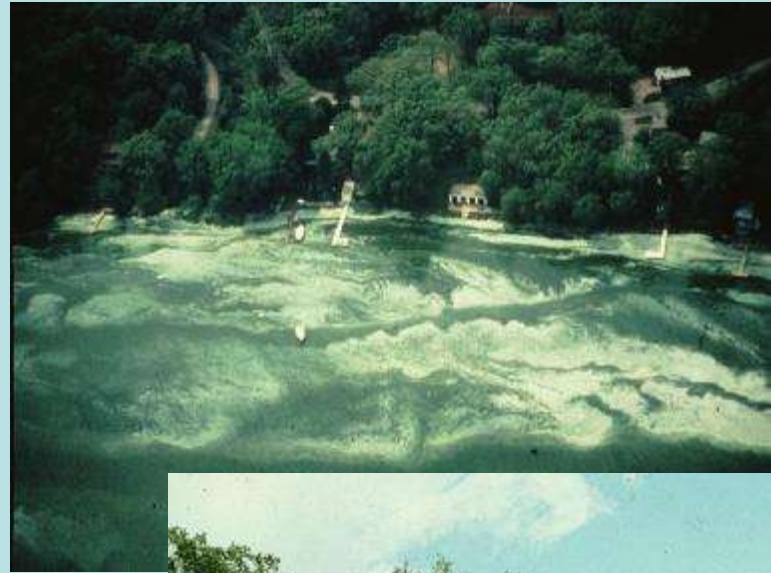


Wisconsin's Lakes are Changing Faster than Ever:

Algae blooms
(phosphorus pollution)

Destruction of
shoreline habitat

Invading plants and animals



Differences Between CBCW & CLMN



- Protecting lake from AIS
- Preventing AIS from spreading to another lake
- Defined hours (high use periods)
- A lot of contact with public
- Monitoring along shoreline near landings
- Checking to see if AIS is in lake
- Some defined monitoring times (based upon AIS monitoring for)
- Minimal contact with public
- Monitoring along shorelines, beaches, shallow water areas, & deep water areas
- Casual observer vs True Monitor

Citizen Lake Monitoring Network

1986 – 126 volunteers collecting secchi data on 113 Lakes

1990 – expansion – 25 lakes for

**Secchi, total phosphorus, chlorophyll, temperature
and dissolved oxygen**

1991 – 2005

**Secchi, total phosphorus, chlorophyll, temperature,
and dissolved oxygen with some regions having
volunteers collect data on Aquatic Exotics**

2006 - Statewide effort to monitor for Aquatic Invasives

**2007 – Statewide effort to have Trainers teach Secchi and
AIS monitoring**

2009 – Additional AIS added

What can we help you do?

- Become familiar with common native aquatic plants & animals in your lake.
- Monitor for the more common non-native aquatic invasive species that could get into your lake.
- Communicate findings from your lake monitoring efforts to others.

Why are we concerned about Aquatic Invasive Species?

- **Negatively impact our water resources**
 - Destroy, disrupt, or change natural habitat
 - Disrupt food chains
 - Out-compete and replace native plants and animals
 - Impact lake quality and water quality
 - Interfere with recreational use of lakes and rivers
- **Nearly impossible to eradicate or remove once present creating a new, likely permanent & often expensive, course for management**

Why conduct AIS monitoring?

- Protect your property value
- Protect your lake
- Cost savings – catch the invasive species early and save money controlling that invasive
- Protect neighboring lakes
- Because you can!!

Casual Observer vs Trained Monitor

- Casual observer

More general observer
(simplified training)

Do not follow protocols

Volunteer selects species they monitor for

Often do not do data entry

Seldom report if they do **NOT** find AIS

- Examples -

Shoreline sweep

Chain of Lakes volunteers

Lake meeting presentations

- Trained monitor

More technical training
(longer & more detailed)

Monitoring follows standard monitoring protocols
(meshes with DNR protocols)

Volunteer selects species they monitor for

Enter data into SWIMS

Report if they do **NOT** find AIS

Manual components

- Contacts
- Section 1 – Getting Started
- Sections 2-11 monitoring by Species
 - Overview of each species
 - ID tips
 - Monitoring protocols by species
 - Data entry
 - Herbarium labels & equipment building directions as needed
 - Reporting forms
- Section 12 monitoring for the native water-milfoil weevil

What other equipment/materials will I or might I need?

- A rake, either one or two sided, on a rope or on a pole.
- An underwater view scope
- Waders or hip boots
- Snorkeling gear
- A boat
- Crayfish traps, nets, zebra mussel substrate sampler, beetle rearing materials, weevil sampling gear
- Identification & information pamphlets

Setting up a monitoring team

- Designate a contact person**
- Obtain a map**
- Divide up the work**
- Report the findings**

Contact person

- Coordinates monitoring
 - Makes sure entire lake is covered
 - Checks on volunteers to see how monitoring is going
 - Vouchers plants
 - Takes “suspect” plants in to LWCD, UWEX, or DNR
 - Complies data

Obtain Lake Maps

- **DNR**
- **Fishing Hot Spots**
- **Bait Shops**
- **Web sites**

Divide up the Work (examples)

- **Have volunteers monitor 1-mile of shoreline**
 - **Shoreline Weed Action Team (SWAT)**
- **Have volunteers monitor specific species**
- **Volunteers without boats can do beach monitoring or zebra mussel monitoring**
- **Bring in Bait Dealers to “store” plants**
- **Maps for lake users to mark where they found suspect plants**

Report Findings

- Let people know what your results are
 - Newsletters
 - News articles
 - County Land & Water Conservation Dept.
 - DNR, UWEX, GLIFWC
 - Surface Water Inventory Management System (SWIMS)

When to monitor

- Native plants – June through August
- Eurasian water-milfoil – May through October
- Curly-leaf pondweed – May through July
- Purple Loosestrife – July and August
- Rusty crayfish – June through August
- Zebra mussels – Ice out to ice on
- Mystery snails – Ice out to ice on
- Waterfleas – June through September
- Freshwater jellyfish – Aug. through Sept.
- Hydrilla – May through October
- New Zealand mudsnail – Ice out to ice on

Where to look

- **Beaches**
- **Launches**
- **Marinas**
- **Camps**
- **High use private landings**
- **Inlets**
- **Entire Lake**

Eurasian Water-milfoil



Exotic Eurasian Water-milfoil

- 11 Native Species of Water-milfoil in USA
- 7 Native Species of Water-milfoil in WI
- EWM Native to Asia and Europe
- EWM Arrived in US in 1942 & WI in 1960s

Out Competing Native Plants

- Reproduces by seeds, runners & fragmentation
- Begins to grow at colder temperatures and lower light levels
- Possesses canopy growth pattern
- Not susceptible to native pathogens





EWM

- Early spring – late fall
- Fast grower
- Up to 20 feet tall
- Distance between whorls
- Lower leaflets same length
- 12-21 leaflet pairs
- Pink coloring at tip
- **NO WINTER BUDS**

Non-native



NATIVE





**Eurasia water-
milfoil will form
monoculture
stands. Plants can
be 20 feet tall**



**AUTOFRAGMENTATI
ON**

UGA1624031





Native milfoils form turions



**Northern water-
milfoil on left**

**Eurasian water-
milfoil on right**

Eurasian Water-milfoil
Little Saint Germain Lake
June 30, 2003



Advantageous roots

This sample was found free floating



**Map the milfoil
beds.**

**•Is it an isolated
bed?**

**•Is it over the entire
lake**

2008 – Pilot study

Refined & statewide in 2009

Eurasian water-milfoil Weevil Monitoring *Euhrychiopsis lecontei*

- Weevils are native to the US
- Weevils eat native water-milfoils but prefer EWM
- They may produce several generations in a season
- Weaken EWM growth and vigor, often causing it to collapse in the lake
- Overwinter in undisturbed shorelines.

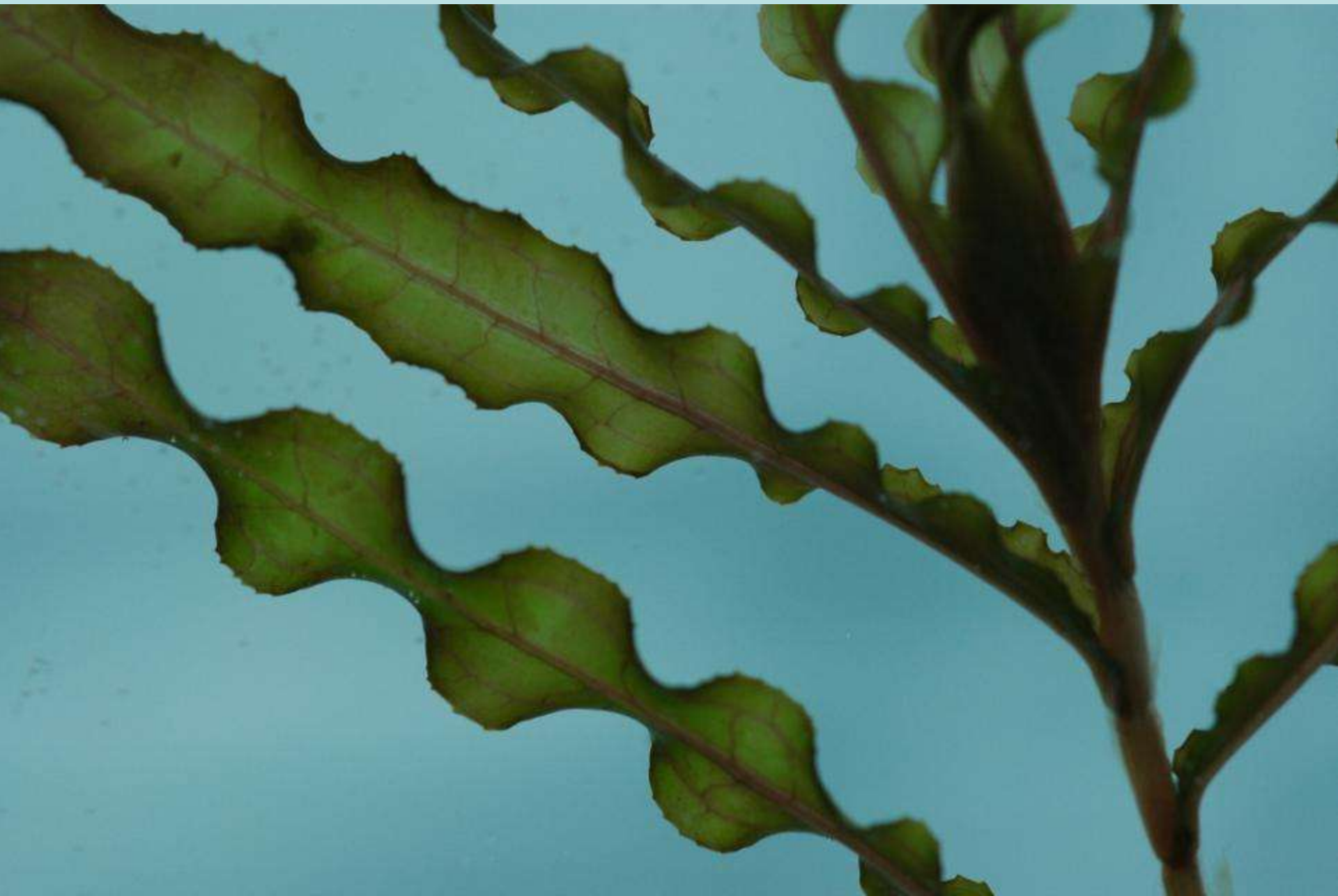






Curly-leaf Pondweed







Curly-leaf seeds and turions



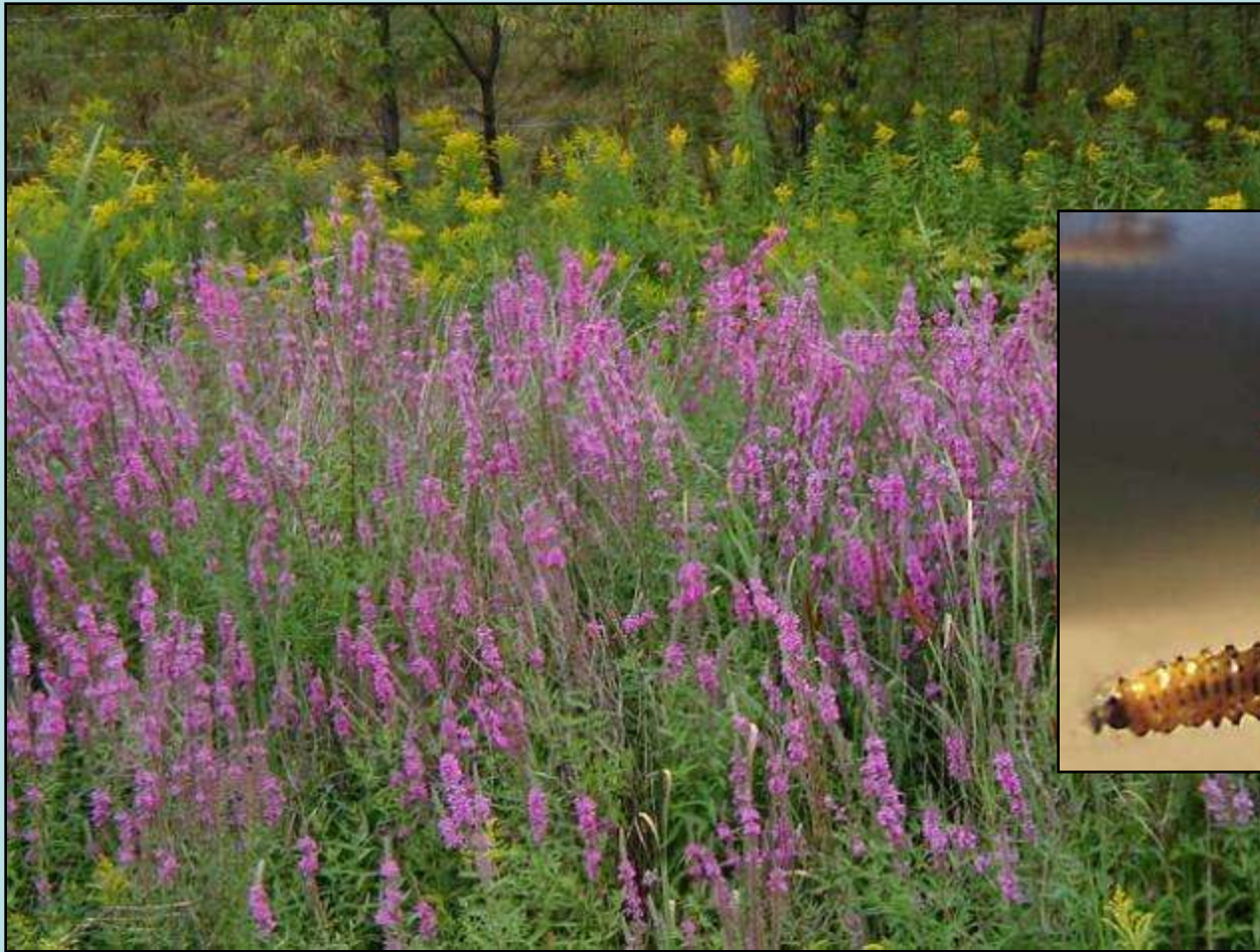


Loosestrife Watch Program

Where to Look

- **Roads**
- **Hiking trails**
- **Lake Shore**
- **Streams**

Raising Galerucella Beetles



DIGGING



PLANTING





GROWING





Host plant roots are dug up and planted in pots. Pots are covered in netting to protect the loosestrife beetles from predators. Beetles are added once the plants reach 2 feet tall.



**Beetle larvae
damage on
host plant**





Rusty Crayfish

Impacts from Rusties

- Destroy native plant beds
- Eat fish eggs and macroinvertebrates
- Outcompete native crayfish
- Hybridize with native crayfish
- Really hard on native snails especially if the lake has the non-native Chinese mystery snails.

Regulations When Collecting Crayfish

- **Fishing License or Small Game License**
- **Cannot have fishing gear**
- **Traps**
 - **Trap dimensions – length and width**
 - **Opening size**
- **Netting**
 - **Net size**
 - **Have to be lifted vertically**





16 8:49 AM



16 6:51 AM



Quagga on the left and zebra mussel on the right.
Note the round hinge edge on the Quagga as
compared to the flat hinge area on the zebra mussel.

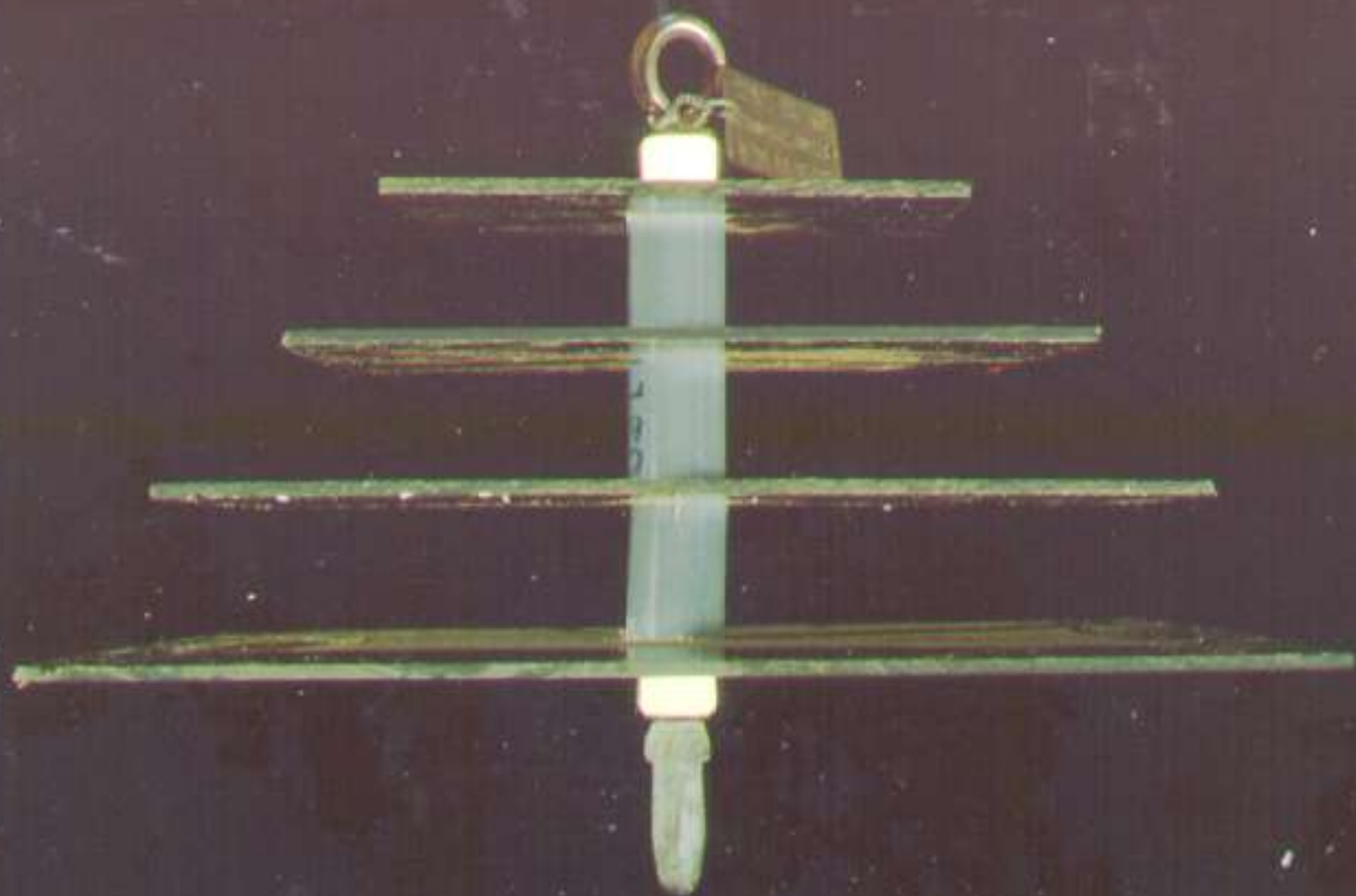


Quagga mussel on the left and zebra mussel on the right.











17 6'97



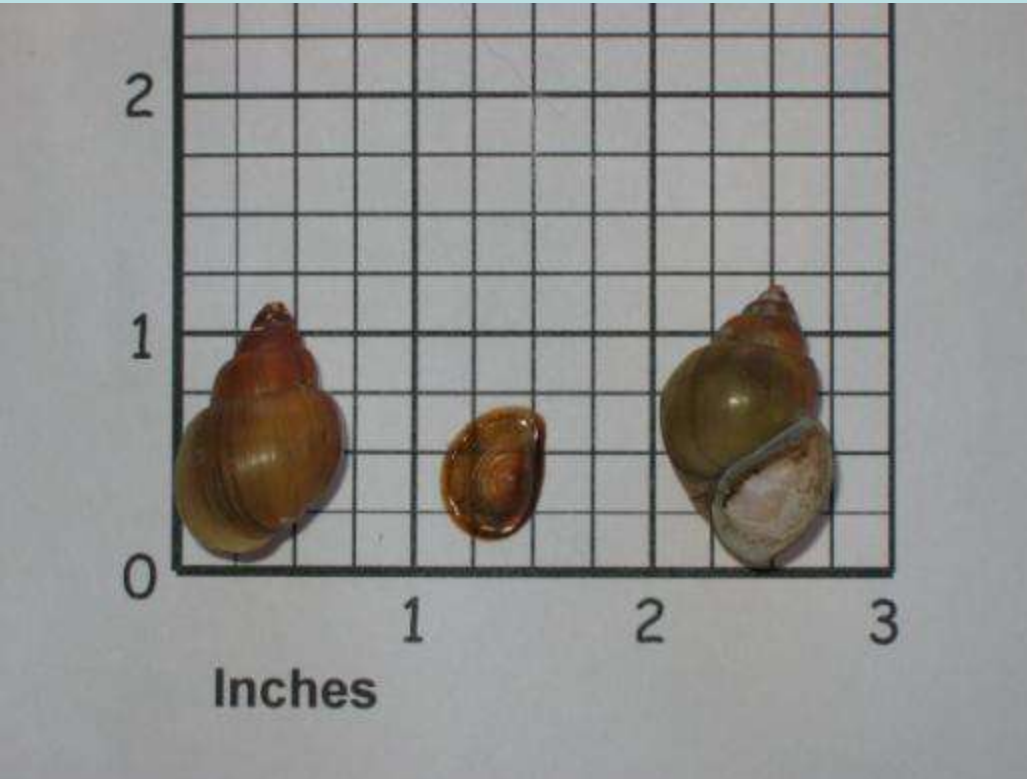


Staff monitoring for zebra mussel veligers

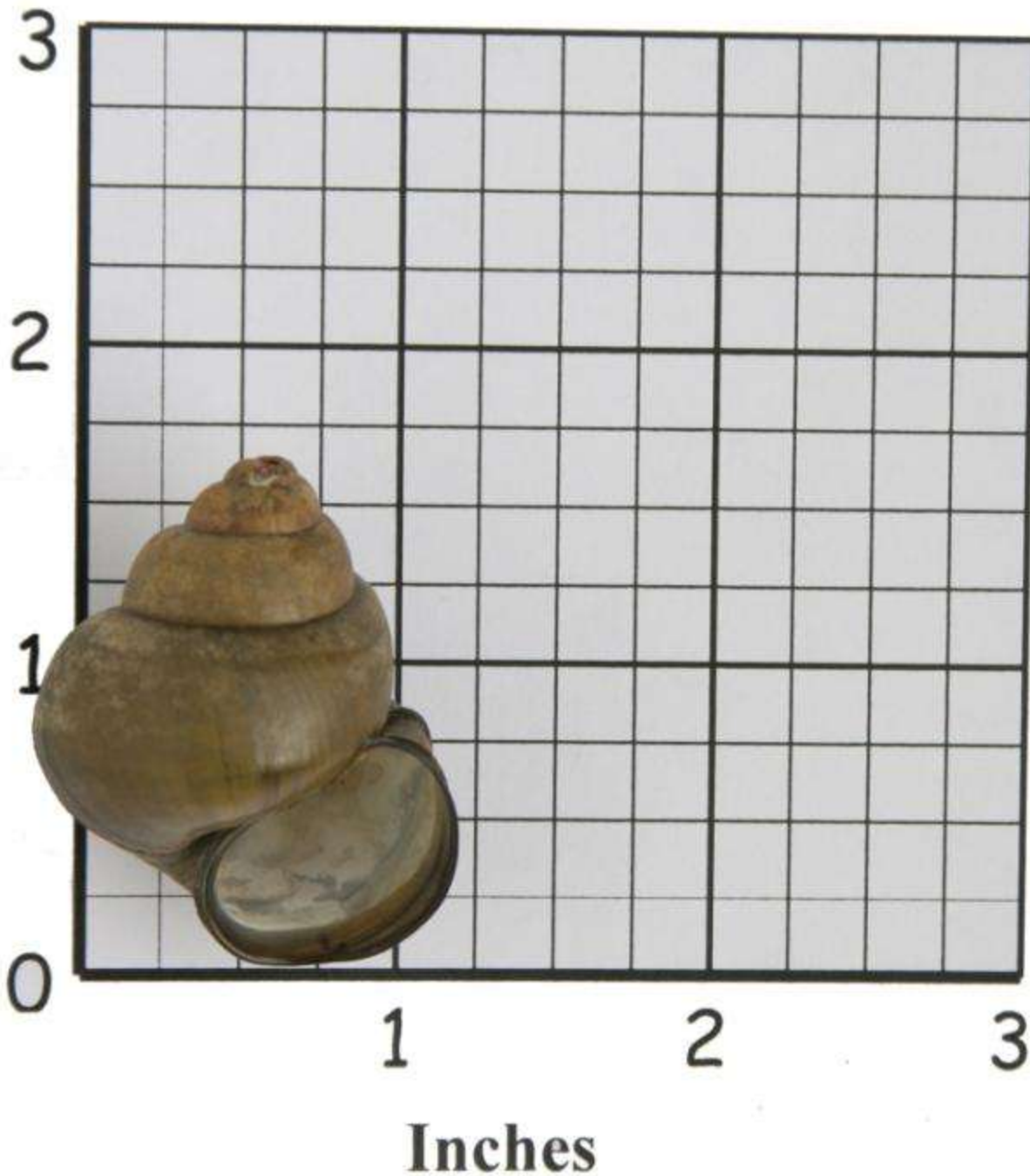
Banded, brown and Chinese mystery snails
(brown mystery snail is native to Wisconsin)



Brown Mystery Snail – Native to Wisconsin



- Adults rarely reach 1.5 inches in height
- No bands
- Have hard operculum



Chinese Mystery Snail

- Adults are over 1.5 inches in height
- No bands
- Have hard operculum



Banded Mystery Snail

- Adults are up to 1.5 inches in height
- bands
- Have hard operculum

Spiny and Fishhook waterfleas





Size comparison of native zooplankton and spiny waterflea

Freshwater jellyfish

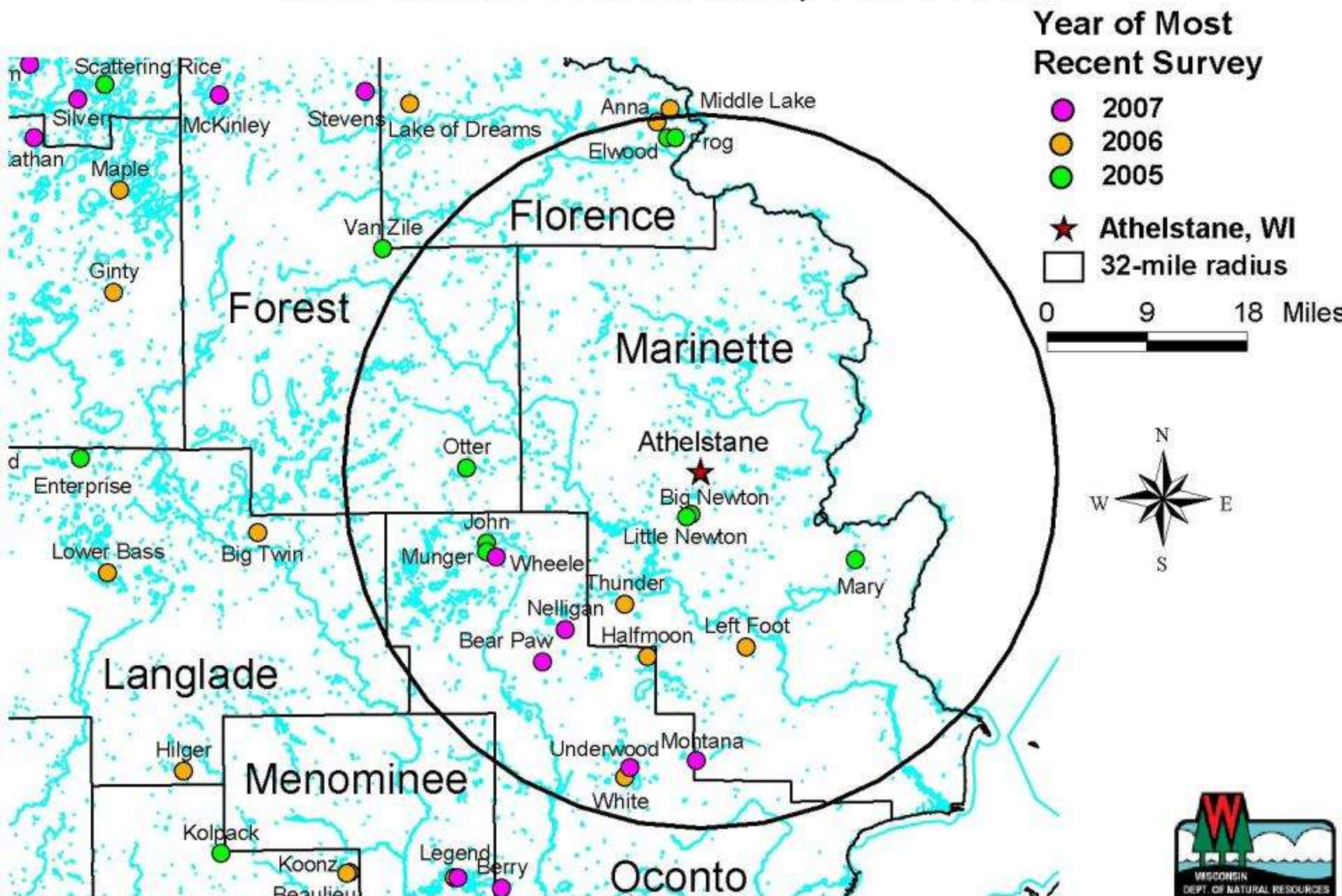


Wisconsin's Success Story!

HYDRILLA VERTICILLATA



Point-Intercept Surveys Northeast Wisconsin, 2005-2007





Hydrilla
Hydrilla verticillata
Photo by Vic Ramey
Copyright 1999 Univ. Florida



Hydrilla tubers
Photo by Alison Fox



Hydrilla verticillata turions
Photo by David Sutton
Copyright 1997 University of Florida



Hydrilla turions showing scale

Hydrilla specimen is a preserved specimen – that is why it is so pale.





Hydrilla showing whorls



Hydrilla above is from the pond
in Marinette 2007



**Marinette Pond
Hydrilla 2006**

**Marinette Pond 2007
(same location)**



Detection in Upper Midwest will be difficult

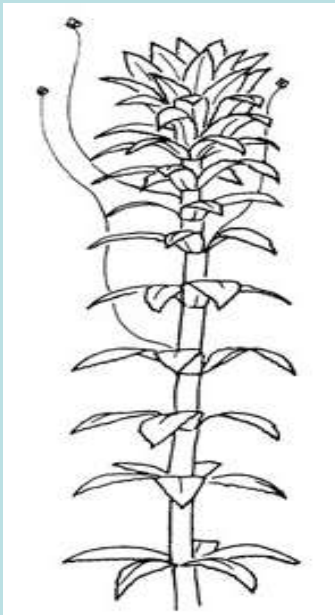
Commonly mistaken for elodea.

Brazilian elodea "egeria" in MN a look alike

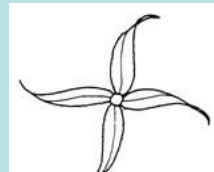
Key is 5 + whorls and spines. Not a vigorous looking plant , initially.

Nut like tubers are only hydrilla

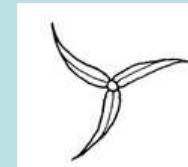
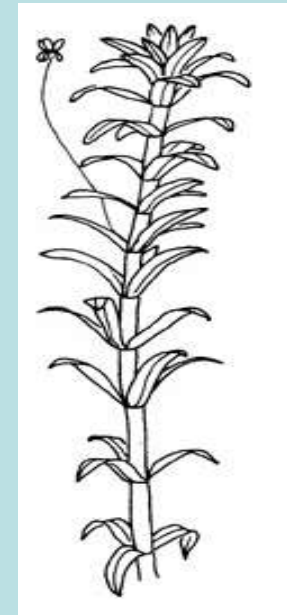
Hydrilla



Egeria



Elodea





Upper left: Hydrilla

Above: Brazilian waterweed (Egeria)

Left: Elodea Canadensis



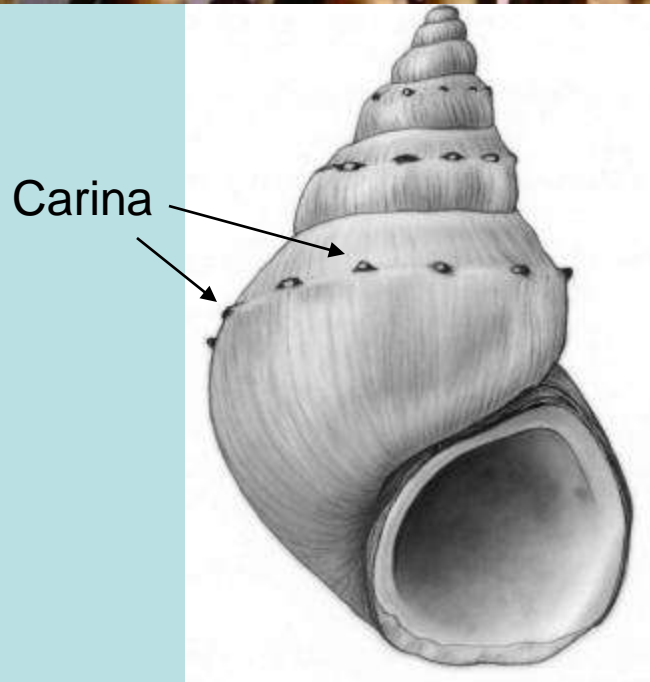
New Zealand mudsnail

- St Louis River harbor (Duluth Superior Harbor) and near Milwaukee
 - Densities up to 500,000 / meter²
 - Asexual reproduction
 - Wide tolerance range
 - Brackish to fresh waters
 - Lives in estuaries, lakes, rivers & streams
 - Tolerates waters with high & low calcium
 - Found on soft and firm substrates
 - Inhabits turbid and clear waters
 - Tolerates water from 32^o to 80^o F
 - Does well in eutrophic waters



New Zealand Mudsnail

- 1/10 to 1/4 inch high
- Operculum present
- Light to dark brown
- Cone shaped shell with 5-6 whorls
- Raised carina (keel) on whorls





**Tailor the
program
for the
volunteers.**


Getting Ready For SWIMS

Wisconsin.gov - Portal Home - Microsoft Internet Explorer provided by Wisconsin DNR

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Address <http://www.wisconsin.gov/state/home/app?COMMAND=gov.wi.state.cpp.command.LoadPortalHome> Go Links



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Government

- Public Services
- Business
- Education
- Wisconsin Facts
- Health & Safety
- Relocation
- Visiting

News and Highlights Thursday, June 4

Flu Information Resource
The State of Wisconsin has a website to provide you with an official resource for information about the current spread of swine flu. Go to [Wisconsin's Pandemic Flu Resource](#)

Wisconsin Arts and Crafts Fairs in June
The Wisconsin Arts Board has an online calendar of the various art and craft fairs held in Wisconsin in June. [View the listing...](#)

State Activates Dead Bird Reporting Hotline to Track West Nile Virus
State health officials announce they have reactivated the statewide, toll-free Dead Bird Reporting Hotline at 1-800-433-1610. [Read more...](#)

Over \$10 Million in Savings on Bids for Road and Bridge Projects
Bids for the second round of road and bridge projects in Wisconsin funded by the American Recovery and Reinvestment Act came in 11.66% lower than expected. [Read more...](#)

Get your... Wisconsin User ID

Featured Site


Wisc.Jobs


www.drugsavings.wi.gov

Online Services

Quick Links

- Employment in Wisconsin
- Business Wizard
- Licensing and Permitting

 Governor Jim Doyle

 Spring Recreation

Getting Ready For SWIMS

Wisconsin Web Access Management System - Microsoft Internet Explorer provided by Wisconsin DNR

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Address <https://on.wisconsin.gov/WAMS/home> Go Links

When access to information or services is restricted, to protect your privacy or the privacy of others, you will be asked to provide a Wisconsin User ID and password. Your Wisconsin User ID and password verifies your identity so that we can provide you with access to your information and services and prevent access by unauthorized individuals.

Please note that only certain types of information will be stored in your user profile, as described in the [User Acceptance Agreement](#). Your user profile will never collect or contain information about you, such as your driving history, tax information, unemployment compensation or vehicle registrations.

[Self-Registration](#) (Request a Wisconsin User ID and Password.)

Self-Registration allows you to create **your personal** Wisconsin Login Account. This is your key to doing secure business with the State of Wisconsin over the Internet. This account belongs to you. It does not belong to your current employer.

Note: You must provide a valid, unique e-mail address to self-register for a Wisconsin Login Account. Correspondence regarding your Wisconsin User ID, password or other information about your Wisconsin Login Account will be sent to this e-mail address.

[Profile Management](#)

Profile Management allows you to change your account information, e-mail address, password and other information.

[Logout](#) (Terminate your account session.)

Getting Ready For SWIMS



Wisconsin Web Access Management System - Microsoft Internet Explorer provided by Wisconsin DNR

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Address <https://on.wisconsin.gov/WAMS/SelfRegController> Go Links >>

 YOU ARE ON WISCONSIN.GOV

State of W I S C O N S I N

[Logout](#) [Help](#) [FAQ](#)

Self-Registration

Welcome to the State of Wisconsin's self-registration process. Self-Registration allows you to create your personal Wisconsin Login Account. This is your key to doing secure business with the State of Wisconsin over the Internet.

OVERVIEW

The self-registration process consists of two parts:

Important: We highly recommend that you complete Parts One and Two at the same time. You **must** complete Part Two within four (4) days of requesting the account or you will have to begin the self-registration process again.

- **Part One: Requesting a Wisconsin User ID and Password**

In Part One, you will submit your contact and account information. You will be sent a

Getting Ready For SWIMS

Wisconsin Web Access Management System - Microsoft Internet Explorer provided by Wisconsin DNR

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Address <https://on.wisconsin.gov/WAMS/SelfRegController> Go Links

[Logout](#) [Help](#) [FAQ](#)

Self-Registration

* Indicates Required Field

Profile Information

First Name	<input type="text"/>	*
Middle Initial	<input type="text"/>	
Last Name	<input type="text"/>	*
Suffix	<input type="text"/> e.g., JR, SR, I, II, III	
E-Mail	<input type="text"/>	* e.g., username@host.domain
Phone #	<input type="text"/> <input type="text"/> <input type="text"/>	

If you provide address information it must be complete and correct. A United States Postal Service data base is used to verify each address.

Home Residence Address

Street	<input type="text"/>
Unit Number	<input type="text"/>
City	<input type="text"/>

Authorize Your Account

- After you have created your user name and password:
 - Email the username to Jen Filbert (Jennifer.Filbert@wisconsin.gov)
 - She will activate your account
- Personal Information??

How Do I find SWIMS??

<http://dnr.wi.gov/lakes/>

Wisconsin Lakes - Wisconsin Department of Natural Resources - Windows Internet Explorer provided by Wisconsin DNR

http://dnr.wi.gov/lakes/

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Wisconsin Lakes

Lake Maps

Lake Information

A to Z Lake List

Search Lakes

Popular Topics

Aquatic Invasive Species

Aquatic Invasives - Lists and Maps

Aquatic Plants

Beaches

Blue-Green Algae

Boat Landings

Citizen Lake Monitoring

Clean Boats, Clean Waters

Fishing

Grants

Maps, Lake Bathymetry

More...

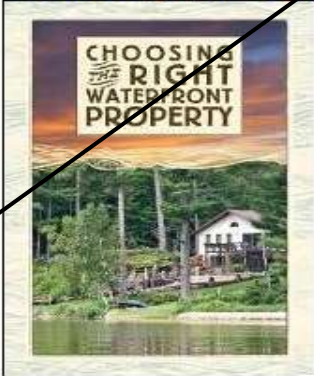
All Topics, A to Z

Wisconsin Lakes

Subscribe to DNR Updates

Features

Choosing the Right Waterfront Property



Excerpt from this new publication:

If you are thinking about buying waterfront property in Wisconsin, this guide is meant for you. A little time invested in learning about waterfront living will pay back sizable dividends in matching your expectations to the realities.

This guide provides:

- Ideas to consider before you start your property search
- Considerations to help you decide on the right lake or river
- Factors to help you choose just the right property

[Choosing the Right Waterfront Property](#) [PDF, 2.63 MB]

Questions about Lakes?

Why is the water level so low in some lakes? What causes the blue

Directions to SWIMS

Citizen Lake Monitoring Network - Wisconsin Department of Natural Resources - Windows Internet Explorer provided by Wisconsin D

http://dnr.wi.gov/lakes/CLMN/

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Wisconsin Lakes


- Citizen Lake Monitoring**
- Monitoring Results**
Reports & Data
- For Volunteers**
Enter Data
How to Submit Data On the Web
Manual - Water Quality
Manual - Aquatic Invasives
Datashets and Forms
Invasives Lists & Maps
Frequently Asked Questions
- Special Projects**
Remote Sensing
Secchi Dip-In
- How to Get Involved**
Volunteer Opportunities

Citizen Lake Monitoring Network

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Features

2009: A Year in Review




Once again, thanks to all volunteers, participation in 2009 was excellent! In 2009, 934 volunteers monitored at over 798 locations!

[Learn More](#)

Did you find an aquatic invasive species?

I found an aquatic invasive species that is new to my lake. [What do I do ?](#)



SWIMS Location:

<http://prodoasjava.dnr.wi.gov/swims/submitData.do>

Welcome to SWIMS - Windows Internet Explorer provided by Wisconsin DNR

http://prodoasjava.dnr.wi.gov/swims/submitData.do

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Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)

Log In

Welcome to SWIMS

The Surface Water Integrated Monitoring System (SWIMS) is a new water division data system designed to ensure that staff and management have access to high quality surface water, sediment and aquatic invasives data in an accessible format.

For more information or to obtain access, please contact:

SWIMS File Managers:

Jennifer Filbert: Lakes
Lisa Helmuth: Rivers, Sediment

Water Division
Wisconsin Department of Natural Resources

SWIMS Intranet
Homepage (DNR staff)

Enter your User ID and Password to sign in

User ID

Password

DNR Staff:

Log in with your Orade 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?](#)

[How to get a Wisconsin User ID and Password](#)

SWIMS Data Entry

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Address http://prodoasjava.dnr.wi.gov/swims/j_security_check Go Links

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Surface Water Integrated Monitoring System (SWIMS)





Help | Log Off

REPORTS, MAPS, DOCUMENTS SUBMIT DATA MY PROJECTS

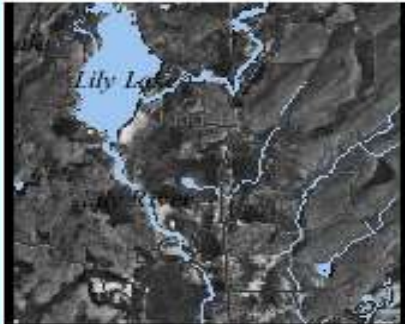
Browse Reports, Maps and Document

- ▶ 2010 Proposed Watershed Monitoring
- ▶ Aquatic Invasive Species Grants
- ▶ Aquatic Invasives (AIS)
- ▶ Baseline Streams Water Quality (Non LTT)
- ▶ Citizen Based Stream Monitoring
- ▶ Citizen Lake Monitoring Network
- ▶ Clean Boats, Clean Waters
- ▶ Critical Habitat Designations
- ▶ Ephemeral Ponds Monitoring
- ▶ Field Procedures and Help Guides
- ▶ Fisheries Mgmt Projects
- ▶ Great Lakes
- ▶ Hydrologic Status Project
- ▶ Impaired Waters (303d, TMDL)

Explore SWIMS

 <p>Aquatic Invasive Species</p>	 <p>Critical Habitat Areas</p>	 <p>TMDL and 303(d) Impaired Water Project</p>
 <p>Citizen Lake Monitoring</p>	 <p>Citizen Based Stream Monitoring Pilot Project</p>	 <p>Targeted Runoff Urban Construction Grants</p>

Interactive Maps



Explore interactive maps that feature data from SWIMS.

- ➔ More Information
- ➔ Go the Surface Water Viewer

SWIMS Data Entry

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Address <http://prodoasjava.dnr.wi.gov/swims/submitData.do> Go Links >>

Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS)

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REPORTS, MAPS, DOCUMENTS **SUBMIT DATA** MY PROJECTS

Submit Data

Monitoring Data

View List View what you've already entered. To edit data, or to add field results to lab samples that have come in, use the "pencil icon". There is also an option to "Add New Monitoring Data".

Add New Add new monitoring data. This option will add a new "Fieldwork Event" (date/time, station, etc.), which you can then add field results to.



Peshigo River

Quick Links

Helpful Hints

SWIMS Data Entry AIS Data

Enter Monitoring Data - Microsoft Internet Explorer provided by Wisconsin DNR

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Address http://prodoasjava.dnr.wi.gov/swims/createDynamicForm.do Go

Surface Water Integrated Monitoring System (SWIMS)

Help | Log Off

REPORTS, MAPS, DOCUMENTS SUBMIT DATA MY PROJECTS

Home -> Enter Monitoring Data
Fields denoted with an asterisk (*) are REQUIRED.

Project *	Clean Boats, Clean Waters on Lake Wingra	Selected Project:	Clean Boats, Clean Waters on Lake Wingra
Data Collectors *	Citizen Aquatic Invasives Monitoring - Lake Wingra	Selected Collectors:	Carry Lupulina
Station *	10017820, Lake Wingra - Lake Wingra Access	Selected Station:	Lake Wingra - Lake Wingra Access

Show Map

Start Date * Select Date

Time

Form * Watercraft Inspection Report (Revised 6/2008)

Optional Fields

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

End Date Select Date

Time

Comments

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

Next

SWIMS Data Entry

AIS Data

Fieldwork Event and Result Form - Microsoft Internet Explorer provided by Wisconsin DNR

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Address <http://prodoasjava.dnr.wi.gov/swims/generateDynamicFormItems.do?fieldworkId=29561686&sampleHeaderId=29561688&f> Go Links >>

Surface Water Integrated Monitoring System (SWIMS) Help | Log Off

REPORTS, MAPS, DOCUMENTS SUBMIT DATA MY PROJECTS

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:** Citizen Aquatic Invasives Monitoring - Lake Wingra
Start Date Time: 06/04/2009
Station: 10001210 - Lake Wingra Save and Edit Header

Aquatic Invasives Presence/Absence Report (03/09)

	Parameter	Result	Units	Method
Time Spent	Total Paid Hours Spent	<input type="text"/>	HOURS	
	Total Volunteer Hours Spent	<input type="text"/>	HOURS	
Did you monitor...	In May?	No <input type="button" value="v"/>		
	In June?	Yes <input type="button" value="v"/>		
	In July?	<input type="button" value="v"/>		
	In August?	<input type="button" value="v"/>		
	All Beaches and Boat Landings?	Frequently/Yes <input type="button" value="v"/>		
	Perimeter of Whole Lake?	Not Often/No <input type="button" value="v"/>		
	Docks or piers?	Some of the Time <input type="button" value="v"/>		
	Other locations	<input type="text"/>		
Did you	Walk along the shoreline?	<input type="button" value="v"/>		

SWIMS Data Entry

AIS Data

Fieldwork Event and Result Form - Microsoft Internet Explorer provided by Wisconsin DNR

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Recycle Bin Mail Print Word Pad Folder Favorites My Recent Places People

Address <http://prodoasjava.dnr.wi.gov/swims/generateDynamicFormItems.do?fieldworkId=29561686&sampleHeaderId=29561688&f> Go Links >>

Did you	Walk along the shoreline?	<input type="text"/>	
	Observe entire shallow water area?	<input type="text"/>	
	Use rake to extract plant samples?	<input type="text"/>	
	Check underwater solid surfaces?	<input type="text"/>	
	Other ways of observing	<input type="text"/>	
Did you find	Banded Mystery Snail?	Didn't Look For <input type="text"/>	
	Chinese Mystery Snail?	No <input type="text"/>	
	Curly-leaf Pondweed?	Yes <input type="text"/>	
	Eurasian Water-Milfoil?	<input type="text"/>	
	Fishhook Waterflea?	<input type="text"/>	
	Freshwater Jellyfish?	<input type="text"/>	
	Purple Loosestrife?	<input type="text"/>	
	Rusty Crayfish?	<input type="text"/>	
	Spiny Waterflea?	<input type="text"/>	
	Zebra Mussels?	<input type="text"/>	
	Other?	<input type="text"/>	
	If yes, list other invasives found	<input type="text"/>	

Save and Enter Another Date Save and Return to List

SWIMS Data Entry AIS Data

Welcome to SWIMS - Microsoft Internet Explorer provided by Wisconsin DNR

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Print Mail Stop Send To Links

Address <http://prodoasjava.dnr.wi.gov/swims/postDynamicFormItems.do> Go

Wisconsin Department of Natural Resources

Surface Water Integrated Monitoring System (SWIMS) Help | Log Off

REPORTS, MAPS, DOCUMENTS **SUBMIT DATA** MY PROJECTS

Monitoring Data you recently entered, updated, or helped collect: Previous 1-9 of 9 Next Start Date Desc **Add Monitoring Data**

		Fieldwork Start	Project	Data Collectors	Status	Station ID	Station Name
		06/04/2009	Citizen Aquatic Invasives Monitoring - Lake Wingra	Carry Lupulina	COMPLETE	10001210	Lake Wingra
		04/02/2009 01:00 PM	Clean Boats, Clean Waters on Lake Wingra	Carry Lupulina	COMPLETE	10017820	Lake Wingra - Lake Wingra Access
		04/01/2009	Citizen Aquatic Invasives Monitoring - Lake Wingra	Carry Lupulina	COMPLETE	10001210	Lake Wingra
			Clean Boats, Clean	Carry			Lake Wingra -

Changes on the web and future invasives

- Jen and the data management crew are always trying to make things easier.
 - Easier reports
 - Easier mapping
 - Easier distribution lists

This message was sent with Low importance.

From: Fibert, Jennifer M - DNR
 To: Herman, Laura J - DNR
 Cc:
 Subject: FW: AIS lists and detail pages

Sent: Wed 03/17/2010 11:05 AM

Wisconsin Lakes

Lake Information

A to Z Lake List
 Search Lakes

Shawano Lake - Banded Mystery Snails

Details of Initial Discovery

Year Found	2008
Found By	BRENDA NORDIN Wisconsin DNR



Banded Mystery Snails on Shawano Lake

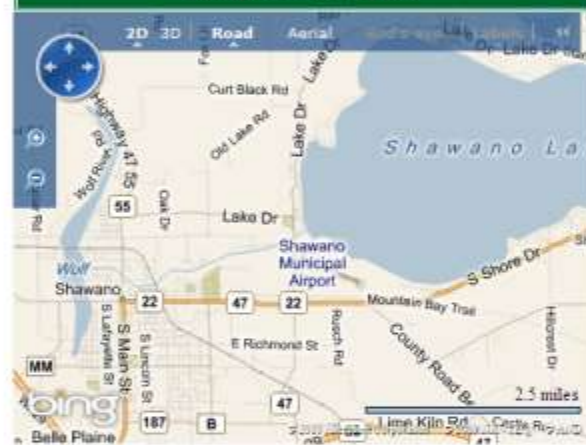


Banded Mystery Snails on Shawano Lake (2)



BANDED MYSTERY SNAILS ON SHAWANO LAKE (3)

About Shawano Lake



Waterbody Shawano Lake
Waterbody ID Code 322800
County Shawano
Size 6215.37 ACRES
Maximum Depth 42 FEET

[More Details >>](#)

Species Profile





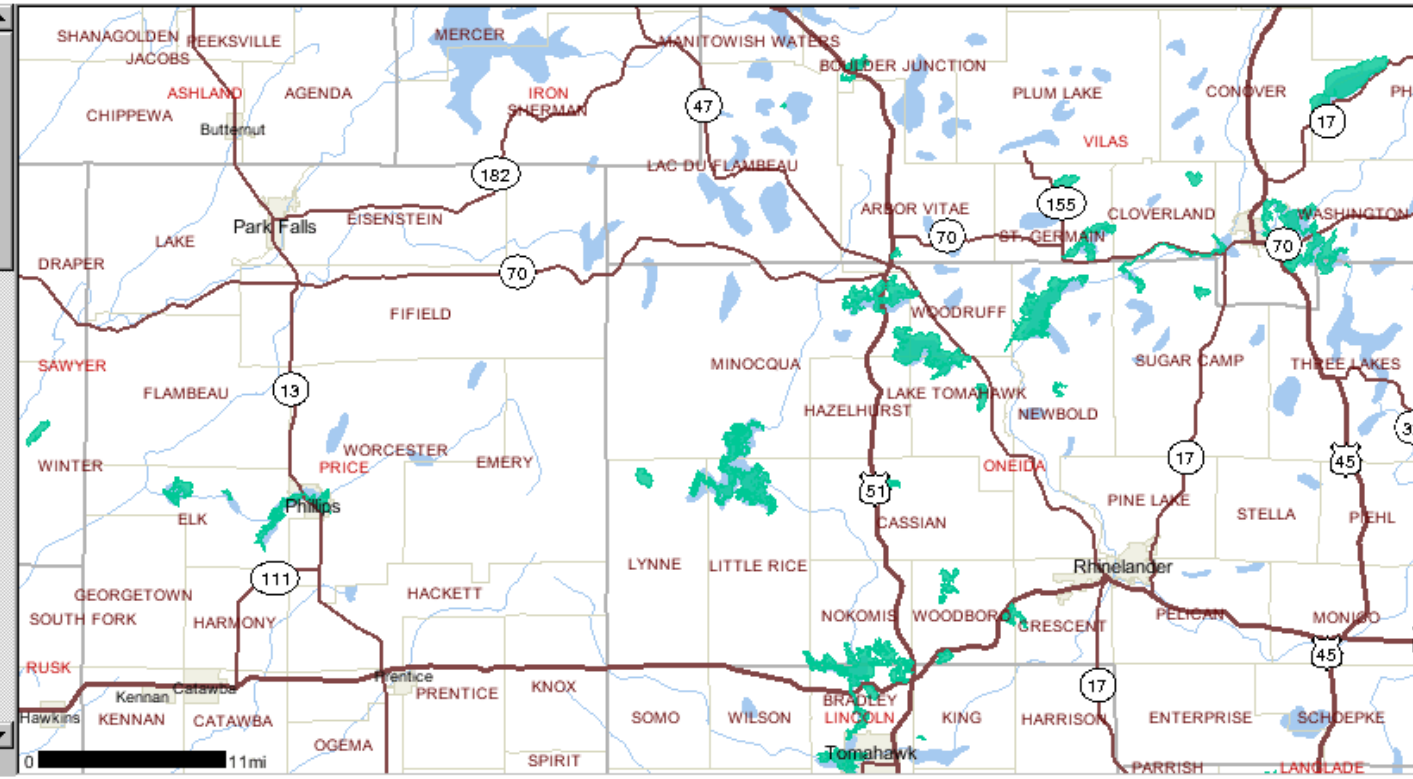
Surface Water Data Viewer

Layers · Legend · Find Location · Themes · Designated Waters · Select · Help · Print

Full State Zoom In Zoom Out Move Zoom Last Zoom to... Identify Download Advanced

Map Layers

- Inland Water Resources
- Federal Hydrologic Units (HUCs)
- Wisconsin Buffer Initiative Watersheds
- Watersheds
- Great Lakes & Mississippi Basins
- DNR Water Mgmt Units
- Open Water
- Rivers and Streams
- Waterbody Details
- Dam and Floodplain Program
- Fisheries Management Waters
- Aquatic Invasives
 - Eurasian Water-Milfoil
 - Milfoil Hybrid
 - Zebra Mussels
 - Reed Canary Grass Infestations
 - Curly Leaf Pondweed
 - Rusty Crayfish
 - Banded Mystery Snail
 - Chinese Mystery Snail
 - Japanese Mystery Snail
 - Freshwater Jellyfish
 - Rainbow Smelt



Scale: 1:617,153 Quick View: Select a location Selected Map Tool: Zoom In Zoom In



Wisconsin Lakes

Lake Maps

Lake Information

A to Z Lake List

Search Lakes

Lake Trails

Popular Topics

Aquatic Invasive Species

Aquatic Invasives - Lists and Maps

Aquatic Plants

Beaches

Blue-Green Algae

Boat Landings

Citizen Lake Monitoring

Clean Boats, Clean Waters

Critical Habitat Designations

Fishing

Maps, Lake Bathymetry

Wetlands

More...

Lakes and Rivers With Eurasian Water-Milfoil

View [Statewide](#) Data or Select Another Location:

Statewide

Total Locations: 564

Total Lakes and Rivers: 540 *

[By County](#) | [By Waterbody](#) | [By Species](#) | [By Year](#) | [Open In Excel](#)

Waterbody	Waterbody ID Code (WBIC)	County	Year First Found	Details
Alaska Lake, East	94200	Kewaunee	1993	Details
Alaska Lake, West	94300	Kewaunee	1993	Details
Alder Pond (T10N, R7E, S34)	967300	Columbia	1973	Details
Allenton Marsh	3000225	Washington	1985	Details
Archibald Lake	417400	Oconto	2009	Details
Arkdale Lake (Millpond)	1374300	Adams	1994	Details
Army Lake (East Troy)	740200	Walworth	1995	Details
Arrowhead Lake	1541500	Vilas	2005	Details
Arrowhead Lake (Manchester)	1377700	Adams	1992	Details
Ashippun Lake	854300	Waukesha	1977	Details
Ashippun River at Monterey Millpond	854100	Waukesha	1977	Details
Auburn Lake	42400	Fond du Lac	2008	Details

Data entry pilot (2011?)

- I-Phone & Palm pilot technology

Pros

- Uses the infrastructure we have set up in SWIMS (security, etc.)
- Can avoid programming for specific brands of phones
- Would automatically work for all of our data entry forms (Secchi, AIS, River monitoring, Loons, etc).
- Cost to develop would be minimal

Cons

- Would require user to have
- phone/PDA with a Data Plan & Access to a 3G network or Wi-Fi
 - 3G coverage will be more widely available & more folks will have the phones by the time we have pilot complete
 - Sometimes a 3G network would NOT be accessible @ a landing. Inspector would have to resort to paper/entering the data later
 - A phone & data plan costs money.

Any Interest?

Newer Invasives to Wisconsin

- Red Swamp Crayfish
- Brazilian Waterweed
- Yellow Floating Heart

Red Swamp Crayfish

- Dark red in color (a genetic mutation may turn the body and/or claws blue)
- Raised bright red spots covering the body and claws
- Black wedge-shaped stripe on the top of the abdomen
- Vary in length from 2 to 5 inches.
- Prefer marshes, swamps, ponds and slow moving rivers and streams, but have become established in lakes. They are tolerant of fluctuating water levels and can survive long dry spells by remaining in burrows or crawling over land to other water sources.
- Mate in autumn and lay eggs in spring to early summer.
- The number of eggs varies with the size of the female, (as many as 650 eggs at a time).
- Distribution in Wisconsin in 2009 - ponds in German Town, Washington Co. and City of Kenosha, Kenosha Co.



Brazilian Waterweed

- Stems can reach 15 feet in length.
- Leaves arranged in whorls of 4-6 leaves. Leaves are $\frac{3}{4}$ - 2 inches long & serrated.
- Leaves are attached directly to the stem. and often curve downwards.
- Adventitious roots are freely produced on the stem.
- Plant Reproduces by stolons & stem fragments.
- Plant forms dense mats. It can out compete Eurasian water milfoil.

Look-alikes: hydrilla (AIS) and our native waterweeds (Elodea canadensis & Elodea nuttallii)

Brazilian waterweed, a top selling aquarium and pond plant, is often sold under the name Anacharis and is also known as Brazilian elodea or "oxygenating plant". It is believed to have been introduced in the United States by the aquarium trade.

Found in one pond in Portage Co.



Yellow Floating-Heart

- Circular to slightly heart shaped floating leaves are 1-6" in diameter. Leaf edges are slight wavy or scalloped
- Leaves are green to yellow-green above, and are often purple underside
- Yellow flowers arise above the water surface
- The fruit is a ½-1" beaked capsule that contains many flat, seeds with winged margins (which help with floatation and attachment to avian vectors)
- Prefers slow moving rivers, lakes, reservoirs and ponds, but can also grow in damp mud, swamps and wetlands.
- Look-a-likes - water lilies, Spadderdock and Watershield
- Yellow-floating heart is a popular water garden plant. In areas where it has been introduced, it has often become the dominant plant species.
- Yellow-floating heart is very difficult to control due to its ability to form a new plant from rhizomes, stolons, separated leaves, or seeds.

