



BAY MILLS INDIAN COMMUNITY

# BIOLOGICAL SERVICES NEWSLETTER

AUGUST 2016

ISSUE 3



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## IN THE NEWS: New Zealand Mudsnail Spreads to AuSable River in Grayling, MI

The New Zealand Mudsnail (*Potamopyrgus antipodarum*) has spread to a second location in lower Michigan. The invasive snail was first observed in the Pere Marquette River near Baldwin, MI in August 2015. In June 2016 it was also observed in the AuSable River near Grayling, MI over 100 miles away. The snail was discovered by Mark Luttenton, a professor and aquatic biologist at Grand Valley State University during regular macroinvertebrate surveys.

The snail is only 1/8in long and eats other aquatic insects out of house-and-home. They are consumed by fish, but are so hardy they often survive digestion— giving no nutrients to their predators. New Zealand Mudsnails have reached stream densities of up to a half-million snails per square yard. They can be disastrous for trout streams.

New Zealand Mudsnails are easily transported on clothing and equipment of anglers and boaters. Always CLEAN, DRAIN, and DRY your gear. For more info or to report an invasive species go to <http://www.misin.msu.edu/facts/>



Photo by M. El Damir  
Above: New Zealand Mudsnails compared to a penny.

**For questions about fishing/hunting licenses, current regulations, or if you wish to report poaching, please contact Conservation Officers at 906-248-8640.**

# HAZARDOUS HOUSEHOLD WASTE COLLECTION

These materials can be harmful and should never go into your community's regular trash. One should **NEVER** place these hazardous household wastes (HHW) down a sink or storm drain - they could contaminate groundwater or even Lake Superior. The collection is meant for Bay Mills members. Please drop off HHW at the Maintenance Building near the dumpsters between 8:00am and 4:00pm.

The next collection will be sometime in **mid-October, 2016**. Keep an eye out for our postings with a finalized date.

Please do not mix chemicals/solutions. Let's work together to have a safe and healthy community and environment!

This collection is made possible by the Great Lakes Restoration Initiative. If you have questions, please contact Aubrey Maccoux-LeDuc at Biological Services at 906-248-8652, [amaccoux-leduc@baymills.org](mailto:amaccoux-leduc@baymills.org).



Photo by Biological Services

Above: Collected hazardous waste before getting shipped to a specially-designed hazardous waste landfill.

## DROP-OFF YOUR OLD:

- Aerosol cans
- Antifreeze
- Batteries
- Battery acids
- Cleaners
- Detergents
- Degreasers
- Drain cleaners
- Fertilizers
- Gasoline & Oil
- Grease
- Inks
- Light bulbs
- Mercury
- Paint
- Paint thinner
- Pesticides
- Propane
- Solvents
- Thermometers
- Wax



# COMMUNITY BIKE CHECKOUT PROGRAM



The community bike program is a bicycle check-out program much like a library. It is open to all members of the community and free of charge! This program, which started as a partnership between the BMIC Biological Services Department and the Mukwa Health and Fitness Center, began in 2012 with the goal of reducing greenhouse gas emissions in the community.

Motorized vehicles are the dominant mode of transportation at Bay Mills and are the leading cause of air pollution. Vehicles emit hydrocarbons (HC), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and other hazardous air pollutants. Miles ridden on bicycles are tracked by a computer on the bikes and then converted to kilograms of carbon dioxide reduced (kg CO<sub>2</sub>).



Above: Bicycles available for check-out

If you wish to check-out a bike, stop by the Mukwa Health and Fitness Center, fill out a brief contact form, and ride away. Bikes may be checked-out for one month. After that month, if bikes are still available, you may re-checkout a bike immediately. All bikes must be returned by end of October for winter storage and maintenance.

Remember, these bikes are for the whole community to share. Please return them to Mukwa Fitness Center when your month is up. Miigwech!



# FEATURED INVASIVE SPECIES: European Frog-Bit



European Frog-Bit is a small floating plant that resembles a small water lily. It has small, three-petaled white flowers. Its leaves are kidney-shaped and grow in rosettes on the water surface. It also has roots that hang down in the water column but usually don't touch the bottom. Frog-Bit grows very rapidly and forms thick floating mats impeding watercraft and fish movement. It has been found as close as Raber Bay. If European Frog-Bit reaches Back Bay it could wipe out the wild rice population and prevent growth of future rice plantings.

## Origin

European Frog-Bit originates from Europe and parts of Asia. In 1932 it was brought purposely to Ottawa, Canada to be used as a commercial ornamental plant; in 1939 it spread into the Rideau Canal.

## Why it's a Problem

Frog-bit grows very thick, enough to stop boat traffic by tangling propellers. It also impedes fish movement and diving ducks due to the lack of space between plants.

## How it Spreads

Frog-bit spreads by becoming attached to boats,

trailers, or other equipment. Currents can also potentially move the plant around, as it's rarely rooted in the ground.

## Ways to Control Frog-Bit

Hand pulling and harvesting is the best method to help remove frog-bit. Preventing further spread is the best strategy for this plant.

## What You Can Do to Help

- Avoid areas that are infested or slow your vessel down when travelling near European frog-bit infestations. The wake can dislodge the plants and allowing them to spread to new areas.
- Always inspect your boat, trailer, and equipment after removing it from the water. Make sure to remove all plants, animals, and mud before moving to a new water body.
- Always CLEAN debris from your equipment, DRAIN the water, and DRY your equipment when leaving the lake to prevent spreading.

## How to identify European Frog-bit

- It can float free or put down roots 50cm long.
- It produces a single white flower 2cm wide of three rounded petals and a yellow center.
- The leaves are 2.5-5cm wide and are heart-shaped. They form a rosette up to 6cm wide.
- The leaf bottoms are a purplish-red with a spongy coating down the middle vein of the leaf that allows it to float on water.
- For more information on identifying this plant visit [http://www.seagrant.umn.edu/exotics/frogbit\\_card.pdf](http://www.seagrant.umn.edu/exotics/frogbit_card.pdf)



Above: Mats of frog-bit choke a dock in Raber Bay Raber, MI

Lower left: A single frog-bit plant when separated from the mat.

Lower right: BMIC staff remove and weigh frog-bit. The plants are bagged (never composted) and sent to a landfill to prevent them from contaminating other waters.

# COMMUNITY OUTREACH EVENTS

## Adopt-a-Beach Program Kicks Off its First Summer

BMIC Biological Services would like to extend a big miigwech to our beach clean-up volunteers! These folks have taken time out of their summer on numerous occasions to pick up trash on the shore.

Spectacle Lake shoreline= 11 bags

Superior/St Mary's beaches= 15 bags

Signs will be posted along each segment recognizing these volunteers.

Commonly found trash includes beverage containers, cigarette butts, plastic bags, and fireworks. If you visit our beautiful beaches, please remember to pack it in and pack it out.



Above: Volunteers clean-up beach after 4th of July.



## Engineers Day Booth

Biological Services staff attended Engineers Day again this summer. In addition to talking with hundreds of local citizens and visitors, the staff also handed out informational brochures concerning invasive species and brought in native aquatic macroinvertebrates. These critters were a huge hit, especially with kids, and allowed many to see an important part of nature which is often overlooked.

They plan to attend next year in order to continue educating the public about the local watersheds, the work they do, and how citizens can protect their local aquatic resources.



Above: Bay Mills Boys & Girls Club science campers joined the staff for a day of exploration!



Above: BMIC Biological Services technician points out some of the cooler macroinvertebrates.

## Waiskey River Watershed Management Plan

The Waiskey River Watershed Management Committee was created in 2015, with the goal of protecting and restoring the ecological integrity of the Waiskey River. Interested citizens are encouraged and welcomed to attend meetings and offer advice and knowledge as BMIC Biological Services writes the Management Plan in collaboration with numerous partners. The next meeting date is TBD, but contact Aubrey Maccoux-LeDuc or Brian Wesolek for meeting dates and more information [amacoux-leduc@baymills.org](mailto:amacoux-leduc@baymills.org) or [bwesolek@baymills.org](mailto:bwesolek@baymills.org) (906) 248 6852.



# GREAT LAKES FISHERIES PROGRAM UPDATE

Fisheries staff conducted several types of surveys on Lake Superior and Lake Huron this season.

- Pre-recruit Lake Whitefish surveys (annual on Superior & Huron): The goal is to monitor trends in abundance of sub-legal (< 17 inch) Lake Whitefish, evaluate recruitment, and predict contributions of year classes to future harvests.
- Lake Whitefish assessment project (Superior): Data are used for evaluating abundance and population characteristics of Lake Whitefish in each management unit of the Great Lakes.
- Annual spring Lake Trout assessment (Superior): Biological information on Lake Trout is used for harvest limit estimates. Diet analysis is also performed for several types of Lake Trout.
- Waishkey Bay fish community assessment project (annual): Rough fish (Common Carp, suckers, Bullhead), sunfish, Rock Bass, Walleye,

Yellow Perch, Northern Pike, and Smallmouth Bass are typically caught in this assessment.

- Whitefish Bay & Upper St. Mary's River assessments (three surveys per year).

In addition to the annual assessments, the fisheries staff conducted two other surveys this season:

- Lake Sturgeon population assessment: staff assisted the USFWS with a population survey in Whitefish Bay.
- Juvenile Coregonid assessment: Using beach seines, the staff sampled shallow water in hopes of capturing juvenile Coregonid species (Lake Whitefish, Round Whitefish, Lake Herring/Cisco and others) to estimate the abundance of these species. They sampled at various sites within Whitefish Bay and west of Whitefish Point.



Above left to right: BMIC Biological Services staff use a beach seining method to assess the populations of minnow and juvenile fish in the shallow water, especially whitefish and salmonids. A staff member gently holds a Sturgeon during population assessment; length and weight measurements were collected and a tag was implanted in the fish. Staff set nets in Lake Superior to be left out overnight for a Lake Trout population assessment.

Bay Mills fisheries staff also monitor commercial and subsistence fishing by its members. Mandatory catch reports for both activities are collected and tracked by fisheries staff. Catches of commercial and subsistence fishers are sampled by staff at landings or onboard fishing boats. These data are used to monitor fish populations and make informed management decisions.

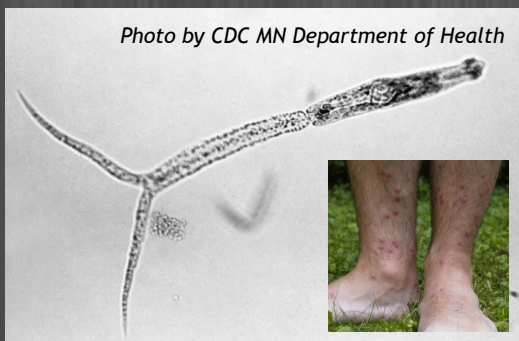
If you have questions about the fisheries program, please contact the program manager, Paul Ripple at (906) 248-8649, [pripple@baymills.org](mailto:pripple@baymills.org).

# WATER QUALITY PROGRAM UPDATE

## Beach Monitoring: I've Got the Itch...Swimmer's Itch!!

*E. coli* is a bacteria often blamed for swimmer's itch, which is caused by a very different organism. Swimmer's itch is an unfortunate, yet common affliction that bathers face during the summer swimming season. Swimmer's itch is an irritating condition caused by a microscopic, parasitic flatworm that results in itchy red bumps on the skin. The flatworms that cause the condition use snails and waterfowl as hosts during their lifecycle. Humans get swimmer's itch when they come in contact with water that is infested with flatworm larvae. The flatworms burrow into the skin causing itchy red bumps that last for about a

Right: The flatworm larvae responsible for swimmer's itch with photo of skin irritation.



week. Humans are not the correct host for these flatworms, and they cause no other harm to us other than the irritating itching. The best way to prevent a swimmer's itch infection is to vigorously towel dry immediately after swimming. One could also avoid beaches that are frequented by waterfowl or have large numbers of snails. Bay Mills Biological Services Department does weekly beach testing for *E. coli* bacteria, but it cannot test for swimmer's itch.

*E. coli* bacteria in this area are often due to bird or other wildlife fecal inputs. The bacteria can cause skin and eye irritation or cause infections in cuts or wounds already present. If the source of bacteria is of human origin, there may be an increased risk due to more harmful strains of *E. coli*, other bacteria, parasites, or viruses. Unfortunately, there is no test for swimmer's itch; the only way to know if water is infested is to see the effects of the flatworm on skin.

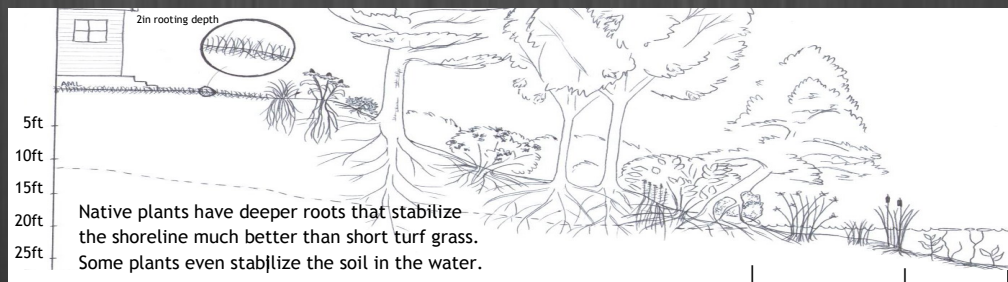
For more information, contact Brian Wesolek at Biological Services 906-248-8648.

## Homeowners Tip: Lawns and Shorelines Don't Mix

Riparian areas are what link our water and land. They are the reason many plants and animals we depend on even exist. Many people remove vegetation along their shoreline to create a swimming area, beach, scenic road, or open the view. But removing that vegetation comes at a cost. Removal of vegetation can lead to colonization by invasive species and degrading habitat for wildlife. It can also lead to erosion and decreased water quality.

Why a Buffer Makes for a Better Lake or River

- Reduces runoff velocity
- Shade trees cool water, keeping fish healthier
- Reduces shoreline erosion
- Provides habitat for small fish, amphibians, songbirds, nesting waterfowl, & insects



- Reduces and filters runoff containing fertilizers
- Improves water quality

What Makes a Good Buffer?

**SPACE:** More is more. 35ft is the standard distance from water, but even a narrow vegetated buffer is better than none. (35ft is often inadequate for large water bodies experiencing big storms.)

**NATIVE PLANTS:** Mowed lawn only roots 2-3in deep, but many native plants, shrubs and trees have deep roots that stabilize the shoreline and even sand dunes.



# INLAND FISH AND WILDLIFE PROGRAM UPDATE



Photo by Biological Services



Photo by Biological Services



Photo by Biological Services

Top to bottom: Walleye are carefully tagged with a jaw tag in Monocle Lake; a newt caught in a stream net, staff measure a Northern Pike.

Inland fish & wildlife staff have been busy with the program's first summer of field work! Our staff has completed the following assessments:

- Monitoring fish movement in streams of Whitefish Bay
- Monocle Lake Walleye population estimate
- Fish inventories on Spectacle Lake, South Pond, and North Pond
- Waterfowl surveys on Back Bay and Spectacle Lake
- Trail camera surveys

The Monocle Lake Walleye population was estimated to be just under 1 fish/acre. The two dominant species captured were Walleye and White Sucker.

Spectacle Lake	North Pond	South Pond
Brown Bullhead	Brown Bullhead	Brown Bullhead
Blacknose Shiner	Blacknose Shiner	Brook Stickleback
Golden Shiner	Central Mudminnow	Central Mudminnow
Bluntnose Minnow	Fathead Minnow	
Rock Bass	Finescale Dace	
Yellow Perch		
Northern Pike		
White Sucker		

## INVASIVE SPECIES PROGRAM UPDATE

### Narrow-Leaved Cattail Removal

Narrow-leaved cattail (*Typha angustifolia*) is an invasive species which competes and hybridizes with native cattails and crowds-out wild rice. They have leaves and flower heads much narrower than native cattails.

These invasive cattails have formed an extensive patch which spans from Bay Mills Resort and Casino to the Brimley bridge. Approximately 7 of 14 acres are located on BMIC land. BMIC Biological Services staff have worked in coordination with Loyola University Chicago to control this infestation in recently using both mechanical and chemical methods.

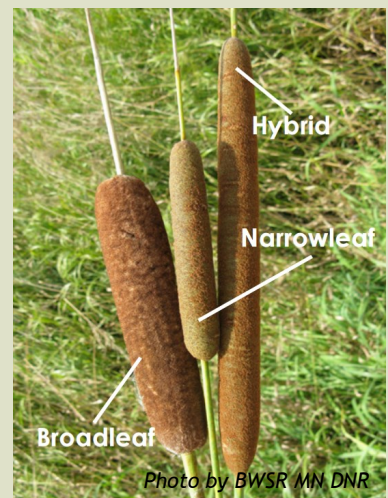


Photo by BWSR MN DNR

Comparison of native, invasive, and hybrid cattails.

## Purple Loosestrife Removal

The highly invasive plant purple loosestrife (*Lythrum salicaria*) was discovered for the first time on BMIC land in 2010. Only a single plant was found, and it was promptly removed by BMIC Biological Services staff. Since then other infestations have been identified near M-28 and Sugar Island. This summer staff have hand-pulled over 20 bags of loosestrife at BMCC East Campus and 30 bags from Sugar Island. If you suspect purple loosestrife on BMIC land, please contact Wes Parish at (906) 248-8647.

Right: Purple loosestrife patch before and after hand-pulling.  
This site filled 15 garbage bags!



Photos by Biological Services

## STAFF CHANGES in BIOLOGICAL SERVICES

Aubrey Maccoux-LeDuc joins the staff of Biological Services as the new Environmental Specialist. She will represent Bay Mills on the Lake Superior and Huron Lake-wide Action and Management Plans as well as the St Mary's River BPAC/SPAC. She will also coordinate numerous recycling programs and beach cleanups. Aubrey studied wildlife at the University of Wisconsin Stevens Point and lives in St Ignace, MI.



Above: Brandon, Jessica, Katherine making us proud at Engineers Day.

In addition, this summer we were lucky enough to be joined by three summer technicians. Brandon Carrick of Brimley, MI is assisting Inland Fish & Wildlife with fish population assessments and waterfowl surveys. Brandon is studying for his Associate's degree at BMCC and continuing on to LSSU for Criminal Justice. He hopes to pursue a career in conservation law enforcement, preferably with Bay Mills Indian Community.

Katherine Skubik of Holly, MI is assisting Great Lakes Fisheries with fish population assessments, fishermen catch surveys, and maintain equipment. Katherine is studying Fisheries and Wildlife Management at LSSU. She hopes to become a fisheries research biologist with a focus on sturgeon.

Jessica Graham of Brimley, MI is assisting Water Quality with beach monitoring, routine site monitoring, and macroinvertebrate identification. She completed her Bachelor's degree in Natural Science from University of West Florida and is going on this fall to pursue a Master's degree in Marine Science at University of Maine. She plans to pursue a career in ocean biological research.

Photos courtesy of M. El Damir, Bugwood.org . Leslie J. Mehrhoff, University of Connecticut, Bugwood.org. CDC/ MN Department of Health, R.N. Barr Library; M. Rethlefsen and M. Jones, Prof W. A. Riley - Centers for Disease Control and Prevention's Public Health Image Library #8556. Board of Water and Soil Resources, State of MN, <http://www.bwsr.state.mn.us/>



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This newsletter funded by the Great Lakes Restoration Initiative.

