



QUARTERLY

THREE LAKES ASSOCIATION

SERVING LAKE BELLAIRE, CLAM LAKE AND TORCH LAKE IN ANTRIM COUNTY, MICHIGAN

APRIL 2014

Shoreline restoration: A Rewarding project for homeowners

By Diane Crandall,
Principal, Bloomin' Buddies

This is my final article on the topic of shoreline restoration, greenbelts/buffers, and controlling erosion. Starting a year ago, we have covered the step by step process, from the assessment of your property to planning, designing, plant selection, utilizing biodegradable products, and, finally, implementing your vision. Shoreline restoration has so many benefits for us and for our environment. The previous four articles can be reviewed in the Natural Shorelines and Greenbelts section on the Three Lakes Association website (3lakes.com)

Two years ago, when I started Bloomin' Buddies in the spring, my first announcement was an ad in the Antrim County newspaper. I was hoping for interest in my new venture! I was grateful that the editor offered an article with my ad, explaining the shoreline restoration process and its benefits.

I wasn't sure how long it would take before anyone showed interest in the business. So I was excited when two months after the ad, I received a phone call from a woman who had read the article. She had been looking for a company like Bloomin' Buddies for seven years!

My first meeting with the homeowners was wonderful, as they had many questions. They are naturalists, which explained their curiosity and desire to act on the

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Sneak peek

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The Mission of the Three Lakes Association is to provide leadership to preserve, protect, and improve the environmental quality of the Elk River Chain of Lakes, especially Torch Lake, Clam Lake, and Lake Bellaire, for all generations.





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President's Message

Greetings to all,

According to the calendar, spring has arrived in northern Michigan. Even though the weather is still cold, blustery, and snowy, we know that our summer activities really are just around the corner.

Please mark your calendars for the TLA Annual Meeting, August 21, at 5:00 p.m. to be held again at the Summit Village Beach Club on the shore of Lake Bellaire. Watch for more information on the specifics of this meeting as we get closer to the date.

TLA joins forces with the Grass River Natural Area, the Friends of Clam Lake, the Torch Lake Protection Alliance, the Intermediate Lake Association, and the Antrim Conservation District to offer two joint educational events each summer. The first joint educational event of this year will be June 17, at 5:00 p.m., at Thurston Park in Central Lake. The featured speaker will be Mark Stone, Antrim County Operator of Dams and County Drain Commissioner, who will address the mysteries of trying to manage water levels in our lakes..

Plans are underway for this year's TLA summer high school internship program. This important outreach program provides high school students with an opportunity to study real-world applications of environmental science, while having a wonderful outdoor adventure, and earning some additional academic credit. Students in the school districts surrounding our three lakes (Bellaire, Clam, and Torch), are invited to apply for admission into this year's program. For more information, visit www.3lakes.com, send an inquiry to info@3lakes.com, or telephone (231) 544-7221.

TLA will also be offering occasional single-issue evening educational events. Watch for the announcements.

These are only a few of the many events and programs on TLA's summer calendar for 2014. Our success will depend on our volunteers – WE NEED YOU! Whatever your interest and skill set, we have a task for you if you want it. Would you enjoy working with high school students in this summer's internship program? Would you volunteer your boat for water sampling or shoreline monitoring? Would you like to swing a hammer and help build fish shelters? Would you like to explore the tributary streams of Grass River and examine the macroinvertebrates that live there, as a way of measuring the health of those streams? Would you donate a few hours to staff a TLA booth at the Antrim County Fair? Would you attend township board meetings and provide information to the TLA Board on what is happening in your township? Would you write an article, for publication, on a topic of environmental interest? The range of possible volunteer opportunities is very wide. If you have an interest in the health and beauty of our region's waters, and are willing to donate a few hours of your summer, please volunteer – as much or as little as you wish. Whatever you can do is appreciated.

WE NEED YOU!

Best to you all,

Tina

The Starry Stonewort Invasion: *An Unprecedented Threat to Michigan's Inland Lakes*

Story and Photos by Scott Brown,
ML&SA Executive Director

Starry Stonewort (Scientific Name: *Nitellopsis obtusa*), a member of the Characeae family, and considered a beneficial, though increasingly rare species within its native range of northern Europe and Asia, was first observed as an invasive species within the North American waters of the St. Lawrence Seaway in 1978, and was later detected in the St. Clair-Detroit River system by the summer of 1983. Discovered in Michigan inland lakes in February of 2006, successful colonization of over one hundred twenty five of the state's inland lakes had been confirmed by the Michigan Department of Environmental Quality by the spring of 2012. Due to the repeatedly observed ability of invasive starry stonewort to degrade ecologically sensitive areas of shallow water habitat within colonized inland lakes, federal and state government agencies, including the United States Aquatic Nuisance Species Task Force and the Michigan Department of Environmental Quality, have classified starry stonewort as a highly invasive aquatic species. Michigan limnologists Pullman and Crawford (2010) have suggested that rapidly proliferating starry stonewort "may be one of greatest challenges ever faced by management professionals and lake user groups in Michigan."

Starry stonewort frequently produces dense monotypic meadows that have been commonly observed in Michigan inland lakes extending from near shore areas in depths of less than one meter to the outer most edges of the littoral zone in depths of up to nine meters, completely engulfing the most sensitive and productive of areas within colonized inland lakes. Aquatic meadows of invasive starry stonewort form dense benthic barriers of up to two meters thick that effectively prevent the growth of an important array of native submerged aquatic plants that rely upon access to bottom sediments for vertical stability and for the uptake of nutrients. In colonized inland lakes, it is not uncommon to observe littoral areas that once supported diverse plant communities now entirely dominated by vast starry stonewort meadows and completely devoid of native submerged aquatic plants. Dense monotypic aquatic meadows possess the ability to significantly alter and/or destroy submerged native macrophyte communities. Native submerged macrophytes play a vital role in inland lake ecosystems by reinforcing and exerting influence on several vital physical, biological and chemical mechanisms that contribute to sediment stability, water transparency, moderate biological productivity levels and the promotion and sustainability of plant and animal biodiversity. Severe degradation and/or loss of native submerged macrophyte communities represent a significant threat to the immense ecological, recreational and economic value of Michigan's inland lakes.

See *STARRY STONEWORT*
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Call for Volunteers

By KC Babb,
Publicity Chair

The TLA Board recently finalized the 2014 Goals for our organization and have posted them on our website (3lakes.com). While we feel these goals will provide strong support for our mission, we cannot accomplish them without help from our membership. While membership dues and donations go a long way with helping us financially, we also need volunteers to help with various activities and projects.

If you would like to get more involved with TLA, please let us know. Whether you can help with a single event or get involved in a longer term activity, any time you can lend would be greatly appreciated.

Much of our activity takes place during the (very) short summer season. Some of the things we could use help with include:

One-time Events

- Volunteer to help with our joint education events
- Man the Antrim County Fair booth for a 2 hour shift
- Volunteer a few hours to work with our summer interns on their projects
- Volunteer to help us with one of our newsletter or postcard mailings

Ongoing Activities

- Help with our website and publicity
- Help with our Science Education Outreach Program (SEOP)
- Help build and deploy Fish Shelters
- Help collect samples for our water quality studies

For more information on all of our projects, please refer to our website:

3lakes.com

If you have questions, or would like to volunteer, you can call us at 231-544-7221 send a note to info@3lakes.com

UPCOMING EVENTS

APRIL 5:
Boater Safety Certification
Mancelona High School - 8:00 AM

APRIL 26:
Boater Safety Certification
Central Lake High School - 8:00 AM

MAY 3:
Boater Safety Certification
Bellaire High School - 8:00 AM

MAY 17:
Boater Safety Certification
Elk Rapids High School - 8:00 AM

JUNE 17:
The Dam Facts: Water Levels
in the Chain of Lakes
Thurston Park - 5:00 PM

JULY 12:
Water Awareness Day
Alden Depot - 12:30 & 4:00 PM

JULY 22:
Natural Shorelines - Up Close
Butch's Tackle & Marine - 10:00 AM

AUGUST 12:
Outdoors in Antrim
Alden Depot - 5:00 PM

AUGUST 21:
TLA Annual Meeting
TBD - 5:00 PM

Shoreline Stabilization Guidance

By Heidi Shaffer,
Soil Erosion Officer

A permit is required from the Michigan Department of Environmental Quality for any shoreline stabilization work done below the ordinary high water mark on our inland lakes and streams (typically where the persistent vegetation stops at the shoreline – where the grass and trees stop growing) or in regulated wetland areas. Matt Kleitch is our MDEQ representative and can be reached using the following methods: phone; 989-705-3432, email; kleitchm@michigan.gov, or mailing address; MDEQ, 2100 W M32, Gaylord, MI 49735. A permit application can be downloaded for shoreline stabilization from the MDEQ's website: 1) www.michigan.gov/deq 2) Left index click on "water" 3) Right index click on "Joint Permit Application". There are appendixes also located here which explain the process: drawings, cost, and application requirements.



The Antrim Conservation District can review application before submittal or help you through the process; call me at 231-533-8363. There are also Environmental Consultants (Wetland consultants) listed at the following location on the Michigan Department of Environmental Quality's website: www.deq.state.mi.us/wcr/.

Natural shorelines combine natural bio logs, plants, and sometimes rocks to recreate a natural shoreline that benefits wildlife, is ecologically friendly to the lake and its inhabitants, filters storm water runoff, and recreates the Up-North aesthetic. Natural Shoreline Stabilization is a newer technology gaining popularity in Northern Michigan because of its many benefits including:

- Creating a softer shoreline resistant to ice push
- Creating habitat for fish and fish food
- Maintaining the Up-North Aesthetic
- Creating a barrier for geese
- Creating habitat for birds and butterflies
- Filtering Storm Water
- Providing privacy and view if done strategically.

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welcome

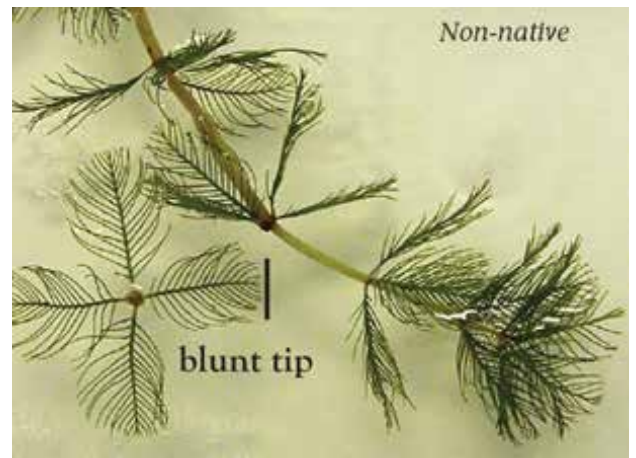
Update on Eurasian Water Milfoil

By Becky Norris,
Water Quality Chair

Eurasian water milfoil (EWM) is a nuisance invasive aquatic plant that can reduce the quality of the aquatic environment through excessive growth. This causes native plants to be replaced, reduces plant diversity, adversely impacts fish habitat, and can interfere with boating and swimming activities due to the effects of large weed beds. The Three Lakes Association, in collaboration with Helena Township, Torch Lake Protection Alliance, and Butch's Marina, contracted with Aquacleaner to have EWM that had been discovered at Butch's, at the Alden Harbor, and in Torch Lake in the embayment between Stony and Lone Tree Points, hand-removed in the summer of 2011.

Despite the divers' best efforts, the EWM at those locations re-emerged in 2012. In the summer of 2013, TLA, in collaboration with Helena Township and Butch's Marina, engaged PLM Lake and Land Management Corp. to treat the marina and the harbor with Renovate OTF pelleted herbicide. Although it required two applications, the herbicide treatment was effective in killing off the EWM. Now TLA will be monitoring these sites for any re-emergence, something that is fairly likely as the EWM can regrow from not-quite-dead-yet roots in the lake bed.

We plan to use mechanical control rather than chemical to deal with any EWM that shows up. Thanks to the Dole Family Foundation, we have funds available to purchase benthic light barriers which are known to be highly effective in discouraging the growth of the EWM. We are conferring with our local MDEQ personnel to develop the necessary permits for the benthic barriers. More information on benthic barriers can be found on our website in the Projects & Reports tab under Water Quality..



Installing a benthic barrier

Star Buoys

Since introduced to our lakes by TLA over 20 years ago, Star Buoys have been used by residents to remind boaters to slow down when they are near areas where people may be swimming. They generally warn boaters to be at a no-wake speed within 100 ft. of the buoy.

With the boating season close at hand, TLA would like to remind both residents and boaters how Star Buoys are to be used and what they mean.

How are Star Buoys to be placed?

There can be no more than one Star Buoy per parcel or residence.

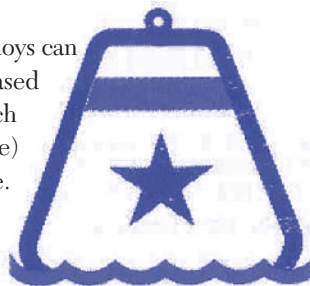
Star Buoys can be placed no more than 100 ft. from the shoreline, dock, raft, or other moored device.

What does a Star Buoy mean to boaters?

A key provision of the Michigan Marine Safety Act states: "watercraft operators must not exceed a dead-slow, no-wake speed within 100 feet of a shoreline or dock or raft".

The Star Buoy provides a visual reminder to boaters that they need to slow down when cruising.

Star Buoys can be purchased from Torch River (Ace) Hardware.



TLA has a new phone number!

New forms of communication have drastically reduced the number of phone calls we receive each month. We average only about 3 or 4 calls each month. In order to reduce costs and still provide multiple forms of contact with our members, we have secured a Skype account that offers us a phone line and video conferencing for up to 10 people. This service will allow for us the opportunity to keep our members and committees connected throughout the winter months for less than half the price of a standard phone line!

Our new phone number is 231-544-7221



Watershed Management: A TLA Priority

Water... Lakes... Fishing... Swimming... Canoeing... Cabins.... these words bring to mind the fundamental Michigan experience. We take the abundance and diversity of our lakes, rivers and wetlands for granted.—and with good reason: Michigan has more than 10,700 lakes that are 10 acres or larger.

Watersheds cannot manage themselves.

In order to maintain these beneficial uses, watersheds need help. With ever increasing recreational use and growing populations residing near and along waterways, watersheds can suffer from small and large cumulative impacts and cannot manage themselves. We affect our lakes by our actions within the lakes, along its shorelines and well up into the lake's watershed(s). Even distant areas can be connected to the lake by the downstream flow of waters which, in turn, carry pollutants, sediments and nutrients into the lake over time. We

all are part of the problem, but we all can do something, no matter how apparently insignificant (e.g., recycling of household materials), to help. Watersheds need to be systematically and purposefully managed over time if we are to sustain their long-term health and viability.

Management plans:

- Enhance partnerships through cooperation.
- Identify the concerns that need to be addressed.
- Set realistic goals, objectives and actions.
- Identify needed funds and personnel.

For 2014 and 2015, Management Plans will be crafted for each of the creeks within the Grass River Watershed. We will begin with Maury Creek and finish with Finch Creek.

Maury Creek outlets into Lake Bellaire just north of the Grass River. A steering committee has been established with members representing Summit Village Association, Antrim County, Antrim Conservation District, Grass River Natural Area, Shanty Creek Resort, TLA and adjacent property owners. Their first meeting took place March 26. Once the Steering Committee establishes goals and objectives, a Technical Committee will be created and be “on the ground” collecting missing data, gathering the necessary partners, determining generalized cost estimates and ultimately overseeing the monitoring plan.

The Plan is expected to be completed this Fall. Interested in assisting the Technical Committee? Please contact Leslie at lesliemeyers01@comcast.net or 231-544-7221.

Shoreline

continued from page 1

situation to protect their investment and our environment. We talked for a long time, and I did a general overview of their property.

Soon after that first meeting, they decided to move forward with a shoreline restoration, as they were experiencing a great deal of erosion at the shoreline. The property is located on a very high energy site, which experiences high winds from several directions, ice push and boating activity on very deep water. The initial shoreline restoration area included a 15 foot greenbelt/buffer behind the restoration. It also covered the natural swale that had formed, which was eroding.

Working Together

Meeting and working with these homeowners was educational for me, too, as my clients were well informed on native plants, invasive species, and chemicals at the shoreline. The design stage was a lot of fun. We worked together sharing information, which made for a smooth process.

I was quite impressed with my clients' positive attitudes, and they were hands-on about everything. For example, I would give her lists of plants to consider based on the zone requirements, soil conditions, area exposure and other factors. She always did her research online before making her final choices. In addition, she was so alert that she

found invasive garlic mustard growing on their property, and we worked together to properly remove it and get it under control.

To my surprise and delight, halfway into the project, these homeowners chose to add three more greenbelt/buffers to deal with erosion issues on the shoreline. The following year, they added some additional coir logs and addressed another erosion issue at the water side.

Hats off to these homeowners as they were the first on Torch Lake to take the natural plunge! I was so impressed that my first clients took that leap of faith with me and am very grateful for that first phone call.

Time to Plan

This winter has been brutal, and storms have kept us inside for much of the season. This makes for a great time to plan ahead. Think warm thoughts and remember the smells of summer! It really brightens a cold and dark day to know that spring is right around the corner!

I would personally like to thank Three Lakes Association for the opportunity to provide these articles for their newsletters. I appreciate TLA's trust and belief in me and my education, and enjoy being involved in their projects. This is a wonderful organization made up of people who work hard and truly care.

Starry Stonewort

continued from page 3

The evidence that starry stonewort has now successfully colonized several hundred Michigan inland lakes continues to mount. It is extremely important that lakefront property owners, recreational boaters, the fishing community and inland lake users in general learn to identify starry stonewort.

Early detection and management of the rapidly growing species is critical to sparing your inland lake or favorite fishing spot from the ecological ravages of this



unprecedented biological invasion. Do not be deceived by the disappearance of the species from shallow water beginning in mid-summer, in all likelihood, the species is still present in deeper

To learn more about invasive starry stonewort and its impact on Michigan's inland lakes, please plan on attending the 2014 Michigan Inland Lakes Convention which will be held on May 1st, 2nd and 3rd at the Boyne Mountain Resort in Boyne Falls, Michigan. To find out more about the first ever lakes convention, visit <http://michiganlakes.msue.msu.edu/convention>.

Membership counts!

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* * * * *

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You are invited....

The Dam Facts

Water Levels in the Antrim Chain of Lakes

Tuesday, June 17, 2014 at 5:00 pm
Thurston Park, Central Lake

Antrim County Operator of Dams and County Drain Commissioner, **Mark Stone**, will discuss the cause and effect of water levels in the Antrim Chain of Lakes. He'll provide an inside look at the management of water flow in the watershed, recent high-water events, navigation issues, and the capabilities—and the limits—of the County's dams and court-ordered levels. A question and answer period will follow the presentation.

Sponsored by Grass River Natural Area, Three Lakes Association, Torch Lake Protection Alliance, Friends of Clam Lake and Intermediate Lake Association, In Partnership with Antrim Conservation District, and Tip of the Mitt Watershed Council

📍 **FREE admission**, open to the public

📍 **Wine & hors d'oeuvres** following the program

More information: 231-533-8314 or info@grassriver.org

