



Driftwood

Spring / Summer 2022

The newsletter of the
Turtle Flanbeau Flowage
and Trude Lake
Property Owners'
Association, Inc.

Association Queries Members – Calling all Views!

By Terry Daulton

How many times have you answered a phone call only to find it is a telemarketer asking you to take a survey? Our daily lives are full of polls, surveys, and references to survey data whether in the news, business, government, healthcare, or the US census. We all suffer from a bit of survey fatigue, which we express by firmly hanging up the phone or circular filing a piece of mail as if it were junk.

But, what if the survey in question would lead to real life actions, implemented in real time in your own backyard? By the time this issue arrives in your mailbox, you may already have received our email invitation to fill out a brief survey for the TFFTLPOA. Hopefully, you took the few minutes to fill it out and found it spurred some innovative ideas. We hope so because the association is planning to use your responses to guide our work - - from your fishing preferences to the way your newsletter arrives.

If you have been an association member for a few years, you will recall other surveys we have conducted in 1996, 2001, and 2009, followed by a recreation-focused survey in 2014. The two early surveys were conducted to help guide

the directions of our young organization, collect baseline data on our members and their concerns. Our 2009 survey repeated some of the earlier survey questions but added a focus on water quality and conservation issues as part of a WDNR lake planning grant.

As our association turns 26 years old, the board wants to assess member opinions and use the results to guide association work for the next 5-10 years or more. We also hope to share our data with partners like the WDNR (which is beginning work on an updated master plan) and Iron County as they plan work on the flowage and Trude Lake. With this in mind, we set up four sections to our survey. These sections include basic demographics on our members, activities that are most important to them, issues of concerns, and suggestions for our work with partners.

At our annual meeting this June we hope to hear a preliminary summary of the data from Amy Nosal, UW Extension. Amy was instrumental in our survey planning, helping us focus

our survey objectives, ask clear questions, and massage the questions so that our results would be meaningful. Association board members Joanna Vodicka and Jeff Wilson led the planning effort along with Terry Daulton. The board and committee chairs provided content and editorial review.

We will share more detailed results in the next issue of *Driftwood*. We hope that once completed, the information you provided will help the association represent your interests and make the flowage and Trude Lake even more rewarding places to live and recreate. The collective sum of your visions for the area and the association will help guide our work and inspire our leaders and volunteers! Thanks for all you do, for not “hanging up the phone” on our survey effort, and for taking the time to share your insights and ideas!



Illustration by Terry Daulton

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President's Letter

By Randy Schubert



Greetings – I hope that everyone is doing well and had a great winter.

As I am writing this article, the weather is finally starting to warm up and feel more like spring heading into summer. The ice has left, the loons and geese have arrived, and the sounds of the flowage have once again returned. As I watch another season start, I am once again reminded of how precious the Turtle-Flambeau Flowage and Trude Lake area really is and how important it is for our organization to continue being its steward. One thing that our group must continue to focus on is invasive species. Each year there seems to be another invasive species threatening our native plants and animals. Curly leaf pondweed has taken hold in Rice Lake. It poses a significant threat as it spreads downstream. If not contained, CLP will likely find its way to the flowage. Our association recognizes this threat and is working closely with other lake associations to contain the problem. Randy Payne, our Invasive Species Committee Chair, has taken a proactive approach to this. Thanks to his efforts we have mobilized our association and will be coordinating workdays, education, and funding if necessary to control this very serious threat to the flowage.

Our association continues to be an active participant in the yearly Turtle-Flambeau Flowage stakeholders' group meeting. This has been an excellent opportunity to have open dialog with various groups and organizations on current issues impacting the flowage along with future planning. We are also conducting a survey of our members to determine their views on association priorities and areas for improvement. I ask everyone to take a minute and complete the survey. As we move forward, our association will continue to pay close attention to our core responsibilities as stewards of this crown jewel. And to all who call this place their home, whether you are full-time or seasonal residents, I look forward to seeing you on the flowage this summer.

Great New Book on Common Loons

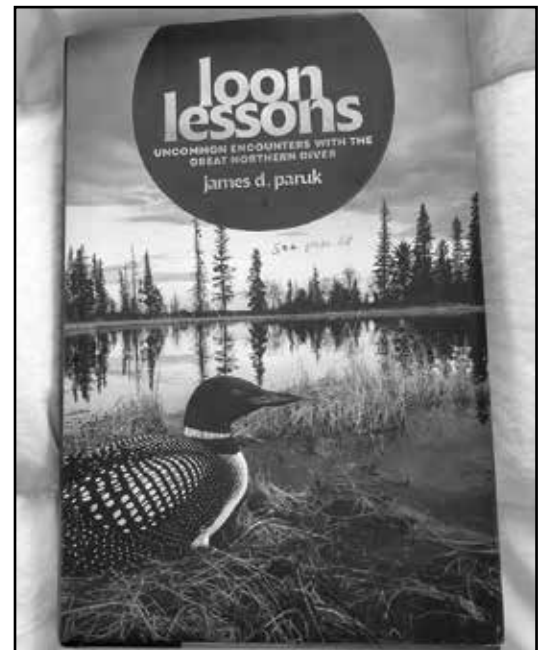
By Jeff Wilson

Loon Lessons: Uncommon Encounters with the Great Northern Diver by James Paruk was published last fall and is a must read for all loon enthusiasts.

Unlike most loon books, it concentrates on new science and natural history and is not a coffee table picture book. Jim Paruk did his PhD work here on the flowage, where he rented a cabin at Tutt's resort for three seasons while conducting field studies on night behaviors of loons with Earth Watch volunteers as his crew.

Loon Lessons combines Paruk's work with the work of other scientists including Dr. Michael Meyer from Manitowish Waters (then a WDNR research scientist) and Jerry Hardigan of Mercer. Hardigan, known in our area as a fishing guide, did a master's project on loons through University of Wisconsin-Stevens Point. Also referenced in the book is Kevin Kenow (US Geological Survey) who conducted research on the TFF and other area lakes. Jeff Wilson, association board member, and Terry Daulton, past association president, both worked for Kenow and Meyer and get mentions in the book. There is even a paragraph in the book that begins "And then there was Jeff Wilson..."

Paruk's stories thoroughly cover recent findings on loon ecology from across the U.S. without losing the reader in technical detail. Published by the University of Minnesota Press, it is available online for under \$20 or can be borrowed at the Mercer Public Library. This well written and enjoyable book is a perfect summer read, whether from your favorite lakeside lawn chair or on "deck" waiting for the fish to bite.



A Day in the Life of ... A Water Quality Monitor

By Jean Burns

As a child I often wondered why anyone would ever volunteer to undertake anything. Well fortunately, with age came wisdom. Over the years, after volunteering for various projects, I have come to realize the many benefits of helping out. I'm usually left with a satisfied feeling for doing something useful and I like assisting a larger group in accomplishing a goal.

The last nine years I have been working with the Citizen Lakes Monitoring Network (CLMN) checking on and testing the water quality of Trude Lake. I became involved in this monitoring because I love our lake and was curious to understand it better. The data collected through this testing not only helps the WDNR but also is shared with our association.

What better environment is there to do a chore than to go out on the lake and take in the surrounding area. It's peaceful, quiet, and affords ample opportunity to witness local wildlife. I've been blessed to watch loons performing various rituals and swans gracefully gliding along the shoreline. One day I was mesmerized watching several osprey and two eagles battling it out in aerial combat. One eagle was knocked from the sky and landed in the water, wing injured.

After a heroic effort of struggling over the water the bird safely made it to the shore. Believe it or not, the aviators were at it again the next day! We have a trio of otters in our bay and I never tire of watching them frolicking together. Their playfulness just brings such joy. A deer or two can often be spotted walking along the shoreline and stopping for a quick drink. Wildlife abounds when one takes the time to simply observe and enjoy.

Another benefit of water monitoring is the socialization it provides. Our piers usually don't get put in the water until the first week of June, and we don't put the boats in until the piers and lifts are in. This causes a problem for me because it is more than two weeks after ice off which is the designated time for the first water testing. Fortunately, our neighbor puts his pier and pontoon in as soon as possible. He's always been willing to take me out for that first testing session. The fun part is his wife and my husband Marty join us and we make it a fun outing. For the other testing times Marty will often come with me and help with the recording of data. He also likes to throw a lure while I'm completing some of the tests. We enjoy sharing that time together. A few times a couple of grandchildren assisted, me bringing

their useful enthusiasm to the task. While out on the lake neighbors out boating might stop by for a quick chat, or we will wave to people on their dock as we motor by. It's nice connecting with friends when out on the water.

You might be wondering what's involved in water quality monitoring. It really isn't that involved or time consuming.

I'll be brief. Basically, testing is conducted at the end of May, June, July, and August. Secchi disc testing is used to determine water clarity. The results can be compared to similar lakes in the state, and changes in the water over the years can be tracked. Then, there's the chemistry collection. Water samples are collected and checked for levels of phosphorus and chlorophyll. This allows the WDNR lake managers to assess the nutrient enrichment of the lake. On Trude, water temperature is taken starting at forty-eight feet deep and is recorded at three-foot intervals up to three feet. As the summer rolls along it's always interesting to see the temperature differences. One perk is that the network provides all the equipment and training needed to collect the water samples and temperature readings. The dates of "ice on" and "ice off" are also

recorded for the year. Ice off is always fun to bet on.

In the long run, data collected by volunteers is invaluable and is used by many groups for many different purposes. It has been published in reports and is often used by scientists who study lakes and water resource planners for various goals. The data collected is reported to the network via its website which in turn makes it available through a data base on the Internet. The WDNR relies on this data collected by volunteers to monitor the many lakes in the state.

For me, volunteering has been very rewarding. If you're interested in getting involved there are many different volunteer monitoring opportunities available through the WDNR or the Wisconsin Citizen-based Monitoring Network. Besides the Water Quality Monitoring there are Boats, Clean Waters Watercraft Inspectors; Loon Watch; and WI Bat Program, just to name a few. There are also several invasive species projects.

For more information on these worthwhile opportunities visit:

<http://dnr.wi.gov/volunteer/>
<http://wiatri.net/cbm/>



Photo by Jean Burns

Editors Pursue Floating Bogs

By Mike Hittle

Three intrepid members of the editorial staff of *Driftwood*, their interest in the byways of the flowage having been piqued by a 2020 excursion to two “lost” lakes on Big Island, launched another fact-finding and imagination-triggering expedition this May. The targets of their curiosity on this fine spring day were the many floating bog islands that move, at the unpredictable whims of wind and water, throughout the north-central part of the Turtle-Flambeau Flowage.

Captain Terry Daulton commanded the undertaking from the helm of a center-console outboard, her deep knowledge of shallow dangers (rock bars, stumps, dragons, whatever) more than compensating for the boat’s inoperative depth finder. She deftly guided the craft in and out of the network of islands in search both of floating bogs whose locations have become semi-permanent and of elusive bogs whose recent movements have given them new—if transitory—homes. As Captain Daulton navigated, her crew, Chad McGrath and Mike Hittle, split their time between gawking at the beauty of this part of the flowage and hoping they would not have to draw up a chart tracing the precise course of our voyage. From time to time Chad set aside such musings to identify the diverse flora that adorned the bogs, just as Mike kept his cell-phone camera active trying to capture a visual record of the excursion. All three of us were monitored, here and there, by eagles classically perched high in white pines—trees, by the way, that were securely anchored in “real” islands.

This late-spring morning offered us one impressionistic image after another, each made all the more elegant by the subtle shadings of color that new growth brought to the bogland vegetation. It’s hard not to notice the trees first—if only because the notion of trees growing on a mass of floating vegetation seems counter-intuitive. Some bogs specialized in hosting youngish white pines, while others were dominated by tamaracks and a splattering of spruce. One of our last stops made it clear that even birches can hop a ride on a floating bog, but only until the trees reach a certain size. An occasional maple, more bush than tree, could be seen sending out miniature versions of its characteristically shaped leaves. Here and there we also saw some large, downed trees, some recent and green, others barkless and wind-polished, that had toppled from want of secure root structures within the bog mat.

As we approached each bog for a closer look, it was readily apparent that the primary vegetation was leatherleaf, whose delicate individual blooms, when multiplied across the expanse of a large bog, gave these landscapes a dazzling look. As one might expect, we saw a handful of alders,



Captain Daulton at the helm. *Photo by Mike Hittle*

noticeable for their reach above the level of the leatherleaf floor of the bog. A large patch of fiddlehead ferns, which had popped up on the very edge of one bog, caught our attention, as did two bog laurel plants, whose deep pink blooms stood out within a sea of leatherleaf. Sphagnum moss, a well-known bog resident, made its presence dramatically obvious on one bog where it constituted a veritable meadow, devoid of any other vegetation. We looked in vain for pitcher plants, a bog staple, but found none. After due editorial consideration, we could not decide whether it was too early in the season for pitcher plants or whether they are simply not present on these floating bogs.

Our encounters with bog-related fauna or their traces were fewer than we had hoped, but rewarding nonetheless. Beaver lodges, ranging from handyman specials in need of considerable attention to luxury lodges, perfectly hemispheric in shape and fully mudded, made it clear that floating bogs are a favored

habitat of these outsized rodents. We even came across one lodge with a large above-water opening that led onto what might be regarded as a sun deck. (It’s hard not to anthropomorphize beavers.) We saw no loons in close proximity to bogs, but we did spot an apparently abandoned loon egg on a peaty platform at the edge of one bog located

There once was a drifting log,
Throughout the lake it would jog;
It nurtured some seeds,
Grew many more reeds,
Turned into a floating bog.

By Jean Burns



in a sheltered bay. Our turtle sightings were limited to a couple of painted turtles sunning themselves on a lengthy floating log protruding from a bog edge. Of course there were lots of birds flitting about the various bogs. Red-winged blackbirds seemed the most numerous species, but then again, they were easy to identify by sight and sound. [On the next expedition we will bring binoculars in hopes of pinning down the identities of lots of little brown jobs that were present in most locations!] While we were eating lunch at a campsite adjacent to a bog, a drake mallard, wings set, silently came in for a landing just feet away from us. Finally, at our final bog, Terry spotted a grayish-colored northern water snake sunning itself on a grass-covered, peaty edge of a bog. Uncertain whether the creature was dead or alive, the two crew members violated a time honored warning; they touched the creature with a ten foot pole (in this case, a boating pole used to bring a craft close to a dock in windy weather) just to see what would happen. The touch was gentle; the reaction scarily instantaneous. Before the camera crew could say iPhone, the snake shot across the grass and into the water, where it dove straight down and out of sight...but not necessarily out of mind. For Terry immediately regaled her crew with a tale about how half a dozen of these aggressive water snakes interrupted a nature talk she was giving while standing (not for very long) on a beaver lodge.

All in all, our floating bog trip lasted less than two hours, but it took us into another world. Though we were only minutes away by high-powered boat from a populated area of the flowage, we could have been in some far distant wilderness as we wound in and out of channels within channels in one of the bigger bogs. The calm and the beauty of these unique ecosystems prompted all kinds of reflections among us. Accompanying this brief trip summary are two articles, one by Chad and the other by Terry, that probe more deeply and even imaginatively, into the world of bogs. We hope our collective recollections will prompt you to set aside time for a personal exploration of the flowage's floating bogs. It's bound to boggle your mind.



Floating bog at its best. *Photo by Mike Hittle*



Intrepid crew spot a floating bog. *Photo by Terry Daulton*



A Tale of Two Bogs: Reflections of a Beaver and Biologist

By Terry Daulton

Imagine you are a beaver, cozily ensconced in your lodge. You and your mate worked hard over the past two years, building up the sticks and mud to form a beautiful dome with three exit tunnels. You had chosen the location for its convenience, on the shore of a bog island where the remains of an old lodge suggested it had been inhabited in the past with good result.



Beaver trophy home on shore. *Photo by Mike Hittle*

One night in the spring a storm comes up and you hear thunder and rain on the lodge. You have no concerns, safe as you are inside. The next morning however, when you slip into the water and surface outside at dawn for your morning aspen snack, you find that the view and nearby shores have all changed. The aspen saplings on the shore are gone and you are facing a piney wood. Somehow in the night your home has moved over ½ mile south and east. Well, being of a beavery mindset you do not ponder these issues too much but set off in search for food, perhaps giving a mental shrug at the nuances of nature.

This story is one I sometimes imagine when considering what happened to a bog island on the Horseshoe section of the TFF during the tornado of 2010. During that storm, a ¼ acre bog that had been anchored on a rock bar near our cabin was torn into three parts and set afloat. During the ensuing two weeks these bog islands floated far and wide on Horseshoe, and the largest bog had a big beaver lodge on its edge. While I enjoyed imagining the beaver with its home turned “travel trailer,” my husband Jeff and I worried that the bog would settle in front of our dock, especially after it spent two days

obstructing our bay. We even tried to move it with our 40 HP boat with no success. Somehow the next day it was gone, heading back out into the main waterbody. I pondered how it could move so quickly when it had seemed to be so firmly aground.

The mystery of the floating bogs of the TFF is interesting to contemplate. Most bog lakes in the Northwoods form over several thousand years. The WDNR publication “Ecological Landscapes of Wisconsin” describes formation of bogs after the last glacial retreat (around 10,000-12,000 years ago). “Bogs are basically of two types: glacial kettle lakes (ice block lakes) in which a basin containing a lake is very gradually filled in from the margins by peatland vegetation. Such lakes are common in pitted (“collapsed”) outwash landforms and sometimes in end moraine (deposits where the glacier stopped). The other important setting for open bog is near-level but poorly drained areas, often with a high, sometimes perched, water table.” Wikipedia says that most peat bogs formed about 12,000 years ago and that peat accumulates on average at about a millimeter a year.

Looking at the Horseshoe floating bog and others on the flowage it is clear that many have peat underpinnings many feet thick. For a waterbody only created in 1926, where might these incredibly old peat formations have come from? I contacted Susan Knight, aquatic plant specialist and bog enthusiast from the Trout Lake Station, for an opinion. She suggested that they might have formed on some of the sixteen lakes that were flooded in 1926. These lakes might have had boggy margins which broke apart with higher water levels. This makes sense to me as I have noticed that the bogs often move during high water. Wind events can also break off or move bogs, which might be perched on a rock bar or submerged stump. It is easy to see how an inch or two change in water level might make the difference between a firm anchorage on a stump or a free-floating island. Likewise, during low water these bogs might have time to get more firmly settled and remain in place. The original lakes might also account for the differences in species diversity on TFF floating bogs.

Just after the glacial retreat,
Some lakes started forming some peat;
Time passed, dams were built,
Our flowage was filled(t),
With floating bog islands replete.

By Terry Daulton

Currently you can find some that are simply shrub covered with a few stunted tamarack or black spruce while others support more diverse plant communities including pitcher



plants, orchids, and sundew. Susan Knight pointed out that many lakes in the Northwoods have bogs but each one is unique. Some fill nearly the entire lake basin and are richly diverse. Others are simply a narrow strip of shrubby leatherleaf or sweet gale on the shore edge. The sixteen lakes that disappeared under the flowage waters might have had a variety of bog types, some of which became the islands we see today.

On the flowage, beaver are not the only species who might go for a ride on a bog. Red-winged black bird, yellow warbler, common yellowthroat, and song sparrow are regular nesting residents. Loons also use the low peaty margins for nesting and turtles and northern water snakes sun along the edges.

These floating islands lend a bit of mystery and beauty to our flowage landscape. The appearance of a new island in our view makes the boater check his map. In the Springstead Landing and Swimmers' Island area the bogs form a protected maze for paddlers and anglers. At the south end, a group of floating bogs is a perfect loon nest sanctuary. You can probably pick your favorite bog, whether you like dropping a lure into the dark depths along shore or listening for the call of a warbler. For myself, when I look at my favorite floating bogs, I am going to think about the stories they tell, wondering about where they first formed, all the changes they have weathered, and how many miles they have travelled as they float through time.

LEATHERLEAF *Chamaedaphne calyculata*

By Chad McGrath

Leatherleaf is a very common plant in and around the Turtle-Flambeau Scenic Waters Area (TFSWA), especially on "floramobiles" that were the subject of your *Driftwood* team's field trip this spring. In fact, leatherleaf's adventuresome roots (rhizomes) are perhaps the most important component weaving and holding the flowage's floating bog rafts together.

Generally thought of as a northern plant, and always found in a wet environment, Leatherleaf's range stretches from the higher elevations in northern Virginia north and northwest through at least parts of all the Canadian provinces, up into Alaska, even beyond the arctic circle. It is a circumpolar plant, found around the top of the globe, including Siberia and the Scandinavian countries. It's present in most of Wisconsin, save a few of the southwestern counties.

Leatherleaf is considered a heath (*Ericaceae* family). It apparently gets its common name from the texture of its leaf, which is tough and seems thick. It is an evergreen plant, retaining its leaves in winter. Leaf color in winter is a medium brown, very leathery looking. As spring approaches the color goes through a reddish phase, which can be quite striking.

Native Americans reportedly made an infusion for fevers and a poultice for inflammations from the leaves. Soaking the leaves in water in the sun makes a tea-like drink. But don't heat or boil the water because they may release a toxin called andromedotoxin.

Three plants often associated with leatherleaf are bog laurel (*Kalmia polifolia*), bog rosemary (*Andromeda polifolia*) and Labrador tea (*Rhododendron groenlandicum*). This latter plant is the only member of the rhododendron group, famous for large, showy spring flowers, that is native to Wisconsin. Leatherleaf's flowers are lovely. They are urn shaped and hang downward off the bottom of terminal twigs, lifting off the plant foliage below them, making for quite a show (see pictures). Usually white, occasionally they have a pink cast. Various insects pollinate them and a small, bb sized seed develops.

Next time you're out boating, check out the watery edges around shore and see if you can find some leatherleaf.



Photo by Chad McGrath

An old bullfrog went boating,
On a bog that was floating;
In search of a date,
Or even a mate,
His *voyage* being *bon*, now he's gloating.

By Mike Hittle



The Curly Leaf Pondweed (CLP) Puzzle – Where, Who, and What To Do

By Randy Payne

CLP is an aquatic invasive plant that is in the Turtle River watershed, and has drifted downstream from Rice Lake as far as Pike Lake, Lake of the Falls, and the TFF could be next in line. This nasty invasive can form thick dense mats in lakes that can choke out native species, and make boat navigation almost impossible. In this installment, I will explain the pieces of the CLP puzzle.

Where is the CLP located? (White pushpins are locations; white shaded areas have too many locations for pushpins.)

- 1) East bay of Rice Lake – Very thick over a wide area.
- 2) South bay of Rice Lake – Moderate amount.
- 3) Turtle River – Many locations but each location is not very thick.
- 4) Pike Lake – A few locations and not very thick. Note the location near the outlet!

What Organizations are Involved? (There's quite a few!)

- 1) Iron County Land and Water Conservation Dept. (ICLWCD) – CLP effort is led by Zach Wilson with help from additional people. This is a boots on the ground effort! They work mainly on the Turtle River and Pike Lake, pulling manually from canoes.
- 2) WDNR – Has provided grant funds to Rice Lake and to Pike Lake (Through Rice Lake Assoc.) Most of the monetary funding for CLP control has come from WDNR.

- 3) Whitewater Associates – Private environmental consultant that has been hired to monitor CLP population on Rice Lake, Turtle River and Pike Lake.
- 4) Rice Lake Assoc. (RLA) - Very actively involved controlling the massive CLP growth in the south bay of Rice Lake. They received a multi-year Surface Water Grant from the WDNR. They host a large “Great Pondweed Pull” every year that uses volunteers and paid individuals to manually pull the plants from the East Bay of Rice Lake. Last year they pulled out 44 tons!
- 5) Pike Lake Neighbors – They use volunteers and help from ICLWCD and received an Early Response Grant from the WDNR which was sponsored by RLA.
- 6) Lake of the Falls Assoc. (LOFA) - Like TFFTL POA, Lake of the Falls does not have CLP in its waters yet, but is downstream from the Turtle River. The association has called for and provided volunteers for CLP pulling effort on Rice Lake, the Turtle River, and Pike Lake.
- 7) Iron County Lakes and Rivers Alliance - Nonpartisan association of lake and river associations and individuals interested in preserving and protecting Iron County waters and the rights of riparian owners.
- 8) TFFTL POA – Our organization has called for and provided volunteers for CLP pulling effort on Rice Lake, the Turtle River, and Pike Lake. We are presently engaged in hiring a crew from the Manitowish Waters' North Lakeland Discovery Center to pull CLP from the South Bay of Rice lake.



As of press time, the TFFTL POA is engaging with the North Lakeland Discovery Center to hire a crew to pull CLP from the South Bay of Rice Lake. The Discovery Center hires out crews for AIS removal, consisting of summer students with experience in this work. They provide boats and AIS disposal. South Bay was chosen for our direct involvement for a couple reasons. First, the East Bay of Rice Lake is intensely pulled by RLA's "Great Pondweed Pull", but the South Bay needs some additional attention. The Turtle River and Pike Lake are addressed by volunteers and ICLWCD, so the South Bay, having a medium infestation,

could use more pulling. Rice Lake's WDNR surface water grant has been on hold due to the lack of a boat landing on Rice Lake. Recently the RLA has received \$10,000 from an anonymous donor. There is hope that a public boat landing will go in Rice Lake, and this will enable the WDNR surface water grant to continue in future years. The war on CLP is a long-term effort, and our future strategy will depend on RLA's continued receipt grant funding, and the progression of the CLP in the watershed. Downstream monitoring of the spread, and continued education encouraging people to keep their boats clean, will also be important.

Making Do

By Chad McGrath

The Turtle-Flambeau Scenic Waters Area (TFSWA) is approximately 40,000 acres including 13,000 acres of water. It includes six public boat landing sites/parking areas. Accessing these six landings consecutively by car involves over 90 miles of driving and about three hours time. There are 66 campsites. Just visiting each site for five minutes would take at least a day. There are also two portages on the property that must be maintained. Thousands of visitors use the landings, campsites, portages and trails each year. The TFSWA is a big deal. It's been called a "gem," a "boundary waters-like area," and "Canadian-like in its wildness".

Guess how many people are currently employed to manage it, day to day?

Two.

Beth Feind and a limited-term employee, David Schmidt, comprise the entire Bureau of Parks and Recreation staffing for the flowage property.

If that staffing level seems thin, perhaps it is. Yet it has seemed to work.

According to Feind, Property Manager, various other WDNR department employees have responsibilities that otherwise might fall to her management. She acknowledges the "huge part" these folks play. Other departments manage specialty areas like fisheries, wildlife, law enforcement, and forestry. And then there are all the other WDNR more centralized, non-resource management departments and functions like real estate, legal, human resources, and technical assistance. Beth stresses that it works because, on a one-to-one personal level all the current individuals in each role get along and cooperate with each other. That is key.

TFSWA has one other position available, sort of. It's a vacant facility repair worker position that pays \$12.00 per hour but is currently unfilled because after four postings (done via central office in Madison) there haven't been many applicants and none that seemed qualified.

Beth says that she'd "really be hurting badly" at getting everything accomplished without volunteer help. She cites

two examples. First are Larry and Rita Krznarich,

who volunteer as camp site stewards. They spend several hours each week maintaining

camp sites and dealing with camper issues. Second are volunteers that help

manage and maintain trails through the statewide adopt a trail program.

Two local folks, Diane O'Krongly and Martha Pierpont head up care of two

flowage area trails and the Mercer Area Cross-Country Ski Association helps out maintaining the Little Turtle Trails, spending over 200 hours each year. There are also currently two trails that need adoption: Wilson Hills and Big Island. Contact Beth if you are interested.

Lastly, planning is another task that falls to the property manager. The WDNR has embarked on regional master plans based on ecological landscapes. The TFSWA will fall within the North Central Forest planning effort. Work on the upcoming Master Plan was scheduled to kick off this past January. Apparently, there are some delays...already. More on this when there's more to report.



The Water Column - Mosquito Musings

By Diane Daulton

Summer has arrived and with it, frogs are calling, bird songs fill the air, and a bumper crop of mosquitoes are on the wing. They don't call them "bugs" for nothing, and many people think a world without bugs would not be that bad. This month's column highlights a couple of bugs and a perspective on their importance, some fun factoids, and a cautionary note about yard treatments.

June's warmth and a few showers always seem to bring out unwanted visitors – especially at dawn and dusk. For those of us who think the world might be better off without mosquitoes, maybe it's a matter of perspective. The University of Madison-Wisconsin Department of Entomology notes, "Wisconsin is home to at least 56 species of mosquitoes. Many of these are never found biting people. Some prefer birds or amphibians. Among those that feed on mammals, the white-tailed deer can be a favorite host." It is probably true that world-wide, mosquitoes are among the planet's deadliest animals, causing up to one million human deaths per year (the numbers vary) due to their indirect role as vectors for diseases. There's no doubt that we could do without diseases like malaria, dengue fever, West Nile, or Zika virus. Luckily for Wisconsinites, the chances of contracting one of these diseases from a mosquito bite are slim, unless one travels to tropical venues.

Living near lakes, wetlands, or a stream means that mosquitoes are a fact of life. After the blood meal we are all familiar with, female mosquitoes lay fertilized eggs on the water's surface or near water where they hatch into larvae. The time between egg and larvae stages varies depending upon the species and water temperature. The larvae, sometimes called wrigglers, live in the water, feeding on algae and organic material, growing and molting several times before transforming into pupae. These wrigglers are small, but easy to spot, partly because they do wriggle around characteristically, but also because most species hang upside down using surface tension to cling to the air/water interphase. They are actually breathing through a specialized body part called a siphon. When the wriggler has developed enough, it will form a pupa, sometimes called tumbler, that does not feed, but is the last underwater stage of life. The pupa develops until it emerges from the pupal case a few days later into the adult flying insect that just gets up on the water's surface and flies away. I had occasion to witness this myself a few years ago, when I had some tadpoles on the counter for people to view. Much to the chagrin of coworkers, we discovered the water in which the tadpoles were thriving had also housed some unwelcome visitors who emerged before our eyes. For a totally gross-

you-out look at the female mosquito's specialized mouth part called a proboscis check out YouTube's "Deep Look: How Mosquitoes Use Six Needles to Suck Your Blood".

In a case for mosquitoes as an important cog in the wheel of the food chain, imagine a world without them from the perspective of a tadpole, dragonfly, bluegill, purple martin, or the blunt leaved bog orchid. Mosquitoes provide food sources to a myriad of organisms, from aquatic macroinvertebrates such as dragonfly nymphs to turtles, before emerging into winged flight. Adult mosquitoes are clearly important food sources for dragonflies, bats, nighthawks, and other critters. It is only the females who seek us out for a blood meal. After emerging, males eat only nectar and mosquitoes serve as an important pollinator to at least one species of orchid, the blunt leaved bog orchid. PBS.org adds an amusing little jab at the snow pool mosquito, explaining, "While seeking the bog orchid's nectar, sticky pollen adheres to the mosquito's head and eyes, which can make it look like it has one or two yellow horns. Makes sense, because they bite like little devils."

Thinking about bugs and lakes, did you ever wonder about those weird pock marks on water lily leaves? According to the "Bug Lady", featured in UW-Milwaukee Field Station's "Bug of the Week" blog, "When it's egg-laying time, females of many species of water leaf beetle chew a hole in a lily leaf, insert the end of their abdomen, and glue their eggs to the underside of the leaf in concentric arcs—like a mini-rainbow." As the Fourth of July approaches, it might interest readers to know that one species of water lily beetle is a superhero speed demon. The water lily beetle, *Galerucella Nymphaeae*, has mastered the art of water skiing. For most people, all we see is a bug that disappears - poof. Unlike water striders who use surface tension to "walk on water", the water lily beetle employs physics to accomplish "interfacial flight" zooming between lily pads. Scientists have recorded their methods and, like a plane preparing for takeoff, observed the steps they go through to take advantage of the physics of surface tension and drag to perform flight at the nexus of air and water. Like a final pre-flight check, the beetle first lifts its middle pair of legs, then raises its wing covers called elytra, and "stands up" angling its body upwards, front legs raised in a goalpost position, then uses its flying wings to whizz across the water. On that last pair of legs, tarsal claws create drag and keep it tethered to the water's surface. Manu Prakash of Stanford University and his colleagues used high-speed video and mathematical analysis to study the beetle's



Photo by Fedaro CC



movements and the physical forces involved. Their study describes the trek from leaf to leaf as a bumpy ride, stating that they, “move so fast that they interact with the ripples generated by their own motion, which increases drag and causes a bumpy ride. It’s as if surface tension acts as a pogo stick that the beetle is jumping on.” According to their study, the beetles’ strong wings “allow them to produce a lot of lift while counteracting drag from the surface. And their legs are covered with tiny hairs that repel water while a claw at the tip is hydrophilic [water-loving], allowing them to pin themselves to the surface of the water.” All we see is that the beetle has disappeared (at speeds up to .5 meters/second); that’s the equivalent of a human speed demon traveling at over 300 MPH. To check out the water skiing beetle in slo-mo visit: <https://www.newscientist.com/article/2079427-the-secret-of-beetles-that-waterski-so-fast-they-vanish/>.

Especially important for lake and river properties is a side note related to treatments that may be offered for your protection or comfort. According to the National

Wildlife Federation, “Most residential mosquito control companies use insecticides known as pyrethrins, which are chemicals derived from chrysanthemum flowers that are toxic to insects; or more frequently, pyrethroids, which are synthetic chemicals that mimic pyrethrins. Whether natural or synthetic, these are broad-spectrum insecticides that are highly toxic to a wide variety of insects, not just mosquitoes.” They go on to warn that many companies use these products in their standard treatment options – “Marketing efforts and corporate talking points correctly state that these pesticides are regulated and approved for use by the Environmental Protection Agency (EPA), but that doesn’t mean they are without any negative environmental consequences.” Make sure to consult an unbiased expert before applying treatments for pest control – especially near lakes, wetlands, and streams where pollinators such as butterflies and bees, fish, and other aquatic life may be inadvertently affected. More information can be found at: <https://blog.nwf.org/2020/09/what-you-need-to-know-before-spraying-for-mosquitoes/>.

A BIGGER MINIMUM WDNR Considers Raising the Size Limit on Flowage Muskies

By Mike Hittle with assistance from Jim Kohl

On April 11, available members of the association Fish Management Committee met in Mercer with Zach Lawson, WDNR fisheries biologist for our region, to discuss a possible change in the minimum size limit for muskellunge in the Turtle-Flambeau Flowage. At the present time, the minimum size limit is 40 inches; the proposal under consideration would raise the limit to 50 inches.

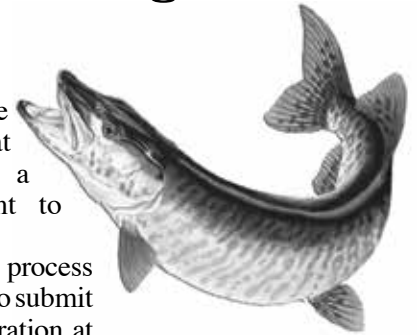
In putting forward the case for an increase in the size limit, Lawson pointed out that the flowage has both the history and the genetics to support being listed among those state bodies of water that currently have 50 inch minimums for muskies. Lawson went on to note that he had previously been reluctant to raise the limit, lest it call further attention to a fishery that was already receiving substantial angling pressure. But with the now firmly entrenched “catch and release” ethic, it seems that most fish that fall between 40 to 50 inches are returned to the water. Given that practice, a 50 inch minimum would affect few anglers, and it would allow for a handful (large hands required!) of trophy-sized muskies to live to follow lures and raise angler heart rates in the future.

In addition, Lawson noted that recent stockings of muskellunge in the flowage have fallen short of numerical targets. He hopes that the proposed regulation might help, in some small way, to compensate for the decline in the number of planted fish.

The potential benefits of this rule change would be marginal, rather than dramatic. Even so, the members of the association Fish Management Committee present at the meeting were in agreement that the change would be for the better. Subsequent communications from other committee members who responded to minutes of the meeting echoed the same sentiments. Based on this evidence, Jim Kohl, Fish

Management Committee chair, considers that the committee gave a unanimous endorsement to Lawson’s proposal.

The next step in the process will be for Zach Lawson to submit the proposal for consideration at the Spring 2023 WDNR hearings. Depending on the outcome of the hearings, the new regulations could be in place in 2024.



A Brief Musing on Measuring Muskies

The historian in me can’t resist putting the proposed new musky size limits in perspective of a very personal kind. Though it’s been many decades since I have harvested a musky, the act of measuring them has been a constant in my life. As a youth, I fished with a Vilas County guide who had filed two grooves, 30 inches apart, on the seat of his double-ender trolling boat to mark the length of a legal muskie. In reverent imitation, I did the same when I got my first boat. When the 40 inch rule came in place, I tried my best, but failed, to “borrow” my wife’s beloved 48 inch “yardstick,” and had to settle for marks along the gunwale, not the safest of places to be measuring an unwilling visitor to the boat. Now I carry a metal tape measure, which has more than adequate capacity to measure a 50 inch fish, but its utility is limited practically by my 54 inch wingspan. That limitation could, in a world of happy imagining, pose a problem, but it would be one I’d be thrilled to confront. In the meantime, I’ll be happily dreaming about the implications of a 60 inch minimum in the distant future.





Driftwood

The newsletter of the Turtle Flaubeau Flowage
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— *Mission Statement* —

The purpose of the Association is to maintain, protect and enhance the quality of the lake and its surroundings for the collective interest of members and the general public.

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