



Driftwood

Spring / Summer 2017

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

TFF Musky Population Estimate in the Books!

By Zach Lawson, WDNR

With a little over a year of field work, the TFF comprehensive fish survey is complete! On April 25th, we pulled the last of 30 fyke-nets deployed during 2017. These last net surveys targeted adult muskies as a 'recapture' component of a 'mark' and 'recapture' study to estimate the total number of muskies that swim in the TFF. This is a terribly large undertaking for the small crew out of the Mercer Ranger Station, probably why it has never been done before. However, with some of the recent changes in the TFF fishery (i.e. documented natural recruitment of muskies), we felt that it was important to understand exactly how many fish are out there.

So how does it work? In short, we 'mark' fish one year by tagging every adult musky we handle in survey work (primarily using large fyke-nets, this was done on TFF throughout 2016).



A behemoth 47" female from Spring 2017. Notice the smile!

equations we relate the ratio of tagged fish/untagged fish in the recapture event (2017) to the total number of fish we marked in 2016 to get an estimate of what the total number of fish in the population is (all tagged and untagged individuals across both years).

To be honest, from my own angling efforts, talking with many of you folks, and hearing reports from countless anglers,

I was expecting to find that TFF was home to many, many muskies. Just think - 13,500 endless acres of stumps and islands and rock bars...and all that food, there must be a ton, right? Well what we found was surprising.

During the 'marking' period in 2016 we tagged a total of 172 adult muskies ranging in size from 22.5-49.5". During our 2017 efforts, we netted a total of 165 individual muskies (18.5-49.5"), 21 of which were tagged during 2016. Using the ol' calculator we

come up with a population estimate of 1,359 adult muskies that call the TFF home. That's .1/acre of water, 1 for every 10 acres of water, roughly one every ten football fields of surface area, or however you care to put the number into perspective. The long and the short of it is that there aren't as many muskies out there as I was maybe thinking. But, that is a good thing! We are aiming for balance in the fishery, and too many top predators like muskies can have adverse impacts on the rest of the fishery. Additionally, we are attempting to maintain a shot at a giant out there, and too many adults can hinder growth and 'top-end' production of trophies. This density of muskies is on the low-end relative to other populations in northern Wisconsin, and on-par with many other trophy systems, so this is all good news.

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very next year, we return for a 'recapture' event, and conduct a fyke-netting survey for the duration of the musky spawning period across the entire system (this would be our efforts in April of 2017). Using mathematical

President's Letter

By Jeff Malison



As I near the end of my 4th year on our property owners' association board of directors and my 1st year as president, I've become more and more aware of how closely our organization is tied to science. We are a dedicated group of volunteers who work with management professionals to monitor several key water quality parameters at different locations across the flowage. Science tells us that tracking these parameters will inform us if the water quality begins to decline, if changes in the water quality will affect our fish and wildlife, and what can be done to stop or slow any changes that might be detrimental. We also have volunteers who track and control many of the invasive species that have become prevalent in our northwoods. Again, science has revealed the pernicious effects of these invasives. Fisheries management is a well-studied branch of science, and our fish managers and fish management committee continually use that science to help maintain and improve our fishery.

As a professional scientist, I cannot help but notice how often science has been in the news recently, and frequently not in a good way. This was not always so. One of the primary reasons why I became a scientist was that, in my formative years, science was always the great hope, and almost everything that came out of science advanced our country and world. Science told us why our waterways had become so polluted (perhaps some of you remember Cleveland's Cuyahoga river catching fire or how Lake Erie died), and showed us how to solve the problems. Similarly, the smog and air pollution that affected many of our cities were studied, and then controlled. The development of vaccines and antibiotics were so successful that they have extended all of our lives. And we had a president who had a vision of humans travelling to the moon, a goal the nation reached only six years later.

Today, science has unfortunately become politicized. But equally concerning to me is that so many otherwise well-educated people fail to understand the simple basics of what science is and how it works. Science relies on a methodology that has led to an ever increasing understanding of the physical and natural world. This scientific method is based on evidence and relies on mathematics and probability.

Science begins with a scientist making or studying an observation. For example, let's say that one of our great ancestors many hundreds of years ago repeatedly observed that groups of walleyes are seen on spring evenings swimming in very shallow rocky areas. This ancestor hypothesized that the walleyes were there to reproduce, rather than, let's say, to feed on a concentration of minnows. So this ancestor collected several hundred of these walleyes, and observed that >95% of the fish were full of either fully developed eggs or sperm. This experiment confirmed our ancestor's hypothesis.

For an hypothesis to become a theory, it must be tested time and time again, usually looking at the observation from different angles. So someone might inspect our shallow spring walleyes to see if a certain type of food was in their stomachs, or could examine the bottom of the lake in the shallow areas to look for developing eggs or hatching fry, or could look to see if walleyes were gathered there at other times of the year, etc., etc., etc.



The hypothesis becomes a theory only after a large number of confirming experiments, each at a probability of at least >95%. Of course, anyone can choose to not accept the theory, but they should recognize that the statistical probability that they are correct is extremely small.

Some theories remain valid for years, but then get modified or even disproven by new observations or experiments. Other theories eventually become scientific facts.

Now, what I think that many people fail to understand is the fundamental difference between scientific hypotheses, theories, and facts, on the one hand, and beliefs, on the other. Beliefs are opinions or convictions that we hold that either have not been scientifically confirmed, or are simply outside the realm of science to investigate. An example of the former might be the existence of extraterrestrial life, and examples of the latter include many beliefs of morality and religion. It's great to have beliefs, and we all have them. But for me, it is critical to recognize the difference between science and beliefs.

Over the past decade I've heard and read about many examples of people confusing science and beliefs. Much of this confusion has resulted in what many people are now calling scientific denialism. Scientific denialism has resulted in some of the recent and proposed cuts in funding for science



education and research. Nationally, dramatic cuts are being proposed for the EPA, the same agency that helped clean up our air and water beginning in 1970. Locally, serious cuts have been made to the University of Wisconsin, including our own Iron County extension offices. Similar cuts are harming the ability of the WDNR to manage Wisconsin's

forests, fisheries and specifically our own crown jewel, the Turtle-Flambeau Flowage. In my opinion, great societies lose their mojo by turning their collective backs on knowledge and science. For the good of our country, state, and our treasured local resources, I hope that this trend does not continue.

Tap Into Science

From the UW-Trout Lake Website

In Minocqua

Forget the lecture, at Science on Tap-Minocqua, you won't find jargon or a PowerPoint presentation – we search for scientists who are good at well, not sounding like a scientist. Our topics are wide ranging, spanning issues from bacteria to bees and from a search for life on other planets to a search for the perfect pint.

The series provides a forum where the public engages experts in an informal, two-way conversation about important issues of the day. Speakers provide 15 or 20-minutes of opening remarks, then the floor is opened for questions, letting the audience join the conversation. The result is a dynamic, engaging community gathering.

Science on Tap-Minocqua is the result of a unique partnership among UW-Madison's Trout Lake Station, UW-Madison's Kemp Natural Resources Station, the Lakeland-Badger chapter of the Wisconsin Alumni Association, the Minocqua Public Library and the Minocqua Brewing Company and exemplifies the Wisconsin Idea – that the boundaries of the university are the boundaries of the state.

Events are held at the Minocqua Brewing Company, a restaurant in downtown Minocqua, on the first Wednesday of each month (except July and August). This relaxed setting, combined with the accessible program format, fosters public engagement. But you don't have to make your way to the brewery to join the discussion – interested members of the public can also watch a live stream at the Minocqua Public Library, watch a live stream from your home over your own Internet connection or watch our archived programs online.

Free, fun and open to everyone! We hope you'll join us at the Minocqua Brewing Company for Science On Tap Minocqua! For those wishing to eat at the Brewery before or after the event, mention Science on Tap and get 10% off. And, if you can't join us in person, you can still watch

In Mercer



Conservation on Tap
6-8 pm

2017 Event Calendar

June 13th: Wisconsin's Wetlands Plants:
Bladder Worts, Carnivores insect eating plants, and Sphagnum Moss. Come learn about the amazing Plant World of Northern Wisconsin with U.W. Madison -Trout Lake Limnology Center's - Susan Knight.

July 11th: Turtle Flambeau Flowage Fish Study :
Zach Lawson, WDNR fisheries biologist shares the most recent fish survey on the flowage. Learn about the flowage habitat conservation project and area fish management.

August 8th:
Wisconsin's Pollinators and the Honey Bee:
Chris Hansen is the current President of the Oneida County Beekeepers and owner of Hansen Honey Farm.

September 5th: Wisconsin Turtles (Live Animals): Join Discovery Center's Naturalist as they share with us the secrets of our turtles. Learn their ecology, unique adaptations, winter survival, and their conservation concerns.

All events will be held at The Pines, Hwy 51 in Mercer, WI

Sponsored By: Iron County Land & Waters Conservation Dept. & The Pines

the show and ask questions on line. You can also visit our website to see archives of past presentations, <http://www.scienceontapminocqua.org/about.html>

Science on Tap is supported through a grant from the Brittingham Fund to the University of Wisconsin-Madison.



Learn about the Science of Lakes at the 7th Annual Trout Lake Station Open House August 4

Trout Lake Station Website

You may not be aware that we have a world class limnology research center right here in the northwoods. The UW-Madison Center for Limnology research station at Trout Lake just north of Woodruff is globally recognized for its long term research on freshwater lakes.

The station has a long history of aquatic research. Since its founding in 1925 more than 1000 scientific publications and student theses have resulted from research conducted at Trout Lake. In addition to fostering research, the Trout Lake Station is used regularly for field trips by undergraduate and graduate courses from universities throughout the Midwest.

Since 1981, the station has served as a field site for the North Temperate Lakes Long Term Ecological Research Project (NTL-LTER), along with the Madison Lakes Region in southern Wisconsin. NTL-LTER studies seven lakes and their surrounding landscapes to understand the long-term ecology of lakes across a broad scale, including relationships to atmospheric, geochemical, landscape and human processes.

If you would like to learn more about lakes and cutting edge science results, you can get a snapshot of the work at the station

during the 7th annual open house at the Trout Lake Research Station on Friday, August 4th. From 1 to 5pm, visitors will get a first-hand look at what research is going on at the station this summer, as well as meet the scientists and students conducting it.



Researcher Noah Lottig shares research data with visitors.

Visitors will have the chance to ride out on pontoon boats for a “research cruise” on Trout Lake, meet some of the fish that call Wisconsin’s northern lakes home, learn to tell invasive species from natives, and talk with scientists about the state of Wisconsin lakes and our role in keeping them healthy for future generations. There will be aquatic-themed crafts for kids, an art exhibition of material produced by the station’s annual “Artists in Residence,” and, of course, free Babcock Dairy ice cream brought up from the University of Wisconsin’s Madison campus!

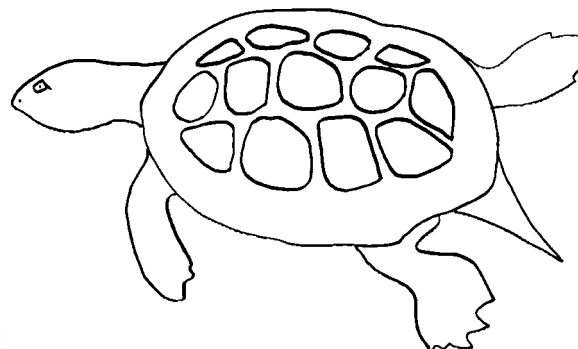
The event is free and open to visitors of all ages.

Scientists at the Center for Limnology conduct research all over the world, exchanging knowledge and helping to solve global environmental problems. We hope you’ll join us at Trout Lake Station, where researchers are doing world-class research on Wisconsin lakes.

Trout Lake Station is located at 3110 Trout Lake Station Drive off Hwy N (between Hwy 51 and Hwy M). For more information, call 715-356-9494.



Susan Knight, aquatic plant expert, shows visitors plant samples



Mr. Birch Thaws Out

By Mr. Birch, as told by Chad McGrath

You may remember back in the Fall/Winter issue of the “Driftwood”, I described my preparations for surviving our Northern winter. And I promised I’d report back in this Spring issue. Here’s my report.

This winter was not bad here around the flowage. A friend who keeps track of such things and lives on the south side of the flowage near Flowage Road tells me that the winter low at his place was only -29. He’s a weather buff, who owns several recording thermometers and keeps track of such things. Minus 29 degrees Fahrenheit is a bit warmer than the historical average low winter temperature for the area. So, for me and my tree friends who have lived here for years, hundreds of years, the coldest aspect of winter was not a problem. But, there were some challenges.

In February, it got unusually warm. While humans generally don’t mind such warm-ups, trees, and other plants with woody parts above ground have trouble with big temperature shifts. You may remember last fall I told you about the physiological changes I go through to cope with the cold. I shunt water from my cells to outside them and I add lipids (fats) to what water remains. Well, when it gets too warm in the middle of winter, I start to reverse those changes. If it stays warm for several days and then gets cold again, I am not as able to prevent the freezing water inside me from damaging my cells. It seems that I and my native tree friends are ok, but I know of one magnolia tree and some rhododendrons, again near Flowage Road, that are blooming late and weakly. They may have incurred some damage.

As you may know, I have two main tasks that must be accomplished each spring. I grow my leaves so I can begin producing sugars that nourish me, helping my trunk and limbs bulk up. and I must produce seed so I can reproduce myself. Growing my leaves is simple. Most of what’s required is already here. My buds simply need some moisture, which

I pull up through my roots as the ground thaws. They also need some sugar, which is already stored in my roots. As I am telling you this in mid-May I have been accomplishing this replenishment for over a month. You are all aware of my northern friend, sugar maple (*Acer saccharum*) and his/

her sap. I too have such sap and some of you even make syrup from it, although it takes 50% more to yield the same amount as maple sap.

Besides leaves, my sap also supports the production of my sexual parts. Plant sex may not be as familiar to you as that of animals, but it does exist and is necessary for the continuation of not only plants but since plants provide food and oxygen, virtually all animals. Try not to forget that next time you cut

down a tree, or herbicide some unwanted plants.

Unlike most humans, individual birch like me have both male and female parts. Most trees are similarly ambidextrous. Oops, maybe I mean androgynous. Anyway, in the world of botany it’s called monoecious. Quaking aspen (*Populus tremuloides*), one of my local neighbors here around the flowage is sexually more animal-like...it has male and female trees. It’s dioecious. Fertilizing someone else sounds weird to me, but I’m told by my aspen friends that it’s quite fun. No matter your method, our sex produces catkins, some male and full of golden pollen and some female full of seed. My seeds are small, hundredths of an inch wide and long. I am told that they look like fleur-de-lis. Mrs. Aspen produces seed that’s connected to what looks like cotton, the better to float far and wide in the wind. I am a bit jealous because her seed floats so far and can germinate far away from her. Perhaps that’s why she/he is the most widely distributed tree in the world.

Ok, that’s all I have time for right now. I just noticed I’ve started releasing my pollen and will soon be fertilizing my female catkins.

I like to watch.



Mr. Birch’s Catkins

DNR Forms Flowage Stakeholder Group

The Wisconsin Department of Natural Resources (DNR), in conjunction with Xcel Energy, is creating a stakeholders’ group for the Turtle-Flambeau Flowage. The stakeholders’ group will be an excellent venue to communicate flowage management issues and to address concerns and discuss possible science supported changes to existing management practices. The hoped for outcome is to enhance the protection and preservation of the flowage’s precious natural resources.

Our association will have representation at the stakeholders’ group meetings, which currently are being planned to commence this fall. The plan for subsequent years is to have semi-annual meetings, with one in the spring and the other in the fall. We appreciate the DNR and Xcel Energy moving this stakeholders’ group initiative forward.

How to Access Data on Flowage Water Levels

By Tom Mowbray

Members have been reporting problems getting current data when using the link to Xcel Energy for TFF elevation and discharge. Depending on search engine and/or web browser used, results from several different dates come up. We have reported this issue to Xcel and they are working on it, unsuccessfully to date.

To get the most recent TFF elevation and discharge data, we have found these steps work best:

Go to the “BING” search engine (not Google). – <https://www.bing.com/> In the search box type: “Xcel Energy Hydro Level”. The first item is a link to the Xcel page for Hydro levels, click on this item for most recent data.

Thanks to everyone for using this “round-a-bout” method for accessing current information, we will continue to work with Xcel to correct these problems.

TTF Musky Population

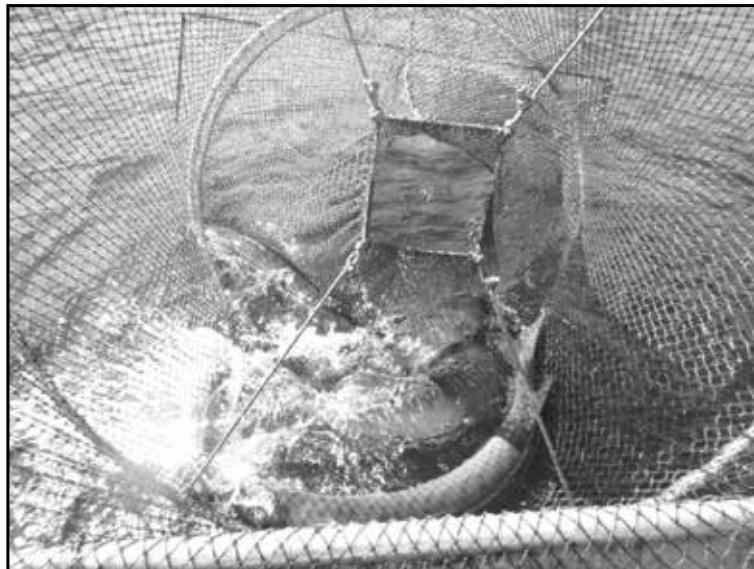
Continued from page 1

The other very interesting component of this survey is that every one of the fish we handled had a unique tag or ‘name’ which allowed us to investigate stocking success, natural reproduction, growth rates, movements etc. While we still have a lot of data entry and analyses to complete, there are a few interesting things that pop out when taking a cursory look at the recaptured individuals. I’ll rattle off a few highlights here:

- Of the 2,908 fingerlings stocked in 2012, we recaptured four in 2016 (all males averaging 26.3”) and 12 in 2017 (all males averaging 30.4”).
- Of the 2,494 fingerlings stocked in 2015, we recaptured four in 2017 (all males averaging 24.5”).
- Of the 21 recaptured adults in 2017 (all tagged in 2016), eight were females and averaged 0.93” of growth, and 19 were males which averaged 0.98” of growth.
- The largest fish recaptured during 2017 were a 48.3” female that grew 0.3” and a 46.1” female that grew 1.0” in a year.
- The oldest fish aged during 2016 were 46.6” and 47” females that were only 14 years old (more to come from 2017, and seeing as though we can expect some muskies to live ~20 years, I’m sure that 1) these fish are not done growing and 2) there are some much

larger fish out there).

- Of all 21 recaptured muskies in 2017, only four fish were found further than a mile from where they were tagged. A 39.4” male was tagged in Blair and recaptured by Bonies mound, a 38.6” male was tagged by Fisherman’s Landing and recaptured in Beaver Flats, a 43.2” female was tagged in Baraboo and recaptured near Mud Lake, a 37.3” male was tagged by Bonies mound and recaptured in Fourmile Creek.



A net full of Muskies

In summary, the musky population looks fantastic. Not too many, and not too few. There are many impressive specimens out there, but there are also some young ones coming up. Over the next year we will be working to age more of these fish, analyze stocking success and natural recruitment to balance growth and size structure with adult densities. There will be much more information on this survey as well as

the rest of the 2016 comprehensive survey coming soon, so stay tuned! For now, hopefully there is enough here for you to chew on while you’re plugging away hunting up one of these green giants. As always, feel free to contact me with questions or comments, always nice to hear what you are seeing on the water.

Tight lines!



Editors are always looking for new material relevant to whatever publication they are editing. With that in mind, we whom edit Driftwood came up with the idea of having a poetry contest for the spring/summer issue. This is that issue. Because we only received entries from four people, we've decided to publish work from all who submitted. Thank you folks.

If anyone wishes to submit something for the fall/winter issue, please feel free. We will publish it if we have room and don't have too many submissions...which given the response to our contest, is unlikely.

Chad

A TRIO OF TURTLE-FLAMBEAU FLOWAGE LIMERICKS

The Lake of the Falls, oh so glorious
Its tumbling waters uproarious
Through the reeds along shore,
You'll find creatures galore
And its campground you'll deem meritorious.

To the flowage waters we're drawn
By its pristine beauty at dawn;
Where loons call and dive,
Eagles breed, nest and thrive
And abundant fish species spawn.

The Turtle-Flambeau-unique
With its size and alluring mystique;
Will give you the reason
No matter the season
To witness the beauty you seek.

Jean Swenson-Marshfield

The Old Flowage Dweller's Lament

There was an old man in his dotage,
Who lived all his life on the flowage.

Mean as muskie,
Swift as a sturgeon,
He took no crappie
And needed no urgin'

To head for the far shore
For a limit of 'eyes
And perhaps a bit more
If no warden he spies.

Tied up to a stump
A minnow he sinks
This'll get a good bump
He happily thinks.

The wind's from the south
He gets a hard hit
The fish is a smallmouth
He cries out "oh shucks."

By Mike Hittle

Longest Day - Again

This time will be different.
It will seem the same but not.
The sun will shine as bright
And daylight will not stop.

But forget about sleep.
Do not long for the night.
Warm days surrender fast
Beyond our grasp or sight.

So embrace these long days
Before they disappear.
For soon you will look back
Wishing they were here.

Lance Flambeau

The Night

Tonight is a very special night.
Tonight this memory will last forever.
Tonight I sit by the nice toasty fire.
Tonight I hear the loons calling to each other.
Tonight the stars are gleaming in the shining water.
Tonight is a very special night.

*By Brad Gonn, age 13
May 2008*



Partnering to Protect Spawning Habitat

Heather Palmquist – Iron County LWCD, Conservationist

The Natural Resource Foundation enables grant recipients to do some unique projects throughout the state. The Turtle-Flambeau Flowage is fortunate enough to have its own grant program prioritizing projects that will directly benefit the Turtle-Flambeau Flowage and a second priority going to projects that are within the TFF watershed. Over the past eight years that I have been with the Iron County Land & Water Conservation Department (LWCD) we have utilized this grant several times and have done some great projects, often partnering with the DNR. We have collaborated with the Mercer School to install erosion control practices at several campsites. A couple of years ago we conducted lake survey work in the Town of Sherman to jump start a volunteer program throughout the township to sample water quality. By working on lakes in the TFF watershed, we hope to indirectly impact the flowage itself. Last year we engaged in terrestrial invasive species management at boat landings and on Big Island.

This year, the partnership is focusing on protecting spawning habitat. Last fall the fisheries crew and I conducted habitat surveys of traditional spawning areas and adjacent shorelines. This year we followed up with a project to stabilize some areas of shoreland to protect spawning

grounds that were being covered with sand from the eroding banks. Live fascines (a bundle of live cuttings of willow or dogwood) have been installed at the toe of some eroding banks to establish vegetation to hold the shoreline in place. The willows and dogwoods will grow from this bundle, stabilizing the bank.

In the coming month, there will be some additional planting and seeding projects to address other areas of concern across the flowage. We are also planning plantings at some of the areas treated for invasive species last year, including Fisherman's Landing. This will require some action from members of the TFFTL POA. We will need assistance watering these plants to ensure their successful establishment. If you are willing to assist in watering, please contact me at lakes@ironcountywi.org or call (715)561-2234.



A fascine, or bundle of live cuttings, at the toe of an eroding bank.

Most people who boat or live on the TFF are very familiar with our challenges relating to erosion. On such a large waterbody with fluctuating water levels and vulnerable soils it is a big challenge. We are lucky to have the Natural Resources Foundation grant to help us tackle these projects.

Association Driveway Signs Available

Good news, folks! Driveway signs for our members have been completed and are ready for distribution. They will be available to all members at no cost. BUT we would really appreciate it if you could make an additional one-time contribution of \$15 when you renew your annual membership. Those contributions will help defray the costs of the signs.

Signs will be available for pickup at the annual meeting on June 17. If you are unable to attend the meeting, please contact the board member who lives nearest to you to arrange to get your sign.

The signs will come with stainless steel bolts and nuts for your installation. Most signs have been drilled with holes to accommodate the old-style firesign posts. If you have a new, flag-style fire number, be sure to ask us for a flag-style sign.



Lake Names: Eponyms and Immortality

By Mike Hittle

Have you ever thought of gaining a foothold on immortality by having a lake named after you? So far as I know there's never been a form to fill out or a registration fee to pay. All you need to do is get your name associated with a body of water through some straightforward, upstanding act, like purchasing land adjacent to, or better yet, all around a lake no one has ever heard of and then hang around long enough for people to figure that must be your lake. Or, of course, you could achieve the same end by doing something really stupid, like trying to have a clambake in the hull of your elegant wooden boat, or attempting to set out tip-ups in response to a July cold front. The important thing, as we know from today's celebrity-driven culture, is that you keep mentioning to everyone within earshot--and beyond--just why the lake should bear your name, no matter whether your claim is to fame or infamy, and why the public should simply accept that fact and get on with it.

Yet when this issue is looked at historically, a problem turns up: the names of lakes change. I could have said that lakes change their names, but such a way of phrasing the issue gives undeserved agency to lakes and not nearly enough agency to the rather fickle public that is the ultimate arbiter of lake nomenclature. Indeed, history suggests that if you put in your claim early on, there is a distinct possibility that someone else, possibly decades or centuries later, will replace you as the eponymous figure on the latest lake map. There is clearly a case to be made for "better late than early and out."

Here are a few examples of name changes from the area around and including the Turtle-Flambeau Flowage that attest to the risks of basing one's immortality on a named (for you) lake.

Van Hise Lake shows up on an early plat map, only to be replaced on a subsequent map by two lakes—Muskalonge and Turtle. Poor Van Hise seems to have lost out to some enterprising critters with much deeper ties to the area. But the animals, in turn, were displaced by a homesteader named Bastien, who, after his name underwent a couple of misspellings, has lived on in memory as Mr. Bastine—even if the better part of his homestead and all of his lake have been subsumed by the TFF.

Birge Lake? Today, it is part of Second Black Lake and all of Third Black Lake. Birge can be a first name or last name, so it is not clear who has been lost to the sands of time.

Red Lake? We don't know Red's last name. Perhaps there was no Red, just a glowing sheet of water first viewed at

sunset by some lost logger. But we know it now as Merkle Lake, which is probably acceptable to John Merkel, whose name was modestly Bastinized. His lake is also under water, but you can easily find it by hitting a really nasty rock bar and then drifting, immobile, into deeper water.

One curious map shows part of a lake, Flint Lake to be precise, in sections 25 and 26, and the other part of the same lake, called Baraboo, just a stone's throw away in sections 30 and 31. A baraboo is a disinterred monadnock. Does that help?

Baum Lake is now Sand Lake. Given the number of trees and the amount of sand in the area, this shift in names seems a real failure of imagination.

Barlow Lake is now Blair Lake. Who was Barlow? Who was Blair? Does it matter since the area is underwater and accessible only at the risk of severe propeller damage. An odd form of immortality.

Horseshoe Lake and Townline Lake, the former aptly named for its shape, the latter for the town line that bisects it, seem quite pedestrian substitutes for Lake Leah and Lake Mary. At least the poor ladies were spared inundation and eternal representation by crosshatches on flowage maps.

Scott Lake gave way to Wilson Lake; and Riley Lake to Grant Lake. The interesting thing here is that at least one significant historical figure exists for each of these names, even though it seems unlikely that anyone had the eighteenth president of the United States in mind when Riley's bid for immortality was defeated.

As if all this isn't puzzlement enough, the initial plat map from 1865 does not show any water where Lake Ten (aka Bass Lake), Rat Lake, Mud Lake, and Sweeney Lake are said to lie beneath the waters of the flowage. What did Sweeney see that others did not when he attached his family name to something not even the surveyors found? But take heart. A determined campaign to get Rat or Mud lakes renamed in your family's honor might succeed, as might an effort to put a human imprint on all those lakes that still bear the number of their section—that is, Lake Ten, Lake Six, Lake Nine, etc. But one word of caution to ambitious readers. Even if your family is really named Bass, don't go the lake-naming immortality route or things will likely come to a sad pass. According to the March 18, 1941 Rhinelander Daily News, a "Federal Board" gave 78 Vilas County lakes new names. Eighteen of them had previously been named Bass Lake.



Fishy Science – the Mystery of Walleye and Bass in Wisconsin Lakes

By Terry Daulton

If you are a science enthusiast or a lake lover, the annual Wisconsin Lakes Conference always has something interesting to offer. This spring at the conference in Stevens Point I listened to an excellent session on walleye population research around the state. Fisheries has always fascinated me. As someone who worked on land based species that you can actually see, count or track, the idea of studying a species that is largely invisible carries a mystique. So it was with some anticipation that I joined the packed room at the conference and settled in to hear about recent data on walleye.

The program was given by Greg Saas, a WDNR scientist and research supervisor based in Vilas County. The research author is Andrew Rypel (ironically a fisheries researcher whose name is pronounced “ripple”) After the conference I contacted him and he shared the following summary of his work.

The first part of his paper (not yet published) addresses walleye in Wisconsin lakes. His key points are as follows:

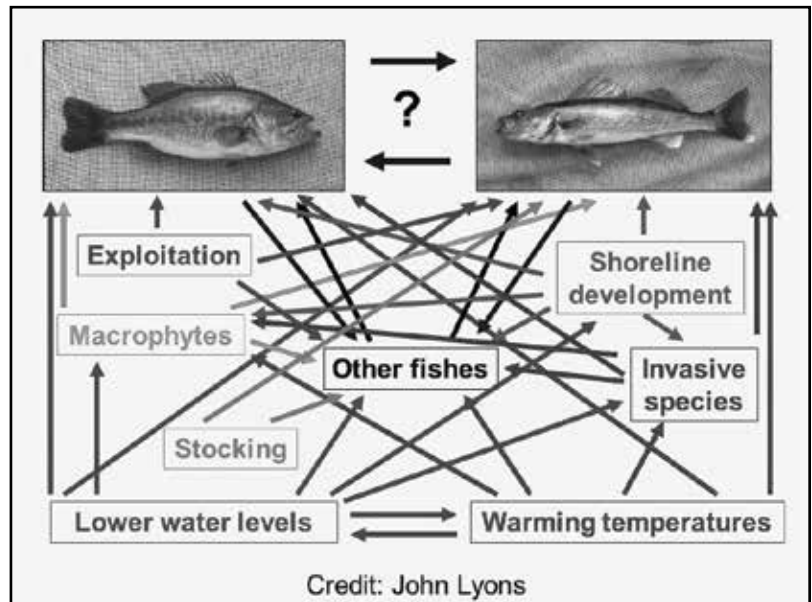
Production of adult walleye in WI is directly related to walleye recruitment (birth rates of new baby walleye). Production of adult walleye in northern Wisconsin lakes is highest in lakes with pure natural reproduction (like the TFF). It is lower in lakes with a mix of natural reproduction and stocking, and lowest in lakes with only stocking (no natural reproduction). This is not evidence that stocking reduces walleye production, but rather just shows that natural reproduction is a huge key to having lots of walleye in lakes.

In many northern WI lakes, walleye recruitment rates started to decline regionally beginning in the early 2000’s. Add to this story the complication of small and largemouth bass which share many of the same lakes with walleye.

Andrew Rypel shared that at the same time as walleye recruitment began to decline (the early 2000’s), densities of adult largemouth and smallmouth bass have been increasing. This pattern (declining walleye and increasing bass) is what is now becoming referred to as the “bass-walleye” problem. Researchers currently do not know what is causing this problem, or even if it is a problem. A diagram from the Wisconsin Lakes presentation gives an idea of the complication of determining cause and effect with fisheries and change over time in lakes. Please note the many arrows and interactions for all the many hypotheses that exist on what is causing the problem. There are many ideas!

Rypel says “A large collaborative team of managers, scientists and academics has been assembled that is trying to better understand the problem and what managers can do to abate, reverse or cope with these trends.”

Research by Gretchen Hansen (PhD researcher now with the MN DNR) shows that walleye recruitment is strongly related to water temperatures (higher water temps are not good for walleye recruitment). Furthermore, largemouth bass abundances are also strongly related to temperatures but in the opposite direction (warmer temps are generally good for bass recruitment). However, water temperatures are unmanageable at the local scale. For example, a fish manager can’t change water temperatures; thus we need to consider how we can make lake ecosystems more favorable for walleye in other ways.



So where do the researchers go from here?

There are several ecosystem-scale experiments that are examining potential management options that could be used to deal with these trends. These include:

- 1) The sunfish removal experiment. This experiment (led by UW-Madison researchers) is attempting to take a lake with declining walleye recruitment, and remove all the warmwater fishes like bluegill and largemouth bass to see if this type of intensive management might help stimulate walleye recruitment. Essentially, they are testing whether managers might be able to sculpt lake food webs to their liking – in this case to resemble a classic perch-walleye lake - as one might see in Canada. No one knows if this will work or not!
- 2) There is some evidence that removal of coarse woody habitat from the shorelines of lakes is not good for some fish species. For example, perch hang their eggs over littoral woody habitats; thus removal of wood from lakes might be bad for perch which may in turn be bad for things that eat perch – like walleye. Thus one trend that has popped up are “fish sticks projects” – where wood bundles are being dropped into lakes to help fisheries by providing additional



woody habitat. However the question remains whether such efforts just attract fish or actually help produce more fish. There is an experiment just starting this coming winter that will be adding large amounts of wood to a northern Wisconsin lake and monitoring fish production (including walleye) in the lake over a very long time frame (20-30 years) relative to a control lake.

3) There is also the Minocqua Chain experiment. In this case, a potential harvest effect is being examined. Here, walleye harvest has been reduced to zero while harvest regulations for bass have been liberalized. Over time, biologists are hoping to see whether recruitment of walleye improves relative to control lakes because of the regulation change.

Rypel goes on to say, “In the end, we don’t know whether any of these efforts will be successful. It took a long time for these patterns to develop, so the solutions will also need to be long-term. However, we are confident that with good science

and management, there are places where we can make a difference.”

This walleye research summary shows the complexity of scientific study on a species that is part of a dynamic system. Additionally, it highlights Wisconsin’s deep cultural ties to the species and the importance of walleye to the Wisconsin economy. However, lest you feel downhearted about the future of walleye and the wait that may be in store to learn the end of the walleye science study, Andy Rypel adds this final note. “In my research on production rates of walleye in Wisconsin lakes, I can testify that Turtle Flambeau is one of the most productive walleye populations in the state. Its biomass turnover rate is in the top 3% of all walleye populations in Wisconsin; thus it produces walleye biomass at a really fast rate compared to other lakes in Wisconsin. It is clearly a special place for walleye.”

Turtle-Flambeau Dam Dike Construction

By Dean Steines, Xcel Energy

Editor’s note: Dean Steines is presenting at our annual meeting this June. The following is a summary of the TFF dike project.

The Chippewa and Flambeau Improvement Company (CFIC) intends to construct two new earth dikes to the east of the spillway (at the TFF dam). The dikes will prevent water from escaping the reservoir at low rim locations during extreme flood events. The proposed dike locations are in the area of the Sportsman’s Landing and between Lake Bastine and Minnow Lake. The need for the dikes stems from a change from state to federal jurisdiction and recent surveys.

The Turtle-Flambeau Dam was constructed in 1926 to create a storage reservoir to provide uniform downstream flow and flood control. One of the purposes of the dam was to augment flow for downstream hydroelectric plants on the Flambeau and Chippewa Rivers. In 1997, the Federal Energy Regulatory Commission (FERC) claimed jurisdiction over the dam because of the hydropower benefits it creates. The project was licensed through an amendment to Xcel Energy’s Big Falls Project in 2008.

The FERC, which has more stringent spillway capacity rules than the state, required CFIC to perform additional studies to ensure that the dam can safely pass the probable maximum flood (PMF). The PMF is the largest flood that is hypothetically possible, resulting from the most extreme precipitation and soil conditions. The studies showed that the Turtle-Flambeau Reservoir would overtop some of the dikes during a PMF event. In contrast, the Wisconsin DNR required that the dam safely pass the 1,000-year flood. The dam can pass the 1,000-year flood with the reservoir remaining within its normal operating range.

Engineers completed subsequent studies to determine whether the existing dikes and the reservoir rim could contain the flood under such conditions. Surveys indicated that some of the existing dikes were not high enough to safely contain the flood. In addition, two low reservoir rim areas were identified as described above. The FERC required that CFIC take steps to prevent overtopping of the dikes and reservoir rim. CFIC raised existing dikes in 2012 where needed to contain the flood with freeboard.

The low reservoir rim areas require new dikes on property that CFIC does not own. The property at the Sportsman’s Landing is owned by the Wisconsin Department of Natural Resources (DNR) as part of the Turtle-Flambeau Scenic Waters Area. The property between Bastine Lake and Minnow Lake is privately owned. Efforts to design and construct the two new dikes began in 2012 with initial inquiries to the DNR and the primary affected private property owner.

The design for the DNR site was initiated first. A preliminary design called for the dike to be constructed between Flambeau Dam Road and the Turtle-Flambeau Reservoir. Due to wetland impacts and other conflicts with the Turtle-Flambeau Scenic Waters Area Master Plan requirements, the dike location has been shifted to follow Flambeau Dam Road. Although potentially more expensive, this alignment will lessen wetland and aesthetic impacts of the project. Construction could begin as soon as September 2017, but more likely will begin in September 2018 due to multiple steps and agencies involved in acquiring the property.

Only preliminary layouts have been completed for the private land site. Coordination with land owners will be needed to determine alignments that will lessen the impact to the property while still achieving the project objectives. More detailed design work is expected in 2017 and 2018, with construction potentially in 2019.



TFF-TL POA
PO Box 631
Mercer, WI 54547



Driftwood

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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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