



# TELEOGRAM



The Newsletter of the Wisconsin Chapter of the American Fisheries Society

FALL 2015

Max Wolter— Editor

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## PRESIDENT'S MESSAGE— Mike Seider



Hope you all spent plenty of time outside and enjoyed the summer! The weather was pretty darn nice in the Northwoods, and I spent a lot of time outdoors with my two young daughters. Some of you know I often like to lament about not fishing as much as I once did before having kids. Its mostly in good humor because I have come to realize that introducing my daughters to fishing (and to the natural world in general) is far **more rewarding than all my past fishing trips combined. That's** why I thought I would share this photograph from a wonderful trip I had with my daughters on Chequamegon Bay this summer catching hawg smallmouth bass.

Back in August, I was fortunate enough to represent the Wisconsin Chapter at the 145<sup>th</sup> Annual Meeting of the American Fisheries Society in Portland, Oregon. I truly enjoyed the diversity of sessions and presentations I was able to attend during the week. As usual the meeting provided ample opportunity to socialize with old colleagues and to make new ones as well. Portland was an awesome location for the meeting in addition; great food and even better beers. It reminded me that attending national meetings at least occasionally is an important part of career development and we must continue to relay that message back to our respective agencies especially in light of increasing travel restrictions and budget cuts.

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## 2016 WIAFS ANNUAL MEETING

La Crosse, Feb 17-19



Please plan to join the Wisconsin Chapter of the American Fisheries Society at our annual meeting to be held

February 17-19, 2016 in

La Crosse, Wisconsin.

We will be gathering at the Radisson Hotel in La Crosse (200 Harborview Plaza, La Crosse, Wisconsin 54601,

Phone: 608-784-6680)

More meeting details on pages 2 and 3!

## First call for papers for WIAFS 2016

Submissions for oral and poster presentations from all areas of fisheries and aquatic biology are welcome.

**This year, we will again have “speed” presentations using a 10 minute time format** (rather than 20 minutes) intended for folks looking to share a brief overview of novel field techniques, “works in progress”, graduate student proposals, or future research projects. If you have something interesting to share, but worried you may not have enough to fill the typical 20 minute time slot, please consider submitting a speed presentation. The traditional 20 minute time slots will be available for presenters as well.

The submission deadline for oral and poster presentation abstracts is January 15<sup>th</sup>, 2016.

If you have any questions please contact Greg Sass ([gregory.sass@wisconsin.gov](mailto:gregory.sass@wisconsin.gov))

Visit the WI AFS website for more details as they become available



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### IMPORTANT LINKS:

ABSTRACT SUBMISSION/MEETING INFO: <http://www.wi-afs.org/AnnualMeetings.aspx>

MEMBERSHIP AND DUES: <http://www.wi-afs.org/Membership.aspx>

## **PRESIDENT’S MESSAGE CONTINUED...**

**As we transition into autumn, planning for the next annual State Chapter meeting is really taking off. If you hadn’t heard already, the meeting will be held in La Crosse this time around (see more details later in the newsletter). I would love to see another agenda packed with outstanding presentations like last year, so please consider submitting an abstract for an oral or poster presentation. Prior to the annual meeting we are also planning a continuing education course on fish health to be held at the USFWS Fish Health Center in La Crosse. The course will focus on the field identification (and cause) of infectious and noninfectious fish diseases. Look for more details on the course coming soon via the email distribution list and our website (<http://www.wi-afs.org/Training.aspx>).**

Finally I want to recognize the hard work and devotion of the officers and Committee members of the Wisconsin State Chapter. Some really great people contribute a ton of their time to make this Chapter so effective. They have helped me out many times and made my job pretty effortless in the last few years. Serving as chapter President has been a really fulfilling experience and I would certainly encourage others to consider running when the call for nominations goes out. Have a great Fall season and I hope to see you all at the annual meeting!

Mike Seider

## Lodging at AFS 2016:

Blocks of rooms have been reserved for the nights of February 17 and 18 at the Radisson Hotel and the nearby Holiday Inn & Suites <http://www.holidayinn.com/lacrossewi>

Rates for the Radisson Hotel are \$83.00 (Standard One King) and \$129.00 (Standard Two Queen). Reservations for the Radisson Hotel can be made by calling (608)-784-6680 or (800)-333-3333 and specifying the WI Chapter of the American Fisheries Society rate.

Rates for the Holiday Inn & Suites are \$82.00 (Standard One King) and \$82.00 (Standard Two Queen). Reservations for the Holiday Inn & Suites can be made by calling (608)-784-4444 or (800)-HOLIDAY or online at <http://www.holidayinn.com/lacrossewi> and specifying the WAF group code.

Reservations at both locations must be made by January 17, 2016 and Wisconsin state employees should bring a copy of their state tax exempt form with them when checking in.



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## Best advice I ever got...

**With WDNR's Kurt Welke**

What was the best advice you got during your career?

The best advice I got I received late in my career from operations supervisor Bob Fahey. I was whining about something and he said "stop poking the cage". **Metaphorically he was saying, stop making your life miserable by fighting a fight you can't win. When digging yourself into a hole, the best advice is to put the shovel down. There's a whole lotta cages in today's world: difficult publics, political side games, inflexible policies, challenging work situations.** Step back. Direct your energies into what you CAN change and stop wasting your mental, emotional, and physical energy on things you can't.

**Looking back on your career as a fisheries professional what is one thing you know now that you wish you'd known on day 1?**

The now-then question is simple. I wish I would have known on day 1 that what matters is serving the resource first and not to get sidetracked or waylaid by the machine and the arbitrary and vogue winds that blow. Keep your eye on the land. It perseveres. Minutia like Sigma Six, STAR, and whatever the flavor-of-the-day is this week come **and go. It's like our own Optimists creed: Is it good for fish? is it good for fishing? is it good for the long term form and function of this place we call our home and the things we put value on?**

Can you identify any one experience or moment in your life that you would consider a professional turning point that set you on the path to where you are today?

**July 1981. Cleopatra's couch** – a classic pool-riffle on the Yampa river in NW Colorado. 15 radio telemetered Colorado pikeminnow (*Ptychocheilus lucius*), originally tagged in 3 separate tributaries to the Green river, have homed to a spawning ground. At first, the scanning receiver seemed to be malfunctioning, but as I checked individual frequency by frequency, it was clear the fish were indeed present. A trammel net drift captured more individuals in 1 day than the previous 2 years of sampling by all gears combined. It was then and there that I understood the beauty and reward of working in the natural sciences. To be gifted this experience, in that place, with close friends was the moment that sealed my choice to get serious about working with fish.

# Summer 2015: A Productive Year at the Ontonagon River Streamside Rearing Trailer

Glenn Miller—USFWS

This past summer proved to be productive for the Ashland Fish and Wildlife Conservation Office (Ashland FWCO) in regards to the Streamside Rearing Trailer (SRT) on the West Branch of the Ontonagon River, Houghton County, Michigan. Located at the outlet of Lake Gogebic near Bergland, this was the third year the SRT was in place. Unlike the previous two years, when large volumes of spring run-off made egg collection on the nearby



Sturgeon River near impossible, conditions in 2015 were favorable for egg collection. In two days, biologists from Michigan DNR, Ashland FWCO, Ottawa National Forest and the Fond du Lac Band of Lake Superior Chippewa Indians (FDL) were able to collect eggs from 8 females and milt from 32 males.

Following genetic guidelines for rearing and stocking sturgeon in the Great Lakes basin (<http://www.glfco.org/pubs/SpecialPubs/2010-01.pdf>), eggs and milt from lake sturgeon in the Sturgeon River were collected and combined to form 32 families. The fertilized eggs from each female are transported to the Ontonagon River SRT and placed into their own hatching jar. Ontonagon River water flows through the jars to gently tumble the eggs. The eggs and fish will imprint to this river water and seek to return to the Ontonagon River in the future. After a week the eggs hatch into tiny tadpole like sturgeon fry and shortly thereafter mini-lake sturgeon can be seen swimming in the tanks that will be their home for the next 4 months.

During the early days of life, the baby sturgeons are fed brine shrimp raised at the SRT. In 3-4 weeks, they reach about two inches in length and biologists begin to add shaved bloodworms for feed along with the brine shrimp. Eventually, the young sturgeons are converted to an all bloodworm diet.

During years like 2015, when eggs are plentiful and hatch rate is high, the number of fry and then fingerlings need to be **“thinned out” to allow maximum growth in the tanks.** On June 4, about 8,500 fry were provided to FDL for release into the upper St Louis River by Brookston, Minnesota. This release is part of an ongoing restoration project to reintroduce sturgeon in this area. By July 14<sup>th</sup>, the fingerlings were 3-4 inches long and another 1,500 were provided to FDL.

After the final thinning, the remaining fingerlings are reared in the SRT until they are large enough to be marked internally with a tag the size of a grain of rice. These, Passive Integrated Transponder (PIT) tags have a unique identifier code which will allow for future study on the growth, movement, and survival of the stocked fish. This year, when stocking time approached, fish biologists from Ashland FWCO and ONF tagged 819 sturgeons composed of fish from each of the 32 families founded in May. On August 24<sup>th</sup> the SRT rearing season came to a close when the 7-9” long fingerlings were released at two different locations on the main stem of the Ontonagon River to help re-



store a genetically diverse lake sturgeon population in the Ontonagon River system.

The successful partnership among Tribal, State and Federal agencies and the Upper Peninsula Power Company is committed to a restoration effort on the Ontonagon River scheduled to last 15 – 20 years. Over this time period eggs from up to 200 females could contribute to restore a healthy lake sturgeon population in the Ontonagon River. Stay tuned for more!

# UPCOMING OPPORTUNITIES



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## Hugh C. Becker Musky Symposium Scheduled for March, 2016

The Hugh C., Becker Musky Symposium will be held from March 13-15, 2016 at the Sheridan Hotel in Minnetonka, Minnesota. The event is sponsored by the North Central Division of AFS and Muskies Inc. and will also serve as a celebration of the 50th anniversary of Muskies Inc. The goal is to bring together muskellunge researchers, resource managers, and anglers from across North America for three days of technical presentations, poster sessions, panel discussions, and great socials!

The event will feature reduced fees for students and FREE lodging and registration for presenters.

Abstracts for presentations and posters can be sent to Derek Crane at [dcrane@coastal.edu](mailto:dcrane@coastal.edu) Deadline is Dec 31, 2015



### **Using Acoustic Tags to Track Fish**

**4-5 February 2016 - 9:00 am to 5:00 pm**

Attend Online or On-Site

Hosted at the University of Washington School of Aquatic Fishery Sciences, Seattle, WA

[http://www.HTIsonar.com/at\\_short\\_course.htm](http://www.HTIsonar.com/at_short_course.htm)

This course addresses all aspects of tracking fish movement with acoustic tags, including three-dimensional tracking with sub-meter resolution. It includes hands-on-operation and a variety of fish monitoring applications are covered. Lunch is provided for on-site students. Reserve a seat or ask a question at [support@HTIsonar.com](mailto:support@HTIsonar.com). Tuition Rate Offer (50% discount) for university students, university staff, non-profit and tribal organizations. [http://www.htisonar.com/Training\\_Special\\_Offer.htm](http://www.htisonar.com/Training_Special_Offer.htm)

### **Using Hydroacoustics for Fisheries Assessment**

**11-12 February 2016 - 9:00 am to 5:00 pm**

Attend Online or On-Site

Hosted at the University of Washington School of Aquatic Fishery Sciences, Seattle, WA

[http://www.HTIsonar.com/ha\\_short\\_course.htm](http://www.HTIsonar.com/ha_short_course.htm)

This course covers mobile and fixed-location hydroacoustic survey techniques, including basic hydroacoustic theory, deployment logistics, data collection and processing, as well as typical results. Split-beam, single-beam, and multi-beam frequency techniques are discussed in detail. Lunch provided for on-site students. Reserve a seat or ask a question at [support@HTIsonar.com](mailto:support@HTIsonar.com).

Tuition Rate Offer (50% discount) for university students, university staff, non-profit and tribal organizations. [http://www.htisonar.com/Training\\_Special\\_Offer.htm](http://www.htisonar.com/Training_Special_Offer.htm)

### Member photos:

L: UW Stout students got a chance to get very up close and personal with sturgeon while assisting WDNR crews at the Jim Falls Dam on the Chippewa River

R: UW Stevens Point students assisted WDNR crews with fin clipping wall-eye before they are stocked



### Northland College– Kaitlyn Windschitl

At Northland College, our AFS Student Sub-Unit started our year off by providing an opportunity for students that worked or interned in the fisheries field over the summer to share their experiences. This included nine members that worked with various agencies including USFWS, USGS, MNDNR, WIDNR, and CMERA. This was an awesome opportunity for other students to learn about the potential experiences they could participate in during their summers to come. Some of our members also volunteered this fall with USFWS clearing beaver dams on a local trout stream. Upcoming, we will be hosting a rummage sale to give Northland professors and some local people the opportunity to recycle their used outdoor gear to Northland students. We are very excited to host a majority of the Ashland USFWS fisheries professionals this November in a panel-like discussion to allow students the opportunity to see the various job opportunities within a single fisheries office. Planning for our annual ice fishing tournament is also underway, and will be held during the Wisconsin Free Fishing Weekend this winter. Northland AFS is off to a great start, and we are looking forward to having a great year! We are very excited to volunteer at the 2016 Sturgeon spearing opener, and to attend the Wisconsin AFS Conference!

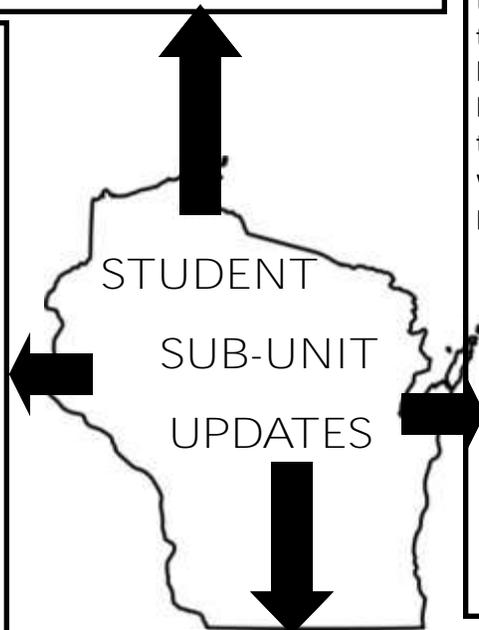
### UW Stout– Jeremy Eckert

A.F.S. Stout helped Joseph Gerbyshak at the Eau Claire W.D.N.R office with Sturgeon tagging in Jim Falls last May. That was our last event last semester. This semester we will be bolstering our members as we had an influx students while losing most of our senior members. On top of that; however, we are looking at a bow-fishing seminar to start off the semester and alternative methods for Carp disposal (we have a visiting Professor from China who is very interested in Carp as they are a primary food source where he is from and he would like to teach our sub-unit how to cook carp, which should be interesting). What will be taking up most of our time for the next year will be work with Michael Bessert on a research proposal that will be dealing with Lake Menomoin blooms affecting Shovelnose Sturgeon in the Lower Chippewa and Red Cedar Rivers. With this proposal we will be looking at microcystins accumulation in large predatory fish as well as exposure of juvenile Shovelnose larvae to cyanobacteria blooms. Most of our time will be getting this project ready for the upcoming spring semester. As always we are looking for volunteer opportunities and workshops with Trout Unlimited and the Dunn County Fish and Game. As well as renewing our preserved fish collection and creating some possible fish skeletal preps for UW-Stout Environmental Science classes.



### UW Green Bay– Jeremiah Shrovnal

So far this semester the UWGB chapter has been keeping busy. Our first volunteer event was helping with musky fin clipping at the BAFF. We were also lucky enough to be given a tour of the Strawberry Weir Fisheries facility while the Salmon were spawning. Some of our members were able to backpack shock to assess the fish assemblage of a local river. We have also been fortunate enough to have graduate students put on a skill class to help our members learn different knots that we may need in the field and basic net repair. We have also scheduled a guest speaker every other week so that we can stay current with the ongoing research and management activities in our area. The biggest event thus far has been a 5K 'Spawning Run' fundraiser that we hosted for over 100 runners. We look forward to hearing from more of the speakers that will be joining us and trying to find more opportunities to get out and into the field.



### UW Stevens Point– Kate Carpenter

This fall, the UWSP Chapter is starting off with a bang! We have had successful meetings since the start of the school year with many students attending, upcoming events planned with assigned project leaders, and a handful of guest speakers sharing their experiences with us. Members, old and new alike, also had the chance to socialize and connect with each other at our annual social event; this year we held a barbeque at Bukolt Park in Stevens Point. Outside of meetings, our officers set up booths at the annual Involvement Fair and College of Natural Resources Majors Night, both of which allowed students to get a glimpse of and join the University's organizations. **We are ecstatic with how many students have joined! Members enjoyed their first hands-on activity at the Wild Rose State Fish Hatchery helping fin-clip walleyes earlier in September.** We are very fortunate to work with the WDNR in Wild Rose and look forward to more opportunities with them. In October, we will head over on the Little Plover River for our annual electroshocking event. We also hope to send our members to the Strawberry Creek Salmon Weir to volunteer with Chinook salmon processing. Historically, our chapter has not had much experience near the Great Lakes or salmon so we are very excited! At the end of October, we switch gears to fyke netting on the Wisconsin River, which is always a very popular event. In addition, members will have the opportunity to help a fellow student fyke net on Lake Joanis, located in the University's Schmeekle Reserve, for his research project, and volunteer with the USFWS at the St. Croix WMD for their annual Conservation Day on the WPA. Lastly, we will have a workshop on either Minnow ID or Age and Growth using calcified structures during the semester. Members will have the opportunity to learn in a more class-room like setting. Also, we are looking forward to all of our wonderful guest speakers, both professionals and students, sharing their fisheries experiences and career advice. If anyone is interested in speaking with our student chapter, please contact our Vice President, Brandon Maahs, at [bmaah654@uwsp.edu](mailto:bmaah654@uwsp.edu). Also, please "Like" us on Facebook at American Fisheries Society – UWSP Student Subunit to see what we are up to this fall!

# UW-Green Bay Fall '5K Spawning Run' a Great Success

The UW-Green Bay student sub-unit is happy to say the first annual '5K Spawning Run' was a great success, with many thanks to all of our supporters! On the morning of Saturday, October 17<sup>th</sup>, community members of all ages joined us on our beautiful campus trails to "run (and walk) with the fish"! Although the morning greeted us with brisk winds, that surely did not stop the dedicated runners and walkers from coming out to support us and our mission. The Spawning Run, held both as a fundraiser and a community outreach event, attracted over 100 race participants and raised over \$3,000. Proceeds from this event benefit student professional development and research in fisheries conservation, habitat restoration, and public outreach and education. We are so very excited to use our resources to learn and work with the community, while growing together and progressing forward in conservation and healthy fish habitats.

Thanks to our kind sponsors and the many that donated giveaway items, all race participants had the chance to go home with an awesome prize! Just to name a few, donated items included fishing rods, hats, and musky lures (Smokey's on the Bay), Green Bay Packers gear and apparel, Green Bay Gamblers season tickets, local artwork, and gift certificates to many local restaurants (Jimmy Sea's, Margarita's, Prime Quarter Steakhouse, Los Bandito's). Everyone went home with a smile on their face!

The positive energy did not stop there, however, as we are already planning the 2<sup>nd</sup> annual 'Spawning Run' to be held next fall! We are also gearing up to tackle several river and stream clean-up projects in the area, and we welcome all those whom are interested in helping make a difference to join us!

The kind support and generosity of the Spawning Run volunteers, sponsors, and race participants was overwhelmingly amazing, and we cannot thank everyone enough for helping make the event such a wonderful success!

Thank you everyone and we hope to see you next fall when we run with the fish again!!

Marian Shaffer



# Student Research Highlights



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EDITORS NOTE: Welcome to this section of the Telegram dedicated to highlighting exceptional research done by student members of the WIAFS. In each issue we plan to highlight at least one exceptional student, nominated by their advisor or another faculty member, from each of the four universities with an AFS subunit. Featured research can be undergraduate or graduate, and can include work done outside of WI during internships or through previous jobs. Professors and faculty members can nominate students to the Telegram editor: max.wolter@wisconsin.gov

## Jamie Goethlick— Northland College



**My name is Jamie Goethlick, and I'm a senior at Northland College. Last summer I had the awesome opportunity to do fisheries research as part of an REU (Research Experience for Undergraduates) at the Arctic LTER-Toolik Field Station in northern Alaska. All research at Toolik Field Station is dedicated to studying climate change, and my project focused on how the predicted nutrient input increases in lakes due to climate change would affect Slimy Sculpins (*Cottus cognatus*).**

To simulate increased nutrient levels, one of the area lakes was fertilized for thirteen consecutive years (2001-2013). During the summer of 2014, I collected ninety-five Slimy Sculpins from the fertilized lake and two control lakes. The fish were weighed, measured, and sacrificed for diet analysis. Their stomach contents were then identified to lowest taxonomic level.

Following the fertilization period benthic and pelagic primary productivity was much higher in the fertilized lake (Lake E5) compared to the control lakes (Lakes Fog 1 and Fog 2). Sculpin diets in all three lakes consisted of mainly larval chironomids (75%, 72%, and 53% of all prey items observed in E5, Fog 1, and Fog 2 respectively). Chydorus spp. was also an important prey item in all three lakes, but occurred more frequently in stomachs of fish in the unfertilized lakes (9% in E5, and 26% in Fog 1 and 45% in Fog 2). Sculpins in the two control lakes had statistically similar mean natural log weight at equal natural log lengths, but the fertilized lake had a statistically lower mean natural log weight than the control lakes at all natural log lengths (Figure 1). This means that sculpin mean weight was less at all lengths in the fertilized lake compared to the control lakes.

These results suggest that increased nutrient availability as a result of increased nutrient inputs might negatively affect the condition of Slimy Sculpins. It seems contradictory that an increase in production would lead to a decrease in sculpin condition, but even though the individual sculpins were lighter at equal lengths in the fertilized lake compared to the control lakes, sculpin abundance and therefore total sculpin biomass was much higher in the fertilized lake. Increased production due to fertilization also seemed to shift sculpin consumption toward a diet consisting of more chironomids and fewer zooplankton. A change in sculpin condition could in turn affect Lake Trout, which prey heavily upon sculpins in area lakes, and are an important species for subsistence fisheries in Arctic Alaska.



Above: the study area. At left: The author measuring a fish from one of the lakes included in the experiment.

## Rachel Van Dam– UW Green Bay



Extensive areas of nearshore, riparian and wetland habitat have been lost in Green Bay, negatively affecting migratory fishes such as northern pike (*Esox lucius*) that use wetlands as spawning and nursery habitat. Recent work has been conducted to restore northern pike spawning habitat on the west shore of Green Bay. While some monitoring has been done to determine recruitment from these restored habitats, the spawning ecology and reproductive success of adult pike at restored sites is not well understood. Our objective is to determine adult usage and microhabitat selected during spawning, compare this to larval recruitment, and relate results to the variation between sites with the hope of guiding future restoration activities.

Three restored wetland sites on the west shore of Green Bay were studied in 2014 and 2015. At each site, fyke nets were set following ice-out, facing in opposite directions, to catch pike migrating into and out of the site. Nets were checked daily. Fish length was measured and sex was identified by gamete expression, and each pike was given a numbered floy tag. Spawning activity was checked daily; water depth and temperature were recorded, and percent ground cover (vegetation) was estimated at each spawning location. Box traps were placed downstream of the wetland to capture outmigrating young-of-year (YOY). We captured 238 adult pike across 3 locations in 2014. In 2015, 433 pike were captured across the same 3 locations. The number of spawning events varied between locations from 6 to 24 events in 2014, and from 2 to 23 events in 2015. All locations produced larvae, but recruitment was variable: in 2014, 8,784 YOY were caught across all 3 study locations, while in 2015 1,097 YOY were captured across locations. In addition, pike displayed intriguing migratory behavior, maintaining varying residency times between study locations, and staying for different amounts of time at each location and often moving into and out of wetlands several times during a season.

Our results and observations to date suggest that the use and contribution of restored wetland habitat to northern pike recruitment is quite variable. We observed the highest numbers of adults, and the longest residency times, at wetlands with a short travel distance and easy access to the Bay, as well as a moderate size, suggesting pike prefer wetlands with these conditions. Consistent water levels/depth were also critical for spawning and egg development. During spawning, vegetation and water depth appear to play a role in spawning site selection. Adults selected only areas with 50% or greater ground cover, and chose to spawn along edges of vegetation interfaces. In addition to pike, bowfin (*Amia calva*) and shortnose gar (*Lepisosteus platostomus*) were documented spawning in the wetlands, indicating multi-species benefits. Potential future work includes further study of northern pike spawning ecology, including adult recaptures between years and egg development and survival.



Field crew measuring length and floy tagging a northern pike caught at Site 1 in April 2014.

## Hadley Boehm– UW Stevens Point



My name is Hadley Boehm, and I am in my last semester as a graduate research assistant in the Wisconsin Cooperative Fishery Research Unit at the University of Wisconsin – Stevens Point. I work under the direction of Dan Isermann, and my research is focused on identifying recruitment bottlenecks for age-0 walleye in northern Wisconsin. My project is funded by the Wisconsin DNR, and has been made possible by the cooperation of many people from WDNR and UWSP. Over the past decade walleye recruitment has declined in some northern Wisconsin lakes where walleye historically naturally reproduced. These lakes have spawning adult populations, but few or no age-0 walleyes are captured during fall electrofishing surveys. Identification of timing and potential causes for recruitment bottlenecks for age-0 walleye would help inform management decisions for these lakes. Therefore, the objectives of my project were to 1) identify timing of recruitment bottleneck(s) for age-0 walleye in walleye lakes with a declining recruitment history (DR), and 2) evaluate differences in abiotic and biotic variables between two walleye lakes with a sustained recruitment history (SR) and two lakes with a DR history.

We sampled during 2014 and 2015 on four lakes in northern Wisconsin: Escanaba (Vilas), Big Arbor Vitae (Vilas), Kawaguesaga (Oneida), and Sawyer (Langlade) Lakes. Escanaba and Big Arbor Vitae Lakes have a SR history, and Kawaguesaga and Sawyer Lakes have a DR history. Each spring immediately after ice out we deployed egg mats on spawning habitat to verify occurrence of spawning and to obtain relative egg density. Egg mats were checked several times and removed after 10 days. We also shoreline nighttime electrofished for adult walleye, and collected dorsal spines for age estimation. Roughly two weeks after egg mat removal we began sampling for larval walleye. We did multiple tows using a conical, fine mesh, ichthyoplankton net towed at the surface in a circle behind the boat at weekly intervals until early June. In 2014 we did daytime tows on all lakes except for Escanaba where we also towed at night. In 2014 we used quatrefoil light traps to sample larval fish at night; however, in 2015 we did not, and switched to nighttime surface tows on all lakes and experimental daytime depth tows on SR lakes. In late June we **began shoreline seining using 50' beach seines with ¼" mesh to capture juvenile walleye in the littoral zone. We seined every other week through August. In 2015 we also used ¼" bar mesh gillnets to sample age-0 walleye in July.** Both years in September we used nighttime shoreline electrofishing to capture age-0 walleye. At peak larval abundance we electrofished for panfish and examined diets to determine if they were major predators of larval walleye. We also collected surface water temperature, temperature and dissolved oxygen profiles, Secchi depth, and zooplankton on all lakes at one to two week intervals throughout the summer. We identified and measured zooplankton, and estimated relative density.

SR lakes had higher adult walleye CPE and relative egg density than DR lakes. Temperature and dissolved oxygen were similar for all lakes, but DR lakes were clearer than SR lakes. We did not capture larval walleyes in 2014 daytime tows, but we did in nighttime tows on Escanaba Lake and is why we switched to nighttime towing in 2015. We captured many larval yellow perch on all lakes in day and night tows, but no larval walleye on either DR lake in either year. The 2014 walleye year class was regionally very poor. We captured a single juvenile walleye seining, and fall electrofishing CPE was below average for SR lakes and 0 fish/hr for DR lakes. In 2015 the walleye year class was strong in SR lakes and we captured larval walleyes in tows, and juveniles in seines, gillnets and by electrofishing. We did not see evidence of age-0 walleye in DR lakes after the egg stage.

Our results suggest a recruitment bottleneck for age-0 walleyes is occurring at or before the larval stage. I am currently analyzing data for my thesis, so will soon know more about the differences between DR and SR lakes that may suggest potential causes for the recruitment bottleneck. I will be presenting my final results along with a suggested sampling protocol for age-0 walleyes at several upcoming meetings.

The author inspects egg mats from one of the experimental lakes



# ASK GILLY!



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??????????



Fun fact– the lapels from this suit are now used to cover the infield at Wrigley during rain delays.

Welcome to “Ask Gilly”, where WIAFS members can query long-time Vilas County Fish Biologist and unofficial WIAFS social coordinator Steve Gilbert on matters of life, love, and fisheries. Future “Ask Gilly” questions can be sent to his managing editor at: [max.wolter@wisconsin.gov](mailto:max.wolter@wisconsin.gov)

Dear Gilly, I had a blast playing fish trivia in Green Bay in 2014, I loved the ice fishing contest in Eau Claire in 2015, are there any social plans in the works for WIAFS 2016 in La Crosse?

*Dear Contest Freak,*

*Sorry to hear that your social calendar revolves around AFS fun and games. This does not make you bad, but points out the need for you to get out more often. LAX is a fun town with plenty of night-life fun to be had. We will have some form of game entertainment planned for one of the nights and you will also be free to enjoy the many fine drinking establishments within walking distance of the*

***hotel. As or right now I'm thinking of a version of bingo called MUSKY or possibly a scavenger hunt.***

Dear Gilly, where does the money from the WIAFS raffle go? Troy- Black River Falls

*Dear Troy,*

***What I don't spend in beer is stashed in my offshore account in the Cayman Islands. The raffle is the biggest revenue generator for the chapter. It defrays some of the cost of the annual meeting and in recent years has offset the shortfalls in our two scholarship funds. So all the money goes back to the chapter.***

Dear Gilly, once the annual WIAFS meeting is over, how can I stay involved throughout the rest of the year? Dan- Waukesha

*Dear Dan,*

*AFS should not just be an excuse to run naked and drunk through a hotel lobby at 2:00 in the morning every February. This is your professional society. It is your outlet to have a political voice, network, and exchange ideas outside of the influence of the agency, university or company that you work for. In uncertain times AFS will always be there for you professionally. So get on a committee, run for office, donate something homemade for the raffle and spread the word about AFS amongst your co-workers. Our strength is in our numbers and diversity.*

*Go team on 3!*

Cheers, Gilly