News and Views from Wisconsin Trout Unlimited

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Wisconsin Trout

Summer 2021

Joint Finance Committee extends stewardship, cuts easements

4By Mike Kuhr, State Council Chair

On Thursday, June 10, the Wisconsin Legislature's Joint Finance Committee (JFC) voted to extend the Knowles-Nelson Stewardship Program for four years at $33.25 million per year. Wisconsin TU commends the legislators who worked both publicly and behind the scenes to make this extension possible.

These investments in Wisconsin's iconic public lands initiative will ensure that our outdoor recreation economy, as well as our trout economy, continue to thrive.

Wisconsin TU is proud to be a part of Team Knowles-Nelson, a coalition of more than 70 conservation and outdoor recreation groups working together to advocate for a long-term reauthorization of the stewardship program.

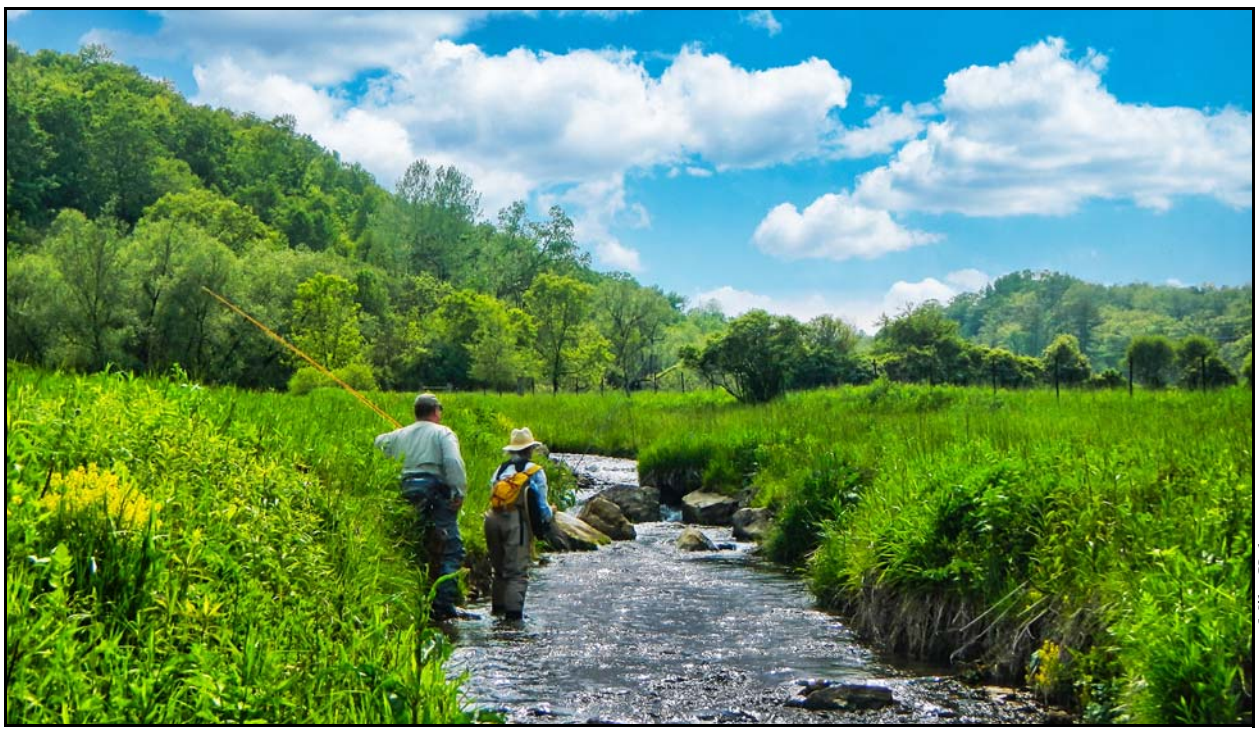
We'd like to thank all of our volunteers who took the time to make contacts to their legislators this spring. These phone calls and emails really made a difference down the stretch. A week prior to the vote, we heard rumors of a much-more-scaled-back stewardship program, and our efforts helped push legislators away from that idea.

Wisconsin TU is fortunate to have Brandon Scholz of The Capitol Group to represent us at the State Capitol. Brandon's knowledge of the legislature's inner workings and his guidance kept us at the table and a part of the discussions all the way to the end. But we still have more work to do.

Historically, the K-N Stewardship Program has been reauthorized in 10-year intervals. This four-year extension falls far short of history and Governor Ever's own proposed 10-year reauthorization.

It appears the assembly was ready to commit to a 10-year reauthorization but the senate was unwilling to show long-term support for the program.

Critics of stewardship have long targeted the DNR acquisition portion of the program. During the last 12 years, funds available for DNR land purchases and easement acquisitions have dwindled from $46 million in 2011 to just $9 million in recent years.



Mike Kuhr

ANGLERS USING A PUBLIC FISHING EASEMENT IN THE DRIFTLESS AREA

Of this DNR acquisition amount, two-thirds is limited to conservation easements, such as the public fishing easements anglers in Wisconsin have become familiar with. The other third is for fee-simple land purchases.

The Joint Finance Committee cut the DNR Acquisition portion of the program from $9 million to $6 million. This effectively reduces the amount of funding available for conservation easements from $6 million to $4 million per year.

We will need to monitor this closely to see the effects it may have on the Streambank Protection Program and our public fishing easements.

Wisconsin Trout Unlimited views these public fishing access easements as a critical tool to protect our coldwater resources. These easements keep private lands on the tax rolls while allowing public access to our waterways. This public access is also key to the watershed restoration work we do.

In the coming years, Wisconsin Trout Unlimited will seek to further empower our volunteers by building better relationships with our elected officials.

Many legislators have expressed an interest in seeing the restoration work we do firsthand, and we hope to get them out for a streamside walk in their district. If you have a recent project you would like to showcase, contact Mike Kuhr at mikek.trout@yahoo.com.

We thank you for staying informed about advocacy issues in Wisconsin and for speaking up on behalf of our coldwater resources.

JFC gives boost to future dam removal projects

By Mike Kuhr, State Council Chair

On June 10 the Wisconsin Legislature's Joint Finance Committee (JFC) approved an increase in the DNR's Municipal Dam Safety Grant Program from $4 million to $10 million in the next biennium (2-years).

The JFC also voted to increase the maximum grant award from $400,000 to $1 million.

Wisconsin TU and the Kiap-TU-Wish Chapter worked with Representative Shannon Zimmerman (R-River Falls) and others to increase funding for this program.

The City of River Falls owns two dams on the Kinnickinnic River, a class 1 trout stream in northwest Wisconsin. The city is committed to removing the dams and returning the "Kinnie" to free-flowing status.

We'd like to thank Rep. Zimmerman and his staff for their leadership on this issue. While this move will potentially provide more funding for the River Falls project, it also provides more incentive for other municipalities in the state considering dam removal.

Dam removals on trout streams allow cooler water to flow downstream and gives fish the opportunity to reach upstream spawning habitat.

Dam removal is also a good option from a municipality's standpoint. It removes the liability and risks associated with dam failure, eliminates future maintenance costs and leaves the previously impounded area available for green space or commercial development.

If your local chapter knows of a municipality that's considering a dam-removal project, we encourage you to reach out to them now to start or continue discussion about this option.

REP. SHANNON ZIMMERMAN

The DNR Municipal Dam Safety grant guidelines are typically released in August, and applications may be submitted as early as September.

We'd also like to acknowledge the work of our lobbyist, Brandon Scholz, on this proposal. Several TU chapters in the region, the State Council and TU National all pooled resources to secure Brandon's services.

Brandon worked tirelessly coordinating with legislators and staff, TU state and local leaders, and City of River Falls staff. Thank you to TU National Trustee Henry Koltz, who made several important office visits to the State Capitol to help move this forward.

During a budget session that has seen very few increases in many areas, we were able to more than double the amount of funding available for the Municipal Dam Safety Grant Program. That's a big win for TU and for future dam-removal projects in Wisconsin.

Wisconsin TU loses a legendary leader

By Todd Hanson

Wisconsin Trout Unlimited lost a longtime leader when Clint Byrnes passed away on April 24 in Beaver Dam at age 91.

Clint was a continuous member of Trout Unlimited since 1969, and he helped found two Wisconsin chapters, Southern Wisconsin and Aldo Leopold. He was awarded WITU's highest honor, the Award of Merit, in 2009.

I'm tempted to go into great detail on some of Clint's accomplishments, but that has already been done in a wonderful chapter president profile by Rolf Skogstad in the Fall 2000 issue of Wisconsin Trout. I encourage you to download it. Write that down. There will be a quiz.

There you will read about Clint receiving not one, but two awards from national organizations for his trout conservation leadership. Recounting Clint's many efforts may make you feel like a slacker when it comes to helping Trout Unlimited, but it will also make you proud that we've had such people to show the rest of us what leadership looks like over the long haul.

Rolf's piece mentioned Clint's many years as president of the Aldo Leopold Chapter. Later Clint became that chapter's permanent State Council representative.

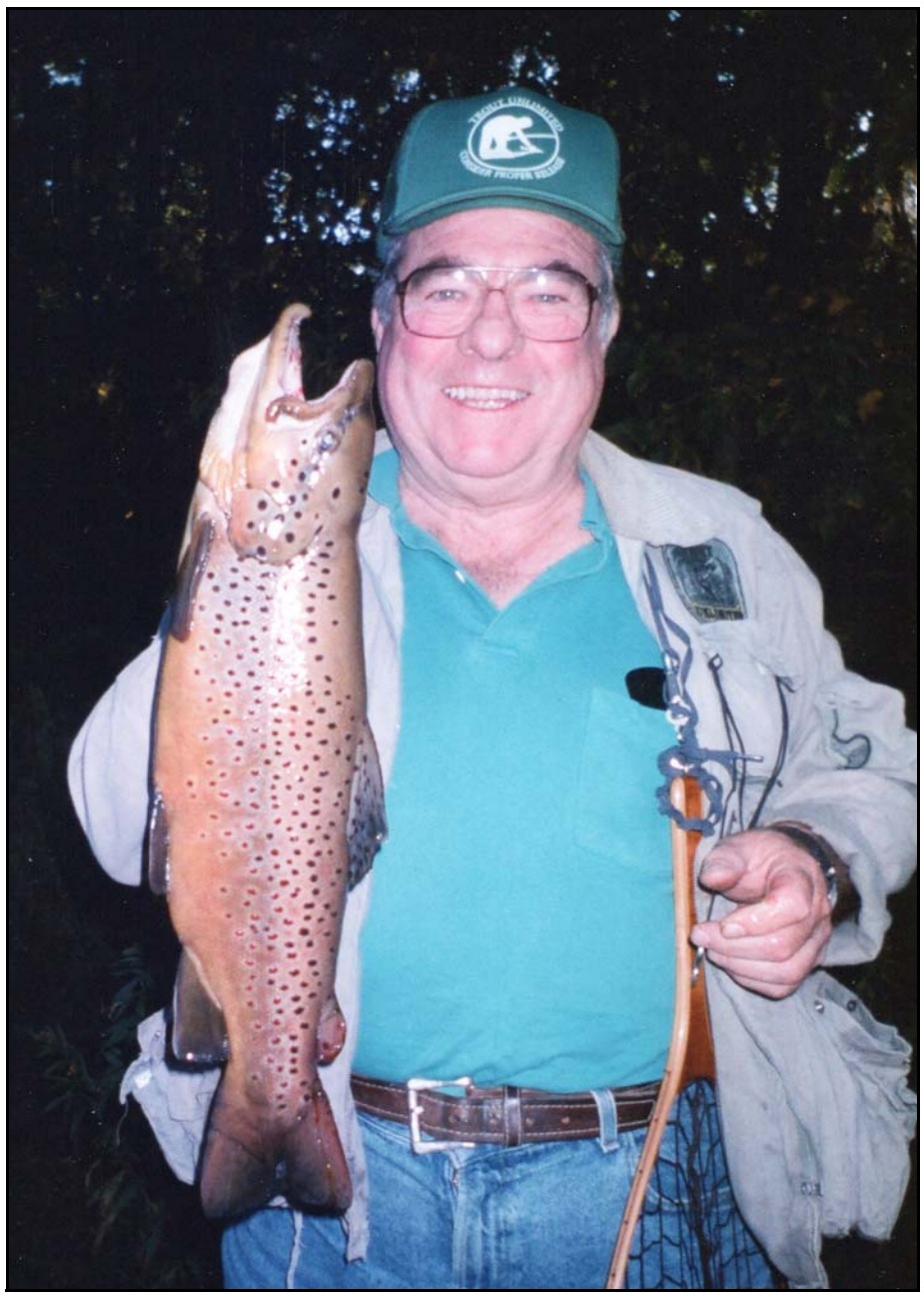
Rolf also described Clint's enthusiastic work on the State Council's Consider Proper Release Committee starting in the late 1990s. That committee produced brochures, streamside signs and a video that later went to every TU chapter in the United States showing how to release trout so they have their best chance of survival. For years Clint never drove anywhere in the state without some CPR signs and fence posts in his trunk to erect signs at trout stream parking lots. It was on that committee that I got to know Clint well and appreciate his boundless energy.

Rolf's profile noted that Clint was a high school wood technology instructor at Beaver Dam High School for 35 years, and he pointed out that an education theme seemed to be at the heart of many of Clint's trout-related activities. I agree. Maybe that is why Clint started the State Council's annual awards program—he knew that giving a bunch of A grades to many of WITU's brightest students might encourage them toward even greater accomplishments. Starting WITU's awards program may be Clint's greatest legacy to our organization, and several of us have suggested that our Gold Net Award be renamed The Clint Byrnes Gold Net Award in honor of the man who built and donated every one of those delicate works of art since 1984.

Later in life, Clint became a stalker of big trout, often with his buddy, Marlin "Spin" Spindler. Though Clint might tell you he caught a big brown on a fly, that fly was almost always a three-inch chartreuse Rapala.

On one visit to Clint's place a few years ago, he told me about a big trout he'd recently caught. "Let me show you," he said, whereupon he walked over to the refrigerator, opened the freezer, and took out a ziplock bag containing the monster's head. That story tells you two things. First, though Clint saw great value in properly releasing trout, he was no catch-and-release purist. Second, it tells you his wife, Becky, is a saint.

As I write this remembrance, I'm packing for a smallmouth bass fishing trip into the Sylvania Wilderness in Michigan's upper peninsula. I don't usually take a net on these canoe trips to save on weight and because a bass' teeth won't rip your thumb off. But this year I'm taking my treasured Byrnescraft little canoe net. I'll troll a Rapala Deep Tail Dancer along the 50-foot contour on Clark Lake. If I tie into a big laker, I'll try my best to not lose it when it makes a run next to the boat. Clint's net will help me seal the deal. And if that trout meets Sylvania's minimum keeper length of 30 inches, I'll cook it on a wood fire. Then I'll pack out its head and put it in my freezer until I die.



Spin

CLINT LANDED SOME DANDIES OVER THE YEARS
Proud of his title of "Hook and Cook," Clint was also instrumental in spreading the word about proper catch and release techniques.

CLINT WAS ENTHUSIASTIC ABOUT THE CPR PROGRAM
Clint was known for his enthusiastic work on the State Council's Consider Proper Release Committee starting in the late 1990s. From left are Clint, Jim Hlaban, Bob Hunt and Todd Hanson

LETTER TO THE EDITOR

The Spring 2021 issue of *Wisconsin Trout* (and many of the preceding issues) prompt me to write. That issue was so well written and meaty, covering a wide range of WITU interests. Just to highlight a few, Chair Mike Kuhr's column on the importance of "resiliency" (a pretty sophisticated concept) in our TU work; Henry's heart-felt and lucid remembrance of a long-time friend and fellow TUer; Duke's musings and updates; John Lyons' superb science-based synthesis of brown trout in Wisconsin; and the array of chapter updates that remind us of good works (and how much we miss seeing friends at meetings, work days, chapter events and more!).

And reports on TU efforts to expand our membership and be more inclusive are important as the organization looks ahead. Having been involved with TU for many decades, the transformation in our conservation work and advocacy, and our organizational development is truly amazing. "One TU" is an amazing team with many moving parts sharing a mission. This is a tribute to our leaders, members, and staff at every level of TU. It seems that we are well positioned to be sustainable, in our conservation work and in our functioning, as we take on the challenges of the coming decades.Kudos to Todd Franklin for the super job he's doing as editor of Wisconsin Trout.
—*Stephen Born*

Chair's Column

The TU Fountain of Youth

As a father of two young daughters, the next generation is always on my mind. Neither of them show much interest in fly rods or fishing poles at the moment, although the youngest surprises me from time to time.

They are both quite content wet wading, chasing minnows, and turning rocks over to look for bugs. We spent nearly three hours today chasing minnows on the Lower Wisconsin River and there was never a complaint. Well, maybe a little grumble when it was time to go, but who can blame them?

I hear a lot of people writing off the next generation because they are too tied to their screens. I don't buy into that notion, and as a TU member, neither should you.

At all levels of TU – local, state and national – we're providing opportunities to engage the next generation of outdoor enthusiasts. The summer months are always a good reminder of our commitment to our youth.

Many of our local chapters are busy putting on kids fishing days, casting clinics and streamside ecology and entomology stations. Keep it simple, make it fun and provide a positive outdoor experience for the kids who participate. If you get the chance, volunteer at one of these events. You'll be glad you did.

Summer is also a perfect time to start thinking about Trout in the Classroom (TIC). Did your chapter sponsor any tanks at your local school in past years? Is there an opportunity to add a tank to a few more classrooms? Now is the time to be making these arrangements.

A typical TIC setup costs about $1,200-$1,500. Now think about how many students and families your chapter will get to interact with over the next several years because of that tank. I'm sure the local newspaper will want to do a story. A TIC tank is the perfect way for a chapter to do local community outreach.

Contact Wisconsin TU's TIC Coordinator Greg Olson at driftless23@gmail.com for more info.

Speaking of summer activities, Wisconsin TU's Annual Youth Camp is right around the corner. This four-day, three-night camp takes place on Pine Lake, just south of Waupaca. We'll be taking 20 campers between the ages of 12-16 and immersing them in fishing, ethics, ecology and conservation.

My favorite part of the youth camp is seeing alumni from prior youth camps coming back to pass on their knowledge to the next class.

Several of our past camp attendees have had the opportunity of going on to the TU Teen Summit – a national gathering of TU teens from around the country. This annual teen leadership conference has been postponed until 2022 due to COVID-19 concerns. We expect a strong showing when it returns.

TU is well positioned to engage youth at the college level through our 5 Rivers Club programs. These tend to be more like fishing clubs on campus, but they certainly have a conservation ethic running through them.

If your chapter would like to engage college students at a local university or college, it helps to first make a strong connection with a faculty member. These clubs tend to turn over students fairly often as they graduate or transfer to other schools, so having a consistent and proactive faculty member facilitating the club is a must.

Once established, make sure to invite your local 5 Rivers Club members out to chapter events. They won't be able to make all of them, but it's a good way to gauge which of your events appeal to a younger audience.

This October, Wisconsin will once again play host to the Upper Midwest 5 Rivers Club Rendezvous. We're expecting about 40-50 college kids participating in 5 Rivers Clubs across the Midwest to descend on the West Fork Sports Club in Avalanche the first weekend in October. The Rendezvous will have a focus on fishing and building friendships.

The Rendezvous will be organized by TU national and provides an opportunity for club members to learn from other programs around the region. On Saturday, October 2, they will participate in either a local stream restoration project or a local community fishing education event. Any free time will probably be spent chasing native brook trout and wild brown trout in area streams.

As these kids grow up, it's imperative that our chapters welcome them and provide opportunities for them to get involved in leadership positions through committees, board of director positions, or as chapter officers.

TU's Stream of Engagement gives us the ability to interact with kids and young adults of all ages in our communities. It's up to us to tap into this fountain of youth and instill their passion, vibrancy and energy into our chapters.

The future of cold, clean, fishable water in Wisconsin depends on it.

Much Respect,
Mike Kuhr
State Council Chair

Does your fishing car have a TU license plate yet?

Support Wisconsin TU and get your Wisconsin TU license plate now. Go to www.dot.state.wi.us/drivers/vehicles/personal/special/trout.htm

Spring fundraiser a success

Awards Banquet returning to Oshkosh in 2022.

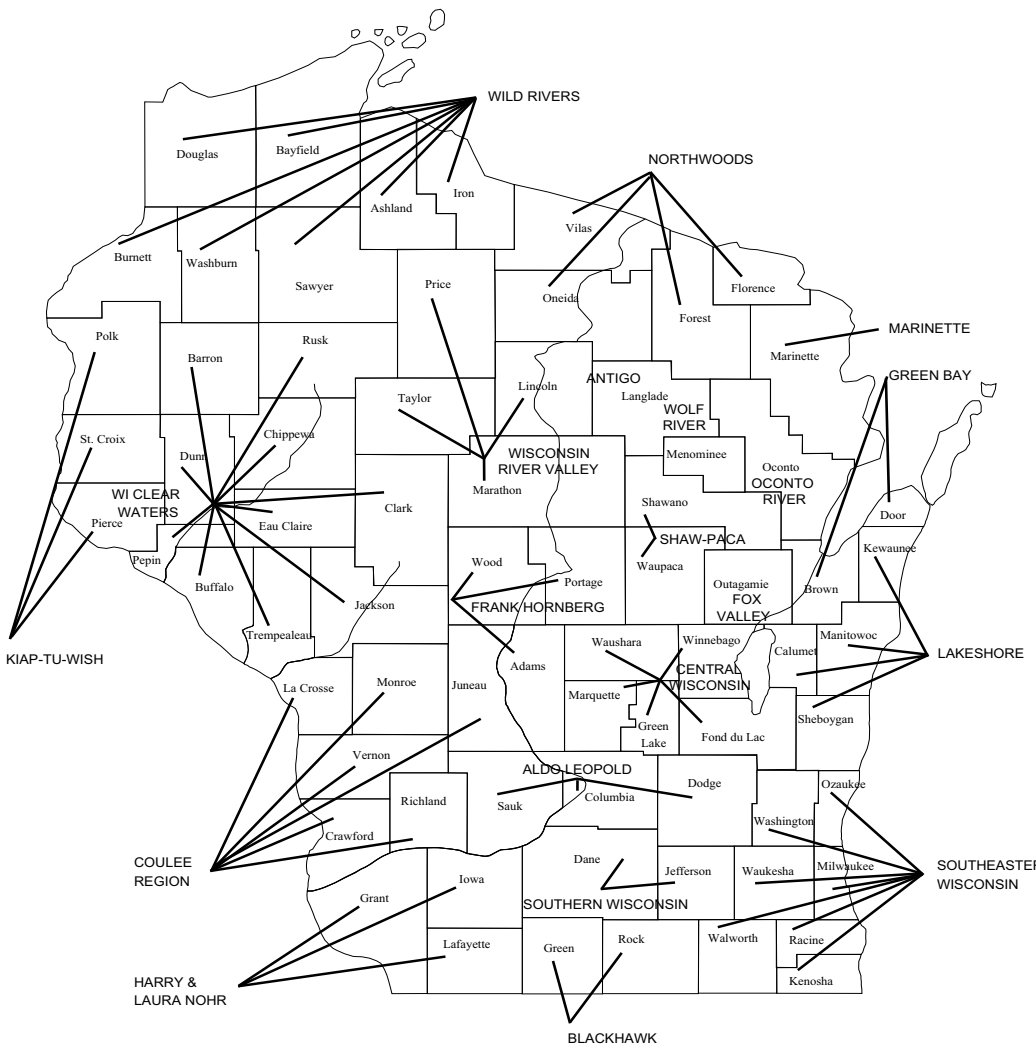
The Wisconsin Council online auction fundraiser concluded April 25, netting $4,000 from the sale of 21 donated service and merchandise items. The strong performance of the Trout Unlimited auction platform should position it as a continued fundraising option for chapters and councils. Chapters with small member rosters or large geographic regions should certainly consider this effective, no-charge on-line format as a primary fundraiser.

In addition to auction proceeds, the State Council also received monetary donations from several chapters, thereby generating a total of $5,950 for our spring 2021 effort. This amount, at about 25 percent of our typical banquet proceeds, is nonetheless a resounding success, given the restrictive conditions placed upon us by the Covid pandemic.

We are moving ahead with planning the 2022 Awards Banquet and Fundraiser in Oshkosh. As in the past, it will take place at the Best Western Convention Center and Hotel on Saturday, February 5. Reduced-rate rooms will be available for Friday and Saturday nights. The banquet will be preceded by the annual Wisconsin Council meeting.

Thank you to the following donors to the Spring Fundraiser:
Antigo Chapter
Central Wisconsin Chapter
Aldo Leopold Chapter
Blackhawk Chapter
Coulee Region Chapter
Frank Hornberg Chapter
Kiap-TU-Wish Chapter
Marinette County Chapter
Green Bay Chapter
Fox Valley Chapter
Southern WI Chapter
Southeastern WI Chapter
Terry Cummings
Todd Franklin
John Beth
Scot Stewart

Wisconsin TU Chapters, Presidents, and Websites



Visit the Wisconsin State Council's web site at **wicouncil.tu.org**, or find us on Facebook.

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Wisconsin Clear Waters (#255): Jim Erickson; 341 Garfield Ave., Eau Claire, 53701; 715-559-1864; ttangler@outlook.com; WisconsinTU.org/ClearWaters

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Legal Counsel: Open
Communications: Open

Are you getting emails from TU?

If you are currently not receiving news and event-related email messages from your chapter, the state council and TU National, then you are truly missing out on what's happening at all three levels. TU National manages the mailing list for the council and chapters, so update your address by going to www.tu.org, log in, then go to "Email Preferences." You can also call 1-800-834-2419 to make these changes, or to ask questions about making the changes via the web site.

WISCONSIN TROUT

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Photo/article contributions, letters to the editor and advertisements are welcomed. Submit to:

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Council TIC update

By Greg Olson,
State Council TIC Coordinator

Due to the pandemic many chapters put their Trout In the Classroom (TIC) programs on hold. My own chapter only had four of our nine classrooms able to do TIC this school year. I'm hoping that during the next school year we will be back to normal.

Prior to the pandemic we had developed a successful partnership with the DNR to streamline the TIC process and obtain free eggs from DNR hatcheries. DNR staff want to continue that next year and they also want to become even more involved in TIC, including hatchery tours and adding TIC content to the DNR website.

Once the DNR has finalized this process, we will update our TIC Guidelines and send them to all of our chapters. Basically, eggs will be free from a DNR hatchery, no fish testing will be required and a simple agreement for each school will need to be signed. Of course all stocking activities must be discussed and approved with your local DNR fisheries biologist before any program is started. Again, we will update our guidelines and send them to our chapters.

The popularity of the new process took the DNR by surprise, however, and they don't necessarily have available funds to ship eggs to all of our TIC program schools across the state. Chapters can still pick them up in person. The State Council is looking at the possibility of setting up a fund that the DNR can access for shipping, and then each chapter would pay that fund back. That way the DNR doesn't have to try to bill each chapter for shipping costs.

Furthermore, they would like to get an idea now of what kind of demand to expect so they can plan accordingly for the fall. I ask that chapter TIC coordinators email me at driftless23@gmail.com with how many TIC programs your chapter has. I will compile all the responses and get back to the DNR. Thanks so much for those chapters that have already responded and for your prompt attention.

DNR reports manure spill near Merrill

The Wisconsin Department of Natural Resources (DNR) is assisting with the investigation of a manure spill that occurred at a dairy farm in southern Lincoln County that resulted in a fish kill in Devil Creek.

On the evening of June 9, 2021, the DNR was notified of an unknown amount of liquid manure running off of a field into Devil Creek, a cool-cold headwater stream and tributary of the Wisconsin River, resulting in an observable fish kill at multiple locations within Devil Creek.

The manure release was reported to have originated off of Joe Snow Road, approximately four miles southwest of the Town of Merrill in Lincoln County. The source of the manure originated from an open valve on a manure pit at a medium-sized dairy operation. The duration of the spill and quantity release is still under investigation. The DNR will continue to work with the farm and other applicable local agencies to continue to investigate the release.

No further details are available at this time. The DNR will share additional information as it becomes available.

WITU Youth Camp ready to resume the fun and learning

After missing a year due to the pandemic, our ever-popular and successful youth camp returns August 19-22. The Pine Lake Bible Camp has opened their large hall to us, so we will no longer have to split our presentations and workshops, which is a huge plus. They have been working hard to bring all aspects of the Covid protocol into their operations and convey what we need to do from our end, which has really helped our committee get comfortable as we finish the planning of the camp.

This year we will have 20 youth again, with 11 being carryovers from last year's cancelled camp. There are 12 chapters sponsoring campers this year.

We still need volunteers. We provide accommodations and meals. Please contact Wayne at 920-540-2315 or wparmley@gmail.com or me at 920-216-7408 or chlbeck@att.net

— Linn Beck

Council grant program updates

The Friends of Wisconsin Trout Unlimited grant program has completed its granting cycle for 2021. It has been quite a year for this program. After the final requests were reviewed, we awarded 12 grants for the 2021 grant year. The State Council's vice chairs review the grants and determine which projects meet the requirements to receive a Friends grant. Thanks to the generosity of our donors, we awarded $23,600 in 2021. The grants are going to chapters across Wisconsin, so no matter where you live, it will be making fishing better in your area.

We are now encouraging donations so that the program will have adequate funding to provide the next round of grants early in 2022.

The Watershed Access Fund has no new finalized acquisitions to report at this time. However, we continue to be involved in discussions with partners around the state. We do have one important acquisition pending at this time and are hoping that the details can be worked out so that another important piece of trout habitat can be added to the publicly available waters in Wisconsin.

If you know of any landowners who have an interest in granting an easement to Trout Unlimited, please let us know.

—Kim McCarthy

Mike Kuhr

Your TU license plates support all that we do

From youth education to veterans services to stream work, Wisconsin TU license plates provide financial support.

By Ben Nerad

Rod, reel, hat, net, tackle, a full tank of gas, and the DNR trout stream maps. Does the trout angler need anything else to have a great day on Wisconsin's cold water streams? Well, one car accessory could be a game changer, and before you guess, it's not one of those spiffy rod tubes.

The Wisconsin Trout Unlimited license plate, pictured in this issue of *Wisconsin Trout* and many back issues, is that game changing accessory. How so? Each year, drivers with a TU plate donate $25 to Wisconsin Trout Unlimited, as an add-on to their annual auto registration fees.

In return, drivers get a special license plate with a beautiful illustration of the Wisconsin native brook trout, created by nationally-known illustrator Neal Aspinall. They also support critical work by Wisconsin Trout Unlimited to help build more trout habitat, educate the next generation of anglers, share news and information with TU members, and advocate for angling and trout habitat with Wisconsin policy makers.

For example, when the DNR seeks to buy land or a fishing easement but has limited funding, Wisconsin TU funds helps bridge the gap to pay for critical pieces of habitat. Additionally, money from the state Council supported by license plate registrations goes to local chapters, helping to fund the habitat work, events and other activities that move the needle on enhancing trout habitat in Wisconsin.

The next generation of anglers is also supported by funding received from license plate registrations. Every year, except 2020 due to COVID-19, Wisconsin Trout Unlimited and local chapters hold a summer youth camp. This camp provides kids with an immersive experience where they can dive into bait, spin, and fly fishing for trout. They not only learn the "how" of fishing, but also stream ecology and conservation.

What else do the license plate revenues support? Well, the very paper you're reading is supported by those funds. License plate registrations also help support advocacy on critical state conservation policies, such as the renewal of the Knowles-Nelson Stewardship Fund which has paid for most fishing easements in Wisconsin.

How important are the license plate funds to this work? Nearly $1 out of every $6 of Wisconsin Trout Unlimited's annual budget is funded by the TU license plate registrations. And, unfortunately, that funding could be at risk. Under state law, if a special license plate like TU's has less than 500 vehicle registrations, the Department of Transportation must provide notice and ultimately end the provision of that license plate. If that were to happen to Wisconsin Trout Unlimited, it would put at risk all the great activities mentioned above.

As of May 15, 2021, there were 667 TU license plates registered across Wisconsin. While that gives a bit of a buffer above the 500 plate cut-off, it's still a bit close for comfort. And, more TU license plate registrations means more fishing habitat, continued summer youth camps, and further support for public policy advocacy in support of trout fishing.

If you'd like to get one, the process is easy. The Wisconsin Council of Trout Unlimited has an information page posted online at: https://wicouncil.tu.org/wicouncil/wisconsin-trout-unlimited-license-plates

You can also find the Department of Transportation's website by searching "Wisconsin Trout Unlimited License Plate." The process is as simple as filling out the DOT registration form posted online, and submitting that along with the $25 annual donation and one time $15 issuance fee.

Trout habitat, youth education, conservation advocacy and more are all supported by the Wisconsin TU license plates. If you benefit from the work of Wisconsin Trout Unlimited, please consider registering for the TU plates. Besides, if you're anything like me, you need a good way to distinguish your SUV from all the others at the grocery store parking lot. What better than a beautiful brook trout on your license plate to help find your car and inspire your next fishing trip.

Ben Nerad is a TU member from Madison, where he works in water resource management. A Green Bay native, he spends much of his free time exploring the Driftless Area for trout on the fly, but also enjoys more northern latitudes where one can hear and feel the drumming of grouse while making a cast.

STREAM Girls debuts in western Wisconsin

By Joe Knight

When Jillian Heth, 17, of Eau Claire, heard her dad talking about the "Stream Girls" program, she was intrigued.

Her dad and sometimes fishing companion, Bill Heth, is a board member of the Wisconsin Clear Waters Chapter. Stream Girls is a joint effort involving the Girl Scouts and TU to develop an interest in sciences.

"He kind of brought it up to me. It seemed to be an opportunity to work with young girls and kind of bring them into the world of math and science and STEM (science, technology, engineering and math)," she said. The program also involved art and recreation. She is fond of math and sciences herself, and is considering a career in the medical fields, although that's not for certain, she said.

"STREAM" is actually an acronym for Science, Technology, Recreation, Engineering, Art and Math, she said, although many of their activities did involve a little trout stream, Deinhammer Creek at the Beaver Creek Reserve north of Fall Creek.

"I contacted the local TU chapter leader, Jim Erickson, as well as Tara Granke, a national TU coordinator."

They were on board with bringing STREAM Girls to western Wisconsin.

Next she went to the Girl Scouts.

Carrie Andringa, program manager for Girl Scouts of the Northern Great Lakes, said she had never heard of STREAM girls, but they were always looking for ways to get girls outdoors, and Trout Unlimited had some expertise in streams and bugs and fishing that they did not have.

GIRL SCOUTS AND TU TEAMED UP FOR STREAM GIRLS PROGRAM

The timing was perfect. Concerns over COVID 19 had kept their activities on-line all winter, but this was a chance to get outdoors in an interactive group of about 10 girls.

"It was the right program at the right time to bring girls together again, she said.

The girls came together for five nights and did activities that included collecting and identifying stream insects, measuring stream flow, but also fly tying and casting fly rods.

The scouts each had a notebook for recording observations and making sketches. At the end of each session there was a "moment of reflection," where they wrote in their notebooks.

In the first session they met a strong role model for women in the sciences – Kasey Yallally, DNR fish manager for Dunn County. She walked the stream with them and they talked about rivers and watersheds. Female staff from the Beaver Creek Reserve also helped. On the days when they did fly tying and fly casting, volunteers from TU helped out.

"It was really nice when the girls were tying the wooly buggers. There were a lot of older gentlemen who came down," said Stephanie Samson, mom of a Girl Scout and Brownie. "Watching the guys, I think they really enjoyed it as much as the girls did."

The girls were quick to show their completed flies to their grandfathers, she said.

TU STREAM Girls Coordinator Tara Granke reminded everyone that the STREAM Girls program was first held near Stevens Point several years ago, and has since spread to programs in eight states. But since that first program, it was never held again in Wisconsin…until now.

"We're bringing it back to its roots here in Wisconsin," she said.

Granke said fishing is not a required part of the program because in many areas the girls don't have a nearby area to fish, but they can always find an open field to practice casting.

Andringa said she would like to have the program again next year, but would like to make it a weekend program with the Girl Scouts staying overnight at Beaver Creek Reserve, rather than coming for separate sessions.

Jillian said she doesn't know if any future scientists will emerge from the sessions, but the Girl Scouts were curious.

"Throughout the program you could see the girls kind of opening up," she said. "We've gotten a lot of positive feedback. I've had people contact me about setting up this program in their town," she said.

She hopes the program will continue locally, but doesn't expect to play the same leadership role again. Next year she will be a senior and will concentrate on transitioning to college.

It has been a busy spring for her, balancing school and sports and STREAM Girls. She is a cross-country runner and because of COVID their season was postponed until this spring. She recently finished seventh in the state finals individually and her team, Eau Claire Memorial, finished fifth.

The girls who finished STREAM Girls received a badge from the Girl Scouts and a certificate from TU.

DNR completes Central Sands Lakes Study

By Tom Lager

This is a brief status update, please refer to links below for the complete reports and contact your legislators requesting support of DNR recommendations.

Wisconsin State Legislature (2017 Wisconsin Act 10) directed the DNR to conduct the Central Sands Lakes Study in response to public pressure over concerns of low water levels caused by groundwater withdrawals in conjunction with normal variation of weather patterns in some Central Sands water resources. The study directive was to the DNR, in collaboration with the Wisconsin Geological and Natural History Survey, United States Geological Survey and the University of Wisconsin System. The multi-year study was restricted to Pleasant, Long, and Plainfield Lakes in the Central Sands using an approach that involved data collection and groundwater flow modeling. Coldwater streams were not in the scope of the study, although streams are noted for being more sensitive to groundwater withdrawals than lakes.

Tom Lager

CENTER-PIVOT IRRIGATION SYSTEM IN MARQUETTE COUNTY
Irrigation systems like this rely on high-capacity wells.

The study was completed and submitted to the legislature, as required prior to June 3, 2021, with these DNR findings: "findings confirmed that the study lakes and other surface water resources (Lager note: e.g. trout streams in Waupaca, Waushara, Marquette and other counties) in the Central Sands Region are well connected to groundwater. We focused our study on high-capacity wells that pump water for irrigated agriculture, since 95-99 percent of the groundwater withdrawals in the near-lake modeling area were used for irrigated agriculture. Our model results indicate that current groundwater withdrawals from irrigated agricultural reduce lake levels in Pleasant, Long, and Plainfield Lakes. Current-irrigated agriculture has caused a significant reduction in lake levels resulting in impacts to human uses (e.g., boating), fish, plants and chemistry on Long Lake and human uses and plants on Plainfield Lake."

The DNR recommends a regional framework, such as a water use district, to address impacts from reduced water levels in the Central Sands Region. DNR determined that the number of high-capacity wells responsible for significant reductions of water levels are so numerous that site-specific management measures often considered for water resource protection are likely to be prohibitive.

The regional public interest group, Central Sands Water Action Coalition, communicated to the legislature that the water use district should include these and other criteria:

- The purpose to manage groundwater extraction preventing additional waters from becoming significantly impacted, and restoring significantly impacted water bodies back to a healthy regime within the Wisconsin Central Sands.
- Every proposed high-capacity well be analyzed by the DNR ensuring no significant impact to waters, either individually or cumulatively with other high-capacity wells. No new well shall be approved if it does.
- Extend the DNR groundwater flow model to include important parts of the landscape in the Tomorrow, Little Wolf and other watersheds.
- Require the DNR to use the existing and extended groundwater flow models to estimate the extent of impacts and expand a Central Sands monitoring program.
- Require the DNR to issue reports of compiled flow and pumping data and progress at reducing groundwater pumping impacts
- Provide funding for the DNR's efforts.

Links for detailed information are available at https://dnr.wisconsin.gov/topic/Wells/HighCap/CSLStudy.html and https://centralsandswater.org .

This study was one of the most comprehensive studies of geology, groundwater and lakes within the Central Sands Region and led to the refinement of a regional groundwater flow model and smaller inset groundwater flow models useful to future efforts to characterize ground and surface water resources and factors that impact them.

Insecticides impacting trout streams

By Mike Miller, DNR Stream Ecologist

Wisconsin's agricultural industry generates an estimated $80 billion in economic activity each year. While agricultural productivity is fundamentally important to the state's economy, it also has significant environmental costs for trout streams. Sedimentation due to upland soil loss, eutrophication from manure and chemical fertilizers, riparian habitat loss, water use and effects of agrichemicals all strongly influence the health of Wisconsin's water resources.

Although the sources and effects of sediment, nutrients and habitat degradation on trout streams are well known, sources and impacts of constantly evolving agrichemical usage is often poorly understood.

Crop production relies on the use of various chemical inputs that, in addition to fertilizers, includes newly developed herbicides, fungicides and insecticides that are often touted to improve crop yields. Impacts from these chemicals are poorly understood in part because of their dynamic nature in the environment and the relatively high costs of laboratory analyses used to measure these chemicals.

However, the presence of pesticides on the landscape and in Wisconsin's surface and ground waters affect invertebrate populations. Both aquatic and terrestrial invertebrates are fundamentally important links in the food chain by consuming living and dead plant matter and in turn providing food for a large number of terrestrial and aquatic animals, including trout.

Environmental effects of insecticides

There is a rapidly growing body of scientific evidence indicating that a specific class of insecticides called neonicotinoids is causing global declines in terrestrial and aquatic insects, which in turn affects the animals that feed on insects, and overall ecosystem health.

Neonicotinoids, or "neonics" are synthetic versions of nicotine produced by plant species such as tobacco, tomatoes and potatoes, to repel insect pests. While neonics' role in colony-collapse among honeybees has gained some public attention, these same chemicals are lethal to a vast array of other terrestrial and aquatic insect as well.

Neonics bind strongly to neural receptors in the central nervous system of insects causing nervous stimulation at low concentrations and at higher concentrations receptor blockage, paralysis and death. Neonics bind more strongly to the neural receptors in insects relative to vertebrates, so they are selectively more toxic to insects than mammals and other vertebrates.

Neonics are generally toxic to insects in very minute quantities. The LD50 (lethal dose that kills 50 percent of test organisms) for ingestion of imidacloprid and clothianidin (several of the most-used neonics in Wisconsin) by honeybees is 5 nanograms (parts per trillion). To put this into perspective a sugar granule weighs approximately 625,000 nanograms — enough to kill 125,000 bees. A coffee sugar-packet amount of neonics is enough to kill approximately 600 million bees.

Use of neonics in Wisconsin

In Wisconsin more than 500 products containing neonics are registered for use. The quantities of neonics used in the state are not tracked. Neonics are applied to cranberries, vegetable crops, soybeans, corn, small grain and forage crops. In urban settings they are used as root drenches for trees, and widely applied in gardens and on lawns. Pet flea and tick collars, and cockroach and ant baits are also widespread applications of neonics.

Overall neonics are primarily used as seed dressing in Wisconsin and elsewhere, accounting for 60-90 percent of their total usage. These chemicals are water soluble and get distributed throughout the plants. Seed dressing as a prophylactic measure is attractive to agricultural producers since this usage requires no action by producers to monitor occurrence of plant pests or crop damage.

Dosing seeds with neonics has resulted in the wholesale shift away from Integrated Pest Management (IPM) strategies of: 1) not applying insecticides unless pest problems occur, 2) spot-treatment of crop fields, and 3) using chemicals that specifically target the pest specie(s) of concern, versus the use of broad-spectrum insecticides.

Neonic use trends

The advantages of perceived low toxicity to vertebrates, high toxicity to invertebrates, systemic action, and flexibility of use has resulted in these chemicals being the most used insecticides globally. Usage information for Wisconsin and most other states and countries is lacking, but trend data from the UK provides insight into the rapidly expanding use of these chemicals. In 1994 about 2,000 kg of neonics were applied to crop fields in the UK. In 2010 about 80,000 kg were used, a 40-fold increase. Japan reported similar increases.

More than six million acres of corn and soybeans are grown in Wisconsin, with nearly all field corn acreage being planted with neonic-treated seed. Based on corn seed treatment rates (3 mg/seed kernel), corn planting rates (30,000 seeds/acre), and acres planted in Wisconsin (3.9 million) suggests about 127 tons of neonicotinoid insecticides are used in the state each year for this one crop.

Economic benefits of neonics

Because of a variety of changes to cropping practices during the last 75 years, crop yields have increased, but in the last 20 years these improvements have been modest or negligible. While highly toxic to insects, there is limited peer-reviewed research reporting the effectiveness of neonics in improving crop yields. In the UK, yields of rapeseed have not increased since the introduction of neonics in the early 1990s, despite nearly 100 percent of this crop being treated with neonics.

Researchers compared the effectiveness of controlling soybean pests with neonics-treated seeds and IPM methods and found the crop yields between the two methods indistinguishable, but pesticide use, and costs were much lower using IPM methods.

Another published study compared yields of neonic-dressed soybeans and untreated controls and saw no differences between treatments in two years of study, but did document reductions in beneficial predators of soybean pests found in the soil of the study plots treated with neonics. Overall, the findings of this study suggest the farmers were not recouping the costs of the insecticide seed treatment by any improvement in crop yield.

A University of Indiana study of field corn reported no increase in crop yield with neonic treatment of seeds. Other studies showed economic benefits of dressing winter wheat seeds with neonics were small, and increased yield was offset by the cost of the seed treatment (references to all the above studies are available upon request from the author).

Fate of neonics in the environment

Various studies suggest that only between 1.5 percent and 20 percent of the active ingredients of seed-applied neonic pesticides are taken-up by crop plants, whereas 50 percent of foliar spray is absorbed.

Likely, more than 90 percent of the active neonic ingredients move into the soil within a few weeks of planting coated seeds. In soil these compounds have half-lives between 200 and 1,000 days, suggesting croplands accumulate neonics over time, unless lost to the atmosphere or water. Citing one study from the UK, soil concentrations of neonics ranged between 6 and 18 ppb one year after planting neonic treated wheat seeds. After 6 years of planting, soil concentrations of neonics 1 year after the final planting were 18 – 60 ppb.

Soil composition determines neonic infiltration and transport, and soils with higher organic content can absorb a higher proportion of neonics applied to crop fields. But, before neonics bind to soil they can readily leach into ground and surface waters, so higher groundwater and surface water concentrations of neonics can be predicted soon after planting, particularly if followed by rainfall events.

Neonics in Wisconsin waters

Numerous studies report neonics being found in ground and surface waters, including a Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) 2019 report: Neonicotinoid Pesticides in Wisconsin Ground and Surface Water.

DATCP reported that 5.7 percent of drinking water wells in agricultural areas had detectable concentrations of one or more neonic compound. For drinking water wells retested because of previous pesticide detections, 14 percent of these wells had detectable concentrations of neonics.

This study also reports that 53 percent of edge of field monitoring wells had measurable concentrations of neonics and cites a University of Wisconsin study focused in the Central Sands region that reports 69 percent of irrigations wells tested had measurable concentrations of one or more neonic compound in the water.

As predicted by knowledge of soil and neonic chemistry, areas with coarse soil and relatively low organic content, and shallow water tables (e.g. Central Sands, Lower Wisconsin Riverway) are more likely to allow neonics to travel directly into groundwater than other areas of the state.

Effects on non-target organisms

While the toxicity of neonics to honeybees has generated significant attention, it should be recognized that the same physiological mechanism that makes neonics highly toxic to crop pests and honeybees is also acting on numerous other terrestrial and aquatic invertebrates. Typical LD50 doses for insects range from 0.8 to 88 ng per insect, which in part is dependent on the size of the insect.

An increasing number of studies show behavioral changes to insects that occur at much lower doses than what causes immediate mortality but that still have strong population effects. For example, an inability of honey bees to forage properly or find the hive or food patches are detrimental to the colony. In aquatic environments, larvae of burrowing mayflies such as hexagenia species have been shown to vacate their river bottoms shelters, which while it doesn't cause immediate mortality, in most instances is eventually fatal.

Regulation of neonics

In 2013 the European Union and a few neighboring countries restricted the use of certain neonicotinoids. In 2018, the EU banned the three main neonicotinoids — clothianidin, imidacloprid and thiamethoxam — for all outdoor uses. Several U.S. states have also restricted usage of neonicotinoids out of concern for bees and other pollinators.

In Wisconsin, the DNR announced its 2021-2023 Triennial Standards Review (TSR) priorities for their water quality standards program and neonics were ranked third in overall priority (https://dnr.wisconsin.gov/sites/default/files/topic/SurfaceWater/2021-2023_TSRFinalReport.pdf).

Their stated plan is to review the U.S. EPA's Office of Pesticide Program's aquatic life benchmark data and other available toxicity data for neonics to determine whether it is feasible to develop surface water criteria to protect aquatic life. Currently, the EPA is also undertaking a risk assessment of all neonicotinoid compounds, which is planned to be completed in 2022 (https://www.epa.gov/pollinator-protection/schedule-review-neonicotinoid-pesticides). Afterward, they will pursue risk mitigation as appropriate.

Summary

Although neonics were developed to control insect pests, they are also highly toxic to numerous non-target organisms. Neonics move into ground and surface water, with lethal effects on aquatic invertebrates, which directly affect the health and functioning of our trout streams.

As with other industrial chemicals, costs and benefits are being assessed along with environmental concerns, and as our scientific knowledge of these chemicals increase it appears that risk assessment and best management practices will also evolve. As with any newly emerging contaminant, one of the best approaches to protect the environment is to stay informed and engaged as regulation and management processes evolve.

CAFO activity update in the Driftless Area

More Controlled Animal Feeding Operations (CAFOs) are appearing on the landscape, while DNR oversight capacity lags behind EPA's recommendations. Meanwhile, fines were finally imposed for several fish kills from manure spills.

By Jason Freund

Agriculture and dairy is strongly associated with Wisconsin. We are, after all, "America's Dairyland." Agriculture is second only to forests in the amount of land coverage in Wisconsin, but in the Southern two-thirds of the state, agriculture is the predominant land use. Most of Wisconsin's 16-million-plus acres of forest are in the northern third of the state.

Wisconsin and much of the United States is going through a change where there are increasingly fewer total farms and the remaining farms are larger in acreage and number of animals. You may remember former U.S. Secretary of Agriculture Sonny Perdue catching a lot of heat for his words, "In America, the big get bigger and the small go out." This was reminiscent of Earl Butz, Nixon's Secretary of Agriculture in the 1970's, who said "get big or get out." Farms have gotten larger, and that is nothing new.

Industrial agriculture in Wisconsin

Confined animal feeding operations (CAFOs), factory farms, industrial agriculture or whatever you want to call farms with more than 1,000 animal units, are one of the greatest sources of environmental and public health concerns in Wisconsin. The most significant public health concerns have been associated with groundwater contamination, as witnessed by studies in eastern Wisconsin, Kewaunee County in particular, and by the Southwest Wisconsin Groundwater and Geology study (SWIGG).

Both of these areas have karst geology (fractured limestone and dolomite bedrock) that are associated with spring flows that create our trout streams but also makes the groundwater more susceptible to pollution, as manure and chemicals can more easily make their way into groundwater without as much soil filtering.

Studies in both areas have demonstrated high levels of fecal and bacterial contamination of wells. The U.S. Centers for Disease Control and Prevention (CDC) states that epizootic diseases that move from animals to humans, such as COVID-19 and "bird" and "swine" flus, are the most significant concern associated with CAFOs. Additionally, fish kills, eutrophication, groundwater depletion by high-capacity wells, and other environmental degradation are of concern throughout much of the state.

The number of large agricultural facilities has been on the rise and there has been increasing interest from Iowa farms to move some of their hog operations into neighboring states as that state deals with disease and pollution issues.

Two such efforts are the Roth Feeder Pig operations that were submitted as soon as Crawford County lifted their CAFO moratorium and the Cumberland, LLC. proposal in Burnett County, which is slated for more than 26,000 hogs and more than 6,000 animal units.

Iowa has nearly 4,000 CAFOs that are estimated to produce at least 68 times the amount of fecal matter produced by the state's just over three-million human residents. Environmental issues associated with Iowa CAFOs are of increasing attention as environmental and human health impacts have been studied in greater detail.

Wisconsin has approximately 320 permitted CAFOs, about 90 percent of which are dairy farms. More problematic is that the state adds 13 farms a year on average and oversight by the Wisconsin Department of Natural Resources (DNR) has not always kept up with the rising CAFO numbers. CAFOs are visited by regional wastewater specialists (https://dnr.wisconsin.gov/topic/CAFO/contacts.html) who work with CAFO owners and managers to ensure that they are in compliance, and to deal with issues before they become problems.

Prior to 2011, each specialist oversaw an average of 17.5 CAFOs. However, since then that number has swelled to 23.3 CAFOs per specialist. The U.S. Environmental Protection Agency (EPA) recommends a 20:1 ratio. Wisconsin is currently above that recommendation. And for the fish kills I will write about below in La Crosse, Monroe and Vernon counties, the regional specialist assigned to the region is in Dodgeville, about an hour and a half drive to where the kills occurred.

The promise of industrial agriculture has been that these farms are more heavily regulated and have more oversight than non-CAFO permitted farms and thus will have less environmental impact than smaller farms do. Certainly this has not been the case in Iowa or even in regions of Wisconsin where CAFOs have created air, surface water, groundwater and human health issues. Much research has shown that the density of CAFOs is strongly associated with human and environmental health issues.

Recent spills, fish kills and enforcement

There is a bit of good news for those that have been following recent fish kills in the Driftless Area. Three of them have been settled and fines have been assessed. Fish kills on Otter Creek in 2017 and 2019 and another unreported fish kill on Bostwick Creek in 2019 resulted in 2,776 dead fish.

The Wisconsin Department of Justice (DOJ) has issued fines of $242,000 for the three fish kills. Wild Rose Dairy, K & D Manure Handling and their owner, Kevin D. Hintz of Sparta, were fined for the Otter Creek spills and K & D Manure Handling and Hintz were fined for the Bostwick Creek fish kill.

The Wisconsin DOJ wrote in their press releases that, "Mr. Hintz told DNR conservation wardens that he knew manure had reached a tributary to Bostwick Creek, and that he did not report the manure spill to DNR because he hoped nothing would come of it. DNR was notified of the fish kill in Bostwick Creek by an anonymous public tip." The settlement included $126,000 for fish killed ($26.25 per trout) and for lost fishing opportunities that is to be paid to the DNR.

The fish kills are a great example of how citizens need to be part of the process. If not for a person reporting the Bostwick Creek fish kill, there may never have been enforcement action taken. If you witness a fish kill on a waterbody, call the Wisconsin DNR tip line at 1-800-TIP-WDNR to be sure that the DNR can respond to the event in time to accurately assess the extent of the fish kill. Fish kills in Wisconsin are investigated by the DNR and enforcement action is taken by the Wisconsin DOJ.

Since the Otter and Bostwick creek kills, another fish kill on Knapp Creek, a tributary of the West Fork of the Kickapoo River, has resulted in at least 118 dead trout. Knapp Creek is listed at a category III stream but the DNR has been working to change this classification as it has not been stocked since 1993. It is a lower-population-density stream and a kill such as this can have a significant negative effect on the stream, particularly if larger fish are killed.

Other happenings in the Driftless Area

While the two hog farms with Iowa connections are our two most significant threats, we are also seeing an increase in dairy CAFO applications, a loss of family farms and a new threat of chicken facilities spreading through the Driftless Area.

For those of you who fish the Coon Creek/Timber Coulee watershed, you may have already experienced the drone of the fans from the 18,000-chicken organic egg facility on Olstad Road.

Other facilities are likely planned for the region. While they fall under the threshold of 82,000 laying hens to be defined as a CAFO, these farms may still present an environmental issue, particularly when sited on a dead end road that has a bridge that has seen water over the top of it a couple of times in the last few years.

While the Wild Rose Dairy was fined for their two fish kills on Otter Creek, they also had their National Pollutant Discharge Elimination System (NDPES) renewed because past fish kills cannot be used as evidence of non-compliance.

There is no question that the laws are exceedingly favorable for the industrial agricultural producers, and citizens of the state are in an uphill battle to regulate and oversee industrial agriculture. At least we are seeing action by the Wisconsin DOJ to attach significant fines to fish kills.

Wisconsin TU's CAFO Committee Report

In response to these issues and the increase in CAFOs in the state, Wisconsin Trout Unlimited put together an ad-hoc CAFO committee to address and inform the members about issues associated with CAFOs in the state. Members from throughout the state were part of the committee, and although the report will not please everyone, it does inform members about the challenges associated with CAFOs and how to work to minimize the potential negative impacts of industrial agriculture.

As farmers experience lower prices for meat and milk, the trends we have seen towards larger farms are likely to increase in the future. CAFOs are efficient at supplying the products to meet our demand for relatively inexpensive meat, eggs and dairy. Unless we can change the demand side of the equation; increased industrial agriculture is the most likely result. My challenge to you, and to myself, is to change our buying habits to better support smaller, local farms.

Look for details on the report in your email as well as Linn Beck's article in this issue of *Wisconsin Trout*.

Jason Freund lives in La Crosse where he teaches biology at UW-La Crosse. He is a Coulee Region TU board member and has recently served on the Wisconsin TU CAFO committee. More of his writings are at https://www.thescientificflyangler.com/, his COVID distraction project.

West Fork Sports Club update

The West Fork of the Kickapoo River is still healing from the flood of 2018. Many small projects have improved the devastation to the water and the land. Various groups have teamed up to make improvements that will withstand future floods and restore the watershed in positive ways. The West Fork Sports Club provided the Watershed Project Plan-Environmental Impact Statement (PLAN-EIS) with the location of LUNKER structures and habitat work on the West Fork of the Kickapoo River dating back to 1987.

Various partner groups including the Natural Resource Conservation Service and Monroe, Vernon and La Crosse counties are preparing a Watershed Project Plan-Environmental Impact Statement (PLAN-EIS) for both Coon Creek and West Fork of the Kickapoo watersheds.

Options include dam decommissioning, replacement of the dams, conservation practices in the upper watershed to reduce runoff and improvements downstream of the dams to reduce flooding or mitigate flood damages.

In the meantime we continue to repair previous work and develop new plans with TU DARE, Vernon County and other agencies.

There are 13 exposed LUNKER structures from work permitted in 1997, These all need to have rock reinstalled. Otherwise the LUNKERS are exposed to sunshine, which degrades the wood faster and reduces their functionality and protection for fish and other species.

As our TU members age and mobility issues arise, the club is one of the few places regularly groomed and accessible for our older members to fish during the entire trout season.

In this spirit, one of our elders who is 85 years old provided $5,000 of the $12,000 needed. He also issued a challenge to other TU chapters and members to cover the remainder. Donations can be sent to: Attn. LUNKERS, WFSC, PO Box 52, Viroqua, WI 54665.

If you have questions or if you would like to help on this project, please contact us at westforksports club@gmail.com

As an aside, the WFSC, with the help of the AmeriCorps disaster team, just planted 40 new trees in the park. Some are as close to the river as possible, to continue the new restoration practices and standards of offering the river some shade during the day to help mitigate climate change and lower water temperatures into the future.

The DNR has informed us that the brook trout stocking program will resume in July and 2,200 brook trout will be released in the watershed in April 2022. With the help of many members, either through investing time or financial donations, the park is fully reclaimed from the flood of 2018. Many people have been enjoying the break from Covid restrictions and are visiting the Driftless Area to see the progress. We appreciate any support. With the momentum we have going, the WFSC may return the stream to all the glory that once made it one of TU's "top 100 streams."

—Tina Murray,
West Fork Sports Club

Women's Leadership Institute a success

The Southern Wisconsin Chapter has been offering women's fishing clinics for more than a decade. We started with the basics clinic, then advanced to the intermediate Women on the Water Skills Clinic. Members from nearly every Wisconsin chapter, as well as from other states, are now available to help women advance their skills.

A decade ago this was groundbreaking within TU. TU National visited to see what we were up to. These Wisconsin Women's Fly-Fishing Clinics (WWFFC) have become the biggest hit in the Midwest for women anglers wanting to learn about the sport, the fishery and conservation. They are also the highlight of the summer for many.

We literally bring women and men from all over the country to participate and lead the clinics. Sadly, we end up with a waiting list every year. We currently can't accommodate more than one clinic per year. If we could just land a major sponsor we frequently joke about having a bus, a salary and hitting the road with the clinics.

The WWFFC offered a Women's Leadership Institute June 18-20 at the West Fork Sports Club in southern Wisconsin. It was led by the instructors of the WWFFC with a curriculum designed to support women wanting to step into leadership roles within TU.

As we evolve as an organization and women's input is viewed as adding value to the organization, women may take more interest in being present and having their contributions appreciated. They will leave the clinic secure in their own fly-fishing abilities and with training on how to teach skills to others.

To our knowledge no other group is offering leadership training nor offering it to an entire region of women ready to step up to leadership. We had 13 women from four states attended the institute

We enjoyed our time with these women and the ripple effect they will have within chapters and across the Midwest. We would like to thank the Southern Wisconsin Chapter and all the members who come to assist, lead, mentor, guide and make these clinics fabulously enjoyable and popular.

—Tina Murray and Team

Check out our Facebook pages

We're getting social. The Council now has an official Wisconsin Trout Unlimited Facebook page at facebook.com/WisconsinTU. So go ahead and give us a "Like!" We've also set up a Wisconsin Trout Unlimited State Council "group" on Facebook for people to share upcoming event info and conservation-related news.

Watershed Access Fund: Obtaining public access

The Watershed Access Fund continues to examine fishing access acquisition opportunities around the state. The Council hopes to be able to announce another new partnership acquisition in the northern area of Wisconsin in the near future. The grant program is becoming more well known, and organizations are finding that partnering with Wisconsin TU is making acquisitions possible.

Our WAF Contributors

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Charles Barnhill	Madison, WI
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Make your check payable to Wisconsin Trout Unlimited

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Back Forty mine saga continues

The long saga of the Back Forty project continues. Recently, there has been cause for hope.

On May 11 Aquila Resources announced that they would end their appeal of the denial of their wetland permit, a decision made by Judge Pulter in January 2021. They also announced that they would not proceed with the contested case of their amended mining permit from Michigan's Department of Environment, Great Lakes and Energy (EGLE).

However, Aquila also stated that they plan to resubmit all of their permit applications to EGLE by the end of 2021. Aquila is conducting a new feasibility study that will include an underground mine. They have talked about an underground mine in publications to shareholders previously, but it was not in their past permit applications. An underground mine is expected to be a part of their new permit applications.

Then on June 1 Aquilla announced that it has entered into a non-binding letter of intent to sell its interest in the Bend and Reef exploration properties in Taylor and Marathon counties, respectively, to a private company, Newco. Aquila President and CEO Guy Le Bel said "We are very pleased to have reached an agreement in principle to monetize our non-core Wisconsin assets. The transaction provides Aquila with immediate cash without diluting Aquila shareholders. It also provides us with meaningful upside exposure to an exciting new exploration-focused company with the resources to explore the Bend and Reef properties as Aquila focuses on the development of Back Forty."

This smells of a shell game to find cash for a struggling exploration company.

All of these events have mining opponents cautiously optimistic. However, no one is letting their guard down. As always, we are grateful to the Menominee Indian Tribe of Wisconsin, Coalition to SAVE the Menominee River and the many other groups and advocates that have spent years fighting this proposal and that are prepared to continue fighting.

The Coalition to SAVE the Menominee River is holding a Water Celebration event on Friday, July 16th from noon to 6 p.m. You can learn more about the event at jointherivercoaltion.org.

—Allison Werner, Executive Director of the River Alliance of Wisconsin

Lawsuit filed against WMC

Midwest Environmental Advocates filed the suit against Wisconsin Manufacturers and Commerce regarding regulations of PFAS and other hazardous substances.

June 14 Midwest Environmental Advocates filed a request to intervene in a lawsuit initiated by Wisconsin Manufacturers and Commerce that seeks to undermine the authority of the Wisconsin Department of Natural Resources to regulate PFAS and other hazardous substances under Wisconsin's Spills Law.

Midwest Environmental Advocates filed the request to intervene in Waukesha County Circuit Court on behalf of concerned Wisconsinites including the River Alliance of Wisconsin, Citizens for a Clean Wausau, Clean Water Action Council of Northeast Wisconsin, Wisconsin Environmental Health Network, and Doug Oitzinger, a former mayor of Marinette. Intervention is a process that allows an organization or a person who is not an original party to a lawsuit to participate and defend their interests in the case if they will be directly and substantially affected by the outcome.

Wisconsin Manufacturers and Commerce and Leather Rich, Inc. filed a lawsuit in February to sue the DNR to limit the agency's ability to investigate environmental contamination and require responsible parties to clean up contaminated sites. The lawsuit threatens to fundamentally undermine the Spills Law, a bedrock environmental and public health protection that has protected the people of Wisconsin for more than 40 years.

River Alliance of Wisconsin chose to intervene in this case because preserving the integrity of the Spills Law is crucial to the DNR's ability to protect Wisconsin's lakes and rivers. The Wisconsin Manufacturers and Commerce assault on the Spills Law is a significant threat to Wisconsin's water resources, to public health, and to all the sectors of our economy — including tourism and agriculture — that rely on clean water.

The idea that the Spills Law could be gutted and that we could return to a time when polluters weren't held accountable for cleaning up contaminated soil and water is unthinkable. Unfortunately, that's exactly what's at stake in this lawsuit.

Read more about how the River Alliance is intervening in this case on our website. We will keep you informed about this case as it proceeds.

—Allison Werner, Executive Director of the River Alliance of Wisconsin.

Get your Wisconsin TU license plate now. Go to www.dot.state.wi.us/drivers/vehicles/personal/special/trout.htm

Tree Planting in the Upper White River

By Bill Heart, Wild Rivers Chapter & Cris Sand, DNR

In late April I received an email from DNR Fish Manager Zach Lawson about a plan to organize a tree-planting day that the Brule Office of the Wisconsin DNR had scheduled to further protect the South Fork of the White River, a headwater tributary to the White River, upstream of the old hatchery property in the White River Fisheries Area.

Background

DNR Fisheries Technician Cris Sand was leading this effort as he had many years ago. Back in the early 2000's several Wild Rivers members, including myself, assisted the DNR in doing some habitat work on the South Fork to improve the habitat for the spawning browns in the upper part of the White River watershed. While doing this work, we ran into exceptionally large patches of glossy buckthorn, a tall, understory shrub brought to North America in the early 1800s as an ornamental shrub, primarily to serve as hedges. This was not a good idea, as this woody plant escaped from yards and landscaped areas long ago, invading forests and precious natural areas like the White River Fisheries Area.

For many years the Wild Rivers Chapter has helped Cris and the DNR crew with removing buckthorn. Most of the work was hand pulling and some digging to try to remove the roots. Just cutting the small stems makes buckthorn spread. At any rate, Cris, his crew and staff from the Gordon Correctional Center have been doing regular work in the headwaters. The work has entailed selective removal of buckthorn with chain saws along the edge of stream corridors intensively restored through numerous in-steam habitat projects since the 1960's, and mechanical clearing of buckthorn with forestry mulchers farther away from the stream. All buckthorn cut is treated with herbicide applied directly to the stump and regeneration in areas cleared are foliar treated annually thereafter until native vegetation is established.

More than 40 acres of riparian area along the South Fork have been targeted for buckthorn control. Buckthorn has been virtually eliminated in 20 of those acres, which now support a healthy and vibrant vegetative community. The project has demonstrated that with some hard work and effort, invasive species control and the restoration of a native riparian vegetative community is possible in targeted areas. It has required a lot of work, but Cris and his crews have done a wonderful job over the years.

So, with this background, Cris Sand and Collen Matula led this group of DNR personnel, along with Wild Rivers Chapter President Kevin Seefelt and me. Cris ordered 2,100 trees consisting of 500 balsam fir, 500 tamarack, 100 black cherry, 300 red pine, 200 black spruce, and 500 white spruce. Half of the crew including Collen, Kevin and I started on the upper section just upstream from the old hatchery, using tree spuds to plant the small trees. It was very pleasant work with few bugs on a nice cool day. According to Cris, nearly 11,000 saplings of 12 different tree species have been planted in the target area to date.

Bill Heart

FOUR-YEAR-OLD TAMARACK PLANTINGS NOW 7-8 FEET TALL
The area abounds with deer, but they have not browsed the tamarack,

Once we finished downstream, we moved up near the habitat structures in the upper area to meet up with Cris and his crew. This was the amazing section where Cris has been doing most of his work from years ago, and I got another look at the habitat work that we had done almost 20 years ago. I was amazed after not being in this section of the upper river for a few years at just the small amount of buckthorn that is now surviving.

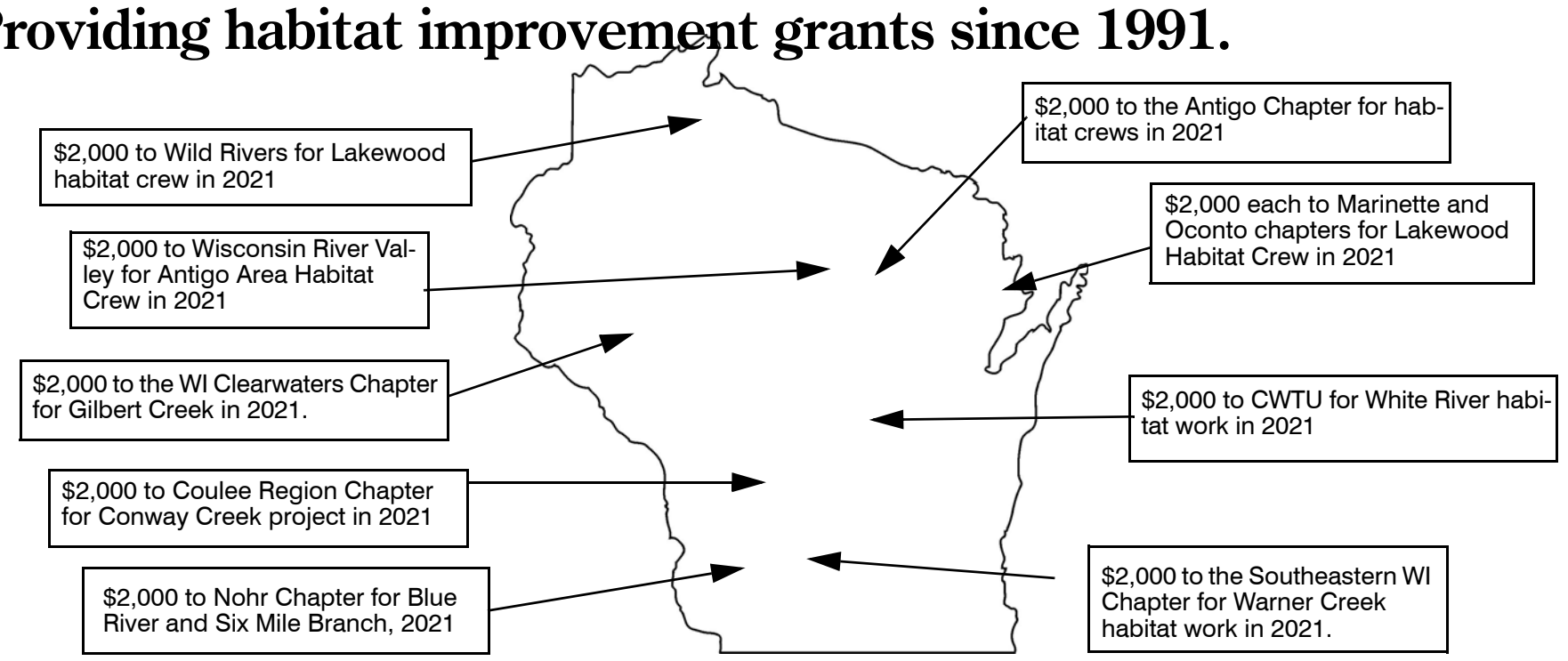
Tamaracks planted four years ago are now 7-8 feet tall. The area abounds with deer, but they have not browsed the tamarack. Cris was a little miffed that the bark had been rubbed by a few of the deer in that area. I am sure he will figure a way to teach those rutting deer to not rub their antlers on tamarack.

It was a wonderful day and the Wild Rivers Chapter would like to thank Cris Sand and his crew of DNR personnel for caring for the Upper White River. I am looking forward to next year's planting and maybe a fishing encounter this fall to check out our plantings.

Please support Friends of Wisconsin TU

The 2021 grant application season has now come to a close and we have awarded two additional grants. The Wolf River Chapter will be receiving Friends of Wisconsin TU funding for its work on Ninemile Creek and Southern Wisconsin Trout Unlimited will be receiving funding for a project on Hefty Creek.

Providing habitat improvement grants since 1991.



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Enclosed is my check, payable to Wisconsin Trout Unlimited.

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Wisconsin salmonids: Past, present and future

Rainbow trout, from Great Lakes steelhead to inland stockers and wild fisheries.

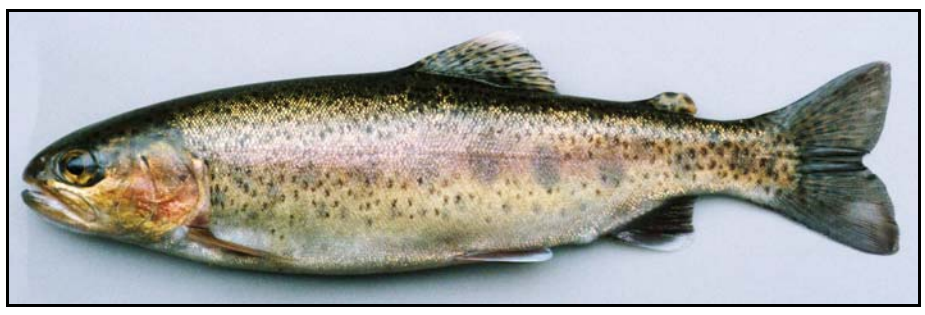
FALL WILD STEELHEAD FROM THE BOIS BRULE
A fall wild steelhead from the Bois Brule River that has been in the river long enough to lose its silvery color.

A STEELHEAD FROM THE SIOUX RIVER

Words and photos by John Lyons

Rainbow trout are the most schizophrenic of the Wisconsin salmonids. On the one hand, when referred to as steelhead, they are one of the most sought-after and revered gamefish in the state, pursued by aficionados who will brave the foulest weather and the most treacherous fishing conditions in pursuit of their quarry. Steelhead are justifiably famous for their strength and speed and are undoubtedly one of the best-fighting fish in Wisconsin.

Yet on the other hand, when referred to as rainbow trout, they can be a most domesticated creature, raised in crowded raceways at fish farms, stocked in artificial urban fishing ponds and made available for kids to catch in plastic pools in exhibition halls hosting winter fishing shows. Author Anders Halverson titled this type of rainbow trout "An entirely synthetic fish" in his 2010 book. But although they seem to have little in common, these two entities are biologically the same species. Let's explore how these very different versions of the rainbow trout came to be found in Wisconsin, where they occur today and what their future holds.



JUVENILE WILD MIGRATORY RAINBOW TROUT FROM DREW CREEK

What is a rainbow trout?

The rainbow trout, as currently recognized, is native to the Pacific slope from the northern part of Baja California in Mexico, the entire west coast of the conterminous United States and Canada, southern Alaska, and eastern Siberia and the Kamchatka Peninsula in Russia.

Within this vast range there is a bewildering variety of populations that encompass tremendous natural genetic, morphological and life-history diversity. Some populations occupy rocky rushing mountain streams and others thickly vegetated slow-moving spring runs in the desert.

Some populations are "resident" and rarely move more than a few hundred yards over the course of their lives whereas others are "migratory" or "anadromous" and migrate hundreds of miles from the rivers of their birth to a large lake or the sea as juveniles and then return to those same rivers as much larger adults to spawn.

Migratory rainbow trout are indistinguishable from resident rainbow trout as juveniles, but quite different in appearance in their lake or ocean environment, when they take on a silvery, steel-gray or chrome sheen and are known as steelhead. Some consider steelhead a form of salmon, but they differ from the other pacific salmon, with which they often co-occur, in not always dying after spawning and retaining the capability of spawning again in a subsequent year. As adults, some resident rainbow trout rarely exceed 12 inches, but some migratory steelhead may reach more than 12 pounds.

Scientists have struggled with defining the rainbow trout. Nineteenth-century ichthyologists described nearly every distinctive population as a separate species, each with its own scientific and common name. Early settlers, fish culturists and fisheries managers paid little mind to this classification and routinely moved, mixed and cross-bred fish from different places, mongrelizing and obscuring many formerly unique biological entities. The readiness with which many distinctive populations successfully reproduced with each other eventually convinced scientists that most were in fact part of the same highly variable species, the rainbow trout.

But some populations looked and behaved so differently, such as the various forms of redband trout of northern California and Nevada, Idaho, western Montana, and Oregon and Washington east of the Cascade Mountains, the golden trout of California's Sierra Nevada Mountains, the apache trout of southern Arizona, the gila trout of southeastern Arizona and southwestern New Mexico, and the poorly known but highly variable native trout of Mexico's Sierra Madre Occidental Mountains, that even today there is debate whether they represent separate species or merely particularly distinctive rainbow trout lineages. Recent advances in genetic techniques will help clarify the situation, although years of poorly documented stocking and mixing of populations will complicate the analysis.

THE PAST:

The origins of a global fish species

The rainbow trout was one of the first fishes cultured in the United States. Propagation began in the San Francisco area in the 1870's, and in 1880 a federal fish hatchery was established in the McCloud River drainage near Mount Shasta in northern California. This hatchery started with McCloud resident and migratory fish (a form of redband trout) but then later brought in migratory fish from other rivers in northern California and southern Oregon, eventually mixing and cross-breeding all of these different populations. Compared to other trout and salmon species, rainbow trout proved relatively easy to raise, and eggs from this hatchery were shipped throughout the United States and used to provide brood fish for many other hatcheries that were established in the eastern United States. From the United States, rainbow trout were eventually exported to suitable waters throughout North America and every other continent except Antarctica.

Another new fish for Wisconsin

In the late 1800's Wisconsin fisheries were in decline from environmental degradation caused by unchecked plowing, grazing, timber cutting, dam building, pollution and overfishing. Rather than effectively addressing these impacts, the preferred response in this era was to introduce new and presumably more tolerant species to the state. From 1875 through 1925, the Wisconsin and federal governments and some individual citizens stocked at least 10 non-native species in Wisconsin waters – arctic grayling from Michigan and Montana, American shad and Atlantic salmon from the East Coast, chinook salmon and rainbow trout from the West Coast and goldfish, common carp, rudd, tench and brown trout from Europe.

Of these, only common carp, brown trout and rainbow trout became widely established at the time. Common carp were certainly more tolerant, but caused major harm rather than benefits to warmwater habitats and fish species. Brown trout, as discussed in the last issue of Wisconsin Trout, improved trout fishing overall but at the expense of native brook trout. Rainbow trout started slowly in Wisconsin, but eventually became a key species supporting inland and Great Lake trout fisheries.

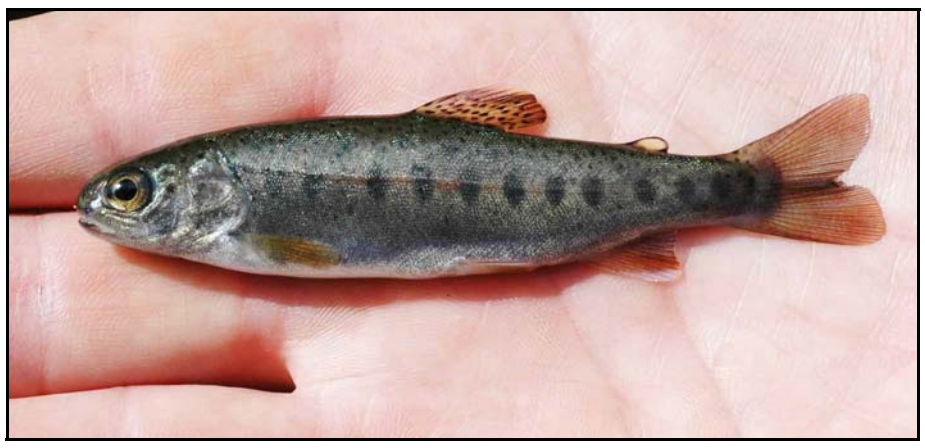
The exact origins of the first rainbow trout in Wisconsin, the federal hatchery in California or other federal or state hatcheries in Michigan or New York, are uncertain. But by the 1890's rainbow trout were being raised in Wisconsin government and private hatcheries and being stocked throughout the state. The first introductions in Wisconsin were a mix of resident, migratory and cross-bred fish. Rainbow trout became popular for stocking because they were relatively easy to raise at high densities compared to either brown trout or brook trout and could survive slightly higher water temperatures in captivity and the wild.

Lake Superior and its tributaries

Despite being introduced statewide in massive numbers, only in Lake Superior and certain tributaries, most notably the Bois Brule River, did naturalized, self-sustaining populations become established initially. Elsewhere in the state, regular stocking was necessary to maintain populations. Even where naturalized populations developed in Lake Superior tributaries, stocking to improve numbers continued in some waters up to 2002. Apparently, some resident rainbow trout were also present in the Bois Brule and perhaps other tributaries at

GANARASKA STRAIN STEELHEAD FROM SAUK CREEK
The author with a stocked Ganaraska strain Steelhead from Sauk Creek in Ozaukee County, Wisconsin.

JUVENILE WILD STEELHEAD FROM THE SIOUX RIVER



JUVENILE STEELHEAD FROM A TRIBUTARY OF THE SHEBOYGAN RIVER

first, but they had disappeared by the 1950's.

The Bois Brule quickly became (and remains) a destination fishery for anglers targeting steelhead. Its importance and popularity have led to its steelhead to receive more scientific study than any other Wisconsin population. The Brule is unique among Wisconsin Lake Superior tributaries in that it has large steelhead "runs" in both the fall and spring. Other tributaries have large runs only in the spring. All Lake Superior rainbow trout spawn in the spring, but in the Brule many Steelhead ascend the river from September through December and then overwinter in deep holes, which are generally lacking in the other tributaries.

They soon revert from steely-gray to a more classic "rainbow" appearance. A fresh run of chrome-colored steelhead enters the Brule in late February through April, and both the fall and spring fish spawn together from March through early May. Eggs are deposited in shallow pits in gravel, known as redds, excavated by the female. After a spawning bout is completed, the female buries the fertilized eggs in the gravel and no further parental care is provided. The eggs hatch after 3-5 weeks, and the fry absorb their yolk sac and emerge from the gravel and become free swimming and begin feeding 2-3 weeks later.

Juveniles spend from one to three years, usually two, in the river or its tributaries before transforming into silvery smolts and migrating to the lake at 6-10 inches to grow to adulthood. They remain in the lake for one to four years, usually two, reaching 21-25 inches and 3-6 pounds before returning to the river to spawn for the first time. Many of these fish survive the rigors of reproduction and return to Lake Superior to grow larger before making additional spawning runs in subsequent years. The largest steelhead may exceed 30 inches and 10 pounds.

Lake Michigan and tributaries

Lake Michigan was one of the first areas of Wisconsin to receive rainbow trout, but it was not until the 1960's that stocking produced fishable results. In the late 1800's and early 1900's many attempts were made to create steelhead runs in Lake Michigan and its tributaries. However, these early efforts were unsuccessful because survival of stocked fish in the lake was low, perhaps owing to the many predatory lake trout present, and the tributaries were generally too warm to allow for successful reproduction.

Stocking ceased by about 1915. However, in the mid-1960's, with lake trout eliminated and Lake Michigan full of abundant alewife as potential prey, rainbow trout introductions recommenced.

This time around they were quite successful, with excellent survival and growth. Anglers began to take large steelhead from 5 to more than 10 pounds from the lake during summer and fall and from tributaries during the spring. Limited natural reproduction was observed in a few small cold tributaries, but the numbers of offspring produced were small compared to the angling demands, and heavy stocking was necessary to maintain the fishery. Many millions of juvenile rainbow trout have been released in the lake and its tributaries during the last 50 years, which continues today.

Inland waters

Inland introductions of rainbow trout began in the 1890's and have never stopped. However, establishment and natural reproduction has been limited or absent almost everywhere. To my knowledge the only two exceptions are the Drew Creek system in Langlade and Menominee counties, and the West Fork of the White River in Waushara County, both of which have self-sustaining populations large enough to support fishing. The Drew Creek population originated in the 1960's when a private fish hatchery along the creek in Langlade County began to raise rainbow trout from Washington State. Fish from the hatchery soon escaped and colonized the creek and moved downstream through a short stretch of the West Branch of the Wolf River into Florence (Langlade County) and Upper Bass (Menominee County) lakes. Although the West Branch continues downstream from Upper Bass, rainbow trout did not colonize it further.

These rainbow trout are migratory, spending their first two growing seasons in Drew Creek and then at 6-9 inches moving to Florence or Upper Bass for most of the rest of their lives. In April, adults from the lakes move into Drew Creek to spawn and then return back to the lakes when finished. These adults range from 15-21 inches and 1-3 pounds, although there are unverified reports of larger fish.

The origins of the West Branch of the White River population are unknown, but rainbow trout were established there by the 1960's. This population is unique in the state in that it consists of resident fish. Naturally produced rainbow trout occur throughout the 16-mile length of the West Branch, but are present only as strays in the White River into which the West Branch flows. They reach a maximum size of about 15 inches and one pound although most fish are under a foot. They do not migrate downstream to the White River Flowage even though co-occurring brown trout, which are 5-10 times more abundant, often do.

RESIDENT WILD RAINBOW FROM THE WEST BRANCH WHITE RIVER

SKAMANIA STEELHEAD FROM THE MENOMINEE RIVER

THE PRESENT

Current stocking

Most rainbow trout fisheries in Wisconsin rely on stocking to persist. The Wisconsin Department of Natural Resources (DNR) raises 700,000-750,000 rainbow trout annually at 3-5 hatcheries for stocking into Lake Michigan and tributaries, inland streams and lakes, and artificial urban fishing ponds. Dozens of commercial operations annually produce more than a million more rainbow trout for sale as food, use in private fee-fishing ponds and fishing show events, and occasional private stockings into public inland waters as permitted by the DNR. No rainbow trout stocking currently takes place in Wisconsin's waters of Lake Superior or its tributaries, although steelhead stocked in Minnesota may enter Wisconsin.

In inland lakes and streams and in urban ponds, about 250,000 fish from the domesticated Erwin Strain are introduced annually, usually at "catchable" sizes from 6-9 inches. In this context, domesticated means that the fertilized eggs used to produce fish for stocking are obtained from "brood stock" adults maintained in the hatchery. Small numbers of brood stock up to 20 inches are sometimes added to a few inland lakes and streams to provide a trophy opportunity. Survival of inland and pond stockings is low, with most fish harvested or dying of natural causes soon after being released in the spring. However, in some waters a few fish may "carry over" and survive to the following year.

In Lake Michigan and tributaries, a total of about 450,000-500,000 steelhead of four different strains. Arlee, Chambers Creek, Ganaraska and (when available) Skamania are stocked each year. The use of different strains diversifies and increases fishing opportunities in terms of where fish occur in Lake Michigan and when they enter tributaries for spawning. Other strains such as Erwin, Shasta and Kamloops, were tried prior to 2010 but dropped because of poor success. None of the strains can be consistently identified based on appearance alone, and the DNR uses internal tags or external fin-clips and the timing and location of spawning runs to distinguish them.

The domesticated Arlee strain, a mix of several migratory West Coast forms that was developed in Montana, is stocked directly in nearshore areas of the lake and near the mouth of a few larger tributaries. Arlees remain in relatively shallow water for much of the year and are more available to shore anglers than the other strains, which tend to stay further offshore except for their spawning migrations. Arlees first enter spawning streams in December and their run and actual spawning peaks in March. They are a deep-bodied fish that may exceed 30 inches and 10 pounds.

The Chambers Creek, Ganaraska and Skamania strains are semi-domesticated, that is, their eggs are obtained from previously stocked fish migrating for spawning into either the Root River in Racine County or the Kewaunee River in Kewaunee County.

*See **RAINBOWS**, page 24*

A STEELHEAD SMOLT FROM THE BRULE RIVER'S COPPER RIDGE

RECOLLECTIONS

The flight of the Pegasus

Author Rick Larkin recalls more tales from his early adventures in Montana in the 1970s.

A STRINGER OF FOX LAKE TROUT
Author Rick Larkin, left, and his friend Howard proudly display a stringer of trout, caught with the help of "Pegasus" behind them.

By Rick Larkin

The long ride home from Montana gave us plenty of time to rehash our retreat from Fox Lake due to bears, the inability to catch any of the big trout we saw, and the mad scramble out of the flooding box canyon. In retrospect, we were amazed by what we all did during the span of what was really less than a week. We also discussed the cooler full of frozen trout packed in dry ice and our promise to throw a party for our friends when we got home. Despite the bears and the canyon escape, we all agreed it was a pretty good trip. Or, as Howard observed, "Nobody died".

The post-Montana fried-trout dinner was a doozy. The fried trout took center stage, along with a mountain of coleslaw, piles of home-fried potatoes, sliced lemons and cases of beer. Our reputation as gourmet trout cooks was now cemented into local legend, at least as far as we were concerned. The big pile of trout and fixings was reduced to scraps. As the stories rolled, the Fox Lake trout got even bigger as the beer disappeared. The non-fishing attendees to this fabulous dinner were amazed. We were fish-fry gods.

"It's going to be an annual!"

The party cemented an even stronger desire to get back to the mountains. We now felt we needed to go back to Montana every year. "It's gonna be an annual, lads!" Howard gleefully laughed. But we really didn't need much encouragement. The memories of the giant trout swimming in Fox Lake continued to torment us throughout the rest of the year. We needed to catch them and it became our obsession. It now took on the importance of some sort of holy quest.

Back at our fish camp apartment, we continued to pile up gear and plan for the next trip west. In the days after the party, we put the apartment back together and established the "Fox Lake Big Trout Expedition Staging Area" which Howard wrote in magic marker on a paper plate which he taped to the wall. He said it would make the equipment pile look more purposeful and less like a big pile of crap.

We stacked up the backpacks, pulled out the tents and reorganized our equipment. Written lists were started. Although we had 11 months until next July, we felt we had better get cracking if we were to get back there and get those monster trout. We knew next summer promised limited time for an expedition west. We had started new jobs and had left painting behind. Dave was starting graduate school. Howard was a teacher, with his summer pretty much free, and was tasked with the bulk of our preparation.

Howard proved to be an excellent architect for the big trout effort. In the evenings after work, he would pour over fishing magazines and catalogs. He had his own unique ideas about getting at those big fish. He talked about lures. I suggested flies.

We debated the small boat or float tube question. I advocated for float tubes while Howard, citing the need to cover more water, wanted some sort of small boat. We learned that the float tubes available at that time were fairly unrefined and consisted of what amounted to an inner tube with variations of a seat or harness in the middle. More in-depth reading discussed a float tube's tendency to sometimes flip over and drown the angler by tangling them in the seat or leg harness. After the near death experience in the Box Canyon, maybe a fleet of tippy little float tubes deployed on Fox Lake might not be the best idea.

Our attention then turned to small boats. Being from canoe country, a small canoe was our first thought. We knew canoes pretty well and all of us had canoe experience. I survived canoeing at summer Boy Scout camp. Howard was the most experienced and had canoed and fished the Boundary Waters. He said portaging a canoe to Fox Lake would be no big deal. He said it would only slow us down a little. I wasn't so sure.

While Howard was the fittest guy, and had run down the mountain from Fox Lake with a backpack full of fish and back again in a little over three hours, his idea of portaging a canoe up the steep mountain trails seemed an impossible task. I called up Dave. He was also unsure about the canoe idea and reminded me that we would have to tie it to the top of the truck and drive it across the west. In my mind, I could see a canoe tumbling across Interstate 90 in a prairie crosswind. We even made a long-distance call to Al at the lodge. He just laughed at the whole idea.

I discovered an ad in a camping magazine for a folding canoe, a 10-footer. It was made of canvas and had a lightweight aircraft aluminum frame. "Heck, we could get two," I thought. We looked further and I saw it cost about $600. "It probably will drown you as efficiently as a damn float tube" I rationalized. The expensive folding canoe idea was immediately scuttled.

One of us came home with a boating magazine. The feature article was about "The New Inflatables" and the magazine's cover photo showed a group of small inflatable boats full of smiling paddlers on a beautiful blue lake. The cover article was all about this new generation of inflatable rafts, along with discussions of the latest technological advancements, versatility and their inherent safety. These were no pool toys.

The article even contained photographs of a guy fishing out of a little inflatable raft in a mountain lake. This was of particular interest to our group. In the back of the magazine, we found an ad for a 10-foot inflatable costing $300. It had a 10-year guarantee and was rated for 400 pounds or three people. That did it. We would go inflatable. Those Fox Lake monster trout would be ours.

That fall, our inflatable raft fund grew slowly, owing to my trainee wages, Howard's teacher salary, and Dave's return to house painting prior to grad school. Plus, our need to go deer hunting, duck hunting, and the need to keep the apartment refrigerator stocked with beer didn't help, either.

My contribution to the fund was further depressed by my purchase of a big used revolver which I now deemed essential bear protection equipment. Plus, I thought it made me look like Clint Eastwood in Dirty Harry. Considering our last year's experience of having a bear in camp and a bad grizzly delivered by helicopter to our Fox Lake locale, the gun seemed like a good idea. Now we would no longer be reliant solely on the pig sticker and the camp ax.

The search begins

That March, we all went to the annual sports show at Milwaukee's downtown arena. We were always on the hunt for a deal and always went on the evening of the last day of the show, hoping for bargains. The inflatable fund had grown some and was now just over $300. After checking out all the exhibits, we spotted a small inflatable at a dealer's booth that looked a lot like the one in the magazine article. It had a similar guarantee and looked like it would fit our needs perfectly. At 10 feet, it looked like three guys could comfortably fish out of it. It came with paddles, a foot pump, a patch kit and a "Safety Manual."

It seemed to be sturdy in its construction and it did not seem to weigh as much as a canoe. It was "show priced" at $300. No bargain here, we thought, and walked off to look for another. We were unsuccessful, and about a half hour before closing, we went back to check it out one more time. The price had dropped to $250.

Howard stepped forward and approached the salesman. While usually not much of a talker, Howard came off as slick as an old horse trader, and, as it turned out, he loved to haggle. He would do the poor guy a favor by getting this thing off his hands. He wouldn't have to carry it back to his car. Howard said he was doing him a favor because he liked him. All he had to do was drop the price, just a little. Come on buddy! He didn't really want to have to put that heavy boat back in his car, did he?

For about 10 minutes, Howard and the tired salesman dueled back and forth. Sensing closing time, the salesman made a small concession, so he could get rid of us and go home. We got the raft for two hundred twenty five dollars and carried it to the car. We were thrilled. Visions of those big trout danced in our heads as we drove home with our prize. There was also $75 left in the boat fund.

On the way home, the discussion turned to naming our little boat. We stopped at a Mobil station to get some gas and Howard saw the red-winged horse logo on the gas pumps. It looked cool and he asked if anybody knew the name of the winged horse. "I think it's Pegasus" I said, dimly remembering a college literature class which touched on classical mythology. "Let's call her Pegasus," said Howard, and the Pegasus was born. She would be a mighty trout-catching vessel.

Sea trials for the Pegasus were scheduled for that May, when the ice was finally off the local lakes and the water was finally warm enough so you wouldn't get hypothermia if you fell in — at least not right away. The plan was to take the little boat

to a local lake and paddle around, fish a little and get to know how she handled. We were mostly wondering how this chubby little inflatable boat would handle the open water of a lake. We inflated the Pegasus with a shop vac and lashed it into the bed of my truck. Off we went.

More than 50 good-sized inland lakes lie directly west of Milwaukee. They range from small 40-acre lakes to more than 2,000 acres. We opted for a smaller lake with a free public boat launch. It looked a little smaller than Fox Lake and we thought it would simulate Fox Lake the best.

Once we got the Pegasus in the water, we paddled away from shore and started to fish. Soon, a strong gust of wind grabbed the raft and shot us across the lake with remarkable velocity. We barely got to fish and struggled with our two little paddles. How the Pegasus would handle in a strong wind had never entered our minds. Well, she behaved like a cork in a washing machine and the wind tossed us to and fro. We had little control and it took us over an hour to zigzag back across the little lake back to the landing. It was like trying to paddle a marshmallow.

Not a nimble craft

This performance characteristic of an inflatable boat was not covered in the magazine article. The Pegasus was nowhere nimble as a canoe. It was during this maiden voyage that we also discovered that three guys could not fish out of a 10-foot inflatable boat. We would have to take turns when we got out west. There was a growing feeling of gloom when we finally got her back to the launch.

When we finally pulled the Pegasus up on the shore and we all knew we could get seriously stuck on the far shore of Fox Lake if a bad wind came up. We remembered this steep and rocky shore was not easily accessible by foot from our campsite and the jagged rocks could potentially shred the raft if the wind got too nasty. I saw our two hundred twenty five dollars sprouting wings and flying away. As always, Howard came to our rescue with plan B.

"Ricky, I know a guy with a little outboard motor." He said.

"Oh….,who?" I asked.

"Doesn't your brother have a new horse-and-a-half Johnson?" asked Howard.

"Yup" I said.

My younger brother did indeed have such a motor. He used it on a small aluminum jon boat to fish on small lakes. It was his pride and joy. No way in hell would he lend it to me, and I told that to Howard.

"I know that" said Howard, "but he might lend it to me." The old horse trader just grinned.

Howard was right. As an older brother, I had broken, lost or had stolen a wide array of my brother's stuff over the years. Howard, on the other hand, had a clean slate. He was a very good friend of both of us and did not have a bad history like mine. Howard and my brother negotiated in secret. My name was probably not mentioned. A week later, Howard came back to the apartment with the shiny little motor. We clamped it to a sawhorse, got a big metal bucket, filled it with water, and pulled the cord. The little motor ran like a top. We were back in business. The giant Fox Lake trout were once again in reach.

A week later, a tiny motor mount from a boating catalog arrived at our apartment. Howard's mind went into high gear. More stuff arrived from various boating and fishing catalogs. The raft's motor mount sported tiny oarlocks, so small collapsible oars suddenly appeared.

Now motorized, we could troll for the giant Fox Lake trout. He even bought a mini downrigger to get down deep to where the really big trout lived. We brought Pegasus into our apartment, inflated her in our living room, and set up all of the new gear. As Pegasus sat there, she looked like one mean fish-catching machine.

Howard also ordered lures for big trout, including Lake Trout Flutter spoons, big jointed Rapalas, and some Helin Flatfish trolling plugs. A couple of long trolling rods also showed-up. We bought small packable gas cans and an oversize pack frame so we could carry the Pegasus up the mountain. It was now big trout, or nothing. It was getting toward July and there was no time for another sea trial. We had all scheduled our vacation time and our departure was in a few days. Plan B had to work.

Off to the Beartooths

Later that week, we deflated Pegasus, folded her up and packed her in the truck with all our gear, and headed back to the Beartooths and the monster trout of Fox Lake. Another nonstop cross-country drive began. We arrived at Al's place about 23 hours later, jangled on coffee, sleep deprived, and understandably a little goofy.

The little lodge and its collection of cabins and sheds looked like heaven. We stumbled out of our vehicle and were greeted by a smiling Al, who welcomed us back. He looked on in amazement as a mountain of gear was disgorged from the back of the pickup. We told him we were going to haul this pile of stuff up the mountain to Fox Lake and catch the big trout. We told him that the plan was that Howard would carry the raft lashed to a pack frame and we would distribute the rest of the gear amongst the rest of us. I am sure we jabbered like idiots.

Al looked on in amazement as the back of the truck produced our inflatable boat, a little outboard motor, tiny gas cans, oars, a motor mount, a mini downrigger, tackle boxes, and rod tubes with the trolling rods. We also had our usual fly rods, spinning rods, personal gear, packs, food, a tent, and sleeping bags. We shoved as much of this gear as we could into our cabin and put the rest back in the truck. Then we grabbed a burger at the café and crashed. We planned to pack up and take off the next day.

The next morning we got up early, ate breakfast, started to take all of the gear out of the cabin and the truck, and load up the packs. It was disorganized mayhem. There was gear everywhere. Howard's pack frame barely held the boat. The remaining gear, no matter how we tried, did not even come close to fitting into or tied on to the remaining two backpacks. We were in a panic and tempers were rising. We packed and repacked. Everyone accused everyone else of bringing too much. We tried to figure out what we could afford to leave behind.

I tried to shoulder my pack. I weighed more than 200 pounds in those days and was fairly fit. My pack felt like it weighed well over a hundred pounds and I wobbled around, dangerously top heavy. Howard's pack frame with the boat, lashed-on oars, and motor mount was even heavier.

Dave's pack included the motor and was also way too heavy. Fully loaded, he sat down on the bench in front of our cabin. He tried and couldn't get back up. I walked over to help pull him up and fell over backwards. I lay on my back and struggled like an overturned turtle. It became clear that we would never get this stuff to Fox Lake in one trip.

Al had been watching this little circus with noticeable curiosity. He watched us as we packed, unpacked, sorted, resorted and argued about what constituted essential equipment. Al sensed an impending disaster. He also noticed we were leaving behind some stuff you really needed to have in the backcountry. He walked into middle of our little frustrated group and said, "You guys need a mule."

We all looked at him. Four-legged assistance had never entered our minds. None of us were particularly horsey people beyond kiddy pony rides, or easy trail rides. But we knew we needed to figure out how to get this pile of stuff up the mountain without killing ourselves. Al looked at the pile of gear. "Yup, I could get most of this on a mule." He stated confidently.

But, I thought, who knew anything about a mule? Who would lead the mule? Weren't mules real obstinate? Once we got up there, would a grizzly show up and eat the mule?

At this point, Howard, always the optimist, cheerily volunteered, "I could be the mule wrangler."

"Mule Skinner," corrected Al. Al laughed, "Guys, I can lead the mule up there on horseback. Twenty-five bucks. Best deal in this part of Montana." We agreed. Two hours later, three backpackers followed Al on horseback, as he led a little mule loaded up with the Pegasus and all our fishing gear, up the trail to Fox Lake.

The hike to the lake went smoothly. Our packs were now tolerable to the point that a newly purchased case of beer was now distributed within our backpacks. We hiked eagerly and chattered about finally getting back to Fox Lake. We stopped for a short break and we asked Al just how much the mule could carry because, to us, the little mule looked kind of overloaded. "This is nothing," Al said. "Last fall, I had to tie a gas stove on top of him and haul it, along with two propane tanks up to an elk camp near here. Some rich hunters had brought a chef with them to cook gourmet meals." We no longer felt bad for the mule.

A NICE RAINBOW TROUT FOR THE FRYING PAN

"Does the mule have a name?" I asked. "Mule" said Al. I tried to feed Mule the rest of my apple and he was uninterested. Mule did not appear to like apples, or me, for that matter. He didn't have much of a personality but he sure could carry a mountain of stuff. And with that, we continued to hike the short distance down the trail to our last year's campsite at Fox Lake.

On our arrival, we dropped our packs and unloaded Mule. Then, we busied ourselves setting up the tent and organizing the rest of our camp. Al sat on his horse and watched us scurry around like a bunch of excited squirrels. One of the first and certainly most important tasks was to go down to the little stream that flowed into the lake, and construct a beer cooler out of rocks for our precious cargo.

*See **PEGASUS**, page 25*

Wisconsin Fly Tiers – By Bob Haase

John Bethke…originator of the pink squirrel

This series recognizes some of Wisconsin's great fly tiers and their role in the art of fly tying. Through this series we will learn more about them, the flies they tied and their tips to make us better tiers.

John Bethke is probably best known as the originator of the pink squirrel. John designed this fly to catch fish in the Driftless Area, but it seems to catch fish everywhere. Because of this, there was a great demand for the fly, and John tied them for Rainy's Flies as part of their product line.

John is one of those down-to-earth individuals who loves to fish and is willing to share his knowledge of fly tying and fly fishing with others. I first met John when he came to the Central Wisconsin Chapter's Master's Fly-Tying program, and demonstrated how to tie the pink squirrel. John may not share his favorite fishing spots but he'll do anything to help people catch trout. John taught fly fishing at UW-La-Crosse for about 12 years and was featured on the television show Northland Adventures, hosted by Dave Carlson.

How long have you been tying flies and how did you get started?

I guess I have been tying flies for around 25 years. You either have to buy flies or tie flies, and I found it was cheaper to tie them than buy them. I had pretty good dexterity with my fingers, and the materials didn't cost much when using road-kill squirrel and a limited amount of materials. I kind of got started tying on my own, and received a lot of help through the fly-tying programs offered by my local TU chapter.

Do you remember who taught you to tie your first fly?

I started tying on my own, so I guess I taught myself how to tie my first flies. As I got more interested, I received help from a lot of tiers in TU such as Steve Born. I also had some books that provided basic tying information.

You are recognized for the pink squirrel, but what are some of the other patterns that you tie and fish?

I never was into the complicated flies and prefer simple flies that catch fish. I do fish dries, but primarily tie flies like the pink squirrel and turkey leaches. I like tying simple flies with basic materials, like dubbing made from squirrel hair, because they look so buggy.

Did you start out fishing for trout or bluegills?

I started fishing bluegills and still fish bluegills as well as trout. With all the trout streams in this area, I spend most of my time fishing trout. Like many others, I started out fishing with worms, and then switched to fly fishing. I have fished for other fish and have caught a number of different kinds of fish on the pink squirrel, such as bass and even a small musky.

The pink squirrel has gained popularity for fishing all over the United States, not just in Wisconsin. What do you think makes it so successful?

I kind of made up the pink squirrel on my own, and it has become my confidence fly. I know that if I have that pink squirrel on, I am going to catch fish. Squirrel hair has a buggy look to it and I think the pink collar works as kind of an attractor. Most of the streams in this area are somewhat shallow, and the bead gets the fly down where it needs to be without dropping too fast. It doesn't represent any specific insect, but it could represent a lot of different insects. The important thing is that it attracts and catches fish. You know fish don't have any hands, so they put the fly in their mouth and they get caught.

How long did it take you to come up with the final design of the pink squirrel, and how many changes do you think you made?

It didn't take that long. I came up with the basic design and started catching fish with it, so I just kept fishing it. I still use Krystal flash for the tail, squirrel dubbing for the body, pink chenille for the collar, and the same size gold bead. I have added a counter-wrapped wire over the squirrel dubbing that I did not have in the beginning. I mix my own dubbing using squirrel hair blended with ice dubbing. I have made some minor changes over time, but I haven't changed it much. I usually tie it in a size #12, but I do tie it and fish it in other sizes as well.

Do you fish the pink squirrel differently than other nymphs?

I fish it like any other nymph. I usually fish it upstream using a dead drift and indicator, but there are times that I fish it directly without the indicator. Sometimes I give it a little twitch, but usually just let it dead drift. There used to be kind of a stigma against using indicators, but not so much anymore. They work, so I use them.

What are some of the benefits of tying your own flies?

Cost is one of the benefits. The more kinds of flies you tie, the more and different kinds of materials you need, and the more it costs to tie your own flies. If you only purchase materials for the flies you tie the most, it reduces the overall cost of tying your own flies, and becomes much less expensive than buying them. It doesn't take long sometimes to lose a fly. If the fly does not cost much to tie, you can always share them with other people. There is also the personal satisfaction in tying your own flies and catching fish on them.

Do you have any tips for those new to fly tying or fly fishing?

Don't scare the fish. Learn how to walk carefully and quietly so as not to scare the fish. When you scare the fish, they become a lot harder to catch. Also work on casting accuracy, not how far you can cast. If you want to catch more fish, concentrate on these two things.

For fly tying, try to go to shows and meetings where they have fly tying, and talk to the different tiers. They are usually very willing to share ideas and answer any questions you might have.

Sometimes little differences in flies can make a big difference, even though they might look the same.

What do you look for when testing flies on the stream?

Most importantly, do they catch fish? Weighting is important, and you can't always see this. It might be a difference in the bead (tungsten vs. brass), additional wire underwrap that you can't see, or differences in the kind or amount of material being used. Just because flies might look the same, it doesn't mean that they will fish the same.

JOHN BETHKE LIKES TO TIE SIMPLE FLIES THAT CATCH FISH

Are there any other things that you feel are important to share?

People get themselves tangled up in so many activities that they don't get out fishing as much as they should. They need to leave more time for themselves, and the things they like to do, such as going fishing.

Steps for tying the pink squirrel

Hook: Mustad 3906 or equivalent (Size #12-#16)

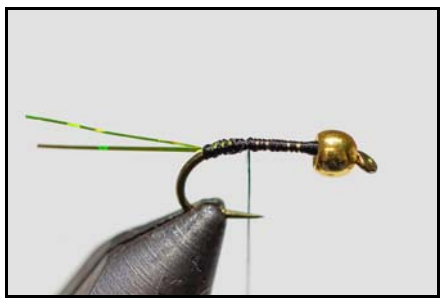
Thread: 140 denier / 6/0

Body: Dubbed squirrel hair and Ice Dubbing mix

Tail: Krystal Flash or Flashabou

Bead: Brass/tungsten gold bead for hook size

Collar: Pink chenille



Step 1 – Place bead on hook, start the thread, and tie to the bend of the hook. Tie in a piece of Krytal Flash or Flashabou for the tail, and trim to about the length of the hook shank.

Step 2 – Tie in a piece of copper wire. By placing the tip of the wire into the bead, it will keep it from slipping back when fished.

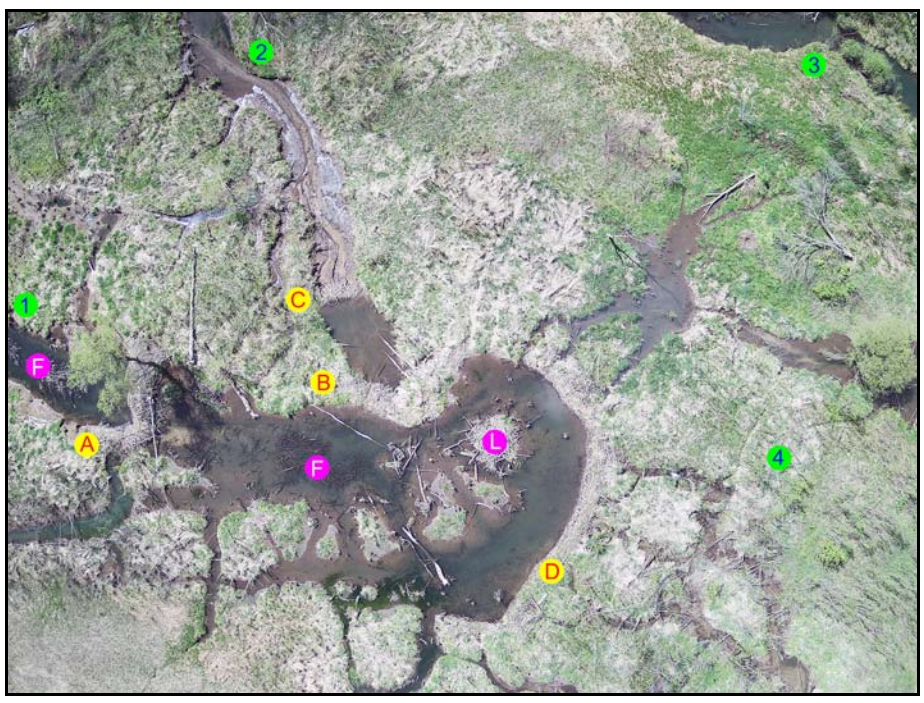
Step 3 – Dub the body with a generous amount of dubbing to about 1/8" before the bead.

Step 4 – Wrap the wire over the dubbing. This makes the dubbing more secure and adds just a little more weight.

Step 5- Tie in and wrap pink chenille to form a collar behind the bead. Tie off the chenille and tie off your thread. Apply a little head cement.

Your pink squirrel is ready to catch some fish.

Unmanned aircraft system used in beaver-trout study



UNMANNED AIRCRAFT SYSTEM USED IN BEAVER-TROUT STUDY
On this photo of Elk Creek in Richland County, the green symbols identify the main stream channel, the yellow symbols identify beaver dams, and the pink symbols identify other beaver constructions.

NOT ALL BEAVER DAMS HAVE THE SAME EFFECT
This dam, not shown in the photo to the left, likely backed up water to beaver dam (C). With lower flow, water drained from the beaver pond and a new channel can be seen carving through the substrate exposed downstream of beaver dam (C).

Words and photos by Matthew Mitro and Jessica Jaworski

Collecting data on the physical characteristics of trout streams can be as time consuming, if not more so, than capturing, measuring and tagging fish. Nowhere is this more the case than on a trout stream colonized by beaver. Beaver will start by building a dam, which will back up water and maybe create new channels draining the backed-up water. Over time, this process repeats, leading to a stream channel structure that can be quite complex.

A ground-level approach to quantifying stream channel structure has involved measuring pool-riffle-run sequences, the bends of a meandering stream, and perhaps an occasional island and side channel. In beaver-influenced streams, we have been marking GPS coordinates of dams, bends and islands, which help map the sometimes-complex formation of multiple channels, often running in different directions.

We now have a new tool that can capture birds-eye images of our study steams—an Unmanned Aircraft System (UAS), commonly referred to as a drone. The Wisconsin DNR's Office of Applied Science was recently approved as a UAS operator within the agency for the purpose of fisheries and wildlife monitoring and research.

The drone model we use for research is a DJI Matrice 200 Version 2. The Matrice 200 is a quadcopter with an 8 km transmission range equipped with specialized safe flight operating sensors such as obstacle avoidance, an automatic return to home feature, and air sense, which monitors the proximity of other manned aircrafts. This drone is also outfitted with a forward person view camera as well as an interchangeable gimble for using external camera payloads. We have two external camera payloads: the Zenmuse Z30, an aerial zoom camera with up to 30x optical zoom and 6x digital zoom, and the Zenmuse XT2, a dual 4K visual and FLIR thermal infrared camera.

Aerial thermal imaging capabilities will be an important tool for quantifying beaver effects on stream habitat. The Zenmuse XT2's thermal function can identify thermal signatures of beaver, if they are present, and associated habitat features like dams, lodges or bank dens.

Thermal imaging can also provide a snapshot of stream thermal conditions. We use temperature data loggers to document temporal changes in water temperature at daily, seasonal and annual scales at fixed locations in streams. Aerial thermal images will provide stream-wide context for point-in-time water temperature data from fixed locations.

Such images may potentially identify sources of cold water input from springs versus stream areas that warm water temperature and map how thermal conditions change as water flows downstream.

Operation of the UAS is strictly regulated in accordance with Federal Aviation Administration and DNR rules which require training for a FAA remote pilot certificate. These regulations are pertinent to safe flight operation.

A few of the rules that a remote pilot needs to adhere to are maintaining visual line of sight with the drone at all times, not exceeding a maximum flight altitude of 400 feet above ground level and operating within authorized air space.

Jessica Jaworski is our licensed UAS pilot. In addition to the work Jessica has begun on the beaver-trout study, she has also helped with efforts to identify ring-necked duck nesting locations using the Zenmuse XT2 and plans to continue waterfowl research with the drone to help identify cryptic nests of waterfowl.

Additionally, Jessica hopes to expand the Office of Applied Science drone program to help with other research projects such as elk surveys and to incorporate machine-based learning algorithms for object identification in drone survey images.

Here we present an aerial image of a series of beaver dams on Elk Creek in Richland County from May 2021 (above left). Elk Creek had previously been maintained as a free-flowing trout stream, but beaver began building dams here about five years ago and have continued to build dams and divert flow. In this image, the green symbols identify the main stream channel, the yellow symbols identify beaver dams, and the pink symbols identify other beaver constructions. The stream flows from the left at (1). The main channel flows through beaver dam (A) and turns towards the top of the image (2) through beaver dams (B) and (C). Beaver dam (B) likely diverted flow towards (4), with beaver dam (D) helping retain that flow to form the large pool where the lodge (L) and a food cache (F) are located. Major flood events probably send water over beaver dam (D), leading to the eroded channels.

At the time this aerial image was taken, flows had been low in Elk Creek, as well as other trout streams throughout the Driftless Area, compared to previous years. Beaver dams (A), (B), (C) and (D) appear old and unmaintained. The sticks comprising the dams are gray and weathered and the dams fail to hold back as much water as they did when originally constructed. A beaver dam between (2) and (3), not shown in the aerial image, illustrates this. (above right) That dam likely backed up water to beaver dam (C). With lower flow, water drained from the beaver pond and a new channel can be seen carving through the substrate exposed downstream of beaver dam (C).

Beaver dams are built to hold back water, and the water level behind newly constructed dams is often at or very close to the top of the dam. Not so in the unmaintained dams in Figures 1 and 2. For comparison, a newly constructed beaver dam further downstream in Elk Creek has water flowing over and around the top of the dam, and the dam itself is made of sticks newly stripped of bark (photo below).

Here is a way to think about how beaver dams and flow interact. If the drain in your bathroom sink is partially clogged with hair and you turn the faucet on high enough, the sink will start to fill and maybe drain through the safety spillway. Turn the faucet lower to decrease the ratio of water input-to-output and the "pond" in your sink will lower to a new equilibrium. Unmaintained beaver dams appear to function similarly. They appear to be built for the flow existing at the time of construction, and if flow decreases, they may fail to maintain pond levels.

We plan to use aerial images captured by our UAS to document the physical changes to streams caused by beaver colonization, as well as the recovery of streams as free-flowing conditions are restored. These images will complement our on-the-ground stream habitat, water temperature and fish-data collection to provide a comprehensive view of how trout streams change when beaver colonize an area, versus when they are removed from the landscape.

NEWER BEAVER DAM HOLDING BACK MORE WATER
This newly constructed beaver dam further downstream in Elk Creek has water flowing over and around the top of the dam, and the dam itself is made of sticks newly stripped of bark.

Chapter News

ANTIGO CHAPTER HOLDS KIDS FISHING DAY

Antigo Chapter

Happy summer from the Antigo Chapter. Things are opening up a little at last. We just held our Kid's Fishing Day June 12 at the city of Antigo's park. Weather was great and not so hot. A good group of kids and parents came out for a fun day. We sure missed everyone last June 2020.

We encouraged mask wearing and social distancing, but it wasn't a requirement, as we were outside. We had waiver forms for people to sign. People were very happy to be out. We provided the fish tank full of trout for the kids, along with prizes for all and a boys and girls bike for the winners. We cooked hamburgers and hot dogs for all who came. Water, root beer, orange juice and chocolate milk and fresh fruit were donated also. It was a great day for all to enjoy. Thanks to all the volunteers who help make this possible.

We will meet with area DNR personnel to discuss providing a walking trail down to the East Branch Eau Claire River off River Road to aid fisherman and people who like to put boats into the river. Antigo TU and the DNR will work on this very soon. Our chapter will maintain this trail in the future.

We are planning summer meetings for more work days, with one in August for sure. We are also planning some work days for painting and brush cutting.

—*Scott Henricks*

Central Wisconsin Chapter

In March CWTU held elections for new officers and added a new face to our board, as we had two openings. Wayne Parmley is president; Tom Meyer is vice president; Laura Tucker is secretary and Joe Peikert will continue as treasurer for a third term. We welcomed Chad Tucker as a new board member. Along with this, CWTU approved a few amendments to our bylaws which included extending treasurer term limits as a special exception to allow Joe to serve a third term due to his outstanding work the past four years. There were minor updates concerning increasing some spending limits to catch up with modern times. Also of note in May, the second board member opening was filled by Linn Beck, a CWTU past president. We welcome his past experience as well as the additional things he brings to the table by being the current NLC representative for Wisconsin.

In April we held our last board meeting and evening presentation via Zoom. In addition, we held another Zoom program titled the Master's Tie-a-thon. It was headed up by Tom Meyer and Bob Haase and featured several mini presentations, various fly patterns and other fly-tying-related topics. The turnout was strong and presenters provided great information, along with some tall tales.

It has been a long time and CWTU finally crossed the line in May and had our first in-person board meeting and evening program. Zoom was a nice tool, but meeting in person is so much better for so many reasons. Wayne Parmley gave a presentation on the Wyoming Cutt-Slam, a father/son trip taken in the summer of 2019 in pursuit of catching all four sub species of native cutthroat trout.

CWTU River Keepers are in full swing already. They were the only group that was able to be active last summer. There are 75 volunteers broken into 25 teams that monitor 35 stream sites in the Central Sands Region. Coordinator Bob Jozwowski reported in April that his article in a local newspaper resulted in 20 additional volunteers, which resulted in fresh faces on exciting teams, as well as new teams and additional new sites.

River Restoration Work Days kicked off in May after a year off due to the pandemic. So, on Saturday, May 15 on the West Branch of the White River, 50 volunteers gathered to do brushing work. The group was made up of TU members from five different chapters. Members of the Elliott Donnelley chapter from the Chicago area made their annual May trip to join us, as they have for many years. They began the morning by presenting CWTU vice president Tom Meyer with a generous donation of $4,000 for future habitat restoration activities. A huge thank you to EDTU.

Work days are scheduled for the rest of the summer through September. Thanks go out to all the CWTU members who organize and make these work days happen, especially Dennis Drazkowski, Ira Giese, Tom Meyer, Chris Northway and Laura Tucker.

This fall CWTU will offer two different fly-tying classes in Winneconne. For the beginner there will be "Fly Tying – A New Experience" and for the tyer taking the next step there is "Beyond the Wooly Bugger." Both will be one evening a week for four weeks starting in late September. For more information on either class please contact David Pable at 920-233-2939 or dandgp@sbcglobal.net.

TROUT UNLIMITED CENTRAL WISCONSIN 50th Anniversary 1971 – 2021

To celebrate the 50th anniversary of the Central Wisconsin Chapter, we will hold a banquet Saturday, Oct. 30 at Mount Morris Camp and Convention Center near Wautoma. There will be outdoor activities, a pig roast and chicken dinner, craft beers, live music, plenty of great prizes and tons of camaraderie and storytelling. For more information about the banquet, contact Laura Tucker at 920-622-5401 or lbtucker1953@gmail.com.

—*Wayne Parmley*

ELLIOT DONNELLY CHAPTER DONATES TO CENTRAL WISCONSIN TU

Coulee Region Chapter

We held a wonderful 10th annual Troutfest in Coon Valley on June 19 at the Coon Valley Veterans Memorial Park along the banks of Coon Creek. It drew quite a crowd. There was kids fishing, complete with prizes, fly-tying demonstrations, live music and vendors. Although this issue goes to press after the event takes place, mark your calendar, check the Facebook page, and join us next year.

Several chapter members helped at the Women's On the Water Skills Clinic June 16 and 17 at the West Fork Sports Club, put on by the Southern Wisconsin Chapter. These clinics offer women the opportunity to increase their skills alongside experienced anglers.

We had some success with our Virtual Banquet in February. Although it didn't fully replace our annual banquet and biggest fundraising event, proceeds were better than expected. A tying station, full pheasant skin, rod, reels and fly boxes were just some of the prizes given out. Chapter president Fred Spademan took care of the emceeing. Members Cy Post and Rick Kyte gave a presentation on CRTU's early years. Jason Freund and Duke Welter presented on past, current and future stream projects. DNR Fisheries Biologist Kirk Olson discussed the state of southwestern Wisconsin coldwater streams. TU's Bristol Bay Organizer Meghan Barker and State Council Chair Mike Kuhr also gave presentations.

Our chapter is looking forward to a number of projects in 2021. Improvements are planned for Conway and Willow creeks and we are partnering with the DNR to make additional improvements to streams in the Coon Creek watershed. Future projects will include work on the West Fork of the Kickapoo, Warner Creek and the North Fork of the Bad Axe River. Funding for these projects is made possible through a number of partnerships, including more than a half-dozen TU chapters and various public and private entities.

Other happenings included members Rick Kyte and Dale Jonson helping out with a learn-to-fish event at the Kickapoo Valley Reserve in May to kick off the summer fun season. We also partnered with some Chicago area chapters in April to build stiles on Bohemian and Timber Coulee creeks. Our chapter donated a trip with the Driftless Angler for the State Council online auction which sold for over $600. A June 2 Talking Trout (Wisconsin TU virtual meeting) featured Kristina Pechacek on her Masters project—brown trout removal on Maple Dale creek. Our chapter helped fund a bit of her project.

Check our Facebook page for other chapter news, including the settlement agreement with Wild Rose Dairy regarding manure spills on Otter and Bostwick creeks, a complete report on the West Fork of the Kickapoo by Kirk Olson and the DNR fisheries crew out of La Crosse, and the PFAS-related "do not eat" advisory for Silver Creek in Fort McCoy. Additionally, Amazon

Chapter News

customers can now support CRTU by setting their "Smile" donations to go to "Coulee Region Trout Unlimited," and donations are now accepted through Facebook and PayPal, thanks to Curt Rees' work on that.
—Brad Bryan

Fox Valley Chapter

Fox Valley TU'ers are hitting the trout streams in record numbers and sorties. Pent-up trout and bass fishing passions caused by the pandemic have our members flocking to "Sand Country" and the Driftless. We hope you are one of them.

The primary mission of FVTU is habitat work. We are trying to make up for last year's inability to accomplish our mission. Jerome Herro has been leading our stream-improvement efforts and he is our Stream Hero!

According to Tony Pudlow, "Saturday May 15 was the first Habitat Day in more than a year. About 40 people from five TU chapters came to the West Branch of the White River." The Habitat Day is a joint effort between FVTU and the Central Chapter. Thanks to the Elliott Donnelley Chapter from Chicagoland for joining the team.

Jeff Moureau has been the captain of our veterans outreach programs. Under his leadership we have added first responders and front-line medical workers and provide them with free first-year TU memberships. With that they receive full chapter, state and national benefits. Our members hope to engage interested vets and others in fishing and habitat projects. Jeff will be happy to answer your questions or help you with a free membership. Contact him at moureaujlm@gmail.com.

Additionally, Jeff connected our FVTU veterans support efforts with Jack Voight, who established Vets and Friends of Wisconsin. Jack is a local businessman, veteran and former city councilman who founded Vets and Friends about five years ago. Check out their web site at vetsandfriendsofwisconsin.com, which explains the valuable work they do for our local Fox Valley vets.

The Council's Youth Camp is returning after being cancelled last year. It will be held at the Pine Lake Bible Camp near Wild Rose August 19-22. Volunteers are needed. Contact FVTU President Graeme Hodson for more information at graemehodson@gmail.com.

January 15, 2022 FVTU will hold its Cabin Fever Day. This wonderful event of cameraderie and fellowship is our only fundraiser. Individuals and organizations are invited to participate in CFD with a booth or as a speaker and can contact Cabin Fever Day Coordinator John Barkmeier at jrbarky@gmail.com for details.
—Don Clouthier

Frank Hornberg Chapter

Members of the Frank Hornberg Chapter are stretching their legs by getting out in the field. We have launched Stream Walks, inviting members to visit the 66 streams in the chapter's three-county area.

In March members walked and fished the Keener Road area of the Tomorrow River. This site was the recipient of several habitat projects over the years.

Past President Matt Salchert enlightened the group with his encyclopedic understanding of the stream's hydrology, geology and identification of the early insect hatches.

Follow us on Facebook for future Stream Walks at https://www.facebook.com/HornbergTU

In May we joined the Central Wisconsin Chapter on their workday on the West Branch of the White River. Five chapters with 50 people brushed several sections of the river to improve fishability.

Wisconsin DNR fisheries Technician Jason Spaeth reported that he has several projects in the works for Portage and Adams counties. They include repairing damaged wing deflectors on the Tomorrow River at Bucholz Road, removing fallen trees on Bear Creek and a habitat work day on Big Roche A Cri Creek near Highway 39.

Jason also has projects planned for Flume Creek, the Tomorrow River, Fordham Creek and Little Roche A Cri Creek.

Matt Salchert is planning to remove fallen trees on the Tomorrow River near Nelsonville. Watch for that announcement.

John Batzer of Wisconsin Rapids donated five prints to be used for fundraising. Thank you, John.

If you have items you would like to donate to our chapter to help with fundraising, contact Doug Erdmann at 715-712-3134.

Our chapter has a number of events in the works. Update your email address at https://www.tu.org/ and we will send you a notice of those activities.
—Doug Erdmann

Green Bay Chapter

In April Green Bay Trout Unlimited (GBTU) held our annual meeting, where we prepare a "year-in-review" for our members and supporters and vote on open board of director positions. The year-in-review is available on our website, greenbaytu.org. While the pandemic slowed our typical high volume of activities, we still had a banner year. As for the elections, we typically have all members in attendance vote on open seats. Given the state of the Covid pandemic, the board voted virtually to fill open seats.

John Tilleman and Casey Hicks were elected board members; Doug Seidl, vice president; John Duechert, secretary and Adrian Meseberg, president. The treasurer position is open, as incumbent Jeff Gross recently retired and moved from the area. A huge thank you goes to Jeff for all his wonderful work. Another thank you goes to Wally Heil, who stepped down from the board after serving the chapter for many years. A final thanks to the chapter leaders who agreed to help lead our efforts moving forward.

At our April annual meeting, work project chair Paul Kruse asked for up to $400 for a chapter grill to be used at work projects and more. We typically hold 4-5 work projects each year, plus a yearly chapter picnic. Historically the chapter has taken volunteers out for lunch in appreciation of their work project efforts. The grill would help replace this. The thinking is that doing a streamside grill-out is more personal and would ultimately pay for itself over time. The vote passed unanimously.

Paul Kruse asked the board to consider sponsoring up to 10 GBTU members to a DNR chainsaw safety certification course, not to exceed $1,100. The certified chapter members would be able to assist DNR staff with chainsaw usage or be able to use chainsaws on DNR land during projects the department approved but could not be part of. The vote passed unanimously.

University of Wisconsin-Green Bay (UWGB) Professor Mike Holly asked for a letter of support in his efforts to study PFAS concentrations in Green Bay, and the biomagnification into sportfish. An April online vote by the GBTU board passed.

In another April online vote, Paul Kruse asked for a budget line-item of $2,000 to be created for the purchase of chapter chainsaws and accessories. The subject was discussed at our April annual meeting, but the board wanted to see a quote prior to acting. Paul subsequently provided a detailed quote from Ambrosius (including a 20 percent discount). The BOD passed the vote. We now have three new chainsaws, extra batteries and three chainsaw safety kits. For the record, GBTU's meeting minutes and online votes are available to the public on our website.

On May 31, GBTU's Alternative Fundraising Committee agreed to put an end to our "Direct Ask" campaign. We were able to raise approximately $10,000. Thank You to the committee for their work and our donors for their unwavering support.

Joined by members of the Wisconsin River, Antigo and Northwoods chapters, GBTU kicked off our 2021 work project season on the Prairie River.

We partnered with the DNR's Taylor Curran and Jake Fronk to plant about 1,000 trees on point bars and islands that the DNR had placed along, and within, the river in 2020. The point bars and islands were created using sediment from the bottom of the Prairie River as well as soil from the shoreline.

Once the trees (white pines, river birch, and silver maple) grow, they will stabilize the ground. The purpose of the point bar and islands is to help the narrowing and meandering in this stretch of the river. Twenty TU volunteers made the trip, including six from GBTU.

For more GBTU chapter information, please visit our website at greenbaytu.org or check our social media on Twitter, Instagram and Facebook.
—Adrian Meseberg

Harry & Laura Nohr Chapter

The Blue River project on the Zadrazil property is located immediately downstream of the junction with Six Mile Branch just off County Q and includes the final 700 feet of Six Mile Branch, which is completed, and approximately 7,500 feet (1.4 miles) of the Blue River.

It was started this past fall/winter and is slated to be done by year's end. Work is progressing well without weather interruptions.

Due to the pandemic, our banquet will be delayed until Saturday, October 9, 2021 at the Castle Rock Ridge restaurant/event center.

The Harry and Laura Nohr Chapter of TU has resurrected its Water Action Volunteer (WAV) water monitoring initiative under the guidance of Peggy Compton, the UW- Madison/Platteville water monitoring program manager.

Our growing team consists of 12 trained volunteers who have completed online courses and an on-the-water training course.

So far, 10 Driftless Area streams are being monitored, and two streams were re-adopted. Our volunteers are collecting data on streams and then entering the results into the DNR SWIMS (Surface Water Integreated Monitoring System) database for past, current and future analysis.

We are thrilled with the interest in this program and the enthusiasm of our WAV team. If you are interested in more information on this initiative, contact our WAV program coordinator and Nohr board member Carol Murphy at Nohrgirl@gmail.com.
—Brian Larson

NOHR'S SIX MILE BRANCH PROJECT IS ALMOST DONE

Chapter News

NOHR CHAPTER CONDUCTED WAV TRAINING RECENTLY

Kiap-TU-Wish Chapter

At the chapter's business meeting, which moved to April this year, we re-elected Greg Olson, Linda Radimecky and Suzanne Constantini as board members. New board member Missie Hanson was elected to fill the vacancy left by Loren Haas, who stepped down after completing his term. Congratulations to Missie and a big thanks to Loren who will still stick around to work on habitat projects.

At the board meeting in May Greg Olson was elected as our new chapter president, replacing Scott Wagner who leaves after an illustrious run. The chapter greatly appreciates Scott's service. Dustin Wing stepped down from the board and at the June meeting Rainbow Barry was elected to fill out the vacant term. Thanks to Dustin for his work on the board.

All four of our Trout In the Classroom (TIC) classrooms successfully released trout into the Willow River, within the state park.

Habitat Coordinator Randy Arnold worked with a crew pulled together by Daniel Pherson, Regional Sales Manager for Stihl Corporation, on brushing the old Oscar Lee property on the Kinni on March 19. Daniel is a trout fisherman who spends time in the area and has taken note of all the restoration work done by chapter volunteers. Kiap TU Wish received a $1,500 gift certificate to purchase Stihl equipment for chapter use.

—Gary Horvath

Lakeshore Chapter

Well, it's that time of year again. The fish are active and the streamwork season has begun. We have a very lengthy work schedule this year, with multiple grants that have to be fulfilled. It's going to take a lot of manpower to accomplish everything, but we are hoping things go smoothly with the permitting, and that we have plenty of attendance at workdays.

We have a big project on Ben Nutt Creek and a huge project on the Onion River. We will be installing bank covers, plunge pools, rock cropping, brush bundles, coir logs and half logs. The DNR will be working with us on this project. I hope this will be a great start to another miles-long restoration project on the Onion. That will take us to the Waldo dam and hopefully further.

I've been working with the Waldo Mill Pond Association for about two years now to help get some very necessary studies done on the pond. I'm also forming a partnership with Jim Kettler from Lakeshore Natural Resources Partnership and Jon Gumtow from Stantec to work on addressing the public on the benefits of dam removal, especially on class 1 trout streams.

We are slowly transitioning back to hosting meetings again. Zoom is great, but I think people stay more connected to the chapter with in-person meetings, at least that's the feedback I've been getting. We will also be changing our meeting location. Soon they will be held at Aventuron in Sheboygan. This will be a great improvement from the bar scene. Once settled in, this will be an opportunity to expand our chapter's activities. We are excited for the future. There's really nothing better than to see all of our hard work taking shape and so much more to come. Tight lines.

—Myk Hranicka

Marinette County Chapter

The Marinette County Chapter had a very successful banquet June 7, with crowd numbers almost back to full capacity, like before the pandemic. We will be able to make all of our obligations and we're looking forward to working on projects again. On June 11 we hosted the kids fishing day in conjunction with the Marinette City Recreation Department.

—Dale Lange

Southeastern Wisconsin Chapter

Hello from Southeast Wisconsin TU (SEWTU). After the last year, which cannot be put behind us fast enough, our TU volunteers are ready to get busy again doing what we do best — helping to restore, reconnect and preserve our coldwater resources. We have some new and familiar names leading the way for our chapter. We thank outgoing President John Rennpferd, who kept us together through the trying times of COVID. Thanks to his technical skills we were able to get our Instagram account up and running and navigate Zoom meetings as we kept our members engaged as best we could.

John has now moved on to our membership committee to help keep our website up to date with fresh content. Joining John on membership are two new board members, Charlotte Larkin and Luke Petrovich. Luke and Charlotte have already had an impact by taking over our email communications from Tony Olveda, who had to step back from his duties that he held for a very long time. We thank Tony for always being there for us to send out an email blast, sometimes on a moment's notice.

We also welcomed Susan Jester and Brian Mullins to the board. Susan will be an at-large member of our board and we will soon be putting her passion for fly fishing to good use. Brian has assumed the role of advocacy chair, taking over from our dear friend Herb Oechler, who will be stepping back from full-time duty. In his first day "on the job," Brian has already connected with our friend Cheryl Nenn at Riverkeeper to see how we can partner together on important projects that affect our local waters.

As for Herb, in our board meeting in June (our first one in person since Covid struck) we let Herb know he is always welcome to come to our meetings whenever he wants some good beer and brats and good company. Herb will also be providing his treasure trove of wisdom and experience on advocacy to Brian and for that we are all very grateful. Herb still actively participates in our workdays, too.

On the veterans front, long-time veterans chair John Graba has transitioned the primary reigns to our newest board member, Matthew Cade, who was officially voted in on June 8. John will stay on our board as an at large member and continue to help out the veterans and habitat committees as much as he can. We thank John for all his work over the years for our veterans and our chapter, and welcome Matt to his new role.

Ken Rizzo

SEWTU ELECTED NEW OFFICERS RECENTLY

New officers (left to right) Vice President Rick Larkin, Secretary Jim Folda, President Andy Avgoulas and Treasurer Stan Strelka.

Andy Avgoulas

SEWTU HOLDS WORKDAY AT MCKEAWN SPRINGS

Our habitat committee continues to be led by co-chairs Ken Rizzo and Rick Larkin. Ken and Rick are thrilled to report that our first workday of 2021 was at McKeawn Springs Pond in the southern unit of the Kettle Moraine State Forest off of State Highway 67, just south of Piper Road. The DNR earlier in the year had McKeawn Springs dredged and the silt pumped to an open area about 60 yards south of the site.

One workgroup smoothed the open area where the silt was pumped, laid grass seed matting, and planted native oak trees. The goal was to restore this area to a southern Wisconsin native savannah prairie. Another workgroup cut back brush and small trees (including buckthorn) from the west shore of the pond to facilitate fishing from that bank.

As a bonus during the workday, the volunteers helped stock the pond with 65 nice size rainbow trout. The stocking at this pond and Paradise springs pond, which are both catch-and-release fisheries, was funded by SEWTU. It was an awesome sight to physically see SEWTU funds put into action.

There were 20 volunteers at the workday including one non-TU member who saw our TU road signs, wondered what we were doing and decided to join us. Among the volunteers were two SEWTU super mature seniors at 85 years old — Herb Oechler and Joe Valkoun.

On the officer front, Jim Folda has been re-elected secretary and Stan Strelka treasurer. We continue to thank them for all their hard work and dedication throughout the years and are very happy to have them continue their roles as officers for the chapter. Rick Larkin is our newest officer, taking over the VP role from yours truly while pulling double duty as co-chair of the habitat committee. And then there is me, Andy Avgoulas, who moved from the VP role to the president's chair. I am honored and humbled by this and hope I can carry on the legacy of the great past presidents our chapter has had.

Please join me in welcoming all

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the new volunteers and thanking those that have served our chapter the next time you see them.

As we return to normal we have started to schedule our activities for the rest of the year. Please mark your calendars and save the dates for these upcoming events:

- July 10 - Workday at Tichigan Creek (location subject to change)
- August 14 - Workday and campout in the Driftless Area (location TBD)
- September 28 - General membership meeting at the Bavarian Bierhaus. Guest speaker Dave Ruetz will discuss Wisconsin hatches. Dave is an environmental scientist and aquatic biologist with training in fishery biology and aquatic entomology. He has written articles for several flyfishing periodicals including Fly Tyer Magazine, Midwest Flyfishing, and Scientific Anglers Flyfishing Quarterly, and was a regular columnist for Fly Tyer Magazine. He was a flyfishing guide in Montana and also operated a flyfishing school for 16 years on the Wolf River in Wisconsin. He has also presented numerous flyfishing seminars throughout the country, including presentations at the Federation of Flyfisher's International Conclaves.
- In addition to Dave's talk, we plan to have some door prizes and raffles to kick off our return to live meetings, so you won't want to miss this event. Look for more details in our September email blast and on our social media sites.
- October 28 - SEWTU's fall fundraiser and banquet at New Berlin Hill Golf Course. Make sure you mark this one down as we will have lots of good food and prizes to give away including some guided fishing trips.
- November 16 - General membership meeting at the Bavarian Bierhaus. Activity TBD
- December 21 - General membership meeting and holiday party at the Bavarian Bierhaus.

That's as far as we know for now. We will provide more updates on our website, Facebook and Instagram accounts as we get closer to each event. We are working on some additional workdays as well.

As always, if you are interested in helping out, are not getting our emails, or have any questions or suggestions, please reach out to me at andyavgoulas@yahoo.com or 262-893-4965.

Enjoy the rest of the summer and I hope to see you at one of our upcoming events.

—Andy Avgoulas

Southern Wisconsin Chapter

Our chapter, like so many others, continues to seek the best, safest and healthiest way to navigate our way back to something resembling normal. The board plans to gather in person in August and is discussing the best path forward for in-person chapter meetings.

As we submit this for publication, it's hot outside, and we have one more SWTU Stream Team Workday to go for the spring. It will be hot then, too, but we know that our coldwater friends will appreciate the effort.

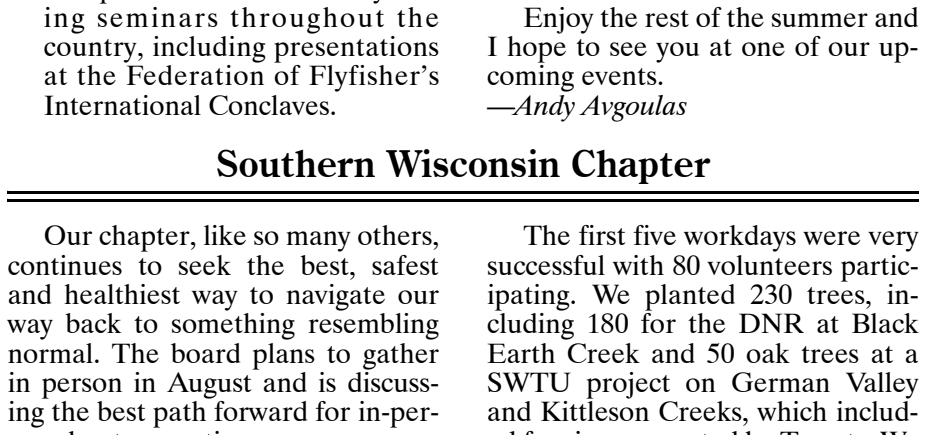
President and Conservation Chair Jim Hess organized the workdays and provided the following summary of the season:

After cancelling our workdays last year due to COVID-19, it was great to start up again this spring and seeing everyone after 18 months. Workdays have been a tradition for our chapter since 1969. We delayed the start of our workdays, hoping the vaccine would have time to make a difference and it certainty did. We started out wearing masks and socially distancing as best we could the first two workdays planting trees. Then by the third workday most of us had our two shots, and mask wearing was waived but we followed all other protocols.

The first five workdays were very successful with 80 volunteers participating. We planted 230 trees, including 180 for the DNR at Black Earth Creek and 50 oak trees at a SWTU project on German Valley and Kittleson Creeks, which included fencing supported by T-posts. We also cleared a section of Mt. Vernon Creek of invasive woodies and did a major clearing of large box elders and honeysuckles on the East Branch of the Pecatonica River, requiring two workdays and a tractor to stack the trunks and limbs.

The Harry and Laura Nohr Chapter joined us on these last two workdays. It was great working with them. And to celebrate our great work at the East Branch, we had a cookout by the stream. Thanks to Topf Wells for getting the brats and dogs, Pat Hasburgh for cooking, Carol Murphy with the Nohr Chapter for getting the condiments and baking cookies, and to the easement property owners for letting us use their grill and picnic area. And a special thanks to Justin Haglund, Lloyd Meng and Mitch Trow with the DNR, who helped out.

In more good news, a recent watering (June 6) of the SWTU trees showed that 46 of the 50 trees were doing fine, but definitely needed the water. And at the Kittleson Creek, every time I threw the bucket into the stream to get water, I scared out trout in good numbers from small to large.



Jim Beecher

SOUTHERN WISCONSIN WORK CREW MASKED AND READY

SWTU crew, masked and making a difference planting trees along German Valley Branch and Kittleson Creek.

Jim Beecher

SWTU PLANTS TREES ALONG SEVERAL CREEKS

Little trees need lots of love. SWTU doing all it can to help this little one grow to be big and shady.

Jim Beecher

A GREAT REWARD FOR A HARD MORNING'S WORK

A picnic is a great reward for a morning of making a difference. SWTU and Nohr members along the Pecatonica River.

Many thanks to Jim for that great recap! Learn more about us and all we do at swtu.org.

—Drew Kasel

Wild Rivers Chapter

Wild Rivers Chapter has made strides at returning to some of our annual events. On May 3 we assisted DNR fishery and forestry staff with a day of tree planting on the upper White River in Bayfield County. Bill Heart, our past long time president, reminisced with project leader Cris Sand about their 20-year partnership of restoration work on this stretch. The buckthorn removal/tree planting is an ongoing task, but particularly important along this brown-trout spawning habitat. I am glad we could return to assist this year.

On May 8 we returned to Delta for another annual event where we picked up trash along our marked two miles of Hwy H. Afterward, we enjoyed visiting over a sit-down brunch at the Delta Diner, followed by scouting and fishing a few spots along the White.

We had our annual picnic on June 9 at Larsen Landing along the Namekagan River, at a remarkably beautiful spot. We were joined by DNR Sawyer County Fisheries Biologist Max Wolter and Landmark Conservancy Conservation Manager Erika Lang. Each gave updates on important issues and efforts happening in this area. Our members and friends shared good food and lots of history and stories about this beautiful river and its tributaries. I am humbled to be around such caring and informed people. With the 90-degree daytime high and 76-degree water temperature, we agreed to watch the fish rise in peace and maybe come back in the fall.

We also held our Kid's Fishing Day, helping children learn to cast and catch stocked trout at the Northern Great Lakes Visitor Center just West of Ashland. Maybe one of those kids will be writing for *Wisconsin Trout* 20 years from now.

—Kevin Seefeldt

Wisconsin Clear Waters

The Wisconsin Clear Waters Chapter has unofficially declared that we survived the Pandemic. Our members are being vaccinated and adventuring out and plans are under way for a new beginning for 2022.

Oh, what a year it was. We learned how to embrace technology, even though there was a bit of Zoom fatigue. Our members engaged in winter brushing workdays with a DNR limit of 10 people, a drone video and our inaugural Stream Girls event. Plus, seven out of 10 Trout In the Classroom programs were active. We also held two tree-planting days.

Matt Wysocki and his brushing crew accomplished a great deal on Duncan Creek and Knights Creek this past winter. They have raised the bar on brushing by creating a drone video of Knight Creek produced by Matt and two new board members, Josh Smeltzer and Jake Fields. You can find the video on YouTube. Search for Wisconsin Clear Waters, and open Chainsaw,

Chapter News

Fire and Water.

Call it dumb luck, but while stumbling around the new Trout Unlimited website trying to find instructions on opening the Leaders Only toolkit, I ran across information on the Stream Girls Program. Out of frustration, I viewed the video and thought we should look into this program. I forwarded an email to our Vice President Bill Heth asking him what he thought, and the next day his 17-year-old daughter Jillian asked if she could take this project on. The next step was to get out of Jillian's way, and the results were above and beyond our expectations. See the article in this issue of *Wisconsin Trout* by Joe Knight.

On two separate locations, the latest Hay Creek restoration, a crew of 10 chapter members and the DNR planted more than 400 saplings

Our TIC program did have some COVID challenges, but our illustrious volunteers Dale Dahlke and Peter Jonas did a great job. This year is over, and we cannot wait for next year so that all 10 of our current installations are up and running,

Chapter leaders are crossing their fingers that the CDC, COVID local restrictions and the trout gods look down at us favorably to have an outdoor event featuring a silent auction, fly casting and tying demonstrations in a local park this coming August.

—Jim Erickson

PREPARING FOR TREE PLANTING ALONG THE PRAIRIE RIVER

The Antigo and Green Bay chapters joined the Wisconsin River Valley Chapter to plant trees along the Prairie River at the Dagis Road Project

WISCONSIN RIVER VALLEY CHAPTER PLANTS TREES ON PRAIRIE RIVER

Wisconsin River Valley Chapter

Greetings from Wisconsin River Valley. We've all heard the phrase "If you don't like the weather in Wisconsin wait an..hour? day? week? It seems pretty crazy that we went from worrying about the garden freezing to being too hot to put your plants in. With such an abrupt weather change, I guess I'll have to switch to fishing for bluegills until some cooler weather comes. Of course I could always plan a camping trip, which usually guarantees me a cold snap or big storm.

In April, Chapter President Kirk Stark received a thank-you letter and Certificate of Acknowledgment from DNR Secretary Preston Cole's office for a donation received from our chapter. It is wonderful to be able to help with restoration work to improve habitat for these watery places that we love to visit and where the trout make their home. It is also wonderful to be recognized for it. Thank you chapter members for your support.

May 8 was a beautiful day on the Prairie River. Several members from Wisconsin River Valley, Green Bay and Antigo chapters manned their shovels to plant 1,000 trees on the new point bars on the Prairie River Dagis Road Project.

The improvement project is not complete yet. More work will be done later this summer and will finish at the Gross Bridge. We will do more tree planting next May. Hopefully Covid-19 will be behind us next year and we will be able to do some grilling, eating and swap fishing stories

May 15 featured Water Action Volunteer (WAV) training day on the Plover River. Several people came to learn how to collect all the data needed for monthly sampling, including flow rate, turbidity, oxygen concentration, how to measure depth and aquatic invertebrates.

The readings and samples taken by the volunteers are compiled into a database that will be used by the University of Wisconsin and the DNR to monitor our local streams. Thank you, WAV volunteers.

Many thanks to Robert Pankratz and Paul Dedo for representing our chapter for the first time at the Lincoln County Sportsman's Club Open House in May. Lots of outdoor folk attended to learn about the organizations and resources in the area. We look forward to being part of this event again next year.

The Wausau Noon Optimist Club is once again proud to partner with the organizers of the Sporting Heritage Youth Day August 28 from 8 a.m. to 4 p.m. If you know of a child who may be interested in attending or want to learn more, go to https://www.wausaunoonoptimist.org/2021-sporting-heritage-youth-day. If you would like to volunteer to demonstrate fly tying or casting, please let me know at buglehman@yahoo.com. Be sure to put "Sporting Heritage Day" in the subject line, please.

—Linda Lehman

WISCONSIN RIVER VALLEY WAV VOLUNTEERS ARMED AND READY

CAN WE HELP YOU LEARN ABOUT COLDWATER RESOURCES?

Robert Pankratz and Paul Dedo represented the Wisconsin River Valley Chapter for the first time at the Lincoln County Sportsman's Club Open House on May 22. Lots of outdoor folk attended to learn about the organizations and resources in the area.

Wolf River Chapter

The Wolf River Chapter is pleased to announce that the $1,400 Friends of Wisconsin TU grant application has been approved. Thank you, Friends! This money will be a big help with our continuing work on Ninemile Creek, a coldwater tributary of the Wolf River. Keeping this creek clear of beaver dams and related obstructions not only keeps cold water flowing into the Wolf River as summer temperatures heat up but also offers a refuge to heat-stressed trout and spawning territory for brook trout.

The great news that goes along with this is that brook trout are now being caught in Ninemile Creek. A big thank you to WRC President Chuck Valliere for putting together the WRC application for the Council's Friend of Wisconsin TU grant.

Work began in early April on Ninemile Creek, clearing the roads of blowdown debris to make it easier to get to "The Point," which is the put-in to canoe down Ninemile Creek to where beaver dams and feed piles need to be removed and also to give our trapper access to see where he needs to do his thing all the way to "The Culverts."

The objective is to keep Ninemile Creek flowing free in its banks instead of forming shallow beaver ponds that get too warm in the summer for trout to survive. This clear, cold spring-fed creek flows through the center of a sedge-dominated wetland and is home to native brook trout. Our work will continue throughout the summer as weather allows. A big thanks to Andy Killoren for his diligence year after year concerning Ninemile Creek, from organiz-

Chapter News

JOHN ROSE CAUGHT THIS 16-INCH BROOKIE ON THE WOLF

BILL LIVINGSTON LANDED THIS 22 1/2-INCH BROWN ON THE WOLF

WOLF RIVER CHAPTER WORK DAY CREW
Work Day crew—from left Andy Killoren, Jon Graverson, Travis Stuck, Chuck Valliere, Rhonda Zander, Bill Livingston and John Rose. Not pictured—Brian Biermier and John Carbonari had already headed out to work.

ing work days to making sure the work is done safely.

May 1, opening fishing day, was a very exciting day for many people who fished the Wolf River. I heard many tales of delight and of large brown trout being caught.

When I say large, I mean greater than 19 inches. A man who has walked along my bank for the last 10 years with permission to get further upstream stopped to visit when he was done fishing and was so gleeful that I thought I was talking to a 10-year-old who just caught a first fish. In years past, he has always been reserved. As he was tap dancing on the bank this year, he told me he caught five brown trout over 20 inches.

"Whatever you guys are doing, it's working," he said to me. "The slot size thing is working, Ninemile Creek is working and a cool summer with high water grew trout, thank you, thank you, thank you!"

All of May was extremely great fishing, as were the first few days of June, on the Wolf River. The phone was ringing off the hook with chapter members telling me they caught the biggest brown trout ever.

Bill Livingston caught a 22½-inch brown and a 19-inch rainbow that were personal bests for the Wolf River.

John Rose caught personal bests as well, with an impressive 16-inch brookie and a 19-inch brown in May with many 15–17-inch browns caught as well.

And I heard Tim Waters broke his record for most fish caught in the month of May on the Wolf River. Congratulations to all the anglers who caught record numbers of brown, brook and rainbow trout in the Wolf River.

We will be supplying a volunteer team for the Wolfman Triathlon on September 11, 2021. This is a great opportunity to bring some much needed funds ($500) into the chapter coffers. As of June 1, we still needed about four more volunteers to complete our team. If you haven't signed up yet, please contact Laurie at lznetzow@me.com.

—Laurie Zen Netzow

Oak Brook Chapter (Illinois)

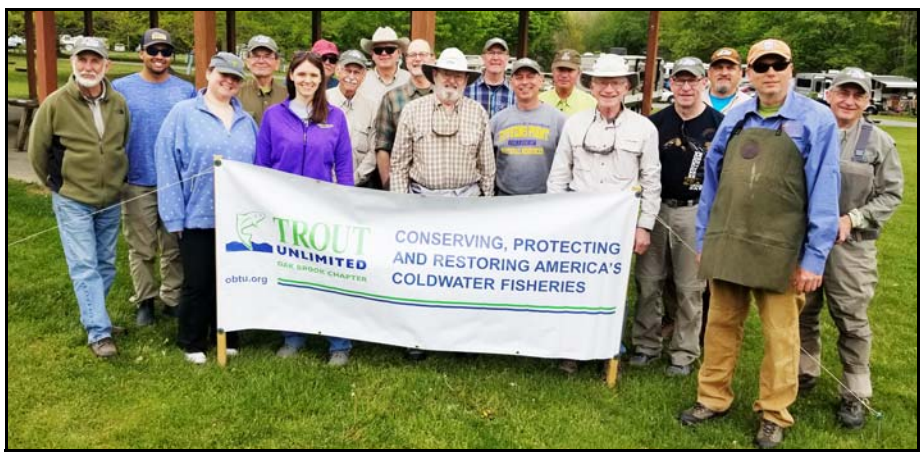
Mike Lesiak and our education committee report that youth fly-fishing classes, designed around the requirements of the Boy Scouts of America fly-fishing merit badge, will be expanded and return to full-day sessions. Covering all the aspects as in the past years, classes will start in August and September 2021, much to the delight of many boy scout troops. Although the Zoom sessions conducted this past winter included many aspects of the program like fly-fishing tackle and outdoor safety, the committee knew that it would have to use in-person outdoor sessions to complete the program for the other units, such as fly tying, casting and catching fish.

Marv Strauch and Dave Carlson conducted two successful events this spring. At the May 1 DuPage River Cleanup Day a large amount of trash was picked up. Unusual items included a folding camp chair, computer, carpet remnants, metal chair frame and 50 feet of fire hose.

Volunteers who attended included Stan Zarnowiecki, Ken Krueger, Jim Hohenberger, Phil Young, Willie Beshire, Dale MacDonald, John Martyn, Ed Michael, Dennis Wisnosky and Steve Carlson, Dan LaFave and Carol Hennessy.

Dave Carlson

OAK BROOK CHAPTER HOLDS DUPAGE RIVER CLEANUP
A large amount of trash was picked up. Unusual items collected included a folding camp chair, computer, carpet remnants, metal chair frame and 50 feet of fire hose.



OAK BROOK CHAPTER SURVEYED THE COLDWATER RIVER, MI
This year 16 volunteers conducted the survey on five sites along the Coldwater River watershed. This program is conducted by our chapter, in conjunction with the Coldwater River Watershed Council, and MiCorps.

In mid May some of our members gathered for the eigth year of conducting macroinvertebrate surveys on the Coldwater River in Freeport, Michigan. The survey is conducted twice each year, in May and October, to sample and count macroinvertebrates in the Coldwater River and its tributaries.

This year 16 volunteers conducted the survey on five sites along the Coldwater River watershed. This program is conducted by our chapter, in conjunction with the Coldwater River Watershed Council, and MiCorps. The data is uploaded to the MiCorps website for sharing with the public. The data is part of Oak Brook Chapter's monitoring efforts on this watershed, which includes a series of temperature monitors, and a EnviroDIY "Mayfly" Monitoring Station.

—Stan Zarnowiecki

LETTER TO THE EDITOR

I just read the Spring 2021 issue of Wisconsin Trout. I would like to personally say "Thank You" to you as editor for having the insight to publish them. I am referring to the two articles: Fly-tying tips and Wisconsin salmonids. These articles were both well written, informative and very enjoyable reading. Please pass on my sentiments to both of the authors as it is well deserved in my opinion. I look forward to another issue as good as the last.

Hopefully a section on fly-tying tips and education may become a permanent feature in the future. Hope to see you on the river someday.

—Ron Kuehn, member, Wisconsin River Valley Chapter

LETTER TO THE EDITOR

I read with interest Tom Wiensch's letter regarding coaster brook trout, in particular his statement that "it's hard to imagine that any significant portion" of TU members would oppose his idea to make brook trout catch-and-release only on the Brule River to effect a return of the coasters. For what it's worth, here's one member who disagrees.

I've been fishing the Bois Brule since I was in high school in the mid-1960's, mostly for stream trout on the upper river but also for steelhead in the fall. Aside from my practical knowledge, I sought out on-line information on coasters before writing this letter. In particular, I reviewed a 1996 report entitled "Status of Brook Trout in Lake Superior" that appears to be a joint production of the U.S. Fish and Wildlife Service and the Wisconsin DNR, as well as an undated Wisconsin DNR publication entitled "Lake Superior Coaster Brook Trout."

These confirm Wiensch's suggestion that the coaster decline was caused in large part by overfishing. However, the overfishing, including commercial fishing in Lake Superior, that caused the coaster populations to plummet occurred in the 1880's to be followed by the severe environmental degradation caused by logging the virgin forests. Then there is the added competition from subsequently-introduced non-native trout such as browns and rainbows. There is also a suggestion that, although coasters are not a distinct genetic variant, the subsequent stocking of non-native brookies may have decreased the anadromous tendencies of Brule River brook trout.

The problem I see with Wiensch's proposal is that it will be impossible to recreate the pristine pre-1900 conditions that fostered the coaster fishery.

Finally, I dispute Wiensch's statement that there has been "no improvement" in the last 30 years of brook trout fishing on the Brule. It has been perhaps 20 years since the 10-inch, artificials-only regulation was imposed on the stretch from Stone's Bridge to Winnebijou, which is the prime brookie water on the Brule, and it has begun to pay off.

When I started fishing the Brule it was rare to catch a brookie over 7-8 inches; most were in the 5-6 inch range. Now, while there may be fewer small fish, the increased size of the brookies brought to the net is very noticeable. In the last five years I have caught and released a number of brookies in the 14-15 inch range. The current regulations seem to work well.

Most anglers on the upper Brule already practice catch and release, but many of us like the option of keeping a few for the pan now and then. Banning the taking of any brook trout to support the pipe dream of reestablishing the pre-1900 coaster population is not warranted, and likely to fail because that alone will not recreate the pre-1900 conditions that allowed the coasters to exist.

—Mike Heffernan

***RAINBOWS**, from page 13*

They are stocked mainly in tributaries. The Chambers Creek Strain originated from Washington State and was developed in New York State. Chambers Creek fish enter spawning streams beginning in mid-November with their migration peaking and actual spawning taking place in March and early April. Spawners typically range from 25-29 inches and 6-9.5 pounds.

The Ganaraska Strain is from the West Coast and was developed in Ontario. Ganaraskas also begin migrating in November, and their run and actual spawning peaks in April and early May, 2-4 weeks later than Chambers Creek fish. Ganaraskas are a little smaller, usually ranging from 23-26 inches and 4-7 pounds.

The Skamania strain was developed in Washington State and the DNR obtained its first eggs from Indiana. Stocking began in the early 2000's but was paused after 2008 because of concerns over the potential for the newly arrived disease Viral Hemorrhagic Septicemia to enter the hatchery system. After modifications of procedures for obtaining and handling eggs, stocking of the Skamania strain recommenced in 2018 and 2019. Because the adults aren't expected to return in significant numbers until 2022, the success of these most recent stockings is uncertain.

Skamania provide the potential for a true summer-through-winter stream fishery. Skamanias begin entering tributaries as early as late June or early July when rains raise river levels, and their run peaks from mid-September through mid-December with spawning taking place in late December through February. Skamanias also have the potential to reach larger sizes than other strains, with spawning fish of 28-32 inches and 8-12 pounds.

Wild rainbow trout management

Efforts to manage self-sustaining populations of rainbow trout in Wisconsin focus on preserving genetic integrity and protecting juveniles and spawning fish from overharvest. Rainbow trout stocking does not occur in Lake Superior and its tributaries, the Drew Creek system or the West Branch of the White River. This prevents hatchery strains from interbreeding with naturalized populations and potentially eliminating any unique attributes that allow these populations to remain viable.

Supplemental stocking does occur in the few Lake Michigan tributaries with natural reproduction because these localized populations are thought to be too small to withstand the heavy fishing pressure that occurs during the steelhead run.

Size limits and season closures shield self-sustaining rainbow trout populations from overharvest. In Lake Superior tributaries, the steelhead season runs from late Match to mid-November, allowing anglers access to the fall and spring runs but not the overwintering period. The size limit is 26 inches with a daily bag limit of one, protecting all first-time steelhead spawners from harvest.

Lake Michigan tributaries have a 10-inch size limit, which eliminates harvest of naturally reproduced juveniles before they venture to the lake.

Drew Creek has a size limit of 8 inches, which also protects more than 95 percent of juveniles before they move downstream to Florence and Upper Bass lakes, and trout harvest is prohibited from mid-October to early May, preventing removal of the adults coming out of the lakes to spawn. The lakes themselves are private and have little fishing pressure.

The West Branch of the White River has a 12-inch size limit for rainbow trout, which safeguards more than 99 percent of the fish, and harvest is not allowed during the March-April spawning period.

THE FUTURE

Lake Superior and tributaries

Climate change clouds the future for Lake Superior steelhead. Projections indicate that by mid-century warming temperatures and more variable precipitation will reduce the amount of tributary habitat available for spawning and rearing of juveniles. The Brule and other top-quality tributaries such as the Sioux River in Bayfield County will remain suitable, but the ability of many others to produce steelhead will be reduced or lost.

Interestingly, as Lake Superior itself warms, it may become more suitable for steelhead. Right now the lake is generally too cold for maximum steelhead growth. However, whether a warmer Lake Superior will mean better steelhead growth and survival depends on the availability of sufficient food, and how the current cold-adapted food web will respond to climate change is uncertain.

Lake Michigan and tributaries

As they do now, in the future Lake Michigan steelhead fisheries will continue to depend on and be determined by stocking, but not just of rainbow trout. The Lake Michigan trout and salmon sport fishery is currently managed for five species, steelhead, brown trout, lake trout, Coho salmon and chinook Salmon, all of which are largely or completely dependent on fish from hatcheries.

There are major concerns that too many salmonids may collapse prey populations in Lake Michigan, leading to a decline in the fishery. This appears to have already happened in Lake Huron. Federal and state fisheries managers responsible for Lake Michigan try to balance total salmonid stocking levels with food availability, but prey abundances, particularly alewife, are currently relatively low, and there is little room for error.

In some years, when natural variations in survival and abundances threaten to push the predator-prey relationship out of balance, the best response might be to decrease or even temporarily stop stocking. However, many angling groups and lakeshore communities dependent on fishing tourism resist this, perhaps understandably, making management difficult and putting the overall salmonid fishery, including steelhead, at risk.

DNR'S LEE KERNAN IN 1968
Lee Kernan, Former Wisconsin DNR Chief of Fisheries Lee Kernan holding one of the first large stocked rainbow trout to be caught from Lake Michigan, Door County, in 1968. Photo courtesy of Lee Kernan.

Because most Wisconsin Lake Michigan streams are already too warm for rainbow trout during summer, climate change will have less of an effect on steelhead runs in Lake Michigan than in Lake Superior. However, higher water temperatures do threaten the few small naturally reproducing steelhead populations in Lake Michigan tributaries. More variable precipitation will also affect stream flows and lake levels, and during dry periods, many smaller tributaries may become inaccessible to steelhead migrating from the lake.

Inland waters

As is the case now, with the exception of the Drew Creek system and the West Branch of the White River, the future of rainbow trout in Wisconsin's inland waters will be completely determined by hatchery production and stocking policies. Climate change may have a relatively limited effect on these fisheries.

Even in the projected warmer climate of mid-century, spring water temperatures should still be cold enough for short-term (1-2 month) survival of domestic rainbow trout. However, carry-over will be greatly reduced, and in most streams no fish will survive the summer after their release.

Fortunately, the most recent projections indicate that both the Drew Creek system and the West Branch of the White River are likely to remain cold enough at mid-century to support their wild, self-sustaining rainbow trout populations. However, the amount of suitable habitat in each stream will be gradually reduced as temperatures increase, and summer habitat in Florence Lake and Upper Bass Lake in the Drew Creek system will become increasingly marginal. If warming trends are not controlled, both populations are likely to be greatly stressed and perhaps eliminated by late century.

Conclusions

Rainbow trout fisheries in Wisconsin are a mix of wild self-sustaining populations and stocked domesticated and semi-domesticated populations. Nearly all fish, wild or stocked, appear to be migratory, but the West Branch of the White River supports a unique resident population of rainbow trout.

In the Lake Superior basin all populations are wild whereas in inland waters and the Lake Michigan basin nearly all are maintained by stocking. The Bois Brule River has the best wild population, whereas several Lake Michigan tributaries have large hatchery-maintained runs of different steelhead strains. Climate change and, in Lake Michigan, overstocking are the biggest future threats to rainbow trout populations and fisheries in Wisconsin waters.

John Lyons is a member of the Southern Wisconsin Chapter of Trout Unlimited and is Curator of Fishes at the University of Wisconsin Zoological Museum. This is the third in his ongoing series. Brook trout and brown trout were discussed in previous issues of Wisconsin Trout.

***PEGASUS**, from page 15*

A constant flow of cold water was essential. The tent was up and the "Fox Lake Big Trout Expedition" sign from our living room was nailed to a tree. Sleeping bags were unrolled, packs were emptied, and I found two trees that were perfect for stringing my hammock.

Big Trout Expeditionary Force Base camp

The Fox Lake Big Trout Expeditionary Force Base Camp was now up and running. It was time for a celebratory beer. Al took one for the road and took off back to the lodge, leading a much lighter and no doubt thankful Mule. We built a fire, broke out some food and celebrated. Tomorrow we would catch some giant trout.

Morning comes late in the mountain valleys that lie between high peaks. It was past eight when the sun peaked out from over the top of the mountain ridge which took up most of the Fox Lake's east shore. A thick morning fog lay over the surface of the lake and when the morning sun hit the fog, the bright sunlight lit up everything instantly. It was like being inside of a frosted light bulb.

It was now time to inflate the Pegasus and start catching the big trout we had talked about all year. We assembled the foot pump. Howard, Dave, and I took turns pumping and soon realized that one more thing we neglected was learning just how much foot pumping it would take to inflate our boat. We never tried it back home and had previously relied on the trusty shop vac. That was only a 20-minute operation.

Well, it turns out that it took a very long time to inflate the Pegasus. We started with 15-minute shifts. These were reduced to 10 and then to five. After two hours, the Pegasus still looked pretty wrinkly. I got leg cramps and had to sit out a while. Dave also got cramps. That left Howard. Much like last year's sprint down the mountain he did the heavy lifting and started pumping furiously.

When the cramps went away Dave and I relieved Howard and continued pumping. We pumped and pumped and pumped. We entertained ourselves by singing silly songs, telling dirty jokes and laughing at our latest miscalculation. After about three hours, we declared the Pegasus seaworthy and waded into the lake to cool off and try to get rid of the latest round of cramps. It was now a warm late afternoon and we hauled our boat into a sunny area by the lake, flipped it over, and took a nap on top of the bottom of the now rigid Pegasus. It felt like a comfortable little trampoline.

Later, as evening was approaching, the surface of Fox Lake dimpled with rising trout. It was time to finish rigging the Pegasus for its first trout mission. We strapped on the motor mount and the little outboard motor and grabbed the rods and tackle. We maneuvered her into the shallows and Howard and I climbed in for the first voyage. I primed and choked the motor, pulled the cord, and the little Johnson chugged and sputtered to life. The Pegasus lurched away from the shore.

Except, the motor never stopped lurching, smoking, sputtering and chugging. Whenever, I thought it had warmed up enough, I took the motor off choke, and it would quit running. We tried everything we could think of and finally ended up letting it sputter away on full choke, moving slowly along toward deeper water. Once underway, Howard took one trolling rod rigged with a flutter spoon and let down the mini-downrigger. I spooled out a big jointed Rapala minnow with a big diving lip. It was at that point that the motor quit.

We tried and tried to start it again. No luck. It coughed and chugged a little, spitting little clouds of oily smoke. We reeled up and rowed back to shore. While rowing back, we hit upon the idea that small two-cycle motors probably required additional adjustment to function properly at elevations over 8,000 feet. We pulled out and took stock of our meager assortment of tools which consisted of a tiny adjustable wrench, two screwdrivers, and a pair of needle-nosed pliers. With these, we set to work, trying to adjust the motor's carburetor.

While we grew up with small motors, anything involving a carburetor required a specialist, sort of a carburetor whisperer. That was usually my great uncle Elmore. I vividly remember him, cigar clenched in his teeth, muttering at some clogged or fouled up carb on one of our lawnmowers, go-karts, snow blowers, or small outboard engines. It was in this setting, my vocabulary of colorful profanity took shape.

Howard and I took the cover off the tiny motor and looked around. After some disassembly, a tiny carburetor with two small brass screws appeared. These, we thought, controlled the jets inside the carb. Dave came over to look and wisely grabbed his fly rod and announced he would go and catch dinner. We began to adjust and move the screws. We were flying blind, trying to get at just the right air-to-gas mix that would work at this high altitude. Do we go rich, or go lean? It was pure guesswork.

I managed to use the wrench to remove the spark plug. It was covered in partially burned two-cycle oil, likely from the poor combustion at this altitude. It was a gunked up mess. I cleaned it off with a Q-tip and a hanky, hoping for the best. Howard kept fiddling with the carb.

We paused from time to time and pulled the starter cord to see if our adjustments would cause the little engine to fire back up. It wouldn't, and we tried every combination of clockwise and counterclockwise adjustments, eventually rendering the little motor completely inoperable. It was now one dead Johnson. It wouldn't even pop, even after what seemed to be a hundred pulls on the starter cord. We had definitely made things worse. Any trolling from now on would be accomplished by using the oars. We were downcast.

Giving up on the outboard

"Look at the bright side" offered Howard. "At least we have a good supply of campfire starter." He was referring to our supply of fuel in the little metal cans. I didn't think this was too funny. Two hundred twenty five bucks for the boat, wrecking my brother's motor, and who knows how much for all of the miscellaneous gear we would never use again. Plus, we had not even caught one trout yet. I headed off for the streamside beer cooler.

Later, Dave returned with a dinner's worth of fat trout. This helped to sooth our dead engine blues. He fried the trout for dinner. Howard and I were covered in oil and gas and clearly depressed.

However, the fried trout were great. The beer was cold. We were on the beautiful mountain lake we dreamed and talked about all year. Plus, we smelled like petroleum which we felt upped our bear protection, so we could sleep a little easier than last year. As dinner went on, the mood brightened. Hell, we were young. We could row the damn Pegasus and still catch those big trout.

The next morning, after trying the motor one more time, Dave and Howard took the Pegasus and trolled the lake using the oars. I took my fly rod and headed off to the tributary inlet where I enjoyed success similar to the year before. The thrill of catching numbers of decent-sized trout on flies took my mind off what my brother would do when he found out about what we did to his beloved motor.

At lunch, Dave and Howard returned, fishless but were encouraged by a number of "bumps" they had on the lures. Now, Dave and I took the boat. Howard got out his box of Daredevils and headed for the lake outlet where he clobbered the trout the year before. It was my turn to row. A nice breeze was blowing and Dave and I let it blow us down the length of the lake. The wind was just strong enough to let Dave troll the spoon slowly on the downrigger while I trolled the big-lipped Rapala. We tried to steer toward the part of the lake where we saw the big trout the year before.

Once we got there, the downrigger release popped and the long rod danced. Dave grabbed it, but whatever hit the spoon got off. Still, we were encouraged. I started to jerk the Rapala from time to time to mimic a struggling fish. But, as we drifted, nothing happened.

We drifted down toward the lake's outlet and turned around. Now, it was time for Dave to start the hard work of rowing into the wind. The rowing was further complicated by the fact that the Pegasus had no rudder and wallowed around in the wind like a toy duck. We had forgotten about what had happened during sea trials. It was the maiden voyage all over again!

As Dave struggled with the oars, I held both rods. I remember Dave rowing past some big rocks near a drop-off when something big hit the Rapala. I dug in for a good fish fight while Dave kept rowing.

It was at that point that the downrigger released and a second fish now took off, causing the drag on the reel to screech. Dave grabbed that rod and started to reel. He said that his fish felt pretty good, too. So now, we had a double and were drifting back down the lake, back toward the rapids at the outlet. Dave and I looked at each other. The Pegasus had no anchor.

They say God protects drunks and pregnant women. They should have also included trout fishermen. By some act of divine providence, the breeze shifted just enough to gently ground us on a big semi-submerged round-topped boulder, a perfect anchor. There we sat, fighting the two fish. Dave's fish broke water with a big jump. It was a rainbow and looked well over 20 inches. It jumped again and threw the spoon.

A landing net?

My fish bore deep and did not show itself. The big Rapala had two sets of treble hooks, giving me a greater degree of advantage over the big fish.

I eased it off the bottom, slowly pumping the rod and reeling. Dave looked over the side of the boat. "I can see it." He said. "It's kinda yellow."

"A big cutt!" I was excited. We found one of the cutthroats that came out of the little tributaries and grew into the Fox Lake monsters, just like we thought. Dave then looked up at me.

"Rick, we don't have a landing net" he said a little uneasily.

"Yah…, never occurred to me" I said, sensing impending failure. It was just one more thing we hadn't thought of.

The big cutt came slowly to the surface. It lay there, showing the red gill covers and its orange-red throat slashes. It looked to be about 24 inches long, fat, and five pounds, maybe even six. I looked at Dave and slowly lifted the fish's blunt head out of the water. Dave tried to grab the big fish, which exploded into life. The line broke as the fish squirmed from Dave's grasp. Exhausted, it finned just below the surface next to the boat and stayed there just long enough for both of us to get a good look. It was a magnificent animal and with one powerful tail stroke, it shot back into the depths of the lake, taking my Rapala with it. Exhausted and defeated, yet somehow exhilarated, we rowed back to camp.

Howard greeted us when we returned. His trusty Daredevil had provided us with another fresh trout dinner which soothed our injured psyches. At least we had two great big fish battles to talk about around the fire. Fried trout, freeze-dried hash browns, cold beer and a day of trying to row the Pegasus made for an early evening. Tomorrow would be another day.

The next couple of days saw us taking shifts rowing the Pegasus and trying to use the wind to our advantage. We combined drifting, rowing and just plain still fishing. Howard chucked spoons while Dave and I returned to the fly rods. We all caught some fish, even a few nice ones. None were the monsters we had seen on our previous trip.

On the last morning, Howard and I took a short morning shift in the Pegasus. Dave stayed behind to start breaking down the tent and pack up. We had taken off the motor mount which also held the mini downrigger.

Howard chucked Daredevils while I took my fly rod and trolled a streamer in a last vain attempt to catch a big trout. Fishing was slow and we returned fishless after about an hour.

Dave had decided to throw flies off the shore of the camp and had made little progress breaking camp. He did, however, have several nice rainbows for his efforts. Seeing Dave's success, I told Howard to take the boat and give it one last try. Al would be by in the afternoon and Dave and I would take down the camp and hopefully catch a few fish off the shore. Howard rowed the Pegasus out into Fox Lake for one last try.

Dave and I took turns fishing and packing up. Time passed quickly and soon we could see Al coming down the trail, leading the mule. Howard was now rowing back up the lake and back to camp.

Soon, our "Fox Lake Big Trout Expedition" would be over. Dave and I broke down our fly rods and packed them away. Howard finally rowed the Pegasus into the shallows off the camp. He was grinning ear to ear. He had a very big trout.

We ran to the shore and looked into the bottom of the Pegasus. A rainbow, well over 22 inches, lay on the bottom.

"This one goes on the wall," grinned Howard, and we all agreed. Al had arrived and dismounted to admire the big trout.

"Beauty," he said. "You guys did it again," He laughed. Our legendary prowess as trout fishermen had

been saved by Howard.

"Daredevil?" I asked Howard.

"Duh," said Dave, answering for Howard, and we all laughed. We pulled the plugs on Pegasus and the air whooshed out. The Pegasus would never fly again, at least not in Montana.

While watching our precious little boat deflate, we speculated as to the used market for small inflatable boats and a gunked-up 1.5-horse Johnson. On the bright side, we noted, we didn't get skunked. We did tangle with some huge fish and we got to try something new. No bears showed up, and, as Howard would repeat, "Nobody died".

We celebrated Howard's trophy. Al could apparently see into the future and knew we had no more beer. He had a six pack on ice in a saddlebag for this occasion. We drank the cold beers and put the big fish along with Dave's rainbows on ice. We loaded up, and a little while later, we followed Al and the little mule down the trail and back to the lodge. While not quite what we had hoped for, it was still a pretty cool fishing trip.

On the way back, Al told us about a group of backpackers who had stayed at the lodge a couple of days earlier. They talked to Al about camping on a big lake, north of the Coulter Pass trailhead at a much higher elevation, way above the tree line called Fossil Lake.

They said that it was a tough, two-day hike and they had encountered some snow. But, they said it was very beautiful and had views of even taller, snow-covered mountains. Some were supposedly more than 11,000 feet tall. There was also a glacier field. They said they caught golden trout, and lots of them. They also saw some grayling.

Al said he had heard about this lake but had never been there. We looked at him with puzzled expressions. "Geez you guys," said Al a little defensively. "There's a lotta lakes up here. I can't fish 'em all. Maybe you guys should go there next year." We agreed. After all, a trip to the Beartooths was now an annual.

While the disappointment in our limited success at Fox Lake was fresh in our minds, the thought of a new lake, a more remote and exotic location, and a new species of trout began to sink in. Golden trout, like the cutthroats the year before, would be a first for all of us. We had never even seen one, and the thought of catching a grayling was, to us, the stuff only seen in fancy fishing magazines.

As we hiked along, the struggles of the Pegasus mission quickly faded. We all thought the same thing: Next, year we would hike all the way up to Fossil Lake and catch those golden trout and maybe a grayling to boot. We would hike up there and slide on the glacier. It would be a grand adventure. We would go above the tree line.

Rick Larkin is a long time member of SEWTU. He has fished and hunted Wisconsin his entire life and reportedly caught a perch off his uncle's dock at age two on a cane pole. While he will fish for anything that swims and once had a trotline license for Mississippi River catfish, he is especially fond of all things trout and the Driftless in particular. He embraces the Robert Traver concept of "Whiskey in a tin cup tastes better out there". He also enjoys building LUNKER structures, cutting down Buckthorn, and listening to bad jokes around the campfire at the West Fork Sportsman's Club.

Great Lakes Stream Restoration Program update

MARENGO RIVER BEFORE RECONSTRUCTION PROJECT
Eroding banks along the Marengo River. Note how the banks are largely devoid of vegetation and drop almost vertically to the river.

MARENGO RIVER AFTER RECONSTRUCTION PROJECT
Large wood structures were installed along the Marengo River to stabilize banks and restore habitat.

By Chris Collier, Great Lakes Stream Restoration Manager

As things continue to trend in a positive direction, I think we're all excited to have a summer that is looking a little closer to normal than 2020. I know I'm looking forward to lots of time on the water in the coming months, as I'm sure most of you are too, and this includes an exciting and jam-packed field season.

I am excited to announce we have three interns helping us this year:

- Linnea Turner is a student at UW-Madison majoring in environmental science with a minor in environmental engineering.
- Mackenzie Klein is an environmental engineering and technology major at UW-Green Bay.
- Garrison Ferone who is a student at Beloit College, is pursuing a double major in environmental biology and spanish.

All three will be leading our effort to inventory road-stream crossings to identify fish passage barriers, along with assisting our partners at the Forest Service and DNR with habitat restoration projects and fish surveys. These projects provide a diverse set of experiences that prepare our interns to take the next step in their careers after graduating.

We have hired a full-time project coordinator, Danielle Nelson. She is originally from the Green Bay area and is excited to be back working on conservation projects in Wisconsin.

She has significant experience working to protect habitat in the Lake Michigan watershed, and will be working to expand our field capacity, implement an improved monitoring program and assist our partners.

You can expect to meet Danielle in person at the fall council meeting, and if you have any questions for her, you can reach her at Danielle.Nelson@tu.org.

We are working with our partners to replace at least six crossing barriers this summer. One of these projects is on Rock Creek, a tributary to the Peshtigo River, where the new crossing will reconnect more than nine miles of coldwater habitat.

We are also continuing to work with Forest County, the towns of Popple River, Armstrong Creek and Brazeau, the U.S. Fish and Wildlife Service and Douglas County to create designs for nine crossings that will hopefully be replaced over the next several years.

We recently finished a restoration project on the Marengo River. Two large sections of banks were eroding into the river, so we worked with the U.S. Forest Service, with funding from the National Fish and Wildlife Foundation, to install large wood structures that not only stabilize the banks but also create habitat for native brook trout. It's been exciting to see this project hit the ground and I can't wait to show you more over the coming years.

In closing, another busy field season is upon us and we have exciting permanent and seasonal staff joining our Wisconsin team to continue growing our coldwater conservation efforts. If you would like to learn more, or check out one of our projects, feel free to reach out to me at 419-296-4390 or chris.collier@tu.org.

See you on the water!

DANIELLE NELSON JOINED THE TU TEAM IN NORTHERN WISCONSIN
TU's new Northern Wisconsin Project Coordinator Danielle Nelson.