

# TROUT UNLIMITED MINNESOTA

The Official Publication of Minnesota Trout Unlimited - November 2024



**BRINGING BACK THE HATCHES**  
**MNTU'S PETITION TO REGULATE NEONICS**  
**ARTIST PROFILE: DAVE NORLING SR. & JR.**  
**2024 HABITAT IMPROVEMENT PROJECTS**  
**FLY TYING: THE NO NAME CADDIS**  
**REINTRODUCING SLIMY SCULPINS**

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LEARN ABOUT THE REINTRODUCTION OF OUR NATIVE SLIMY SCULPIN ON PAGE 16.

**ON THE COVER**

Students from the Cherry School in Iron Junction, MN enjoy their fall field day with the MNTU Trout in the Classroom program.

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# EDITOR'S ANGLE

## PROTECTING OUR TROUT FOOD AND POLLINATORS

By Jade Thomason, Editor

The past number seasons I've been aware of the dangers of neonicotinoid sprays and treated seeds in plants purchased from large box stores. I've done my best to choose small local greenhouses for my flower purchases and bought more native plants that are naturally pest-resistant. It's becoming more common knowledge that neonicotinoids, currently the most popular pesticides in the country, kill and negatively impact indiscriminately. Our native bees, honeybees and butterflies can all be harmed by interacting with the pollen from these flowers. And treated seeds take up the pesticide into every part of the plant, making the leaves, stems and fruits also toxic. As with so many pollutants and treatments, the first victims are typically the tip of the iceberg.

Whispers of "there aren't hatches on trout streams like there used to be" have been heard for years within the angling com-

munity. The US Environmental Protection Agency has potentially uncovered the cause of this phenomenon. Careful studies of the effect of neonicotinoid pesticides on aquatic macroinvertebrates and the levels of these pesticides currently in our trout streams have begun to put the pieces together. MNTU and partners have worked together to submit a petition urging the MN Department of Agriculture to regulate neonicotinoid-treated seeds. Read more on Page 9, where our executive director John Lenczewski has explained how neonics end up in our trout streams and what MNTU is doing to stop it.

Advocacy is at the core of what MNTU does, and, to me, it has one of the largest impacts of all. The pushing of good policies and the thwarting of bad ones happens each season. MNTU's voice has been instrumental in ensuring effective stream buffers, better fishing regulations



and so much more. Volunteer on our Advocacy Committee or donate for Give to the Max Day to lend a hand to this important work.

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THE WIN-CRES CHAPTER PLANTED NATIVE SHRUBS, INCLUDING HAZELNUT, PAGODA DOGWOOD, GRAY DOGWOOD AND NANNYBERRY, AT THE CEDAR VALLEY CREEK PROJECT.



# FROM THE EXECUTIVE DIRECTOR

## WHAT CAUSES FISH KILLS?

By John Lenczewski, MNTU Executive Director

Over the past three years Minnesota Trout Unlimited has spent considerable time on advocacy work aimed at preventing fish kills on trout waters. Between 2015 and 2021 a series of major fish kills occurred on some great trout streams in southeast Minnesota. The last devastated a section of Rush Creek on which MNTU had completed a habitat restoration project the previous year. The precise cause and origin of fish kills are very difficult to pinpoint given the fact that the toxic pollutants are typically carried into the streams during a large rainfall event. But we (and state regulatory agencies) know that they are usually caused by spills from stored manure or the application of manure on farm fields.

For this reason we have been pressing key state agencies to review the rules and permits governing feedlot operations and agricultural runoff. You can read

elsewhere in this and recent newsletters about those efforts. Preventing fish kills in southeast Minnesota has focused on agricultural land use practices precisely because they have been implicated as the causes of those fish kills.

This July a significant fish kill occurred on Tischer Creek in Duluth. Tischer Creek is a small stream winding down through neighborhoods to Lake Superior. This wild, self-sustaining, brook produces some surprisingly large trout, including on the edge of the UMD campus. This fish kill was not caused by poor agricultural land use practices. But poor decisions know no geographic boundaries. It seems that city workers chose to send more than a million gallons of heavily chlorinated water into a storm drain leading to Tischer Creek, rather than into the sanitary sewer. We are still waiting for answers, but the real question is whether the city had a procedure



to prevent this or not. Was it followed or not? What can be done to prevent events like this in the future? Look for a full report on this in our next newsletter.



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## BOARD OF DIRECTORS ELECTION NOTIFICATION

- There is an opening for an at-large board member.
- Terms are three years.
- Nominations must come from a chapter board member or a council board member.
- If you are interested or know of someone who may be, please speak to your chapter president or the council board chair to discuss membership qualifications and expectations.
- Nominations are due to the board secretary, Micah Crider, by January 15, 2025.
- Elections will be held at the January 25, 2025 MNTU Council Board of Directors meeting.

## MINNESOTA COUNCIL UPDATE

### PROUD TO BE INVOLVED

By Brent Notbohm, Minnesota Council of TU Chair

My partner Cheri and I spent several weeks this summer on an epic adventure in Wyoming. We visited the lovely Bighorn Mountains and fly fished the North Tongue River. We backpacked into a majestic wilderness lake in the Wind River Range where we each caught 100+ brook trout in a single day. We enjoyed the grandeur of Grand Teton National Park, fishing several of its renowned waters. We explored the Beartooth Mountains, camping and fishing above 9,000 feet of elevation. And then there was the time we spent in Yellowstone National Park; its stunning geological features, pristine waters, and incredible wildlife are nothing less than inspiring. In such a place of natural wonders, one inevitably reflects on the state of Mother Nature—the harms we have unfortunately done to her and how we can do better moving forward.

As much as I love visiting the West, I'll never live anywhere except in northern Minnesota. I look out my front window onto the vast blue ocean of Lake Superior and think: "We have fresh water!" Which means we will always have fish—that is if we keep up the good fight to conserve, protect, restore, and

sustain our water resources.

We live in challenging times politically and environmentally. Climate change is causing unprecedented hurricanes in the south and catastrophic forest fires throughout the West, yet some political leaders want to amplify the problem instead of search for solutions. Minnesota may be a haven of sorts in this unfortunate era of climate change with our 10,000 lakes and countless streams and rivers. However, many of our rivers have nearly dried up this summer and there have been almost daily Red Flag warnings throughout the state this fall. Climate change is here, in our home, in Minnesota.

Welcome to the new "normal," I guess. But there are things we can do in these uncertain times. Advocating for good environmental policy aimed at preserving and protecting our lakes and rivers, restoring critical habitat for fish and wildlife, and educating youth and communities about climate change are all within the purview of Minnesota Trout Unlimited. This is why I am a proud member of MNTU and why I volunteer my time to our organization. Being an active MNTU member is one of the



ways I fight the despair I sometimes feel when I read the paper or watch the evening news. If you too sometimes feel that despair, please consider getting more involved with us or any of the other amazing conservation organizations out there. It helps to be part of the solution.

Chances are that as you read this column, the results of this November's election are known. My hope is that the leaders of our hometowns, counties, state, and country seek to address the growing challenges of human-caused climate change. For Mother Nature's sake, and the beauty and joy she provides us all.



# MNTU HABITAT IMPROVEMENT PROJECTS

## 2024 UPDATE

By Jennifer Biederman, PhD, MNTU Habitat Program Director

October marked the end of a busy 2024 work season for Minnesota Trout Unlimited. In-stream habitat improvement (HI) projects were completed on nearly 12,800 feet of stream—creating new corridors of improved angling and habitat for fish and nongame wildlife of nearly 2.5 miles in length. It was also a busy summer for fish passage projects in the northeast. In total, we replaced five fish barriers to return access of trout to 51,300 feet of critical cold-water habitat—nearly 10 miles of stream! In addition, important habitat maintenance work was carried out on numerous streams across the state, with the help of our chapter volunteers, including tree planting and maintenance, lunger building, invasive species removal, and more.

This hard work was supported by MNTU's dedicated contractors, including design engineers and construction crews, and our chapter volunteers who also did critical work carrying out vegetation and design maintenance at several other streams where MNTU HI projects have been installed in recent years.

It would take pages and pages to detail everything MNTU has accomplished in the 2024 work season, but we want to highlight the newly installed stream and fish passage projects supported by the Lessard-Sams Outdoor Heritage Fund (OHF).

### Fish Passage Projects to Restore Habitat Connectivity in the Northeast

Unnatural fish barriers in northeast Minnesota streams are a critical concern due to the profound impact these structures have on the health of riparian ecosystems. Barriers, like poorly designed culverts, impede the natural movement of populations of various fish species, including native brook trout. This restriction disrupts essential migratory routes, limiting access to spawning, overwintering, thermal refugia and feeding grounds, while diminishing habitat for macroinvertebrates and other nongame organisms.

This year, MNTU worked with partners to replace five barrier culverts in northeast Minnesota. In the Baptism River



MILL CREEK POST-PROJECT. NOTE THE NEWLY NARROWED CHANNEL, SLOPED BANKS, AND FLOODPLAIN ACCESS. SOILS ARE STABILIZED WITH HYDROMULCH AS COVER CROP BECOMES ESTABLISHED. (PHOTO: PAUL KRAHN TU DARE)

watershed just outside Finland, MN, two undersized barrier culverts on a critical tributary were replaced with properly-sized metal arch culverts, reconnecting fish to almost 2,000-ft of additional cold-water habitat. Also in the Baptism, an undersized barrier culvert on a tributary off Sonju Lake Road was replaced with a box culvert, including a headwall and wing walls, reconnecting brook trout to 4,600-ft of coldwater habitat.

In the Manitou River watershed, MNTU partnered with several agencies, including the MN DNR, to replace an undersized culvert on Hockamin Creek along the Ramstad Trail with a new bridge, reconnecting 35,000-ft of coldwater habitat for brook trout.

Finally, MNTU partnered with the City of Hermantown to replace an undersized barrier culvert on Keene Creek at Oker-

strom Road with a properly-sized, pre-cast concrete arch culvert with headwall and wingwalls, reconnecting trout with 8,300-ft of habitat. This new passage connects two previous MNTU in-stream projects above and below the crossing, and the installation included a new cross vein to maintain depth of the pool below the culvert, added toewood and boulders within the pool, riffle substrate throughout the culvert, and the planting of dozens of native trees, including white pine, white spruce, and white cedar along the stream edge.

### Stream Improvement Projects Installed During the 2024 Work Season Rice Creek (Fillmore County)

This project aimed to increase in-stream fish and macroinvertebrate habitat along approximately 5,200 linear feet of shoreline on Rice Creek, a designated trout stream in Fillmore County. The work

took place near County Road 6 and Jubilee Drive within a DNR Aquatic Management Area fishing easement.

Habitat features included the installation of over 500-feet of toewood and several pool logs for overhead cover and forage opportunities for fish, while also providing habitat for macroinvertebrates that utilize woody material. Streambank narrowing was conducted on 1,300 feet of overly-wide areas of the stream to increase baseflow velocities, thereby exposing coarse substrates that could be re-colonized by macroinvertebrates and benthic organisms. Approximately 6,025 linear feet of streambank grading was completed to re-establish bankfull benches, reconnecting the incised stream to its floodplain. Large boulders were used for boulder clusters and rock vanes to provide additional cover opportunities for trout.



BAPTISM RIVER TRIBUTARY BARRIER CULVERT PRE-REPLACEMENT (LEFT) AND POST-REPLACEMENT (RIGHT) IN FINLAND, MN. A SINGLE UNDERSIZED CULVERT WAS REPLACED WITH TWO METAL ARCHED CULVERTS, INCLUDING A LOW FLOW AND HIGH FLOW CULVERT.



Anglers can access this easement from the bridge crossings on County Road 6 and Jubilee Drive.

### Mazeppa Creek (Wabasha County)

The Mazeppa Creek stream project east of Zumbro Falls in Wabasha County, focused on stabilizing streambanks, enhancing in-stream habitat, and restoring natural hydrology to support the trout population and overall stream health along 2,000 feet. Extremely high banks were eroding at a fast rate (see photos) along a bluff. To reduce erosion and sedimentation, the stream was pulled away from the bluff to create a wide, stable floodplain. Throughout the project, streambanks were graded, reshaped, and planted with native vegetation, creating stable riparian buffers that provide shade and organic material essential for aquatic life.

The project also enhanced in-stream habitat by incorporating features like boulder clusters, rootwads, and riffles. These elements provide cover, feeding, and spawning areas for trout, while also supporting diverse macroinvertebrate communities crucial to the stream's food web. This fall, volunteers will plant plugs of native flowers and stake willows along the bank throughout the project reach.

Anglers can access this easement, within the Mazeppa Creek AMA on County Road 7.



TOP: MAZEPPA PRE-PROJECT, STREAM CHANNEL AGAINST A STEEP ERODING BLUFF. (PHOTO: DUSTY HOFFMAN, MN DNR)  
BOTTOM: POST-PROJECT, STREAM CHANNEL PULLED AWAY FROM ERODING CLIFF. (PHOTO: DUSTY HOFFMAN, MN DNR)

### Mill Creek (Chatfield, Fillmore County)

A project on Mill Creek in Chatfield restored 2,300-feet of fish habitat just above the confluence with the North Branch of the Root River. This project continues previous projects by the MN DNR and MNTU. The section covers nearly one-half mile of stream and includes toewood, riffle, and pool habitat. The Hiawatha Chapter assisted by building 12 lunkers structures, placed in the bank to provide cover habitat.

Channel realignment restored the stream with its previous oxbow, adding nearly 1,000-feet of stream length. The project also sloped back steep, actively eroding stream banks to reconnect the stream to its floodplain, while preventing the loss of nearly 85 tons of soil (nearly six dump truck loads!) into the stream each year. Wide, sandy stretches were narrowed to increase currents and pass fine sediments, exposing coarse substrates beneath and maintaining the exposure of newly added riffles.

Anglers can access this reach via the parking area at the terminal end of Library Lane SW in Chatfield.

### Maple Creek (Fillmore County)

This project enhanced the habitat of approximately 3,500 feet of stream along Maple Creek, a tributary of the South Fork of the Root River located within the Choice Wildlife Management Area, in Fillmore County about 15 minutes south of Rushford, MN. In addition to containing heritage strain brook trout, recent work with our land protection partners, including The Nature Conservancy and Trust for Public Land, made this stream a prime focus for enhancement of in-stream and riparian habitat.

The project was designed to address floodplain abandonment, accelerated

bank erosion, and degraded instream habitat to restore the ecological and hydrologic functions of the creek and adjacent floodplain. The in-stream habitat features of the project design aimed to favor the habitat preferences of brook trout with fewer structures like rootwads and more open pools.

Anglers can access this project from the DNR parking area off Highway 43 at the upstream end of the project reach.

### MNTU Moving Onward

As the season closes, we eagerly look to the HI work that lies ahead in the new

year. As always, it's important to remember that these 2024 HI projects are not "complete." Our newest projects will still look a little "raw" until grasses take off in the spring, and instream features are prone to high water events and susceptible to minor erosion and seed loss until native vegetation becomes well-established across two or three years. The OHF award used to fund HI work includes three years of project maintenance, to enable better establishment of native vegetation while allowing us to study how the design features respond to high flows, and tweak them as needed for long-term project stability. To that

end, our 2024 work season also included inspections and vegetation maintenance at projects completed in the last few years, including Cedar Valley Creek (Winona), Trout Brook (Dakota), Hay Creek (Goodhue), Rush Creek (Winona), Wisel Creek (Fillmore), West Beaver Creek (Houston), South Branch of the Whitewater River (Winona), and West Indian Creek (Wabasha).

As we look ahead to the 2024 field season, we have numerous projects in the design, permitting, and construction bidding phases. Stay tuned for more updates in the New Year!



KEENE CREEK (OKERSTROM ROAD, HERMANTOWN). A LARGE POOL BELOW THE NEW CULVERT CONTAINS TOEWOOD AND BOULDER HABITAT, AND NEW NATIVE TREES PLANTED IN PROJECT AREA WILL PROVIDE WILDLIFE HABITAT AND FUTURE SHADE.



# THE NORLINGS

## AN ARTIST PROFILE

By Ben Nelson • Photos by Hal Tearse

“My dad loves to talk about the shop,” says Dave Norling Jr. “He says he’ll get between you and the door and explain it to you until you wished you hadn’t asked. Sometimes I have to say, ‘Dad, they didn’t ask.’”

Today, Dave Norling Jr. and his father, Dave Norling Sr., are talking shop. Their bamboo fly rod shop fills an oversized detached garage just steps away from the home that they share. The Norlings reunited here four years ago.

Dave Norling Sr. sits in the shop on a wheeled office chair. He’s now 94 years old. He is thin and grey. He answers questions slowly, with careful detail, and punctuates his statements with long pauses. As his stories unfold he raises his hands and scoots toward you. He has not yet rolled to block the door.

His son, Dave Jr., sits back with his legs crossed. He has full hair and glasses. He’s fidgety but attentive. He talks fast and laughs easily. He smiles as he stands and moves around the shop, describing their materials, machines, and methods.

The shop is divided into bays by steel shelving. Columns of bamboo lean in corners and hang from the rafters. “They’re twelve feet long except some pre-embargo stuff we got that’s ten,” says Dave Jr. Tools rest on workbenches: the bamboo splitter, the planing form, calipers, and micrometers. Machinery lines the bays and fills shelves. There’s the Southbend Engine Lathe, the Bridgeport Mill, a retrofitted Hardinge Chucker converted to computer numerical control (CNC), miscellaneous grinders, a band saw, and several drill presses. The bamboo mill is homemade and runs on CNC software/hardware. “I am on about my fifth iteration of said mill which has been built, rebuilt, discarded and built new and now functions well, although it may be in line for a computer upgrade. The ferrule lathe is also a cobbled-together piece of equipment.”

Framed family photographs hang from the shop walls. “Look up there, on the

right,” says Dave Sr. “That’s David, on the lower Kinni. How old were you there, six? And just to the left, there’s us again, hunting.” Hardcover texts line three shop shelves. They range from Sigurd Olson to Sam Cook, from identifying wildflowers to raising retrievers. They are, of course, heavy in fishing and rod-building knowledge. The Norlings refer to the books often and Dave Sr. shares a favorite quote, “The old people in my life have always been sailors or fishermen... and I have always been a fisherman.”

And by mortal measures of time, Dave Sr. has always made fishing rods. He’s been building them for over 80 years. His first was made of soft iron from a greenhouse down the block. “I don’t know how old I was; I was just a little kid. It was in the depression and of course the rod was junk. It wasn’t worth anything, but I’ve never gotten over it. I’m still making them.”

“In 1946 I was a sophomore in high school, tenth grade. I made a kit from Herter’s of a bait-casting rod. And that, I guess, was the real start of it. And then I just kept going.

“I ran into this place in Marine on St. Croix. The guy’s name was Peck. I can’t remember his first name. But he bought all the seconds from St. Croix. I got chummy with him. And I had done some work for him so he would send me big boxes full of blanks and I would put them together and I ended up with lots and lots of fly rod blanks. Everybody had them. I made them for everybody. These were graphite. And finally I made a rod for my son. And I can remember putting it in his hands. I can see him now. He had it like this and he looked at me and he said ‘Pa, what am I going to do with another fly rod?’”

Dave Jr. shrugs and says, “If I walked out the door carrying all of my fly rods I’d look like a porcupine.”

“I had a book by George Barnes on bamboo fly rods,” Dave Sr. continues. “At that time everything was plastic. No one



A LIFETIME OF FISHING, FRIENDSHIPS, AND STORIES. DAVE NORLING SR. CAN STILL CAPTIVATE A LISTENER.

wanted bamboo fly rods. And I thought, ‘That’s it! I gotta do something to stay at it and this will take a really long time.’ I started putting the tools together and I started making bamboo rods. Well, then, when you get into bamboo rods, you start getting into other people’s tapers, and your own tapers, and et cetera, et cetera. And so I could see where this is open-ended. And how that has progressed over the years...boy. I can’t even begin to tell you what the rods have done.”

“A guy called me up,” says Dave Sr., “and he was the first person I had ever talked to about bamboo fly rods. No one wanted them. No one was interested. And one guy called me up and asked, ‘Do you build bamboo fly rods?’ And I said ‘Yes I do.’ He said ‘Could I come over, so we can talk about it?’ And I said ‘Yeah, come on.’ So the guy comes over, and he’s the head of the School of Dentistry at the University of Minnesota. And one thing led to another,

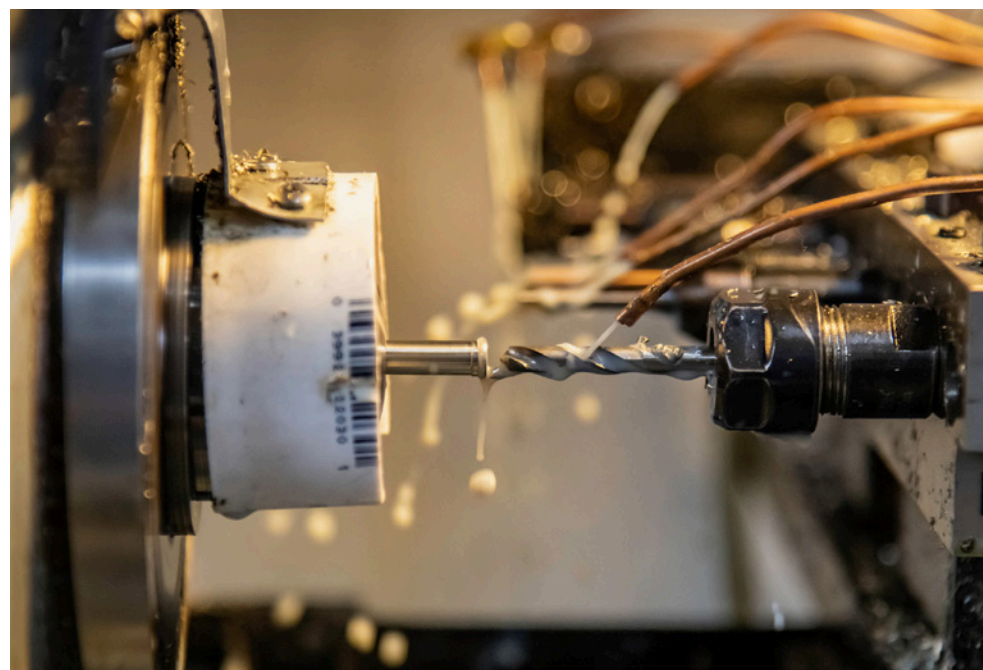
and I taught him, and we were back and forth a couple times a week with something. He’d call me on the phone with something, because there are a lot of steps, and I taught him, and we became very good friends. And at some point, he called me up, he had a question, and I said, ‘You know John, I had a tooth pulled a while back and if I just touch that spot it’ll put me right to my knees.’ And his exact words were, ‘Get your ass in here right now.’ So I went there right then and to make a long story short—”

“Oh it’s too late for that!” cries Dave Jr.

“It was cancer! It was cancer!”

“A bamboo rod saved his life. At the end of the five-year check up at Mayo Clinic they said, ‘Bingo. You won. Almost no one wins this one.’”

“And so a bamboo fly rod saved my life. Isn’t that nuts?”



LEFT: “BAMBOO IS WARM IN TEXTURE, APPEARANCE, FEEL, AND SMELL,” DAVE WRITES ON HIS WEBSITE. “WHO WOULDN’T CHOOSE WARMTH OVER COLD, FEELING OVER OBJECT, JOURNEY OVER A QUICK DESTINATION?”

6 RIGHT: FROM SOLID STICK TO PRECISION FERRULE; DAVE JR. HAS ENGINEERED, MACHINED, AND MAINTAINED A COMPUTERIZED FERRULE LATHE. HE MANUFACTURES AND DISTRIBUTES FERRULES AROUND THE WORLD.





JUNIOR POINTS TO THE FERRULE LATHE, "LAST WEEK I HAD A SHIPMENT TO SOUTH AFRICA AND ANOTHER TO NEW ZEALAND, AS WELL AS DOMESTIC ORDERS, SOMETIMES IT KEEPS ME BUSIER THAN I'D LIKE."

Dave Sr. pivots in his chair and waves a hand around the shop. "The whole thing, everything you see in here is his fault." He nods at Dave Jr. "Because I didn't even have a sander. I did everything by hand. David is a super-talented person. He can fix anything. And so when he started the machinery process for this thing, everything he bought was busted. And I can remember one time he bought this precision lathe, and of course it was broken. He's never bought anything that worked."

"It was just disassembled, Dad. It was a partial purchase."

"He bought it in Buffalo, New York. And I'm asking him, you know, why would you buy a broken lathe in Buffalo, New York? 'Well,' he says, 'I want to go steelhead fishing with Dan Larson.' Well that explains it! Of course! Why not? And so his journey with it all started that way."

"Time gets away and I don't know, seems I dipped my oar in the water close to 20 years ago," says Dave Jr. "When I started making bamboo rods it was in his shop in his basement. It was some-

thing considerably less than half the size of this bay. And he had theater seating in there so there wasn't actually any room to walk. You had to crack a window just to breathe. Anyhow, I moved out of his shop, and I set up my own shop and we lived about a block apart in Minneapolis. And so we weren't working together that much. We'd be in and out of each other's shops a little bit but you know, he's over at his shop doing his stuff, I'm over at my shop doing my stuff. I don't know how many years we did that, a long time. And so it was rather obvious but, for whatever reason, the first thing I noticed was that the old man wasn't around. And I thought, 'Jeez, someday it'd be nice if we were in the same shop again.'"

"Four years ago I sold my house, he sold his house, and we moved in here."

"It was getting to where he couldn't live in his house anymore," Junior adds.

"I've got some physical problems," says Senior. "I can't wade anymore."

"My wife Pam and I, we were looking for a place like this. And by golly it hap-

pened. It was a dream come true."

"So I live with these people."

"The lovely woman who continues to tolerate me and enhance my life puts up with him too."

"I moved in here with two dogs. And me. And she smiles. Is that a miracle?"

"It is a miracle! She's living proof that love is blind."

"These past years our rods have been a team effort," says Dave Jr. "I make the blanks and provide them to him along with a set of ferrules. Then he assembles the rod, wraps the guides, glues up the handle and turns it in the lathe, dips the rod in the varnish tube, sews the rod sock, and makes a ferrule plug. I believe our rods are still getting better."

"You know what we just did?" asks Senior. "We just made five seven-and-half-foot rods for five great-grandchildren. We just completed that."

"That's something we've been wanting to do for a long time."

"The next rod that hits my bench," says Dave Jr., "After we finish this little batch that we've got going right now, is a three-piece, eleven-foot, splice joint rod for a guy in Scotland."

"And this one right here," Senior picks a rod up off the workbench. "I just finished it this morning. Polished it up. It's going to the Brule River Sportsmen's Club. We donate about four rods a year, usually. To Trout Unlimited, and Brule River. It's so neat to give things back. By giving these rods away guess how many people we've met doing that?"

"I've seen grown men cry when they win that rod," says Junior. "I have. It's crazy."

How many rods do the Norlings sell each year? "I don't know," says Dave Jr. "Depends on the year. Usually a dozen

or so. I suppose. Something like that."

"We've never sold them," adds Dave Sr. "People buy them but we've never sold them. David came up and he said, 'Dad, do you know that guy just tried to buy a rod from you?' I said, 'Yeah, I do, but you know, he's got enough rods.' And so we haven't really been very aggressive in the sales of it."

How long does it take to build a rod? "Awful hard to tell," says Dave Jr., scratching his chin.

"I've tried to keep track sometimes but there's so many steps," says Senior. "And, you know, we're not in here all day, we're in and out, and so I don't know. The word is on the street, I've heard people say 80 hours."

"Forty. How'd you double that one?"

"I don't know if that's true. He says 40."

"It's probably pretty close," says Dave Jr. "Forty hours. But what happens is, I do some of it, he does some of it, then something happens. I'm working on some ferrules, or somebody brings in a repair. There's just no keeping track of the time. You know what we do around here? We come out in the shop whenever we want to, we do whatever we want to when we're in the shop, and we leave whenever we want to. That's as close to keeping track of the time as we get. You know. I'm out here at two in the morning sometimes. I'll wake up early. You just don't know what I'm going to do. It goes on with me. I'm looking to hire someone to sleep for me. There's no keeping track of time. The only thing I can tell you about time is there's not enough. So yeah, we've got it pretty good here. It's a pretty nice place to be."

"Now I'm just mostly busy trying to keep him alive," says Dave Jr. "Keep him propped up. He seems to thrive best when there's bamboo rods for him to work on. You know I'm busy, I've got stuff going on. My kid owns a construction company. When



DOES THIS BLADE HAVE A NAME? "YEAH, CLEAVER!" JUNIOR SAYS WITH A SMILE. DAVE SR. WAITS UNTIL THE LAUGHING WANES, "THAT TOOL WOULD BE CALLED A FROE. F-R-O-E."



he calls and says ‘Dad I need a dump truck driver today,’ I go. ‘Dad I need a bobcat operator, excavator operator,’ I go. You know, I go. That happens pretty frequently so he gets alone here. But the good news about that is when he runs out of new blanks and stuff to work on, he buys the worst piece of junk you can find on eBay. He’ll buy it and he’ll stand it back up. And so somewhere in my realm there’s a pile of rebuilt stuff that’s unbelievable. And some of it’s just...he did it because he can.”

“One of the things that I marvel at, with the old guy here, he can wrap that gossamer. That’s gossamer silk. It’s the finest silk in the world. He does it so uniformly. If you look at other makers’ rods, you’ll see heightened bulges of finish over the varnish. His work, he minimizes that. And you know, you look at his bent up old hands, and he shakes a little bit, and yet I’ve not seen any rods that anybody does a better job on. It’s amazing.”

“There was a point in time, as he loves to tell, where I figured I had enough fly rods,” says Dave Jr. “I had one particular one that I just loved, graphite rod. He made me that bamboo rod and I thought, and this is my honest-to-God feeling was, ‘Shoot, now I’ve got to fish this.’ Because I loved my graphite rod. But I started fishing that bamboo rod and I’ll tell you there is something about it. It’s an organic material and it connects you to the planet. It just grounds you. It’s just a little bit slower and you can just feel it. Everything about it. It’s soulful. I never used to use that word “soulful” until Per Brandin wrote that book, *A Fly*

*Rod with a Soul*. That bamboo, it is. It’s a soulful material. It is. It’s a grass. It’s actually a grass. Anyhow, I feel far more connected to the entire fishing process: the fish, the river, the Earth. But that’s it. It’s soulful. And that’s why I like bamboo.”

“When you cast a bamboo rod,” explains Dave Sr, “You let the rod do it. You know what they say in Zen archery: ‘Be the arrow.’ So when you teach people to cast a bamboo rod, you want them to get in touch with that rod. You can’t do that with graphite, it’s too fast. One of the things you can do with bamboo, you can get ahead of the cast, what you have to do is listen to what the rod wants. Every cast is different. You let a little more line out, you’ve got a different rod. So what is the rod telling you to do now? You don’t ask yourself that with graphite. You do it as fast as you can and get it over with. But with bamboo, you’re not making the cast, the rod is. And you have to let it do it. If you don’t let it do it, it will go to pieces on you.”

“So when you get out of your truck and you walk down to the river, and all of the pressures of the world are behind you and you take your cane rod and you go like this,” Dave Jr. makes a slow, graceful motion with his arm. “Instead of this,” now he shakes his arm in fast, erratic movements. “It’s soulful. It’s a connection. It’s what you go fishing for.”

“As you know, trout fishing is a meditative sport. If you go with another guy, and you get down on the stream, and he says ‘Which way are you going to go?’”



“PEOPLE USE CANE RODS AND PASS THEM ON. PEOPLE ARE CONNECTED BY CANE. BAMBOO IS HUMAN CONNECTION AND HUMAN CONNECTION IS LEGACY.”  
- DAVENORLING.COM

Dave Sr. pauses. “And you go the other way. And you’re together but you’re not together. And there’s a yin and a yang to that, and the paradoxical nature of truth. You’re together but you’re not together. All of that solitude. And all of a sudden there he is. There’s your pal. And you sit down. Isn’t it something? There are things that can happen that are so sacred

they can only be experienced wordlessly. Tell me about it. I can’t. Wasn’t it great? Yes.”

*Editor’s Note: Ben Nelson is a physician in Duluth. He lives there with his wife and three children.*

*Find more of Hal Tearse’s photography at: [www.tearsephotography.com](http://www.tearsephotography.com)*

## TROUT FISHING THE DRIFTLESS AREA

### BOOK REVIEW

By John Hunt

Modern technology has put a plethora of tools at our collective angling fingertips. From forward-looking sonar and Vexilar cameras for lake fishing to TroutRoutes for stream fishing, we have never had so many ways to try to improve our odds when on the water. With that in mind, however, it is a bit of a treat to see the publication of a non-internet trout fishing resource that some might call retro, throwback, or even vintage.

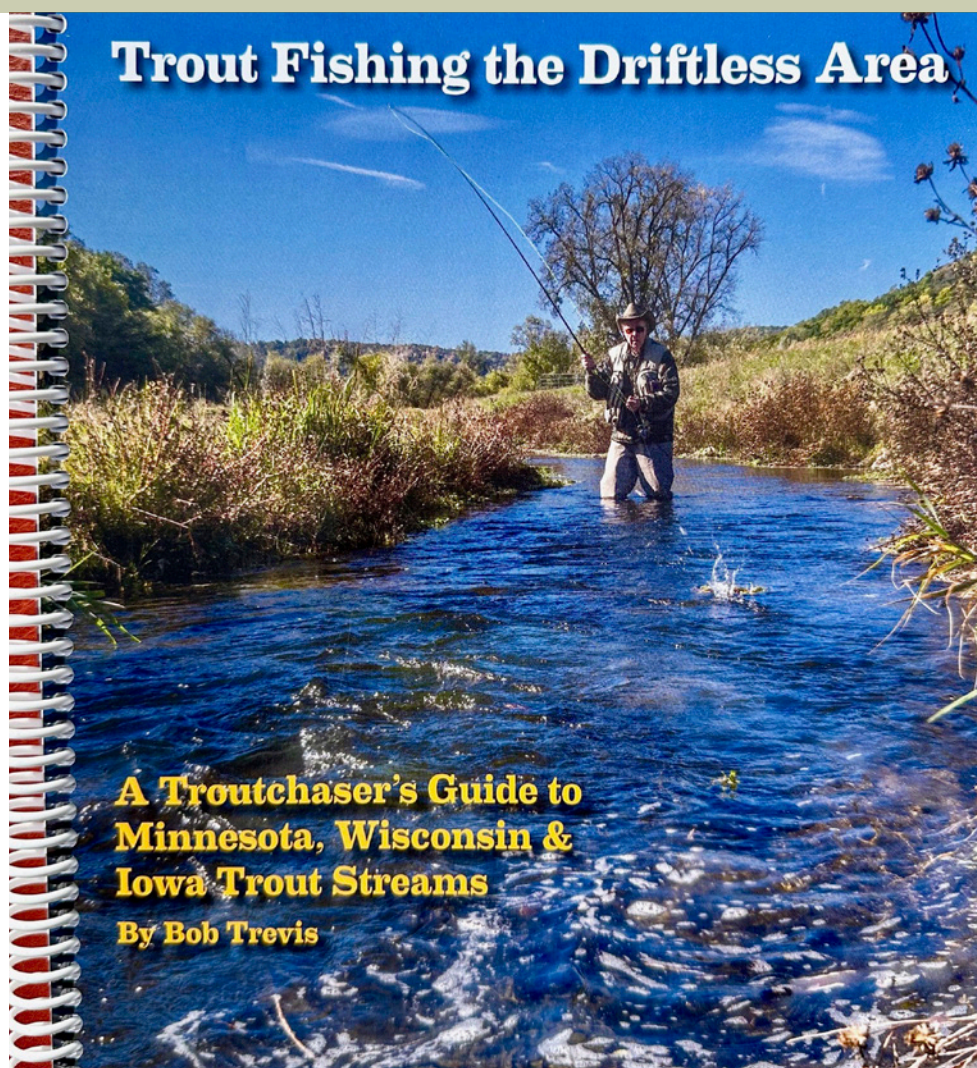
Author Bob Trevis’ latest contribution, *Trout Fishing the Driftless Area*, represents another solid source of information for Upper Midwest trout anglers. Building from his 2016 *Fly Fishing for Trout in Southeast Minnesota*, Trevis’ latest guide expands geographic boundaries to encompass coldwater destinations just across the border in both the Badger and Hawkeye states.

Picking up this book, the reader immediately notices the spiral binding and the high-quality paper. Both choices recognize the high likelihood that this book will soon be found open on the front seat of a pickup truck whose driver is sipping a fresh mug of coffee as he or she winds down a gravel road looking for that next good stream access point. An abundance of color photographs and maps throughout the book add to the overall

quality of the publication.

The book begins with an introductory section that sets the stage for the book’s purpose and overall outline, giving proper attention to an angler’s responsibility to understand stream access and easement rules wherever they may be fishing. From there, Trevis offers some basic “how-to” suggestions for novice trout anglers. He then provides separate segments for the Minnesota, Wisconsin, and Iowa portions of the Driftless Area, taking time to offer both facts and anecdotes regarding a selected list of streams in each state. The book’s closing segment steps back out of the stream and covers insect hatches, as well as thoughts on winter stream fishing, Tenkara, and Euro-nymphing. Trevis also recognizes the close-knit world of Driftless fishing by giving a shout out to the regional guides and fly shops that can enrich an angler’s experience and help create those memorable days on the water.

As with his 2016 book, Trevis’ conservation ethic is woven throughout this new title. He mentions the numerous organizations and state natural resource agencies whose never-ending work seeks to protect, restore, and enhance both the ecology of trout stream watersheds and the angling opportunities they provide. Given that we are currently in a gap be-



tween trout seasons here in Minnesota, “Trout Fishing the Driftless Area” will be at the top of my active book pile until I can plan my next trout fishing trip.

*Editor’s Note: John Hunt is a long-time Trout Unlimited volunteer who has served in numerous positions over more than three decades. He has been authoring book reviews for the newsletter since 2013.*



# BRINGING BACK THE HATCHES

## MNTU'S PETITION TO REGULATE NEONICOTINOID-TREATED SEEDS

By John Lenczewski, Executive Director MNTU

On October 15, 2024 Minnesota Trout Unlimited sent a formal petition to the Minnesota Department of Agriculture (MDA) asking the agency to begin regulating seeds treated with a group of insecticides known as neonicotinoids. These chemicals are highly effective at killing insects, but because they are water soluble and persistent in the environment, they end up in Minnesota streams in concentrations that kill aquatic insects and harm trout fisheries. Insects form the base of the food web that supports trout fisheries. To protect and improve our trout fisheries we must protect and improve the aquatic insects trout depend on. We believe the MDA has authority to regulate the primary culprit, neonicotinoid-treated seeds, and should do so without delay.

### What are neonicotinoids?

Neonicotinoids, or “neonics” for short, are a group of chemicals designed for one thing—killing insects. Neonics are applied in agricultural settings in two ways: as a coating on seeds prior to planting and as a foliar spray. A foliar spray is a water solution into which an insecticide is dissolved, then is sprayed onto the leaves and stems of plants. The plants absorb the neonic insecticide into the plant cells as they absorb the water solution. When neonics are applied to seeds as a coating they are absorbed by the plant as it germinates and grows. In Minnesota virtually all corn seeds are coated with neonics and approximately half of all soybean seeds are. Unfortunately, less than 10% of neonics in the seed coatings are absorbed by the plants, leaving 90% in the soil. These water-soluble, persistent chemicals are then washed directly into streams as runoff, or leach down through the soil into groundwater and eventually into streams via springs and seeps.

### How We Know Neonics are a Problem in Minnesota Waters

The U.S. Environmental Protection Agency (EPA) has used sound science and controlled studies to determine the level of exposure to each neonic that aquatic insects can withstand without harm and death. These toxicity benchmarks, meant to protect aquatic life from harm due to short-term (“acute”) and long-term (“chronic”) exposure are called “acute aquatic life benchmarks” (acute ALBs) and “chronic aquatic life benchmarks” (chronic ALBs). They are the concentrations of the neonic in surface water above which aquatic insects will be harmed and killed. Recent testing of streams and rivers across southern and western Minnesota have found toxic levels of two neonics.

### Alarming Water Testing Results

Since 2010 the MDA has routinely tested Minnesota streams and rivers to determine the levels of numerous pesticides, including several neonics. After the EPA updated the aquatic life benchmarks in 2017, the MDA increased the frequency of testing to determine what the chronic (21-day duration) levels were in Minnesota waters. The MDA found that

the concentrations of two neonics routinely exceeded safe levels in southern and western Minnesota, including in the karst area of the Minnesota Driftless. In other words, southern streams regularly have levels of neonics that we know kill aquatic insects. Based upon the seasonal timing of high neonic levels, the MDA was also able to conclude that corn and soybean seeds coated or “treated” with neonics, “are the primary source of detections and are rapidly transported to rivers and streams after planting.” See page 4 of the February 9, 2024 letter of the MDA to EPA, a link to which can be found on MNTU’s October 15, 2024 blog post. The agency also found the concentrations of these toxic insect killers in our streams spiked following rainfall events, indicating the excess neonics (90% of coatings not used by the plants) were in fact being washed from farm fields into public waters. To its credit, the MDA shared its concerns and findings with the EPA and urged the EPA to strengthen its regulation of neonic-treated seeds.

### MDA’s Good Work

In summary, here is what we now know:

- Neonics are highly toxic to aquatic insects and cause large declines in insect numbers.
- The EPA has determined what concentrations are harmful (chronic ALBs).
- The MDA’s water testing program has documented that neonic concentrations in MN waters routinely exceed toxicity thresholds (chronic ALBs) for aquatic insects. Neonics are regularly killing aquatic insects in public waters.
- The MDA has determined that neonic-treated seeds are the primary source of neonics in surface waters.
- The MDA has shown that rainfall is washing neonics from farm fields recently planted with treated corn and soybean seeds.
- The MDA appears genuinely concerned that current EPA regulations are



NEONICOTINOIDS HAVE PROVEN TO BE TOXIC TO AQUATIC INSECTS.

not effective to prevent this pollution and its destruction of aquatic life.

### MDA’s Inaction

The MDA’s own testing has made a compelling case that seeds treated with neonicotinoids are causing serious harm and should be regulated. Yet the MDA has taken no direct action to regulate the treated seeds. Why not? The answer appears to lie in the agency’s misinterpretation of the state’s Pesticide Control Act (Minn. Stat. §§ 18B.01 et seq.) as well as the Federal Insecticide, Fungicide and Rodenticide Act (“FIFRA”)(7 U.S.C. § 136 et seq.). The MDA believes it lacks authority to regulate seeds treated with pesticides, including neonics. Minnesota Trout Unlimited and its partners on the petition, the Minnesota Center for Environmental Advocacy and the Natural Resources Defense Council Action Fund, are convinced that the agency is wrong. In fact, we believe state law requires the MDA to regulate neonic-treated seed under the Pesticide Control Act.

### What MNTU is Asking For

Our petition asks the MDA to begin regulating seeds treated with neonicotinoids. We request a regulatory plan be developed that:

- collects accurate data regarding the extent of treated seed use in Minnesota and makes this information readily available to the public;
- prohibits use of seeds coated with treatments that have not been registered by MDA for that purpose;
- ensures farmers can access popular seed hybrids that are not treated with insecticides (which is rare now);
- requires written “verification of need” to reduce widespread use of treated seed in circumstances that do not benefit farmers.

### Timetable and More Information

The MDA is required to respond to our petition by late December. We sincerely hope it gives thoughtful consideration to the correct reading of state and federal laws and agrees to initiate rulemaking. Visit MNTU’s Neonics webpage in our Advocacy section for links to more information, including the Petition, the MDA Letter to the EPA (including informative attachments and links to reports), and Neal Mundahl’s November 2022 article on how neonics impact trout stream insects.



AQUATIC MACROINVERTEBRATES ARE THE BASE OF THE FOOD WEB SUPPORTING TROUT. WE MUST PROTECT THESE INSECTS IN ORDER TO HAVE QUALITY TROUT FISHERIES.



# ADVOCATE WITH US IN 2025!

## KEY ISSUES NEED YOUR VOICE

By Kristen Poppleton, Assistant Director MNTU

With a new legislative session beginning January 14, 2025, Minnesota Trout Unlimited has been busy setting its priority issues for the year ahead. Although the election will most definitely have some impact on *how* we advocate for these issues, we know that these issues are critical to address to ensure Minnesota's trout streams are clear, cold and support healthy aquatic ecosystems.

The following are concerns that we are following closely and will be identifying how to advocate for in the months ahead through coalitions, partners, and internally with MNTU staff and our advocacy advisory committee.

### Agricultural Runoff

Runoff from tilled fields can carry chemical fertilizers, pesticides, forever chemicals, and soil. Practices that retain or slow runoff and increase infiltration, reduce fertilizer and pesticide use, and reduce erosion are beneficial. High nitrate levels in water can harm trout and other aquatic life. Soil erosion, nutrient and pesticide/fungicide runoff are, in part, a result of non-sustainable agricultural practices. Runoff from neonicotinoid-treated seeds is a growing problem that we are also addressing through a petition to the Minnesota Department of Agriculture (see article on Page 9). We will continue to support policies that more strictly regulate the use of fertilizers and chemicals, as well as policies that incentivize agricultural practices that are beneficial to water quality.

### Feedlot Impacts

Livestock feedlot operations are polluting both surface waters and groundwater. The risk of water pollution is especially high in the "karst" geology which makes southeast Minnesota's Driftless area such a phenomenal trout mecca. This karst region has porous bedrock

close to the surface which creates the large, cold springs which, in turn, produce the amazing spring creeks concentrated here. Unfortunately, the porous bedrock also allows contaminants on the surface to easily reach this groundwater and our beloved trout streams. Surface water runoff also remains a concern, in that fish kills are often caused by a more sudden overland runoff event. We will continue to support policies that strengthen manure management including the timing of use, and storage practices. In September 2024, MNTU joined partners in submitting comments on an update to feedlot permitting through the Minnesota Department of Agriculture, we will be monitoring how the agencies respond through actions and/or new policies.

### Preventing Fish Kills

There have been at least four large fish kills on trout streams in southeast Minnesota since 2015 where the cause could be identified, and more where the cause could not be determined. Investigations of past kills have identified these causes: discharge or runoff of pollutants from the landscape through incidents like toxic spills, runoff of manure, pesticides, fertilizers, high-temperature stormwater, and wastewater discharges. The precise cause or parcel involved is often difficult to pinpoint due to factors like the passage of time between when a fish kill happens and when it is discovered, reported, and investigated. Water levels, water temperature, water quality, and amount or type of runoff can quickly change before samples can be taken. However, there is strong evidence that applications of manure and pesticides washed off the land by rainfall are often a major cause of southeast fish kills. In May 2024 MNTU submitted their comments on the draft of the Interagency Fish Kill Response Guidance Document and Protocol. We will be monitoring how the agencies



PROTECTION OF HEALTHY AQUATIC ECOSYSTEMS (THAT INCLUDE STRONG MACROIN-VERTEBRATE POPULATIONS) IS AN IMPORTANT INTENDED OUTCOME OF OUR ADVOCACY EFFORTS. (MICHAEL MELFORD PHOTO)

respond to our comments, and those of our partners through actions and/or new policies.

### How can you get involved?

We invite you to join us in advocating in the year ahead by signing up for our

action alerts, <https://mntu.org/monthly-enews>. As opportunities emerge, we will keep you informed and up to date on ways you can use your experience as an angler and concern for coldwater fisheries to make a difference!

## HOW YOU CAN REDUCE NITRATES

By Doug Moran

We all know that Minnesota has a nitrate problem.

We know that nitrates are bad for humans (cancer, thyroid disease, especially for infants), bad for aquatic life, and bad for our economy (\$210 billion/year).

Twenty-seven percent of surface water tested by the Minnesota Pollution Control Agency exceeds the EPA limit of 10 mg/L. And 10 percent of the private wells sampled in southwestern, southeastern, central, and north-central Minnesota have nitrate levels above 10 mg/L.

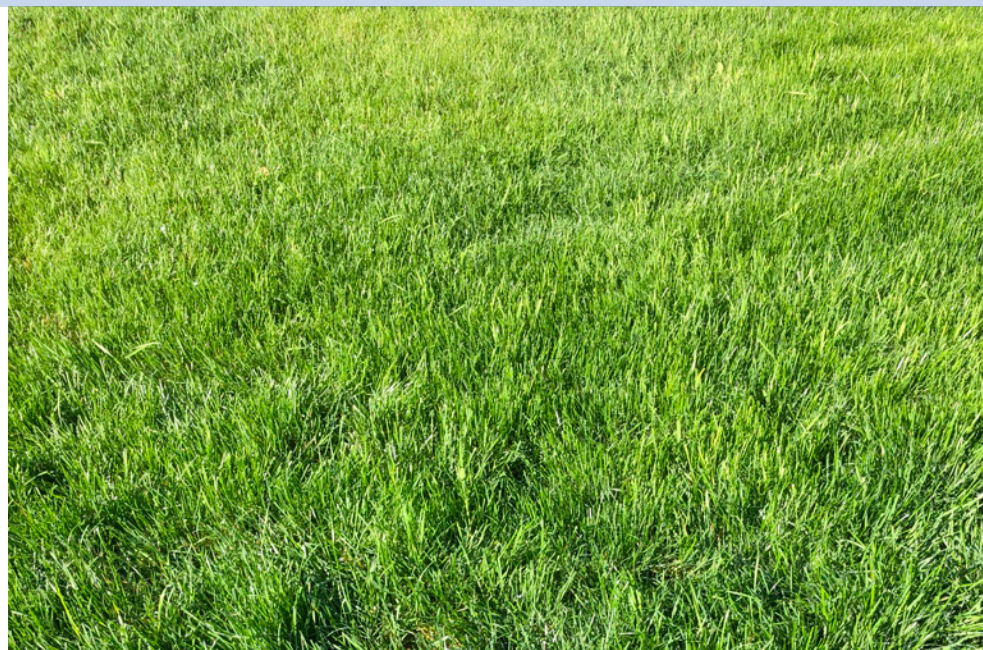
So what can you do about it? A few simple things:

- If you fertilize your lawn, use only "slow release" nitrogen fertilizer.

- Keep your lawn clippings in your yard (or compost) and off the street, you can reduce your fertilizer load by 25%!
- Pick up pet waste.
- Join Adopt-A-Drain (<https://adopt-a-drain.org>) and keep your storm sewer drains clean.
- Practice landscaping for clean water. Your soil & water conservation district has some tips. Here's the Dakota SWCD's site: <https://dakotaswcd.org/services/landscaping-for-clean-water-2024/> but look for your local site.

Do your part! It's easy to reduce the amount of nitrates you add into our groundwater!

*Doug Moran is on the TCTU Chapter board and serves on the Habitat and Advocacy Teams.*



DOUG'S LAWN IS IN THE VERMILLION WATERSHED. HE MINIMIZES HIS FERTILIZER USE AND COMPOSTS HIS GRASS TRIMMINGS. HE'D RATHER FISH THAN DO LAWN MAINTENANCE, BUT IT DOESN'T LOOK TOO BAD!



# 2024 GIVE TO THE MAX DAY

On Give to the Max Day, please join with other supporters who help make Minnesota Trout Unlimited the highly-effective organization it is! Minnesota Trout Unlimited strives to provide an excellent return-on investment for your conservation dollar. We have achieved significant milestones thanks to the generosity of donors like you. Last year, individuals' donations totaled \$101,459 from 252 donors, setting new records. This exceptional support has improved our ability to carry out our mission of **protecting, restoring, and sustaining** Minnesota's coldwater fisheries and their watersheds.



## PROTECTING

Through your support we are able to advocate for coldwater fisheries **protection**, working with partners throughout the year, and especially during the legislative session to advance important policies. We will continue to work on preventing fish kills, supporting policies whose outcomes would positively impact the water quality of trout streams and pressuring agencies to more strictly regulate manure and feedlot management and the use of neonicotinoid-treated seeds. With your help we will be able to increase our ability to keep our state's waters clean, cold, clear, and fishable.

## RESTORING

Minnesota is rich in trout streams and we are **restoring** more every year. In 2024 we completed nearly 2.5 miles of large-scale in-stream habitat improvements and removed and replaced human barriers to fish migrations, mostly flawed culverts, reconnecting 10 miles of habitat for fish migrations on these North Shore streams. In addition, due to the support of volunteers, we have been able to continue maintaining and monitoring restored sites in the years following a project. Your support is essential to allow us to continue reopening miles of fish habitat across the state.

## SUSTAINING

Education is critical to **sustaining** a passion for conserving coldwater fisheries into the next generation. Minnesota Trout Unlimited runs a highly successful watershed-focused education program for over 4,700 school kids across the state. This year 68 schools and two nature centers are actively participating in this program. Make sure today's youth learn to conserve and protect trout streams for generations to come and give your support today.

**Head to [mntu.org/donate](https://mntu.org/donate) any time on or before November 21 to make your recurring or one-time donation.**

**Thank you for your dedication to Minnesota trout streams!**





It has been a beautiful fall full of fun in the water looking for aquatic macroinvertebrates with our Trout in the Classroom (TIC) students! As you are reading this, most of the MNTU educator-led fall field days have wrapped up. By the end of November, our team will have driven thousands of miles to all corners of the state, meeting 1,500 excited students from the Driftless to the Iron Range. They got into waders to collect aquatic insects for identification and use as biotic indicators of water quality. Some students built leaf traps to place in creeks and ponds close to their schools as a more passive way of collecting aquatic creatures, pulling them after a few weeks to discover what had taken up residence in these insect houses. Fall field days are full of experiential, hands-on, and engaging lessons that take place in a wide variety of water bodies, from creeks to rivers, lakes, and neighborhood ponds.

I was lucky enough to work with groups of fifth grade TIC students from the Cherry School up on the Iron Range in mid-October. Upon arrival to set out equipment and prepare for students, it was a lovely 28 degrees with the sun shining bright. When our team goes to new places for aquatic insect programs, we are often arriving with little to no information about that location in regards to water accessibility. Once parked, I went over to check out the creek that empties into the St. Louis River in which we were to conduct our study. It was dry. Zero water. I was able to slide down the banks and walk the last few hundred feet of it right to the St. Louis. New game plan! I quickly put on my waders, grabbed a bucket, kick net, and made my way to the river bank near the bridge, crossing my fingers that it was accessible to collect as many insects as I could

before students arrived. If they couldn't get in, at least we'd have something to look at!

The river ended up being low enough to allow small groups of students to get in safely throughout the day, while the others waited their turn, exploring what I had collected before they arrived. Working with partners and a kick net, they happily splashed through the water in search of insects, crayfish, and whatever other awesome organisms wound up in their nets. They found multiple species of stoneflies, dragonflies, and mayflies as well as crayfish and a small catfish. The wind was blowing, with air and water temps cool, some waders sprung leaks, sleeves became soaked, and there were a few close calls of students falling over entirely, but every one of them had smiles on their faces. This came in a follow up email from the teacher: "Thank you SO much for today. I was hearing reports of, 'this is so fun,' 'best field trip ever,' 'we should go here more often,' 'I want to come back here'... I think the kids had fun and learned a lot!"

Trout in the Classroom is a program that impacts thousands of students throughout Minnesota each year. It is much more than just trout in a tank. It is multidisciplinary, from science and math, to history, social studies, and art. The ability for students to not only observe fish as they develop from eggs to fingerlings but also take responsibility for their care captivates all ages and even the most disengaged. In high schools, teachers are weaving TIC into agriculture curriculum, natural resource career explorations, FFA chapters, fishing clubs, and more.

Humboldt High School in St. Paul has been home to a trout tank since 2015.



FIFTH GRADE TIC STUDENTS HOLD UP THE LEAF PACK TRAPS THEY MADE AND PLACED INTO A LAKE BEHIND THEIR ELEMENTARY SCHOOL IN BEMIDJI THIS FALL. AFTER A FEW WEEKS, THEY WILL RETRIEVE THE TRAPS TO DISCOVER WHAT CREATURES MAY HAVE MOVED IN TO THESE AQUATIC INSECT HOTELS.



LEFT: AFTER COLLECTING AQUATIC INSECTS FROM A LAKE NEAR THEIR SCHOOL, A GROUP OF STUDENTS GATHER AROUND THEIR BIN. USING A BIOTIC INDEX TO IDENTIFY THE LIVING ORGANISMS THEY FOUND, STUDENTS CAN MAKE INFERENCES ABOUT THE HEALTH OF THAT BODY OF WATER.



RIGHT: CHERRY SCHOOL STUDENTS PEAK INTO THEIR NET WHILE EXPLORING THE ST. LOUIS RIVER DURING THEIR FALL FIELD DAY. IT WAS A COOL, WINDY OCTOBER DAY ON THE IRON RANGE, BUT ALL STUDENTS HAD A BLAST EXPLORING THE RIVER ON THIS BEAUTIFUL DAY.



Lead teachers Brad Novacheck and Andrea Nthole incorporate TIC into most of their middle and high school classes. In case you missed it in September's Monthly Cast, check out how students engaged with TIC during the 2024-2025 school year.

“At Humboldt, the TIC program is a vital part of many classes in our department. Currently, the trout are used for several sections of classes that include: Intro to Environment (MS), Exploring Agriculture (MS), Small Animal Care (MS), Intro to Ag (HS), Natural Resources (HS), and Sustainable Food Production (HS). Our FFA Chapter also interacts with and completes maintenance on the trout and tank. In total, the trout interacted with over 300 students over two semesters, which is our highest number yet. In the past, the TIC program has been used to teach water quality and ecology, while that still happened, we also taught aquatic animal management, conservation, and even looked at ways for food production. Some of our Natural Resources students also received certifications for Ducks Unlimited for Conservation through the iCEV curriculum.

“Our management is getting better every year. This year we only lost 21% of the trout that hatched. We have mastered methods in counting using photos, having an accurate data log of numbers for toxicity, feed ratios, and plans for general maintenance. We went to the Belwin Conservancy for our field days and have done both ecology and water quality with them. This year our FFA Chapter also completed the Fish and Wildlife Career and Development event to enhance knowledge of the MN DNR, natural resource career opportunities, and conservation.

“Each year we build upon what we are doing with our students. They are wonderful and look forward to this program every year. It is a major component of what we do for our classes, and Andrea and I continue to build on and utilize them each year. The more hands on we get, the more student success we build, and Trout in the Classroom is a major part of it. Humboldt is thankful to continue to do this program each year and our administration backs us 100%.”

Egg delivery day is scheduled for Wednesday, December 11 this year and we rely on a team of volunteers from all around the state to make this day a success! As an egg delivery volunteer, you will pick up and transport a cooler with 300 rainbow trout eggs and a bag of food, ensuring their safe arrival to schools. Egg sorting and distribution will take place in Burnsville, with pick-ups starting in the morning. Our goal is to get eggs to all 71 schools and two nature centers in that one day! Contact Amber Taylor, [education@mntu.org](mailto:education@mntu.org), for more information.

Starting in January, we will be teaching biomimicry, fly tying, and habitat lessons, as well as leading ice fishing programs with our TIC students. Please consider volunteering to assist with one or more of these programs! Contact Evan Griggs, [tic@mntu.org](mailto:tic@mntu.org), for more information.



ALL ABOVE: HUMBOLDT HIGH SCHOOL STUDENTS SPRING RELEASE DAY.



**B**y now I am sure you have figured out that I am something of a fly tying fanatic. (Hi. My name is Paul and fly tying is one of my problems.) In fact, my fly tying room has so many flies in it that I am thinking about having a garage sale or would that be a "man cave sale?"

Several years ago when I was digging through some of my older fly boxes, I came upon a caddis dry fly that I did not remember tying or even where I came across the fly pattern. It was just one of those flies that really caught my eye. The fly was tied on a curved-shank hook. The abdomen was a medium, dun-colored, stretchy floss. The underwing was CDC feathers and the overwing was deer hair. The thorax was tied with rooster hackle.

I pulled one of these nameless flies out earlier this summer and started to tinker around some with it. I like the dun color for early spring, but after that I generally prefer a tan caddis. So I dug around in my cabinet and found some tan stretchy floss. I do like CDC feathers in my flies, but they can be a little frustrating to use after they get slimed up by a fish. So I switched the

Materials List	
Hook:	Emerger Hook Size 14
Thread:	14/0, Dark Brown
Abdomen:	Tan Stretchy Floss (Bug Legs from Fly Tyers Dungeon)
Underwing	Tan Poly Fibers (Congo Hair from Fly Tyers Dungeon)
Overwing:	Deer Hair
Thorax	Mahogany Superfine Dubbing
Collar:	Rooster Hackle Brown

underwing from CDC to a tan poly fiber. I liked the thorax as it was, so I kept that the same.

With those minor changes, I am proud to show you the No Name Caddis!

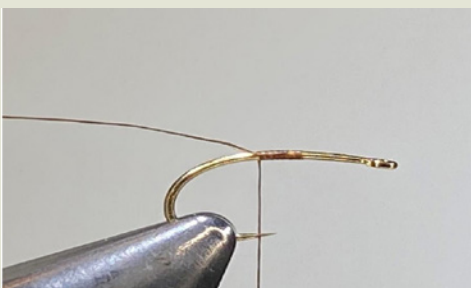
While I have your attention, let me do a little promo for the Laughing Trout Fly

Tying Club. We're "an informal group of fly tying and fly fishing enthusiasts." We meet every Wednesday night from about 5:30 to 8:00 p.m. at the American Legion Post in Wayzata. We enjoy working with beginning tyers (any age, but especially youth 10 to 60 years old) and can help with a loaner kit that includes tools and materials if you haven't fallen into that

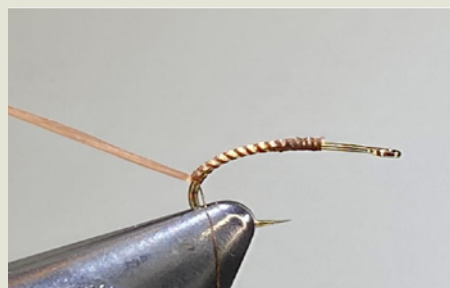
rabbit hole yet. If you are interested, we would sure like to have you stop by and check out our little club.

As always, if you have any questions or comments please feel free to reach out to me:

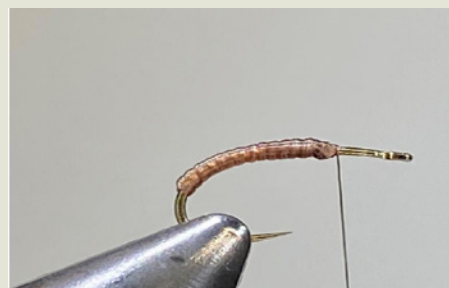
paulwaconia@gmail.com



Step 1. Insert your hook into your tying vise. Start your thread at the 60 percent mark on your hook.



Step 2. Tie in a length of tan stretchy floss and, with your tying thread, wrap back down to the bend of the hook. Return your tying thread to the 60 percent mark on your hook.



Step 3. Wrap the stretchy floss forward with touching turns to the 60 percent mark on your hook. Secure with your tying thread and clip off the excess.



Step 4. Tie in a clump of tan poly fibers right at the 60 percent mark on your hook.



Step 5. Clip the butt ends just past the back of the hook. Lift and cut the front end off at a shallow angle. Secure the remaining ends down with your tying thread.



Step 6. Clean and stack a clump of deer hair. Tie in at that same 60 percent mark on your hook. The tips should extend just past the underwing. Lift and clip off the butt ends of the hair at a shallow angle and further secure with your tying thread.



Step 7. Tie in a rooster feather. I like to downsize this feather to a size 16 or even a size 18.



Step 8. Dub a very slight dubbing noodle on your thread. Remember, less is more here!



Step 9. Dub the thorax to cover from the wing down to the eye of the hook.



Step 10. Make three wraps of the rooster feather working from the wing to the eye of the hook. Secure the feather with your tying thread and clip the excess.



Step 11. Whip finish or secure your thread with three or four half-hitch knots. Go FISH!



# WIND

By Bob Luck

As I drove along the edge of the Driftless one April morning, gusts of wind were blowing topsoil from the bare fields into a brown cloud that stretched along the horizon. My mood darkened as I pictured that dust, no doubt laden with nitrogen, stimulating algae blooms in Lake Pepin, or working its way down to the Gulf of Mexico to expand the dead zone at the mouth of the Mississippi. I recalled a conversation the day before with a friend who works at the Freshwater Society. He told me that only 3% of Minnesota farmland is protected by cover crops. With our short growing season, farmers are skeptical of anything that might get in the way of collecting subsidies on their corn crop. To top things off, those gusts were going to play hell with my casting.

My destination was a small, lightly fished stream about an hour from my home. Vegetation growth makes it nearly unfishable in the summer, but a careful angler can hit most of the good holes in the springtime without tangling up in the trees. At least they can when the wind isn't pushing into the high end of the Beaufort Scale.

In the morning, I played it smart. I tied a streamer onto my 8-1/2 foot 5-weight and made short, sidearm downstream casts into the banks and logjams. In an hour of fishing, I pulled out four respectable browns. After a brief stop at my car for lunch, I made the disastrous decision to try nymphing with my 13-foot Tenkara rod. I spent the better part of the afternoon untangling my line from tree branches. When I actually got the fly into the water, gusts would catch the line, dragging the nymph up through the water column. I missed the hook set on the few strikes I did get. This is typical of windy days: I start out fishing ok, but as I expend physical and psychic energy

to keep things under control, I lose my concentration and judgment. If I had only stuck with streamers, it would have been a pretty good day.

In "To Build a Fire," Jack London describes a gold prospector in the Yukon trying to light a fire with numb fingers. He uses up all his matches and freezes to death. That is how I feel trying to tie on a fly on a windy day, minus the hypothermia. A week after the brown cloud episode, I was fishing nymphs on Mike Miller's farm on the Lower Kinnickinnic in Wisconsin. The headwind was again putting a bow in my Tenkara line and taking the nymph for a joyride, so I stopped in front of one of my favorite runs to tie on a heavier nymph. Before I knew it, the wind had wrapped the line around me and tangled it in my net. It was like a scene from the Sorcerer's Apprentice. Mike caught up to me and pulled three nice fish out of the run while I watched helplessly. It had been a cold morning and a slow start, but the sun came out and as the water temperature climbed into the mid-50s, the trout started to feed aggressively. Little good it did me; PTSD from being taken hostage by my line had kicked in, and I missed at least 30 strikes.

The lower Kinni is actually a good place to fish on a windy day. It is always possible to find a stretch of river lined by bluffs that block the wind. In fact, there was a stretch of river like that just upstream from the hole where Mike poached my fish. We didn't fish it until the end of the day. Like I said, wind messes up your judgment.

I heard that climate change reduces surface wind speeds by decreasing the temperature differentials between the poles and the equator. Somebody forgot to tell the wind. Last May I heard from a climatologist on the radio that Minne-



THE AUTHOR WITH A BROWN HE CAUGHT (ON A STREAMER) ON A WINDY DAY ON HAY CREEK EARLIER THIS MONTH.

apolis had experienced 26 days in April with wind gusts over 30 mph, something he'd never seen before. This April, on the same channel, the climatologist helpfully informed me that 17 of the last 18 days had seen wind gusts over 30 mph. I know these guys don't make the weather, they just report it, but I still couldn't help feeling that he was letting me down.

He was right about one thing: he said the spring winds would die down in May, and they did. We had another calm summer until the winds picked up in September. Autumn winds don't seem as bad, which could have more to do with how I fish than what is going on in the atmosphere. I like to fish hoppers from late

summer until we get frost, and streamers after that. Neither of these tactics are much affected by gusty winds, and hopper fishing may benefit when more naturals are blown into the water. No doubt, though, when I start tightlining nymphs again next spring I will be cursing the wind. It could be worse. In Tarifa, Spain, on the Strait of Gibraltar, strong winds blow constantly. In the summer they blow from the Mediterranean, and in the winter from the Atlantic. Local legend claims that the wind has driven people to insanity. I bet those poor souls are fly anglers.

*Bob Luck is the current Twin Cities Chapter president and an avid angler.*

## THE MADISON RIVER NEEDS YOUR HELP VULNERABLE AQUIFERS AT RISK

By Karalyn Carlton

I know many of you head to Montana to fly fish, and there is a current need for help to preserve this special place. This is urgent and next year might be too late according to the local Planning Board.

Classic fly fishing experiences on the Madison River are rapidly vanishing with a great migration of people from the coasts to rural lands and the post-pandemic rush to the great outdoors. Montana is overwhelmed by unprecedented growth and currently there is no zoning to manage the impact of commercial development on the Madison River and the surrounding Madison Valley.

The Reynolds Pass area cradles the Madison River fisheries south of Quake Lake, downstream to the West Fork of the river. Reynolds Pass is surrounded by encroaching commercial develop-

ment to the south, north and east. Such development, with its increased density of structures and water use, taps the fragile bedrock water aquifer, a source of water to the Madison River, and would introduce new streams of pollution to the river at Reynolds Pass.

The community was successful in defeating a large 64-acre RV park. Now Reynolds Pass needs your help to prevent irreversible development and support elbow room on the riverbanks. We must work quickly through the zoning process and that requires funding of professional services. Please donate today: [www.preserveraynoldspass.org](http://www.preserveraynoldspass.org)

Let's keep the agricultural and rural residential character of the valley for everyone to discover and enjoy now and in the future!



FLY FISHING THE MADISON RIVER IN REYNOLDS PASS.  
[WWW.MICHAELCRAMERPHOTOGRAPHY.COM](http://WWW.MICHAELCRAMERPHOTOGRAPHY.COM)



# SLIMY SCULPIN REINTRODUCTION

## WILL BRINGING BACK SMALL PREY FISH MEAN BIGGER TROUT?

By John Weiss

As Brian Beyerl tells it, he was preparing to electroshock small nondescript slimy sculpins from Forestville Creek in late August so they could be transplanted to Gribben Creek because of something his former boss told him a few years ago.

That mention would rejuvenate the slimy sculpin project, return the prey fish to some streams, begin studies to determine how well they do, and maybe get healthier, larger trout. This would also continue the Department of Natural Resources' push to bring more attention and research to native, non-game fish. In this case, the non-game fish is the sculpin that might grow to four inches, are brownish, have big heads and small tails, bulging eyes and big, wing-like fins on their sides.

The DNR fisheries technician in Lake City said Kevin Stauffer, former area supervisor, got things rolling when he mentioned something to Beyerl a few years ago about slimy sculpins. Like the brook trout that eat them, sculpins can live in only the coldest, purest water we have in the Southeast. In fact, many of the best streams have only trout (brown and brook) and sculpins, but "that's just the nature of coldwater streams," he said. (The Mississippi River, by contrast, has about 119 fish species.)

"There was a project in the mid 2000s (nearly 20 years ago) doing sculpin relocation and reintroduction," Beyerl learned from Stauffer. "It kind of piqued my interest in increasing the diversity in some of our coldwater streams since the habitat has gotten better and increased base flows and colder stream temperatures. I thought it sounded interesting and it's fun to work with a non-game species. A lot of emphasis gets put on our trout. It's fun to work with non-trout species. It's fun to do research and look into less-appreciated fish."

Reintroducing sculpins to three streams and comparing these to similar nearby waters without sculpins are parts of a larger project to take a deeper dive into the lives of sculpins.

Here are the key points in the project's justification:

1. "No one has yet tested for the positive benefits of reintroducing native sculpin as prey for larger adult trout or examined more comprehensive food web effects of such introductions on the coldwater streams in southeast Minnesota."
2. "Assess long-term genetic viability of mixed-source reintroductions to ensure no long-term problems with genetic diversity, outbreeding depression, etc. and to determine if certain donor streams provide better long-term contributions to reintroduced populations."

If sculpins show they can again live and thrive without problems, it would probably lead to more streams with



A SLIMY SCULPIN SHOCKED FROM FORESTVILLE CREEK LATE THIS SEPTEMBER.

more sculpins. And according to the report, it will mean bigger trout.

Before getting into the research, we need to remember the past. Maybe 200 years ago, this region was loaded with small and large trout streams but had only the brook trout and probably slimy sculpins. The beautiful brookie is the aesthetic counterpoint to the sculpins but their lives are intertwined because sculpins are, or were, a major prey fish for the trout.

Along came Europeans, and settlers cut forests and plowed the prairie. Soon, topsoil and water began running wild down bluffsides, polluting streams. Europeans brought in German brown trout that can tolerate poorer water and they became the dominant trout. They also brought in some brookies from other states. Whether any of the native brookies survived is an oft-debated but never-solved question.

As for slimy sculpins, they were also extirpated from many streams. Because their normal home range is maybe 15 square meters. "We don't think they can move around a lot so once they were eliminated from a stream, their odds of getting back are pretty slim," said Doug Dieterman, a DNR fisheries researcher who was electroshocking with Beyerl.

When streams were warmer decades ago, browns and brookies also had food fish such as minnows and shiners, he said. Now, with climate change, we're getting more rain overall and that is seeping into the ground and coming out of more springs around 48 degrees so trout streams appear to be getting colder.

"And now streams that used to have a lot of minnows in several different species have virtually no minnows any more," he said. But sculpins thrive in the cold water.

Trout in waters without minnows eat smaller trout, trout eggs or benthic macroinvertebrates (bugs). That's about it.

A survey of streams and rivers in the Southeast, both cold and cool water, found only 22 percent had sculpins, though many could have been mottled sculpins, slimy's cousin. Slimy sculpins could be in only 8 percent, he said.

The first work on reintroducing sculpins was about 20 years ago, where the DNR took sculpins from Beaver Creek in the Whitewater Valley, Cold Spring Brook near Zumbro Falls and Garvin Brook west of Winona and moved them to streams without sculpins. Researchers wanted to know if perhaps fish from one stream were better. Yes, and the best fish were from Beaver, Dieterman said. Fish



BRIAN BEYERL EMPTIES HIS SCOOP WITH SLIMY SCULPINS INTO A COLLECTION BUCKET.



with mixed parentage didn't fare as well. One question that has been asked was whether sculpins would outcompete trout for food. Studies done in Europe used browns and sculpins (they are called bullheads there, which isn't much of an improvement in name) and found there doesn't seem to be a problem, he said. But they looked at trout in a stream with a waterfall separating two sections, one with and one without sculpins and found trout spawned at different times, he said.

That pretty much is where things stood until Stauffer told Beyerl about the project. This brings us back to late August when the two were shocking Forestville Creek that flows into Forestville/Mystery Cave State Park west of Preston.

The idea was to move sculpins from Forestville to Gribben. Gribben has no sculpins. Though the stream east of Lanesboro is known as a great wild trout stream in a valley rich with forests, it was once overgrazed and nearly barren of trees, Dieterman said. It's assumed it once had sculpins but they were extirpated.

At the same time, they surveyed another stream nearby, one without sculpins, as a control to see if sculpins did well and how well trout fed on them, he said. The pair is one of three being tested.

They wanted to get sculpins back because they are orders of magnitude more dense for calories so they would be better food for bigger trout because only larger trout feed on other fish.

So in a few years, they will go back to the three stocked streams and the three control streams and get trout from them. How will they know if the sculpins have been a major food fish?

Ah, that is where technology comes in, said Beyerl. They will compare stable

isotopes to see if the food web in sculpin-released streams has changed, based on the ratio of carbon and nitrogen. If they have more nitrogen, it means they are eating prey higher on the food web, namely sculpins or smaller trout, he said. More carbon means they are eating prey like caddis and mayflies that eat bacteria, leaves and other things lower on the food web.

So, in 15 to 20 years, will big trout get bigger? Even if there is no benefit, at least they repatriated fish to where they once were. Moving sculpins and helping a non-game species were the dual purposes of the project, he said

A part of the overall study is how to tell slimy and mottled sculpins apart. They are cousins but mottled do better in poorer water.

\*\*\*\*\*

An interesting study on sculpins, which found they can indeed move, was done by Neal Mundahl, a Winona State University professor who is passionate about trout streams.

According to the paper on the study, on Sept. 26, 2019, two kilometers of Garvin Brook were hit with what was considered a total or near total fish kill. It was thought sculpins moved very little, it states.

Mundahl studied how well the sculpins came back (it's also possible a few did live in the kill section). He and his researchers found that sculpins did indeed move back up, meaning they can move in where there is suitable open habitat.

The team found sculpins in all reaches of 900 meters of the kill in six months, though abundance of adults dropped toward the upper part. After 11 months, they found sculpins were about the same as in control sections where there



**BRIAN BEYERL ELECTROSHOCKS FORESTVILLE CREEK FOR SLIMY SCULPINS. THE BUCKET IS TO HOLD THE FISH, AND SOME TROUT THEY COLLECTED FOR TESTING.**

was no kill. While adults didn't move up as quickly, it found that juveniles were more mobile.

\*\*\*\*\*

The push to get more fish species back to where they once were is really part of a much-wider DNR interest in non-game native fish. Devon Oliver, who shares

a cubicle with Dieterman in Lake City, is looking at some rough fish that have been deemed needing more interest. One is the redhorse that is native to the Southeast but lives in more coolwater streams such as the Zumbro and Root rivers.

Oliver is really a cheerleader for them because he really gets excited when talking about them and other rough fish. (Rough fish also could use some PR help. They are called rough because they were once sold in the "rough," without being filleted like more desirable fish. The Minnesota Legislature, in telling the DNR it needs to do more, called them native rough fish as opposed to invasive rough fish like Asian carp.)

For redhorse, he's trying to find the best way, without actual genetic testing, to tell them apart. He's also looking at other species.

He said more anglers and bow fishermen were getting an interest in the rough fish. Maybe it has something to do with putting a greater value on the environment, the Earth. The fish help support healthy ecosystems because having a more complete, more complex ecosystem means it is more resilient when change hits, he said. "And we have a very healthy ecosystem up here," he said.

*John Weiss was a reporter/photographer for the Rochester Post/Bulletin for 41 years and still does freelance. He has been an outdoors writer in the Driftless nearly 46 years. He is secretary for Hiawatha TU and loves fly fishing small streams.*



**DOUG DIETERMAN ELECTROSHOCKS FORESTVILLE CREEK FOR SLIMY SCULPINS AND A FEW TROUT.**



# THE CADDIS CASE

## YOUTH SERIES

By Evan Griggs, MNTU Educator



LEFT: CADDISFLY NYMPHS MAKE CASES OUT OF MATERIAL IN THE STREAM AND THEIR OWN SILK. (CARL HAENSEL PHOTO)  
RIGHT: CHECK OUT THIS FLY FISHING PATTERN THAT MIMICS AN ADULT CADDISFLY. (PAUL JOHNSON PHOTO)

**C**addisflies are amazing aquatic macroinvertebrates! They are indicators of good water quality and are found clinging to rocks and logs in fast river currents. There are many different types of caddis found in Minnesota. These underwater equivalents to caterpillars have the ability to make their own sticky silk, like spider webs. The caddis larvae use it to create cases to live and pupate in. Some don't make cases, but instead use their sticky, silk-like tethers and repel from rock to rock in rapids! We can tell what species of caddis they are often by the shape and the materials they use to make their cases.

### Rock Cases

Many species of caddis make their cases out of rocks. This provides them a lot of protection and camouflage in their ecosystems. Glossosomatidae caddisflies are known as the saddle case-making caddisflies because they make a case that fits them like a saddle on a horse. The

cases are constructed using their sticky silk with rocks attached. On the top and sides, they place large rocks from head to tail. On the bottom, they use smaller rocks and make a narrow band that wraps under their abdomen. The fast water current pushes the case down on the rock, essentially gluing them in place. They will crawl around on the rock scraping off algae to eat. Yum!

Another caddis family that uses rocks are the Limnephilidae. They will make tubular cases from small pebbles. You can often find them in gravel or sandy areas of a stream. They like to eat decaying leaves off the bottom near the shore. When it's time for the larvae to pupate, they seal their case on both ends with pebbles. Once the adult is ready to hatch, they will dig out of their case and swim to the surface.

### Mixed Media Cases

Some species of caddis in Limnephili-

dae don't just use rocks for their cases. When available, these species will put small pebbles around the top of their case, but cover the bottom half by wrapping plant material around their abdomens.

### Wooden Cases

Some species of caddis like to make their cases out of wood or small twigs. For example, the caddis in the family Lepidostomatidae, make their case entirely out of wood. They like to live just off the bank eating decaying leaves or animals. They have the ability to crawl around with their lightweight case, kind of like a wooden jacket.

### Plant Cases

Some caddis species, like those in Brachycentridae, make their cases from bits of leaves, grass, or other non-woody plant material. They make conical-shaped cases around their bodies. These caddis will cling to the shoreline, eating

algae and other bits of food that are floating around.

### Human Biomimicry

Biomimicry is when we use nature as an inspiration for solving human problems. Caddis silk can be used by humans as well! Because of its stretchiness, stickiness, water-proof abilities, and strength, doctors have been researching ways to use it in many different medical capacities. Doctors believe they could use it for stitches or an adhesive tape during surgeries.

There are many more types of caddis than just these five! And often their case materials depend on what's available for them to use. Different river habitats will yield slight variations in case construction. Caddis are amazing creatures and it's important to protect their valuable habitats. Without clean water and healthy watersheds, we wouldn't have caddisflies.



18 TROUT OF ALL KINDS, SUCH AS THIS BROWN TROUT, LOVE TO EAT CADDIS NYMPHS AND ADULTS. CADDIS ARE PART OF A HEALTHY TROUT STREAM FOOD CHAIN. (CARL HAENSEL PHOTO)



# INNOVATING CONSERVATION

## FLAT METAL FISH REPLICAS WITH 3D APPEAL

By LeeAnna Luoma

For many, capturing that moment forever used to mean one thing: a taxidermy fish mount.

However, these traditional mounts are not only costly but involve keeping the fish itself. In a world where conservation efforts are becoming more critical, it's time for a new approach—one that respects both nature and your wallet. My husband is a passionate entrepreneur and former avid angler. Brian is pioneering a revolutionary way for anglers to commemorate their catch with flat metal fish replicas that look three-dimensional but remain two-dimensional works of art.

What makes these replicas so special? They preserve the excitement of the catch without requiring anglers to harm the fish. It's the best of both worlds—preserving memories while promoting catch-and-release practices that support conservation efforts. But there's more to this story than just innovation in design. My husband's journey to creating these unique pieces is one of perseverance, adaptation, and faith, as he has navigated life with Facioscapulohumeral (FSH) muscular dystrophy.

### The Innovation: 3D Illusion on a Flat Surface

Brian's fish replicas are unlike any other art forms on the market. At first glance, you could easily mistake them for three-dimensional sculptures. However, they are crafted from flat sheets of metal, giving them the advantage of being lightweight, easy to mount, and much more affordable than traditional taxidermy mounts. Despite being flat, Brian's technique brings these replicas to life, capturing the intricate details of each species—from the shimmering scales of a walleye to the distinctive patterns of a brook trout.

The process behind these creations is just as fascinating as the final product. Utilizing cutting-edge printing technology and artistry, Brian manipulates the metal to give the illusion of depth.

Shadows, highlights, and contours are meticulously incorporated into the design, giving the flat metal pieces a lifelike, three-dimensional appearance. "People are often amazed when they realize the fish is flat," Brian says. "The goal was to create something that looks and feels just as real as the moment an angler caught it."

### Conservation Meets Affordability

In recent years, the push for catch-and-release fishing has gained momentum as a means to preserve fish populations for future generations. Brian's replicas offer anglers a perfect way to keep that unforgettable memory without compromising the environment. These pieces are not only beautiful but also align with modern conservation values, offering a sustainable alternative to traditional fish mounts.



A MINNESOTA NATIVE BROOK TROUT COMMEMORATED WITH A FLAT METAL REPLICA.

While traditional mounts can cost hundreds or even thousands of dollars, Brian's flat metal replicas come at a fraction of the price. This affordability allows more people to access high-quality, lifelike pieces without sacrificing the aesthetics of their home or office. "I wanted to make something that was accessible to everyone, not just those who can afford high-end taxidermy," Brian explains.

### Persevering with FSH Muscular Dystrophy

Behind the innovation is Brian's personal story of resilience. He was diagnosed with FSH muscular dystrophy, a genetic disorder that progressively weakens muscles in the face, shoulders, and upper arms. As the disease has progressed, Brian has had to adjust his lifestyle, giving up his beloved fishing trips. However, instead of letting this define him, he sought new ways to stay connected to the fishing community and his love for the sport.

"I may not be able to cast a line anymore, but that doesn't mean I'm done with fishing," Brian shares. "There's always a way to adapt and stay close to the things you love." His desire to remain involved with the angling world led to the creation of his metal fish replicas, which he now shares with fellow anglers across the country.

Living with FSH muscular dystrophy has not been without its challenges, but Brian believes that facing obstacles head-on has shaped his journey as an entrepreneur. "You have to find ways to adapt, and for me, creating these fish replicas was the perfect way to do that. It gives me a sense of purpose, knowing that I'm helping others preserve their memories and promoting conservation at the same time."

### Faith and the Power of Perseverance

Brian's journey is also a testament to his faith. He credits much of his success to God's guidance and the doors that have

opened along the way. "I believe God has a plan for each of us, and sometimes it's not what we expected," Brian reflects. "When I was diagnosed with FSH muscular dystrophy, it felt like my world was shrinking. But instead of focusing on what I couldn't do, I started looking for new opportunities—and that's when everything began to change."

He believes that God has been with him throughout this journey, providing support when he needed it most. From connecting with talented artists to finding a community of anglers who support his vision, Brian sees these moments as divine interventions. "There were many times when I wasn't sure how things were going to work out, but doors kept opening. I truly believe that God has been leading me down this path."

Brian hopes that his story will inspire others, whether they are facing physical disabilities or simply struggling to find their way. "We all have obstacles in life, but that doesn't mean we have to give up. There's always a way to keep moving forward, and for me, it was about

finding a way to keep fishing close to my heart."

### Looking to the Future

Brian's innovative flat metal fish replicas are already making waves in the fishing world, but he's not stopping here. He's constantly working on new designs, improving his techniques, and finding ways to make his creations even more lifelike. His goal is to expand his business, reaching anglers around the globe who want a unique, affordable way to commemorate their catches without harming the environment.

In the end, my husband's story is about more than just fish replicas. It's about passion, perseverance, and faith in the face of adversity. His journey is a reminder that no matter what life throws at us, we can adapt, overcome, and find new ways to pursue our dreams.

*Editor's Note: Check out Brian's replicas at [www.reelisticreplicas.com](http://www.reelisticreplicas.com)*





# INCLUDING MNTU IN YOUR ESTATE PLANNING

Any loss in a family is challenging. It's much easier to delay answering uncomfortable questions such as, "What happens to my assets and my loved ones when I or my partner dies?" So it's no surprise that roughly half of Americans don't have a will, and even fewer have an estate plan. While it is a hard subject to discuss, an estate plan goes much further than a will. Not only does it deal with the distribution of assets and legacy wishes, but it may help you and your heirs pay substantially less in taxes, fees, and court costs, as well as benefit the people and causes that you care about.

Including MNTU in your estate plans not only helps to provide for future programmatic and organizational security, it can take many different forms to balance your financial and philanthropic goals. Drafting these documents may seem like a daunting task at first, until you realize all the good that comes from having them. A gift in your will or living trust lets you make a meaningful gift to MNTU with ease and be flexible in your commitment. You can give cash, specific property or a percentage of your estate, with restrictions or without. You can also make MNTU a beneficiary of

your 401k, IRA or life insurance policy. Because your gift doesn't come to MNTU until after your lifetime, you can change your mind at any time. To make sure your will accomplishes your goals according to your wishes, we recommend that you obtain the professional counsel of an attorney who specializes in estate planning. We've included specific bequest language below for usage with individual or estate planning.

### Bequest Language

The official bequest language for Minnesota Trout Unlimited is:

### Unrestricted General Legacy:

"I give Minnesota Trout Unlimited, a Minnesota non-profit corporation, presently at P.O. Box 845, Chanhassen, MN 55317-0845, EIN# 52-1766036, the sum of (dollar amount)/ or percentage of (\_\_\_%)/ residue of my estate to be used at the discretion of its governing board."

### Specific:

"I give Minnesota Trout Unlimited, a Minnesota non-profit corporation, presently at P.O. Box 845, Chanhassen, MN 55317-0845, EIN# 52-1766036, my (specific personal property item(s) and/or real property located at \_\_\_\_\_) to be used at the discretion of its governing board."



### Gift of Residuary Estate:

"All the rest, residue and remainder of my estate, both real and personal, and wherever situated, I give, devise and bequeath to Minnesota Trout Unlimited, a Minnesota non-profit corporation, presently at P.O. Box 845, Chanhassen, MN 55317-0845, EIN# 52-1766036, to be used at the discretion of its governing board."

The information above is not intended as legal or tax advice. For such advice, please consult an attorney or tax advisor. Contact our executive director, John Lenczewski, with any questions, or for assistance with estate planning, using this language or using this process: [jlenczewski@comcast.net](mailto:jlenczewski@comcast.net) or at 612-670-1629.



A STUNNING DAY ON HAY CREEK. MIKE RIEMER PHOTO.

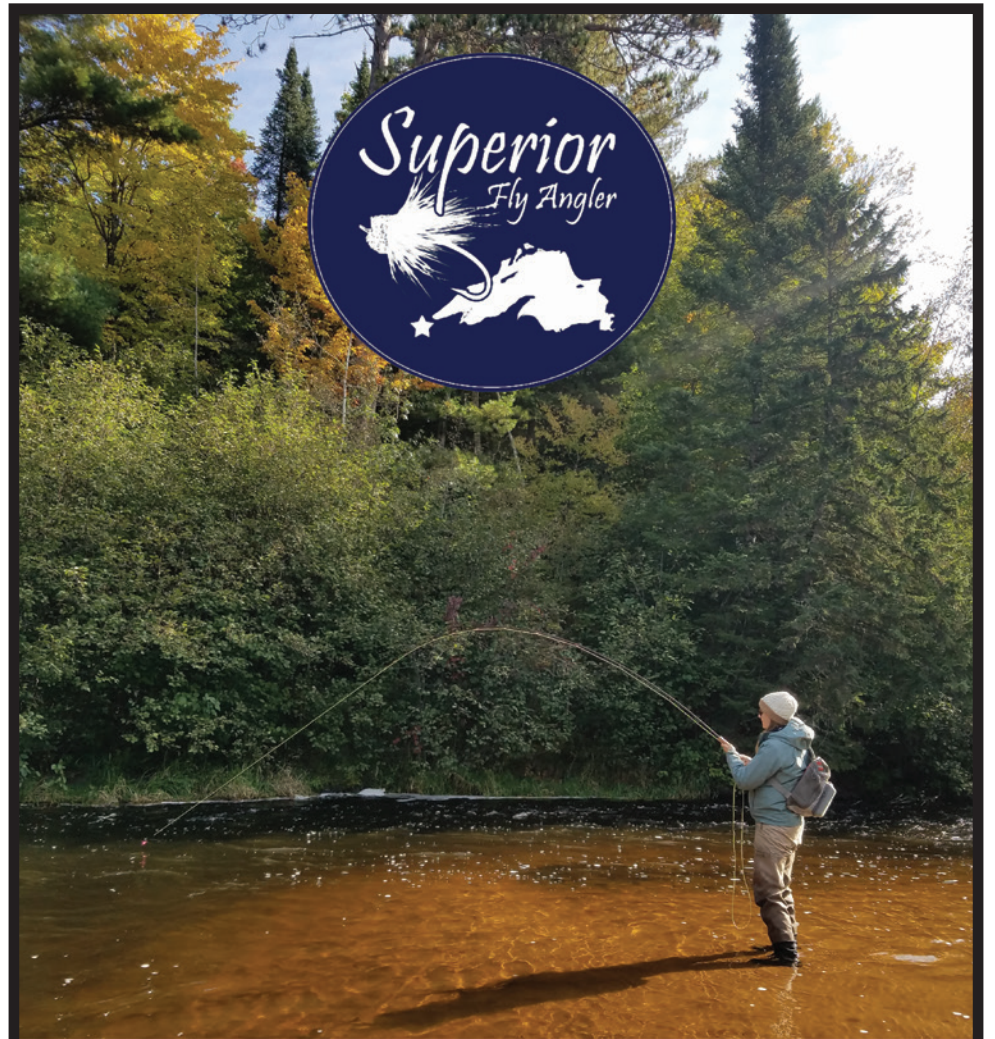




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### COMMITTEE MEMBERS NEEDED

If you have an interest in the areas of advocacy, communication, education, fundraising, habitat, or inclusivity/diversity, please consider joining one of our committees. A key component of the strategic plan is to foster member involvement more directly with the work of MNTU. Your voice matters! Contact [chair@mntu.org](mailto:chair@mntu.org) with your committee interest.

### HABITAT HELPERS NEEDED

We need volunteers to assist with statewide habitat projects. To volunteer or receive information on opportunities to help with inspections and/or hands-on work, send an email to: [monitor@mntu.org](mailto:monitor@mntu.org) List "inspection" or "habitat help" in the subject line and tell us what type of things or specific streams you might want to help with. Please provide a phone number; we will not use your information for other purposes.



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# MNTU CHAPTER NEWS

## Gitche Gumee Chapter

I wrote about the abnormal to severe drought conditions our region experienced last summer in the November 2023 GGTU chapter update. Substantial moisture arrived in September that brought 4 to 7" of rain to most of the Arrowhead region which helped ease the drought of 2023. A year later, we are again dealing with another drought. Unfortunately, there hasn't been much rain to help ease our conditions. Rivers across the North Shore are a mere fraction of what they look like in the spring. We can only hope that steelhead smolts and brook trout were able to find refuge in deeper holes or cooler sections of rivers before flows slowed to a trickle. We need to appreciate the resilience of these North Shore fish populations as Mother Nature has not provided ideal conditions over the past several years.

GGTU chapter had a great summer staying busy in our community. We partnered with the City of Duluth and offered fly casting clinics in June and July. We were also out working on previous habitat projects along Keene Creek, Chester Creek, and the French River. In one section of the Chester Creek habitat project, trees that were planted in 2018 were pushing 10 feet tall. We also resurrected the Paddle the Pads fly fishing tournament and had a great time on the St. Louis River. Thanks to the Superior Fly Angler for sponsoring.

We have a great program season schedule for 2024-2025. We are excited to be partnering with the North Shore Fly Anglers of University of Minnesota, Duluth again this year to bring events to our community. We wrapped up our October program: Fall Migratory Fishing Strategies—Steelhead, Browns and More, presented by Carl Haensel. Carl brought a lot of enthusiasm to his presentation and provided really good tips and techniques on how to fish our area's rivers. Carl shared where there are good enough river flows to fish; the opportunity to catch trophy fish exists this fall! This is due to the record-breaking number of ciscos that hatched in the 2022 year class. The fish in Lake Superior have been gorging themselves on these ciscos for the past several years and fish size is noticeably bigger this fall. Carl shared that eventually the ciscos will age out and will no longer be small enough for the trout and salmon to eat. Until that time arrives, get out fishing!

We have another great program to look forward to in November, Fly Fishing the Boundary Waters. Details about all our upcoming events will be shared on our Facebook page as well as the chapters e-newsletter. If you'd like to get on our distribution list and stay up to date with our chapter news, send me an email at [brandon.kime@gmail.com](mailto:brandon.kime@gmail.com) and I'll get you added to the list!

## Headwaters Chapter

Spring and summer are prime fishing seasons, but at Headwaters TU, we're committed to nurturing a new generation of anglers who share our passion for clean, cold waters.

For over three decades, our chapter has partnered with local schools, primarily fifth graders, to introduce fly fishing. Through four after-school sessions, we teach fly tying, essential knots, and casting to 30 to 50 students. The enthusiasm from these young anglers has led to additional fly fishing events.

This summer, Headwaters members engaged children in fly casting and tying at four venues. The first was the Everything Outdoor event in Brainerd. The second was at the Forest History Center near Grand Rapids. Despite the heat, we saw a steady stream of participants, including a memorable family of eight.

Our next venture was a similar event at the Beltrami County Fair. Our high school volunteers demonstrated fly tying, and we offered casting instruction in a designated area. This inaugural event was well-received by the fair staff, and we identified opportunities for improvement.

At the end of August, we participated in the Youth Outdoor Activity Day in Alexandria. Our chapter set up a casting range with eight stations, offering 10-minute lessons. To encourage participation, we provided a free fly to each successful caster. Between 10:00 a.m. and 4:00 p.m., we worked with 477 kids and dozens of adults, thanks to the efforts of our members and two dedicated fly tying volunteers who had prepared over 500 flies.

As fall rolls around we are preparing for our winter activities, including fly tying, a winter chapter meeting, and exploring fundraising activities.

Kris Williams

## Hiawatha Chapter

About 15 Hiawatha TU members, as well as a Rochester Post-Bulletin photographer and an online editor, and Dusty Hoffman, MN DNR stream habitat specialist, met July 16 along the high, muddy South Branch of the Whitewater River for a mid-summer cookout.

After brats, hotdogs, potato salad and chips, and liquids of several kinds, we heard from Hoffman who updated us on the summer projects and what's ahead.

But first, he noted all the rain that has been hitting the region, saying in an understatement "this year has had some challenges." Parts of Rice Creek south of Chatfield farther up the channel were



GGTU HELD A SUCCESSFUL PADDLE THE PADS FISHING TOURNAMENT THIS SUMMER, PICTURED ARE THE CONTEST WINNERS.

bone dry before the rains but "the water level came up and never went away," he said. Three weeks ago, it got hit with five inches in three hours, equalling a 100- to 200-year flood. "It tore it up pretty good," Hoffman said.

The project itself held, but there wasn't enough vegetation. "That is where we got eaten up," he said. A big part of the problem was that the Root River rose up and was so high that Rice couldn't drain.

Mazeppa Creek west of Zumbro Falls and south of the city of Mazeppa was the next one to get work and, again, the rains were a major problem with the creek out of its banks four times. It's also a very winding, sandy stream and has or had a very tall sandy bank that went back scores of feet over the past few decades.

Maple, south of Rushford near Choice, joins the South Fork of the Root and it's "another cobble trap stream." It will be a step-pool design instead of the usual riffle-pool. Also, it has some rare ani-

mals and plants in its watershed so they have to take them into account. It also has a lot of invasive knotweed in its upper stretches that could wash down into the new section.

Here is how Dusty defined a step-pool: "Many of our streams in southeast MN in a natural state would be step-pool streams in the headwater sections where gradient is steeper. In those sections, water runs off faster and scours several smaller pools and riffle segments that tend to alternate or zig-zag. Typically, this is caused by a much larger bedload of cobble/rock and a steep slope that transports out most of the finer gravel and sand/sediment.

"Whereas our lower gradient sections of stream down in the valley would create a meandering pattern, like a snake shape, with longer riffle/run segments and longer, deeper pools. In their natural state, these stream sections would still have higher amounts of sand and sediment than the headwater sections, because



HEADWATERS CHAPTER VOLUNTEERS TIED FLIES AND TAUGHT CASTING TO HUNDREDS OF PARTICIPANTS OVER THE SUMMER.



# MNTU CHAPTER NEWS



SUPER VOLUNTEERS GET A BIG ROUND OF APPLAUSE AT TCTU'S OKTOBERFISH FUNDRAISER, HEADLINED BY JOHN VAN VLIET.

Please consider running for the TCTU board! It is a great way to contribute to the TU mission while working with some fun and interesting colleagues. Email me at [bob.luck@twincitiestu.org](mailto:bob.luck@twincitiestu.org) if you are interested in joining our board.

Bob Luck

## Win-Cres Chapter

The Win-Cres Chapter has been putting along during the summer and early fall. Familiar themes include:

**Outreach:** Win-Cres had a presence at the five-day Winona County Fair. We had a table with information, put on fly tying demos, and chatted with visitors. Thanks to Roger Berg for spearheading this effort.

**Base Camp—an outdoor event at Prairie Island Campground:** We taught fly casting and again had a table with information about TU and coldwater fisheries. Thanks to Merry Enright, Dave Shaffer, Bruce Fuller, Roger Berg, and Klaus Friedli for staffing this activity.

**Scouts:** This spring we taught fly fishing at the Gamehaven Council Spring Camporee. Two of the scouts went on to complete the Fly Fishing Merit Badge.

**Japanese knotweed:** We injected and sprayed a large (450 stems) colony on private property along Garvin Brook. We also treated colonies along East Burns Valley Creek. In our fourth year of battling knotweed, we have learned a few things: The dose of Polaris recommended by the manufacturer is excessive. We have found that 40% of the recommended dose (2ml) works just fine. And that the herbicide can injure or kill trees in the treated area. We are working out methods which use less herbicide.

**Willow-whacking:** At the request of the landowner, we have begun treating willow stands that have recurred within the stream corridor on Garvin Brook. This is an area with a fishing easement and prior habitat work.

**Mowing:** A crew of Win-Cres volunteers mowed a trail along Garvin Brook.

### Membership meetings:

October 23. Jenny Biederman will review her first year as MNTU Habitat Director. Moose stew will be offered prior to her talk.

December 4. Author Bob Trevis will talk about his books on fishing the Driftless Region.

Both programs are at Sobieski Lodge, Winona. There is a meal/social hour at 6 p.m., with programs at 7 p.m.

Chuck Shepard

gradient is lower and the valley floors are wider and built up of thousands of years of these finer sediments being washed into the valley from up top.

“Here’s how my brain processes it: Up top is steep and narrow (like a gully) and water is more turbulent and rushing faster, so it easily carries smaller sediments downhill but still has the power to push around cobbles to form pools. Further down, the valley is wider and less steep, so water moves slower and sediments have the ability to drop out because the valley is wider. In the Driftless, we accelerated the amount of sediment available for transport on the hillsides with early timber, grazing, and cropping practices, which resulted in the landslides of the early 1900s, flushing millions of tons and/or several feet of sediments that are sitting in the valley floor now...hence the many high banks we see on streams known as entrenched streams. Through time, streams have become further entrenched (deeper bed/higher banks) during high-water events, because waters cannot escape the high banks to access the floodplain and dissipate their energy. So, that trapped water/energy actively erodes the streambed and banks.”

When asked about what the DNR is doing about the growing amount of wild parsnip, Hoffman stated he doesn’t know what to do. “Show us how to win that battle and we’ll try,” he said.

After Maple, it will go to Mill in Chatfield that is being designed with Natural Resource Conservation Service (NRCS) help. Again, the creek rose and the Root is backing it up so it can’t go down.

The projects for the future include Gilbert that has 90 percent of its design work done and the South Branch of the Root in Lanesboro that is going to go out for bids.

Spring Creek in Wabasha County will only be 1,300 feet and its design is about 30 percent done.

John Weiss

## Twin Cities Chapter

Many thanks to the 100+ members and supporters (and even some Packers fans) who attended our 3rd annual Oktober-

fish season-end celebration and fundraiser on October 23. We “netted” over \$20,000 to support TU programs (see what I did there?) through ticket sales, an online auction, raffle and donations.

### Highlights of the evening included:

- A keynote speech by author and TU member John van Vliet on the Driftless area, in which he finally divulged where he got his hat. If you weren’t there, you’ll have to ask John at the Great Waters Expo, but I can pass on some advice he gave us: “Never wear a hat that has more character than you do.”

- Recognition of 19 “Super Volunteers” who participated in five or more habitat or education events in the past year. TCTU had a great year of volunteer accomplishments, and these members were the tip of the spear.

- Presentation of the Duke Hust award for exceptional dedication and leadership to Lee Stoe. This award was given out from 2007 to 2017, took a seven-year hiatus, and came back this year. Congratulations, Lee!

We have two events of note coming up: Winter Fish Camp in Whitewater State Park from December 6 to 8. Activities will include our Annual Chili Cookoff (always a highlight), presentations on winter fishing, fly tying, games, and (of course) fishing! There are a few tickets left as of this writing; enter this address into your browser for details and tickets: <https://tu.myeventscenter.com/event/Winter-Fish-102007>

The Annual Meeting and Board Election will be on January 27. Kristen Poppleton will be giving us an update on statewide advocacy efforts, and we will be holding elections for the TCTU Board.

Enter this address into your browser for details and tickets:

<https://tu.myeventscenter.com/event/Chapter-Meeting-98157>



WIN-CRES VOLUNTEERS WORKED A TU BOOTH AT THE WINONA COUNTY FAIR THIS SUMMER.



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## SELECT POETRY

**No Words** By Larry Gavin

There are not words  
just the sound of finches  
above the sound of water  
flowing on the path  
of least resistance.  
The trout measure  
and erase any troubles,  
the sky, blue and clear,  
hinting at any peace one needs.  
Any path that leads to water.  
No reason to think,  
instead, just feel, rocks under  
foot. The water pressing  
against legs telling the only  
truth there is, follow that truth  
upstream, believe it,  
and take some home.

*Larry Gavin is a poet from Faribault, Minnesota. He is the author of five books of poetry. His newest, A Fragile Shelter: New and Selected Poems, is available from Red Dragonfly Press. [www.reddragonflypress.org](http://www.reddragonflypress.org)*

**Dad Taught Us to Fish** By James Hobbs

He took my brother and me  
by the hand  
or sometimes on his shoulders,  
to the edge of a meadow,  
into the dark woods,  
to the bank of a small stream,  
places full of fresh air  
with room enough for mystery.  
The day might bring a glimpse of a deer,  
the rush of air through startled wings,  
a new flower,  
a sparkling trout.  
Without a word being spoken we knew  
all of this was ours to cherish,  
today, tomorrow, and for each day to come.  
He is gone now.  
His unadorned death seeps slowly into my heart.  
But I will return whenever I can  
to the edge of a meadow  
into the dark woods,  
to the bank of a small stream,  
places full of fresh air and mystery.  
And without a word being spoken  
I will understand  
all of this is mine to cherish  
today, tomorrow and for each day to come.

*James Hobbs has been a TCTU member for several decades. His father and uncle instructed he and his brothers when they were very young in the ways of trout. Over the years he has expanded that pursuit to include freshwater lakes, saltwater backcountry and ocean beaches, angling for everything from crappies to tarpon.*