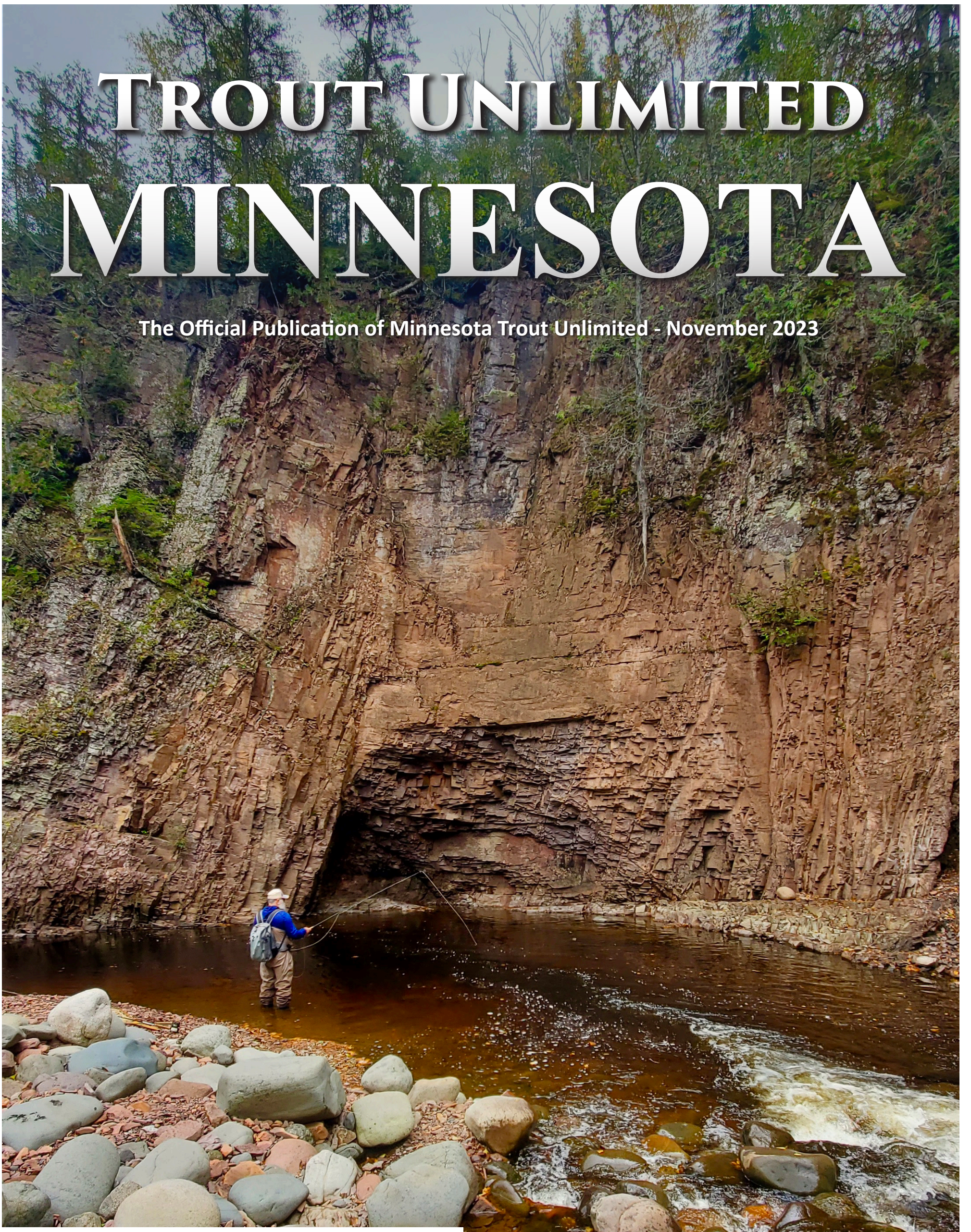


TROUT UNLIMITED MINNESOTA

The Official Publication of Minnesota Trout Unlimited - November 2023



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MNTU HABITAT UPDATE
THE MN HERITAGE BROOK TROUT STORY
A NYMPHING PRIMER
MNTU ADVOCACY
TYING THE PURPLE HAZE SPECIAL
YOUTH SERIES: STORM DRAINS

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GITCHE GUMEE VOLUNTEERS CAGE TREES ALONG THE MN NORTH SHORE.

ON THE COVER

Rhyolite cliffs tower over the Devil Track River past Grand Marais. Carl Haensel photo.

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EDITOR’S ANGLE
 PLANNING FOR CLIMATE CHANGE

By Jade Thomason, Editor

Severe weather events are becoming more common with climate change. After a summer of intense drought, Duluth saw a singular rain event this September that brought more than seven inches of rain to my home weather station over a weekend. Deluges like this flush smolts and young-of-year trout out of streams and into larger water bodies. Without refuges from predators and abundant food these fish are much less likely to survive into adulthood. I think it may be time for us to stop saying "in the future, the effects of climate change will be..." when we are living with the effects every day. Unprecedented weather and seasons happen every year now.

MNTU and partners are thinking about climate change with every decision made. To keep trout comfortable in their changing world, TU is planning for drought or overly wet seasons and warm conditions. Check out the update

on MNTU's habitat work this season by Jennifer Biederman, our new Habitat Program Director. As much as I like trout, I first got involved with the organization because I saw that advocating for sensitive trout protected many other non-game species in turn. This has been formalized more in the past few years as MNTU plans for frog, turtle and bird habitat with installations like wetland scrapes or banks for cliff swallows.

Climate change is also on the minds of the MN DNR and collaborators. Read John Weiss' well-researched article telling the story of the heritage Minnesota brook trout and the new stocking program working to get these trout back home. I was fascinated to learn about these intrepid fish, swimming amongst invaders, and their potential to outcompete as conditions become more challenging for salmonids. I'm excited to catch one of these newly stocked fish or



their offspring in the future. Maybe I already have caught a relative, as fish with these genetics have plied our waters for thousands of years.

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MNTU EDUCATOR EVAN GRIGGS INSTRUCTS A GROUP OF STUDENTS AT GENE DILLON ELEMENTARY SCHOOL IN BEMIDJI. THE HEADWATERS CHAPTER HAS BEEN HEAVILY INVOLVED WITH TROUT IN THE CLASSROOM FOR WELL OVER A DECADE.

FROM THE EXECUTIVE DIRECTOR

GROWTH AND SUCCESS IN 2023

By John Lenczewski, MNTU Executive Director

Fall is in full swing in Minnesota, and we've just wrapped up a productive field season around the state. With successful habitat work implemented in both northeast and southeast Minnesota, there is plenty to celebrate. North Shore trout populations have been reconnected in multiple watersheds with effective culvert replacement. Brook trout are now able to swim to find coldwater refuges in the summer, fall spawning areas, and deep overwintering pools. Southeast habitat work has continued to revitalize important streams throughout the region. Working with partners and our new Habitat Manager Jennifer Biederman, we've been able to successfully reduce erosion, increase habitat, and prepare streams to be more sustainable fisheries in the face of climate change. Read about Jennifer's work this summer in her article on Page 8.

We're excited to announce the hiring of a new staff member, Kristen Poppleton. Plan to hear more from her soon as she and our team advocate for your streams, lakes and other coldwater resources. As we move into fall, keep an eye open for opportunities to help fund Minnesota TU. Our annual giving campaign will be headed in the mail to you soon. There is also a great opportunity to engage with Minnesota's "Give to the Max" charitable giving day, coming November 16, 2023. It's an easy way to give online and help out Minnesota TU this season at mntu.org/donate. I hope to see some of you on the water during both the fall "Town and Park" season in southeast Minnesota, as well as throughout the winter. The fishing should be great when the entire Driftless opens back to fishing on January 1, and the trout will be waiting for all of us.



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BOARD OF DIRECTORS ELECTION NOTIFICATION

- There are three current openings on the MNTU Board.
- 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 10, 2024.
- Elections will be held at the January 20, 2024 MNTU Council Board of Directors meeting.

MINNESOTA COUNCIL UPDATE

PADDLING INTO THE LEGISLATIVE SEASON

By Brent Notbohm, Minnesota Council of TU Chair

I am thrilled to announce we have successfully hired a new Assistant Director for Minnesota Trout Unlimited! Please join me in welcoming Kristen Poppleton to our growing staff of extraordinary MNTU professionals! A passionate environmental leader and educator, Kristen comes to MNTU from Climate Generation in Minneapolis where she served as Senior Director of Programs along with a stint as their Interim Director. Kristen has extensive experience leading organization-level strategic initiatives and managing communications, projects, budgets, and education programs for Climate Gen. My thanks to Carl Haensel and Mike Madigan who, along with myself and John Lenczewski, served on the hiring committee.

We are particularly excited to have Kristen join our staff in time for the forthcoming legislative session. Her strong background in strategic communications will benefit MNTU's environmental advocacy agenda. For too long, our dedicated Executive Director, John Lenczewski, has tirelessly paddled the MNTU canoe solo into the frequently strong headwinds of Minnesota coldwater conservation. Finally, he has a partner to

row in tandem with as MNTU traverses the uncertain environmental and political waters ahead. Along with Habitat Program Director Jenny Biederman, Education Program Supervisor Amber Taylor, and Development Director Mark Abner, we have the team in place to continue the great work of MNTU and fulfill our mission to conserve, protect, restore, and sustain Minnesota's coldwater fisheries, their watersheds and groundwater sources!

Speaking of MNTU's mission, at the September Board of Directors meeting we reviewed a draft of a new comprehensive Advocacy Plan. This plan will direct the environmental advocacy work of MNTU for years to come by clarifying processes and creating networks that Kristen and John will utilize as they navigate those aforementioned political waters in Minnesota. Many thanks to all who completed the advocacy survey earlier this year which helped to inform the plan's drafting. Revisions to the Advocacy Plan are underway and we look forward to formally adopting it at January's full Board of Directors meeting. A key component of the plan involves a standing Advocacy Advisory Committee with at least one volunteer representa-



tive from each chapter to provide input on and assist with key advocacy initiatives. If you are interested in serving in this important group, please talk to your chapter president.

My last topic for this column is one that I frequently receive questions about. With the hope that you can better understand what is needed and why, I will provide some context and clarification about MNTU's funding operations. I wish to make abundantly clear that MNTU is a fiscally responsible organization, evidenced by a clean audit conducted last year by an external accounting agency.

Continued on Page 13

www.mntu.org

THE MN HERITAGE BROOK TROUT STORY

HOPE FOR OUR LOST FISH

By John Weiss

At 10:30 a.m August 17, Cedar Valley Creek flowed cool and gentle, much of it beneath the overhanging grass, a large tributary pouring more cold water into it. Yet it was very different from the day before, as it now had 3,500 Minnesota Driftless brook trout fingerlings. If hopes and dreams for the new strain come true, there will be an added dimension of trout fishing to this stream and scores of others in the Southeast, and a few more across the state. It could be the first stage of the final step in expanding brook trout to as many streams as can hold them.

Twelve streams in the Lanesboro area and two in the Lake City area were stocked with about 63,000 fingerlings in August, according to Shawn Haase, hatchery manager. The Fergus Falls area has one stream that received 6,500 fingerlings, Little Falls with 8,000 fingerlings in one stream, Detroit Lakes with two streams for a total of 10,000 fingerlings. One stream in the Duluth area will get 2,500 bigger fish (five to the pound) next May.

Minnesota Driftless are a new brook trout strain that took around two decades to create. The first step was a lot of sweat and hard work by Department of Natural Resources fisheries workers, electroshocking 174 streams throughout the Driftless area, then sophisticated work in genetics laboratories, more electroshocking, then taking milt and eggs from brook trout and, finally, three years in the Peterson State Fish Hatchery to turn out more than 100,000 Minnesota Driftless fish. All that was needed before Travis Viker, a DNR fisheries technician, could pour 3,500 into Cedar Valley.

He said he's stocked hundreds of thousands of trout across the state, but Minnesota Driftless are special. "It's hard to describe what those brook trout really mean to me," because brook trout are a native fish and maybe, just maybe, the new strain is made up of descendants of fish that were here many centuries ago. But we can't be sure.

But what he is sure about is that the new strain fits right into our streams. When he has stocked other fish, such as browns, they tend to sit there for a while, disoriented. When he stocked the new strain in Duschee Creek he said most darted into niches under or near rocks. "They immediately began acting as fish," he said.

For Melissa Wagner, DNR fisheries supervisor in Lanesboro, being part of introducing Minnesota Driftless is exciting. "It's really neat to know that I get to be in the final stages of stocking," she said. "I think people are pretty excited about catching a native heritage brook trout."

When she presented information about Minnesota Driftless to the Hiawatha, Win-Cres and Twin Cities TU chapters, she said she got a lot of questions about what they would be like compared to other strains. All she could say is it's a very good

chance Minnesota Driftless are native fish so they survived very well in the region before Europeans, and probably even after Europeans messed up our streams. "They should be good," she said. "That is what our confidence is built on."

Not every stream will get the new strain, she said, but most will. It will take a while. Managers need to give requests for the strain to the Peterson Hatchery two years in advance. The dozen streams that got them this year will be stocked for two more years, then the DNR will move on to a new batch. Those chosen this time were ones without brook trout, some with the older Minnesota Wild strain, some that were planned to be stocked with Minnesota Wild, and some to see how well they fare against hatchery strains already in the streams. They will avoid streams where brook trout are thriving or with the heritage (possible native) strains.

A pathogen in the Crystal Springs State Fish Hatchery forced the DNR to kill all the fish, including Minnesota Wild. "Losing those fish was a setback, but also gave us a fresh start," Wagner said. "At that point we knew all the genetics of the trout in all the Southeast streams, so it was a chance to develop a completely new strain of heritage brook trout."

In the next round, they will stock streams in a more concentrated area, Wagner said.

The DNR will also go back to streams stocked with Minnesota Driftless to see how well they are doing and if they, as expected, outcompete other strains, she said. "That is one way to evaluate them," she said. If they are no better than existing strains, then there is no need to stock more, she said.

In a decade, many streams in the Southeast will have the new strain, she said. Grandparents of the new strain have already shown that they can outcompete other strains. That means a lot more chances to catch brook trout. They could even be a bit better than the heritage fish now in streams (more on that later).

The new strain will be taken more than 100 miles north of the Driftless region, including to the Little Net River south of Duluth. Deserae Hendrickson, regional fisheries manager in Duluth, said she's confident they will do well. Three streams in the area got Minnesota Wild in the past and two are doing well, she said. Too many beaver dams in the third stream apparently didn't let the Wild take hold, she said. "We were pretty happy with the previous strain," she said. "I would expect similar performance" from the new strain.

Minnesota Driftless came to be begin with some curiosity by DNR researchers.

But first, let's go back a few centuries.

The Southeast before Europeans came



TRAVIS VIKER DUMPS A BUCKET OF MINNESOTA DRIFTLESS BROOK TROUT FINGERLINGS INTO CEDAR VALLEY CREEK.

by the tens of thousands was a maze of deep valleys with waters small and large. All were fed by springs and seeps that flowed out of the porous rocks at 48 degrees and were loaded with just the right minerals for growth of bugs for trout to eat. The only trout were brook trout.

Europeans did two things to mess that up:

First, their land use practices in the fragile Driftless were horrid, plowing up and down hillsides and cutting down forests, leading to massive erosion. That, in turn, destroyed many of the streams, filling them with debris, ripping them deeper, blanketing riffles with silt. It's unknown if any native brook trout survived.

Second, they brought in brown trout that are more tolerant of warmer, more degraded streams. They took over. Brook trout from hatcheries in other states were also imported and stocked. Rainbow trout were imported and stocked, though they don't reproduce well so the DNR stocks them, often as catchable-sized fish, to supplement streams and ponds that get heavy pressure. As of maybe 50 years ago, according to DNR research, only three percent of local streams were known to have brook trout, though it's possible others had brookies but only in the far upper reaches near springs.

After that, the fishery began a fantastic improvement. Land use had been improved and more snow and rainfall meant more springs feeding cold water

into streams. Brook trout tend to do better in the colder upper reaches of streams. Also, a major paper outlining how Minnesota Driftless were discovered found nearly all brook trout living within about 50 miles of the Mississippi River. That is where streams are fed by two different aquifers compared with those farther west. "Groundwater from the latter two formations (our eastern ones) typically originates from deep, confined aquifers, and therefore water temperatures are very stable with minimal annual variation," according to the genetics paper on Minnesota Driftless.

So that's where things stood roughly 30 years ago.

Around then, two DNR fisheries officials did a paper on where our brook trout came from, said Doug Dieterman, a DNR fisheries researcher in Lake City who has been very instrumental in developing Minnesota Driftless. He said Mel Haugstad, a former DNR fisheries supervisor in Lanesboro, believed all native fish had been extirpated, but others wondered. The two researchers looked at streams with brook trout and found paper records of when they had been stocked and with what strain. But many of the streams with brookies had no records of being stocked.

Around then, John Huber, then manager of the Crystal Springs State Fish Hatchery, decided he wanted to expand brook trout and took eggs and milt from a few streams that had the fish but no history



THE BROOD STOCK FOR THE MINNESOTA DRIFTLESS BROOK TROUT CAN BE SEEN ABOVE SWIMMING ABOUT, WAITING TO BE STOCKED INTO MN TROUT STREAMS.

of being stocked and created the Minnesota Wild that also had some outside genetics. They were being stocked until that pathogen forced the DNR to wipe out all the fish so the hatchery could be thoroughly cleaned.

Before the pathogen hit, Huber realized he needed new genetics because Minnesota Wild were being crossed and re-crossed.

Around then, fortunately, Jon Hoxmeier got curious. He was a DNR fisheries researcher and is now the head of the southern region researchers. Dieterman said Hoxmeier was one who really got things going. “The (Driftless) brook trout story is really Jon Hoxmeier’s story,” he said. Jon said “I want to go in the

field, I don’t want to just use field data... I want to run around and see these fish.”

Hoxmeier said when he took his new job in Lake City, “I decided we needed more research on brook trout. I wanted to see where they were, and what were they?... A lot of our focus up to that point had been on brown trout.”

The DNR had anecdotal evidence of where brook trout were but nothing solid. Working for many hundreds of hours, he and others would go to streams, often ones that were well known because of shocking, but often ones that weren’t checked farther up in the stream where the native fish might live, he said. “In a lot of cases, we would find brook trout.”

When Loren Miller did the genetics testing, many were from hatcheries but 36 streams had genetics with no known outside source. Could they be native? We will probably never know because we don’t have genetics from a few centuries ago so they technically couldn’t be called native. Instead, they are called heritage. “They are putatively native,” Dieterman said.

Also surprising was that streams that were known to have been stocked with hatchery fish only had the heritage strain fish, Hoxmeier said. “This shows us the heritage brook trout are better adapted to our conditions,” he said. They either had some heritage fish already in them when stocked, or heritage fish swam in from a nearby stream (some brook trout

have even been caught in Lake Pepin at cooler times of the year). “These brook trout can swim from stream to stream,” Hoxmeier said. That finding would indicate the heritage were a better fit for the Driftless, he said.

They also found that the heritage fish were found in three clusters, called genetic management units: Rush-Pine Creek, South Fork Root and the Zumbro.

It is worthwhile doing all that work, he said. “A lot of our trout anglers seek them out, especially heritage because they want to catch something that is native,” he said. And Minnesota Driftless could make the DNR’s work more efficient because the fish should be able to better take care of themselves, he said.

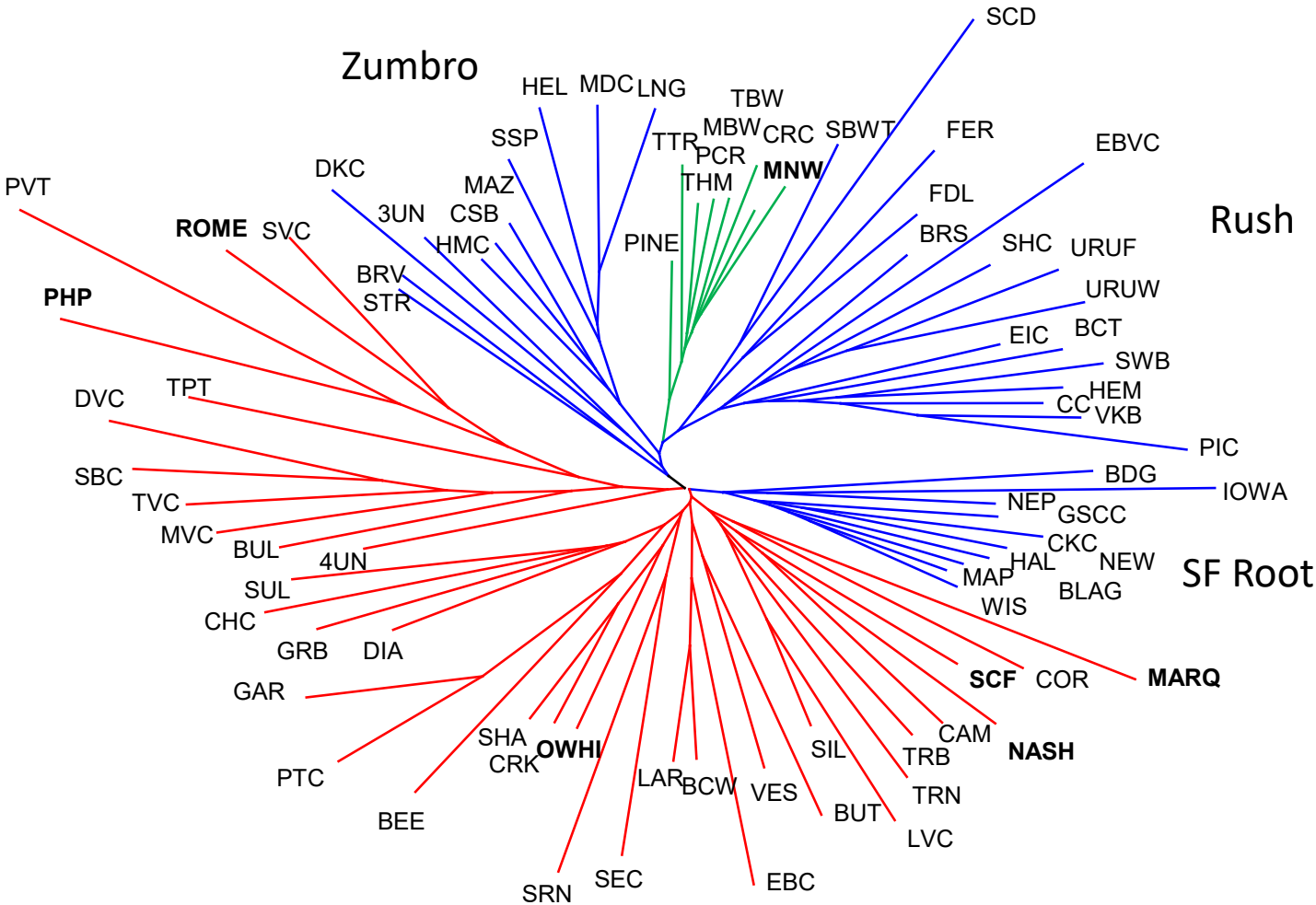
Dieterman added that a survey found 47 percent of anglers want to see the DNR focus more on brook trout. Anglers also think brookies “taste better than brown trout,” he said.

The actual work of taking milt and eggs, growing brood stock and rearing the fingerlings was directed by Haase. “We definitely get excited about rearing brook trout,” he said. “Each strain of brook trout has its own personality.” Some are more shy, others more aggressive. Minnesota Driftless were more shy at first, but now, “you can hand feed them, they are really aggressive eaters and grow really well,” he said.

They will get gametes from the three sources “to keep that genetic footprint wide,” he said. That should mean the new strain is a bit better than any of the separate heritage strains, he said.

Fingerlings they stock are dark with plump bellies, “healthy, good, big shoulders,” Haase said. That’s good so they have enough energy as they learn to eat in the wild. From what he’s seen, “they will fit right in with the wild environment,” he said.

“We feel like parents, we



THIS IS A DIAGRAM FROM A DEPARTMENT OF NATURAL RESOURCES PAPER SHOWING THE GENETICS OF BROOK TROUT FROM SCORES OF SOUTHEAST MINNESOTA STREAMS. ALL COME FROM A COMMON ANCESTOR IN THE MIDDLE BUT THEY BRANCHED OUT. SOME ARE FROM HATCHERIES OUTSTATE, SOME ARE FROM THE OLD MINNESOTA WILD BROOK TROUT AND SOME HAD NO KNOWN GENETIC ANCESTRY, SO THEY ARE CALLED HERITAGE.

pride ourselves in starting a new strain here in Minnesota,” he said.

Miller said that only the Zumbro and Pine-Rush heritage fish have had milt and eggs stripped but the South Fork Root will be added soon. Could combining genetics from the three create a fish that greatly outdoes any of the fish from the three clusters? “That gets a little complicated,” Miller said. But they are closely related enough so there’s not much chance of that, or of having problems. But “you might get a boost of alleviating potential inbreeding,” he said. And it could make the new strain “stronger, more fit fish for the future” by being more resilient and sustainable.

Here are some interesting things from the paper, published in 2015:

Minnesota brook trout are in the southwestern part of their range that goes well up into Canada and east to the Atlantic Ocean. They could be hurt due to climate change, but conversely, more water in the Driftless from changing weather patterns could mean a refuge for brook trout. “However, fisheries managers must ensure the protection of base flows through enhancing groundwater infiltration and reducing groundwater withdrawals.”

Several Minnesota populations are showing low genetic diversity because of some kind of bottleneck that keeps

new fish from coming in. It could be a dam or warm water that doesn’t allow brookies to move to other streams.

A fascinating diagram showed the genetics of fish from all the streams where they were found. The three clusters are shown, as well as Minnesota Wild streams and fish from outside hatcheries.

“Brook Trout were present in 68% of coldwater streams compared with only in 3% in the early 1970s. The increase is likely due to increasing stream discharge.”

*“Higher Brown Trout densities have been shown to have negative effects on Brook Trout in the Driftless Area.”

*“Our study documented an increase in the distribution of a coldwater native trout during the last several decades. We found robust, remnant Brook Trout populations increasing in number in the Driftless Area of Minnesota, which is likely the result of the cumulative effects of land-use conservation practices, improved fisheries management strategies, and the unique landscape of the Driftless Area.”

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.



CEDAR VALLEY CREEK HAS RECEIVED THE NEW STRAIN OF HERITAGE BROOK TROUT.

MNTU ADVOCACY: A CALL TO ACTION

THE THREATS OF RUNOFF, NEONICOTINOIDS, LOGGING AND DROUGHT

By Mike Madigan • Photos by Carl Haensel

The threats to Minnesota’s coldwater ecosystems are growing and increasingly serious and Minnesota Trout Unlimited is prioritizing its advocacy program to protect these sensitive resources. Climate change has brought about extreme drought in many parts of the state. Minnesota is experiencing abnormally dry conditions. The Minnesota Drought Monitor Map currently shows that:

- 30% of the state is in moderate drought.
- 39% of Minnesota is in severe drought.
- 15% of the state is in extreme drought.
- 1% of Minnesota is in exceptional drought.

<https://www.dnr.state.mn.us/climate/drought/index.html>. As a result, river levels are generally lower and water temperatures are generally higher.

The New York Times recently ran an article entitled “Big Farms and Flawless Fries Are Gulping Water in the Land of 10,000 Lakes.” <https://www.nytimes.com/interactive/2023/09/03/climate/minnesota-drought-potatoes.html?smid=nytcore-android-share>. Extensive agricultural irrigation has significantly worsened the drought’s effects, and it is not just farmers that are rapidly depleting our aquifers. Cities, power plants, factories, golf courses and consumers water-

ing their lawns are also the source of the problem. The depletion of groundwater has revealed how dependent much of the state has become on aquifers that are fragile and often poorly understood. The same could be said for the health of trout streams which depend on a reliable flow of cold groundwater to sustain trout and the aquatic insects on which they depend.

The NYT article noted that: “In Minnesota, watersheds started to dry as the heavy irrigation in 2021 lowered aquifer levels. Trout streams warmed when huge wells siphoned away the cooler underground water that normally fed the streams, scientists said, threatening fish populations. And in parts of Minnesota, people reported backyard wells drying up, sometimes leaving kitchen faucets to cough and sputter as though they were gasping.”

In addition, agricultural runoff of manure, pesticides, and nitrates are also threatening the health of Minnesota’s trout streams. Last year, 2,500 trout, mostly browns, were killed in Rush Creek, near Lewiston. In 2021, 250 trout were found dead in Trout Valley Creek, just south of Weaver. In 2019, 1,500 fish were reported killed in Garvin Brook, just east of Lewiston. In 2015, one of the most productive trout streams in the state, the South Fork of the White-water River that passes to the west of Lewiston, was the site of yet another disaster that was estimated to have killed



IN THE LAST EIGHT YEARS CERTAIN MAYFLY POPULATIONS IN OUR REGION, PARTICULARLY HEXAGENIA LIMBATA, HAVE DECLINED BY APPROXIMATELY 50%.

nearly 10,000 fish.

And it is not just trout that are dying. Over the years, many of you have likely noticed that some mayfly species have disappeared from your favorite streams and other species have declined significantly. An article published several years ago in National Geographic, based on recently released studies, reported that in the last eight years certain mayfly populations in our region, particularly *hexagenia limbata*, have declined by approximately 50%! See “Mayfly numbers drop by half since 2012, threatening food chain,” National Geographic,

January 20, 2020. Mayflies are the oldest surviving winged insects on the planet. Mayfly impressions from some 300 million years ago have been found in this country.

According to another study published three years ago in the journal Biological Conservation, 40 percent of global insect species are threatened with extinction. The four most affected aquatic insect populations, which the study describes as "imperiled," are caddisflies, mayflies, stoneflies and dragon and damselflies. These aquatic insects are essential to the long-term health of cold-water eco-

systems and trout populations. Without them, fly fishing would not exist.

Although climate change and algae blooms have played a role in this dramatic decline, the primary cause is the widespread use and extreme chronic toxicity of neonicotinoids. These insecticides in agriculture result first in contamination of the soil of the treated crops, and secondly in the transfer of residues to the aquatic environment.

The decline of many populations of insects is affecting the structure and function of aquatic ecosystems. Consequently, fish, birds, amphibians, and animals that depend on these insects and other aquatic invertebrates as their sole or main food resource are also being detrimentally impacted. For instance, declines of insectivore bird species are quite evident so far, but many other terrestrial and amphibian species, including trout, may be at risk.

In addition, in recent years, the DNR has permitted the deforestation of Aquatic Management Areas. Removal of the tree canopy can further warm trout streams. AMAs are specially designated lands which must be managed in accordance with Minn. Stat. § 86A.05, subd. 14. AMAs were created in order to “protect, develop, and manage lakes, rivers, streams, and adjacent wetlands and lands that are critical for fish and other aquatic life, for water quality, and for their intrinsic biological value, public fishing, or other compatible outdoor recreational uses.” The statute mandates that AMAs “must be administered by the commissioner of natural resources in a manner consistent with the purposes of this subdivision to perpetuate and, if necessary, reestablish high quality aquatic habitat for production of fish, wildlife, and other aquatic species.”

DNR owns outright many sensitive parcels of land surrounding some of Minnesota’s best trout and steelhead rivers. These parcels have been designated as AMAs and management, including tree cutting, may only be performed for the purpose of protecting fisheries, fisheries habitat, water quality and intrinsic biological values. No timber harvest in an AMA should be permitted unless the DNR can demonstrate the proposed timber harvest is “consistent with the



LAST YEAR RUSH CREEK (PICTURED ABOVE) WAS THE SITE OF A CATASTROPHIC FISH KILL. AGRICULTURAL RUNOFF OF MANURE, PESTICIDES, AND NITRATES ARE THREATENING THE HEALTH OF MINNESOTA’S TROUT STREAMS.

purposes . . . to perpetuate and, if necessary, reestablish high quality aquatic habitat for production of fish, wildlife, and other aquatic species.” Absent such a showing, the harvest should not be allowed. For reasons that are not clear, but which appear to be vestiges of a handshake political deal more than a decade ago, the DNR included all 8,017 acres of AMAs in Lake County in the STHA. And although Lake County AMAs account for 0.3% of the 2.75 million acre harvest pool statewide, somehow the DNR model has decided that 7,260 of these 8,017 acres will be in the harvest pool! This is 90% of the AMAs along popular Lake County trout and steelhead rivers.

Setting cord targets on lands set aside for fish and wildlife that are not tied to established, well defined wildlife goals and benefits is unprecedented, concerning, and should be rejected. If this current direction is allowed to continue, fishery and wildlife managers will have lost

control of managing forested wildlife habitats on lands designated for wildlife management resulting in unacceptable long-term negative impacts. Such a loss of control also results in a violation of both federal and state law.

This is by no means an exhaustive list of the many threats to trout and coldwater ecosystems. MNTU is the primary advocate for these delicate and precious resources. Its mission is “to conserve, protect, restore, and sustain Minnesota’s coldwater fisheries, their watersheds and groundwater sources.” We can successfully address these threats if we work together and are focused, engaged, and effective.

As eloquently expressed by Thomas McGuane in *The Longest Silence, A Life in Fishing*, we must all do our part:

“We have reached the time in the life of the planet, and humanity’s demands upon it, when every fisherman will have

to be a riverkeeper, a steward of marine shallows, a watchman on the high seas. We are beyond having to put back what we have taken out. We must put back more than we take out. We must make holy war on the enemies of aquatic life as we have against gillnetters, polluters, and drainers of wetlands. Otherwise, as you have already learned, these creatures will continue to disappear at an accelerating rate.”

Please support MNTU’s advocacy efforts with your time, expertise, resources, and energy. I am always amazed at what a dedicated group of volunteers can accomplish. Stay tuned for further updates and thanks for all you do.

Mike Madigan is the current MNTU State Treasurer and a dedicated volunteer. He is a life-long fly fisher who practices law in Minneapolis in his spare time.



LEFT: A COW STANDS IN A SPRING THAT IS TRIBUTARY TO THE SOUTH BRANCH OF THE WHITEWATER RIVER. EFFECTS OF THE CATTLE INDUSTRY HAVE BEEN MORE SEVERE IN RECENT YEARS WITH LARGER RAIN EVENTS.



RIGHT: BROWN TROUT FORAGE LIKE MAYFLIES, CADDISFLIES AND STONEFLIES HAS DECLINED PRECIPITOUSLY.

MNTU HABITAT IMPROVEMENT PROJECTS

2023 UPDATE

By Jennifer Biederman, PhD, MNTU Habitat Program Director

October marked the end of a busy 2023 field season for Minnesota Trout Unlimited. Habitat improvement (HI) projects were completed on nearly 17,000 feet of stream—creating new corridors of improved angling and habitat for fish and nongame wildlife that exceeds three miles in length. This hard work was supported by MNTU’s dedicated contractors, including design engineers and construction crews, 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.

Hay Creek (Goodhue County)

The first round of Outdoor Heritage Funds in 2008 financed the 8,200-foot HI project at Hay Creek along 320th Avenue, making it one of MNTU’s earliest accomplishments and a popular destination for trout anglers statewide, particularly for those from the metro region. In recent years, MNTU and DNR staff agreed that an overhaul of the original HI project with a design incorporating newer techniques that emphasize reconnection to the floodplain during high flows and streambank stabilization would improve the quality and stability of the project.

Completed in late June, this was an extensive project involving work to stabilize existing features (e.g., sky hooks, rootwads, and riffles) while adding additional design features and structures (clusters of big eddy boulders, pool logs, and rootwads) to support trout habitat. The new project also included extensive bank shaping, benching, and channel narrowing to improve sediment transport and floodplain access. To conserve and enhance habitat for nongame wildlife, mature trees, including walnut and butternut, were preserved and wetland habitat was created within the project corridor. Although this summer’s severe drought presented challenges with vegetation, a cover crop was established, and a vibrant mix of native prairie grasses and flowers will take hold in the next few years.

Anglers can access the project at the upstream end at the 320th Avenue bridge crossing at the western end of 320th Avenue, and parking is available in a newly constructed lot just below the bridge.

Cedar Valley Creek (Winona County)

Located in southeast Winona County, the Cedar Valley Creek HI project was completed in early August, restoring approximately 4,675 feet of trout stream. Cedar Valley Creek is well known as a productive brown trout fishery, but poor conditions created challenges for angling.

In particular, the current HI project on Cedar Valley Creek targeted steep, actively eroding banks, which in some locations reached eight feet in height (see picture). A streambank erosion estimator that utilized field data collected prior to restoration estimates that the



CEDAR VALLEY CREEK HAD SIGNIFICANT BANK WORK COMPLETED THIS SEASON TO TARGET A LARGE SOURCE OF EROSION. A STREAMBANK EROSION ESTIMATOR CALCULATED THAT THE RESTORATION WILL SAVE AN ESTIMATED 136 TONS OF SOIL FROM ENTERING THE STREAM CHANNEL EACH YEAR.

completed project will prevent 136 tons of soil (equal to almost 10 dump truck loads!) from entering the stream channel each year. In addition, habitat enhancements, including eddy boulders, pool logs, rootwads and rootwad habitat jams, and rock riffles were added throughout the project reach. Invasive or aggressive trees (e.g., black locust, box elder, and buckthorn) were removed, while many

mature black walnut and cottonwoods were preserved to provide shade and important non-game wildlife habitat.

The best way to access fishing at the recently completed Cedar Valley Creek project is from the County Road (CR) 9 bridges just above and below the completed project (see map). Anglers should note that the driveway located in the up-

per-middle section of the project is not within the easement and should not be used for parking or to access the road for walking. To fish from the CR 9 bridge upstream down to the driveway is about 2,800 feet, so there is just over one mile of commitment to walk the stream round trip. To fish upstream from bridge to bridge and walk the road back would be 6,400 feet of stream plus 5,400 feet of

road for a total of 11,800 feet (just over 2 miles).

Trout Brook (Dakota County)

Completed in early October, the most recent and final MNTU HI project of the 2023 field season restored 3,600 feet of Trout Brook in Dakota County, an upstream reach within Miesville Ravine Park Reserve near County Road 91. This new HI project is downstream and adjacent to nearly 3,100 feet of HI completed in 2017, creating over one mile of exemplary and scenic trout fishing that is particularly accessible to anglers from the metro region.

Just prior to start of construction, the discovery of a state threatened flower, snowy campion (*Silene nivea*), throughout the project area required MNTU to work with the DNR to create a mitigation plan which altered the original project design. In particular, MNTU reduced the total area of soil disturbance, removed large sections of sod (to be replaced following construction), and collaborated with the University of Minnesota Arboretum and Dakota County for seed collection and propagation. MNTU is appreciative of the expediency and supportiveness of these collaborators in resolving this unexpected challenge, and excited to play a role in the protection and recovery of this rare plant.

Trout Brook has healthy populations of both brook and brown trout, and this project successfully enhanced fish habitat while improving the quality of angling. The design added pool logs, big eddy boulders, rock riffles, and rootwads for fish cover, and rocky slackwater habitats for young-of-year fish. In addition, the project included channel narrowing to transport sediment, and extensive bank grading and shaping to reestablish a connection to the floodplain.

Invasive and aggressive trees and shrubs were removed throughout the reach, including black locust, box elder, honeysuckle, and buckthorn, while native species, including butternut, black walnut, American elm, basswood, and nannyberry were preserved for the ecological benefit of nongame habitat. Other non-game habitat features that were incor-

porated into the design include sandbars for turtle nesting habitat, steep banks for nesting swallows, wetland scrapes and backchannels for amphibians.

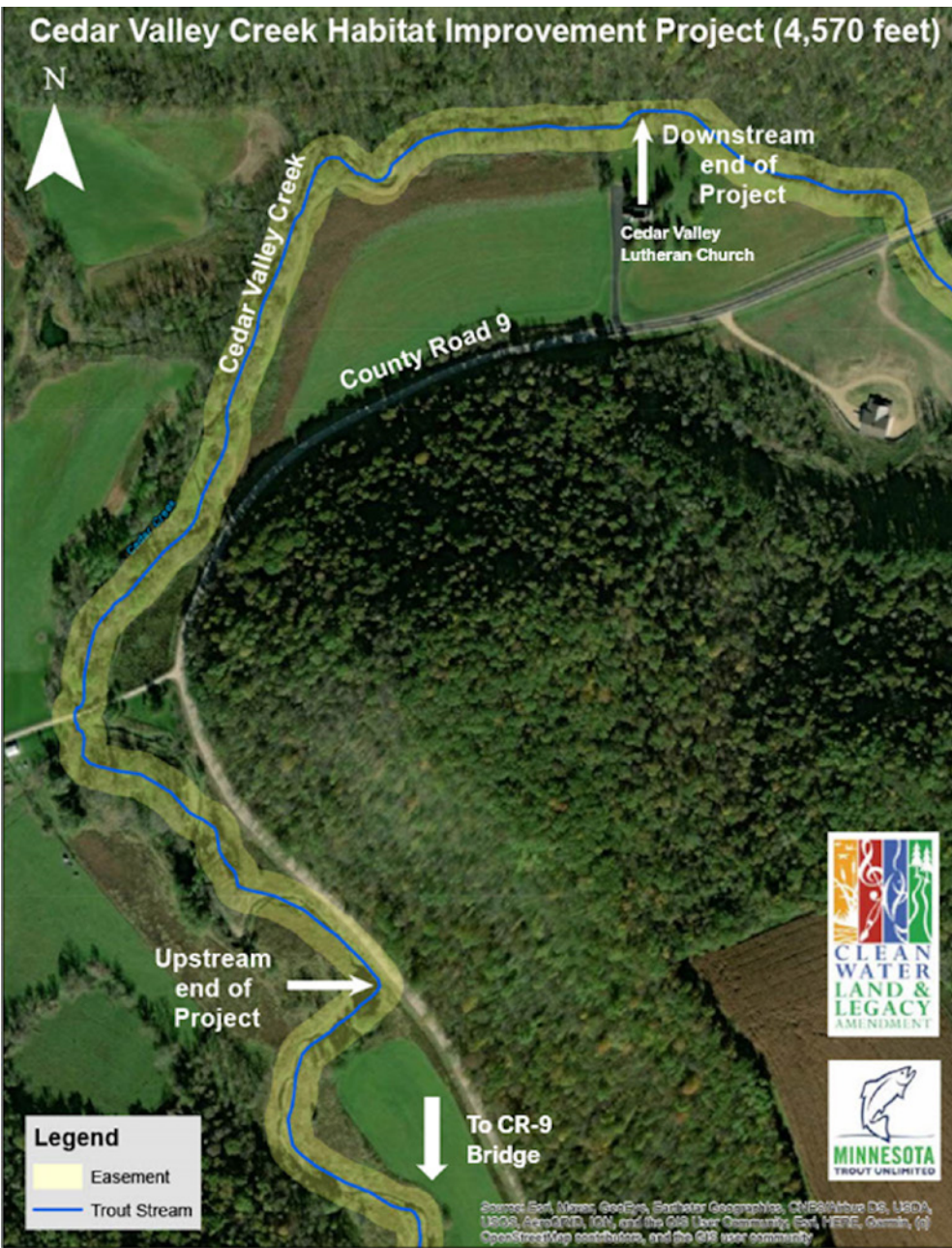
Finally, the installation of the new project also created an opportunity to put in rock checks in a dry run tributary upstream of the HI projects to help capture and reduce sediment from entering the HI project reach. Rock boulders and pool logs were also added within the 2017 project reach to enhance fish habitat and improve angling.

To access the new project, anglers can park near the headwaters on County Road 91 and hike a short distance down to the creek. Unfortunately, Trout Brook is not open for winter fishing, but the fish will be eagerly awaiting the arrival of anglers upon the opening of the spring season. Also worth noting is that the location within a county park allows anglers to have access beyond the typical easement corridor, with other outdoor recreational activities permitted, including hiking, birdwatching, and dog walking.

MNTU Moving Onward

As the season closes, we eagerly look to the new HI work that lies ahead. With that in mind, it is important to note that these 2023 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 vegetation becomes well-established across two or three years. The Outdoor Heritage Fund award used to fund HI work includes three years of 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.

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!



MNTU ALSO PRIORITIZES NON-GAME WILDLIFE HABITAT LIKE THIS WETLAND SCRAPE.



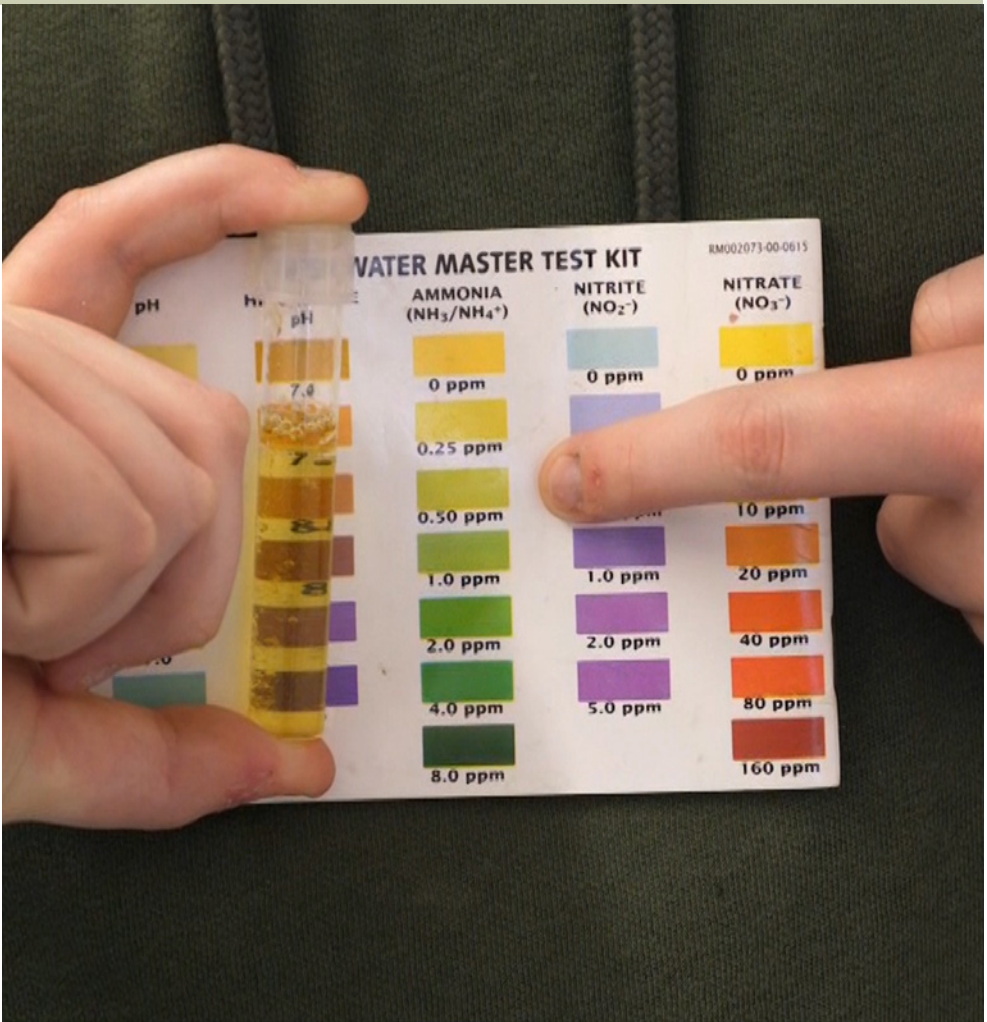
HAY CREEK IN GOODHUE COUNTY RECEIVED ANOTHER IMPROVED STRETCH THIS SEASON. THE NEW PROJECT INCLUDED EXTENSIVE BANK SHAPING, BENCHING AND CHANNEL NARROWING TO IMPROVE SEDIMENT TRANSPORT.



MNTU EDUCATION UPDATE

NOVEMBER 2023

By Amber Taylor, MNTU Education Program Supervisor



LEFT: STUDENTS WADED INTO THE ST. LOUIS RIVER ON A BEAUTIFUL FALL DAY IN SEARCH AQUATIC MACROINVERTEBRATES DURING THEIR FALL FIELD DAY EVENT. RIGHT: A STUDENT TESTS THE WATER IN THEIR TANK FOR AMMONIA IN ORDER TO TRACK THE NITROGEN CYCLE AND PREPARE A HEALTHY TANK FOR THE ARRIVAL OF THEIR TROUT EGGS.

“The Trout in the Classroom program has proven to be a transformative experience for students, teachers, and the entire school community. The program has deepened students' understanding of trout biology, water quality management, and environmental conservation through hands-on activities, field trips, and student involvement. Looking ahead, the program aims to expand its impact, fostering a greater sense of stewardship and sustainable practices among students and the community.” – MNTIC Teacher

Trout in the Classroom came to Minnesota in 2007 with the first tank in a Bemidji elementary school. With the support of Headwaters chapter funds and volunteers, as well as passionate DNR fisher-

ies staff, a small cluster of TIC schools gradually formed until 2015. That year, MNTU applied for and received a grant to be able to grow and develop this awesome program throughout the state. When I started in 2018, we had 27 schools and two nature centers participating in TIC around Minnesota. For the last five years, our team has worked hard to improve and streamline the program to allow for continued expansion. Below is a five-year summary of data demonstrating the awesome impact of our work.

- 65 TIC schools as of June 2023
- 14,031 TIC students participating in MNTU-led programs, activities, and events

- 1,904 summer fishing skills program participants
- 650 TCTU youth education volunteer hours

Something to remember about these numbers is that they only reflect the direct work our team and Twin Cities area volunteers put in with TIC and fishing skills programs! There are hundreds more students around the state that are participating in TIC-related lessons led by their teachers, DNR fisheries staff, and other organizations throughout each school year. There are also hundreds more hours of volunteer time not included here, to include egg delivery and all the awesome education work chapter members do with youth around the state.

With another grant received from the LCCMR, we were able to hire a team and continue bringing new schools into the program. This 2023-2024 school year has 72 schools and two nature centers participating in TIC, with 14 of them new to the program. Head to www.google.com/maps/d/u/1/edit?mid=13jm-QUQJn1uLvdp5mJx-VWTIJfh2A7-&usp=sharing for the current MNTIC map for those reading this digitally and are curious where schools are located.

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 hundreds of miles to every corner of the state, leading field days with TIC schools. They



STILLWATER HIGH SCHOOL STUDENTS COLLECT AQUATIC INSECTS AND TEST THE WATER QUALITY OF BROWN'S CREEK TO ENSURE IT IS READY FOR THE RELEASE OF THEIR TROUT.



DURING THEIR SCHOOL'S FALL FIELD DAY EVENT, TIC STUDENTS FROM CLOQUET HIGH SCHOOL PAUSE FOR A PICTURE WITH MNTU'S EDUCATION SPECIALIST, EVAN GRIGGS, BEFORE FISHING IN THE ST. LOUIS RIVER.

will have worked with over 1,700 students, getting the majority of them into waders and then into the water in order to collect insects for identification, using them as biotic indicators of water quality. Aquatic insect studies take place in a huge variety of water bodies, from trout-filled creeks to rivers, lakes, and ponds.

A lot of schools are unable to get students to an offsite body of water for their fall field day, so small, mucky, neighborhood ponds become the insect study sites. Even though these aren't bodies of water that hold trout or even a lot of fish, our team is often surprised at the amount of biodiversity students find in them, to include dragonfly and damselfly nymphs, water scorpions, snails, giant water bugs, and crane fly larvae. Students also assisted with water testing and data recording using the WiseH2O

citizen science app. One lucky group in Cloquet got to fish with Evan in the St. Louis River as a part of their field day event and had great success catching a few off the bridge.

We had another successful summer of fishing skills programs. Over 600 participants attended spin and fly fishing programs held around the Twin Cities in partnership with various organizations. A special shout out to TCTU members Yves Charron, Mike Grengs, and Gary Wittrock. Yves and Mike took on leading programs themselves when we got into a bind and needed some coverage. Gary worked closely with Cabela's in Rogers to coordinate Family Fly Fishing events at the store where participants learned about aquatic insects with live specimens, casting, fly tying, and gear. Thank you also to all the other volun-

teers that assisted with the Cabela's events and fishing skills programs held throughout the summer!

Egg delivery day is scheduled for Wednesday, December 6 this year and we rely on a team of volunteers 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 74 schools in that one day! Contact Amber Taylor, 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, for more information.



LEFT: AN EIGHTH GRADE TIC STUDENT CHECKS HIS NET CLOSELY AS HE WADES THROUGH THE VERMILION RIVER ON THE HUNT FOR AQUATIC MACROINVERTEBRATES OR OTHER LIVING ORGANISMS TO COLLECT AND IDENTIFY.

RIGHT: TWO HAPPY PARTICIPANTS SHOW OFF ONE OF THE FISH THEY CAUGHT AT A FISHING SKILLS PROGRAM LED BY MNTU VOLUNTEERS, YVES CHARRON AND CAITLIN COLLINS.

CLEARWATER RIVER TROUT

A SYNERGY OF HABITAT WORK AND TIC

By Bob Wagner

Minnesota is not just a land of 10,000 lakes, but also has 6,564 rivers and streams comprising 69,000 flowing miles that all of us canoers, kayakers and fly fishers greatly appreciate. The Clearwater River is ranked 21 in length at 147 miles. However, like most trout streams, only a fraction of that total length (4.5 miles) is suitable trout water. What's unique about the Clearwater in north central Minnesota is the last couple years of DNR Fisheries electrofishing survey results and the Trout in the Classroom (TIC) program.

Some necessary background information to better understand this timely and important synergy: Headwaters Chapter 642 Trout Unlimited volunteers did some habitat work on the Clearwater River prior to the TIC program, thanks to the coordination of John Sorensen. The DNR fisheries program also completed several streambank restoration and habitat improvement projects over the last 17 years. All of this healthy habitat work has contributed to a growing number of trout surviving over the winter, adding to total numbers and size of trout in the population. This river has been the designated approved release site for all 17 years of TIC-raised fingerlings.

Tony Standera, a fisheries specialist for Minnesota's DNR, maintains a database containing 20-plus years of fish survey data collected in the trout management area of the Clearwater River and has contributed to the Bemidji area's TIC programs as an educator for the past 16 years. Survey work conducted this past September once again demonstrated a unique synergy involving TIC-released trout and the Clearwater River.

Not to ruffle any feathers of "word geeks," I'm using the word synergy as in a synergistic relationship of mutually complementary collaborating agents, one being TIC trout and the other being a healthy river environment. In other words, the data suggests that TIC trout have been persisting in the stream in numbers comparable to traditionally stocked trout. Both need the habitat and restoration work to thrive and survive over the winter. Here's the key point, TIC and habitat work are playing mutually supportive roles. Here's the data or, if you will, the proof in the pudding.

The electrofishing dataset for the Clearwater River consists of sampling locations and lengths of sample sites, species captured (brown or rainbow trout), fish numbers per 100 feet and mile, numbers of fish by ½-inch length groups, and total numbers of fish captured annually. Analyzing this data over the last five years (2021 skipped for low water) Tony has identified an interesting trend in the growth and survival of TIC-reared fish that now appear to be contributing to



TIC STUDENTS WORKED WITH CHAPTER VOLUNTEERS AT THEIR CLEARWATER RIVER TROUT RELEASE DAY.

the trout fishery in the Clearwater River.

TIC-released trout are identified from Tony's electrofishing results in the length frequency distribution as trout ranging from five to nine-and-a-half inches in length. "Since the Clearwater River is stocked annually with catchable-size rainbow trout, we can usually determine a fish's age by its size. Most trout stocked in the spring are at least nine inches in length and will put on several inches of growth over the summer. Since there is no reproduction occurring, we can assume that most, if not all, trout less than nine or so inches in length are coming from the TIC program. These fingerling trout are approximately two to three inches in length at the time of stocking in late May and some years may grow to five inches in length or more that first summer," Standera said. "Trout approaching the nine-inch length interval are likely age-one fish from the previous year's TIC program. It's likely that some of these fish continue to survive and grow into catchable-size trout, but they become impossible to distinguish from stocked fish at that point."

September 1 of this year there were 32 trout captured that originated from the TIC stocking of approximately 250 fingerling trout released three months earlier on June 1. Correspondingly, there were 41 trout captured in the stocked trout length groups that measured 10 to 18 inches out of 2,600 that were stocked four months earlier by fisheries around May 1. The 32 measured TIC trout represented 44% of the combined total of 73 trout captured. "It is interesting that the TIC fish made up a similar proportion of the catch compared to hatchery reared trout given the fact that hatchery fish are stocked at ten times the rate," Standera said. Obviously, there are a number of factors that could influence survival rates between these two groups of fish. Angling is a major cause of mortality for the hatchery fish, but not the TIC fish. Predation is another cause of mortality that likely affects both groups

of fish. Tony thinks the difference in survival rate "success" could relate to "TIC trout spending less time raised in captivity (hatchery) and therefore being more adaptable to a wild river environment." Also the percentage of trout captured that likely originated from the TIC program has increased from 8% to 44% of the sample in the past five years.

In reviewing this data with Tony Standera we also discussed the possibility of fisheries fin clipping the TIC trout either at the time of stocking or when they are captured later in fall electrofishing surveys. This fin clip would help us to determine in future years how many TIC trout are also in that 10- to 18-inch category we are calling "stocked trout." It's highly probable that the TIC trout will show up as marked (fin clipped) fish that do overwinter and are playing an even larger role in the fisheries of the Clearwater River.

Speaking of probability and the future, TIC has grown from a handful of classrooms in Minnesota to over 70 in this same five year period of time. Therefore, all those 70 tanks of TIC-released

fingerlings across Minnesota have the capacity to greatly enhance the possibility of catching a trout! Anecdotally, a few of us believe there have been larger rainbows caught in the past couple of years in the Clearwater river than any previous time.

It's exciting to see, hear and write about another positive aspect of TIC's contribution to healthy productive trout streams. I'm hopeful and encouraged that the next beautiful, bright rainbow pulled into your net was possibly raised by a classroom full of bright-eyed students who spent around 120 classroom days caring for and learning from this same fish. This same trout could represent far more than adding a catchable fish in the river, but, more importantly, a classroom full of educated advocates that will in the future appreciate and support a sustainable environment of healthy rivers with trout just like the Clearwater River.

Bob Wagner is a past-president and current board member of the Headwaters Chapter. He lives in Bemidji with his wife Val.



STUDENTS LOOK FOR RECENTLY RELEASED TROUT IN THE CLEARWATER RIVER.

MINNESOTA COUNCIL UPDATE - CONTINUED

By Brent Notbohm, Minnesota Council of TU Chair

Continued from Page 3.

MNTU has averaged well over a million dollars worth of work every year since the Legacy Amendment was passed and John was hired as Executive Director in 2009. To give that some perspective, no other state TU organization has completed even close to the 100+ miles of habitat work that we have in that timeframe. That is an astonishing accomplishment for an organization with so few employees, which is precisely why the Board of Directors created and implemented a staff hiring road map with the 2021-25 Strategic Plan. Both the Habitat Program Director and the Assistant Director were identified as key positions in that road map.

We are so very fortunate in Minnesota to have several pipelines for state funding—most notably the Outdoor Heritage Fund (OHF) for our habitat program and the Legislative-Citizen Commission on Minnesota Resources (LCCMR) for our education program. However, it is important to understand that there are limits to what these grants can and can-

not fund. OHF and LCCMR cover the cost of specific programs within certain timeframes, but MNTU must apply for new grant funding on a regular basis—work intensive processes that are not covered by the grants themselves. Also, crucially, these grants do not fund MNTU's general operations budget, which includes essential personnel and organizational management, fundraising by our Development Director, and the non-volunteer portions of our communication and advocacy work. For these vital operations we rely primarily upon unrestricted donations from our members and a few key fundraising opportunities like the annual Great Waters Fly Fishing Expo. In recent years we have also received several significant bequests, enabling the hiring of our new and much needed staff. MNTU receives no funding from TU National (TUNA), though they provide us with necessary organizational functions like human resources and accounting services. The portion of membership fees that TUNA gives back to the state goes directly to the chapters. Contributions made to TUNA by Minnesotans are not shared with MNTU.

Needless to say, successful fundraising is needed for us to sustain all we do at MNTU.

In recognition of this need, the MNTU Board of Directors unanimously adopted a 100% Board Giving program last spring for which every member of the Board donates an amount they consider personally significant. This fundraising program comes on the heels of our very successful River Keepers Council initiative made up of donors who contribute at least \$1,000 to MNTU annually. If you are financially able, please consider joining the River Keepers Council—a vital group for the continued success of MNTU. Please contact our Development Director, Mark Abner, if you wish to join the River Keepers Council or make a donation in any amount.

I share this all to clarify three key points:

MNTU is a fiscally responsible organization that accomplishes a great deal, especially considering the modest size of its staff.

MNTU utilizes an array of funding sources to do its work, some of which is restricted to particular programs such as habitat and education.

MNTU relies heavily on your contributions to fulfill its mission, with unrestricted individual giving being vital to support our general operations and advocacy work.

Please feel free to contact me if you have any questions concerning this topic. Like so many of you, I am a volunteer who values service and dedication to the causes I believe in. Many of us donate our time and talents to MNTU, many of us donate money to MNTU—all of which is sincerely appreciated! As we continue to strengthen our environmental advocacy program and fortify our operations with new staff, we need your help more than ever. The waters may be rocky at times, but we are a growing organization of strong paddlers determined to journey on.

Thank you for your support of MNTU!

SECRET SPOTS HEAD TO FRENCHMAN'S CREEK

By Bob Luck

A couple of years ago I discovered a creek with a lovely upstream section offering excellent hopper fishing and a good blue-winged olive hatch, and a junky stretch close to the mouth with some impressive logjams and, I suspect, equally impressive trout inhabiting them. The fish in this creek run larger than average, and I have caught several browns in the 16- to 18-inch range. Hardly anybody else fishes it, and I have come to view it, rather possessively, as my secret stream. Last September, Greg Olson, the president of the TU chapter in Western Wisconsin, took me out for a day of fishing. We first tried the Trico hatch on the Rush, but it was sputtering out. "No worries," Greg said, "I'll take you to my secret stream. I always catch fish there. Big ones." After considering a blindfold but settling for a vow of silence, he drove me to a bridge on my secret stream. We caught some big fish, just as promised. We agreed to keep the stream's name between the two of us, and I have Greg's permission to write about it only if I refer to it as "Frenchman's Creek" in homage to the elusive "Frenchman's Pond" featured in the works of Robert Traver. This experience taught me there are fewer true secrets on Driftless streams than I thought, but that just means I have to look harder.

One of my current prospects is a stream that I heard about from an old-timer at a fly fishing show last spring. He told me it requires a long walk-in and a tricky descent through a steep ravine. I took a look at the map when I got home and saw that there were no bridges for three miles either upstream or downstream from the walk-in—a good sign. A week later I drove out to the stream. If any-

thing, the old-timer had understated the difficulty of the descent, but I made it down without breaking a rod—or a leg. It was a cold morning, and I caught nothing in the first hour, but as the water temperature warmed from the high 30s to the low 40s, I started picking up fish on nymphs. First in slow, deep holes with almost undetectable takes, and later in riffles. After catching close to 20 fish, I switched to a streamer and caught a couple more. A 16-incher emerged from a root wad and took a swipe but didn't like the looks of the fly—or more likely he spotted me.

I fished the stream three more times this year. I ran into heavy caddis hatches in May, and caught some nice fish up to 15 inches. I found a walk-in that could be safely negotiated without ropes and pitons, and learned that the stream is flashy and not worth fishing if more than an inch of rain has fallen. I am not yet ready to put it in the same class as Frenchman's Creek, but I will definitely be fishing it more next year. Like one of my friends says about a new brand of beer: he has to try at least a pint, and preferably several, before he can really decide if he likes it. Not everybody is as forthcoming with information as that old-timer. I was teaching fly casting at a Future Farmers of America event at Goodhue Public School last spring when one of the teachers stopped by with a student whom I would guess was about 10 years old. "Show him what you showed me," said the teacher. The kid pulled out his phone and displayed a photo of a 25-inch brown. "Where did you catch it?" I asked in the most innocent-sounding voice I could muster. The kid wasn't buying it. "Somewhere in Southeast



THE AUTHOR WITH A QUALITY BROWN ON "FRENCHMAN'S CREEK."

Minnesota," he said. "Can you get any more specific?" He just gave me a pitying look and walked off. I realized later that I should have asked him to Air Drop it to my phone so I could look up the GPS coordinates. I know that sounds shady, if not borderline criminal, but the trout was 25 inches, and the kid is eventually going to have to learn to protect his data. Most of the secret spots I have found in the Driftless are camouflaged by plainness: there just happens to be an undercut bank concealed by weeds, a trough in an otherwise unremarkable riffle, or a submerged log hiding under the shade

of an overhanging tree. My favorite secret spot is a deep hole in a small feeder creek that flows through a grassy meadow. The creek is so tiny that it looks like it would hold only fingerlings, but I have caught more 12-inch-plus trout from this hole than any other spot in the Driftless. I'm feeling generous, so I'll tell you where it is: a few hundred yards downstream from that bridge on Frenchman's Creek.

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

A NYMPHING PRIMER

THE DRIFTLESS TO THE NORTH SHORE

By Carl Haensel • Photos by Jade Thomason



NYMPHING DEEP RUNS CAN DRAW FISH OUT OF HABITAT SUCH AS LOGJAMS OR LARGE BOULDERS.

If you're headed out to a trout stream in Minnesota, it's likely that you'll have some nymphs along in your pack or vest. Trout feed underwater over 90 percent of the time. While some of this feeding is on large prey like crayfish, minnows or sculpins, often it is on nymphs. Nymphs, broadly speaking, can be defined as the young life stages of insects including mayflies, stoneflies, dragonflies and damselflies. Most fly anglers also include flies that imitate caddisfly and crane fly larvae, scuds, sowbugs and other small organisms as "nymphs" when sorting their fly boxes. To fish with these flies, there are a variety of techniques that can be used. All involve getting the flies underwater and down to where the fish are holding. Read below to explore some of the different methods that anglers can use to present their nymphs to trout. Techniques can work in both the Driftless streams of southeast Minnesota as well as the freestone waters of the North Shore, and on streams and rivers in between. Pay attention to local hatches and seasons to select nymphs that imitate what can be found in the water that you're fishing.

Dead Drift Indicator Nymphing

Most anglers in the Midwest start fishing for trout with a dead drift or indicator rig. It works well on conventional eight- to nine-foot fly rods loaded with floating fly line and a tapered knotless leader. This technique involves at least one fly at the end of the leader, with a small amount of shot or other weight placed about a foot above the fly. An indicator is then attached to the line at about one-and-a-half times the water depth above the fly. This length var-

ies with every riffle, run or pool fished. The amount of weight also varies. The indicator is not intended to float the flies in this presentation, but rather to show their progression down the river. Often, this rigging uses two flies instead of just one. In most cases with a two-nymph rig, I like to tie my first, or lead, fly on to a stronger tippet, usually 3x or 4x. Then, I tie the lighter trailing tippet to the bend of the hook, often 4x or 5x, and sometimes as light as 6x. This type of rigging will keep you from losing your entire setup when the trailing fly invariably snags on the bottom while you're fishing. This trailing tippet should be between 12 and 20 inches. Some anglers prefer to tie their trailing tippet to the eye of the lead fly, which is another effective option for this type of rig. For a producing presentation of smaller flies, use your large fly as the lead pattern, and the smaller one as the trailer.

When presenting this rig to the river or stream, it's often best to fish from a quarter-down position. Try roll casting with this type of nymph rig to avoid the tangling that often occurs when flinging flies, shot, weight and an indicator overhead. It will save time and frustration on the stream. Once the rig is in the water, the floating indicator will show the progress of the flies moving downstream. If the indicator hesitates or stops, either a trout has grabbed a fly or you may be stuck on the bottom of the stream. Snagging up on rocks or logs is a regular occurrence with this type of fishing. If you're not ever connecting with the bottom in a given riffle or run, your flies might be floating feet above the heads of the trout you want to catch. Try adding

some additional weight or lengthening the distance between the lead fly and indicator to get deeper in the river. Conversely, remove weight if you're snagging too much to avoid losing flies.

Hopper-Dropper Fishing

Another common way that anglers present nymphs to fish is with a hopper-dropper rig. This utilizes a large, buoyant fly like a foam grasshopper as a lead fly, along with a single nymph as a trailer. The trailing tippet is usually tied to the bend of the hook of the hopper. Patterns like Chernobyl Ants or Hippie Stompers can make great hopper-dropper lead flies. The length of the trailer can vary from as short as 18 inches to three feet.

An attractor-style beadhead nymph like a Hare's Ear, Pheasant Tail, Pink Squirrel, or Copper John all can work well in sizes 12 to 16. Using a tungsten bead pattern can help your fly get deep. Most of these rigs will not necessarily get the nymph down to the bottom. Instead it will cruise along the mid-depth of the water column. It is often best fished in faster riffles and runs, especially along habitat-improved banks found in the Minnesota Driftless. I like to use a heavier tippet to the hopper, like 3x, along with a lighter tippet to the trailing nymph, sometimes as light as 5x. This can help you from losing the entire rig when you hook some brush along the bank as you throw your hopper into the grass.



NYMPH BOXES DON'T NEED TO BE FANCY TO BE EFFECTIVE. BRING ALONG WHAT YOU HAVE AND PAY ATTENTION TO WHAT IS HAPPENING ON THE STREAM.

Euro or Czech Nymphing

These tight-line fishing methods can work very effectively to present flies to trout in fast water situations where a dead-drift presentation is not as important. In addition to the primary styles above, anglers also separate out Polish, Spanish and French nymphing styles. There are variations between the techniques and setups, but broadly they involve maintaining direct contact with the fly using a tight line to lower a relatively heavy nymph or nymphs into the stream. While you can try this type of nymphing with any fly rod, longer, lighter rods like 10- or 11-foot, three- or four-weight models are popular for this style of nymphing in the Midwest. There is no float style of indicator used in these methods, though a section of “sighter” or fluorescent indicator tippet is usually used and tied into the rig. A standard knotless, tapered leader can be used to start your rig, but this is where the similarity in rigging ends. Attach around 20 inches of sighter tippet to this, using different colors, or leaving tag ends as desired. Then attach a tippet ring if desired, and three to six feet of 4x or 5x tippet. Your fly, with no additional shot or weight, will be at the end of this.

The Euro nymphing cast begins by lobbing the heavy fly or flies upstream into the current and letting them sink to the bottom. The angler then raises the rod tip, tightens the line and slightly leads the flies downstream through the water, maintaining contact at all times with the rig. Faster, rockier runs are great places to start trying this technique in Minnesota. Watching the sighter tippet for takes can be key to connecting with fish. Some anglers like to fish a single, heavy nymph, while others will use a trailing tippet attached above the point, or a bottom fly to add another pattern. When using two flies, remember that your bottom, or point, fly will be your heaviest with this type of rig. Tungsten-headed nymphs are key to get down to



THE LARGEST FISH IN THE STREAM ARE MORE DIFFICULT TO CATCH ON DRY FLIES. DROPPING NYMPHS DOWN TO THEIR LEVEL CAN HELP ENTICE A STRIKE. NOTE THE TINY BEADHEAD NYMPH IN THIS BROWN'S MOUTH.

the bottom quickly when Euro nymphing. Lighter patterns can be used on the trailing tippet. Often they are slim and have additional weight added to drop through fast water swiftly. Perdigon patterns or other similar flies tied on jig hooks help keep your hook point up and avoid snagging. Plan to lose flies as you start to practice this technique and head to the river with some spare patterns to start the day.

Swing Nymphing

Casting flies on the swing has become increasingly popular over the last few years. While anglers often think of it as a streamer presentation methodology, it also can be very useful with nymph patterns. Indeed, anglers have been focusing on swinging presentations with nymphs for many decades. Jim Leisenring from Allentown, Pennsylvania popularized

his “Leisenring Lift” technique in the 1940s, combining a dead-drift cast to sighted fish with a swing and rise of the nymph or wet fly as the fly neared the target trout. This type of presentation is still deadly today, and works well with all manner of nymphs, especially when a hatch is just about to begin, or even after it has started. While the lift works well with sighted trout, a standard down-and-across swing will take trout on nymphs regularly in riffles, runs and pools alike. While natural patterns and attractors both work, I find that flies with more hackle or legs that wiggle in the current can convince fish to bite when swinging. Since you’re often connecting with fish on a tight line, having your drag set lightly and using a stronger tippet can be handy. I often use as heavy as 3x tippet in these situations, and use a loop knot to keep the fly on the end moving attrac-

tively through the current. Keeping your rod tip low to the water and following the line and fly with the tip as it swings will help keep you tight to the fly when a fish hits. While it’s entirely realistic to fish a nymph swing with a “regular” eight- to nine-foot trout rod and floating line, some anglers may want to try using a trout spey setup, with a longer rod, along with line designed to shoot some distance. Pairing this with a light sink tip can keep your nymphs in the strike zone for longer, and help with covering additional water on larger trout streams around Minnesota.

Carl Haensel is the Northern Minnesota Vice Chair for MNTU and lives in Duluth. He owns the fly fishing guide service Namebini and is the author of Fly Fishing Minnesota.



HABITAT-IMPROVED SECTIONS OF STREAMS OFTEN HAVE EXCELLENT DEPTH THAT IS WELL SET UP FOR NYMPHING. CHECK OUT MNTU.ORG TO FIND STRETCHES THAT MN TROUT UNLIMITED AND PARTNERS HAVE IMPROVED.



FLY TYING

THE PURPLE HAZE SPECIAL

By Paul Johnson



My Purple Haze Special is a variation of the standard Parachute Purple Haze and Walter Weise's Purple Haze Cripple. I like how this fly floats and with the white wing, I can see it a little easier in broken water or poor light conditions. For the abdomen, I use a stretchy floss that tends to keep its true color even when it is wet or coated with floatant, as compared to dubbing which always seems to get darker. This is a very good dry fly to have in the spring and also again in the fall when the baetis make their appearance.

So why would a purple fly work so well as a baetis imitation? Heck if I know, but they seem to catch fish.

Materials List	
Hook:	Dry Fly Hook Size 16
Thread:	8/0 Uni, Purple
Shuck:	Zelon Mayfly Brown
Abdomen:	Bug Legs in Purple
Wing	Widows Web, White
Collar:	Rooster Hackle Brown

If you have any questions about this fly or any of my other flies, please contact me.
Paulwaconia@gmail.com



Step 1.
Place the hook in your vise. Start your tying thread at the 2/3 mark and wrap a thread base to the bend of the hook.



Step 2.
Tie in a length of Zelon and clip to a hook gap in length.



Step 3.
Tie in a length of Bug Legs. Take care to avoid lumps and bumps on the hook shank.



Step 4.
Wrap the Bugs Legs forward in touching turns to the 2/3 mark. Secure with your tying thread. Clip the excess.



Step 5.
At the 2/3 mark, tie in a length of Widows Web. Form a thread dam in front of the wing. Clip off the butt ends leaving a small clump.



Step 6.
Tie in a rooster hackle just behind the wing.



Step 7.
Make two wraps of the rooster hackle behind the wing and one full wrap in front of the wing. Secure with your tying thread and clip the excess. Whip finish.



Step 8.
Clip the wing so it stands just a little longer than the hackle wraps. Go fish!



2023 GIVE TO THE MAX

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. In the prior fiscal year, 215 donors, like you, made gifts to Minnesota TU totaling \$82,000. Their support was essential and allowed us to restore multiple sections of trout streams in the southeast and replace poor culverts on North Shore rivers, reopening miles and miles of fish habitat upstream.

Donor funding also allowed nearly 1,000 kids in 70 classrooms across Minnesota to learn about clean water, freshwater ecology, and the trout life cycle through our ever-growing Trout In the Classroom program.

And we partnered with many allied organizations at the state capitol to respond and address with more urgency the recurring fish kills in the Driftless Region. Trout anglers also pressured the legislature to require state agencies to recommend changes to laws regarding the spreading of manure and pesticides in the porous limestone geology of the Driftless to try to prevent fish kills in the first place.

These are current examples of Minnesota Trout Unlimited's daily work to keep our state's waters clean, cold, clear and fishable.

Head to mntu.org/donate any time before November 16 to make your reoccurring or one-time donation. Thank you for your dedication to Minnesota trout streams!



MNTU PHOTO CONTEST

Rules of the Contest:

- Photos must be shot in Minnesota.
- Photos must include a trout, salmon or steelhead with water in the background of the photo, **OR** a water body that they inhabit.
- Photos must be submitted by January 15, 2024. Top entries will be published in the February issue of the MNTU Newsletter.
- All photos submitted must be sent in *.jpg format at their original resolution to the Editor at: mntueditor@gmail.com
- Please include the name of the photographer and the location the photo was taken in the submission.
- Submission of photos gives MNTU the right to publish photos in the MNTU newsletter, in online media, and in other print mediums.

Prizes:

The top three entrants will receive a box of a dozen flies ready to catch trout this season. The overall winner will receive a Minnesota TU t-shirt and an official MNTU hat.

Share this announcement with your friends near and far, we welcome submissions from members and non-members alike. Photos from the contest will be used in the upcoming February 2024 issue of *TU MN* and will be highlighted on our website, Facebook page and in other promotions.

Questions? Contact the newsletter editor at: mntueditor@gmail.com.



LEFT: TOM CARPENTER PHOTO, 2022. RIGHT: SETH HOFFMAN PHOTO, 2021.



MICHAEL MELFORD PHOTO, 2022.

THE IMPORTANCE OF CLEAN STORM DRAINS

YOUTH SERIES

By Jim Emery, MNTU Educator



LEFT: SENSITIVE SPECIES LIKE BROOK TROUT NEED THEIR WATER TO BE CLEAN AND CLEAR.

RIGHT: BRUSH AWAY LEAVES AND OTHER DEBRIS TO KEEP YOUR LOCAL STORM DRAIN CLEAR. PHOTO COURTESY OF ADOPT-A-DRAIN MN.

They are everywhere, on most every street. We don't even see them, but they are really important. If you get up in the morning, and someone on the radio says it rained two inches last night, it doesn't mean you'll have to walk through two inches of water all the way to your school bus stop. The storm drains carry most of the water away, keeping our streets safe and dry.

Something we don't think very often is "What happens to this water?" But maybe we should. We all live on what's called a "watershed." That word means that gravity pulls water downward, to where it collects into common water bodies, such as lakes or streams.

In most cities, we've done some human engineering to help that process along by turning our watersheds into "pipesheds."

A pipeshed is just what it sounds like it would be. Water from our streets drains into storm sewers, and follows a series of large pipes downward into those same rivers and lakes.

We need to care about what happens to the water in our pipesheds, because of what doesn't happen. Unlike the wastewater from our homes, the water that drains into a storm sewer is never treated. Storm water makes its way down the pipe, directly to a lake or river, carrying literally everything from the street—salt, pet waste, litter, chemical leaks from automobiles—with it. Everything on the street will find its way to the waters that we so enjoy as Minnesotans.

If you are raising trout in your school, you will learn about what these special species of fish need to thrive. Trout need

water that is very clean, free of toxins and pollutants, and has plenty of dissolved oxygen. Many of our urban waters are impaired by the toxins that flow into them from stormwater, and aren't places where trout could ever live.

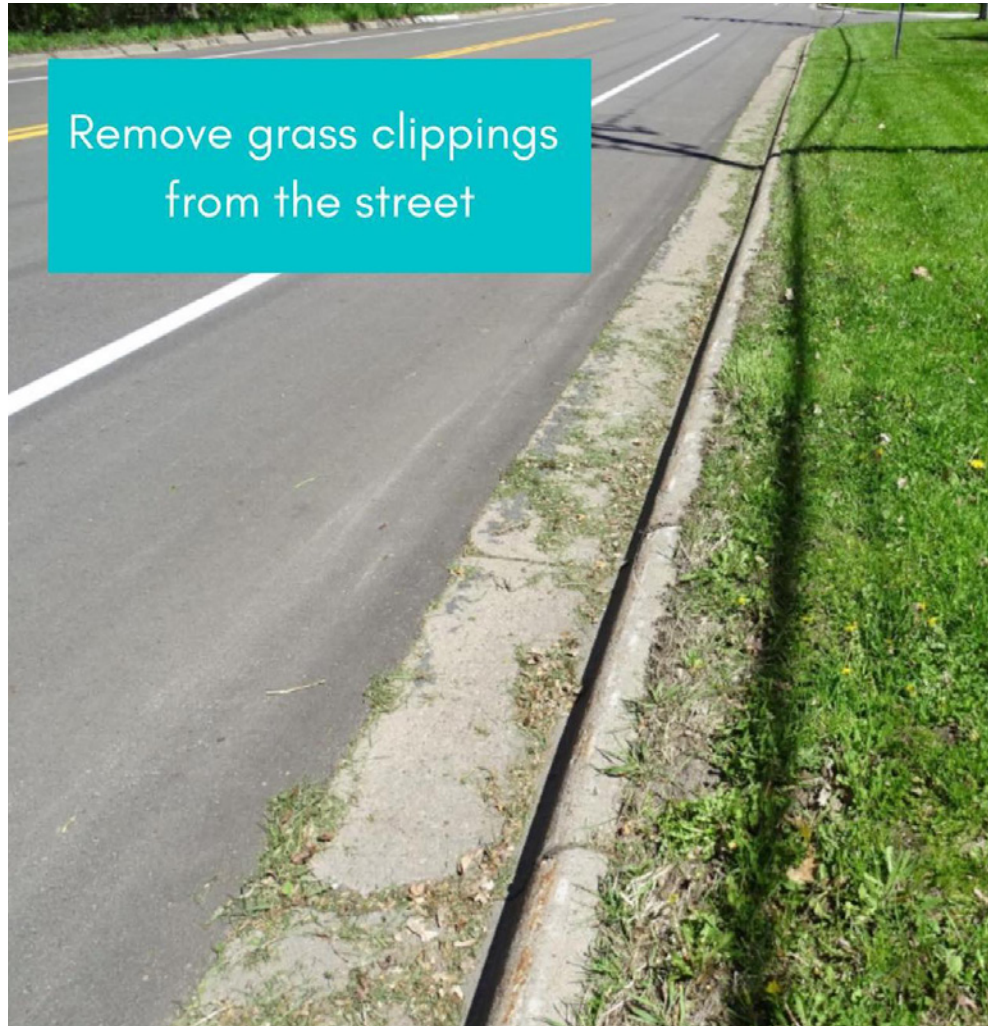
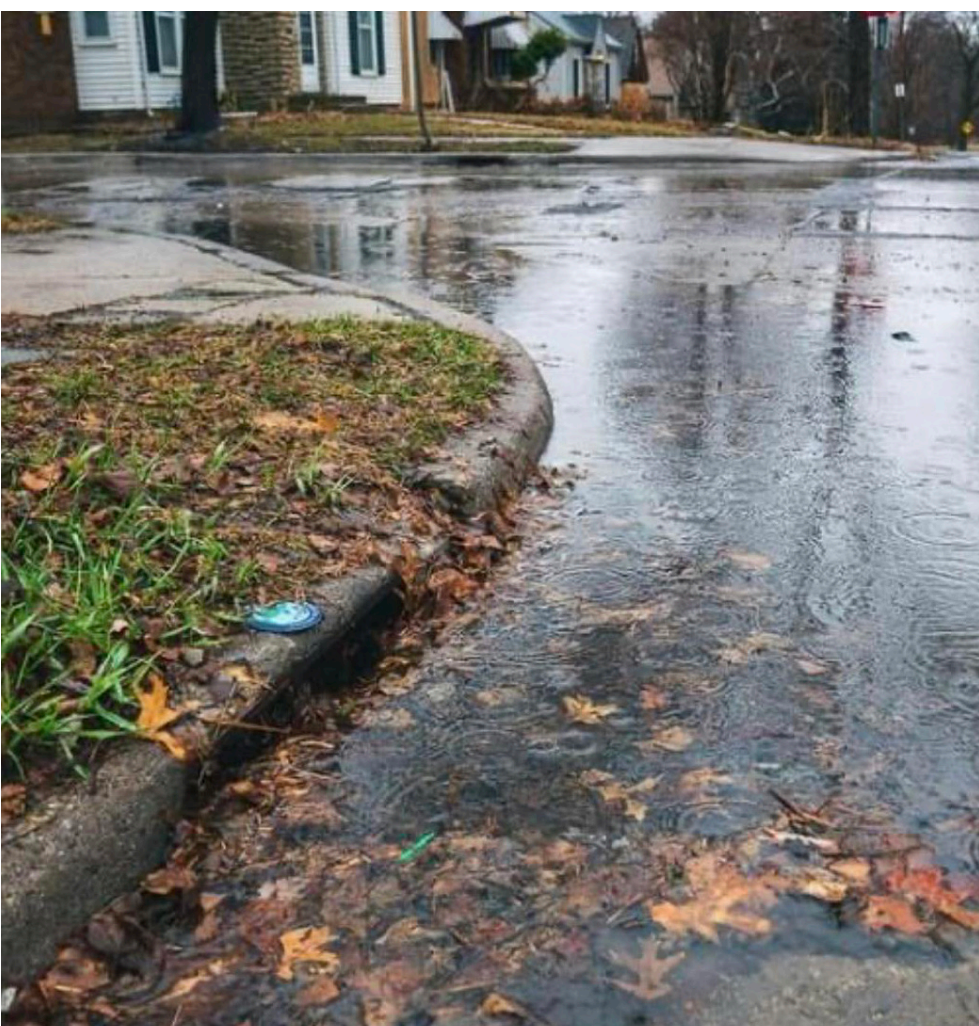
Trout aren't the only ones who need clean water. Many insects who start their lives in the water need their aquatic habitat to be super clean too. If the water is too polluted for those bugs to survive, the food web gets disrupted, and there aren't many fish of any species, because there is not enough food to support them.

Take some time to look down into a storm drain on the street where you live, or around your school, and you might be surprised by the things you see in it.

You can do your part in caring for storm

water by looking at what is on the ground around you, and thinking about how our actions away from the water will have an impact on a nearby lake or stream. Pick up litter that you see. If you have a dog, make sure their waste always gets picked up and put in the garbage. Your family or classroom can even go the extra mile, and take responsibility for keeping a storm drain near your home or school clean throughout the year. Find out more from the Adopt-a-Drain program: mn.adopt-a-drain.org

Storm drains are something we would have a hard time getting along without. If we appreciate them a little more, they can teach us something important about caring for our waters.



STORM DRAINS CAN CLOG WITH ANYTHING, SUCH AS FALLEN LEAVES, GRASS CLIPPINGS OR TRASH. ENSURING THAT THEY ARE CLEAR ALLOWS FOR STORM WATER TO DRAIN PROPERLY FROM THE STREETS AND KEEPS HARMFUL POLLUTANTS FROM OUR WATERS. PHOTOS COURTESY OF ADOPT-A-DRAIN MN.

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 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 with your committee interest.

HABITAT HELPERS NEEDED

We need volunteers to assist with statewide 2023 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 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

Last year at this time, I wrote about abnormal to severe drought conditions in our regions. A lot of the same was true for this past summer. Trips were planned to fish this fall and hopes of normal water flows on our rivers looked grim. The calendar turned to September and everything changed in a snap. We've seen 150-200% of normal precipitation between mid-September and October per Weather.com. Incredible amounts of water were recorded the weekend of September 24/25 with Duluth seeing close to four inches and spots along the North Shore measuring more than seven inches. This is the most rain our area has measured since the historic rain storm of Summer 2012.

The silver lining in such a storm is that as water levels receded, the North Shore rivers saw runs of pink salmon and the Brule River (WI) saw its first significant push of fish. Many pictures and success stories were noted on Facebook and Instagram. Even I was able to cash in a few hall passes and had some success on the water. I love hearing great news, but a storm of such significance has me wondering what the long lasting effects will have on our fisheries. Unfortunately, we won't be able to gauge the impact until we get into the next several years of survey data. Storms like this tend to have a negative impact on fisheries so we need to keep our fingers crossed.

We have a great program season schedule for 2023-2024. We are excited to be partnering with the North Shore Fly Anglers of UMD (University of Minnesota-Duluth) this year to bring some great events to our community. We just wrapped up a program on Fishing the Wisconsin Brule, presented by Andy Selvig. Andy sure knows how to navigate a river and bring fish to a net! We have our MNTU leaders coming to Duluth in November for a presentation and then have a fly tying get-together at the Great Lakes Fly Shop in December to round out 2023. 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 e-newsletter distribution list and stay up to date with our chapter news, send me an email at brandon.kime@gmail.com and we'll get you added to the list!

Hope to see you on the water!

Brandon Kime

Headwaters Chapter

This year marks our chapter's 30th anniversary. While some things tend to change, one thing has remained the same. That is our commitment to education. Not just for youth, but anyone who has an interest



GITCHE GUMEE VOLUNTEERS WORKED ON PLANTING AND MAINTAINING TREES ALONG KEENE CREEK IN DULUTH THIS SUMMER.

in learning about anything related to the sport of fly fishing and habitat restoration.

This summer we saw the return of our annual pike fishing event. The highlight for the group that fished on Lake Plantagenet was catching not one, but two dogfish over 27". The weather was windy, and there was even some sprinkling of rain, but the sun came out by the time the fish fry started. A special thank you to Mark Carlson for hosting at his house on Lake Plantagenet.

The Trout in the Classroom program at Gene Dillon is off to a great start. In September we had ALL of the fifth grade students participate in creating and setting leaf traps. That was over 250 kids. Evan Griggs taught the classroom portion and volunteers from the Headwaters Chapter handled the outside work. Unlike last year we didn't see snow, but instead 80 degree temps and a lot of sun. The kids were very excited.

In June we taught 16 girls from Camp Courage how to tie flies. In July we taught fly casting in Grand Rapids at the Forest History Center. In August we co-sponsored a booth at the Beltrami County fair with the Turtle River Watershed Association. The Watershed was a great partner and we hope to collaborate with them more in the future. Ten volunteers worked the three-and-a-half-day schedule. We had tons of interest in TU with lots of people signed up to learn fly casting. We also gave away a fly rod and reel and a box of flies. We talked with dozens of kids and parents who have taken our past Youth Fly Fishing program over the last 20 years. We have planted a lot of seeds that are growing into positive TU advocates. We also returned to the Youth Outdoor Activity Day in Alexandria. There we had over 900 people come through our booth. This event saw over 4,600 people this year.

Kris Williams

Hiawatha Chapter

Anyone who's fished in the region in the past several years knows what a blessing habitat improvement projects (HIP) have been, bettering so many streams and rivers, giving trout more places to live and giving us more places to catch them.

But how about other effects of HIP work?

On September 11, about a dozen Hiawatha TU members and some on ZOOM heard about other benefits of HIP from Dustan Hoffman, the Department of Natural Resources new southern stream habitat specialist, and Dr. Jenny Biederman, MNTU's new statewide habitat director.

Here's the basics of that work, which has increased dramatically in the past several years thanks to mega-bucks from Legacy Amendment coffers: Experts will go to a stream that has been beat up by too much erosion, heavy rainfalls, too many box elders and other trees along its bank and give it a major overhaul. Generally, that means narrowing the stream because they tend to be too wide and shallow (now and then, a stream might be too narrow), establishing deeper places for trout of all sizes to hide, getting rid of many of the wrong trees along it and (this is critical) shaping its banks so they slope back by about 3-to-1.

Sloping back is necessary because many streams have incised banks that are several feet tall. With a heavy rain, rising waters have no place to go, so they gouge the stream a bit deeper and often have to go faster to get through the incised portions. When sloped back, however, water spreads out, reducing its overall power so there's not as much erosion and also, some of the silt drops out in the floodplain.

Finally, they add riffle-run-pool combinations down the stream.

But Hoffman and Biederman also pointed out some ancillary benefits that we seldom see. TU is trying to document more of those benefits, Biederman said.

First, that means less silt heading down the stream into Mississippi River backwaters that are filling in much too fast; we're slowly losing a precious resource for fish, wildlife, all kinds of birds and bugs, and vegetation.

Second, as part of the project you might notice a few small ponds or side channels with little or no flow. Those are places for turtles, frogs and other critters to live.

Third, one I didn't know much about until the two told us about them, was they will sometimes dump unneeded dirt out of the floodplain but with a vertical wall so birds like bank swallows have a place to nest. They said they are already seeing some nesting in a few places. "Stuff recolonizes real quickly," Biederman said.

Fourth, more grasses and maybe even flowers grow on the banks, offering places for non-game wildlife to live.

Here are some other things we learned:

In streams with brook trout, brown trout can be a competitor, so it's good to take home some browns. "Keep a brown trout, save a brook trout."

Both showed before and after photos of projects, explaining what was done. One interesting one Hoffman talked about was Mazeppa Creek that has a monstrously high bank in one sharp bend. "It's like we are still dealing with those problems from 100 years ago" when wretchedly bad land use severely eroded hillsides and left deep gullies and streams in such bad shape.

MNTU CHAPTER NEWS



Vegetation management has become a bigger thing, Biederman said. They once contracted to have crews come back for one or two years. Now it's three years because it takes that long for vegetation to be established. Yet they also showed examples of new grasses flattened by floods yet they held, they stayed in place, and they keep the banks from washing away.

In winter, DNR crews cut out unwanted brush and other plants to keep the stream sides clearer (that unfortunately does not stop all nasties like wild parsnip from invading and conquering).

They are doing erosion loss estimates and the amount seemed staggering. Little Winnebago Creek can have 218.2 tons flow down, mostly in snowmelt or after heavy rains.

For 2024 and 2025, planned stream improvement projects and their lengths are: Maple Creek, 3,298 feet; Mill Creek, 6,170 feet; Trout Brook, 3,600 feet; Mazeppa Creek, 890 feet; Rice Creek, 6,996 feet; Cold Spring Brook, 4,917 feet; Gilbert Creek, 4,600 feet; and Root River in Lanesboro, length TBA.

John Weiss

Twin Cities Chapter

I am writing this note on the last day of the Catch & Release season in Southeast Minnesota. With our third year of drought, streams were low and clear this year, and catching trout wasn't easy! The rains we received in September and October were welcome; we are hoping for a good snowpack this winter.

Our second annual Oktoberfish fundraiser was held at the Forgotten Star Brewery on October 25. Over 100 TU members and supporters turned out to hear guest speaker Carl Haensel talk about some of the most memorable photos in his book *Fly Fishing Minnesota*. Including our silent auction, we raised over \$10,000 for Youth Education. Thanks to all who participated!

2023 has been a big year for habitat projects in our area. In July we completed a massive 8,000-foot project on Hay Creek, and in October we finished up 3,600 feet on Trout Brook. The projects already look terrific, and they will be ready to fish next Spring. Two more reasons to brag that the Twin Cities has the best trout fishing of any big city in the world. Thanks to the Legacy Fund for funding the projects, and to all the DNR and MNTU Staff who were involved. Special thanks to volunteer Tony Nelson, who is on a mission to protect and improve every trout stream in the Twin Cities region. You can read about the projects and find photos and maps at the following website pages:
<https://www.twincitiestu.org/blog/hay-creek-2023>



WIN-CRES PARTICIPATED IN A FLY FISHING RETREAT FOR VETERANS AT WHITEWATER STATE PARK.

<https://www.twincitiestu.org/blog/trout-brook-2023>

Bob Luck

Win-Cres Chapter

It has been an active summer for Win-Cres. Major themes are:

Outreach

Fly Fishing Retreat for Veterans at Whitewater State Park: On September 16, veterans were given an opportunity to learn about the healing potential of time on the water. Organized by Park Naturalist Sara Holger and supported by Win-Cres members and others, veterans were taught fly tying and casting, followed by a couple of hours of guided fishing. Time was spent reflecting on the trauma many of the vets have endured, and the opportunity to heal by spending time in nature. Each veteran was given a box of 25 flies, tied by Win-Cres members and friends, including the Laughing Trout Club.

The Trout Unlimited booth at the Winona County Fair gave more public exposure for TU. Many thanks to Roger Berg for leading this effort.

Habitat Work

Mowing paths along area streams: Organized by Dave Schaffer, Win-Cres members mowed trails along Garvin Brook and the South Fork of the Root River. We were unable to mow on Rush Creek due to difficulties with a balky landowner.

Japanese Knotweed: The more we look, the more we find. Work continued on the Garvin Brook corridor. Late in the year three additional patches were found approximately ½ mile downstream of previously known colonies. As these were on private land, we will be con-

tacting the landowners for permission to treat the colonies. State Forest land was sprayed in September by a DNR contractor. Knotweed colonies on East Burns Valley Creek were also injected. Between 500 and 600 stems were injected this season.

Joe Lepley Legacy: This spring we learned that a former Win-Cres President and an avid outdoorsman, Joe Lepley, had left the Chapter more than \$32,000 in his estate. After much discussion, it was decided to use the funds to establish an endowment for the Chapter with the

Winona Community Foundation. We also plan either a memorial bench or picnic table in Lake Winona Park, near the Japanese Cherry Trees that Joe loved.

Cedar Valley Creek was the site of major habitat work this summer, organized by MNTU and the DNR, and funded by the Legacy Amendment. Win-Cres members are pleased with the work, and report the stream is full of fish.

Chuck Shepard



DAVE SCHAFER OF WIN-CRES ORGANIZED TRAIL MOWING ALONG GARVIN BROOK AND THE SOUTH FORK OF THE ROOT RIVER.

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SELECT POETRY

By Larry Gavin

After All

Riffle and pool form steps
up the valley disappearing
off to the north and around a corner.

Trout rise regular as memory recalled
counting time and measuring
what passes for this life.

Insects restate the obvious
a story of repetition and resilience
a testimony to a faith in this world

a belief without proof that being
here makes me better. It pulls
from my heart those things

closest to all hearts until all
that's left is a feeling as suspect
as the belief engendered there.

One can only guess at mystery
and forbearance. The trout
care little about all this and go

on being trout, perhaps that's the real
lesson of the days fishing
after all.

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

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Minnesota TU is the leading voice, your voice, advocating for coldwater fisheries and watersheds in Minnesota and the region. Our effective advocacy work, and the work necessary to obtain grants to fund our stream restoration and environmental education programs, **cannot continue without your direct financial support of Minnesota TU.** We receive none of the donations raised from TU's direct mail and other fundraising efforts, and the small portion of your membership dues we receive is less than the cost to print and mail this newsletter. We need direct support from you - members and non-members alike - to keep us working effectively for you, your family and your friends. Every dollar of your donation will be used here in Minnesota.

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