

# Hooked on Mille Lacs Lake



## Inside this issue:

- Habitat Projects
- The Bite
- What's Bugging Me
- More Myths and Facts

## Current Mille Lacs Fishing Regulations:

<http://www.dnr.state.mn.us/fishing/millelacs.html>

## Tiny Tidbits



While not very noticeable to anglers, **freshwater sponges** are common on the harder substrates of Mille Lacs. In the winter they form what are called "gemmules" - basically these are the tiny resting stages of this animal, which allows them to survive the harsh temperatures of winter. Freshwater sponges are not very tolerant of pollution.

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## Habitat projects at Mille Lacs



Above two photos: Before and after photos from the mouth of the Rum River. Bottom: Close up of the newly constructed weir dam.

By Rick Bruesewitz

MNDNR Aitkin Area Fisheries Supervisor

**M**ille Lacs anglers may notice changes on the shoreline this spring. Two projects that the DNR has been involved in were the Rum River Dam project, and the Vineland Bay Resort harbor removal project.

### Rum River Dam Project

The new Rum River dam at the outlet of Mille Lacs (where our carp barrier once was) is a co-operative project between DNR Wildlife and the Mille Lacs Band. The objective is to lower the water in Lake Ogechie to increase wild rice production for waterfowl and ricing, while not altering the Mille Lacs water level regime.

The first part of the project is completed (moving the dam to the outlet), and the next step will be to modify and lower the Buckmore Dam at Mille Lacs Kathio State Park to allow for the water in Ogechie to be lowered.

During the review process, DNR Fisheries and Ecological and Water Resources staff recommended the use of a series of rock-arched rapids to allow for fish movement across the weir in all but the lowest water level conditions. This will allow fish to continue to travel to and from Lake Ogechie in the spring. However, just like at Buckmore Dam, there will be times when the Mille Lacs water level will be so low that it will not flow over the weir. Usually those times are in the late fall and winter.



## Habitat Projects, continued

### Vineland Bay Harbor Project

Vineland Bay Resort harbor removal project is a DNR Fisheries project, paid for with Outdoor Heritage funding.

This parcel of land was once an operating resort owned by Rose and Harry Simons. It was purchased by the DNR in the 1980s to establish a public water access, but that project was discontinued when it was found that the area was rich in cultural artifacts. It has since been adopted by Mille Lacs Kathio State Park.

DNR fisheries has a long history of not being particularly fond of man-made offshore jetties and harbors on Mille Lacs because they interrupt the longshore drift on this big walleye lake. They tend to create the quiet water habitat more suitable for species like bullheads, rather than walleye.

This longshore drift is what keeps the sands moving around the lake and thereby keeps the fine sediments from filling in the clean, rocky habitat that walleye use for spawning.

Since the purchase of the property in the 1980s, the harbor has been unused. In an effort to restore the shoreline and longshore drift in this area, the project was submitted as part of DNR's Fisheries Habitat Improvement Package, and was funded by the Outdoor Heritage Council.

Deconstruction began this past February. All the in-water work was completed by the end of April, and all of the seeding and erosion control was finalized April 21.

I look forward to seeing the new aerial photos this summer.



*Vineland Bay Resort harbor is seen circled in the middle of this 2007 aerial photo from DNR Forestry. The jetties and breakwalls were removed this winter to restore a more natural shoreline to Mille Lacs adjacent Mille Lacs Kathio State Park.*



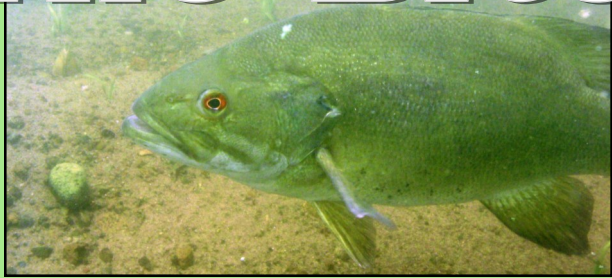
*Contractors finish erosion control with willow staking. Willows will take root and help to stabilize the bank. The large log-like roll at the water's edge is called a coconut lag, and is used to accumulate any sediments that do drain off the disturbed soil. Native wetland plants and upland grasses and forbes were seeded in appropriate areas.*

For more information regarding  
Mille Lacs please visit:

The Mille Lacs Management webpage @

<http://www.dnr.state.mn.us/millelacslake/index.html?detailTabs&tab=5>

# The Bite



Looking for a fight? Spend a day angling for these feisty fish. Smallmouth bass are known for being some of the strongest fish for their weight.

**By Alisha Hallam**

*MN DNR Aitkin Area Fisheries Specialist*

The 2015 Minnesota fishing opener is here. It's time to hit the lakes and Mille Lacs is the one lake where you can fish for trophy walleye, northern pike, smallmouth bass, and muskie all in the same lake.

There will also likely be a pretty good bite this spring for walleye between 10-12 inches. A good bite throughout the summer for these young 2013 year class walleye will hinge on the number of young-of-the-year yellow perch. The bigger walleye will be a more challenging bite with a good abundance of young tullibee keeping them fat and happy.

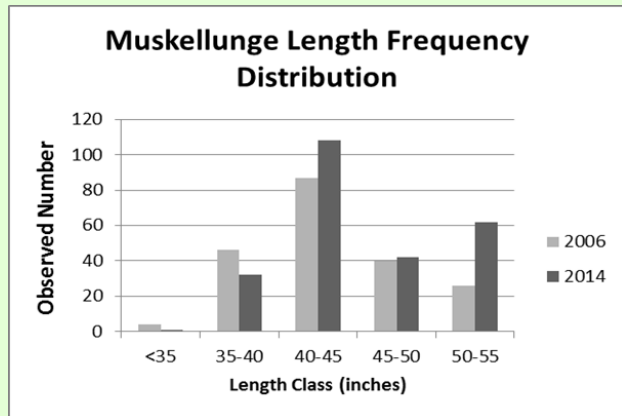
Northern pike are out there and ready to put up a fight. There are plenty in the 25-30 inch range to be harvested. Be sure to keep two under 30 inches before you harvest one over 30 inches.

Want some action? Smallmouth bass will keep your lines tight this spring and throughout the summer. Mille Lacs Lake has an excellent smallmouth fishery with an abundance of trophy fish. Last spring the north end was a hot bite, although anglers were catching them throughout the lake. Whether you are the catch-and-release type of angler or enjoy a meal of fresh fried fish, smallmouth will not disappoint.

The muskie population is also strong and providing an exciting fishery. More than 25% of the muskie that we sampled last year were over 50 inches long!

Lakes are beautiful and a great place to have fun and relax with family and friends. Please enjoy Mille Lacs Lake this summer while remembering to be safe. Always wear a life jacket, do not drink and drive your boat, and be aware of other boaters.

Muskellunge length frequency distributions observed in 2006 and 2014.



The muskellunge possession limit is one (Minimum size 54").



## How can you help the walleye fishery?

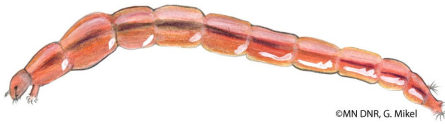
Catch-and-release fishing can play a very large role in management of a fishery. Here are a few things to keep in mind when releasing fish to increase survival:

- Do not play the fish to exhaustion.
- Do not hold it by the eyes.
- Cut the line if the fish is deeply hooked.
- Use circle hooks when fishing with live bait, this can help minimize deep hooking.
- Return the fish to the water immediately.
- When possible, remove the hook without removing the fish from the water.
- Exercise restraint when the fish are really biting. Do you really need to catch and release so many that your hooking mortality will be even higher than a possession limit?



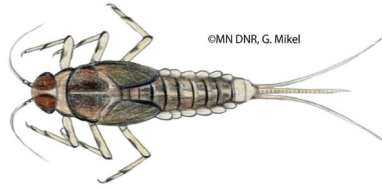
# What's bugging me?

Take a closer look at some of the creepy crawlies that emerge around Mille Lacs Lake during the open water season.



©MN DNR, G. Mikel

## Midge Larvae



©MN DNR, G. Mikel

## Mayfly Larvae



©MN DNR, G. Mikel

## Caddisfly Larvae



©MN DNR, G. Mikel

## Adult Midge



©MN DNR, G. Mikel

## Adult Mayfly



©MN DNR, G. Mikel

## Adults Caddisfly

By Eric Jensen

MN DNR

Aitkin Area Large Lake Specialist

Hang around any waterbody long enough and you are likely to witness the impressive spectacle of a mating swarm of insects. Several species of insects emerge each year at Mille Lacs during the open water period and they tend to be dominated by three major groups commonly known as; midges, mayflies and caddisflies.

Although each of these species have individual characteristics they also have many similarities.

- The majority of their life cycle actually occurs underwater as immature nymphs or larvae, in some cases for up to two years.
- Most adults emerge over a short period of time, resulting in large numbers of adults present all at once. This helps ensure the species will survive predation and that successful mating can occur.
- Although adult aquatic insects

can be extremely abundant, numbers of the underwater larvae are even more remarkable. For example, midge larvae may be counted in densities of several thousand per square meter.

- The number of larvae and pupae of all the various species are reduced through predation by fish and other aquatic organisms, while adults are also preyed upon by birds, bats and other predators.

### Midges

One of the first major insect hatches to occur on Mille Lacs each year is the non-biting midges from the Chironomidae family. Midges are commonly known as “fish flies” or “lake flies”, and the first midge hatch usually occurs sometime in May.

Adults look like a very large mosquito, but without the piercing mouthparts. Some of the mating swarms of the adult midges are so

dense, that from a distance, they actually appear to be columns of rising smoke.

One of the most common midges in Mille Lacs is the bloodworm. They have red larvae, which is why they are called bloodworms. The red color is due to a hemoglobin-like substance which helps carry oxygen, allowing them to live in very low oxygen areas. Bloodworms live in tubular cases on soft lake bottoms and feed on organic material. Several emergences occur over the open water period as their life cycle is relatively short.

### Mayflies

There are several species of mayfly that inhabit Mille Lacs, but the most well-known is *Hexagenia limbata*, which is the second largest mayfly found in North America. Both the adults and immatures can measure over an inch long, not including their elongated tails.

See **BUGS** page 5

## BUGS, continued

Mayfly nymphs build U-shaped burrows in sandy-silty areas where the bottom is soft enough to make burrowing easy, but firm enough that the burrow won't collapse. Water pumped through the burrow provides relatively high oxygen levels and organic materials for food. Nymphs will typically grow for about two years.



*Hexagina mayfly crawling on bottom. The feather-like appendages on their abdomen are gills.*

Adults often emerge in late June and live for about two days. The adults will often rest on shoreline trees or cabins before forming giant mating swarms at sunset. Swarms of adults are attracted to common light sources and create short-term nuisances at gas stations and other well lit locations. These mating swarms can be large enough to show up on weather radar.

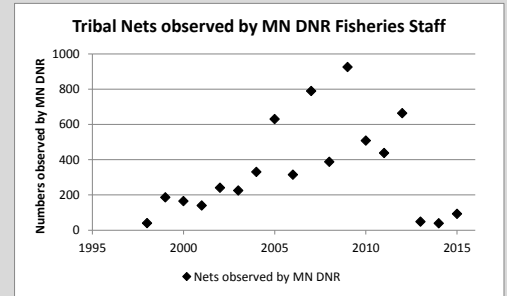
### Caddisflies

Several species of caddisflies also inhabit the lake. Caddis larvae appear wormlike and larvae of most caddis actually build a protective case out of sand, sticks, old shells or small stones. Case-building caddisflies tend to eat algae or organic materials, while free living (non-cased) caddisflies tend to prey on other invertebrates.

Caddisflies undergo pupation similar to the process moths and butterflies experience. Adults emerge from an underwater cocoon after pupation. The adults are relatively easy to identify, because their wings are folded tent-like over their bodies when not flying.

While large insect hatches can be annoying and disruptive to various lake users, try to remember that some of the insect species we observe are indicators of the good water quality we enjoy at Mille Lacs. The large number of insects that are present as both larvae and adults are an important source of food for the many species of fish, birds and mammals that make Mille Lacs their home.

## Myths and Facts Surrounding Mille Lacs



**Myth 6:** Nobody monitors the tribal netting.

**Fact 6:** The Great Lakes Indian Fish and Wildlife Commission (GLIFWC) and Fond du Lac Band (FDL) DNR are responsible for monitoring and recording the catch in the Tribal fisheries.

Since 1998, Minnesota DNR Fisheries has also been randomly monitoring the spring Tribal fishery. Over the years our staff have observed the weigh-in process for over 6,000 net lifts.

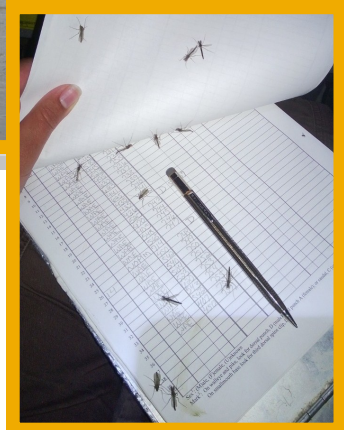
On average, DNR Fisheries staff are present at the landings for about 15% of the net lifts. In recent years, due to the very low allocation, the number of net lifts we have observed has only been about 40-90. From 2007 thru 2012 our staff observed 400-900 nets lifts per year.



⚠ A "scum line" of midge exoskeletons after an emergence on Mille Lacs.



⚠ Look close. A Caddisfly larva in a case blends into its surroundings.



⚠ Midges tend to "bug" us also when we are field sampling.



⚠ Home sweet home. Midge larvae tubes in the soft substrate of Mille Lacs.



# NOTICE TO ANGLERS

## Mille Lacs Fishing Regulations: (Including all tributaries to posted boundaries)

### WALLEYE:

- Release immediately all walleye less than 19.0" or greater than 21.0", except one 28.0" or greater may be harvested.
- Possession limit is 1.
- Changes in the walleye regulations will be immediately posted on this sign.

### NORTHERN PIKE:

- Possession limit is 10, with only one greater than or equal to 30.0".
- Two Northern Pike less than 30.0" must be in immediate possession (taken same day from Mille Lacs) before harvesting one greater than or equal to 30.0".
- Angling season runs through the last Sunday of March.

### SMALLMOUTH BASS AND LARGEMOUTH BASS:

- Bass season opens and closes with the walleye season.
- Possession limit is 6, with only one smallmouth bass greater than 18.0".

TULLIBEE (NORTHERN CISCO): Possession limit is 10.

ALL OTHER SPECIES: Follow statewide regulations.

NO CULLING OR LIVE WELL SORTING: Fish taken into possession must be considered part of an angler's bag limit and cannot be exchanged with another fish.

**NIGHT CLOSURE:** beginning at 10 p.m. on the first Monday after walleye opener and ending at 12:01 a.m. on December 1.

- May 11-June 7 - No one may fish for any species or possess fishing gear on the lake from 10 p.m. to 6 a.m.
- June 8-Dec 1 - Fishing equipment may be in possession, but may not be used to fish except:
  - a) While Muskellunge angling - Muskellunge may be targeted with artificial lures longer than 8" or sucker minnows longer than 8". No possession of tackle or bait not specifically used for muskellunge. No possession or targeting of species other than muskellunge.
  - b) While Bow Fishing for rough fish - No possession of angling equipment, and only rough fish may be in possession.

Minnesota Department of Natural Resources