



Focus on Aitkin Area

# Fisheries



DEPARTMENT OF  
NATURAL RESOURCES

A NEWSLETTER OF THE MINNESOTA DNR AITKIN AREA FISHERIES OFFICE

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## Late Ice-out. What this means for fish and fishing.

By Rick Bruesewitz

Late cold springs usually mean late ice-outs. And late ice-outs mean cold water come fishing opener. Since fish are ectotherms (cold blooded) their metabolism is low when temperatures are low and high when temperatures are higher. Freshwater fish in our area experience a range of temperatures between about 32° and 85°F (or 0° to 30° C). Their peak activity occurs at a mid-range temperature that is preferred for each individual species. Some fish have higher preferred temperature ranges (Largemouth Bass) and some fish have lower (Lake Trout) preferences, which results in their activity levels being different even at the same temperature. With these two species, you would find the bass to be way more active in summer months simply because it prefers that warm water, while the trout will be most

active from fall thru spring since it is a coldwater species.

The metabolic activity in fish is affected by something we call the "Q<sub>10</sub> factor". Metabolic (chemical/physiological) processes typically double with each 10° C increase in temperature. In this manner, one could suggest that fish activity could double going from 10° C (50°F) to 20° C (68°F). Walleye activity does seem to follow that rule and it can be seen in average catch rates through the season, which typically are the highest in mid-June in our area. Obviously other factors also play a role such as forage availability and other weather parameters like wind, and cloud cover.

So...with the late ice-out in Minnesota this year, I would expect the best fishing to occur just a tad later than usual. Since the water will be rather cold, think *slow* for your presentations. I repeat SLOW, not SNOW.

Other species are also affected and normal patterns are likely to be later for them too. Good luck with your fishing!

This and all future issues will be posted on the Aitkin Fisheries website at: **DNR FISHERIES LINK**. I look forward to your feedback and suggested topics for future issues. You can contact our office by email at [aitkin.fisheries@state.mn.us](mailto:aitkin.fisheries@state.mn.us).

### TINY TIDBITS

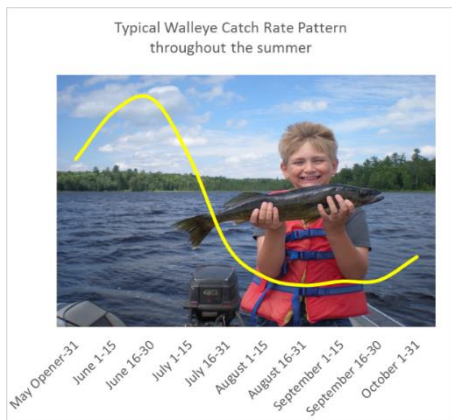
*From a distance it looks like a bunch of snails on a submerged rock. But, sometimes things are NOT what they appear to be!*



**Did you know that...**Sometimes nature tends to imitate itself. When you look closely at those "snails" they are actually mobile homes constructed with coarse sand pebbles. This home builder is actually an insect from the Caddis Fly family. Most Caddis Flies build a shelter out of sand, fine twigs, or leaf material for camouflage and protection. Without their house they would be exposed and too heavily preyed upon by fish.



*Snail Shell Caddis Flies from the Helicopsychidae family on a log in Farm Island Lake. These creatures make a living by scraping the substrate and eating the diatoms (fine plankton with silica cell walls) and detritus (organic materials partially decayed).*



Be sure to wear your PFDs! Cold water is extra dangerous!

By Kris Nissen



Hi, my name is Kris Nissen. I have been a fisheries technician in Aitkin for 12 years. I have been an avid angler my whole life and really enjoy a good fish fry once in a while. My family and I enjoy the usual Aitkin county Bluegills and Crappies, which are always a hit, but we also enjoy some "other species" once in a while, too. Spring White Sucker patties and Channel Catfish can be quite delicious if cared for and prepared properly. Now with the new zone regulations for Northern Pike, you may find those smaller Pike are pretty tasty too.

Here are a few tips to prepare your catch to have the best tasting fish possible:

- Small and medium fish usually taste better than large fish.
- Keep your catch fresh, either alive or on ice.
- Fillet your fish as soon as you get home or to camp.
- Trim any dark or red meat from the fillet. This tends to be in the lateral line area, and just under the skin on species like Northern Pike, Bass, Walleye, White Sucker, and Channel Catfish.
- Trim any yellowish fat/meat from Channel Catfish fillets.
- Wash your fillets thoroughly, removing any blood.
- I like to soak my fillets in a salt water solution for a while to help pull out any bad flavors and to firm up the meat. Some people soak fillets in milk.
- If you intend to smoke the fish, freeze them for a couple days to ensure any parasites are no longer a concern.
- The easiest way to deal with the y-bones on pike is to pickle them. The acid from the vinegar will soften them up so they are no longer noticeable.
- If you have small northern pike, consider grinding the fillets like suckers to make fish patties (a little egg, seasonings, and corn meal make a good mix).
- If not grinding or pickling the little pike, I like to remove the y-bones when I fillet them. While I find it's pretty easy to do with somewhat larger fish (over 26 inches now with the new zone regs) here's an easier way to remove the y-bones from the under 22 inch Pike once you are ready to prepare them for a meal:
  - Fillet normally and then remove the skin and any rib bones you missed.
  - Then cut the fillet into three pieces, perpendicular to the length of the fish. One piece will be the tail section, which has no y-bones. If you run your fingers along the middle of the other two fillets you can feel where the tip of the y-bones protrude from the fillet.
  - Next take each of the other pieces, turn them cut side toward you, then very carefully cut on a line just above where the bones protrude and cut down to the bones. Turn the knife and gently fillet along the bones to the back.
  - Next cut on a parallel line just below where the y-bones protrude down about ½ way thru the fillet, then turn your blade toward the back again and this time cut up to the y-bones and again gently fillet along the bones (your knife now under them) to the same ending point near the back that you had made with your first cut. Now you can gently pull the strip of y-bones from the fillet with minimal damage to the meat. Voila! You now have three pieces of bone free fish for your fryer. Or if you are like me, maybe it's become four or five pieces by this point.

## Aitkin Fisheries Office Field Season Sampling Schedule:

- **Ice-out electrofishing** on Sandy River below Libby Dam
- Assist Garrison Station with **Mille Lacs walleye tagging**
- Ice out **Winterkill assessments** (if needed)
- **Trout Stocking** (Two River Springs, Blue, Taylor, Loon Lakes)
- **Walleye Fry Stocking**
- **Bass Electrofishing** on Lake Minnewawa and Round Lake near Garrison (01-0204).
- Standard and Targeted **summer surveys**:
  - Big Sandy, Farm Island, Hill (01-0142), Blind, Four, Minnewawa, Rice Lake (01-0067), Waukenabo Lakes.
- August **Catfish survey**
  - Mississippi River and select tributaries
- Summer **Tullibee Habitat Evaluations**:
  - Ball Bluff, Little Ball Bluff, Big Sandy, Cedar (01-0209), Long (01-0089), Little Pine, Round (01-0070), Round (01-0204), Spirit Lakes
- **Fall juvenile walleye electrofishing** assessments:
  - Big Sandy, Farm Island, Round (01-0137), Sugar Lakes.
- Assist Garrison Station with **Mille Lacs fall assessment**.
- **Stock walleye and musky fingerlings** in October
- **Harvest Northern Pike** from Rice Lake National Wildlife Refuge November-January, for statewide stocking.
- **Outreach events** are scheduled throughout the year at schools, lake associations, Big Sandy Institute, and the Rivers and Lakes Fair.

## Focus on Sampling Gear: Trot Line

*Trot lines are used primarily for sampling catfish in rivers. The Aitkin Area Office has been using trotlines in the Mississippi River since 2007. They consist of a 150 ft main line with then a couple dozen dropper lines (see photo at right) that are secured to the main line. The main line is tied to show on one end and then anchored on the other. The dropper lines are evenly spaced and have hooks that are baited with cut bait from suckers. Trot lines are set one day and then checked the next. Although an occasional pike or walleye is caught, the catch is almost always catfish. Catfish that are sampled are measured, weighed, some have a spine removed to estimate their age, and then released.*



Above: A nice Channel Catfish from the Mississippi River near Aitkin.



Left:  
Catfish on dropper line being retrieved with landing net.

Right:  
A baited trot line being deployed on the river.

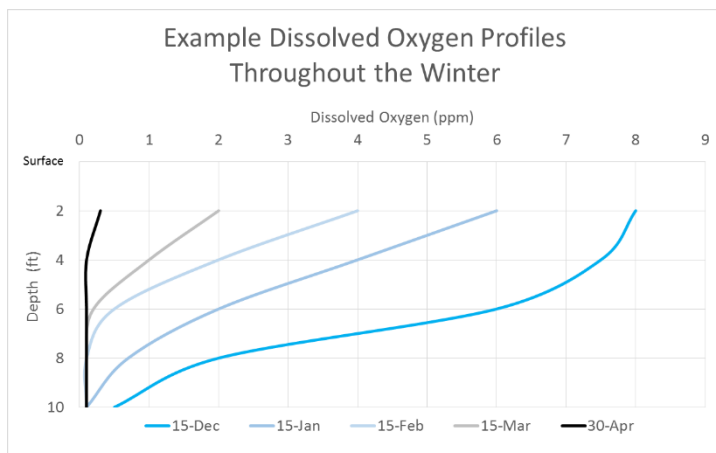


# Winterkill!

By Rick Bruesewitz

**No**, it's not the name of the next Bond movie (not that I am aware of anyway).

But it does sound pretty ominous, doesn't it? All over north central Minnesota this year the DNR received word from anglers of fish in stress late in winter. In the Aitkin Area, we heard about stressed fish from a couple lakes and then checked the oxygen levels in those and some others. It sure was looking like several of the lakes were going to winterkill.



An example showing how dissolved oxygen decreases under the ice as winter progresses, and is always worse near the bottom.

Winterkills occurs in lakes in areas of the North Country when ice and snow cover last longer than the dissolved oxygen does. **NOT** because the ice froze all the way to the bottom, which is a common misconception due to another common name for a winterkill, which is "freeze-out". When this happens fish can die. If you think of it this way, when a lake freezes over it has only a limited amount of dissolved oxygen in the water since the liquid water is no longer exposed to the atmosphere, and since photosynthesis begins to cease. If ice thickness and snow depth are too great, then all photosynthesis stops (because sunlight no longer penetrates the ice) and lake plants and algae begin to die. This dead vegetation then starts to be decomposed by bacteria and other microbes that also consume oxygen, which thereby increases the rate of loss of the limited dissolved oxygen. When the ice/snow cover lasts too long, dissolved oxygen drops to such low levels that fish ultimately suffocate.

Some fish species are more sensitive to low oxygen than others. The largest largemouth bass and bluegills are often the most susceptible to the low oxygen levels, while fish like northern pike, yellow perch, bullheads and

pumpkinseed sunfish are much hardier. When you see dead perch and bullheads you know you had a pretty harsh kill.

Shallow lakes with ample vegetation are the most likely lakes to winterkill, and sometimes a kill can be limited to only a certain bay or basin of a larger lake. Those bays/basins are usually shallow and heavily vegetated too.

When harsh winterkill occurs on a nearly annual basis there is usually not much of a fishery (maybe bullheads, pumpkinseeds, and minnows). However, periodic winterkills tend to "thin the herd" with respect to panfish, which often results in exceptional growth rates and size distributions for the surviving fish. One of the best lakes in the area for large bluegills winterkills over most of its area with just one deeper basin surviving fish. Then when summer comes, the whole lake is again available to the surviving sunfish, offering them ample food and habitat. In a similar manner, some lakes experience partial kills only once in a great while. These lakes too can be rejuvenated by the winterkill and basically restart the fishery, which may have become too densely populated with small fish in recent years.

While it is pretty rare for us to do so, in some very severe cases of winterkill we may stock panfish, bass, and pike back into the system. It is very rare because it is very rare that we get kills so strong that do not leave seed fish to repopulate the lake. Normally, Mother Nature just needs a little time to get the job done.



While sometimes winterkills can be quite harsh, most times only a small fraction of the fish population dies. In either case, the fish you see floating are usually just the tip of the proverbial "ice-berg".

# Aitkin Area Fisheries

# Outreach

By Alisha Hallam



Here at the Aitkin Fisheries Office we value the importance of educational programs that will promote fishing recreation and the protection of our aquatic habitats. As Minnesotans, we have a unique opportunity to get outdoors and enjoy aquatic habitats, but not everyone has the exposure or ability to do so. That is where we like to step in and help create these opportunities for people who would otherwise not be able to do so.

The Minnesota DNR manages approximately 5,400 game fish lakes and 15,000 miles of fishable streams and rivers. Fishing is a lifelong activity that creates a connection with the environment and encourages stewardship of natural resources. Not only does fishing connect people to the outdoors it can also be quality and fun-filled time spent with your family. Taking a child fishing can be a great way to teach kids meaningful lessons about life such as patience, problem solving, a love for the outdoors (not just electronics), self-reliance, fun, the importance of conservation, where good food comes from, and will hopefully create an experience they will likely want to share with others.

In the Aitkin Fisheries Area we participate annually in educational programs at local schools, take a kid fishing days in the summer and on the ice, and the Rivers and Lakes Fair in Aitkin, which is held at the Aitkin High School and will take place on June 16<sup>th</sup>. We are looking forward to our upcoming events and also hope to expand and create additional opportunities.

In addition to youth educational programs, the Aitkin fisheries staff regularly attend lake association and other group meetings, sharing information about a particular lake, and always including some educational information about such things as coarse woody habitat, river and stream connectivity, or general fisheries biology. We put together a pretty cool newsletter too. ☺



*Above: The turtle pool is always popular with the little tikes at the Aitkin County Rivers and Lakes Fair.*



*Above left: Fisheries Technician Kris Nissen helps a young angler during a winter kids fishing event.*

*Left: Fisheries Specialist Alisha Hallam teaches some kindergarteners about Minnesota Fish.*