

Glenwood Area Fisheries Newsletter

Minnesota Department
of Natural Resources

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2009 walleye egg-take a success

This year, the Glenwood State Fish Hatchery received a total of 540 quarts of walleye eggs (65 million eggs) from egg-take stations near Grand Rapids and Ely Minnesota. Hatching success was about 55% which translates into about 35 million fry that were immediately stocked into area lakes and rearing ponds. Pond-stocked fry will grow to about 4-6 inches long over the summer at which time DNR crews will harvest and transport the “fingerlings” to Area lakes. Nighttime electrofishing is used to evaluate stocking success in the fall of the same year for lakes where fry were stocked. Walleyes reared artificially tend to have higher rates of survival than those hatched in nature, however, in Minnesota, Mother Nature can produce in one spring more walleyes in a lake like Mille Lacs than all State hatcheries can combined.



The DNR’s ecological classification of lakes – What does it mean?

In 1992, the Minnesota DNR published *An Ecological Classification of Minnesota Lakes with Associated Fish Communities* by now retired fisheries biologist Dennis Schupp. Similar to Ontario Canada, Schupp gathered together years of fisheries survey data for Minnesota lakes and categorized them based on variables associated with lake size, depth, chemical fertility and length of growing season. What Schupp found was that different fish communities were associated with different lake classes. For example, there were big differ-

ences between some northeastern Minnesota lakes classified as 2, 3 and 7, where northern pike, white sucker and walleyes dominated the community; compared to lake classes such as 41 and 43 in the southwestern part of the state where northern pike, black bullhead, carp and walleyes dominated the fish community. Reasons for such differences in this example may seem obvious, however, Schupp’s data analysis also revealed more subtle differences such as that of two lake classes

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Lake classification (cont'd from page 1)

very familiar to folks in Alexandria. Lakes Carlos, Ida and Latoka are Class 22, while Lakes LeHommeDieu, Darling and Andrew are Class 27. Differences? Class 22 lakes tend to be deeper, have clearer water and are more irregular in shape than Class 27. Class 27 lakes however, tend to have higher fish biomass, especially white sucker and yellow perch. Abundance of rock bass and black crappie were higher in Class 22 lakes, but average size was smaller than Class 27. The point is, different lakes have different physical and chemical attributes that make them more suitable for certain kinds of fish than other lakes. Interestingly, of the 81 lakes actively managed by DNR in

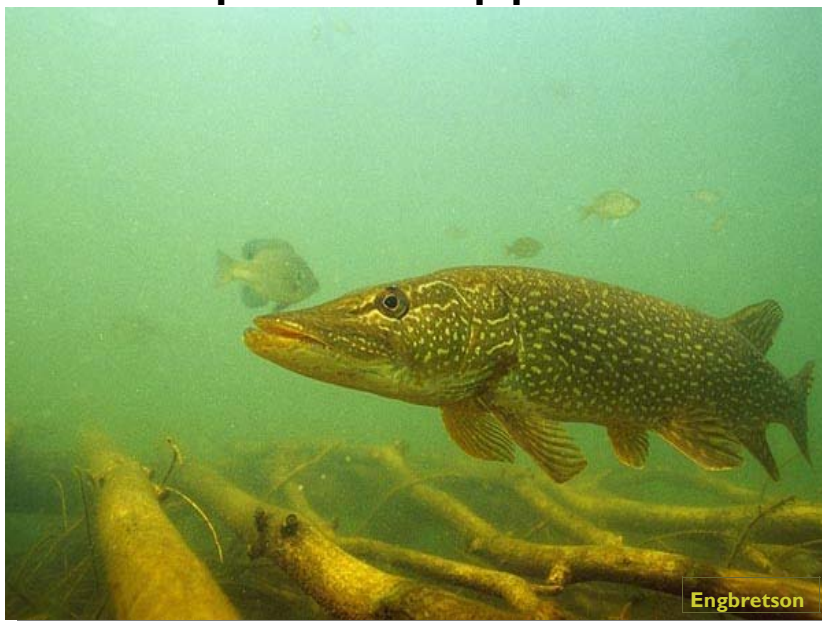
the Alexandria/Glenwood Area, only 17 (20%) contain the size, depth and chemical fertility suitable for walleyes to naturally occur as a primary species. The remaining 80% of managed lakes contain attributes more suited to northern pike, bluegill and largemouth bass. The DNR's lake classification system, while not the only tool used to guide fish management activities, does give an important base from which to work from.



Lake Vermont

“Of the 81 lakes actively managed in the Alexandria/Glenwood Area, only 17 (20%) contain the size, depth and chemical fertility suitable for walleyes to naturally occur as a primary species.”

Northern pike—The top predator



The label “top predator” has more to do with the species of animal rather than its individual size. You can probably guess what fish are considered to be top predators in our area lakes. Muskellunge may come immediately to mind, but what about walleyes, northern pike, and large or smallmouth bass? Yeah, they're all predators, and they're all looking for similar prey, which can be problematic in maintaining proper balance in a fishery. Optimum growth for northern pike or any predator species, is dependent upon a number of factors. One of the most important factors is the type, abundance and individual size of available prey fish. Fusiform (submarine-shaped) prey is the preferred prey shape for fish-eating preda-



tors. When northern pike are in their first 2 growing seasons, small perch, minnows and various invertebrates comprise much of their diet. As they grow however, prey requirements for optimal growth shift to larger fish (4 to 8-inches). When adequate-sized prey is low in abundance, growth can and usually does begin to slow. Optimum prey for large northern pike may be a third or longer its own body length. In other words, a 30-inch northern pike prefers forage 10-inches or longer. Some predators are more choosy than others when it comes to eating and that's what puts northern pike ahead of the others on the food chain. Versatility. Northern pike are opportunistic predators. While muskellunge and walleyes for example are particular as to the size and type of prey they'll eat, northern pike will adapt to whatever's most available. Unfortunately, "whatever's available" in many area lakes, often isn't the most nutritious for good growth. Once the perch have been eaten down (walleyes love

to eat perch too), they'll first look for anything else shaped similarly. Walleye fingerlings fill the void in some cases, but sunfish and even smaller northern pike are occasionally consumed as well. It would be nice if small bluegills and pumpkinseeds were regularly taken by northern pike, but the truth is, while sunfish are occasionally preyed upon, they're usually not the first choice on the menu.

Our lakes in west-central Minnesota are what they are. Most can be described as quality bass/panfish fisheries, some provide quality walleye fisheries, and a couple are even considered very good muskellunge destinations. What most if not all have in common is the presence of northern pike. The top predator.

"When adequate-sized prey is low in abundance, growth can and usually does begin to slow".



Fish parasites – Unsightly but not harmful

Most anglers have seen the little black specks in fish called black grub (scientifically known as *neascus*), but what about other grubs that may show up from time to time? Another fluke, or trematode known as yellow grub can also be found occasionally in the fillets of fish, and this one tends to turn up more than just an eyebrow when found. More common in fishes of the northern regions of Minnesota but occasionally

found around Alex, yellow grubs usually show up in the fillet as a pale-yellow dot about the size of a small wood tick. Carefully cut it away with a fillet knife and the small dot may slowly extend into a ¼-inch or more across your knife. By this time, most anglers are ready to pitch the fillets into the nearest trash receptacle. Hold on though - no need to throw away a good meal. Yellow grubs are harmless to humans, and while

Parasites (cont'd)

you probably aren't going to want to leave them in the fillet, if you did, they wouldn't hurt you or the taste of the fish. Yellow grub is similar to black grub. They're called digenetic trematodes and their life cycle involves two main hosts and one intermediate. The adult worms are found in the mouths of great blue herons. Eggs are dropped out into the water where they hatch and find a secondary host in a snail. Once inside the snail, they multiply and eventually emerge to become free-swimming. If they come in contact with a fish, they'll burrow in and become encysted. The life cycle is completed

when an infected fish is eaten by the final host (usually a great-blue heron) where it starts all over again. As mentioned, yellow grub and most other fish parasites are not harmful to humans but can cause problems with fish, especially in hatchery situa-

tions where mortality can result in heavy infestations.



2008-2009 special sampling for black crappie: Lakes Irene, Latoka and Lobster

The Glenwood Office has received requests to consider special fishing regulations for black crappies in Lakes Irene, Latoka and Lobster. Current angler perception is that average size of crappies in these lakes is small and that a special regulation might bring about an improvement. Before special regulations can be considered, good data are needed with regard to crappie size, abundance and growth rates. The best way to sample crappies is with a method called trapnetting. Trapnets are set perpendicular to shore and allowed to sit overnight (approximately 24 hours). As crappies and sunfish move along the shoreline, they inadver-



tently swim into the trapnet and are then collected, measured and released the next day. Since the DNR's standardized lake assessment program is conducted during the months of June through September, crappies are often under-sampled in trapnets because the fish have moved deeper to different habitat. In order to sample crappies

better, special assessments are occasionally conducted in late April and early May in order to collect crappies as they move to shallow water to spawn. Because sample sizes are usually much higher, information with regard to the average size of individual crappies is more accurate. Data from the special assessments of Irene, Latoka and Lobster will be analyzed and a report will be completed during the winter of 2009/2010. Based on the information collected, a decision will be made on whether to continue the consideration process with public hearings.

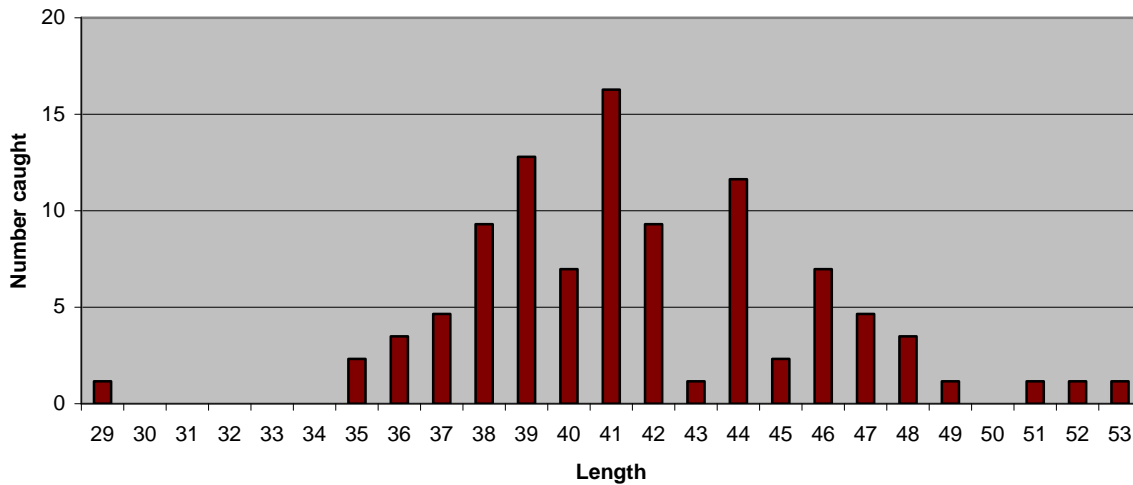


Lobster Lake muskellunge survey, 2009

Fisheries staff completed a survey of the muskellunge population in Lobster Lake this past April. Large-framed trapnets specifically designed for muskellunge were deployed over a 10-day period at standardized location sites around the perimeter

of the lake. Water temperatures targeted are from 45 to 55 degrees, which seems to be the best for capturing muskies when they're close to shore. A total of 86 fish were collected, measured and released back into the lake, unharmed.

Individual sizes ranged from 29 to nearly 54 inches in length. All fish sampled were in healthy condition and it appears that the muskellunge population in Lobster Lake is in good shape.



The 2009 lake survey season—lakes on the list

Each year, the Glenwood Area Office conducts 12-18 lake surveys and population assessments on Area lakes. These surveys provide important information which we use to plan management activities. Data are collected using gillnets, trapnets and electrofishing equipment. The information is compiled and written into the form of a report during the winter months, with a completed version available to the public by summer of the following year. Fisheries surveys essentially fall into one of three categories: Full surveys (FS) include an evaluation of the fishery as well as vegetation,

chemistry, bottom substrates and shore and watershed features. Lake population assessments (PA) are the most common and evaluate the relative abundance and size structure of the fish community. Special assessments (SA) are occasionally conducted to answer a specific question regarding a particular species or habitat issue. Most Area lakes are on a 3-5 year rotation schedule. Survey dates, net site locations and electrofishing stations are all standardized so that comparisons from year to year can be made. Following is a list of field work scheduled for 2009:

Round.....	PA
Maple.....	FS
Grill.....	PA
Pelican (Ashby).....	FS
Little Chippewa.....	PA
Mountain.....	PA
Stowe.....	PA
West Crooked.....	PA
Latoka.....	FS
Mina.....	PA
Whiskey.....	PA
Carlos.....	**
Lobster.....	FS
Devils.....	PA
Big Chippewa.....	PA
Grants.....	PA
Thompson.....	PA
Mary.....	FS
Blackwell.....	FS
Elk.....	PA
Freeborn.....	FS

** Lake Carlos is part of a Statewide special annual sampling study.

Employee Spotlight—Ryan Kessler



As a kid growing up in Lewiston, Minnesota, Ryan Kessler spent many hours exploring the reaches of Garvin Brook, Whitewater, and Rush Creeks. Kessler fondly remembers those June mornings in southeastern Minnesota's bluff country as if they were just yesterday. "I guess that's what initially sparked my interest in becoming a fisheries biologist," said Kessler. In 1971 Kessler graduated from high school and enlisted in the US Air Force. After his enlistment ended he headed to the University of Minnesota, graduating in 1982 with a Bachelor's

degree in fisheries management. His first job with the Minnesota DNR in 1980 was in St. Paul, working as a student worker within the Section of Fisheries. From there, Kessler moved north to International Falls and became the Large Lake Specialist for Rainy, Kabetogama and Namakin Lakes. In 1986, he moved to Grand Rapids and took over Large Lake duties on Lake Winnibigoshish. He decided to transfer to the Glenwood Area Fisheries Office in 1989, where he became the walleye hatchery specialist, – a position he continues to hold to this day. Since coming to Glenwood, Kessler has overseen the successful hatching of over a half-billion eggs. The hatchery receives approximately 650 quarts of walleye eggs every year from spawning runs in northern Minnesota. That translates into about 43 million fry that go into area lakes and rearing ponds. One of the reasons the Glenwood Office is so successful with their walleye hatching program is the excellent

water supply that feeds the hatchery. "That was the main reason the State built this office here in the first place", says Kessler. Artesian spring water flowing from nearby hillsides contribute clean, cold water at a rate of 100 gallons per minute – one of the best water sources in the State. It's been a steady, reliable water source to the hatchery since the 1930's. Kessler would like to remind people that the hatchery is open to the public for tours from roughly May 1st through the 20th. School groups and civic organizations have been regular visitors over the years. Kessler estimates that as many as 500 people may visit on any given season. "We really like to see people interested in what we do here in the spring. In certain cases, some of our Area lakes just won't naturally produce walleyes on their own. If the lake has the right biological attributes though, stocking walleyes can provide enjoyable fishing opportunities where they may not otherwise be realized."

The Glenwood Area Fisheries Newsletter is published twice a year by the DNR Area Fisheries Office located at:

23070 North Lakeshore Drive
 Glenwood, MN 56334
 Dean Beck—Area Supervisor
 PH: 320.634.4573
 Newsletter questions: al.schmidt@dnr.state.mn.us

