Reel in Michigan's Fisheries

Upper Bushman Lake, Oakland County

Michigan Department of Natural Resources, Fisheries Division
Quarterly Publication
Vol. 1, No. 2
October 2013

Reel in Michigan's Fisheries

Michigan Department of Natural Resources, Fisheries Division

This publication is an outreach item to Michigan anglers to describe what the DNR's Fisheries Division does and why we do it. Specifically it highlights the work Fisheries Division employees are accomplishing on inland lakes and streams. Reel in Michigan's Fisheries will often showcase waters that are actively managed and provide the public with enhanced knowledge and the opportunity to access the wealth of information contained in survey reviews and management reports.

Content

The Michigan Department of Natural Resources is committed to the conservation, protection, management, use and enjoyment of the state's natural and cultural resources for current and future generations. For more information, go to www.michigan.gov/dnr.

Cover photo is an aerial of Upper Bushman Lake and is courtesy of Oakland County Parks.

Nawakwa Lake, a Central U.P. Walleye Factory

If there's such a thing as a lake having too many fish in it, Nawakwa Lake in Alger County fits the bill. A 369-acre lake that forms the headwaters of the Sucker River, Nawakwa Lake has traditionally been known as a walleye lake (though it boasts northern pike, smallmouth bass and some big bullheads, as well) and that's what attracts the anglers.

At one time, the Department of Natural Resources stocked the lake with walleye but studies have shown natural reproduction more than takes care of the fish population. The DNR discontinued walleye stocking in 1990.

A quiet lake located six miles down a dirt road outside of Grand Marais -- though it does have a concrete launch ramp -- Nawakwa Lake has an uneven shape with lots of point, which gives anglers the opportunity to stay out of the wind and fish.

"It's just a beautiful lake to go fishing on," said Eastern Lake Superior Management Unit supervisor Steve Scott.

Fisheries biologist Cory Kovacs, who oversaw the most recent population assessment survey that was conducted this May, says there are 2.6 adult walleye (three years old and older) per acre on the lake. The fish are smallish, however.

"It has a fairly poor growth rate," Kovacs said.

"Legal-size adult fish in most of our lakes are age four. At Nawakwa, it's about age five. I think that's because of fish densities – we have a good number of fish and very successful reproduction, so they grow very slowly.

"It does have an abundant small pike population, as well."

Over the years, the DNR has experimented with different pike length limits -- sometime enacting the statewide size limit, sometimes going to no minimum length limit -- to see what suits the lake best. After the 2012 spring electrofishing survey turned up a large number of sub-legal pike, a no-size minimum limit regulation was enacted in hopes that anglers would thin out the pike population a bit.

"While (the no minimum length limit) the regulation was in place, the walleye and pike growth rate both improved," Kovacs said.

"So we placed it back on the water. It's a fish factory – that's one of the reasons for the poor growth. Northern pike just need to be harvested. We need anglers to catch their five pike and take them out of there so we can get better growth rates for both pike and walleye."

Kovacs describes the smallmouth bass fishery as "incidental." Clearly, Nawakwa is a walleye lake.

Last fall's electrofishing survey turned up good numbers of young-of-the-year walleye, Kovacs said, indicating another successful spawn.

"It's one of our better walleye lakes," Kovacs said. "It reaches a maximum depth of about 35 feet, but the average would be closer to 10 feet because there a lot of shallow bays -- quite a few areas that are only two feet or three feet deep."

The forage base, Kovacs said, is sufficient for the lake, though right now there are just too many mouths to feed.

"It could grow bigger fish," he concluded.

For more information contact Cory Kovacs at (906) 293-5131, extension 4071.

The Walton Junction Sportman's Club

It's no secret; the Department of Natural Resources' Fisheries Division is simply unable to accomplish everything it would like to without a little help from its friends. Escalating costs make it impossible to meet all of the objectives on the DNR's wish list.

Fortunately, many of Michigan's sportsmen's groups are willing to step up to the plate and pitch in. And anglers who enjoy fishing for big brown trout in the Manistee River can thank the Walton Junction Sportsman's Club for its help in making that opportunity a reality.

The Walton Junction Sportman's Club, with property near Fife Lake, has concrete raceways on its property that were built in 1971 with a mind toward raising trout. Fed by cold springwater, the raceways are perfect for rearing the brown trout fingerlings that the DNR has been supplying them with each spring since 1972.

"This is a cooperative effort," said Central lake Michigan Management Unit fisheries biologist Mark Tonello, who works with the 250-member club on the trout-rearing project. "These are fish that wouldn't be stocked without the effort of the Walton Junction folks."

Brown trout fingerlings are transferred to the Walton Junction facility in May from the nearby Harrietta State Fish Hatchery. The fingerlings are excess to the hatchery's needs.

"We always take extra eggs in the fall, more than we'll be able to raise, because things happen," said Harrietta hatchery biologist Jon Jackoviac. "You might lose a raceway of fish or something, so you want to be ready for those contingencies.

"But as those fish grow, they take up more room and our hatcheries are all at capacity," he continued. "We don't have any more room and we have to do something with the excess fingerlings. So this is a perfect use for those surplus brown trout."

The DNR supplies Walton Junction with about 30,000 fingerlings annually. The fish are harvested from the raceways in the fall -- this year, it occurred the last weekend of September -- and stocked in the Manistee River.

"They averaged about six inches," Tonello said. "They were nice fish this year. The club members do a nice job."

The brown trout were stocked in the Manistee River in southern Kalkaska, northeast Missaukee and northeast Wexford counties, all upstream from Hodenpyl Dam.

"It's pretty big water and it can definitely handle the fish," Tonello said. "That part of the river has some natural reproduction of brown trout, but not as much as we'd like, so we're happy to supplement it with stocked fish.

"It's big-fish water -- you'd compare it to the Muskegon River or some stretches of the Au Sable, like below Mio, which are kind of borderline on the warm side," he continued.

"They will hold trout but not support much natural reproduction, but will also hold some smallmouth bass, walleye and northern pike as well.

Continued on page 4

The Walton Juction Sportsman's Club
(Continued from page 3)

"Browns bigger than 20 inches are fairly common here and truly big river browns -- between 25 and 30 inches -- are caught every year out of that stretch."

Anglers with a yen for battling big browns could do worse than fishing in this stretch of the Manistee River. And those who do should tip their caps to the Walton Junction Sportsman's Club, which helped make this fishing opportunity possible.

For more information contact Mark Tonello at (231) 775-9727, extension 6071.

Brown trout flowing into the boat holding tank from the truck.

Mullett Lake, an Intriguing Walleye Fishery

Few inland walleye populations have been studied as intensely as those in Mullett Lake. The Cheboygan County lake, which is approximately 10 miles long and four miles across at its widest, is Michigan's third largest lake and is part of the inland waterway on the Cheboygan River system. The lake rests within the boundaries of the Treaty of 1836 and is open to tribal harvest under the terms of the 2007 Consent Decree.

Tribal interest in walleye harvest in Mullett Lake led the Department of Natural Resources to conduct surveys in order to estimate the population of walleye in order to allocate the harvest.

"When we completed our population estimate, the number that we came up with was pretty darn low," explained fisheries biologist Dave Borgeson, Northern Lake Huron Management Unit supervisor. "So using a formula stipulated in the consent decree, the amount of exploitation (harvest) the fishery could take was low.

"So we did a creel survey and we ended up reducing the bag limit in Mullett Lake and the Cheboygan River so we could assure state-licensed anglers didn't take too many fish out of that population either," he continued. "But we weren't totally comfortable with our population estimate because it's a big system with a lot of complexity."

Thus, the DNR and the tribes launched an overall study of walleye population in the Inland Waterway, which has been ongoing since 2010.

"We've been doing our fall electrofishing on Mullett for a long time and it's been a long time since we noticed any significant natural reproduction in Mullett Lake," Borgeson said. "We've got it in Burt, Crooked and Pickerel lakes, but not in Mullett.

"There's a lot of production elsewhere and we know walleye move so that's something we needed to look at too," Borgeson continued.

"In spring, we can hardly find walleyes in Mullett Lake, but maybe they're not there that time of year.

Continued on page 5

Mullett Lake
(Continued from page 4)

Maybe they're somewhere else that time of year – and then they come back and live in Mullett during the rest of the year."

In conjunction with the population studies, Michigan State University is conducting a study of the diet and early life history of those walleyes, to see if there's an underlying reason that Mullett isn't producing.

"We're trying to see if maybe zooplankton aren't available that time of year in Mullett or if the size of the zooplankton is a factor," Borgeson said. "Or maybe it's available in Burt but not Mullett, which is a fairly unproductive lake, basically. There are always other factors, but regardless, we've noticed a long-term trend of a lack of reproduction in Mullett Lake."

The low population estimate prompted the DNR – as well as the tribes and the local Mullett Area Preservation Society (MAPS) -- to begin stocking Mullett Lake with walleyes again, something that hadn't been done since 2003.

In 2010, a cooperative effort between the DNR and the tribes resulted in the stocking of 102,000 spring fingerlings, while MAPS kicked in almost 10,000 fall fingerlings purchased from a private producer.

In 2011, the DNR stocked almost 100,000 fingerlings, MAPS kicked in about 7,500, and "one of the tribes also purchased some fish, too," Borgeson said.


Taking a fin ray to age walleye.

The DNR did not stock any fish in 2012, though MAPS stocked 7,500. But in 2013, state walleye production was outstanding and the DNR wound up stocking 466,000 spring fingerlings that averaged 1.7 inches.

Where the stocking program will go in the future remains to be seen, Borgeson said. In the meantime, the DNR is assessing how the stocking is working.

"What we are going to do is head out in the next few weeks, get our electrofishing barge out there and see what we've got," Borgeson said.

A mangement report on the Mullett Lake fishery is expected to be completed in a few years. For more information contact Tim Cwalinksi at (989) 732-3541, extension 5072.

Upper Bushman, a Little Piece of Up North, Down South

Is it true that good things come in small packages?

The Department of Natural Resources, Fisheries Division thinks so.

Upper Bushman Lake is actually a package of three small lakes and even then it's still a small package -- just 32 acres -- at the headwaters of the Clinton River. But the ambience and the fish community are of such high quality that the DNR, after studying the lake, has decided it should be designated a quality non-trout lake and managed as catch-and-release water, the only so-designated lake in southeastern Michigan.

Upper Bushman Lake was in private hands until it was purchased in 2010 by Oakland County and incorporated into Independence Oaks-North County Park.

Continued on page 6

Upper Bushman Lake
(Continued from page 5)

It was officially opened to the public on May 28, 2011, but before it opened the DNR was able to survey the lake with trap nets, small-mesh fyke nets and gill nets. The results were eye-opening.

Biologists found a total of 12 species, mostly panfish, though largemouth bass were very abundant. Panfish made up 76 percent of the total catch by number and 28 percent by weight. Large predators -- largemouth bass and northern pike -- accounted for 14 percent by numbers, but 62 percent by weight.

Bluegills, measuring up to eight inches, were the most abundant species. Growth rates for adult bluegills were above average and those found in fyke nets averaged 7.8 inches. On a (Schneider Index) scale from 1 to 7 that provides the measure of quality of bluegills in lake, Upper Bushman scored 6.75, the best score of any lake in the Lake Erie Management Unit.

Pumpkinseeds, though less numerous, were of similar size; those caught in fyke nets averaged 7.6 inches with 81 percent of them larger than seven inches. They were growing at significantly better than state average rates and nine age-classes were found.

Largemouth bass made up 45 percent of the overall catch weight. Bass averaged 15.8 inches and twelve year classes, from age 1-13, were collected. (Age 2 fish were notably absent.) The young fish were growing at around state average, while the older (age 8 and up) bass showed slightly below average growth rates.

Northern pike showed good size range, averaging 23.2 inches with 55 percent of them longer than the 24-inch minimum size limit. Conclusion?

"The fish community was awesome," said Lake Erie Management Unit Supervisor Liz Hay-Chmielewski, who said a lack of angling pressure allowed the fish populations to flourish.

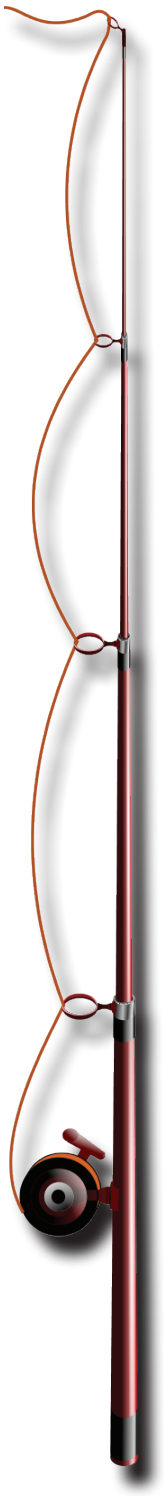
The DNR immediately recommended the no-kill regulations, but it would take one fishing season to implement them. "After one year under ordinary fishing regulations, the fish community structure remained good," Hay-Chmielewski said.

Although Upper Bushman Lake is open to fishing, it does not have an improved boat ramp. There is a 180-foot long fishing dock on the north lake (which is just 3.7 acres) provides the only shore-fishing access to the lake. There is a 1,200-foot gravel trail from the 30-car parking lot on the same lake that leads to a launch for hand-carried canoes, kayaks or other non-motorized boats.

"It was a private lake for a long time and there is no development on it," Hay-Chmielewski said. "It's surrounded by wetlands. It very much has that 'Up North' feel without having to drive the distance to get there -- it is accessible to a lot of people."

By managing Upper Bushman Lake as catch-and-release waters, the DNR hopes to provide people in the greater Detroit Metropolitan Area a quality-angling, get-away-from-it-all experience without having to drive a great distance to accomplish it, in a small package, to boot.

For more information contact Liz Hay-Chmielewski at (248) 666-7443.



DNR Fisheries Division Library

The Fisheries Division Library, located at the Institute for Fisheries Research in Ann Arbor, was established in 1930 to serve the fisheries biologists of the Michigan Department of Conservation. The library now serves the fisheries biologists of the Michigan Department of Natural Resources; University of Michigan faculty, staff and students of the School of Natural Resources and Environment; and the Exhibit Museum of Natural History. The collection consists of more than 700 books; thousands of reports and reprints from around the world; and several journal, magazine and newsletter subscriptions.

Included in the library are Status of the Fishery Resource Reports written by the local field biologists, which contain the results of major fisheries surveys of Michigan lakes and rivers. These reports briefly describe the environment, the fishery resource, and the management direction for the water body. Tables summarize information on fish species found as well.

The library can be accessed online here:
http://www.michigan.gov/dnr/0,4570,7-153-10364_52259_19056---,00.html.

Receive DNR fishing-related emails!

Do you want to stay up-to-date on all fishing-related news and information the DNR has to share? As well as other natural resources issues in Michigan? Then sign-up for the DNR's email lists. Just look for the RED ENVELOPE while you're visiting www.michigan.gov/dnr.

Do you have questions you'd like answered or comments you'd like to share about "Reel in Michigan's Fisheries"? Feel free to email them to DNR-Fisheries@michigan.gov.