



Wisconsin DNR Fisheries Information Sheet

Water: Shay Lake

County: Oconto

WBIC: 456765

Year: 2015

Shay Lake is a 60 acre spring lake located in northern Oconto County approximately 32 miles west of the city of Marinette or 8.5 miles east of the town of Mountain. It has a maximum depth of 39 feet and approximately 1.5 miles of shoreline (Figure 1). The bottom composition is primarily marl and muck.

Shay Lake was stocked extensively from 1937 through 1952. Largemouth bass were stocked in large numbers from 1943 through 1952. Species stocked to a lesser degree included bluegill, yellow perch, northern pike, walleye, bullheads, and rock bass. Shay Lake is classified as a spring lake and the potential for a two story fishery prompted the stocking of brook trout annually from 1954 to 1964. Brook trout stocking ended in 1964 because habitat was limiting, growth was poor, and the number of fish caught and harvested was low. There are no records indicating any stocking after 1964 to the present.

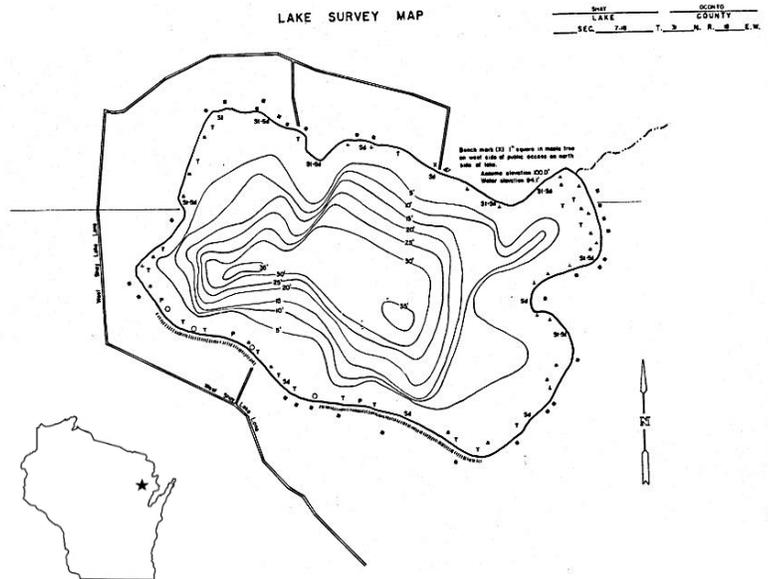


Figure 1. Shay Lake, Oconto County

Previous surveys in 1965 and 1972 indicated a bass and bluegill fishery. Other species present were yellow perch, bullheads, green sunfish, and pumpkinseeds. No brook trout were captured in either survey, but were thought to still be present during the 1965 survey. In both years, electrofishing boats were used to sample the entire shoreline.

On May 27th, 2015 the entire shoreline was sampled with an electrofishing boat. All species encountered were collected (Table 1). Species composition closely resembled that of previous surveys with the addition of a couple of species. Both black crappie and northern pike were not present in any of the two previous surveys, but were found in 2015.

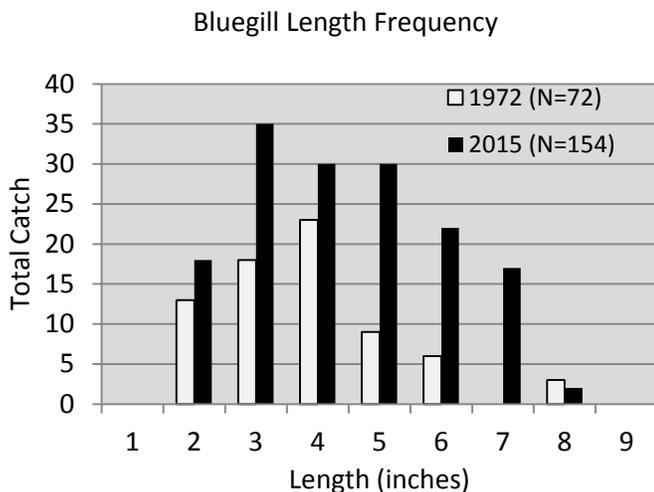


Figure 2. Length frequency of bluegill from 1972 and 2015 electrofishing surveys. Shay Lake, Oconto County.

Bluegill

Bluegill was the most abundant panfish encountered on Shay Lake. A total of 154 bluegill were captured. The mean length was 4.9 inches and a range of 2.0 to 8.7 inches in total length. Bluegill captured had a proportional stock density (PSD) of 30 and a relative stock density of preferred length (RSD-6) of 1. A PSD of 30 is well within the accepted range of 20-40 for balanced fish populations. Natural reproduction is evident as all length ranges were represented (Figure 2). The 2015 survey suggests average growth when compared to other northern Oconto County lakes.

Yellow Perch

Only 13 yellow perch were captured in 2015. The average length of yellow perch was 5.4 inches with a length range of 3.9 to 10.3 inches. Only 1 fish was larger than 8 inches. More than 50% of fish captured were 6 inches or smaller.

Largemouth Bass

Largemouth Bass are the dominant predator in Shay Lake. In 2015, 50 largemouth bass were collected. Bass averaged 10.1 inches and ranged in length from 5.4 to 17.5 inches in total length. PSD of largemouth bass captured was 31 and RSD-15 was 3. PSD values were slightly below the accepted range of 40-70 for balanced fish populations. Approximately 8% of bass captured were greater than the minimum length limit of 14 inches (Figure 3). Growth for older fish is below average when compared to other lakes in the region (Figure 4).

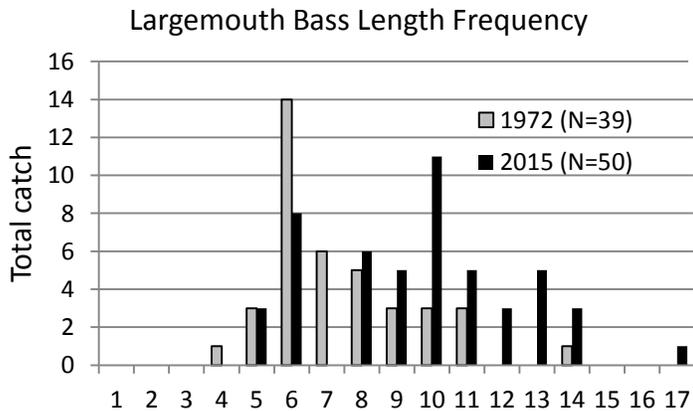


Figure 3. Length Frequency and total catch for survey years of 1972 and 2015, Shay Lake, Oconto County.

Largemouth Bass Length at Age

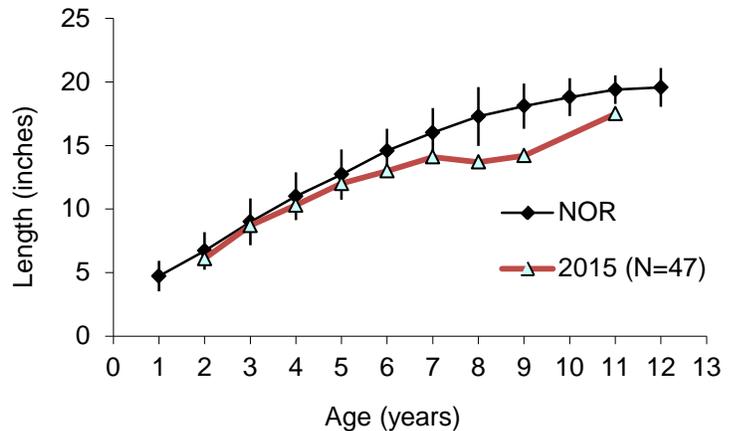


Figure 4. Largemouth Bass mean length at age for 2015. Shay Lake, Oconto County.

Black Crappie

Black Crappie were not present in previous surveys. In 2015, 17 black crappie were captured. The average length was 9.1 inches with a length range of 8.2 to 10.3 inches in total length. Age analysis shows almost 90% of black crappie sampled in 2015 were 4 years old.

Summary

Shay Lake has changed very little since the early 70's. The most notable change is the introduction of northern pike and black crappie. Manager's notes in the 60's specifically mention the lack of northern pike and the possible stocking of this species when the brook trout stocking program had ended. Lake residents opposed such an idea and it was quickly abandoned. Bluegill abundance and size structure have both improved over the years as well as largemouth bass numbers. The reduced growth of largemouth bass is more likely the culprit of a small sample size. Natural reproduction is occurring in all species present confirmed by the presence of fish in almost all length ranges. There is evidence of a lack of

recruitment in black crappie since over 90% of fish captured and aged were from a single year class. However, crappie are cyclic spawners and it is not uncommon to observe several consecutive good and/or bad year classes. Overall, the fishery in Shay Lake is doing well and should provide anglers a respectable fishing opportunity.

Questions about fisheries management activities for Shay Lake in Oconto County can be directed to:

Chip Long

Fisheries Biologist – Bureau of Fisheries
Wisconsin Department of Natural Resources
101 N. Ogden Rd., Suite A
Peshtigo, WI 54157
Phone: (715)-582-5017
Christopher.Long@Wisconsin.gov



Cory Wienandt

Fisheries Technician-Bureau of Fisheries
Wisconsin Department of Natural Resources
101 N. Ogden Rd, Suite A
Peshtigo, WI, 54157
Phone: (715) 582-5007
Cory.Wienandt@Wisconsin.gov

Table 1. Total species captured during in 2015. Shay Lake, Oconto

Species	Total Catch	Catch/ mi	Mean (in)	Min (in)	Max (in)
Bluegill	154	103	4.9	2.0	8.7
Largemouth Bass	50	33	10.1	5.4	17.5
Black Crappie	17	11	9.1	8.2	10.3
Yellow Perch	13	9	5.4	3.9	10.3
Yellow Bullhead	6	4	10.6	8.5	11.8
Pumpkinseed	6	4	5.4	4.1	6.9
Northern Pike	3	2	20.1	19.0	22.4
Green Sunfish	1	1	3.4	3.4	3.4