

Sixtown Pond Big Panfish Initiative (Survey #: 621002)
 Les Resseguie, Region 6 Fisheries

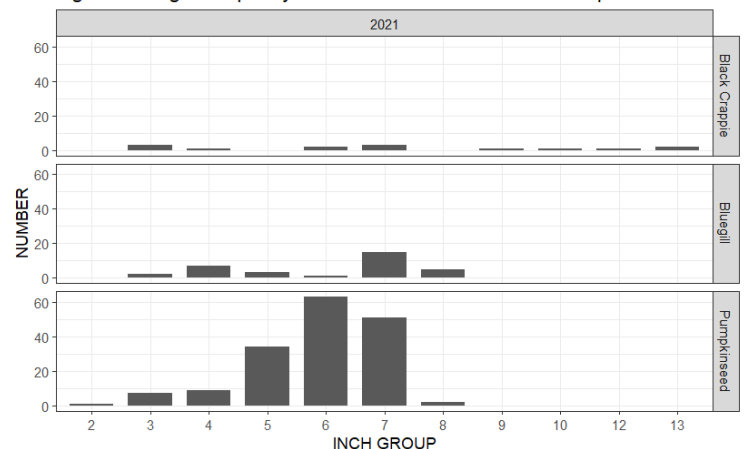
6/9/2022

Sixtown Pond (aka Crystal Lake) is a 169-acre waterbody in the Town of Henderson in Jefferson County with a maximum depth of 24 feet and mean depth of 14 feet. Public access is available by a NYSDEC maintained cartop boat launch located on southwest shoreline off County Route 178. Popular sportfish found in Sixtown Pond are largemouth bass, northern pike, walleye, yellow perch, brown bullhead, black crappie, bluegill and pumpkinseed sunfish. The walleye fishery is currently supported by annual fry stocking. Prior to April 1, 2022, special fishing regulations applied to yellow perch and sunfish (open year-round, no minimum length, no daily limit), walleye (open 1st Saturday in May, minimum length of 18 inches, daily limit of three fish) and black bass (fishing for black bass, including catch and release, is prohibited outside the open season [third Saturday in June – November 30]). The special regulation for yellow perch remained in place; however, effective April 1, 2022, the special regulations for black bass, walleye and sunfish changed; as did the statewide regulation for black crappie. The only change to the bass special regulation was changing the start of the opening season from the third Saturday in June to June 15. The black bass special regulation that prohibited fishing for black bass, including catch and release, outside the open season remains in effect. The only change to the walleye special regulation was changing the start of the opening season from the first Saturday in May to May 1. The sunfish special regulation changed to open year-round, minimum length of eight inches, daily limit of 15 fish. The statewide minimum length for crappie was increased from nine to ten inches. Ice fishing is permitted on Sixtown Pond.

Sixtown Pond has been surveyed thirteen times from 1984 – 2013 predominately using boat electrofishing and gillnets to evaluate walleye. In May 2021, a survey was conducted to evaluate new sunfish regulations as part of the Big Panfish Initiative (BPI; NYSDEC 2021). Goal 1 of the Big Panfish Initiative is to determine if the experimental BPI sunfish regulation (i.e., new special regulation) in Sixtown Pond results in improved population age and size structure (NYSDEC 2021). This initial survey will provide baseline data for the evaluation of the experimental BPI regulations with

repeated surveys planned each year through 2025. Sampling methodology followed the New York State Sunfish and Crappie Trap Netting Protocol (Loukmas 2021). Trap nets were first set on May 10, 2021, but due to a decrease in water temperature and reduced chance of capturing the target species, netting was delayed until the following week. Nets were reset May 17, 2021 through May 19, 2021 resulting in a total of seven net-nights of effort. Water temperatures ranged from 52°F - 65°F.

Figure 1. Length Frequency Distribution for Selected Panfish Species



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Pumpkinseed sunfish dominated the sunfish catch (n=167) followed by bluegill (n=33) and black crappie (n=14) resulting in catch rates of 23.9, 4.7, and 2.0 fish/net-night, respectively. Bluegill and black crappie have been sampled with more regularity in previous survey efforts yet were poorly represented in 2021. Therefore, population metrics will not be calculated for bluegill and crappie as the samples were not likely representative of the population.

Pumpkinseed sunfish lengths ranged from 2.9 – 8.4 inches (Figure 1), averaging 6.4 inches. Stock density indices were calculated to evaluate size structure in the population and allow for comparisons between lakes and years. The Proportional Stock Density (PSD), and Relative Stock Density for preferred (RSD_p) and memorable (RSD_m) were 74.1, 3.0 and 0, respectively. These values indicate that the population is dominated by fish in the “quality” size class (i.e., 74.1% of stock sized population were 6-8 inches; Table 1). In Sixtown Pond, 3.0% of the stock sized population was preferred size and none were memorable size. Relative weights (W_r; an index of condition) were calculated for each size class (Table 1) and were found to be lower than the statewide average that was determined from fish caught during springtime electrofishing but still considered in optimal condition for NY waters (Brooking et al. 2018).

The age distribution of pumpkinseeds sampled in 2021 was dominated by age-5 fish (Figure 2). It is unclear why age-1 and 2 fish were poorly represented. It may have to do with capture efficiency or younger fish may not be occupying the same space as adult fish that are moving around pre-spawn. In 2021, the mean length at age of Sixtown Pond pumpkinseeds were comparable to the statewide average (Figure 3).

Prior to April 1, 2022, fishing regulations allowed for unlimited harvest of sunfish in

Figure 2. Age Distribution of Pumpkinseeds from Sixtown Pond in 2021

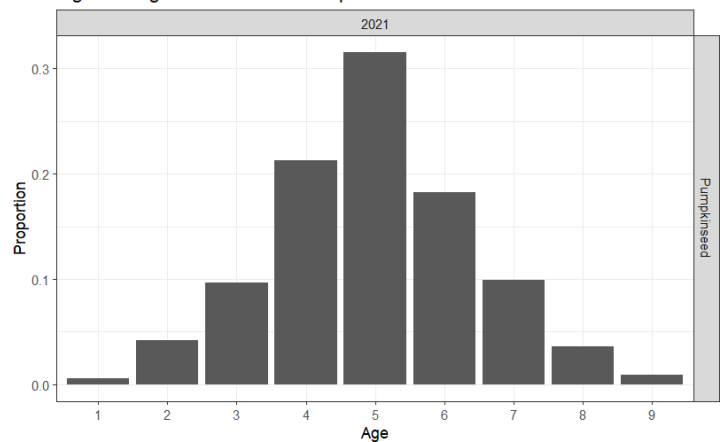
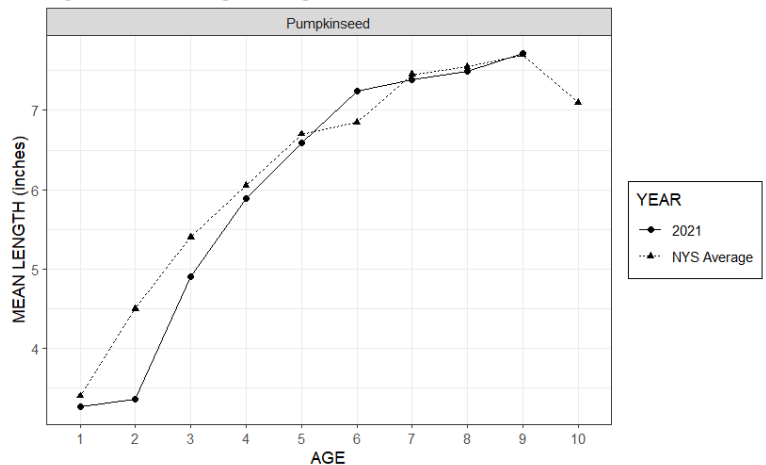


Figure 3. Mean Lengths at Age of Pumpkinseed from Sixtown Pond in 2021



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Sixtown Pond. Trap net surveys will continue annually through 2025 to evaluate the response of the sunfish population under the new regulations which apply a minimum length of 8 inches and a daily limit of 15 fish.

Table 1. Average relative weights (Wr) for each size class of Pumpkinseeds from 2021 in Sixtown Pond (n = number collected and SE = standard error).

Size Class (min. length)	n	Wr (SE)	Wr statewide (SE)
Stock (3-5.9")	43	96 (2.0)	104 (1.0)
Quality (6-7.9")	118	98 (0.7)	102 (1.0)
Preferred (8.0-9.9")	5	101 (3.4)	103 (1.0)

Literature Cited:

Brooking, T., Loukmas, J., Jackson, R., VanDevalk, T. 2018. Black Bass and Sunfish Sampling Manual for Lakes and Ponds. New York State Department of Environmental Conservation, Federal Aid in Sportfish Restoration, F-63-R, Study 2, Job 2-2.3. Albany, New York.

Loukmas, J. 2021. New York Sunfish and Crappie Trap Netting Protocol. New York State Department of Environmental Conservation, Bureau of Fisheries. Albany, NY

NYSDEC, 2021. Big Panfish Initiative Study Plan. New York State Department of Environmental Conservation, Bureau of Fisheries. Albany, NY

