

Saratoga Lake Sunfish/Crappie Netting Survey # 522007

Kyle Jones, Region 5 Fisheries

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Saratoga Lake is a 3,763-acre lake located in the towns of Saratoga Springs, Stillwater and Malta, in Saratoga County. Access to the lake is provided by a public boat launch operated by New York State Office of Parks, Recreation and Historic Preservation, as well as several private marinas. It is a popular destination for anglers targeting panfish, black bass, and walleye. Most fish species in Saratoga Lake are managed under statewide angling regulations, with the exception of sunfish (bluegill, pumpkinseed, redbreast), which have a minimum length limit of 8”, and a maximum creel limit of 15 fish per day. This regulation is part of the newly adopted Big Panfish Initiative (NYSDEC 2021), a statewide study which seeks to improve population size structure for sunfish by limiting harvest in select waters. The statewide minimum length limit for crappie was also increased from 9” to 10” in 2022 for the same purposes. This survey along with the 2021 survey seeks to establish baseline population information for sunfish and crappie, allowing the Department to assess the impacts of the more restrictive regulations.

Three Oneida Lake trap nets were set at three locations in April 2022, following the New York State Sunfish and Crappie Trap Netting Protocol (Loukmas 2021). The nets were set on April 25 and tended and reset on April 26. One of the nets had collapsed on April 26, resulting in a zero catch and was

Table 1. Number and size range of all species captured in 2022

| Species         | Number Captured | CPUE (Fish/Net Night) | Min. Length (inches) | Max. Length (inches) |
|-----------------|-----------------|-----------------------|----------------------|----------------------|
| Black Crappie   | 139             | 27.8                  | 5.8                  | 12.8                 |
| Bluegill        | 137             | 27.4                  | 4.8                  | 11.4                 |
| Pumpkinseed     | 34              | 6.8                   | 4.8                  | 9.2                  |
| Largemouth Bass | 8               | 1.6                   | 13.5                 | 21.3                 |
| Rock Bass       | 8               | 1.6                   | 7.6                  | 10.9                 |
| Yellow Perch    | 5               | 1.0                   | 10.3                 | 12.4                 |
| Walleye         | 3               | 0.6                   | 20.3                 | 21.7                 |
| Chain Pickerel  | 12              | 2.4                   | 12.9                 | 21.8                 |
| Northern Pike   | 1               | 0.2                   | 11.3                 | 11.3                 |
| Golden Shiner   | 17              | 3.4                   | 7.0                  | 11.2                 |
| Brown Bullhead  | 13              | 2.6                   | 7.9                  | 14.5                 |
| Yellow Bullhead | 4               | 0.8                   | 11.5                 | 13.6                 |

excluded from this survey. Therefore, a combined total of 5 net nights was used for effort related calculations. All fish were measured, weighed, with scales or otoliths taken from subsamples of sunfish and crappie for age estimation.

Twelve species totaling 382 fish were captured during the survey (Table 1). Black crappie were the most common species captured (27.8/net night), followed by bluegill (27.4/net night) and pumpkinseed (6.8/net night). There was an insufficient number of pumpkinseeds collected for a representative size structure determination.



Black crappie ranged in lengths from 5.8-12.8 inches and mean length at age 4 was 7.9 inches  $\pm$  1.0 (mean  $\pm$  SD) (Figures 1 & 2). Proportional stock density (PSD), and relative stock densities for preferred (RSD<sub>p</sub>), and memorable (RSD<sub>m</sub>), for black crappie were 79.1, 49.6, and 4.3 respectively. The overall mean relative weight (Wr) for black crappie was 110.1.

Bluegills ranged in length from 4.8-11.4 inches, and mean length at age 5 was 8.5 inches  $\pm$  0.7 (mean  $\pm$  SD) (Figures 1 & 2). PSD, RSD<sub>p</sub>, and RSD<sub>m</sub> for bluegill were 98.5, 80.3, and 3.6 respectively. Overall mean Wr for bluegills was 97.5.

Size structure index values for black crappie were all in the upper third when compared to mean values for spring electrofishing surveys in New York State (Brooking et al. 2018), indicating a well balanced black crappie population. In addition, mean relative weights for each size category were also in the upper third, suggesting that black crappie from Saratoga Lake are heavier than an average fish of the same length.

Size structure index values for bluegill were also all in the upper third when compared to the statewide average, indicating a desirable size distribution of bluegills. The overall mean relative weight of 97.5 indicates that these fish are in good condition.

Overall, the black crappie and bluegill populations in Saratoga Lake appear to be healthy and well balanced. These fish should provide excellent angling opportunities for the foreseeable future. Annual monitoring on Saratoga Lake will continue through 2025 to more fully evaluate the impact of the current regulations.

Literature Cited:

Brooking et al. 2018. Bass and Sunfish Population Metric Data. New York State Department of Environmental Conservation, Bureau of Fisheries. Albany, NY

Loukmas, J. 2021. New York Sunfish and Crappie 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

Figure 1. Length Frequency Distribution for Selected Panfish Species

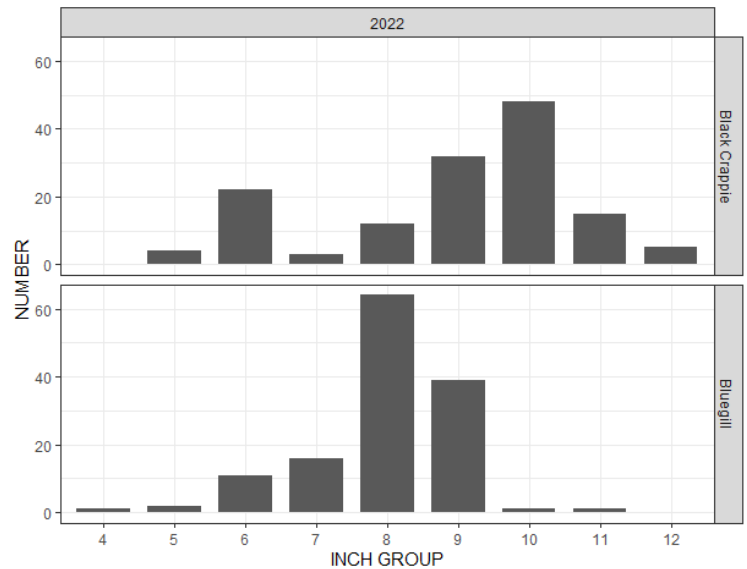


Figure 2. Length Distribution at Age for Selected Panfish Species

