

## Upper Twin Pond Panfish (Survey #: 121009) Region 1 Fisheries, Peter Malaty

3/20/2023

Upper Twin Pond is a 23-acre lake in Nassau County, Long Island with shore access through a town of Hempstead preserve. The lake supports a warmwater fishery for largemouth bass, black crappie, bluegill, pumpkinseed and a put and take stocked trout fishery. Upper Twin Pond has a year-round catch and release season for largemouth bass and at the time of the survey the sunfish bag limit was 15 with no minimum length limit and the black crappie bag limit was 15 with a minimum length limit of 9 inches. The current regulations which went into effect on 4/1/22 are 25 sunfish with no minimum length limit and 25 black crappie with a 10 inch minimum length limit.

This survey followed the same design as survey number 120007 and was the second survey of this type on Upper Twin Pond. The purpose of this survey was to index black crappie, bluegill, and pumpkinseed abundance and estimate size and age structure, and condition. A total of ten North American standard fyke nets were set overnight at randomly selected locations perpendicular to the shore around the perimeter of the lake on the night of 10/5/21. The water temperature was 63.9 °F. All black crappie, bluegill and pumpkinseed were collected. Scales were collected.

A total of 140 bluegill were caught and the total mean catch per unit effort (CPUE) was 14.0 fish/net (Table 1) which was half the catch rate of the previous year (28.0 fish/net). Bluegills ranged in length from 1-8 inches (Figure 1). No memorable or trophy size bluegill were caught. Upper Twin Pond bluegill ranked third for CPUE, third for PSD, and first for RSDp among the four lakes sampled in 2021 (Table 2). Between 2020 and 2021 PSD doubled and RSDp nearly doubled (Table 1) which indicates that the proportion of bluegill over six inches and over eight inches in the stock size and larger catch increased. Bluegill mean relative weight was 2.9% less than standard weight and ranked first among the four lakes sampled.

A total of 42 pumpkinseed were caught and the total mean CPUE was 4.2 fish/net (Table 1) which was similar to the previous year (3.4 fish/net). Pumpkinseed ranged in length from 2-7 inches (Figure 2). No preferred, memorable or trophy size pumpkinseed were caught. Upper Twin Pond ranked last in pumpkinseed CPUE, and third in PSD among the four lakes sampled in 2021 (Table 3). Between 2020 and 2021 PSD was similar and RSDp remained zero (Table 1) which indicates that the proportion of pumpkinseed six inches and larger in the stock size catch did not change much and that pumpkinseed eight inches and larger were not present in the catch. Pumpkinseed mean relative weight was 1.6% less than standard weight and ranked first amongst the four lakes sampled.

A total of 96 black crappie were caught and the total mean CPUE for black crappie was 9.6 fish/net (Table 1) which was lower than the previous year's estimate (26.2 fish/net). Black crappie ranged in length from 2-10 inches (Figure 3). No memorable or trophy sized black crappie were caught. For black crappie Upper Twin Pond ranked last in CPUE, first in PSD, and third in RSDp among the four lakes sampled (Table 4). Black crappie relative stock indices were not reported from previous surveys on Upper Twin Pond. With the new minimum length limit of 10 inches, the portion of the crappie population available for harvest will be reduced by 75%. Mean relative weight for black crappie was 1.4% above standard weight and ranked first amongst the four lakes sampled.



Table 1. Summary statistics for Upper Twin Pond (120007, 121009)

Species	Year	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Black Crappie	2020	45.1	14.7	2.0	0.0	26.2	102.8
Black Crappie	2021	86.8	9.4	0.0	0.0	9.6	101.4
Bluegill	2020	31.3	13.0	0.0	0.0	28.0	96.8
Bluegill	2021	60.0	23.5	0.0	0.0	14.0	97.1
Pumpkinseed	2020	28.6	0.0	0.0	0.0	3.4	97.0
Pumpkinseed	2021	25.6	0.0	0.0	0.0	4.2	98.4

Table 2. Lake comparison for bluegill.

Lake	Species	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Upper Twin Pond	Bluegill	60.0	23.5	0.0	0.0	14.0	97.1
Artist Lake	Bluegill	71.3	0.0	0.0	0.0	17.0	93.4
Lake Ronkonkoma	Bluegill	3.8	0.0	0.0	0.0	68.7	85.8
Fresh Pond	Bluegill	83.3	3.9	0.0	0.0	8.1	79.1

Table 3. Lake comparison for pumpkinseed.

Lake	Species	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Upper Twin Pond	Pumpkinseed	25.6	0.0	0.0	0.0	4.2	98.4
Artist Lake	Pumpkinseed	89.7	0.9	0.0	0.0	14.6	92.5
Lake Ronkonkoma	Pumpkinseed	1.2	0.0	0.0	0.0	76.2	81.6
Fresh Pond	Pumpkinseed	86.4	6.8	0.0	0.0	8.8	83.3

Table 4. Lake comparison for black crappie.

Lake	Species	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Upper Twin Pond	Black Crappie	86.8	9.4	0.0	0.0	9.6	101.4
Artist Lake	Black Crappie	16.1	2.1	0.0	0.0	48.9	91.1
Lake Ronkonkoma	Black Crappie	21.5	16.6	7.3	0.0	64.1	83.9
Fresh Pond	Black Crappie	59.0	37.6	1.2	0.0	17.3	77.5

Figure 1. Bluegill length frequency

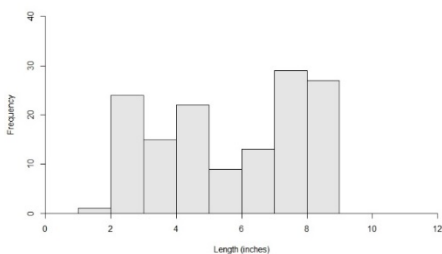


Figure 2. Pumpkinseed length frequency

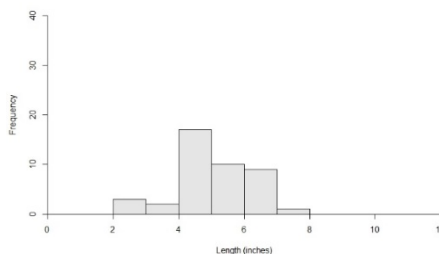


Figure 3. Black crappie length frequency

