

## Lake Ronkonkoma Panfish (Survey #: 121011) Region 1 Fisheries, Peter Malaty

1/20/23

Lake Ronkonkoma is a 231-acre lake in Suffolk County Long Island with public access through a DEC boat launch and shore access through Suffolk County Parks. The lake supports a warmwater fishery for largemouth and smallmouth bass, black crappie, bluegill, pumpkinseed and a stocked walleye fishery. Current special regulations on Lake Ronkonkoma are for walleye which is a 3-fish bag limit with an 18 inch minimum length limit. 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 120009 and was the second survey of this type on Lake Ronkonkoma. 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 twenty North American standard fyke nets were set over two nights (10 per night) at randomly selected locations perpendicular to the shore around the perimeter of the lake. The nets were set on the nights of 10/20/21 and 10/21/21. The water temperature was 63.3 °F. All black crappie, bluegill and pumpkinseed were collected. Scales were collected.

A total of 1,305 bluegill were caught and the total mean catch per unit effort (CPUE) was 68.7 fish/net (Table 1) which was less than half the catch rate of the previous year (154.1 fish/net). Bluegills ranged in length from 2-7 inches (Figure 1). No memorable or trophy size bluegill were caught. Lake Ronkonkoma bluegill ranked first in CPUE, and last in PSD among the four lakes sampled in 2021 (Table 2). Between 2020 and 2021 PSD changed from 6.7 to 3.8 and RSDp changed from 1.1 to zero (Table 1). This indicates that bluegill six inches and larger continue to make up a small percentage of the stock size catch and no bluegill eight inches and larger were present in the 2021 catch. Bluegill mean relative weight was 18.4% less than standard weight and ranked third among the four lakes sampled.

A total of 1,448 pumpkinseed were caught and the total mean CPUE was 76.2 fish/net (Table 1) which was higher than the previous year's estimate (64.4 fish/net). Pumpkinseed ranged in length from 2-7 inches (Figure 2). No memorable or trophy size pumpkinseed were caught. Lake Ronkonkoma ranked first in CPUE, and last in PSD and RSDp among the four lakes sampled in 2021 (Table 3). Between 2020 and 2021 PSD increased from 0.9 to 1.2 and RSDp remained zero (Table 1) which indicates that few fish over six inches and larger were present in the catch. Pumpkinseed mean relative weight was 11.3% less than standard weight and ranked last among the four lakes sampled.

A total of 1,217 black crappie were caught and the mean total CPUE was 64.1 fish/net (Table 1) and was less than the previous year's estimate (76.2 fish/net). Black crappie ranged in length from 2-13 inches (Figure 3). Fifteen memorable sized black crappie were caught but no trophy size were caught. For black crappie Lake Ronkonkoma ranked first in CPUE, third in PSD, second in RSDp, and first in RSDm among the four lakes sampled in 2021 (Table 4). Black crappie PSD estimates from the 2001-2018 fall electrofishing surveys ranged from 20-100 and RSDp ranged from 0-100. The 2021 PSD estimate was the second lowest of the range of fall electrofishing and RSDp was near the median. Again, the relationship between the estimates collected with two different gears is unclear. With the new minimum length limit of 10 inches, the portion of the crappie population available for harvest will be reduced by 8.1%. The mean relative weight for black crappie was 16.1% less than standard weight and ranked third among the four lakes sampled.



Table 1. Summary statistics for Lake Ronkonkoma (120009, 121011)

Species	Year	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Bluegill	2020	6.7	1.1	0.0	0.0	154.1	98.8
Bluegill	2021	3.8	0.0	0.0	0.0	68.7	85.8
Pumpkinseed	2020	0.9	0.0	0.0	0.0	64.4	88.7
Pumpkinseed	2021	1.2	0.0	0.0	0.0	76.2	81.6
Black Crappie	2020	93.0	23.4	6.3	0.0	76.2	92.4
Black Crappie	2021	21.5	16.6	7.3	0.0	64.1	83.9

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

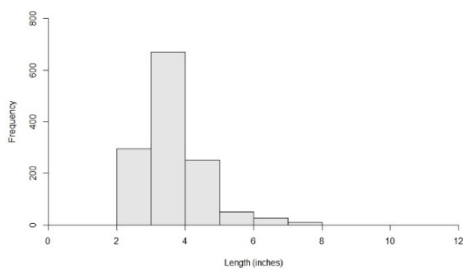


Figure 2. Pumpkinseed length frequency

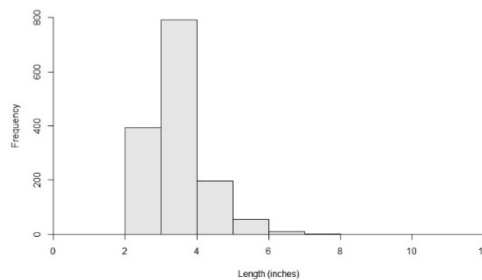


Figure 3. Black crappie length frequency

