

New Mill Pond Panfish (Survey #: 120010) Region 1 Fisheries, Peter Malaty

07/07/22

New Mill Pond, also known as Blydenburgh Lake, is a 111-acre lake in Suffolk County Long Island with shore and boat access through a Suffolk County Park. The lake supports a warmwater fishery for largemouth bass, black crappie, bluegill, and pumpkinseed. 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 15 sunfish with an 8 inch minimum length limit and 25 black crappie with a 10 inch minimum length limit.

The design of these surveys was driven by a need to build a statistically robust information base which would provide the foundation for understanding sportfish population dynamics, context for annual population performance, and quantitative information for identifying the need for and evaluating management actions which specifically are season, size, and bag limit and stocking. The purpose of this survey was to index black crappie, bluegill, and pumpkinseed abundance and estimate size and age structure, and condition. These basic surveys are being done for the first time on New Mill Pond/Blydenburgh Lake, Artist Lake, Lake Ronkonkoma, Peconic Lake, Upper Twin Pond, and Fresh Pond. 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 10/22/20 and 10/23/20. The water temperature was 63.14 °F. All black crappie, bluegill and pumpkinseed were collected. Scales were collected.

A total of 874 bluegill were caught and the total mean catch per unit effort (CPUE) was 48.6 fish/net (Table 1). Bluegills ranged in length from 2-10 inches (Figure 1). One memorable size and no trophy size bluegill were caught. New Mill Pond bluegill ranked second for CPUE, first for PSD, and first for RSDp out of the five lakes sampled in 2020 (Table 2). Bluegill PSD estimated from four spring electrofishing between 1998 and 2017 ranged from 41-94 and RSDp estimates ranged from 7-38. Spring fyke netting was also done in 2017 but relative stock indices were not reported. Relative to the previous electrofishing surveys the 2020 PSD estimate was the second highest and RSDp was at the median, although the relationship between the current and previous values is unknown because of the confounding effects of gear and season. With the new minimum length limit for panfish of 8 inches, 24.7% of the stock size bluegill population will be available for harvest. Bluegill mean relative weight was 7.8% less than standard weight and ranked third among the five lakes sampled.

A total of 257 pumpkinseed were caught and the total mean CPUE was 14.3 fish/net (Table 1). Pumpkinseed ranged in length from 2-8 inches (Figure 2). No memorable or trophy size pumpkinseed were caught. New Mill Pond ranked second in pumpkinseed CPUE, third in PSD, and third in RSDp among the five lakes sampled in 2020 (Table 3). Pumpkinseed PSD from the 1998 to 2017 spring electrofishing surveys ranged from 24-100 and RSDp ranged from 1-31. Relative stock indices were not reported from the fyke nets. The 2020 PSD for pumpkinseed was near the median of the spring electrofishing estimates and the 2020 RSDp estimate was lower than all the previous estimates. Again, the relationship between the current and previous values is unknown because of the confounding effects of season and gear. With the new minimum length limit for panfish of 8 inches, less than 1% of the stock size pumpkinseed population will be available for harvest. Mean relative weight for Pumpkinseed was 7% less than standard weight and ranked third among the five lakes sampled.

A total of 204 black crappie were caught and the total mean CPUE was 11.3 fish/net (Table 1). Black crappie ranged in length from 3-12 inches (Figure 3). Four memorable sized black crappie were caught but no trophy size



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were caught. New Mill Pond black crappie ranked fourth in CPUE, third in PSD, second in RSDp, and second in RSDm (Table 4). Of the four spring electrofishing surveys between 1998 and 2017, black crappie were only collected in 2017 but only 11 were caught and no relative stock indices were reported. Three hundred and thirty-nine black crappie were caught in the 2017 fyke net survey and estimated a PSD of 92 and an RSDp of 7. The 2020 PSD estimate was less than half and the RSDp estimate was more than three times larger. Again, the relationship is unclear. With the new minimum length limit of 10 inches, the portion of the crappie population available for harvest will be reduced by 19%. Mean relative weight for black crappie was 0.6% less than standard weight and ranked second among the five lakes sampled.

New Mill Pond is scheduled to be sampled annually for black crappie and panfish from 2020-2024.

Table 1. Summary statistics for 120009 New Mill Pond

Species	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Bluegill	86.6	24.7	0.1	0.0	48.6	92.2
Pumpkinseed	49.6	0.4	0.0	0.0	14.3	93.0
Black Crappie	48.7	31.3	2.1	0.0	11.3	99.4

Table 2. Lake comparison for bluegill.

Lake	Species	Number Caught	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Upper Twin Pond	Bluegill	252	31.3	13.0	0.0	0.0	28.0	96.8
Artist Lake	Bluegill	72	52.9	0.0	0.0	0.0	8.5	87.6
Lake Ronkonkoma	Bluegill	2906	6.7	1.1	0.0	0.0	154.1	98.8
New Mill Pond	Bluegill	874	86.6	24.7	0.1	0.0	48.6	92.2
Peconic Lake	Bluegill	186	72.9	21.1	0.0	0.0	9.3	89.3

Table 3. Lake comparison for pumpkinseed.

Lake	Species	Number Caught	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Upper Twin Pond	Pumpkinseed	31	28.6	0.0	0.0	0.0	3.4	97.0
Artist Lake	Pumpkinseed	25	68.0	4.0	0.0	0.0	2.9	88.7
Lake Ronkonkoma	Pumpkinseed	1203	0.9	0.0	0.0	0.0	64.4	88.7
New Mill Pond	Pumpkinseed	257	49.6	0.4	0.0	0.0	14.3	93.0
Peconic Lake	Pumpkinseed	98	90.8	5.1	0.0	0.0	4.9	102.3



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Table 4. Lake comparison for black crappie.

Lake	Species	Number Caught	PSD (%)	RSDp (%)	RSDm (%)	RSDt (%)	Mean CPUE (fish/net)	Mean Wr
Upper Twin Pond	Black Crappie	236	45.1	14.7	2.0	0.0	26.2	102.8
Artist Lake	Black Crappie	123	35.5	30.6	0.0	0.0	15.1	90.5
Lake Ronkonkoma	Black Crappie	1708	93.0	23.4	6.3	0.0	76.2	92.4
New Mill Pond	Black Crappie	204	48.7	31.3	2.1	0.0	11.3	99.4
Peconic Lake	Black Crappie	142	90.8	54.6	0.1	0.0	7.1	94.4

Figure 1. Bluegill length frequency

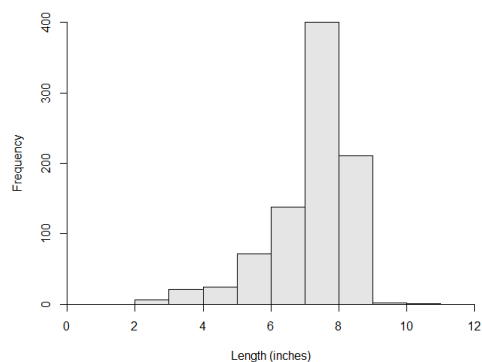
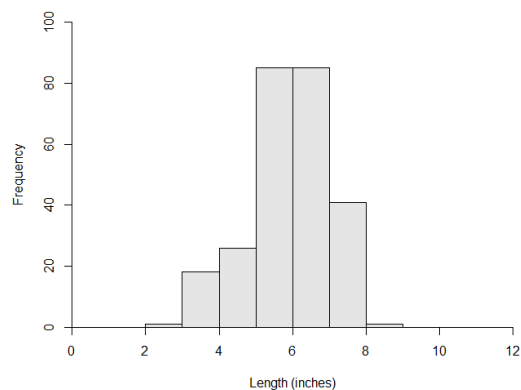


Figure 2. Pumpkinseed length frequency



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Figure 3. Black crappie length frequency

