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Harlem Meer Centrarchid Survey (#221004)

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Ten-acre Harlem Meer (the Meer) is a popular angling location in the northeast corner of Central Park, Manhattan, in the Lower Hudson Watershed. Nearly the entire water body is accessible to anglers. Both New York City and New York State regulations require catch and release fishing. DEC Fisheries performs boat electrofishing surveys of the Meer bi-annually with the last survey completed in 2019. Staff performed a boat electrofishing survey of the Meer on June 1st, 2021 following the DEC Black Bass and Sunfish Sampling Manual for Lakes and Ponds (Brooking et al. 2018).

Four, ten-minute electrofishing runs were completed, covering close to 100% of the shoreline as in the 2019 survey. Visibility was high and aquatic vegetation coverage was relatively low. A total of 561 fish of five species were captured. Neither golden shiner nor green sunfish were captured in this survey as they were in 2019. Brown bullhead catfish were captured; this species was captured in a 2015 electrofishing survey of the Meer but not in four other previous surveys. One common carp was observed. Catch rates for bluegill sunfish and largemouth bass were slightly less than in 2019 although catch rates of larger-sized fish of both species were higher in this survey as reflected in PSD and RSDp size indices (Tables 1 and 2).

Table 1. Number collected and length category catch rates for fish species captured during a boat electrofishing survey of the Harlem Meer in 2021.

			CPUE (fish/hour; standard error)				
Species	Total catch	Time (h)	All sizes	Age-1	>=Stock	>=Quality	>=Preferred
Largemouth bass	81	0.7	119 (31)	18 (9.3)	102 (24.2)	78 (12.8)	37 (7.7)
Bluegill	465	0.7	684 (27)	54 (31)	630 (44)	320 (82)	0 (0)
Black crappie	7	0.7	10 (4.4)	0 (0)	10 (4.4)	10 (4.4)	2 (1.5)
Pumpkinseed	1	0.7	1.5 (1.5)	0 (0)	1.5 (1.5)	1.5 (1.5)	1.5 (1.5)
Brown bullhead	7	0.7	10.3 (3.7)	0 (0)	10.3 (3.7)	10.3 (3.7)	7.4 (2.8)

Table 2. Size index comparison between 2019 and 2021 electrofishing surveys

Species/Index	2019 survey	2021 survey
Largemouth bass PSD	56	77
Largemouth bass RSDp	26	36
Bluegill PSD	22	42
Bluegill RSDp	0	0

Largemouth bass size distribution was towards greater lengths in the 2021 survey, despite lower catch rates of this species. Number of fish in the lower size range was less in 2021 than in 2019 (Figure 1).

SPORT FISH RESTORATION

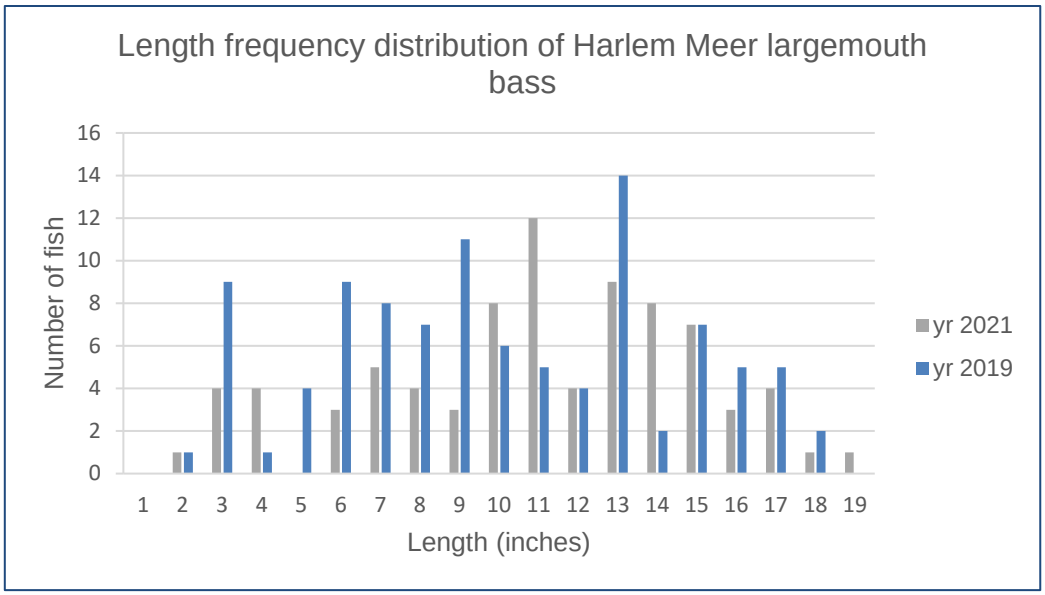

Figure 1. Harlem Meer length frequency distribution of largemouth bass for 2019 and 2021 electrofishing surveys

Compared to other surveys in NYS, largemouth bass catch rates were exceptionally high: rates for stock size (eight inches) and above were greater than those in 98% of lakes in the NYS fisheries database; those for quality (12") and preferred (15") were greater than those in 99% of lakes in the NYS database. Mean relative weight for largemouth bass was 90%: lower than the mean relative weight of largemouth bass captured in other NYS night-time spring electrofishing surveys. Bluegill sunfish catch rates were extremely high relative to those found in surveys throughout NYS and relative weight of this species was low (90%).

The Harlem Meer largemouth bass population offers angling opportunities for large-sized fish. Bluegill sunfish are plentiful offering an ideal angling opportunity for those wanting to catch sunfish.

[i]PSD (Proportional Stock Density) and RSD (Relative Stock Density) are indices that allow for standardized comparisons of size classes of fish and provide measures of fish population balance. PSD is the percent of the stock-sized population that are quality size, and RSD_p is the percent of the stock-sized population that are preferred size. Populations of bass that are well-balanced (i.e., have good size distributions) have PSDs of 40-70 and RSD_ps of 10-25.

Literature Cited

Brooking, T., Loukmas, J., Jackson, R., VanDeValk, T. 2018. Black bass and sunfish electrofishing protocol 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.