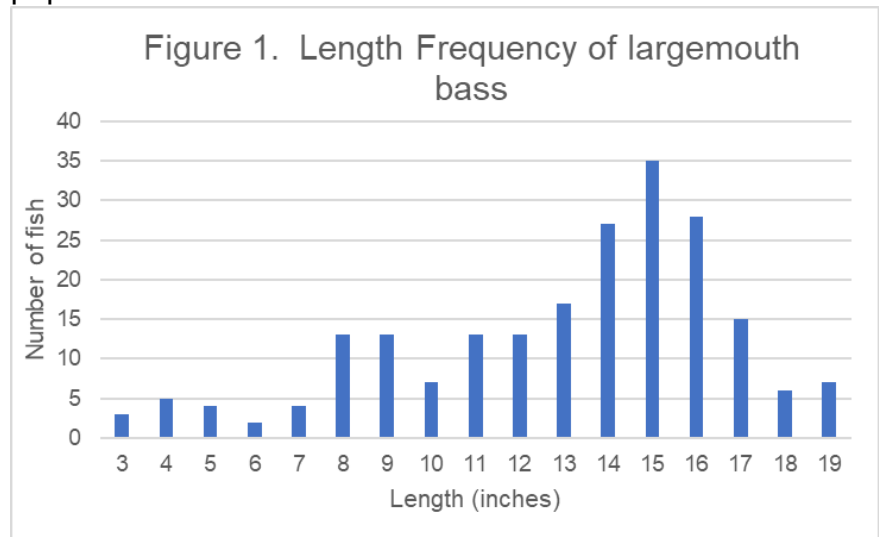


**Moon Lake Centrarchid Survey (Survey #: 619001)**  
**Les Resseguie, Region 6 Fisheries**

12/24/2019

Moon Lake (SL-25-50-P71) is a 243 acre natural lake in the Town of Theresa in northern Jefferson County. It is a shallow eutrophic waterbody (mean depth of 12 feet, max 20 feet) which supports dense submergent vegetation, predominantly Eurasian milfoil. The lake is accessible at the NYSDEC Moon Lake Fishing Access Site car-top launch (10 hp limit, no trailers) off Moon Lake Road. Moon Lake is popular with local anglers for largemouth bass, black crappie, and northern pike. Special fishing regulations apply to black bass in Jefferson waters. Fishing for black bass (including catch and release) on Moon Lake is prohibited outside of the open season which begins the 3<sup>rd</sup> Saturday in June and goes through November 30<sup>th</sup>. During the traditional open season, anglers can harvest up to five bass with a minimum length of 12 inches. Moon Lake is also a popular winter ice fishing destination. NYSDEC stocked Moon lake with tiger muskellunge from 1993-2015. In May 2019, a boat electrofishing survey was conducted to assess the Centrarchid population.

Over two nights, a night-time electrofishing survey was conducted following NYSDEC's black bass and sunfish electrofishing protocol (Brooking et al. 2018). Effort included five game fish runs (30 min) and five all-fish runs (10 min) for a total of 3.35 hours. The entire shoreline and all habitat types were sampled. A total of 10 species and one family were identified with a total of 1,475 fish captured.



Largemouth bass were the most numerous sportfish captured (n=212) followed by black crappie (n=60) and northern pike (n=55; Table 1). When compared to lakes of similar size, catch rates of largemouth bass were 86%, 93% and 95% higher for all fish (63/hr), quality sized (45/hr; ≥12 inches), and preferred sized (28/hr; ≥15 inches) fish, respectively (Table 1; Brooking et al. 2018). Proportional Stock Density (PSD=78) and Relative Stock Density preferred (RSDp=48) values of largemouth bass were high (Table 2) indicating a large proportion of population is of quality or preferred size. PSD and RSDp values fall within the top third percentiles when compared to all lakes statewide (Brooking et al. 2018a). The majority of largemouth bass captured were greater than the minimum harvestable limit of 12 inches (Figure 1).

Bluegill were the most numerous panfish captured (n=772; 908/hr); however, PSD value was very low (Table 1, Table 2). Of the captured fish, 96% were stock sized (3-6 inches) and only 0.6% were quality sized (≥ 6 inches). Black crappie catch rate (18/hr) was higher for Moon Lake



than the statewide average (11/hr) while PSD and RSDp values are comparable to statewide mean index values.

Moon Lake provides year-round fishing opportunities and is considered one of the top bass waters in Region 6. There is a high abundance of panfish, although few are of quality size. The relatively high abundance of quality and preferred sized largemouth bass provides anglers with a quality fishing experience.

**Table 1. Spring night-time boat electrofishing from Moon Lake, 2019.**

Species	Total Catch	On-time (h)	CPUE (fish/h; Standard Error)			
			All	≥Stock	≥Quality	≥Preferred
Largemouth Bass	212	3.35	63 (6)	58 (3)	45 (2)	28 (4)
Black Crappie	60	3.35	18 (7)	11 (3)	7 (2)	1 (1)
Northern Pike	55	3.35	16 (2)	6 (1)	0	0
Bluegill	772	0.85	908 (199)	877 (205)	6 (2)	0
Pumpkinseed	131	0.85	154 (21)	136 (13)	40 (12)	5 (2)
Yellow Perch	148	0.85	174 (82)	164 (78)	4 (1)	0

**Table 2. Length categories and size structure indices of sportfish and panfish in Moon Lake, 2019.**

Species	Category cut off (inches)			Size Structure Indices (Standard Error)	
	Stock	Quality	Preferred	PSD	RSDp
Largemouth Bass	≥ 8"	≥ 12"	≥ 15"	78 (6)	48 (8)
Black Crappie	≥ 5"	≥ 8"	≥ 10"	58 (19)	11 (13)
Northern Pike	≥ 14"	≥ 21"	≥ 25"	44 (17)	0
Bluegill	≥ 3"	≥ 6"	≥ 8"	1 (2)	0
Pumpkinseed Sunfish	≥ 3"	≥ 6"	≥ 8"	30 (9)	4 (4)
Yellow Perch	≥ 5"	≥ 8"	≥ 10"	0 (71)	0

**Literature Cited**

Brooking, T., J. Loukmas, R. Jackson, and T. VanDeValk. 2018. Black bass and sunfish electrofishing protocol for lakes and ponds. New York State Department of Environmental Conservation, Albany, NY.

Brooking, T., J. Loukmas, R. Jackson, and T. VanDeValk. 2018a. Bass and sunfish population metric data 1988-2017. New York State Department of Environmental Conservation, Albany, NY.