

# Crescent Lake (H-240) Black Bass Survey (Survey #: 418011)

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Crescent Lake is a 1,904-acre permanent impoundment of the Lower Mohawk River spanning Schenectady, Saratoga, and Albany counties in NYS. Located at the top of the Waterford Flight of Locks, the reservoir is eutrophic, perennially infested with water chestnut, and supports a diverse assemblage of warmwater sportfishes. Smallmouth and largemouth (i.e., black) bass, walleye, northern pike, chain pickerel, channel catfish, and the occasional (stocked) tiger muskellunge make this a popular water for anglers. Migratory blueback herring, plus spottail, spottin and other shiners are the common forage species. Blueback herring likely populated the river soon after the original bypass step-canal was completed around Cohoes Falls in 1823. Thereafter, this new marine-derived food source crafted the lower Mohawk into one of most productive rivers in the state (McBride 1994). Many river fishes including numerous non-natives move about the main stem river and connected waters (i.e., Hudson River) via canal locks and high flow events.

A survey using DEC’s revised black bass and sunfish sampling manual (Brooking et al. 2018) was conducted over six nights covering much of the reservoir shoreline between June 18-27, 2018. The primary purpose was to assess the status of black bass, with a secondary focus on walleye. Effort included 27 individual boat shocking runs (14 all-fish, 13 sportfish) at night for a total of 8.9 hours of on-time. A total of 27 fish species were identified with 1,038 fish captured. The most numerous sportfish captured was smallmouth bass (198), with 11 fish >16 in. (maximum 18.7 in., Fig. 1), and a maximum weight of 2.8 lbs. The catch rate of smallmouth bass was 22/h followed by walleye at 15/h (Table 1). However, the catch rate for quality or legal (≥12 in.) size smallmouth bass was only 7/h, or one-half the statewide average for spring surveys on lakes >1000 acres in NYS. Largemouth bass were much less numerous (27), but ~60% were of legal size (≥12 in.), with a maximum length of 19.4 in. and a maximum weight of 4 lbs. The largemouth bass catch rate was a meager 3/h (all sizes), decreasing to 2/h for quality size fish (Table 1). Interestingly, over one-half of the smallmouth bass collected were immature (<9 in.), yet few juvenile largemouth bass were captured/observed. Walleye were also common but only 16 of 130 collected were of legal size (≥15 in.) with a catch rate of only 2/h (Table 1), with a maximum size of 24.8 in. and 5.4 lbs.

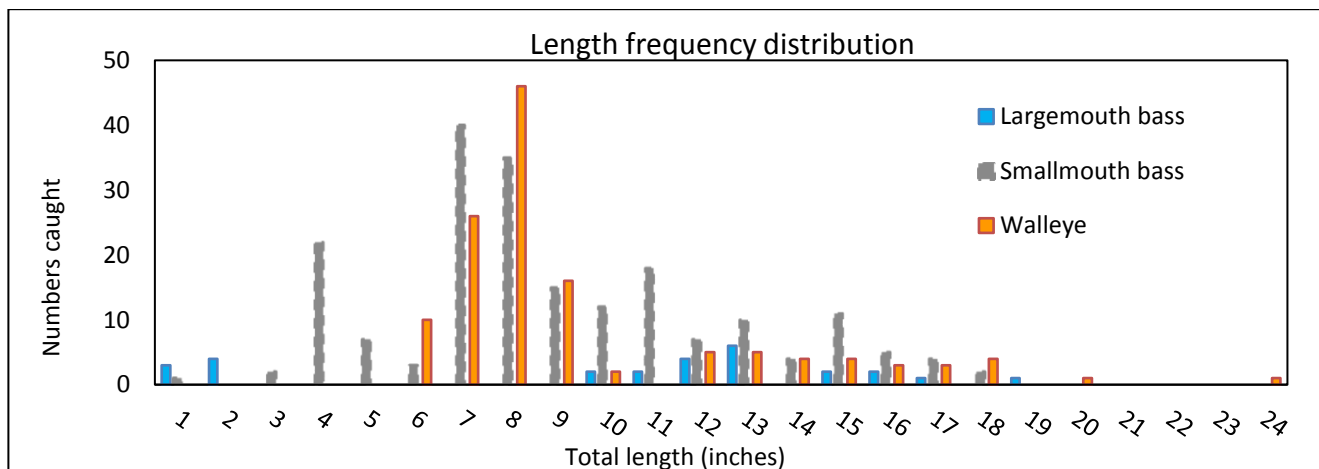


Figure 1. Results for three sport fishes captured in Crescent Lake, NY between June 18-27, 2018.

Only six northern pike and 11 chain pickerel were collected. No tiger muskellunge were collected or observed. Pumpkinseed and rock bass were the most common panfish captured, followed by bluegill, yellow perch, and brown bullhead (Table 1). Other notable collections included 12 channel catfish and three black crappie.



Table 1. Results from night electrofishing in Crescent Lake, NY between June 18-27, 2018.

Fish Species	N <sup>2</sup>	Effort <sup>3</sup> (h)	All sizes	YY/SY <sup>4</sup>	Length category <sup>1</sup> catch rate		
					≥Stock	≥Quality	≥Preferred
Brown bullhead	49	2.4	20.7	0.0	20.7	20.7	18.6
Rock bass	95	2.4	40.1	1.3	37.6	7.2	0.0
Pumpkinseed	129	2.4	54.4	0.8	53.6	34.6	3.8
Bluegill	62	2.4	26.6	8.9	16.0	13.1	0.0
Yellow perch	41	2.4	17.3	0.4	16.9	4.2	0.0
Largemouth bass	27	8.9	3.0	0.8	1.8	0.7	0.0
Smallmouth bass	198	8.9	22.3	3.6	18.0	6.8	3.2
Walleye	130	8.9	14.7	1.6	3.6	1.8	0.2

<sup>1</sup>Total length categories for various fish species

	Rock bass	Yellow perch / Brown bullhead	Bluegill / Pumpkinseed	Smallmouth bass	Largemouth bass	Walleye / Chain pickerel
Stock	≥ 4 in	≥ 5 in	≥ 3 in	≥ 7 in	≥ 8 in	≥ 10 in
Quality	≥ 7 in	≥8 in	≥ 6 in	≥11 in	≥12 in	≥ 15 in
Preferred	≥ 9 in	≥10/11 in	≥ 8 in	≥14 in	≥15 in	≥ 20 in

<sup>2</sup>N—numbers captured, <sup>3</sup>Effort—fishper h—hour, <sup>4</sup>YY—young of year and SY—spring yearling (age-1) fish

Large schools of forage fishes (likely young blueback herring, spottail and spotfin shiner) were observed during the survey, an indication of the lower river's productivity. Fish passage improvements at both ends of the reservoir (hydro-dams) would likely reduce mortality of migratory species such as American eel (only one adult collected in upper tailwater) and blueback herring (five adults collected at the tail of their spring run) resulting in a more productive (forage input) and balanced warmwater ecosystem.

Smallmouth bass and walleye populations appear to be recruiting well in Crescent Lake (Fig. 1). A lack of larger walleye and esocids in the survey was likely due to rising water temperatures in early summer when adult fishes tend to move deeper seeking cooler water. Shocking runs along dense water chestnut beds often resulted in very few fish collected. This scenario indicates a general avoidance displayed by many river fishes and likely caused our catch rates in general to be lower than expected. The presence of multiple public access points and a menu of quality sized sportfish, mostly in areas relatively devoid of water chestnut (better habitat), contribute to existing angler pressure that can be high due to close proximity of the Capital District and likely fluctuates by season. The productive black bass and walleye fishery of the lower river will continue to be managed under the statewide fishing regulations. In addition to smallmouth bass, the primary sportfish, good numbers of large panfish should also contribute to quality fishing opportunities for many years to come.

Brooking, T., Loukmas, J., Jackson, R., VanDeValk, T. 2018. Black bass and sunfish sampling manual 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.

McBride, N.D. 1994. A fisheries management plan for the lower Mohawk River. NYSDEC, Albany, NY. 109pp.