



Late-Spring Electrofishing Survey Summary Long Lake, Ashland County, 2013

Survey Description

The Mercer DNR Fisheries Management Team conducted a late-spring electrofishing survey at Long Lake on May 27, 2013. The lake was surveyed for purposes of obtaining representative samples of the bass and panfish populations. Water temperatures during the survey were in the mid to upper 50s and weather conditions were calm. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society.

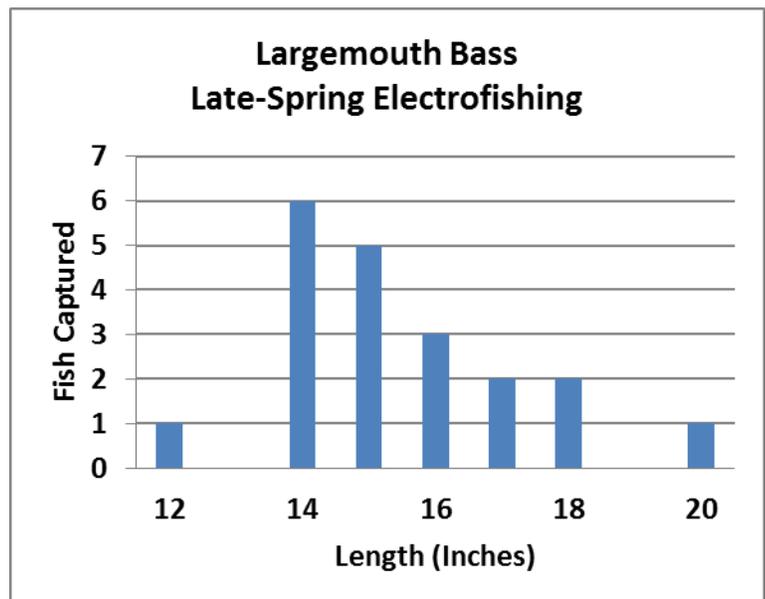
Habitat Characteristics

Long Lake is a 111-acre drainage lake (maximum and mean depths of 13 and 7 feet, respectively) with medium brown-stained water and low water clarity (Secchi disk visibility 4 feet; 1966 Wisconsin Conservation Department Surface Water Resources of Ashland County). The littoral zone (near-shore area where light is able to penetrate to the lake bottom) substrates are comprised primarily of sand and silt with limited areas of gravel. Aquatic vegetation appears to be present at low levels and is generally limited to the near-shore areas. A small boat landing with limited parking is available.

Largemouth Bass



Captured 10 per mile $\geq 8''$	
Quality Size $\geq 12''$	100%
Preferred Size $\geq 15''$	65%
Memorable Size $\geq 20''$	5%

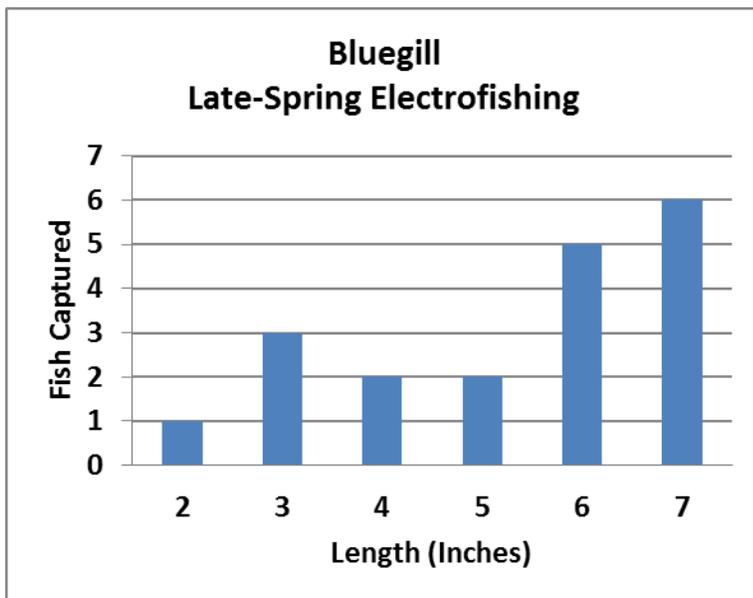


We captured largemouth bass at a moderate rate (10 per mile) during the late-spring electrofishing survey. Size structure of the population is considered very good, with nearly two-thirds of the fish sampled being of preferred size. However, our sample is indicative of a population that appears to be experiencing low levels of recruitment. No smallmouth bass were captured or seen during this survey.

Bluegill



Captured 18 per mile $\geq 3''$	
Quality Size $\geq 6''$	61%
Preferred Size $\geq 8''$	0%

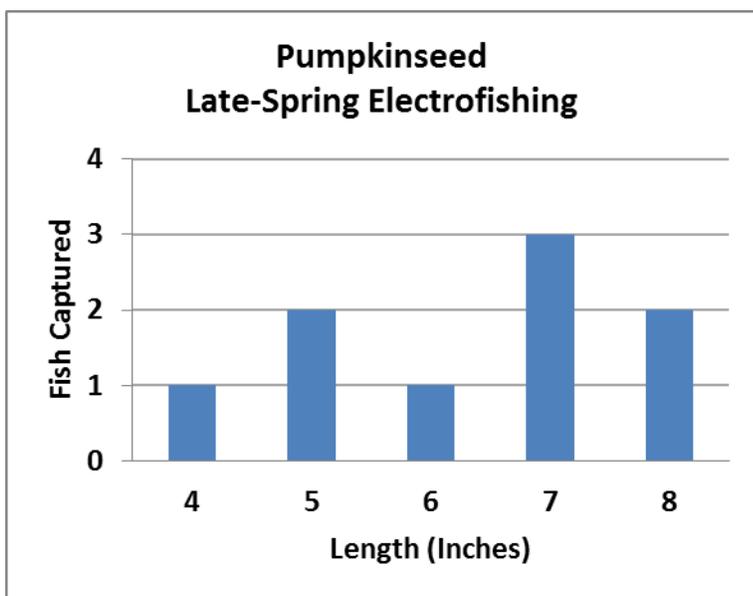


Bluegill ≥ 3 inches were captured at a low rate (18 per mile) during the late-spring electrofishing survey. The size structure of the population was good, with a relatively-high proportion of fish being of an acceptable size to anglers.

Pumpkinseed



Captured 9 per mile $\geq 3''$	
Quality Size $\geq 6''$	67%
Preferred Size $\geq 8''$	22%



Pumpkinseed sunfish ≥ 3 inches were captured at a low rate (9 per mile) during the late-spring electrofishing survey. As with bluegill, the size structure of the population was good.

Conclusions

The Long Lake fishery exhibits characteristics of a fish community in which the apex predator populations (largemouth bass) are able to exert predatory control over panfish (e.g., bluegills and pumpkinseeds). This keeps panfish numbers relatively low, promotes relatively fast growth (due to an abundance of food and space per individual), and therefore contributes to good bluegill and pumpkinseed size distributions (although age and growth analyses have yet to be completed).

Largemouth bass in Long Lake offer anglers a quality fishing opportunity. However, a potential lack of recruitment (as mentioned above) suggests that sustainability of a quality bass fishery may be threatened. In order to maintain this fishery, anglers are encouraged to voluntarily release bass and harvest northern pike, which are known to prey upon slender young bass in preference to chunky panfish (that are more difficult to capture and swallow).

Although electrofishing is not the best technique for obtaining a representative sample of the northern pike population (hence the reasoning for not displaying survey results graphically), we captured them at a relatively high rate (11.5 per mile) at lengths ranging between 10 and 23 inches. Whenever we capture more northern pike than largemouth bass by electrofishing (an unusual phenomenon), it indicates that pike may be having a negative impact on the survival of young bass.

Several black crappie, a number of small yellow perch, common and golden shiners were also captured during the survey but are not reported here due to low sample size and/or sampling bias.

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