



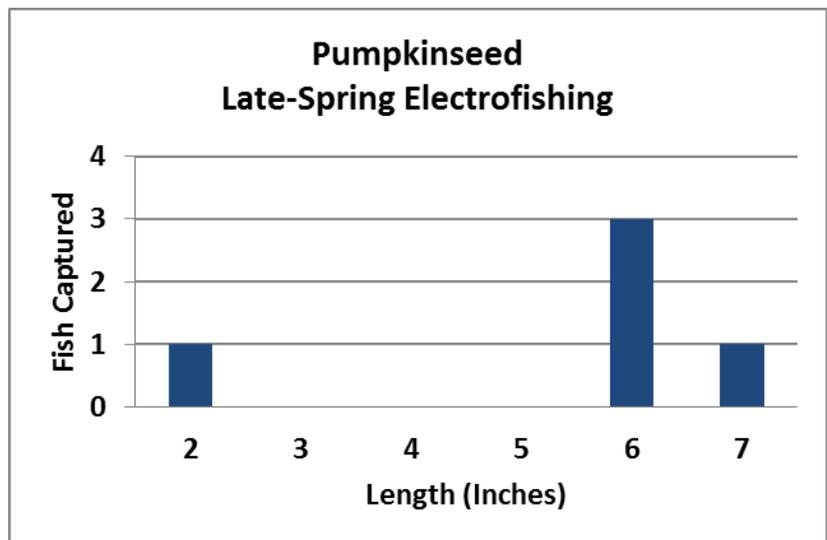
Late-Spring Electrofishing Survey Summary O'Brien Lake, Iron County, 2012

The Mercer DNR Fisheries Management Team conducted a late-spring electrofishing survey at O'Brien Lake on May 30, 2012, as part of our baseline monitoring program. The entire shoreline of the lake was surveyed for purposes of obtaining representative samples of the bass and panfish populations. 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.

Pumpkinseed



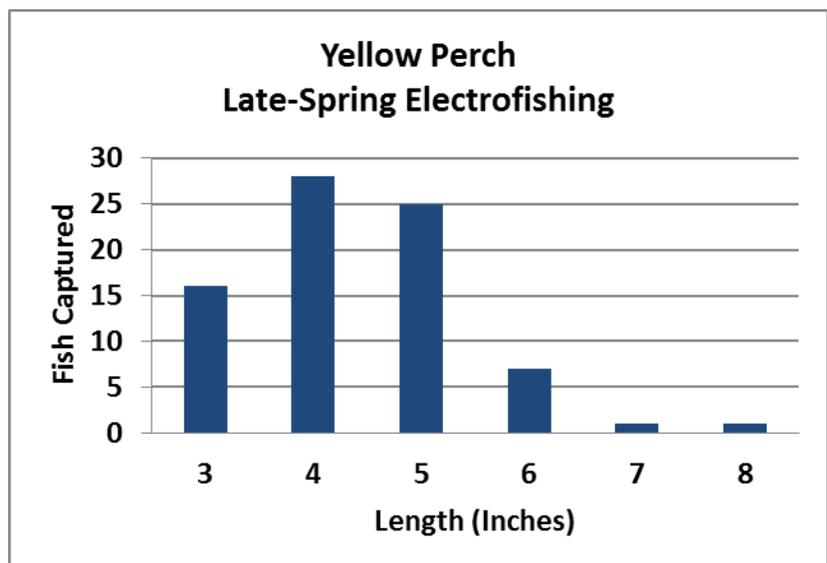
Captured 3 per mile $\geq 3''$	
Quality Size $\geq 6''$	100%
Preferred Size $\geq 8''$	0%



Yellow Perch



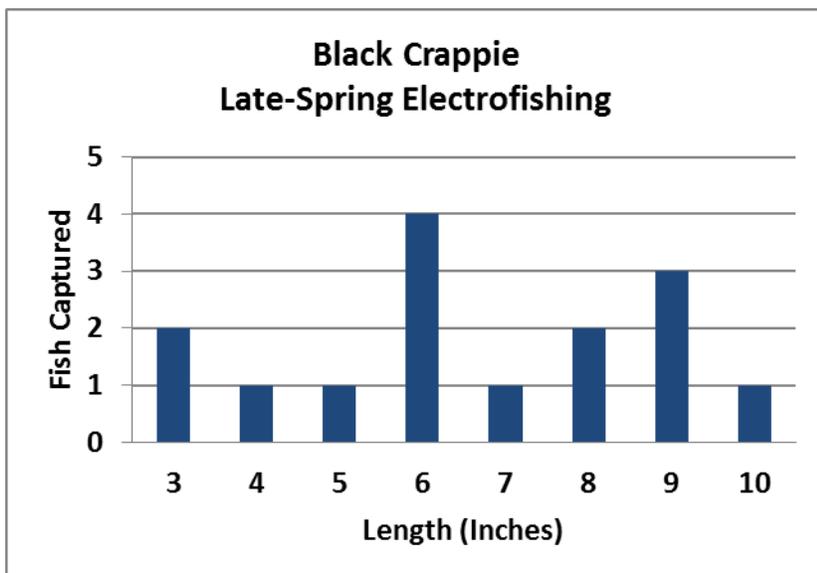
Captured 29 per mile $\geq 5''$	
Quality Size $\geq 8''$	3%
Preferred Size $\geq 10''$	0%



Black Crappie



Captured 10 per mile $\geq 5''$	
Quality Size $\geq 8''$	50%
Preferred Size $\geq 10''$	8%



Summary of Results

Water temperatures during the survey were in the low 60s. Weather conditions were calm, clear, and cold. Sampling efficiency was very good, but the cold conditions may have decreased our catchability of bass (due to them potentially having moved out to deeper water, making them invulnerable to capture during shoreline electrofishing). Only one largemouth bass was captured during the survey, and only one other was observed, indicating very low abundance. No bluegills were captured or observed. Of the species most readily captured (pumpkinseed, yellow perch, and black crappie), very few were of an acceptable size to anglers.

Pumpkinseed, Yellow Perch, and Black Crappie

Pumpkinseed ≥ 3 inches were captured at a very low rate of 3 per mile. Due to the low sample size, reliable inferences on population size structure cannot be made.

Yellow perch ≥ 5 inches were captured at a moderate rate of 29 per mile. Electrofishing is not the best way to document the relative abundance of perch, but our sample does reveal that most perch in O'Brien Lake are of an undesirable size to anglers.

Black crappie ≥ 5 inches were captured at a low rate of 10 per mile. Electrofishing is not the best way to document the relative abundance of crappie, but our sample does reveal that few crappie in O'Brien Lake are of an acceptable size to anglers.

Other Species

Just one largemouth bass (14 inches) and one brook trout (10 inches; a likely migrant from the downstream Tyler Forks River) were captured, along with white sucker, common shiner, and central mudminnow.

Discussion

O'Brien Lake is a relatively shallow (maximum depth = 12 feet), 76-acre lake that has a history of winterkill (fish-killing dissolved oxygen depletion under ice and snow cover). Results of this survey (no bluegills and only one largemouth bass) strongly suggest that a winterkill may have occurred recently. However, because of the potentially low vulnerability of bass to capture by electrofishing during cold front conditions, a follow-up bass angling survey was conducted. No bass were caught or observed. We are now almost certain that winterkill has been a major factor structuring the fish community in O'Brien Lake. As a result, we are planning to monitor dissolved oxygen levels in O'Brien Lake for three consecutive years (at a minimum) to determine the frequency of winterkill conditions. This information will be used to inform our management decisions into the future. In the meantime, largemouth bass will be stocked opportunistically, when hatchery production allows for it.

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