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Mr. Sweeney,

I'm writing you regarding our electrofishing sample at Indianhead Lake this spring. We sampled six shoreline sites and one open water site. At the first three shoreline sites we collected all sport fish that we encountered and at the last three shoreline sites we mainly focused on Largemouth Bass, however we did collect any crappie or Redear Sunfish that we collected. At the first three sport fish sites we mostly collected Bluegill (51 fish) and Largemouth Bass (35 fish), however we also collected Redear Sunfish, Warmouth, and White Crappie (Figure 1). We also saw plenty of gizzard shad that were of good size for forage for Largemouth Bass. The Bluegill collected ranged in size from 3-8 inches with most fish in the 3-4 inch size range (Figure 2). Average size of Bluegill was slightly smaller than the 2020 sample (Figure 2). We only collected six Redear Sunfish that ranged in size from 5-8 inches. Although we don't use electrofishing to evaluate crappie populations, we did collect 12 White Crappie that ranged in length from 6-13 inches.

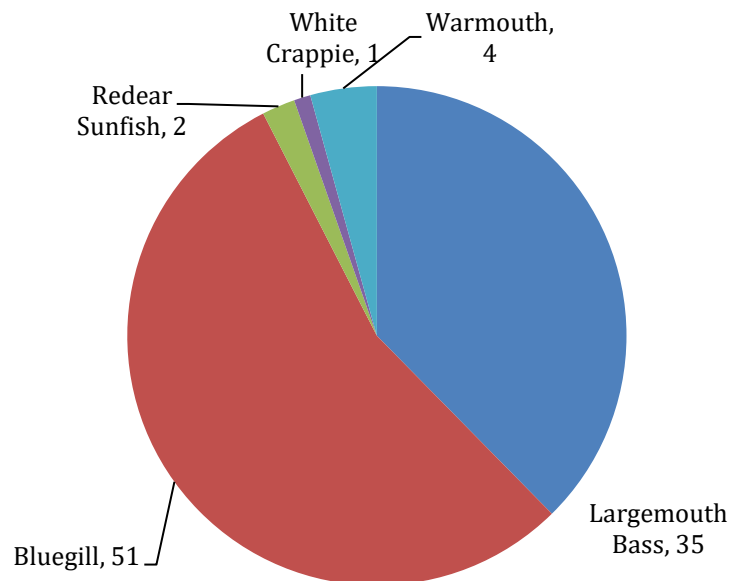


Figure 1. Species composition of the three sport fish sites on Indianhead Lake, April 2023.

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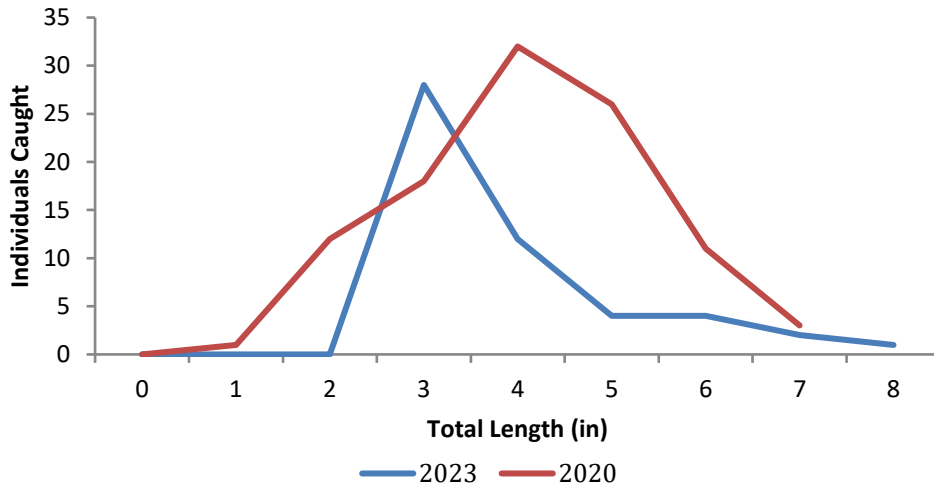


Figure 2. Length distribution of the 51 Bluegill collected on Indianhead Lake during April 2023 (blue line) compared to the 2020 sample (red line).

We collected 61 Largemouth Bass at the six shoreline sites and an additional four fish at the open water site. Average catch per hour of electrofishing was 58 fish per hour, similar to the 2020 sample (54 fish per hour). This value is below average for spring samples from lowland lakes in Arkansas (74 fish per hour). Largemouth Bass collected ranged in size from 3-21 inches with most fish collected being 13 inches or larger (Figure 3). Average size was slightly smaller than the 2020 sample however overall size structure was very similar to 2020 (Figure 3). The length to weight relationship indicated that a five pound bass would be about 20 inches in Indianhead Lake (Figure 4) and this relationship was similar to 2020.

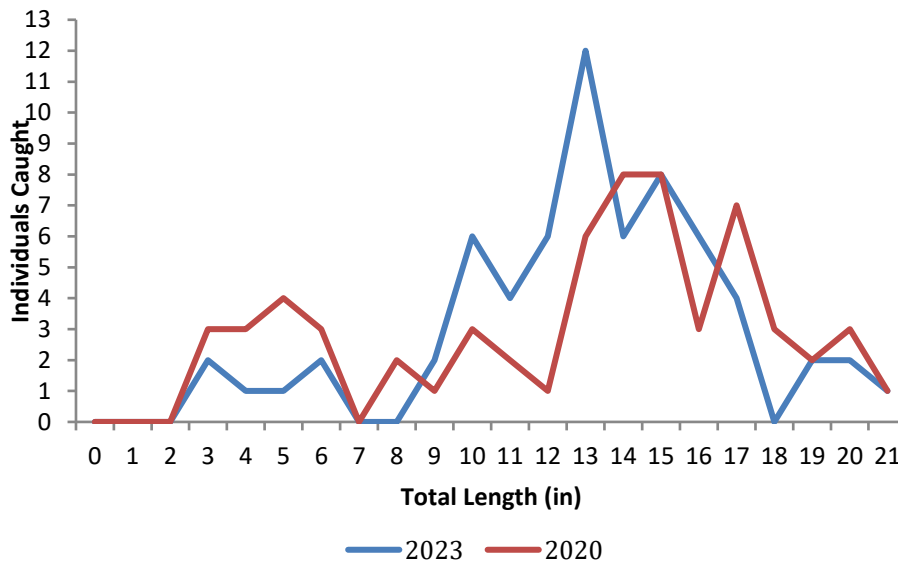


Figure 3. Length distribution of the 65 Largemouth Bass collected from Indianhead Lake during April 2023 (blue line) compared to the 2020 sample (red line).

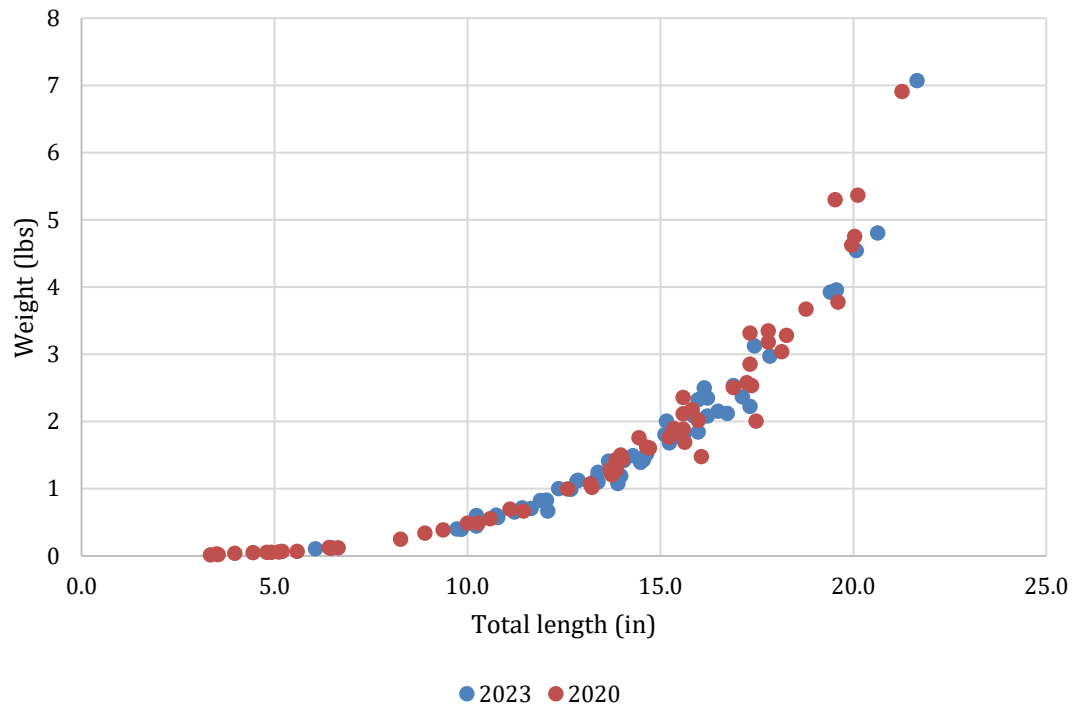


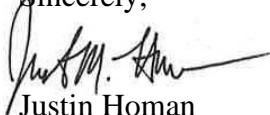
Figure 4. Length to weight relationship for Largemouth Bass at Indianhead Lake in 2023 (blue dots) and 2020 (red dots).

To determine fish condition we use a factor called “relative weight” (W_r). This factor is a comparison of a fish weight to a “standard” weight for its size. Fish of good condition have W_r values around 100 with lower values indicating poor condition and values over 100 indicating “plump” fish. Average W_r for Bluegill by inch-group ranged from 110-117 while average W_r for most inch groups of Largemouth Bass was typically 95 or higher. These values indicate that both Bluegill and Largemouth Bass are in good condition in Indianhead Lake. This is especially true as the Largemouth Bass were post-spawn and condition is usually poor after the stress of spawning. We witnessed several balls of young-of-year Largemouth Bass while we were sampling so hopefully these will recruit into the fishery next year.

Based on the data we collected, Indianhead Lake is still in a “large bass” state as it was in 2020. We did not document much change in the status of the population. Of the bass we collected, most were 13 inches and larger. There were lower numbers of 3-12 inch bass which usually prey on small Bluegill. Due to the lack of small bass, small (3-4 inch) Bluegill were more plentiful than desired and the larger ones that people prefer to catch were not as abundant. This “large bass” state is not a bad situation if the majority of the anglers on the lake prefer to bass fish. If you would like to increase the number large Bluegill you may consider supplemental stocking of bass. This will increase your bass numbers and increase your average size of Bluegill, however your average size of Largemouth Bass caught would likely decline.

If you'd like to discuss stocking in detail, feel free to give me a call. I hope you find this information useful, please let me know if you have any questions.

Sincerely,



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