

BIOLOGICAL OBSERVATIONS

The Largemouth Bass population at High Rock Lake continues to be in excellent condition. The CPUE was within range, and at the higher end of what is normally seen in Piedmont reservoirs (30–60 fish/h) and has remained consistent for the past 7 years (Table 1). The percentage of Largemouth Bass greater than 356 mm TL was above 50% in this survey and has been at or 50% since the 2009 survey. While many large fish were captured, we also collected smaller and younger fish, indicating reproduction and recruitment are successfully occurring (Figure 1; Figure 2). The oldest Largemouth Bass collected was 12 years of age, and over 25% of the population was age 6 or older. These older fish indicate that total mortality levels are likely low and not of concern. Over 60% of the population had relative weights over 90, indicating moderate to good condition (Figure 4). There was also a slight upward trend in relative weights and size of fish, showing that older fish are obtaining adequate forage. Overall, the High Rock Lake Largemouth Bass population continues to be in excellent condition and no management changes are recommended at this time.

MANAGEMENT RECOMMENDATIONS

1. Maintain current 356-mm minimum size limit and 5 fish daily creel limit, while permitting 2 fish in the daily creel to be less than 356 mm, for Largemouth Bass at High Rock Lake.
2. Continue to sample High Rock Lake every three years during the spring with electrofishing gear to examine temporal trends in population and recruitment variability and evaluate the current regulation.

TABLES AND FIGURES

TABLE 1.—Catch per unit effort (CPUE), percent of fish that were 356 mm and longer, Proportional Size Distribution-Preferred, mean length (TL mm) at age 3, and mean relative weight (W_r) of Largemouth Bass collected from High Rock Lake with electrofishing, April-May 2006, 2009, 2012, 2015, 2018, and 2022. Parentheses are one standard error.

Year	CPUE (fish/h)	% \geq 356 mm	PSD-P	Mean length at age 3	Mean W_r
2006	68 (9)	45	41	344	102
2009	105 (2)	50	48	358	106
2012	82 (10)	64	53	358	98
2015	58 (7)	50	49	353	97
2018	62 (11)	64	59	387	96
2022	57 (12)	51	58	367	95

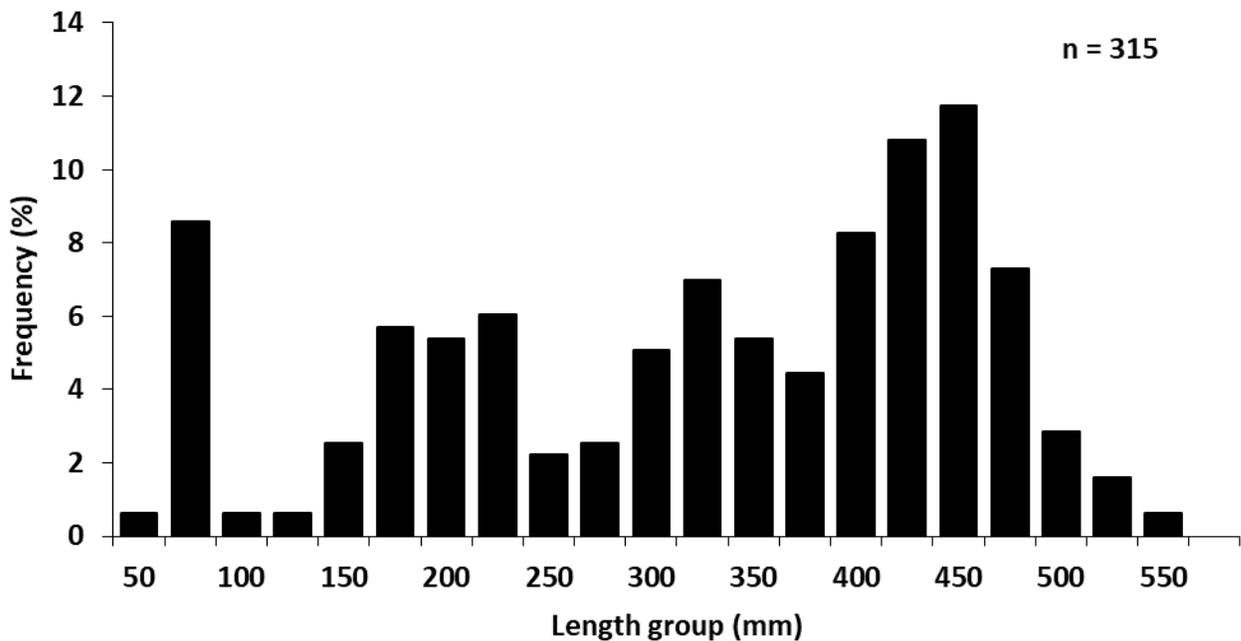


FIGURE 1.—Length frequency distribution of Largemouth Bass collected from High Rock Lake with electrofishing, April 2022.

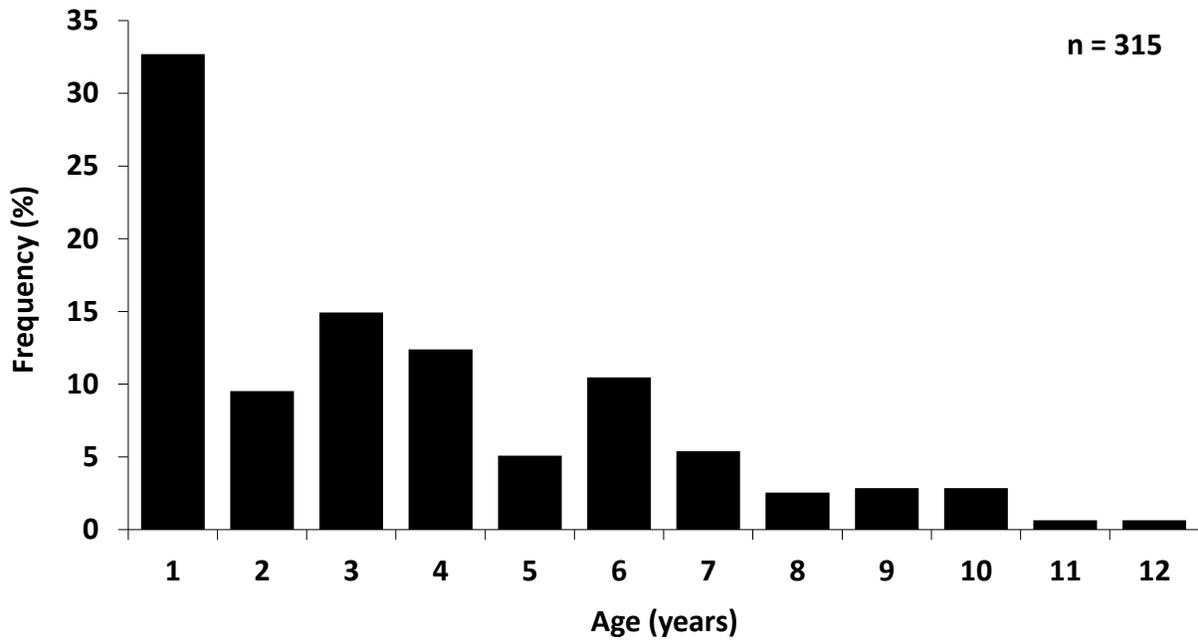


FIGURE 2.—Age frequency distribution of Largemouth Bass collected from High Rock Lake with electrofishing, April 2022.

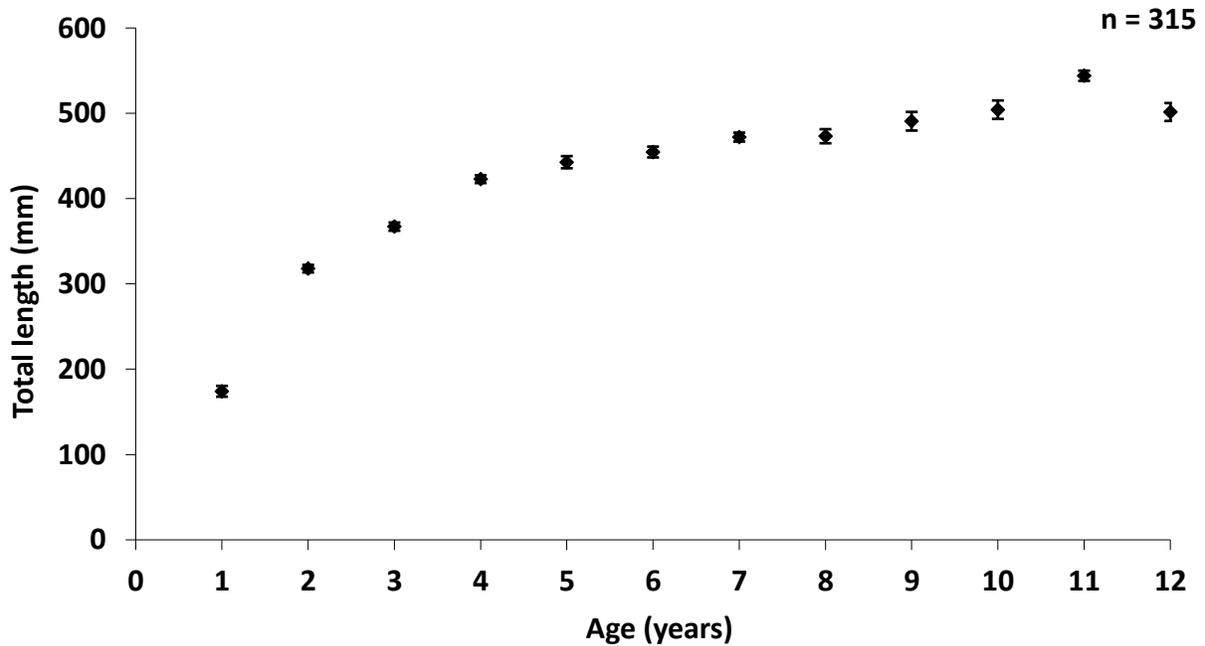


FIGURE 3.—Mean total length at age (± 1 SE) at time of capture for Largemouth Bass collected from High Rock Lake with electrofishing, April 2022.

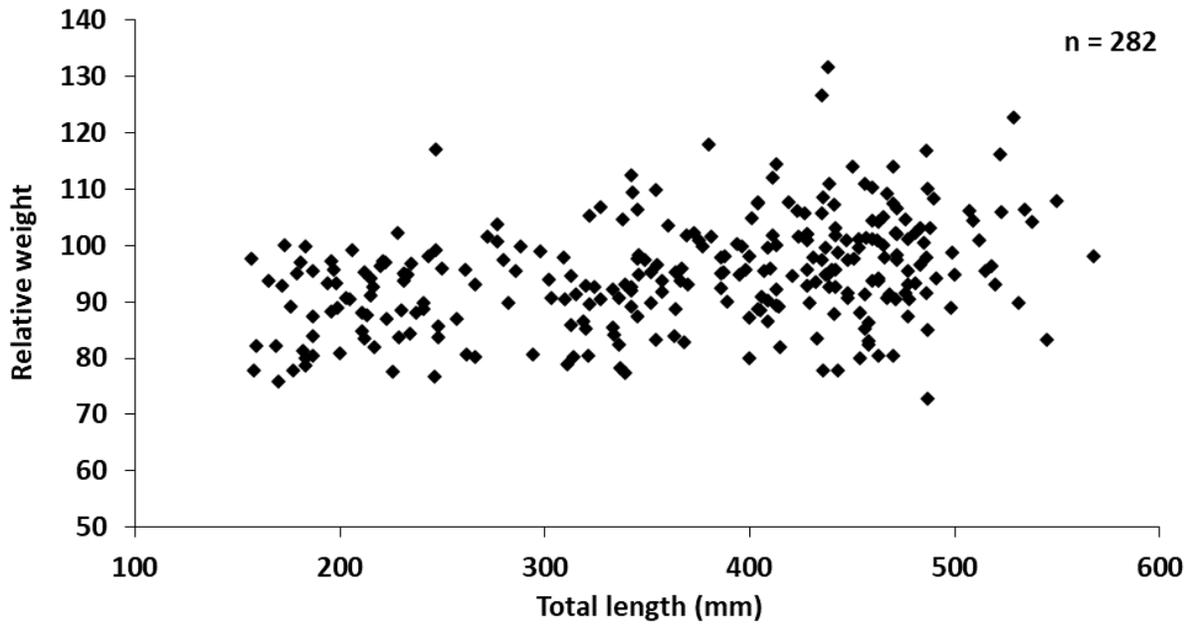


FIGURE 4.—Relationship between length and relative weight of Largemouth Bass collected from High Rock Lake with electrofishing, April 2022.

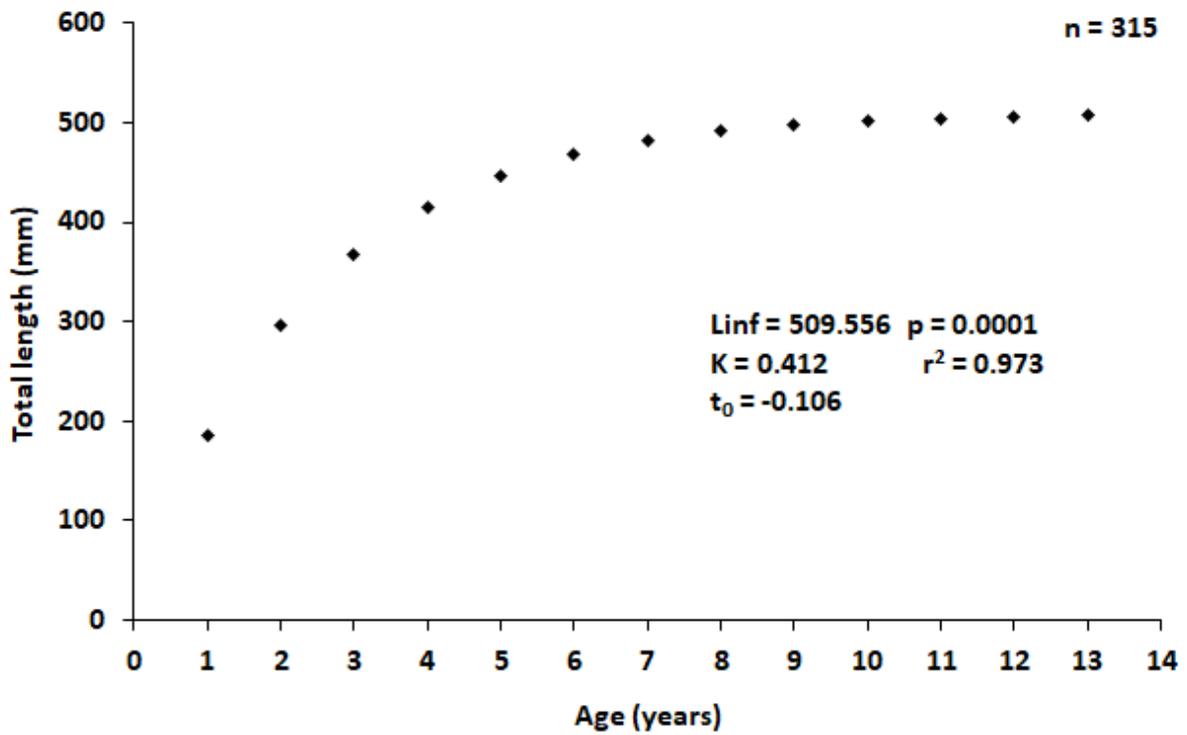


FIGURE 5.—von Bertalanffy growth curve for Largemouth Bass collected from High Rock Lake with electrofishing, April 2022.

APPENDIX

