

Fisheries Research Summary

Division of Inland Fisheries

N.C. Wildlife Resources Commission



Evaluation of the Black Bass Population in Lake James

Black bass species in Lake James (largemouth and smallmouth bass) utilize different habitats throughout the reservoir. Like crappies in Lake James, largemouth bass prefer the upper Catawba River arm and its nutrient rich environment, while smallmouth bass make use of the nutrient-poor zones within the Linville River arm.

From 2004–2006, N.C. Wildlife Resources Commission biologists conducted shoreline electro-fishing surveys to evaluate the black bass population in Lake James. However, equipment failure prevented staff from targeting smallmouth bass in the Linville River arm during the 2005 and 2006 sampling seasons; thus, a limited number of smallmouth bass were examined during the study.

Nevertheless, biologists collected largemouth and smallmouth bass up to ages 13 and 8, respectively. Age-2 fish were the predominant age class of largemouth bass observed, while the majority of smallmouth bass were age 1. Largemouth bass ranged in length from 2.7 to 22.7 inches, with an average size of 12.8 inches (Figure 1), and smallmouth bass averaged 10.4 inches in length and ranged from 2.7 to 20.3 inches (Figure 1). Overall, condition values indicated that the black bass in Lake James were in good to excellent condition.

In addition, Lake James is often referenced as a place where it is sometimes difficult to catch fish, but in the 2006 sample, Commission staff collected black bass at a rate of 60 fish per hour. Such a catch rate does not necessarily mean that anglers would see similar results using a rod and reel; however, this high rate of catch indicates that the black bass population in Lake James likely exceeds the numbers generated by public perception.

The Commission will continue to monitor the black bass population of Lake James to develop management programs that maintain and enhance the resource.



Largemouth bass



Duane Raver/USFWS

Smallmouth bass



Duane Raver/USFWS

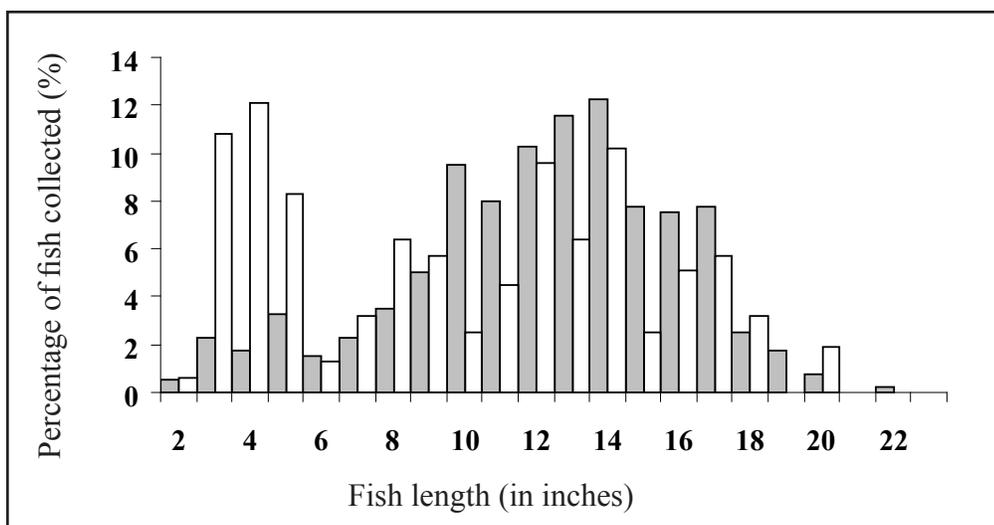


FIGURE 1.—Length-frequency distribution of largemouth (shaded bars) and smallmouth (unshaded bars) bass collected during the 2004–2006 sampling seasons on Lake James, North Carolina. Fish are grouped by 1.0-in size class intervals.

