

Fisheries Research Summary

Division of Inland Fisheries

N.C. Wildlife Resources Commission



White Oak and New Rivers Boast Quality Sunfish Fishing Opportunities in Coastal North Carolina

Although the White Oak and New rivers are well known among anglers as destinations for speckled trout, red drum and flounder, N.C. Wildlife Resources Commission biologists have found that these two rivers also are home to a variety of freshwater fish including largemouth bass, sunfish and white catfish.

Commission biologists have sampled the White Oak and New rivers four of the last six years, mostly during the fall, using electrofishing techniques. This research summary highlights some results of sampling during spring and summer 2009.

On the White Oak River, sampling was focused upstream of the Grant's Creek-Haywood Landing area adjacent to the Croatan National Forest. On the New River, sample sites were located upstream of the U.S. 17 (Marine Boulevard) bridge in Jacksonville. Biologists also sampled the White Oak River in July specifically for catfish upstream of Haywood Landing. This sampling trip was to determine how many flathead catfish might be present in the river following the first documentation of this non-native predator earlier in the year (to view the press release, click [here](#).)

Staff collected 16 different fish species on the New River including bluegill, largemouth bass, pumpkinseed, redear sunfish and juvenile spot and pinfish. On the White Oak River, they collected 13 species, including bluegill, largemouth bass, pumpkinseed, redbreast sunfish and redear sunfish.



A typical marshy area of the lower New or White Oak River where N.C. Wildlife Commission staff collected most of the large sunfish.



An example of the large bluegill, pumpkinseed, and redear sunfish in the New and White Oak rivers.

In general, bluegill, pumpkinseed, and redear sunfish were larger on the New River than the White Oak River with 7- to 9-inch fish abundant in samples. Bluegill on the White Oak River were smaller; however, several 6- to 9-inch redear sunfish were collected. Staff also collected about 40 redbreast sunfish in the upper end of the White Oak River, the biggest of which approached 7 inches in length. Largemouth bass 12 to 14 inches in length made up the majority of sample on both rivers, and only about 20–25 percent of the catch consisted of largemouth bass larger than 14 inches. Condition (how skinny or plump a fish was) of bluegill, pumpkinseed and redear sunfish on both rivers was high. For largemouth bass, especially the ones bigger than 14 inches, condition was lower than optimal.





Biologists aged a sample of largemouth bass from each river and found fish from age 1 to age 11 on the New River and from age 1 to age 8 on the White Oak River. On both rivers, largemouth bass growth in length was good up to age 5, and then began to level off at about 14 to 16 inches (Figure 1). Annual mortality (percent of fish that die each year) of largemouth bass was low on both rivers, ranging from 30–36 percent.

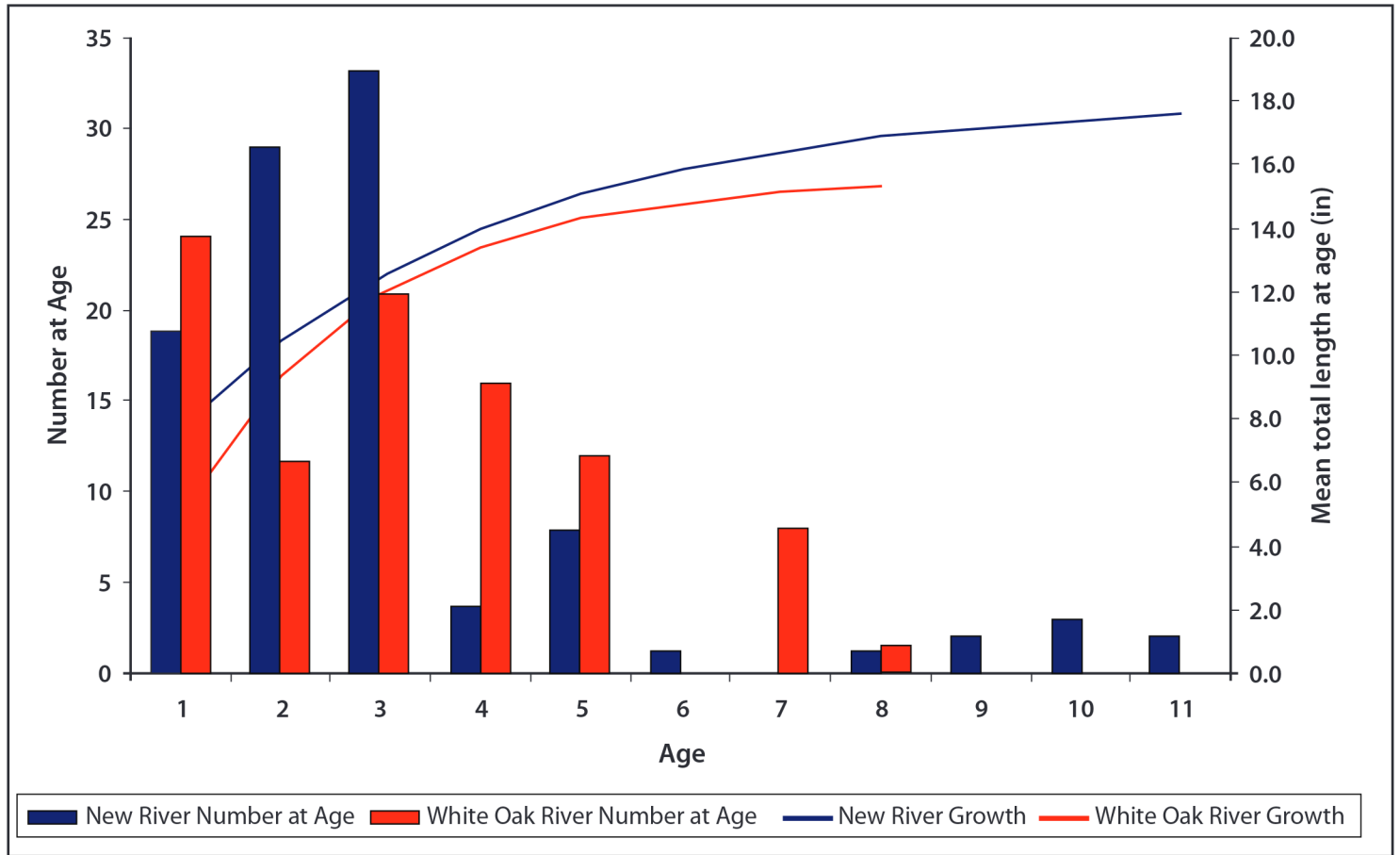


Figure 1. Number at age and growth curves of largemouth bass from the New and White Oak rivers.

A sampling trip to the White Oak River for catfish during July targeted an area between the Maysville Quarry Lakes and Haywood Landing. In 3.5 hours of electrofishing time, staff captured 115 white catfish and one yellow bullhead. They collected fish from 1 to 17 inches long that weighed as much as two pounds. Most of the fish collected were between 10 and 15 inches long. White catfish collected reached 0.5 pound at about 10 inches and one pound at 13 to 14 inches. Condition was good overall, but declined with length. Flathead catfish, which were collected earlier in the year at the Maysville Quarry Lakes, appeared to be some of the first fish established in the White Oak River, considering that follow-up surveys did not collect additional flathead catfish lower in the river basin.

In summary, these two rivers offer opportunities to catch freshwater fish within a stone’s throw of the Crystal Coast, particularly for anglers who enjoy fishing for large sunfish. The number of large bluegill, pumpkinseed and redear sunfish in both rivers was impressive, especially in areas near the upstream extent of brackish water (where freshwater and saltwater meet). The largemouth bass population in both rivers consisted of plenty of catchable size fish, but few fish of harvestable size (greater than 14 inches). Biologists did not collect any flathead catfish in a 2009 catfish sampling trip to the White Oak River; however biologists continue to be concerned about their possible expansion throughout the basin and potential effects on the fish community.

