

Fisheries Research Summary

Division of Inland Fisheries

N.C. Wildlife Resources Commission



Chowan River a Favorite Among Largemouth Bass Anglers

A study conducted on the Chowan River during 2001 and 2002 found that anglers preferred to catch largemouth bass more than any other fish species. The study, which spanned a 12-month period, concluded that anglers spent more than 211,000 hours fishing on the Chowan River, with 82,000 of these hours spent in pursuit of largemouth bass. On average, Chowan River anglers caught one largemouth bass for every two hours they spent fishing.

Creel survey objectives

The project was conducted by fisheries biologist with the N.C. Wildlife Resources Commission. Primary goals of the study were to estimate fishing effort, the number and types of fish caught, and how many fish were harvested.

Chowan River anglers caught 18 different species of fish during the survey. Of the more than 2,500 anglers interviewed, largemouth bass were targeted during most of the angler trips (44 percent) followed by striped bass (17 percent), white perch (13 percent), sunfish (7 percent), catfish (4 percent) and black crappie (3 percent). Generalist anglers, or those who said they were fishing for anything that bites, represented 13 percent of the total.

The total number of fish caught on the Chowan River between July 1, 2001 and June 30, 2002 was estimated at a whopping 354,650 fish. Of this number, 195,600 were kept (or harvested) by anglers.

Sunfish (primarily bluegill, redear and pumpkinseed) accounted for nearly 40 percent of the total catch and harvest. White perch weren't far behind, accounting for 28 percent of the catch and 36 percent of the harvest. Largemouth bass catch ranked third, with total catch of largemouth bass over the 12-month study estimated at 47,000 bass.



Fisheries biologist Chad Thomas holds up an adult largemouth bass.



Conducting a creel survey

As was expected, catch and release practices were highest among largemouth bass anglers. However, almost 13,000 (or 28 percent) of the bass caught were kept by anglers.

We also found that anglers spent a considerable amount of money chasing fish on the Chowan River. Based on interview questions asked of anglers, we determined that on average almost \$36 was spent per fishing trip on things such as gas, bait, food and lodging.

When this number was expanded over the 12-month study, we estimated that these expenses topped \$885,000. This figure does not take into account the costs of durable goods such as boats, motors or vehicles.



Chowan River a Favorite Among Largemouth Bass Anglers



Largemouth bass anglers spent more money (60 percent) than any other angler group, and averaged almost \$50 spent per trip. Anglers were also asked how much more money they would be willing to spend on another fishing trip of equal or greater satisfaction, and on average, their answer was \$51. When this willingness-to-pay value was combined with the estimated expenses, the potential annual angling value on the Chowan River was approximately \$2,271,000.

Creel survey respondents

Along with spending a lot of money to fish on the Chowan River, anglers also come from lots of different places. "Local" anglers made up almost 60 percent of those interviewed and included residents of Bertie, Chowan, Gates and Hertford counties.

"Regional" anglers accounted for 37 percent of the fishing parties, and were defined as those anglers living in the remaining counties of North Carolina or in the southeastern Virginia counties of Chesapeake, Virginia Beach, Suffolk, Isle of Wight and Southampton.



8-inch largemouth bass

Results from the survey have already helped us modify regulations to improve gamefish populations on the Chowan River. For example, 32 percent of the largemouth bass kept during the survey were smaller than 14 inches. Recent declines in the number of adult largemouth bass found in the Chowan River following several hurricanes made it necessary to protect these smaller fish.

By requiring that all bass kept be at least 14 inches long, our hope was that a bass would spawn at least once before being removed from the river.

On July 1, 2002, a new regulation went into effect on the Chowan River that established a 14-inch minimum size limit for largemouth bass with no exceptions.

Our plans are to repeat this survey within the next 10 years to determine changes in angling trends over time. Effective management of the Chowan and other North Carolina rivers requires that we consider the full cost and benefits associated with proposed changes to our rivers before alterations to habitat and/or water quality should take place.

