Fisheries Research Summary

Division of Inland Fisheries N.C. Wildlife Resources Commission

Tar River Is Home to Trophy Flathead Catfish

When most anglers consider trophy flathead catfish waters in coastal North Carolina, the Cape Fear and Neuse rivers usually come to mind. However, N.C. Wildlife Resources Commission biologists have found that the Tar River also boasts some hefty flathead catfish.

Biologists have been sampling the Tar River for all species of catfish each summer since 2006. Sampling occurred near Falkland and Old Sparta in 2006 and from Greenville to Grimesland in 2007 and 2008. Catfish were collected using an electrofishing boat, the principal sampling method for coastal rivers.

Flathead catfish in the Tar River are increasing in abundance and size. Every year, flathead catfish comprised a larger portion of the total catfish catch (14 percent in 2006 to 56 percent in 2008). Conversely, the percentage of white catfish in our total catch continued to go down each year (53 percent in 2006 to 32 percent in 2008). Channel catfish were also collected during the past three summers. Most of the white catfish collected were between 12 and 18 inches long, while channel catfish were between 12 and 24 inches long.

A larger size range of flathead catfish was observed, with fish ranging in size from 4 inches to more than 40 inches. In fact, biologists continue to see larger flathead catfish showing up in their samples each year. In 2006, the largest flathead catfish collected was 35 inches long and weighed 25 pounds. The largest one collected in 2007 was 40 inches long and weighed 33 pounds, while the biggest flathead catfish in 2008 was 42 inches long and weighed 51 pounds.

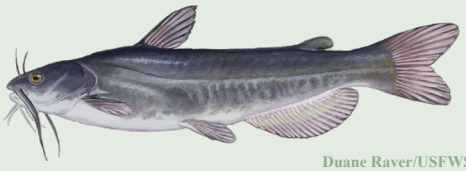
Flathead catfish

Duane Raver/USFWS

Channel catfish

Duane Raver/USFWS

White catfish



Duane Raver/USFWS

Robert Barwick, fisheries biologist with the N.C. Wildlife Resources Commisison, holds a 51-pound flathead catfish collected on the Tar River during the summer of 2008.

During 2007 and 2008, biologists began collecting age data on the catfish population. Channel catfish ranged in age from 0 to 7 years old, while white catfish ranged from 0 to 8 years old. Flathead catfish have ranged from 0 to 9 years old. The 51-pound fish referred to earlier was able to reach that massive weight in only nine years.

Flathead catfish continued to increase in size and age each year of sampling, suggesting that the population is continuing to expand in the Tar River. Flathead catfish in the Tar River are growing about 4 to 4 ½ inches per year (Figure 1). This is normally not the case for fish populations as growth usually declines as fish get older. However, since the population is expanding and is fairly young in the Tar River (flathead catfish as old as 18 years have been collected in other coastal North Carolina rivers), growth of older fish has not slowed by much. For younger flathead catfish, initial growth occurs as the fish get longer, up to about 30 inches, and then they really start to pack on the pounds as length continues to increase (Figure 2). The main reason for this extraordinary growth is flathead catfish are voracious predators, and once they reach about 36 inches, they become the biggest species of fish in the river. Their large size and aggressive feeding habits result in little to no competition among these large fish for an otherwise unexploited prey base. While growth is expected to slow for these older age-classes, only time will tell just how big a flathead catfish can grow in the Tar River.

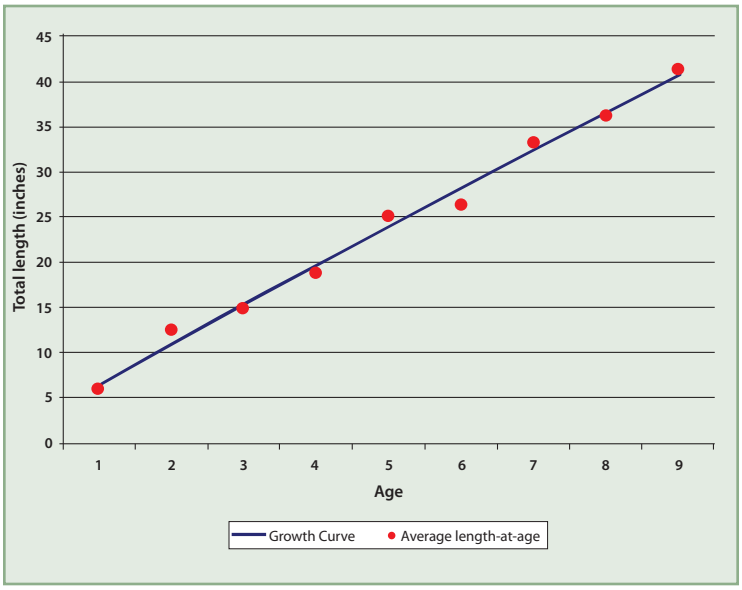


FIGURE 1.—Tar River flathead catfish growth curve and average length-at-age from summer 2008.

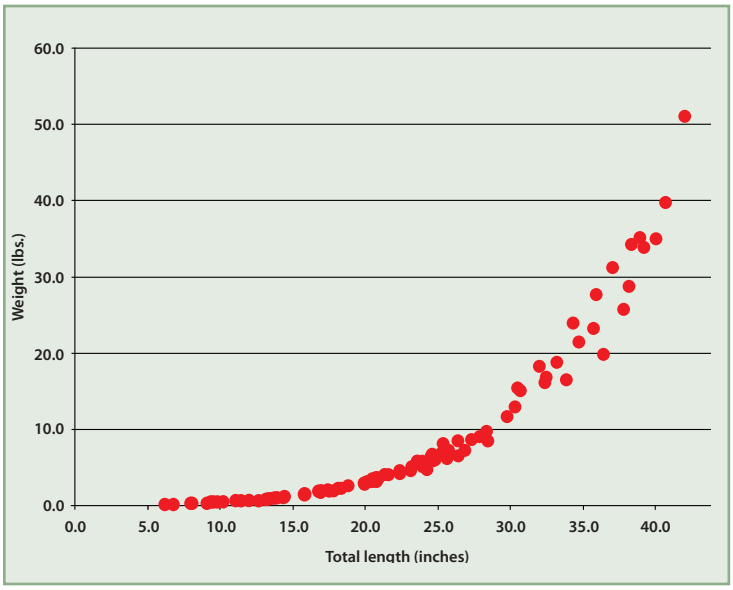


FIGURE 2.—Tar River flathead catfish length-weight relationship from summer 2008.

Biologists plan to continue this study over the next few years in order to track catfish community changes. In other coastal rivers in the state where flathead catfish have become established, white catfish are no longer present. At this point, it is unclear to biologists why white catfish disappear in the presence of flathead catfish. Possible reasons include direct predation by flathead catfish or competition for resources such as habitat and food. If young white catfish are having trouble surviving in the Tar River, we should begin to see missing year-classes in the future.

The Commission does not have any plans to adopt new management regulations for the Tar River catfish population at this time. However, there are plans to conduct a survey of catfish anglers throughout North Carolina to determine angler opinions toward catfish and catfish management. This survey will help the Commission develop catfish management strategies that balance angler preferences with resource potential.