

Fisheries Research Summary

Division of Inland Fisheries

N.C. Wildlife Resources Commission



Sportfish populations in Northwest River and Tulls Creek

Northwest River and Tulls Creek, located in Currituck County, N.C. and Chesapeake, Va., are important tributaries to Currituck Sound. Anglers often fish Northwest River and Tulls Creek for yellow perch, black crappie, white perch, largemouth bass and sunfish. Fisheries biologists from the N.C. Wildlife Resources Commission sampled Northwest River and Tulls Creek in fall 2009.

This survey focused on the largemouth bass, black crappie and bluegill populations in these two riverine water bodies and evaluated the recovery of those populations following the fish kills related to Hurricane Isabel in September 2003.

Largemouth bass in Northwest River and Tulls Creek are healthy and improving every year. Fish kills related to Hurricane Isabel in 2003 have limited the number of fish 6 years and older, which means there are few fish currently over 20 inches. Largemouth bass age 5 and younger, those fish spawned since Hurricane Isabel, are recruiting to the fishery and allowing the population to rebound nicely. There are plenty of largemouth bass from 12 to 18 inches; as these fish grow, anglers should find that the numbers of 20-inch fish should increase (Figure 1 and Figure 2).

Largemouth bass had a very successful spawn in 2004. The strength of the 2004 cohort could have been bolstered by the Commission's stocking of largemouth bass that year in response to the 2003 fish kills. However, we are not certain if stocking, natural reproduction, or a combination of both was ultimately responsible for the strength of the 2004 year class because stocking efforts were not formally evaluated in this area.

Regardless, the number of "keeper sized" fish has increased (Figure 2). Furthermore, there are many age-2 largemouth bass in the population, indicating the 2007 year class was likely very successful as well. This should ensure that fishing will remain consistent or improve over the next few years. (continue)

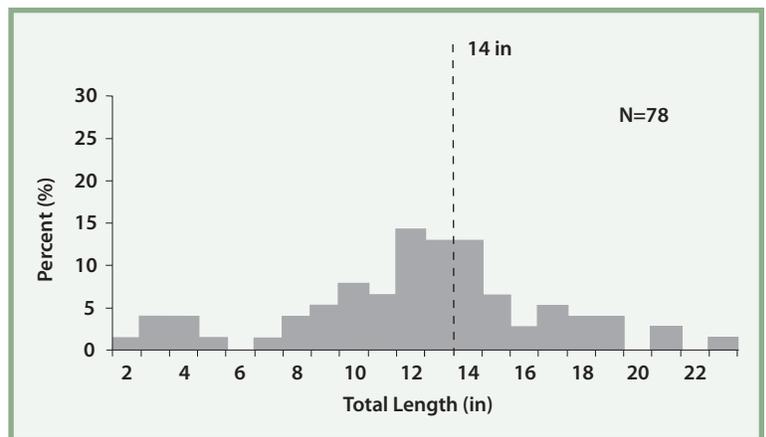


Figure 1. Length frequency distribution for Northwest River and Tulls Creek largemouth bass, fall 2009. The dotted line represents the 14-inch minimum length limit.

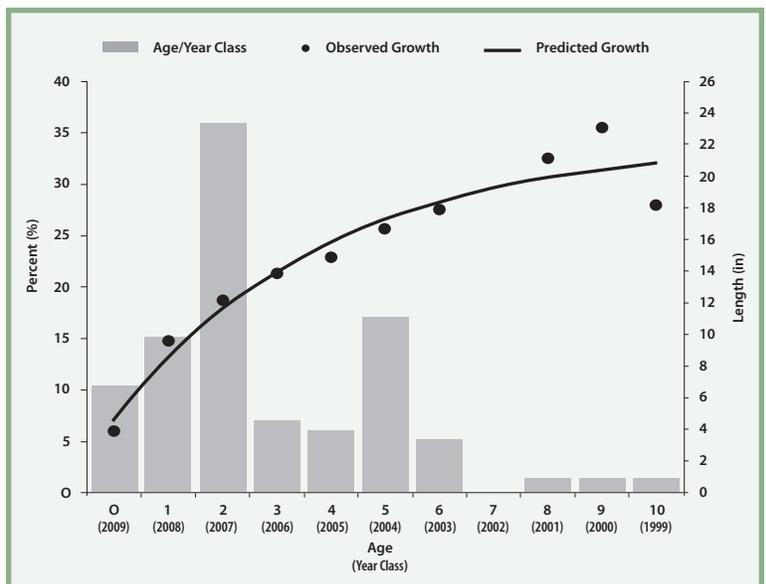


Figure 2. Largemouth bass age structure and mean length at age for Northwest River and Tulls Creek, fall 2009. Bars represent percent frequency of age classes, dots indicate mean length in inches at age, and the line represents predicted length at age.



Largemouth bass harvest in Northwest River is restricted to five fish greater than 14 inches. The length limit protects fish until they are sexually mature and ensures that largemouth bass get a chance to spawn at least once before they are harvested.

Black Crappie

Black crappie are also rebounding from the fish kills caused by Hurricane Isabel and are doing well. Similar to the largemouth bass population, the older fish were less abundant due to the fish kills (Figure 3). Black crappie had a very successful spawn in 2005, which should result in anglers catching good numbers of 10 inch and larger fish (Figure 4). Black crappie in Northwest River and Tulls Creek are managed by restricting harvest to fish greater than 8 inches and a daily creel limit of 20 crappie. The minimum length limit appeared to be adequate for protecting black crappie to sexual maturity. Anglers should expect to see black crappie fishing remain consistent over the next few years.



Largemouth bass populations in Northwest River and Tulls Creek are rebounding nicely following the fish kills spawned by Hurricane Isabel in 2003.



Like largemouth bass populations, black crappie populations are recovering well after Hurricane Isabel.

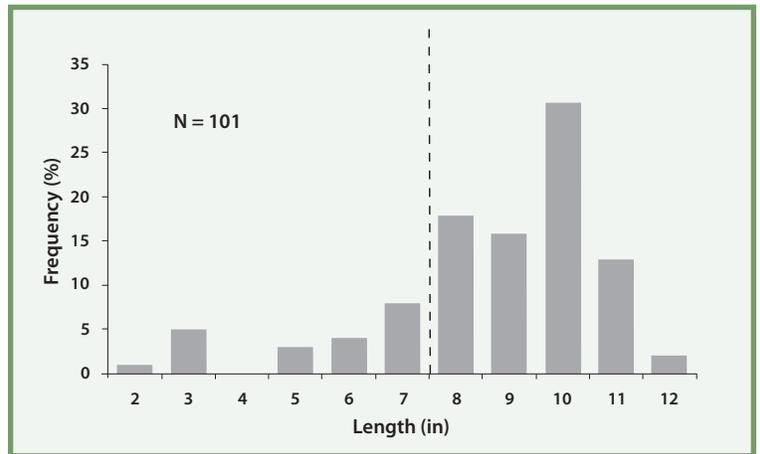


Figure 3. Length frequency distribution for Northwest River and Tulls Creek black crappie, fall 2009. The dashed line represents the 8-inch minimum length limit.

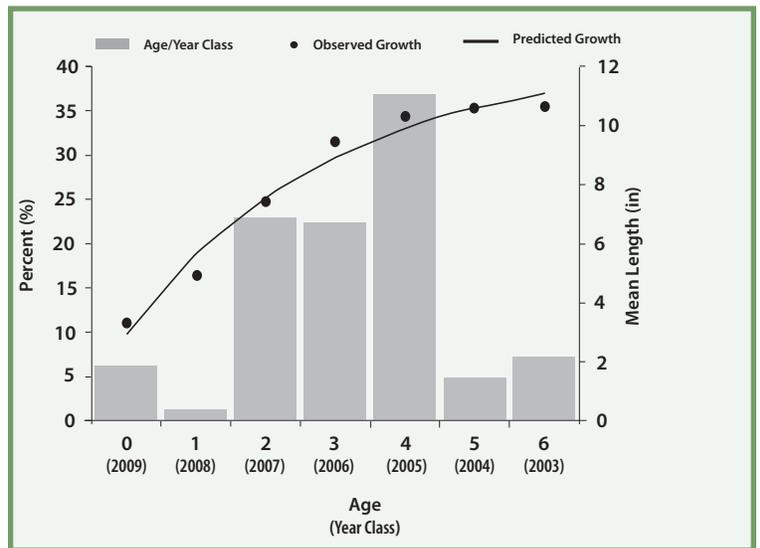


Figure 4. Black crappie age structure and mean length at age for Northwest River and Tulls Creek, fall 2009. Bars represent percent frequency of age classes, dots indicate mean length in inches at age, and the line represents predicted length at age.



Bluegill

Bream anglers should expect to see primarily 5-to-8 inch bluegills with few fish smaller or larger (Figure 5). There is evidence that bluegill populations may be overcrowded resulting in stunted, or slower, growth. However, as largemouth bass populations continue to rebound, predation by largemouth bass is expected to increase on smaller sunfish. Therefore, it is likely that stunted bluegill growth may only be a short term condition.

Similar to the other sportfish populations, the fish kills may also be playing a role in the limited number of older bluegill. Anglers should expect the number of larger bluegills to increase through the fall of 2011 and into the spring of 2012.

Northeastern North Carolina anglers are currently benefiting from the absence of hurricane-induced fish kills for the past six years. Sportfish are thriving in the relatively stable environment and are growing well and reaching older ages. As long as this situation continues, anglers should see the quality of their catches improve as fish begin to live long enough to display their full growth potential.

Northwest River and Tulls Creek are great examples of how sportfish populations can recover following major fish kill events.

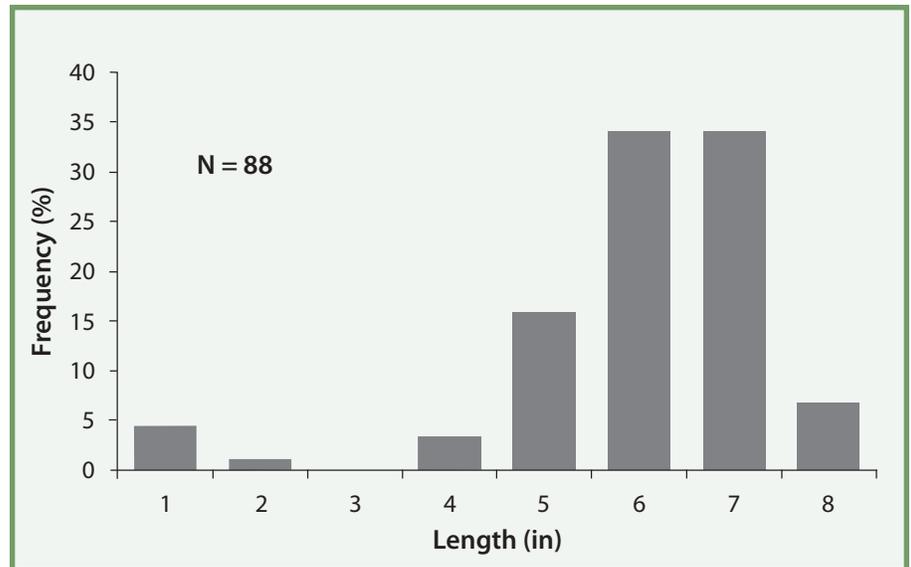


Figure 5. Length frequency distribution for Northwest River and Tulls Creek bluegill, fall 2009.



Bluegill sizes, which have been stunted, should improve as largemouth bass populations continue to rebound.

White Perch and Yellow Perch Tagging Project

The N.C. Division of Marine Fisheries is currently conducting a white perch and yellow perch tagging project that includes sampling locations in Northwest River and Tulls Creek.

If you'd like to know more about this project or if you have caught a tagged perch, contact Michael Loeffler at 252-264-3911.