



Roanoke River Striped Bass Spawning Stock Assessment 2016/2017 Update

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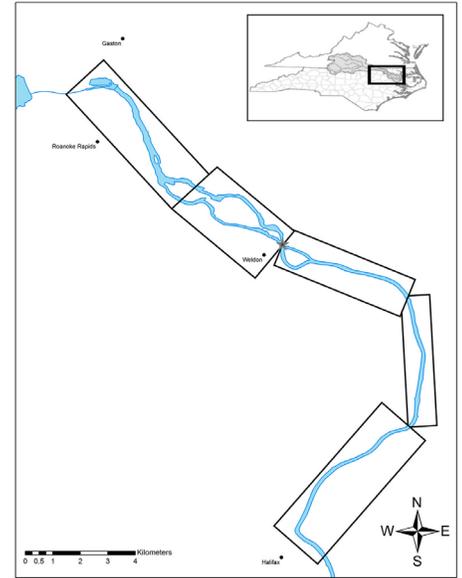
Submitted by Katy Potoka, District 1 Fisheries Biologist

Since 1991, the N.C. Wildlife Resources Commission (NCWRC) has conducted annual spring surveys of Striped Bass that return to spawn in the Roanoke River in the vicinity of Weldon, NC. Striped Bass that spawn in the Roanoke contribute to what is referred to as the Albemarle-Roanoke stock of Striped Bass. This fishery is jointly managed by the NCWRC in the Roanoke River Management Area, and the N.C. Division of Marine Fisheries (NCDMF) in the Albemarle Sound Management Area. The NCWRC manages Roanoke River Striped Bass with a daily creel limit of two fish. The minimum size limit is 18 inches, and no fish in the protective slot between 22 and 27 inches can be possessed. The regulations also allow for one fish in the daily creel to be over 27 inches. Harvest of Striped Bass in the Roanoke River is allowed between March 1 and April 30, unless modified by proclamation. The yearly landings total of Striped Bass allowed to be harvested from the Roanoke River is 68,750 pounds. The Albemarle Sound Management Area also has an annual recreational harvest allocation of 68,750 pounds, as well as a commercial harvest allocation of 137,500 pounds. Harvest allocations are determined after analyzing field data collected by both NCWRC and NCDMF, and comparing to fishing mortality and spawning stock biomass targets established for the population.

Because Striped Bass in the Albemarle-Roanoke stock are migratory, moving back and forth from the Atlantic Ocean, management plans for this population must also be approved by the Atlantic States Marine Fisheries Commission. To remain in compliance with the approved management plan, seasons and regulations are often adjusted to ensure that we do not exceed the harvest allocations.

Project Objectives:

- The objective of this survey is to characterize the spawning portion of the Albemarle-Roanoke stock in the Roanoke River Management Area by estimating relative abundance (Number of fish collected per hour of electrofishing), size-structure, and age-structure.



Location of yearly spring Striped Bass sampling near Weldon, NC.
(Map created by Christopher Smith)



This nice 28- pound Striped Bass was released by District 1 Assistant Fisheries Biologist Christopher Smith. (Photo by Katy Potoka)



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Methods:

- Striped Bass were sampled weekly from April 11 to May 23, 2016 in the vicinity of Weldon. Boat mounted electrofishing was used to collect Striped Bass from 6–8 sites per day.
- Striped Bass were held on board in an oxygenated live well until they could be measured, weighed, and tagged. A few scales were removed for ageing purposes.
- All scales were processed in the lab by two individuals to assign each Striped Bass an age.

Results:

- Weekly electrofishing sampling in the Roanoke River yielded 1,102 Striped Bass. The overall catch rate of Striped Bass for 2016 was 69.7 fish per hour electrofishing, which was much lower than past surveys
- Striped Bass ranged in length from 9–45 inches. Fish of harvestable size (18–22 inches) made up 69% of the total electrofishing catch. Of the 1,102 fish collected, 6% (70 fish) were within the protective slot (22–27 inches), while 2% (20 fish) were 27 inches or larger.
- The 2016 spawning stock of Striped Bass in the Roanoke River was supported mainly by age-4 and age-5 fish (74%), most of which were males (64%). Age-3 fish made up 4% of the total catch, suggesting that the 2013 spawn was poor. The relative absence of age-3 fish in our collections was the primary reason that the overall abundance was low in 2016. In addition, few older fish were observed as less than 1% of fish collected were age-9 or older.

What's next?:

- Sampling in 2017 will start mid-April, when water temperatures on the Roanoke near Weldon reach approximately 59°F. Weekly collections will continue until Striped Bass spawning has ended, usually toward the end of May.
- Data collected in 2016 will be further analyzed and combined with the 2017 data into one report.
- NCWRC will continue to coordinate with NCDMF to place external reward tags in Roanoke River Striped Bass. For more information on the tagging program, visit <http://portal.ncdenr.org/web/mf/tagged-fish>

For more information, please contact:

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*Each year, NCWRC and NCDMF staff cooperate to efficiently weigh, measure and tag Striped Bass. From left to right Sean Darsee, Ted Rie-man, Charlton Godwin
(Photo by Christopher Smith)*



How You Can Help

Your purchase of fishing tackle, fishing licenses and motorboat fuel helps support fisheries work conducted by N.C. Wildlife Resources Commission fisheries biologists through the Sport Fish Restoration Program administered by the U.S. Fish and Wildlife Service.

