



◻ North Carolina Wildlife Resources Commission ◻

Gordon Myers, Executive Director

1/25/2019

MEMORANDUM

TO: District-9 Files

FROM: A. Powell Wheeler, District Fisheries Biologist
Amanda M. Bushon, Fisheries Biologist I
Inland Fisheries Division

SUBJECT: Lake Chatuge Walleye Stocking

Walleye *Sander vitreus* were introduced into Lake Chatuge by the North Carolina Wildlife Resources Commission and the Georgia Department of Natural Resources (GADNR) in the early 1960's. The population persisted without additional stockings until shortly after Blueback Herring *Alosa aestivalis* appeared in the reservoir in 1996. Blueback Herring are commonly associated with recruitment failures in Walleye and other sportfishes, and the Lake Chatuge Walleye population reportedly vanished following their introduction.

We began an experimental annual stocking of 30,000 fingerling Walleye in Lake Chatuge in 2014. Walleye were spawned at Table Rock State Fish Hatchery and reared to fingerling size before being marked with OTC. They were stocked into Lake Chatuge at the Shooting Creek Public Fishing Area between late April and early May of each year (Table 1).

In 2016, GADNR collected 43 Walleye from their annual fall hybrid Striped Bass *Morone chrysops* x *M. saxatilis* gill-net samples. The collected Walleye were delivered to us frozen *en masse* without any site information. We aged the fish by counting otolith annuli and we checked otoliths for OTC marks under a microscope with epifluorescent light. Our specific laboratory and data analysis methods follow Wheeler and Bushon (2018).

We could assign ages to 39 of the Walleye (Table 2). The sample only contained Walleye from stocked year classes and no fish were collected from year classes that pre-dated the beginning of our stocking. In addition, zero age-0 walleye were collected, which was not unexpected because they typically do not recruit to gill-net samples until age-1. The percentages of OTC-marked fish in the 2014 and 2015 year classes were high (67% and 100%) and relative weight (W_r) values were generally very high (>100).

The results confirm that the Walleye stocking is successful because the stocked fish are recruiting to ages ≥ 1 and reaching sizes which will interest harvest-oriented anglers. The high W_r values indicate the fish are finding sufficient forage and suggests Lake Chatuge is likely a suitable location for a Walleye fishery.

References

Wheeler, A. P., and A. M. Bushon. 2018. Contribution of stocked Walleye in Lake Glenville. North Carolina Wildlife Resources Commission, Federal Aid in Sport Fish Restoration, Final Report, Raleigh.

TABLE 1.—Stocking date, quantity, and mean TL of Walleye stocked in Lake Chatuge from 2014–2016.

Date	<i>N</i>	Mean TL (mm)
05/14/2014	31,060	37
05/12/2015	30,000	38
04/27/2016	34,800	25

TABLE 2.—Mean TL, weight, and W_r of Walleye collected by GADNR from Lake Chatuge in fall 2016. Standard deviations are reported parenthetically. The percent of each year class that was marked with OTC is also presented.

Age	Year class	<i>N</i>	TL (mm)	WT (g)	W_r	OTC (%)
1	2015	33	423 (18.2)	844 (107)	106 (6.1)	100
2	2014	6	461 (14.0)	1087 (161)	103 (9.2)	67