



Northeast Creek Reservoir 2009

Located in Louisa County, Northeast Creek Reservoir is a 170-acre water supply reservoir that is administered by the Louisa County Water Authority. The reservoir was constructed in 1983, open to fishing in 1987, and currently contains self-sustaining populations of largemouth bass, bluegill, redear sunfish, black crappie, and chain pickerel. To provide additional angling opportunities, the reservoir is annually stocked with channel catfish. On April 25th, 2008 the fish community of Northeast Creek Reservoir was sampled by boat electrofishing gear. This report summarizes the results of these surveys and what anglers can expect to catch in Northeast Creek.

Northeast Creek Reservoir contains a typical fish community for a small impoundment with a combined eight fish species collected (Table 1). Largemouth bass was the most abundant species collected followed by bluegill, redear sunfish, and black crappie (Table 1). Seventy eight bass were collected, yielding an average electrofishing catch rate of approximately 52 fish per hour. The 2008 catch rate was considerably higher than catch rates from previous surveys (37 fish/hour in 2002, and 39 fish/hour in 1998), but was still lower than rates for a typical Central Virginia impoundment. Low catch rates could be attributed to many factors including sampling efficiency, low reproduction, high mortality (natural and fishing), and/or limited lake productivity.

Low sampling effectiveness is an unlikely cause of low bass catch rates due to the historical trend in low catch rates in Northeast Creek. Additionally, bass reproductive success and mortality do not appear to be problems. A large portion of largemouth collected were younger than age-3, indicating that there were successful bass spawning in 2006 and 2007. There were also good numbers of fish ranging between age-3 and age-7 (Figure 1). Survival estimates indicate that bass survival in Northeast Creek is relatively decent with annual survival around 70%. Additionally, largemouth bass are remaining in the system for many years; bass were collected up to age-10.

Low bass catch rates in Northeast Creek are primarily a function of low lake productivity. The reservoir has a very small watershed supplying nutrients to the lake, and the reservoir has a large presence of aquatic vegetation. Nearly 90% of the reservoir shoreline is full of water shield lily pads that provide fish habitat but also utilize nutrient that would be available to prey fish. Predator fish, such as bass, are showing signs of limited productivity in the form of slow growth. On average, bass in Northeast Creek are not reach 12 inches until age-5 and do not reach 16 inches until after age-7 (Figure 1).

Since 1991, the reservoir has been governed by a restrictive 18-inch minimum size limit, two bass per day regulation. This was in an attempt to reduce fishing mortality and increase the number of large bass. At this point, the regulation does not appear to produce big fish and is actually causing a stockpiling of small bass. Most of the adult largemouth bass collected were

small fish (81% collected < 12 inches and 91 % collected < 15 inches, Figure 2). The largest bass collected measured only 18.5 inches and weighed 3.5 pounds. Additionally, these small bass (8-15 inches) appear to be in poor condition with the average relative weights of 82. Relative weight is a measure of fitness or plumpness, and in Central Virginia ideal relative weights should range between 90 and 100. Overcrowding in the smaller size classes combined with poor lake productivity is leading to poor bass growth and less potential for the lake to produce trophy bass. For these reasons the restrictive harvest regulation on bass will be removed in 2008 and replaced with the statewide 5 bass per day creel limit. Even with low numbers of bass and slow growth, the reservoir does produce some largemouth in the 16-18 inch range (Figure 1). Additionally, the reservoir is in a very rural setting and receives very little fishing pressure. Anglers fishing for bass should concentrate around the edge of the water shield and in the areas with standing timber.

Northeast Creek Reservoir offers a decent panfish fishery that is primarily comprised by three species: bluegill, redear sunfish, and black crappie. Panfish are not extremely abundant but there are numerous harvestable-sized fish (> 6 inches) available to anglers. The majority of sunfish collected were between 5 and 9 inches (Figure 3). Catches of panfish > 9 inches were rare except for the occasional big redear. Anglers search for panfish should concentrate efforts around the sandy flats and brush piles in the spring and the deeper timber structure during the summer. A good area to start is the brush piles in the eastern arm of the reservoir or the sandy banks on the western shore, just above the boat launch.

Channel catfish and chain pickerel offer anglers a different variety of fishing experience. Channel catfish are stocked annually, but none were capture in our electrofishing sample. The absence of catfish in the catch is due to our sampling gear rather than a lack of fish. Very few pickerel were collected in the 2008 electrofishing survey, but the abundance of vegetation offers these fish plenty of suitable habitat and numerous places to hide. Fishing around the vegetation beds with roster-tailed spinner or beetle spin baits should give anglers a chance to catch a pickerel.

Anglers looking for a scenic experience with little interference from other anglers should visit Northeast Creek Reservoir. There is ample parking and a gravel ramp that accommodates most boats. The entrance to the lake is an unmarked gravel road directly off Route 33 (approximately 5 miles east of Louisa). The reservoir is open 0.5 hour before sunrise till 0.5 hour after sunset. If you plan to make a day on the lake, be aware that a fishing permit issued by Louisa County is required to fish the lake. Permits are \$2.00 daily, \$10.00 annual, \$8.00 for senior citizens (calendar year), and can be obtained from Carterfield's Sporting Supply (540-967-1220).

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Table 1. Species account and catch rates for fish collected throughout Northeast Creek Reservoir in 2008.

Species	Number Collected	Catch Rate (fish/hour electrofishing)	Percentage of Catch
Largemouth Bass	78	52	34.1
Bluegill	65	43	28.4
Redear Sunfish	48	32	21.0
Black Crappie	33	22	14.4
Chain Pickerel	2	1	0.9
Warmouth	1	1	0.4
Creek Chubsucker	1	1	0.4
Brown Bullhead	1	1	0.4

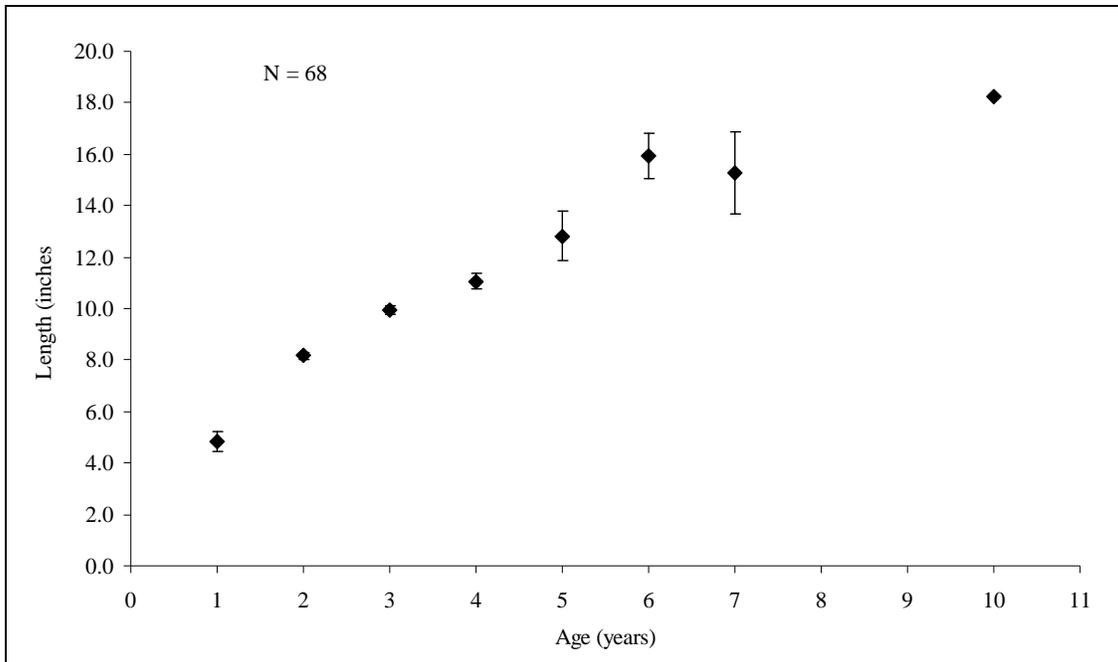


Figure 1. Average length-at-age of largemouth bass collected throughout Northeast Creek Reservoir in 2008. Error bar indicate standard error.

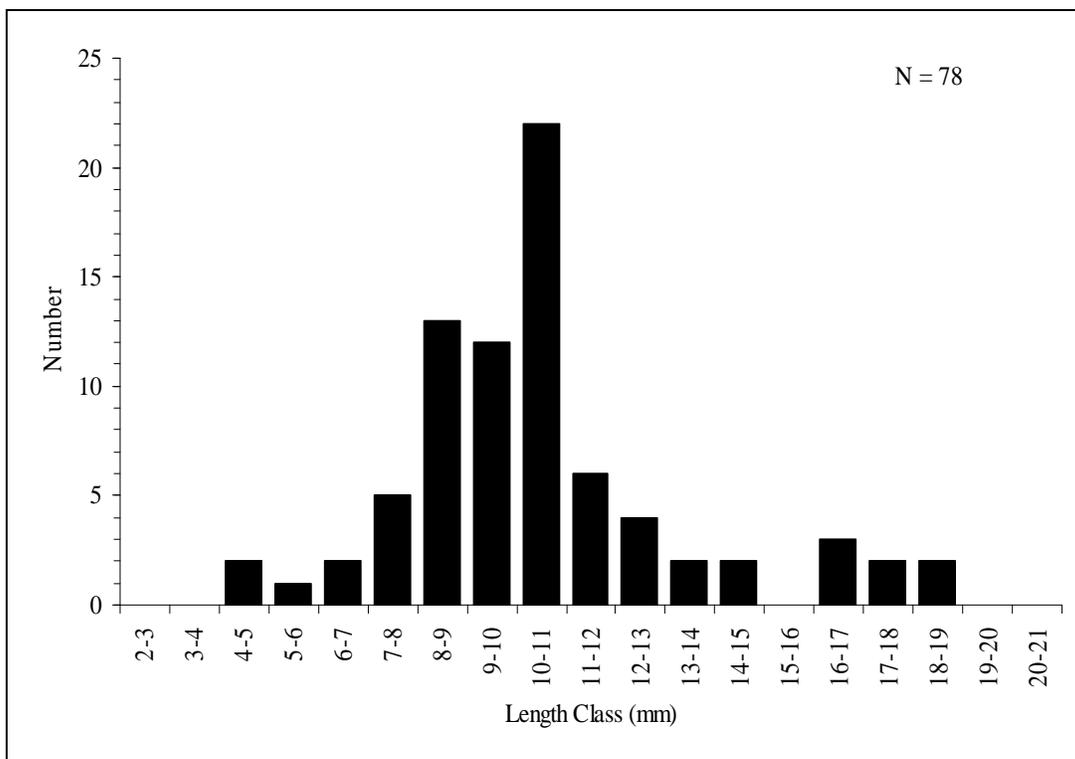


Figure 2. Length distribution of largemouth bass collected throughout Northeast Creek Reservoir in 2008.

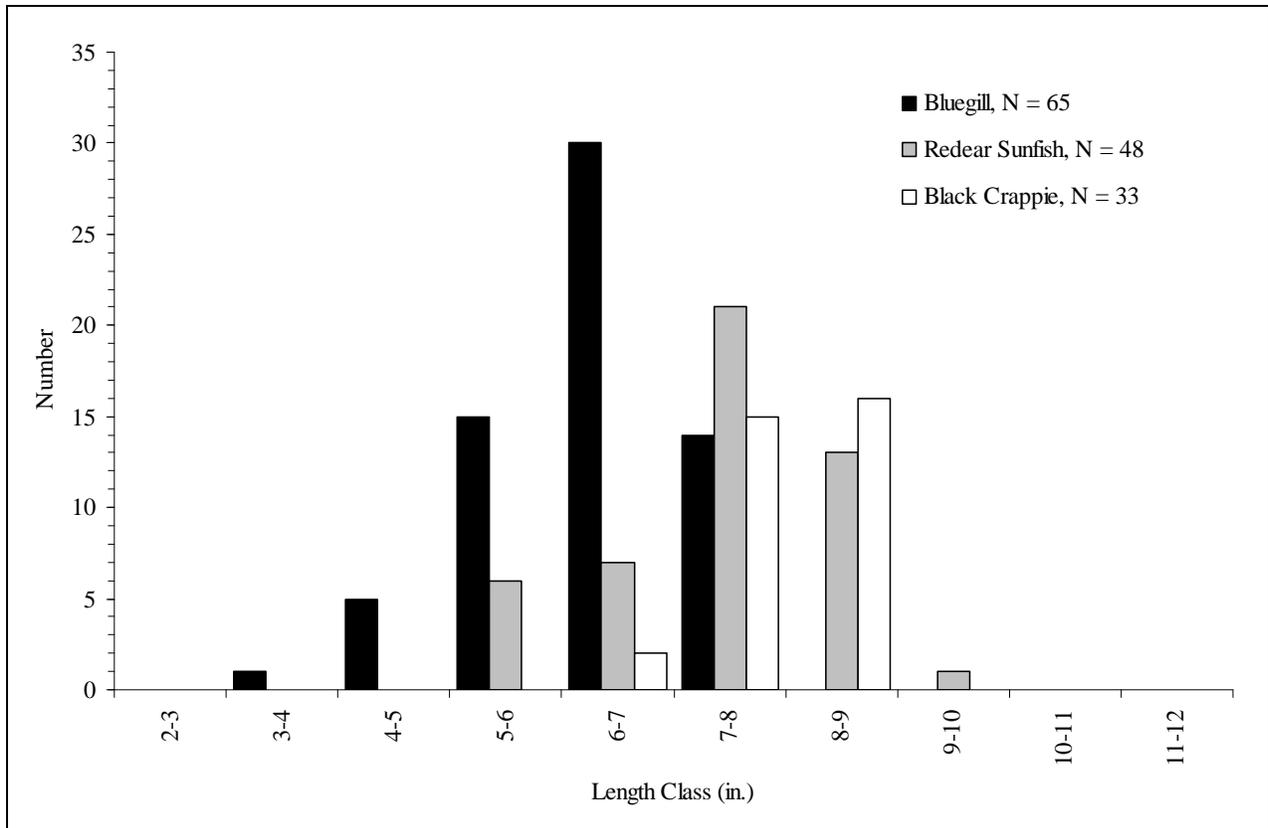


Figure 3. Length distribution of panfish collected throughout Northeast Creek Reservoir in 2008.