



Clinch River Fisheries Management Report 2013

From its origin near the town of Tazewell, the Clinch River flows some 135 miles through the heart of Southwest Virginia, reaching portions of Tazewell, Russell, Wise and Scott Counties before crossing the Tennessee state line. The Clinch contains more species of fish than any river in Virginia. It supports populations of sport fish like smallmouth bass, spotted bass, rock bass, sunfish, crappie, walleye, musky, freshwater drum, longnose gar, channel catfish, and flathead catfish. It also supports one of only two sauger populations in the state. Largemouth, white, and striped bass are also occasionally encountered, particularly in the lower reaches of the river.

Sport fish populations are sampled in the Clinch River using boat-mounted electrofishing gear. This sampling equipment generates a controlled field of electricity around the boat that immobilizes the fish. The fish can then be collected with dipnets and placed in a livewell on the boat to recover. This method does not kill the fish, but only stuns the fish so that they can be collected, counted, measured and released. These population samples are typically conducted during April and May, when most fish are in shallow water.

The relative abundance of each fish species is calculated as the number of fish collected per hour of sampling. This is also referred to as the catch rate or catch per unit of effort (CPE). The total length and weight of individual fish are measured to determine the condition of the fish and also to evaluate the size structure of the populations. A balanced size structure with representative numbers of both large and small fish is ideal. Mostly small fish in the population might mean that growth is slow or few fish are surviving to older ages. Mostly large fish in the population might mean that natural reproduction is lacking and there are not enough young fish being recruited to replace older fish that die. Periodically fish are collected for the purpose of determining the age structure of the populations. These data provide biologists with the information necessary to calculate average growth rates and mortality rates for the population. Age data are not collected each year, because it requires killing the fish.

All of these data together are used to make management decisions about the fishery. Biologists use the data to make stocking recommendations and regulation proposals. The relative abundance of a particular species or the size structure of that species may not always correspond with what you catch as an angler. The electrofishing method tends to collect average and small fish better than really big fish. It is likely that you will catch more or bigger fish in your efforts than biologists collect in sampling. The data collected in sampling is best used to track trends in the population from year to year and also to compare to another location on the river or other rivers in Virginia.

Routine sampling locations include: Cleveland, Carterton, Burton's Ford, Dungannon, Fort Blackmore and Clinchport. Other locations are sampled when boat access is suitable and the schedule allows.

Smallmouth bass

Smallmouth bass relative abundance (number of fish collected per hour of sampling) in the Clinch River varies from year to year (Figure 1). The catch rate for smallmouth in the Clinch is average compared to other rivers in the state. The 2012 catch rate of 75 smallmouth bass per hour was good. With the exception of the low catch rate of 35 in 2005, the relative abundance has been steady at 70 to 90 fish per hour of sampling. Sampling catch rates can be affected by river levels, water clarity and weather, but sampling under the same conditions each year helps to minimize these factors.

The abundance of smallmouth bass populations in rivers is heavily influenced by reproductive success. In years with good spawning conditions and survival, strong year classes are produced. Strong year classes increase the population abundance and create better fishing opportunities. These strong year classes usually persist for 10 years or more, until most of the individual fish die of old age or other causes. When two or more strong year classes are produced in quick succession, the fishing can be extraordinary. Of course, when average or weak year classes are produced the population declines and fishing is not as good. Population samples indicate that smallmouth recruitment in the Clinch was fairly consistent in recent years.

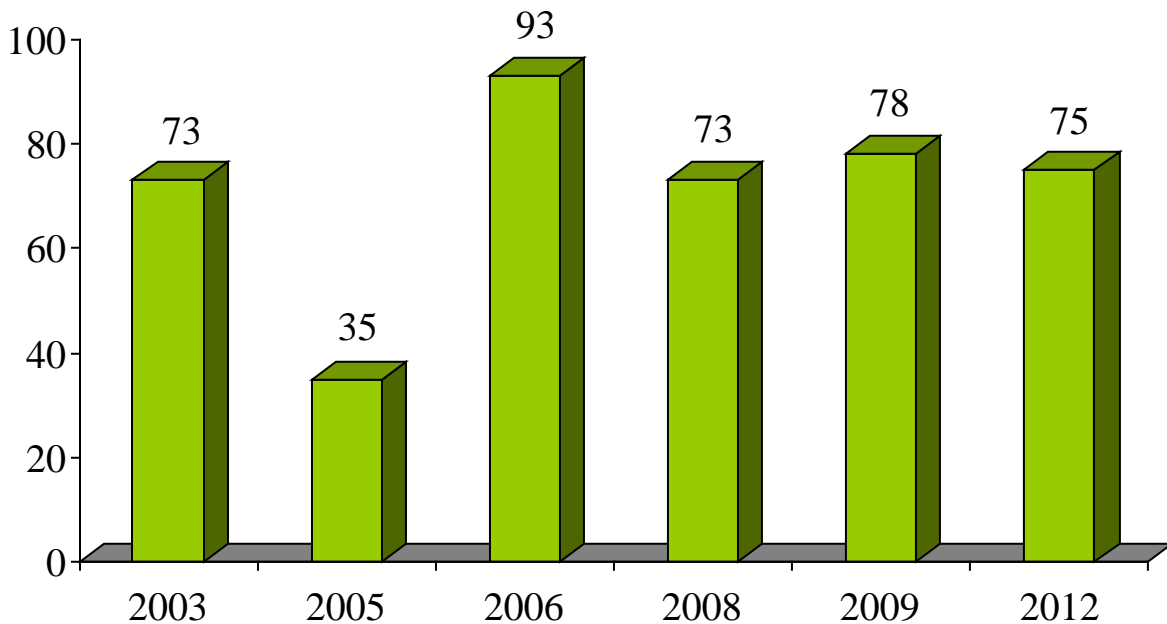


Figure 1. Number of smallmouth bass collected per hour of sampling in the Clinch River from 2003 to 2012.

Proportional Stock Density (PSD) is an index that measures the percentage of adult fish that are 11 inches or larger in the population. Of the adult (all fish 7 inches or larger) smallmouth bass collected in 2012 the PSD measured 52 (figure 2). This means that approximately 52% of all adult smallmouth bass collected in 2012 were 11 inches or larger. The percentage of adult fish 14 inches or larger in the collection was 11% and the percentage of adult fish that were 17 inches or larger in the

collection was 2%. The following figures show the size range of smallmouth bass by percentage for collections made from 2003-12.

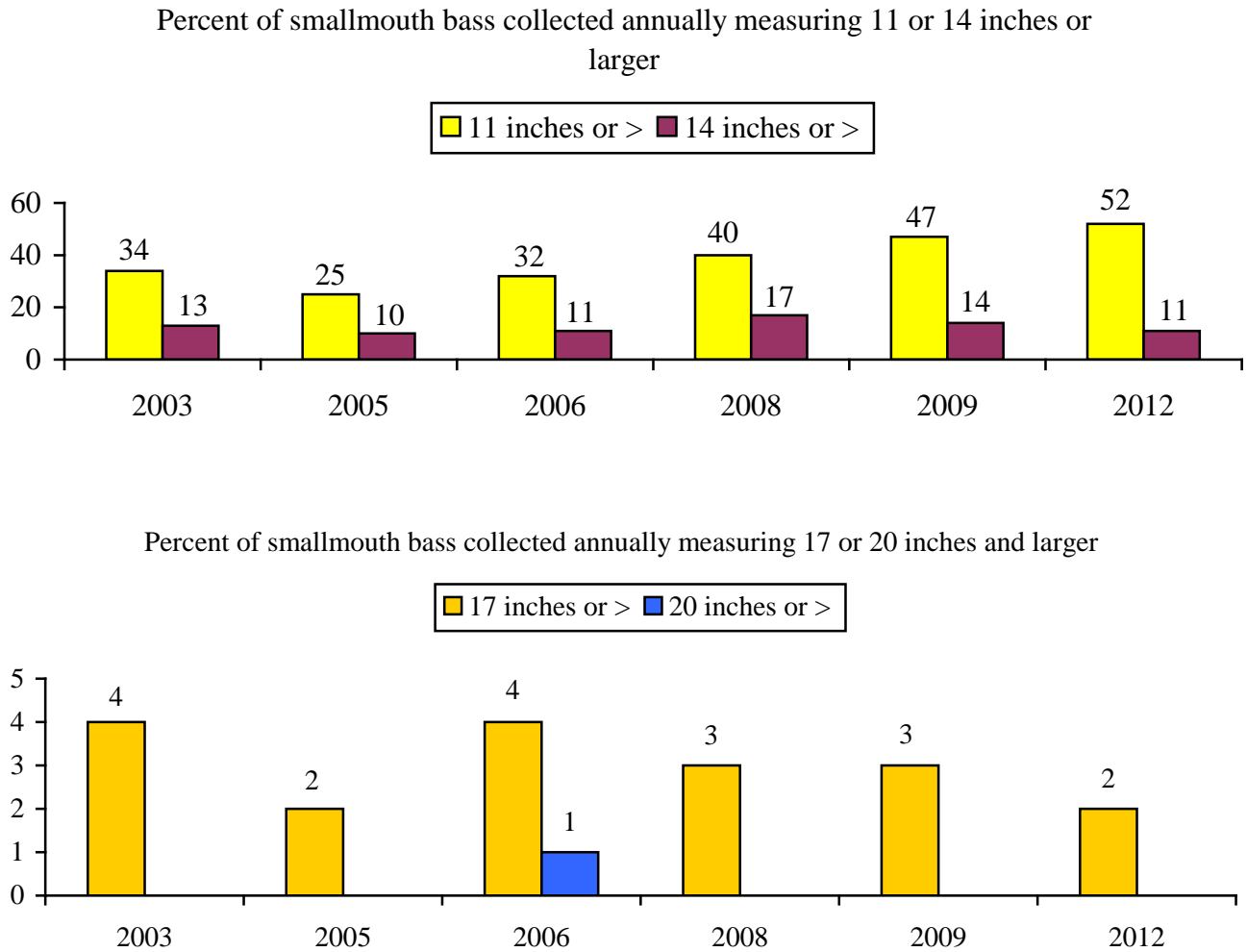


Figure 2. Percentage of smallmouth bass collected by size group in the Clinch River from 2003-2012.

Rock bass

Rock bass catch rates also fluctuate from year to year (Figure 3). Rock bass were collected at a rate of 54 fish per hour in 2012. There has been a decreasing number of rock bass collected per hour since 2006. The decrease in catch rate is most likely the result of poor spawning success. The size structure of the rock bass population is good in the Clinch and has remained constant even though the catch rate is down. Anglers should find quality-sized rock bass.

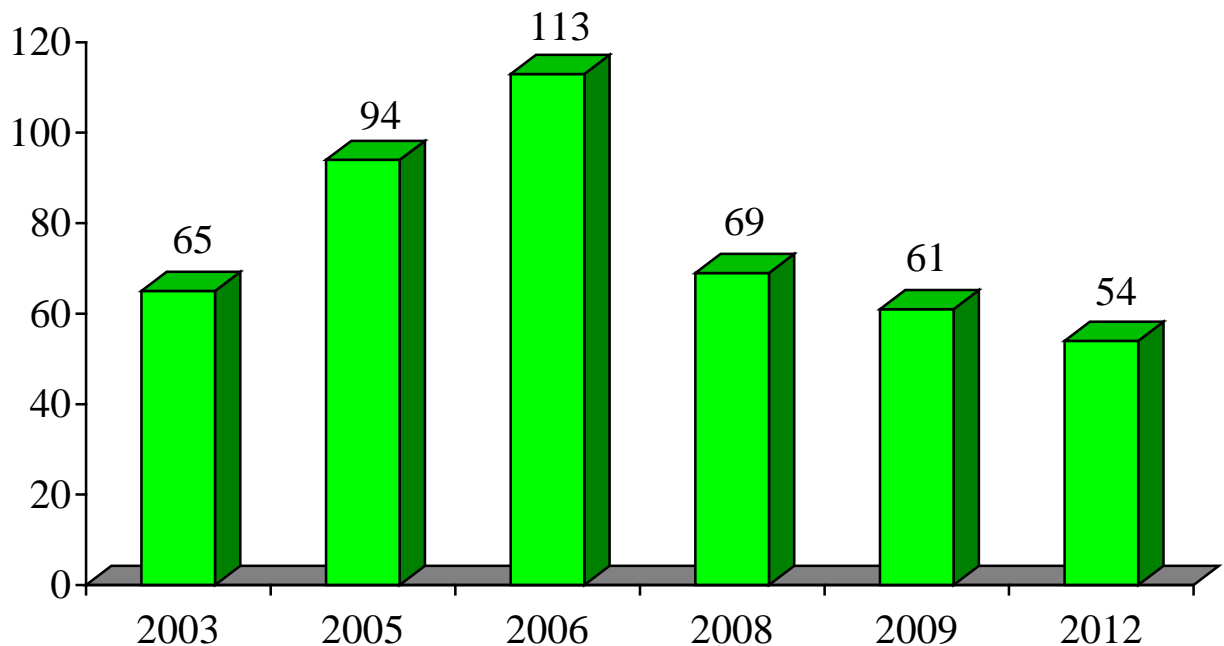


Figure 3. Number of rock bass collected per hour of sampling in the Clinch River from 2003 to 2012.

Catfish

Channel catfish are more abundant in some sections of the river than others, but overall they were not collected in large numbers. The average catch rate for 2012 was less than 1 channel catfish per hour. This is lower compared to previous samples. Flathead catfish are native to the Clinch, and a few are collected in sampling each year. Because catfish tend to favor deeper water, their population abundance may not be accurately represented in electrofishing samples. Electrofishing samples are concentrated in shallow water to maximize effectiveness and visibility of stunned fish.

Walleye

Walleyes are native to the Clinch and were stocked in the past to enhance the population. Annual stockings of fingerling walleyes were resumed in 2005 after several years of not stocking. Walleye catch rates have improved from less than one fish per hour to an average of two fish per hour (Figure 4). Walleyes are still not very abundant in the Clinch. Increased stocking rates and regulation of harvest may be necessary to increase the catch rate for walleyes in the Clinch.

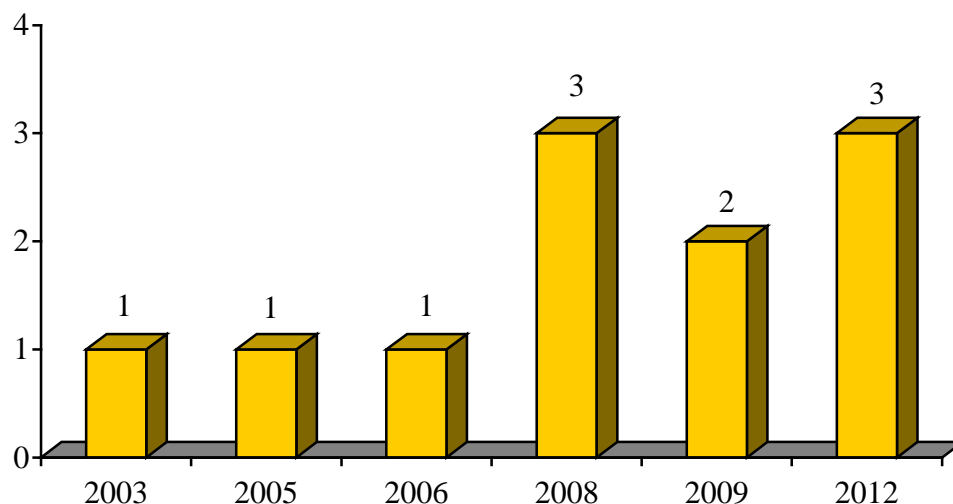


Figure 4. Number of walleye collected per hour of sampling in the Clinch River from 2003-2012.

Other species

Sauger are not common, but two separate state records were landed in 2005. Sauger are typically collected at a catch rate of less than one fish per hour. Musky and freshwater drum are also collected at similar rates.

There is an 11-14-inch slot limit in effect for bass in the Clinch River, and a 30-inch minimum size limit for musky. Statewide creel limits apply for all species. The Clinch River has been declared navigable in Virginia from near the town of Richlands in Tazewell County to the Virginia-Tennessee state line in Scott County. The Department and the Tennessee Valley Authority have developed several access points along the river. The uppermost launch site is located at Blackford in Russell County, and the last take-out is located near the Tennessee-Virginia state line.

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