



2023 Clinch River Fisheries Management Report



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, Walleye, Longnose Gar, Channel Catfish, Flathead Catfish, and a variety of sunfish species. It also supports one of only two Sauger populations in the state. Muskellunge and Freshwater Drum are also occasionally encountered.

Stocking

Walleyes are native to the Clinch River but have been stocked in the past to enhance the population. However, Walleye have not been stocked in the Clinch River since 2015. This was initially the result of poor hatchery production. More recently Walleye stocking in the Clinch River has been suspended while awaiting the results of genetic testing for this species. Initial results of this testing suggests that the Walleye in the Clinch River are part of the Eastern Highlands genetic group and similar to other native Walleye populations in the Upper Tennessee River drainage. In the coming months, VDGIF will be drafting a management plan for Walleye in the Virginia portions of the Clinch and Powell Rivers, which

will include securing a source of eggs or fingerlings from native populations with a similar genetic make-up.

Regulations

Certain gamefish species are managed under the following regulations. Species not listed below are managed under statewide regulations.

Species	Length Limit	Creel Limit
Smallmouth Bass	20-inch minimum	1 per day
Rock Bass	none	25 per day
Sunfish (all species combined)	none	50 per day
Walleye	18-inch minimum	5 per day
Sauger	none	2 per day
Catfish (Channel and Flathead combined)	none	20 per day
Muskellunge	30-inch minimum	2 per day

Population Sampling

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 (CPUE). 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.

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. 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: 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, but has generally averaged about 67 fish/h. The catch rate of adult Smallmouth Bass in 2022 (39 fish/h) was comparable to that observed in 2019 (41 fish/h), but down substantially compared to previous years (Figure 1). The catch rate of juvenile Smallmouth Bass in 2022 (8 fish/h) was down from 2019 (15 fish/h) however, 2019 was the highest observed in recent years.

Smallmouth Bass observed in the 2022 sample ranged in length from 3 –20 inches with an average length of about 10 inches (Figure 2). Proportional size distribution (PSD) is an index that measures the percentage of adult (≥ 7 in) Smallmouth Bass that are ≥ 11 inches in length. The PSD for Smallmouth Bass in 2022 was 50%. The percentage of adult fish ≥ 14 inches in the collection was 21% and the percentage of adult fish that were ≥ 17 inches was 5%. Less than 1% of Smallmouth Bass collected in 2022 exceeded the 20-inch minimum length limit for this species. The 20-inch minimum length limit regulation was implemented on January 1, 2015, and had been in place about seven years at the time of the current sample. Additional sampling will be necessary to determine if the regulation has had an impact on the population size distribution.

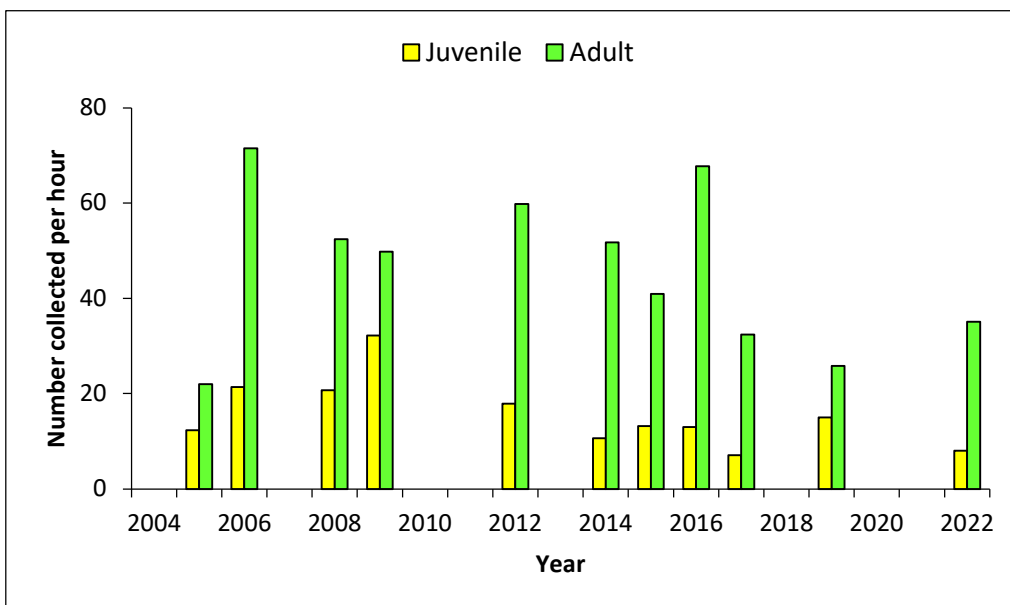


Figure 1. Number of juvenile and adult Smallmouth Bass collected per hour of sampling on the Clinch River 2003-2022. The river was not sampled in years with missing values.

The Clinch River should provide good fishing opportunities in 2023 for anglers targeting Smallmouth Bass despite the lower overall numbers. Good numbers of quality and preferred-size fish are available, although the size structure is somewhat smaller than that seen on other Virginia rivers. The strong cohort of juvenile fish should help boost the population as they grow into the larger size ranges.

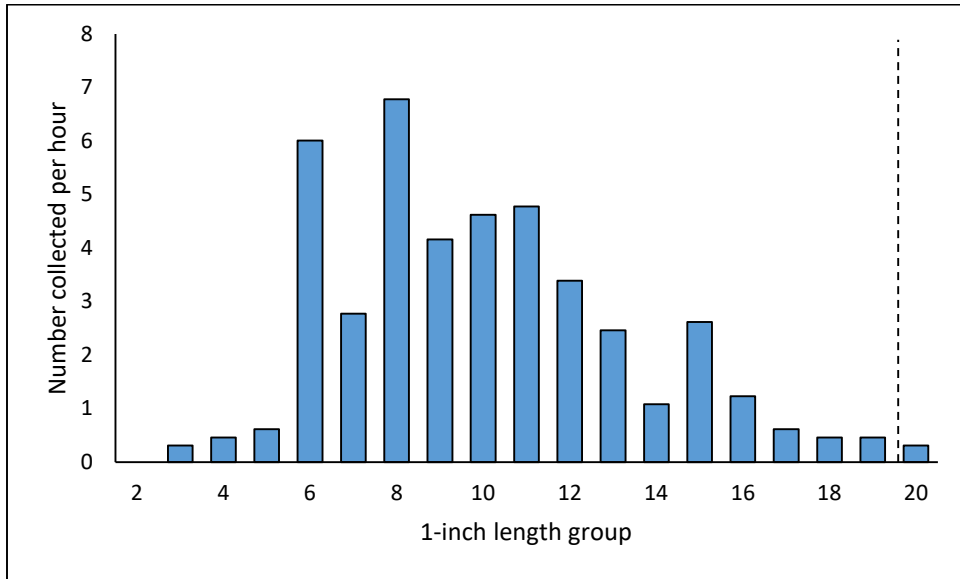


Figure 2. Length frequency distribution of Smallmouth Bass sampled from the Clinch River during electrofishing samples in spring 2022. Dashed, vertical line represents the 20-inch minimum length limit for this species.

Rock Bass

Rock Bass catch rates can also fluctuate from year to year but appear to be experiencing a continued decline since about 2006 (Figure 3). Adult Rock Bass were collected at a rate of 12 fish/h in 2022. The factors leading to this sustained decline are unclear at this time but require further investigation. Rock Bass ranged in length from 4 – 10 inches with an average length of approximately 7 inches. Sixty percent of the adult Rock Bass observed were ≥ 7 inches and 1% were ≥ 9 inches.

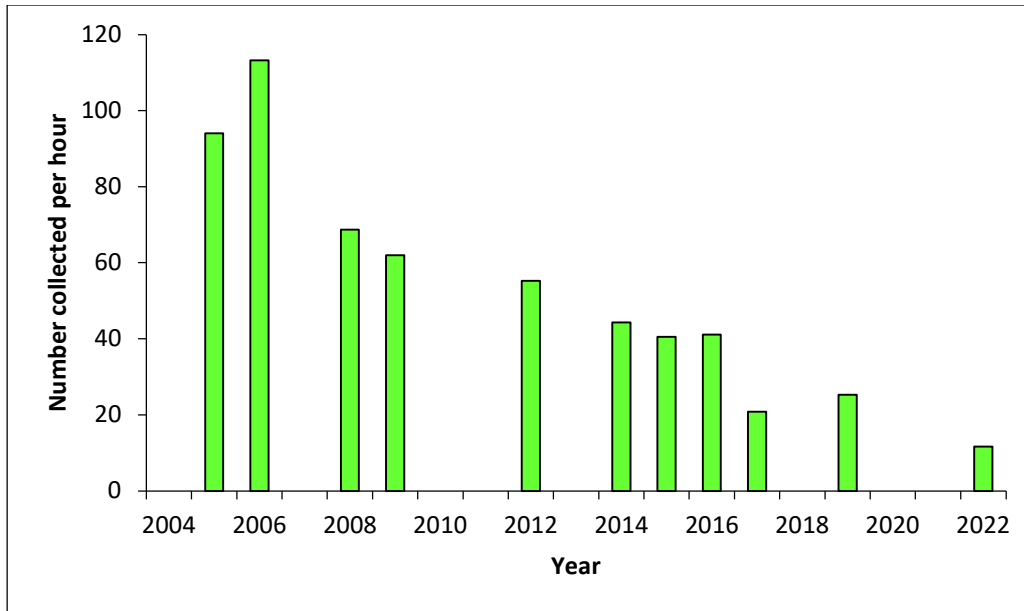


Figure 3. Number of adult Rock Bass collected per hour of sampling on the Clinch River 2003-2022. The river was not sampled in years with missing values.

Catfish

Channel catfish are more abundant in some sections of the river than others, but overall they were not collected in large numbers. 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.

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. Walley, Muskellunge, and Freshwater Drum are also collected at similar rates.

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