Capturing the Truth about West Virginia's Musky

By Kevin Yokum and Scott Morrison

One of West Virginia's most elusive fish, the muskellunge, is being caught at an amazing pace. The strange part about the prolific fishing is that no rods, line or lures are being used. The Division of Natural Resources (DNR) Wildlife Resources Section is using high tech electrofishing boats to study muskellunge populations in two of the Mountain State's better musky streams. The study involves the Buckhannon River, which is annually stocked with fingerling muskellunge, and Middle Island Creek, which has a naturally reproducing population of muskies.

Muskies that are captured during this study are injected with tags that have a microchip that can send a unique number to a scanner. The tags are about the size of a small pill and are not visible after they are inserted. A portable scanner, which works much like those at the grocery store, is used to check recaptured muskies for tags.

Recapturing a tagged musky supplies the Wildlife Resources Section with movement and growth information. The study may also supply information on musky behavior characteristics such as movement; identify habitat preference; and investigate the spawning potential of stocked fish. Results from this study will provide the DNR with some of the most extensive data ever assembled on West Virginia musky populations, and that should mean better management and fishing for one of the Mountain State's largest game fish.

The study began in 2002 and will be continued through at least 2009. On the Buckhannon River, the six-mile Buckhannon Pool is currently being evaluated, but expansion of the study is planned

Releasing a musky caught on the Buckhannon River.

Photo by DNR

A portable scanner is used to check muskies caught by anglers and biologists for pit microchip tags injected into the fish.

Photos by Scott Morrison

next year as access to the lower river has been developed. The Buckhannon Pool has a special "catch-and-release" regulation for muskies so the expanded study area will allow biologists to compare the effects of catch-and-release regulations versus standard regulations on musky populations.

Since the study started, WRS personnel have collected more than 300 muskies within this six-mile section. More than 120 of these muskies have been recaptured. Several of these fish have been collected multiple times, including six fish which have been collected six times. Electrofishing catch rates on the Buckhannon Pool have remained steady at almost five fish collected per hour. That rate translates into a musky being collected every 12 minutes! Musky anglers should be excited because this catch rate indicates the fishing opportunities provided by the Buckhannon River.

Scott Morrison

Middle Island Creek, a classic musky stream, has been managed under catch-and-release regulations for 14 years.

Only a few of the fish collected from the Buckhannon have moved more than a mile between captures and the majority have been found less than 200 yards from where they were originally collected. One musky, however, traveled seven miles in just over a month and longer journeys may be documented once downstream expansion of the study is implemented.

Findings from Middle Island Creek are also impressive. Middle Island Creek has better access for electrofishing boats than the Buckhannon and a larger section of the Creek can be studied. Biologists have tagged more than 240 muskies on Middle Island Creek, 87 of which have been recaptured. Middle Island Creek muskies appear to move more than their counterparts from the Buckhannon. The average move for Middle Island Creek musky was more than three miles. The Middle Island Creek study also found that males moved more and for greater distances than females. The longest moves found for Middle Island Creek fish were 51, 46 and 41 miles. These three fish all moved downstream. The greatest move found for a female was 18 miles upstream. Biologists discovered that Middle Island Creek's standard regulation areas had musky population densities similar to Middle Island Creek's seven-mile-long "catch-and-release" section.

The information obtained from this and other fisheries research surveys will help biologists better understand this important game fish, and ultimately lead to increased fishing opportunities.

Scott Morrison

Gary Batton, wildlife manager, holds a hefty musky caught in Middle Island Creek during a research survey.

Kevin Yokum and Scott Morrison are the district fisheries biologists stationed in French Creek and Parkersburg, respectively.