Paddlefish Reproduction in Harry S. Truman Reservoir, MO.

Christopher W Schwinghamer

Paddlefish are a common sport fish species in Missouri as well as throughout much of the Mississippi River Basin. This ancient fish is related to the sturgeons and is unique in its generally large size, catfish-like skin, and long, paddle-shaped nose. Feeding primarily on plankton, Paddlefish will not take a lure presented to them so anglers must pull a weighted treble hook though the water in hopes of snagging this fascinating fish. Paddlefish snagging has become such a popular activity that the Missouri Department of Conservation has created and maintains populations in its reservoirs through stocking in hopes to create trophy fisheries. These reservoir fisheries though create a habitat that is not typical of those Paddlefish would have encountered historically. As such, it is believed that these fishes are unable to spawn in these unnatural habitats. Data from prior study though has led us to believe that Paddlefish populations in Harry S. Truman Reservoir were indeed spawning. Though their sampling, they discovered that only 16% of fishes in this population were tagged with the coded wire tag that each fish is implanted with before stocking in the hatchery. With another study finding that almost all fish tagged keep the tag, natural reproduction is the likely cause of the lack of tagged fish in this reservoir. This led to the purpose of our study, documenting natural reproduction of Truman Lake Paddlefish and locating spawning sites within the tributaries feeding this lake.

In order to achieve our objectives, 96 sexually mature Paddlefish were tagged with ultrasonic transmitters. These transmitters create a sound every 60 seconds that can be picked up by proper listening devices known as VR2’s. VR2’s are stationary and can passively track the movements of fishes around the clock. Eight VR2’s were set in Truman Lake and its tributaries. Potential spawning sites were then located based on historic spawning locations, areas where we detected schooling behavior in our tagged fish, or areas where habitats were suitable for spawning, such as areas with gravel bottoms and moderate flow. Once these areas were located, we planned on sampling for eggs and larvae using bottom trawling and setting egg mats which consisted of cinder blocks wrapped in furnace filter material. Our plans ran into some roadblocks though when egg mats we had disappeared over night. This led to us manually searching for eggs on the rocks. We got out of our boat and picked up rocks, inspecting each for eggs. Eventually our hard work paid off and eventually we found 11 eggs and 1 larvae on a gravel bed near the Taberville, MO.

Our find documented the first evidence of spawning location within the tributaries of Truman Lake. Knowing this bit of information could help to better manage this population of fish in this reservoir system. Natural reproduction could be the first step in creating a population that can sustain itself rather than be maintained through stocking. Future studies though should look at how much reproduction is occurring in Truman Lake and how many of the young fish are surviving to reproductive ages. Knowledge of how the Paddlefish in Truman Lake are reacting to the new habitats presented to them will help to ensure a trophy fishery and happy anglers for years to come.