Ensuing invasion of bigheaded carps and the imperilment of the Tennessee – Tombigbee Waterway

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Introduction

Silver Carp (*Hypophthalmichthys molitrix*) and Bighead carp (*H. nobilis*) are commonly referred to as bigheaded carps. These two species were brought to the United States to control algae blooms in aquaculture ponds and wastewater management facilities. Flooding of aquaculture and wastewater ponds have led to their escape into local waterways. These species can be confused with Gizzard Shad when they are young which can cause them to be used as bait. Once these species escaped, they have a high affinity to establish resident populations and their high reproductive capabilities makes them a very successful invasive species. These species now pose a major threat to the Tennessee – Tombigbee Waterway

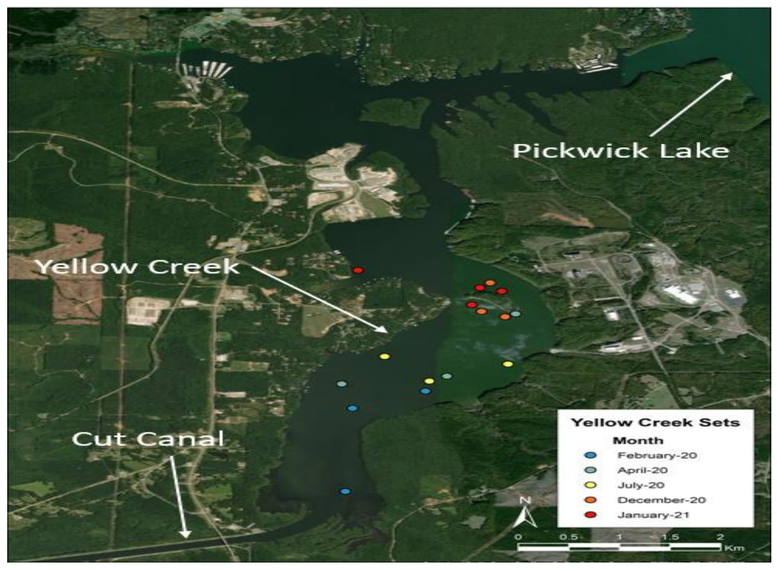
Objectives

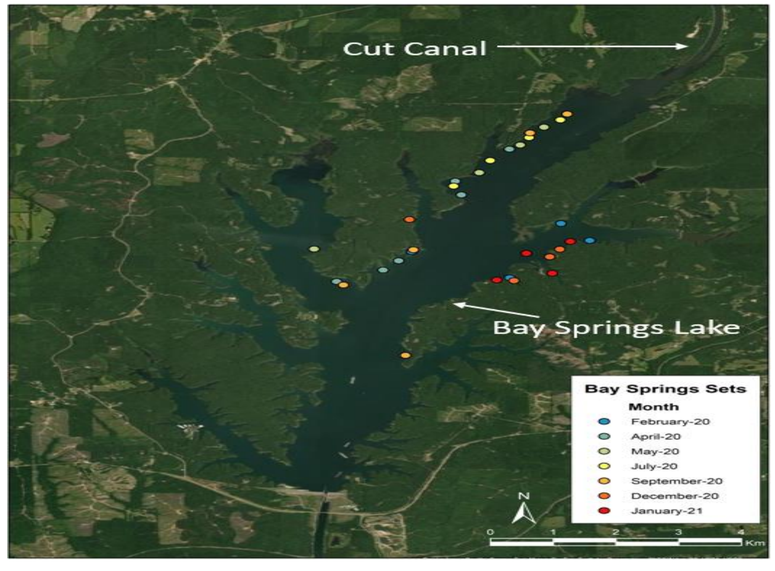
1. Document movement of bigheaded carps from the Tennessee River into Yellow Creek Arm of Pickwick Lake and Bay Springs Lake.
2. Document the CPE to show relative abundance of fish coming into this system

Methods

Experimental gillnets with mesh sizes of 3, 4, and 5 inches were set in Bay Springs Lake and the Yellow Creek Embayment of Pickwick Lake. These nets were set at dusk and retrieved the following morning. Nets were set in locations of no deeper than roughly 20 feet. Fish were measured to the nearest 1 mm and any bigheaded carp were weighed to the nearest 1 gram.

Results with net locations





Results

We have set a total of 16 nets in Yellow Creek and 31 nets in Bay Springs. There have been zero carp captured in Yellow Creek and two carp captured in Bay Springs Lake resulting in a CPE of 0.065 fish per net night in Bay Springs.

Discussion

Based on the findings of the gill netting surveys we conducted, it appears that the abundance of bigheaded carps at the head waters of the Tennessee – Tombigbee Waterway are still very low. Bay Springs Lake may potentially act as a natural barrier for bigheaded carps due to its oligotrophic nature. So far there have not been any other bigheaded carps captured in the Tennessee – Tombigbee Waterway.

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