Abstract

Lake McMurtry was sampled using hoop nets to assess the Channel Catfish population. Concern the Channel Catfish population may be stunted led to evaluation of the population in the summer of 2022.

Current Management Practices

Evaluate and Maintain Stocked Percid Fish Populations

Hybridized fish species like Saugeye do not have the capability to reproduce and sustain their populations as other game fish can. These put and take fisheries are subject to greater control by fisheries managers who must request annual introductions to maintain their abundances in satisfactory levels for the angling public. Populations must be monitored closely to ensure this limited resource is used most efficiently. The Saugeye fishery at Lake McMurtry has always been of interest as it has produced very large Saugeye in the past. The maintenance of current data on these species is vital to gauging success of these management strategies and communicating about them with constituents.

Evaluation of Historically Stunted and High Profile Crappie Populations

Crappie was the second most sought after species in Oklahoma according to the most recent angler survey. It is important to keep a finger on the pulse of high profile crappie fisheries in the region, especially with the recent developments in fish finding technology. The Garmin Livescope allows anglers to single out and harvest the largest fish in a school. As this technology becomes more affordable and more widespread in use, it will be important to have baseline information on high profile crappie fisheries. Slow growing crappie populations have been observed in some NCR reservoirs. These lakes have been stocked with saugeye in the past to develop a biological control for overabundant and slow growing crappie. Results have varied among these lakes and future evaluation of the crappie and saugeye populations is warranted.

Evaluation of Catfish Populations

Channel Catfish are the third most sought after species in Oklahoma. Tournament and trophy angling for this ictalurid species seem to be on the incline. Channel catfish can be slow-growing, long lived species that are often pursued by very efficient gears like jug lines. It is important to maintain and establish datasets. It is also an objective to identify other notable fisheries in the region. Hoop netting has been the method of evaluating Channel Catfish across the State. Concern that Channel Catfish in McMurtry may be stunted requires evaluation.

2022

Channel Catfish:

Lake McMurtry was sampled for Channel Catfish using baited hoop nets during the summer of 2022. A total of 10 net nights of effort was collected with 757 Channel Catfish being collected. Fish were measured (mm), weighed (g), and a subsample of 20 individuals for every 20 mm had their otoliths

removed for assessing growth. Catch Per Unit Effort (CPUE) was 2.65± 14.06 with a C.V. of .32. Length frequencies for Channel Catfish indicate 25% of the population is between 250mm – 274mm (~10in) (Figure 1). Proportional Size Distribution (PSD) was 10± 3 and relative Weight (Wr) was 83.85± 1.12. Age frequencies indicate strong year classes for age 3, 4, 7, and 9 (Figure 2). Mean Length at Age (MLA) indicated Channel Catfish were not reaching stock size (280mm, 11in) until the 5th year of life, and not reaching quality size (410mm, 16.1in) on average in any meaningful numbers (Figure 3).

Channel Catfish in Lake McMurtry are a classic example of a stunted fish population. Lake McMurtry catch rates of Channel Catfish are some of the highest in the state ranking between the 75th and 95th percentile statewide. Proportional Size Distribution ranked in the 25th percentile of Channel Catfish Statewide. Relative Weights ranked between the 5th and 25th percentile statewide. Mean Length at Age is under the 25th percentile statewide from age 2 – 6 and falls to below the 5th percentile for ages 7 and 8.

Management of the slow growing Catfish population is a challenge as options are limited. Encouraging anglers to keep all catfish caught is a tough ask as many anglers prefer to keep larger Catfish. Increasing predation of smaller Channel Catfish could potentially help increase growth rates. Largemouth Bass are known to predate on small Channel Catfish. Lake McMurtry has never been known to have a spectacular Largemouth Bass (LMB) population. Evaluating the LMB in Lake McMurtry may give an idea how abundant they are as a predator in the lake. Channel Catfish anglers can expect to have high catch rates of small Channel Catfish. This could be a draw for beginning anglers looking to catch a lot of catfish.

RECOMMENDATIONS

1. Evaluate Largemouth Bass population in Lake McMurtry to see if they are reaching a size as to be a viable predator for Channel Catfish.
2. Work with Friends of Lake McMurtry staff to promote Catfishing as a lake to experience high catch rates and encourage harvest of small Channel Catfish.

Figures and Tables

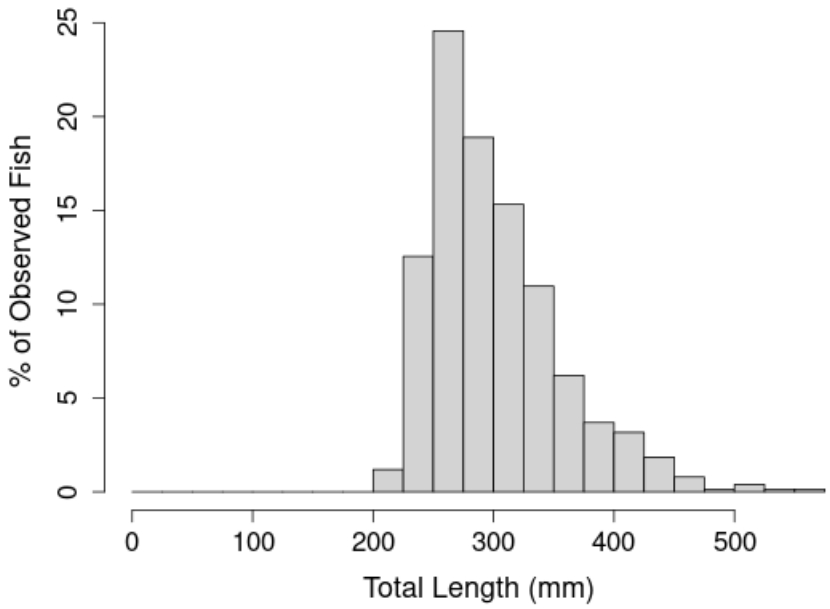

Figure 1. Length frequencies of Channel Catfish in Lake McMurtry collected summer 2022.

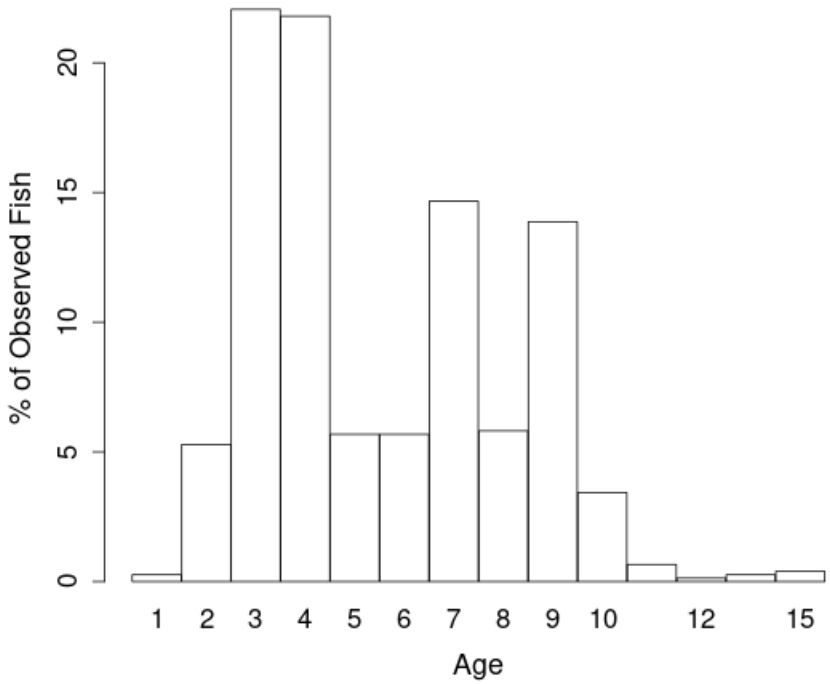

Figure 2. Age frequencies of Channel Catfish in Lake McMurtry summer 2022.

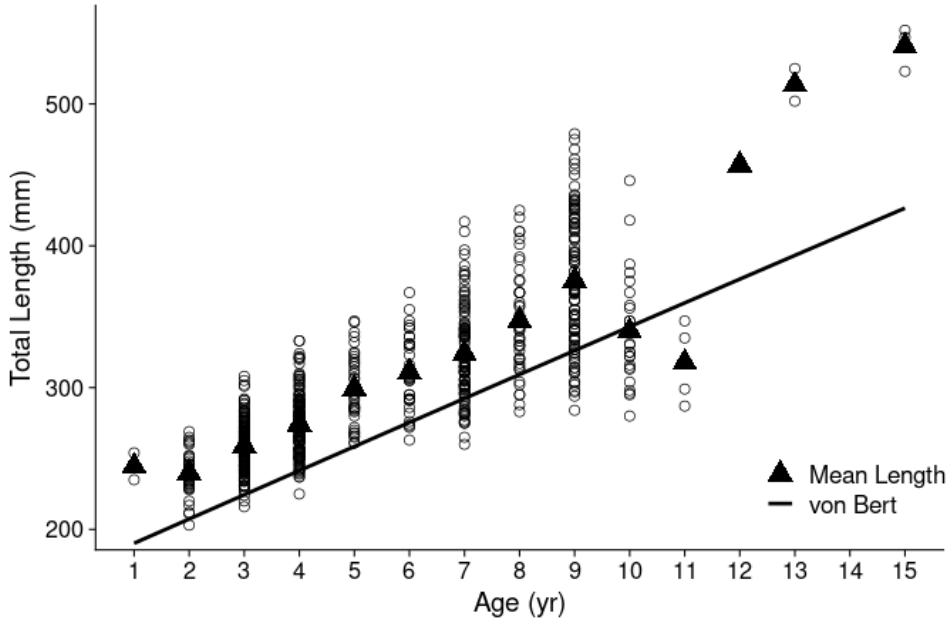

Figure 3. Mean Length at age of Channel Catfish in Lake McMurtry sampled in 2022.