

Lake Information: 8,800 Acres

Located: Crawford, Dubois, and Orange Counties

GPS Coordinates: N 38.434446°, W-86.706977°

Ownership: Division of State Parks

(812)685-2464, <http://www.in.gov/dnr/parklake/2953.htm>

Fees: Entrance \$7/vehicle to enter Newton-Stewart State Recreational Area; \$5 non-motorized and \$20 motorized annual statewide lake permit for boats

Amenities: Two State Recreational Areas; campgrounds; swimming beach; marinas; biking and hiking trails; 10 concrete boat ramps and 1 unimproved ramp; archery range; hunting; disc golf course; shelter house for

Outboard Motor Restriction: None

Special Regulations: 15-inch minimum size limit for Largemouth Bass

Best Fishing: Largemouth Bass and Channel Catfish

Stockings: 6 million Walleye fry stocked annually; 44,000 Hybrid Striped Bass fingerlings stocked annually; 10,000 Striped Bass stocked annually

DNR Contact Information:

Fish Management District 6

2310 E. State Road 364

Winslow, IN 47598

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Report Approved By: Daniel P. Carnahan

Date Approved: April 6, 2017

Purpose

White Crappie have been the dominate crappie species. In recent years, crappie growth has been poor, with high abundance contributing to their slow growth. Crappie reproduction has normally been good, which continues to lead to slow growth and high abundance of small crappie. Supplemental crappie surveys have periodically been done to monitor their population. Past crappie surveys were completed most recently in 2002 to 2004, 2006, 2008, 2009, and 2014.

Methods

Fish sampling was conducted on March 21 through 23, 2016. Nine standard trap nets were fished for a total of 18 overnight lifts. In addition to trap nets, daytime electrofishing on the first day of sampling was used to obtain samples for age estimation. Fish collection effort consisted of 0.97 h of electrofishing. All collection efforts were made in the Kings Bridge boat ramp area of the lake. Both Black and White Crappie were measured to the nearest 0.1 in and weighed to the nearest 0.01 lb. Otoliths were removed from a subsample of fish for age estimation.

Summary

- 240 White Crappie was sampled that ranged in length from 3.9 to 14.0 in and weighed 40 lbs.
- 64 Black Crappie was sampled that ranged in length from 3.9 to 8.7 in and weighed 7 lbs.

- 91% of the White Crappie and 100% of the Black Crappie were less than 9 in.
- The White Crappie trap net catch rate was 10.8/overnight lift and the Black Crappie catch rate was 2.7/overnight lift.
- The White Crappie electrofishing catch rate was 44.5/h and the Black Crappie catch rate was 8.3/h.
- Previous crappie survey catch rates indicate how cyclic the crappie population is at Patoka.
- As the catch rates decrease, growth should improve due to less intraspecific competition for resources, producing more, larger fish.
- Both White and Black Crappie grew slow. Fast growing crappie are normally at least 9 in by their third year; White Crappie did not reach 9 in until age 7 and no Black Crappie were sampled that reached 9 in.
- Both White and Black Crappie are in poor condition, as the highest relative weight (W_r) of 89 was for sub-stock size (<5in) for both species.
- Low annual total mortality (0.22), instantaneous rate of total mortality of 0.25, and high survival (0.78) continue to contribute to the large slow growing crappie population as was found in the 2014 survey.



Discussion

The crappie population remains at a low point with large numbers of small, slow growing fish. Big fish are present in the population, but anglers will need to catch and harvest many of the smaller fish before obtaining a limit of quality fish.

Recommendations

- Anglers should cull the small crappie in their daily bag limit.
- Conduct a crappie survey in spring of 2018.

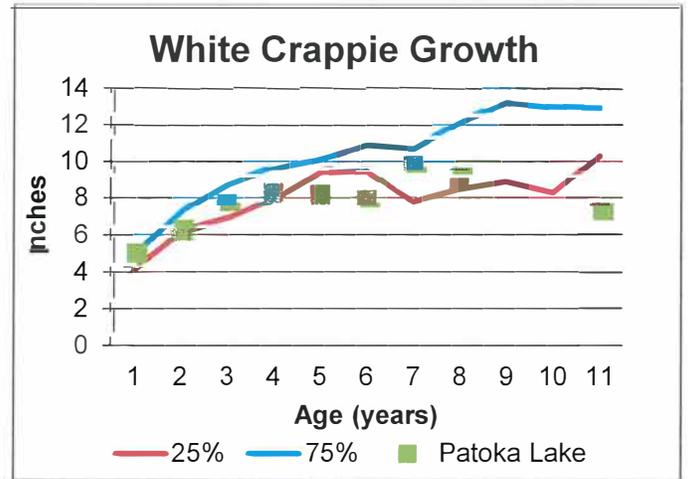


Figure 1. White Crappie mean length-at-age from the 2016 spring survey at Patoka compared to the District's 25th and 75th percentiles of White Crappie sampled from 2005-2014 using otoliths as the aging structure.

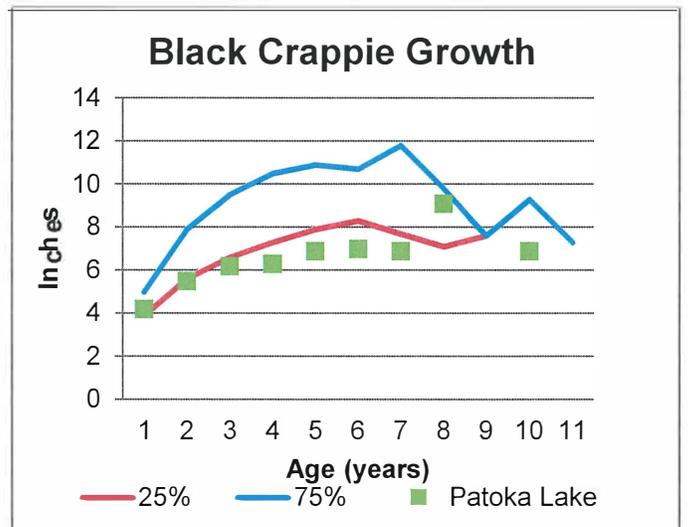


Figure 2. Black Crappie mean length-at-age from the 2016 spring survey at Patoka compared to the District's 25th and 75th percentiles of Black Crappie sampled from 2005-2014 using otoliths as the aging structure.