

Patoka Lake 2016 Hybrid Striped Bass and Walleye Supplemental Survey

Lake Information: 8,800 Acres

Located: Dubois, Crawford, and Orange Counties

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 Recreation Area; \$5 non-motorized and \$25 motorized annual statewide lake permit for boats

Amenities: Two Patoka Lake State Recreation 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 picnicking; visitor center.

Outboard Motor Restrictions: None

Special Regulations: 15" minimum size limit for Largemouth Bass.

Best Fishing: Largemouth Bass and Channel Catfish

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

DNR Contact Information:

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Report Approved By: Dan Carnahan, Fisheries Supervisor

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Methods

October fish collection effort consisted of 3.0 h of pulsed DC night electrofishing with two dippers for 12, 15 minute stations. Sampling occurred over two nights, October 5 and 17. Electrofishing stations were located in the Newton Stewart boat ramp area along the north and south shorelines over sandy flats. Fish were measured to the nearest 0.1 in in TL. Scales were collected from each fish for age determination. Hybrid Striped Bass and Walleye were the target species. Simple linear regression was used to evaluate trends in Walleye age 0 catch rate over time.

Summary

- In 2014, Striped Bass stockings were scaled back and partially replaced with Hybrid Striped Bass which have since been stocked annually.
- A total of 42 Hybrid Striped Bass was sampled that ranged in length from 5.1 to 10.6 in. Twenty-five were age 0 that ranged from 5.1 to 8.9 in, 16 were age 1 ranging from 9.0 to 10.6 in, and one was age 2 at 10.5 in.
- The Hybrid Striped Bass catch rate was 14.0/h and the age 0 catch rate was 8.3/h which increased from 2015 which had catch rates of 11.0/h and 7.0/h respectively (Figure 1).

- Patoka Lake has been stocked with Walleye fry since 2008 with a target of 6 million annually.
- A total of eight Walleye was sampled that ranged in length from 7.1 to 11.6 in. Six were age 0 and ranged in length from 7.1 to 11.2 in and the remaining two fish were age 1 and measured 11.5 and 11.6 in.
- The Walleye catch rate was 2.7/h and the age 0 catch rate was 2.0/h.

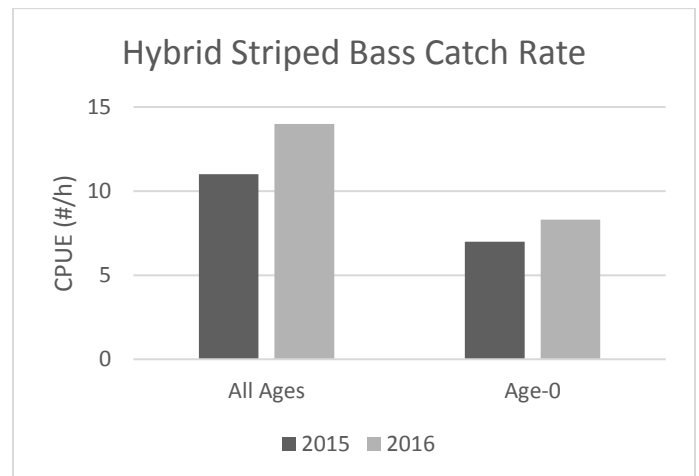


Figure 1. Comparison of 2015 and 2016 Hybrid Striped Bass catch rate and age 0 catch rate in Patoka Lake.



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- Walleye survival has been variable over time with fall age 0 catch rates ranging from 0/h in 2012 to 18/h in 2008 with an average age 0 catch rate of 6/h.
- Walleye age 0 catch rate was the second lowest since the first Walleye survey in 2008. The age-0 Walleye catch rate in Patoka Lake has been declining significantly since 2008 ($F=6.945$, $df=7$, $P=0.0388$) (Figure 2).

Recommendations

- Continue stocking of 44,000 Hybrid Striped Bass and 10,000 Striped Bass fingerlings annually.
- Continue stocking target of 6 million Walleye fry annually.
- Conduct an age-0 Walleye and Hybrid Striped Bass supplemental survey in 2017.
- Conduct survey of recruited Walleye in 2018.

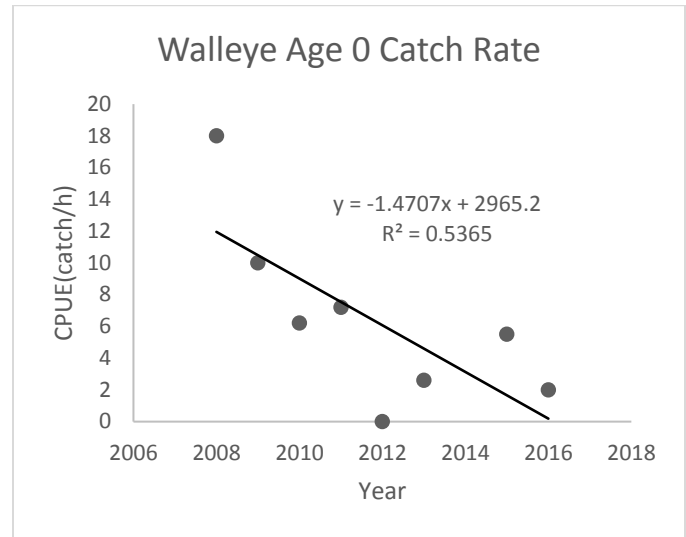


Figure 2. Walleye age 0 catch rate 2008 to 2016 in Patoka Lake ($F=6.945$, $df=7$, $P=0.0388$).

