IOWA DEPARTMENT OF NATURAL RESOURCES

Sport Fish Restoration Research Findings

Evaluation of Hybrid Striped Bass Introductions in Iowa

Project Duration: 2013 - 2023

Locations: Statewide

Study Number: 7043

Large Impoundments Fisheries Research:

Rebecca M. Krogman, Fisheries Biologist

Mark Richardson, Fisheries Technician 2

Josh Goff, Fisheries Technician 1

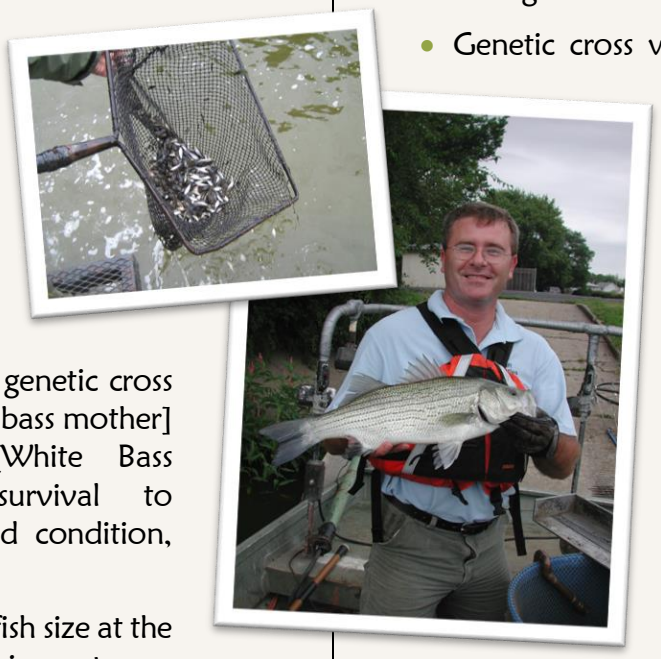
For more information, please contact the Chariton Fisheries Research Station at (641) 774-2958.

Evaluation of Hybrid Striped Bass Introductions in Iowa

Iowa Department of Natural Resources began stocking Hybrid Striped Bass in 1981. Saylorville Reservoir received the first fish, but the fish's popularity has led to an expansion of stocking efforts in other reservoirs of varying size and characteristics, such as Lake Macbride, Three Mile Lake, and West Lake Osceola. Because Hybrid Striped Bass do not naturally reproduce, their populations must be maintained through culture and stocking, making it essential to know about effectiveness and cost of various stocking strategies. It is also important to monitor Hybrid Striped Bass fisheries using the best available science to guide sampling, fish handling, and laboratory protocols. Management decisions, such as increasing a stocking rate or assessing a protective regulation, depend on good quality data, which can be gained through a standard protocol specific to Hybrid Striped Bass.

Goals

- To determine the best sampling gear for collecting Hybrid Striped Bass from lakes and reservoirs based on capture efficiency, precision, and representativeness of the true population
- To determine the most consistent and accurate age estimation method
- To determine whether genetic cross (Palmetto Bass [Striped bass mother] or Sunshine Bass [White Bass mother]) affected survival to adulthood, growth and condition, or cost effectiveness
- To determine whether fish size at the time of stocking, stocking rate, or weather conditions at the time of stocking affected survival to adulthood



Results and Conclusions

- Industry-standard experimental gill nets with a special large-mesh add-on should be used to assess populations of Hybrid Striped Bass. These nets were more efficient than electrofishing and more accurate than single-mesh gill nets.
- Dorsal spines should be removed, sliced thin, and examined under a microscope to determine age accurately up to Age 6. Ages of older fish are best determined using sagittal otoliths.
- Best tagging practices were developed for advanced fingerling fish, allowing for safe pond harvest, handling and tag insertion, and stocking with minimal mortality.
- Genetic cross was not an important factor affecting survival to adulthood, overall growth, or body condition. Therefore, the more cost-effective cross is recommended for future culture and stocking in Iowa. Typically, this is the Palmetto Bass, *but* some cost factors and availability change from year to year. Anglers can be confident that adjustments to genetic cross have negligible effects on the fishery.
- Fingerling stocking was more effective than fry stocking at Lake Macbride. At smaller waterbodies, a fingerling stocking rate of at least 10 fish/acre should yield good return.
- Weather and water conditions at the time of stocking may be important and should be measured at the time of stocking, and water should be tempered to minimize stress on stocked fish.
- Future work should focus on lake-specific conditions that are friendly to Hybrid Striped Bass fishery establishment, and potential differences in growth with varying forage and predator fish communities.