

# Serpent River Fisheries UPDATE

Lake Sturgeon Assessment of Serpent River and Lake Huron

February 2013

## INTRODUCTION

Much of the literature focused on Lake Sturgeon has stated that the Lake Sturgeon population in Serpent River has been extirpated. However, traditional knowledge from Serpent River First Nation (SRFN) members has noted the contrary—that Sturgeon (both adults and juveniles) are being caught in the area surrounding the river.

Previous studies conducted by the Anishinabek/Ontario Fisheries Resource Centre (A/OFRFC) have focused on both the Serpent River and the surrounding area, mainly Aird Bay. Lake Sturgeon were successfully caught and tagged in the Whalesback Channel area outside of Serpent River.

With to the Federal listing of Lake Sturgeon as a Species at Risk, Serpent River First Nation proposed to look at the Lake Sturgeon population to assess whether or not to support this listing.

In 2012, SRFN and the A/OFRFC conducted a Juvenile Lake Sturgeon Assessment in the Serpent River area as part of a larger lake-wide study. The Department of Fisheries and Oceans and the Ontario Ministry of Natural Resources conducted similar studies in other areas of Lake Huron to complete the data set.

## METHODS

A new Juvenile Lake Sturgeon Index Survey Protocol was used in which sampling efforts are targeted at areas around the mouths of current and historic spawning tributaries. The protocol has a minimum of 8 net sets and a maximum of 16. Sixteen total sample points were randomly selected across three sample zones; 0-2 km (inner zone),



**A juvenile Lake Sturgeon from the waters surrounding the mouth of the Serpent River.**

>2-5 km (middle zone), and >5-10 km (outer zone) from the Serpent River mouth. Among the three zones, 6 nets were allocated to the inner zone, 6 to the middle zone, and 4 to the outer zone.

The index nets used were 1000 ft in length, and consisted of 600 ft of 4.5", and 200 feet of 8" and 200 feet of 10" mesh.

Juvenile Lake Sturgeon were then tagged with a PIT tag, measured for fork, total length and weight. A 1" piece of the pectoral fin ray was removed for ageing the fish as well as a small piece of the caudal fin for genetic sampling. All Lake Sturgeon were released alive.



**Juvenile Lake Sturgeon being released back into the lake.  
A total of 88 Lake Sturgeon were sampled from the Serpent River study.**

## RESULTS

The crew conducted the project from July 22<sup>nd</sup> until July 27<sup>th</sup> 2012. In total, 88 Lake Sturgeon were sampled. Among these were 2 previously tagged Sturgeon from the Mississagi River.

Water temperature and sediment samples were also taken at each end of the net. Water temperatures ranged from 13.5 to 24 degrees Celsius. Water depths at the net sites ranged from 4.0 to 14.0 meters.

Captured juvenile Lake Sturgeon ranged in weight from 500 g to 9500 g (1—20 lbs.) They ranged in total length from 464—1202 mm (~1.5—4 ft.)

Other species captured included Walleye, Smallmouth Bass and Redhorse Suckers.

## CONCLUSION

The data collected from the Serpent River juvenile Lake Sturgeon population will be compiled with the lake-wide data for a full perspective on Lake Huron sturgeon. A full technical report is currently being drafted and will be finalized in 2013.



For more information on this or other fisheries projects please contact the A/OFRFC:

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