

Results

A total of 35 Lake Sturgeon were PIT and Floy tagged between 2006 & 2007. 52 LS were radio tagged with between 2008 - 2010. Radio tagged LS were manually tracked from May to September, and fixed base stations monitored passing sturgeon from June to mid-November.



An external radio tag and Floy tag (orange).

The following movements were observed: upstream and downstream movements of varying lengths within the lower 25 km section of the river, and continuous movement downstream into Lake Superior and then back into the river.

In 2010, unusual conditions (higher water temperatures, low spring water flows and runoff) resulted in LS utilizing different areas of the river or not entering at all. Furthermore, spawning occurred approximately one month earlier compared to 2008 and 2009. As well, larger and more mature LS were found to undertake considerably further migrations compared to smaller ones.

White River runs through Pukaskwa National Park. In 2010, for exploratory purposes, 8 nets were set in the White

Results cont'd

River, catching a total of 9 LS, none of which were radio tagged. 4 previously radio tagged LS were tracked in the White River.

Conclusions from the Pic River Lake Sturgeon Project included: critical habitat classification, ideas regarding environmental cues for spawning and confirmation of spawning locations.

Future Plans

The 2011 study will extend its scope by looking at the LS populations of both the Pic River and White River.

If you catch a tagged Lake Sturgeon, please measure its weight and length (if you can) and relay the information to General Manager Ed Desson at the contact information below.

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Ontario



Pic River Lake Sturgeon



Pic River, Ontario

2011

"Conservation is a
Tradition"

Lake Sturgeon: A Species at Risk

The Lake Sturgeon (LS) is a highly regarded species within the culture of the Pic River First Nation. It was in 2006, that the Pic River First Nation recognized the importance of collecting information on LS in the Pic River system and first proposed a project to the Anishinabek/Ontario Fisheries Resource Centre. Since then, the project has continued for four consecutive years including partners like the Department of Fisheries & Oceans.



A juvenile Lake Sturgeon.

LS numbers have declined due to a variety of activities—mainly human. Historically in Canada, commercial fishing caused declines in abundance that never fully recovered. Recently, habitat loss and degradation, altered water flows by the construction of dams, poor land use and agricultural practices have caused declines. Other threats include contaminants, poaching and the introduction of non-native species.

Currently, the LS is considered threatened in the Great Lakes—Upper St. Lawrence River area, by the Committee on the Status of Endangered Species in Canada Act (COSEWIC). It is also included on Ontario's Endangered Species Act. LS are under consideration for listing under the federal Species at Risk Act.

The largest Lake Sturgeon captured (on record) was 3m long and weighed 400lbs.

Sturgeon Biology

The Lake Sturgeon are usually found in shoal areas of large lakes and rivers. It is a bottom-dweller and feeds on small organisms found in the mud and gravel bottom.

LS are distinguished by their heavy torpedo-shaped body and thick skin prominently displaying rows of bony scutes. They have a large suctorial mouth with 4 barbels in front of it.



Bony scutes on the back of a Lake Sturgeon.

LS are usually olive-brown or grey colour on their back and sides and white on the underside. Their dorsal (back) fin is usually quite far back, close to the caudal (tail) fin.



Large suctorial mouth with four barbels.

LS migrate to the rivers after ice melt and spawn from early May to late June.

Optimum spawning temperature appears to be between 13°C and 18°C.

Spawning LS have been

observed to leap out of the water at this time. During spawning, LS lie in groups of two or three, one or two males to each female. Eggs are scattered and adhere to rocks and logs and hatch in 5-8 days.

The lake sturgeon is one of Canada's largest freshwater fish and may live to over 100 years.

Methodology

Large multifilament nylon gill nets with mesh ranging from 6.5 to 12 inches were set overnight within 60 km of the Pic River.

Sampling included collecting fork and total length, girth, weight, aging structures (fin ray) and genetic samples (fin clip).

As well, LS were tagged with a passive integrated transponder (PIT tag) implanted under the first bony scute & a Floy tag on the dorsal fin. A radio telemetry tag was surgically implanted in adult LS exceeding 9.5 kg.

Internal radio telemetry tags were implanted into the peritoneal cavity (the 'belly' area) of the fish.



Implanting an internal radio tag into a Lake Sturgeon.

The radio tagged sturgeon were monitored using fixed automated receiver stations (front cover) and manual tracking from a boat (below). Drift nets (front cover) and egg mats were used to confirm potential spawning sites. Critical habitat identified by radio telemetry were assessed by: creating depth contour maps, classifying substrate, and collecting abiotic conditions (temperature, water flows.)



Manual tracking by boat.

The oldest known Lake Sturgeon specimen in Ontario was about 154 yrs old.