Ministry of Natural Resources

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Northern Pike Tagging and Tracking in Lake Muskoka



The Muskoka BassMasters host a major pike tournament on Lake Muskoka every year in May. Pike are captured throughout the lake and live-released at the Wharf in Gravenhurst. Over 200 pike were released in 2009.

The Wharf is at the extreme south end of the lake within Muskoka Bay which is isolated from the main lake by Lighthouse Narrows.

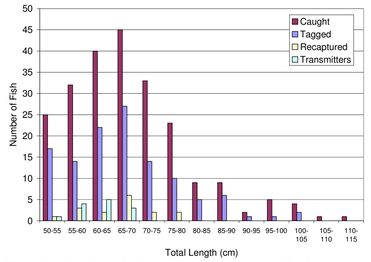
The MNR and the Club were interested in learning if the fish displaced into Muskoka Bay returned to the main lake and to where they were caught. The goal was to determine whether displacing the fish had an impact on the pike population.

In 2009, pike caught in the tournament were marked with a coloured tag. Anglers were asked to report fish caught that had a tag.

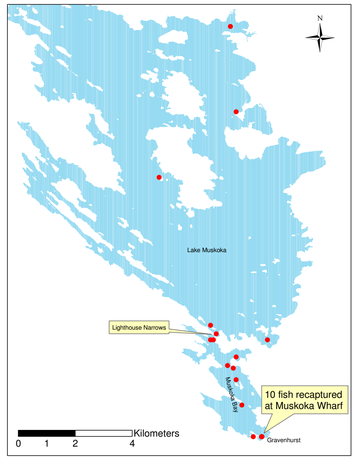


Attaching a tag to the dorsal fin of a pike.

About 15% of the tagged pike were caught again and reported by anglers through the summer of 2009. Additional fish were probably caught but not reported.



Size distribution of pike caught and tagged in the tournament, recaptured after tagging and of the fish implanted with radio transmitters

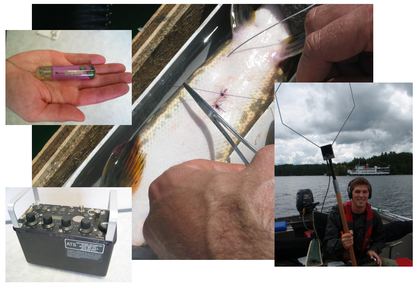


Locations where tagged pike were re-captured, 2009

Pike will be tagged again at the 2010 tournament. Reports of tags from 2009 and 2010 will increase our understanding of the fate of fish after being caught then released at a different location.

Thirteen pike were also implanted with radio transmitters These transmitters send a signal that can be homed in on precisely using a directional antenna.

Pike movements were monitored weekly through summer/ fall, 2009 and again in the spring of 2010.



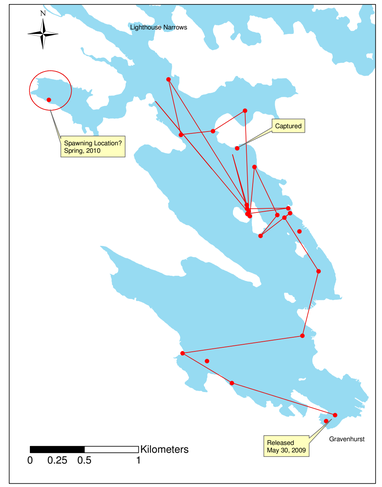
Pike, under anaesthetic, having radio-transmitter surgically implanted in the body cavity. Note trailing antenna at top of picture. Insets, clockwise from top left, transmitter, antenna, receiver.

Status of 13 pike with radio transmitters, as of Oct 4, 2009. Transmitters were implanted on May 30, 2009.

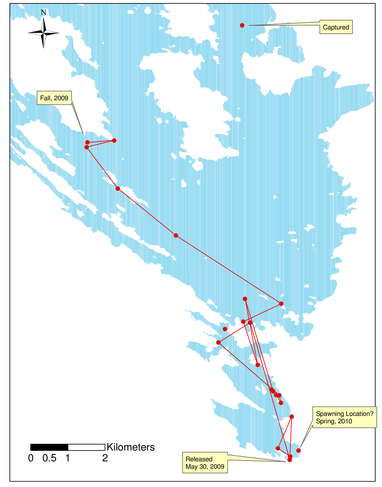
Fish	Location Caught	Times Relocated	Fate
1	main lake	25	stayed in Muskoka Bay
2	Muskoka Bay	25	returned to close place of capture by June 1
3	main lake	9	stayed in Muskoka Bay until last contact on June 19
4	main lake	19	stayed in Muskoka Bay until found dead Aug. 20
5	main lake	21	returned to main lake by June 8
6	main lake	24	stayed in Muskoka Bay
7	main lake	18	returned to main lake by August 5
8	main lake	25	stayed in Muskoka Bay
9	main lake	13	stayed in Muskoka Bay until last contact on July 3
10	main lake	24	stayed in Muskoka Bay
11	Muskoka Bay	25	returned to close to place of capture by June 10
12	main lake	16	returned to close to place of capture by June 12
13	Muskoka Bay	20	returned to close to place of capture by June 1; signal lost Sept. 3

Below, are examples of the movements of two fish. Fish 11, on the left, was typical of the three fish captured in Muskoka Bay; all three quickly returned to near where they were captured and stayed in a small area throughout the summer.

The 10 fish caught outside of Muskoka Bay and displaced a long distance from where they were caught behaved differently. Only three (including Fish 5, below, right) were confirmed to return to the main lake of which only one returned to the area where it was caught. Four stayed in Muskoka Bay throughout the summer. Three others stayed in the bay until they died (1 fish) or their signals were lost (two fish) during the summer.



Fish 11 was caught in Muskoka Bay and was released at the Wharf, about 2.5 km away. Within 10 days it returned close to where it was caught and established a well defined home range until tracking ended in the fall. In the spring, it was found in a shallow bay and probably spawned nearby.



Fish 5 was caught outside of Muskoka Bay and was released at the Wharf, over 11 km away. It wandered in and out of Muskoka Bay; finally settling into a defined area only late in in 2009. In the spring it returned to Muskoka Bay, possibly to spawn.

By the fall of 2009, nine of the 13 pike with transmitters were still being tracked. The remaining fish will be tracked through the spring of 2010. Information from tracked fish and tag returns from anglers will be used to analyze the impacts of fishing tournaments on the pike population.

For more information on this project please contact: Stephen Scholten, Fisheries Biologist, Ministry of Natural Resources, Bracebridge (705)646-5523

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