

A/OFCRC PROJECT SUMMARY

SHESHEGWANING FIRST NATION—AQUATIC PROFILE MONITORING

August, 2018

2018 BATHYMETRY AND FISH COMMUNITY INDEX NETTING INITIATIVES

INTRODUCTION

The Anishinabek/Ontario Fisheries Resource Centre (A/OFCRC) in partnership with Sheshegwaning First Nation have completed a multifaceted study, aimed at updating the First Nations aquatic profile within the Bayfield Sound area. The study consisted of a mapping exercise and fisheries monitoring component.

METHODS

The first phase of the study involved mapping the depths of Bayfield Sound within the vicinity of the First Nation. Utilizing side-scan sonar, one A/OFCRC crew mapped approximately 3,194 hectares (Figure 1). The deepest recording of the area was measured at approximately 51 m near the north eastern portion of the study site. This phase took 4 days to complete, from June 25 to June 28, 2018.

The second phase of the study involved a Fish Community Index Netting (FCIN) survey. This survey utilized standardized graded gill nets, set on bottom and perpendicular to shore in random locations within the study site. Each gang of nets consisted of eight #2 monofilament panels tied together. Mesh sizes were 38, 51, 64, 76, 89, 102, 114, and 125 mm stretched mesh. All panels were 50 m in length with the exception of the 38 mm panel, which is

25 m in length. Two different depth strata were sampled; shallow (0 – 20 m) and deep (20 – 60 m), each stratum received 11 and 19 sets respectively. All fish species caught were fully biologically sampled. Biological sampling consisted of the following attributes; fork length and total length, round weight, internal determination of sex, maturity and gonad condition, lamprey wounds and scars, recording of fin clips and aging structures.

RESULTS

A total of 2052 fish were caught representing 14 different species (Figure 2). The most abundant species captured included Yellow Perch (752), Lake Herring (691) and Common White Suckers (383). Other important fish species captured included Lake Trout (33), Lake Whitefish (29) and Walleye (12).

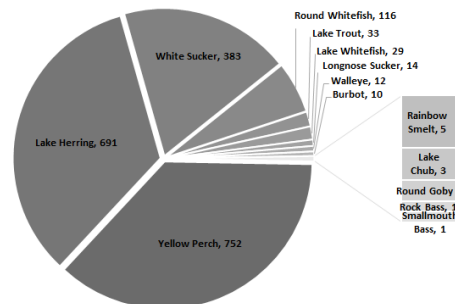


Figure 2. Species Composition of the 2018 Fish Community Index Netting in Bayfield Sound.

Results obtained from this study will be compared to the 2012 FCIN, and 2015 Nearshore Community Index Netting. Analysis of temporal trends will aid in monitoring the fish community and help gauge population dynamics of important fish species within the Bayfield Sound area. The addition of this dataset will also help Sheshegwaning inventory and compile enough scientific information on the fishery to assist in making appropriate conservation and management decisions.

A full technical report highlighting this years work will be generated in the Winter of 2019. For more information please contact Curtis Avery at 705-472-7888 ext. 6.

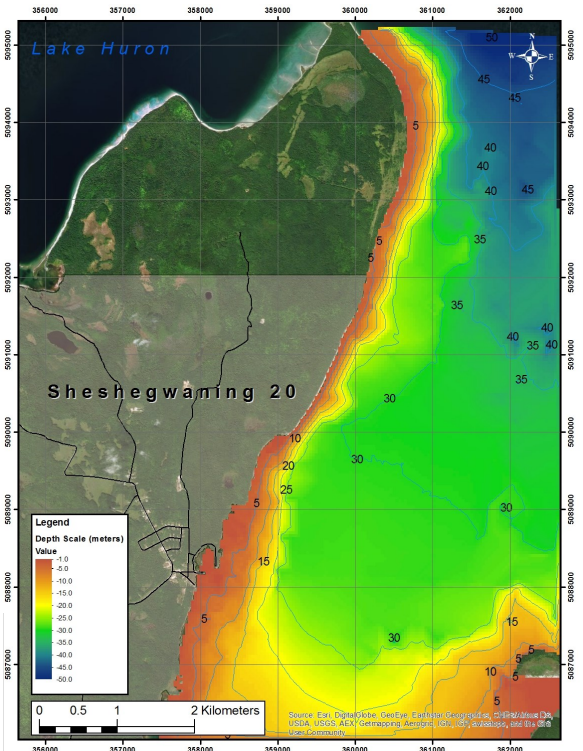


Figure 3. A bathymetric map of the Bayfield Sound, adjacent to Sheshegwaning First Nation.



Figure 1. A crew retrieves a net from the waters of Bayfield Sound.



Figure 4. A crew processes a gillnet lift as part of the Fish Community Index Netting.



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