

## **First Nations Liaison (Field Monitor) Weekly Report**

Completed by: Austin Paul

Report covering the period from June 26<sup>th</sup>- July 3<sup>rd</sup> 2015

**Date:** June 26<sup>th</sup>, 2015

**Staff:** Brittany Dixon, Aurelian Simon, Austin Paul

**Activities Conducted** Participated in Eel/elver studies on the St. John and Nashwaak Rivers, working in conjunction with the Canadian Rivers Institute's Mactaquac Aquatic Environmental Study.

### **Pertinent Tasks**

- The studies were carried out with the aid of a motorized watercraft, although some work was also conducted from the shoreline.
- Eel traps, consisting of a concrete block, a collection pot with attached hemp strands to simulate grass, and a rope attached to a buoy were pulled from the water and analyzed. The contents of which, were carefully dumped into a plastic tote and strained through a fine dip-net.
- Upon the detection of eels/elvers, a cooler was used to mix a solution of water, ethanol and clove oil. The specimens were placed in this solution which acts as a sedative. Once the eels were sedated, they were measured, weighed and then placed in a tote of fresh water until they recovered. The eels could then be released back into the river.
- At every trap location, the water temperature and velocity (flow) were measured and recorded.
- When on shore, I took a few moments to analyze the erosional faces of the banks to ensure that no archaeological sites were actively eroding, no traces of cultural material were found.

### **Interests and Potential Concerns from a First Nations Perspective**

**Traditional resource sites:** The eel traps are placed in and around the area known as Ekpahaq (The head of the tide), and has been traditionally used for fishing and gathering by Native people for thousands of years. Fiddlehead ferns are plentiful in the area.

**Traditional Land Use Sites:** Eel traps located in the Nashwaak River are in close proximity to a registered archaeological site below the Marysville Bridge. No Pre-Contact Native artifacts were exposed on the river banks.

**Note:** The eel pots being used and methods of deployment and extraction are very unobtrusive and do not represent a threat to any resources or sites of traditional value.

## Photographs



Above: A miniscule yellow eel being measured prior to release back into the St. John River.

**Date:** July 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 2015

**Staff:** Sam Andrews, Austin Paul

**Activities Conducted:** Participated in various fish studies associated with The Canadian Rivers Institute's Mactaquac Aquatic Environmental Study (MAES).

### **Pertinent Tasks:**

- Set up Fyke nets in the Hammond and Kennebecasis Rivers. These nets were emptied daily in hopes of finding juvenile Striped Bass. Unfortunately, no juvenile Striped Bass were caught or tagged. Any incidental by-catch specimens that were found deceased were used as bait to catch adult Striped Bass.
- The Fyke nets were pulled from the river and dumped into a large cooler. The fish were then scooped into a small dip-net and sorted. Fish that were present within the Fyke nets were: White Perch, Yellow Perch, Small Mouthed Bass, Mommichog, Banded Killifish, 4-Spined Sticklebacks, 3-Spined Sticklebacks, Tommy Cod, Common Shiners, Gold Shiners, Alewives, Suckers, Bullheads, Chain Pickerel, Pumpkinseed Sunfish and Yellow Eels. All of the live fish were released back into the river and the Fyke nets were redeployed.

- Active fish monitoring was conducted in both the Hammond and Kennebecasis Rivers. At strategic locations on the rivers, a Vemco hydrophone was used to listen for tagged Striped Bass. Once a school was found, Alewives were used as bait in order to catch a Striped Bass for the purpose of tagging. We managed to catch and tag a Striped Bass weighing 21 pounds.
- When tagging a fish, a small surgery is performed: the fish is sedated in a large cooler with a mixture of water, clove oil and ethanol. Once sedated, the fish is placed on a measuring board and subsequently weighed. Sterile surgical equipment is used to make an incision near the belly, into which, a transmitter is inserted and the incision is stitched shut. A tracking tag is then inserted into the dorsal fin and the fish is revived in fresh water.
- Active fishing was conducted in an area known as the sturgeon hole with the hope of tagging a sturgeon. I managed to catch the smallest sturgeon that I have ever seen, in fact; the specimen was too small for tagging.
- Prior to leaving for the weekend, the Fyke nets were removed from the water and dismantled.

### **Interests and Potential Concerns from a First Nations Perspective**

- Traditional resource sites: With many archaeological sites in the area, it can be assumed that the area was used for fishing, hunting and gathering. The Hammond River is in close proximity to deposits of fine grained rhyolites used pre-historically for the construction of stone tools. There are undoubtedly many archaeological sites within the area, although no traces of cultural material were found on the few erosional surfaces that were examined.
- Traditional Land Use Sites: The area known as the “Sturgeon Hole”, near the confluence of the Hammond and Kennebecasis Rivers is in close proximity to Darlings Island. Darlings Island is now a sizable non-native community; however I have read that significant pre-contact Native sites can be found in the area. That being said, Maliseet people must have traditionally used this area to exploit aquatic resources.
- **Note:** The fish specimens analyzed in this study were treated with the utmost respect. By-catch mortality rates were very low; however the few fish that did die were subsequently used as bait. Sam Andrews is passionate about his work and genuinely cares for the well-being of the wild-life being studied. He was also keen to share his insight in regards to fishing Sturgeon and Striped Bass, which I was very happy to absorb.

### **Photographs**



Above: The contents of a Fyke net being sorted and analyzed prior to release.



Above: A juvenile Short-Nosed Sturgeon with amazingly sharp scutes.



Above: A 21 pound Striped Bass being sedated prior to surgery.



Above: Surgery in progress; a transmitter has been placed inside of the fish and the incision is being carefully stitched back together.



Above: After a successful surgery, the Striped Bass was rejuvenated in the river and released. Note the yellow tracking tag inserted into the dorsal fin.