

First Nations Liaison/Field Monitor Report

Completed by: Austin Paul

Report covering the period from: August 2nd- 12th, 2016

Dates: August 2nd, 3rd, 4th, 5th, 8th, 12th, 2016

Activities Conducted:

A striped bass/ muskellunge feeding study was conducted by the Canadian Rivers Institute near the Mactaquac Generating Station.

Pertinent Tasks

- Active angling was carried out from the shore.
- When fish were hooked and landed, they were placed in a tank filled with fresh water, ethanol and clove oil, which acts as a sedative.
- Once the fish had been sedated, they were weighed, measured and fitted with an identification tag below the dorsal fin. A clipping of the caudal fin and scale samples were taken for genetic studies.
- We analyzed the stomach contents of the striped bass and muskellunge using a specially designed stomach pump before returning the fish to the river.
- So far, the stomach contents of the predatory fish consisted of mainly gaspereau (alewives and blueback herring), although recently, a striped bass had a small yellow perch in its stomach.

Interests and Potential Concerns from a First Nations Perspective

The striped bass/ muskellunge work is non-invasive and does not pose a threat to any archaeological and/or traditional land use sites.

I have been saving tissue samples of any striped bass that have been caught on my own time and have sent the samples to the Canadian Rivers Institute for mercury analysis. When the data has been processed, I will forward the results out to all of the consultation coordinators in Wolastoqiyik territory.

Photographs



Above: A C.R.I. employee in the process of landing a striped bass.

Dates: August 9th, 10th, 11th, 2016

Activities conducted

Fish community studies are being conducted along the Wolastoq River. This work is being carried out by the Canadian Rivers Institute in support of the Mactaquac Aquatic Ecosystem study.

Pertinent Tasks

Beach seining

The seine net used in this study measures approximately 2 meters wide and 20 meters long. The mesh is very fine which allows us to capture fish of all sizes. The team would travel to the various predetermined testing sites along the river. Using the seine net, one person would hold one end of the net on the beach, while another team member walked the net out into deeper water. The person in the water would keep the net tight as they walked in an arch-like manner, circling back to the other team member. The net would be slowly pulled into shore and all of the fish would be placed in a tank of fresh

water. Fish would be sorted by species, weighed, measured and released (unless the fish needed to be used for mercury analysis).

Fyke nets

Two fyke nets were used in the study. The nets are left out over-night and subsequently removed from the river. Fyke nets generally have 2 wings and a lead net which guide the fish into a series of cages. Once inside the cages the fish cannot find their way out. The Fyke nets were used for 2 days and held a wide variety of fish species: banded Killifish, common shiners, gold shiners, white perch, yellow perch, small mouthed bass, gaspereaux and American eels.

Electro-fishing

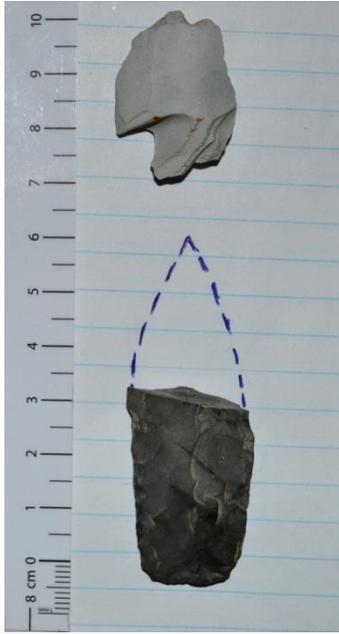
In order to target specific species and locations, we also used an electro-fishing boat. The electro-fishing boat can deliver a controlled charge of electricity to stun any fish that are within the immediate vicinity of the front of the vessel. The fish float to the surface when stunned and are captured using dip nets. These fish are then placed in a live well located onboard the electro-fishing boat. After the fish have been weighed and measured, they are released back into the river. No fish were acquired using the electro-fishing boat as we had experienced technical difficulties.

Interests and Potential Concerns from a First Nations Perspective

The work associated with the fish community study is relatively non-invasive and does not pose a threat to any traditional plant resources or land use sites. Seeing as most of the work is carried out from the riverbanks, I took the time to survey the worksites for any cultural material. Pre-contact Wolastoqiyik artifacts were encountered in 2 locations: behind the Pine Grove retirement home 45° 57' 51.65" N 66° 40' 25.80" W, and near the confluence of the Nashwaaksis and Wolastoq Rivers 45° 58' 20.84" N 66° 39' 22.77" W (Google earth coordinates).

The artifact that was found on the beach behind the retirement home is the by-product of stone tool manufacture: a bleached felsic volcanic biface thinning flake. The flake would have been detached from the parent piece of material while shaping a stone tool. The artifact found near the confluence of the Nashwaaksis and Wolastoq rivers is the base of a grey/green, banded volcanic lanceolate biface. The tool would have made an excellent knife/ projectile point. The style of the projectile base is reminiscent of what is called a Meadowood blade. These blades were commonly used during the early woodland period (3000-2400 years before present). All of the artifacts were collected and taken to Archaeological Services NB for curation.

Photographs



Above: Deploying a fyke net near McKinley ferry.



Above: The beach seine method.



Above: The business end of the electro-fishing boat, the electrical current passes between the 2 electrodes. Two people stand on a platform in the front of the vessel to capture fish.

Upcoming work

The week of August 15th-19th, 2016 will be spent conducting fish community studies along the Wolastoq River. During this time, we will be collecting fish samples for mercury analysis. I will also be helping out with sturgeon studies. These studies involve the tracking fish and the use of drift nets to acquire juvenile sturgeon samples for tagging. All of the work that is scheduled to take place does not involve any ground disturbances and is unlikely to impact any culturally sensitive locations. NB Power and its contractors follow provincial requirements for Heritage Conservation as contained in the Heritage Conservation Act and its associated regulations. One of the roles performed by the project's First Nations Liaison/Field Monitor is to watch for potential impacts on such sites and to report them to the project's management team and the Maliseet Consultation Coordinators. Fieldwork for the week of August 22nd – 26th, 2016 has not yet been finalized; however I am anticipating the continuation of the archaeological assessment of the Mactaquac Project development area.