

Eels and Eeling by Mainland Nova Scotia Mi'kmaq

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In response to concerns about the population of the American Eel in Nova Scotia, MAPS (Mi'kmaki All Points Services) announced in the November 2010 issue of the Mi'kmaq-Maliseet Nations News a study project aimed at infusing our traditional knowledge into the process of assessing the current status of the regional eel population (article 'Eels [Kat] in Trouble', p.16). It is our conviction that any conclusion regarding the status of a species and, if necessary, the development of a recovery strategy need to be based on 'two-eyed seeing', in other words need to include Aboriginal traditional knowledge (ATK). We therefore had asked for your cooperation in our efforts to collect and document your knowledge and observations relating to eels, eel fishing, and threats eels may face in Nova Scotia waters. Over the past months, MAPS has carried out interviews within mainland Nova Scotia and analysed its existing database on traditional resource uses. We wish to thank all who contributed and provided their insights and observations.

To provide feedback to our community, the results of this survey are summarized here.

Eels are a very long-lived species, potentially reaching an age of 30 or more years. Their extraordinary life-cycle is quite the opposite to that of Atlantic salmon. Salmon spawn in freshwater, migrate as 'smolt' to the sea where they spend most of their lives, and return to the freshwater body of their origin as 'grilse' in order to spawn. Eels, however, start their lives in the Sargasso Sea, the spawning ground for all eels. Young eels approach our shores as transparent 'glass eels' and gain the brown pigmentation of 'elvers' as they enter the estuaries. While some stay in the estuaries for some time, most enter rivers and migrate upstream to suitable lakes and river sections. Spending many years in freshwater lakes and streams, wintering in muddy sediments, they grow into yellow eels and eventually mature silver eels. At some point in the fall, triggered normally by heavy rainfalls, the mature eels begin their migration back to the estuary where they again may spend some time and overwinter before making their way to the spawning grounds in the Sargasso Sea. There they reproduce and die. While eels spawn only once, a female may produce 5 million eggs or more.

Within the Mi'kmaq community most are aware, in general terms, of the economic and cultural importance eels had, and still have, in traditional Mi'kmaq society.

Eels are a very dependable and ubiquitous resource - one of the very few regional food resources that are available year-round, are present in virtually all major Nova Scotia river systems, are highly nutritious, and could be preserved through drying or smoking.

The Mi'kmaq eel fishery is a year-round resource activity, carried out in different types of habitat using a variety of harvesting techniques depending on the season.

In Nova Scotia, the Mi'kmaq eel fishery consists of two distinct complexes, determined by local ecological parameters and involving different, specifically adapted, technologies.

One of these is the freshwater fishery, exemplified by the eel weir fishery in virtually all primary river systems in southwest Nova Scotia, such as the Gold, LaHave, Medway, Mersey, Roseway, Shelburne, Clyde/Barrington, Tuskent, Meteghan, Sissiboo, Bear and Annapolis rivers. but also occurring in river systems along the Eastern Shore.

The other one is the saltwater fishery carried out in larger estuaries and harbour basins, for example the Tatamagouche, Pictou/Merigomish, Antigonish and Pomquet harbours along the Northumberland Strait and St. Georges Bay, and to some extent in the lower part of major tidal rivers such as the Shubenacadie/Stewiacke River system.

Recent research by Roger Lewis, Mi'kmaq archaeologist and Ethnology Curator at the Nova Scotia Museum of Natural History, has revealed just how much the presence of eels has shaped the overall land use pattern of mainland Mi'kmaq, and how prevalent the reliance on eel as a resource was in all of the mainland's varied landscapes and throughout the annual cycle of subsistence activities.

The large number of ancient and historic Mi'kmaq eel weirs still visible along most of the main river system in the southwestern mainland attest to the importance of this resource, the productivity of this fishing technology, and the significant number of people it appears to have supported. These eel weirs and their associated archaeological sites document a 5000 year-long history of Mi'kmaq occupancy with the eel fishery being the economic cornerstone in this region.

These weirs undoubtedly produced large numbers of eels during the fall migration and were the most efficient fishing technique in this region. During the winter, eels were caught in this region by spear fishing through the ice on lakes or stream sections with muddy sediment.

Until the early 20th century eels were the reliable and predictable food staple that allowed Mi'kmaq families to spend long periods of time in the otherwise not particularly resource-rich interior of southwestern Nova Scotia.

Two major factors appear to have resulted in a decline of this fishery since then, one being environmental changes and the other large-scale commercial harvesting.

In the early 1900s, the construction of dams for power generation along most of the major river systems, large-scale industrial logging and associated log drives created barriers to the migration of eels and altered the environment in and around the region's lakes and streams. In addition, a commercial elver fishery sprung up on the lower sections of some of the rivers in southwest Nova Scotia in the 1980s. A large portion of the elvers attempting to head up those rivers is currently being caught and shipped to international markets overseas.

Eel fishing has also been an important harvesting activity in the Shubenacadie/Stewiacke River system with all its tributaries (Nine Mile River, Gays River, etc.). Here, most of the fishing occurred during winters when people fished through holes in the river ice. Eel fishing in this region also declined significantly since the 1970s.

Some of the reasons mentioned for this decline were concerns about river contamination resulting from surrounding agricultural activities, and access restrictions due to fields and fenced-in pastures or residential developments bordering the river banks.

The saltwater eel fishery is carried out most extensively along the Northumberland Shore and St. Georges Bay, particularly in Tatamagouche, Antigonish, Pomquet and Tracadie harbours.

During the winter, when eels lay buried in the mud on the bottom of the estuaries fishing is done by spearing through ice holes during winter. Summer eeling may be done by spear fishing off a small boat/canoe at night using a torch to attract eels to the surface. Eel pots or traps are also used during summers.

This is where the Mi'kmaq eel fishery gained a high profile nationally when Donald Marshall Jr. was charged in 1993 for selling his catch of eels without a licence – an action which ultimately led the Supreme Court of Canada in 1999 to confirm Mi'kmaq treaty rights to fishing commercially.

Much research has been done over the past years by Kerry Prosper of Paqtnkek, with support by St. Francis Xavier University on the saltwater eeling in this region.

Here, the eel and Mi'kmaq fishers also face the strongest pressure by the non-Aboriginal commercial fishery. The opening of the spear fishery to non-Aboriginal fishers resulted in an influx of fishers, even from other Maritime Provinces crowding Mi'kmaq fishers out of their traditional areas. Not surprisingly, eel catches have dropped significantly since the late 1990s. So far only a small portion of the Pomquet Harbour basin has recently been reserved for the Mi'kmaq food fishery.

However, the importance of the eel to the Mi'kmaq community and culture goes far beyond economics. Apart from its obvious significance as a food resource, sharing was the most important use of eels mentioned. Among Mi'kmaq there is an expectation that eel fishers distribute part of their catch within their extended families and beyond. This food sharing network, which is not limited to eels, has always served as a traditional form of social security and a means to strengthen and maintain social bonds within the community.

Medicinal uses of eel include, for example, the use of the skin as a bandage on injuries such as sprains, the application of a patch of eel skin to relieve rheumatism, headaches or cramps, and the use of the oil as an ointment to be applied to cuts.

As the eel, like other living things in nature, is animate, therefore a physical as well as a spiritual being, and an integral part of the web of life that connects all beings, including humans. To maintain a proper balance with the environment and its various elements and beings, such as the eel who nourishes people, Mi'kmaq practice certain customs and follow certain traditions to express their respect and gratitude. One such custom is offerings of food, in this case parts of the eel, to give thanks to the spirits.

In some Mi'kmaq legends, the eel plays an active role in shaping the environment.

Some of the man-made and natural threats the regional eel population, and consequently the Mi'kmaq eel fishery, currently face are: deteriorating habitats, increasing human activity along freshwater and ocean shores, the obstruction of waterways through dams, water contamination, the introduction of non-native (sport) fish species, and the shrinking of eel grass beds in some formerly productive eel habitats.

The study found that Mi'kmaq eeling efforts and yields have declined in some areas of the Province as a consequence of government interventions in Mi'kmaq traditional land use and occupancy patterns, through the centralization policy and residential school policies, and through the introduction or fostering of recreational and commercial fisheries to the detriment of the Mi'kmaq food fishery.

Mi'kmaq today face increasing restrictions to the access to eels, and a growing competition for this resource that had long been considered theirs by the regional commercial fishery.

The eel seems to be losing its appeal as a food item among many of the young generation today. This appears to be to a large extent due to the pervasiveness of the advertising media spreading the food and taste concepts of mainstream North American culture.

However, the study also demonstrated that traditional practices associated with the eel and eel fishery are still strong among mainland Nova Scotia Mi'kmaq, in spite of all these pressures.

Eels still play a very important role in Mi'kmaq society, economically and culturally.

Eels prompted the Supreme Court to clarify and re-affirm Mi'kmaq rights to fish, not only for personal and ceremonial use, but also commercially for a 'moderate livelihood'.

Better education and more exposure of our youth to eels, eel fishing, preparation and consumption may help making eel dishes more popular again on our families' dinner tables.

Keep fishing eels to keep our traditions and rights alive.

MAPS is continuing its research on eels and other resource related issues, and is presently looking into the status of the Atlantic Salmon.

If you like to share your knowledge of eels or salmon in order to support our efforts in protecting these species and our fishery, please contact us.

For the full report "Mi'kmaq and the American Eel", contact MAPS at

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