

A Presentation to the National Capital Commission's Board of Directors

**by
Westboro Beach Community Association**

*A Proposal to safeguard and preserve a national treasure – **The Kitchissippi Stromatolites***

In response to the invitation of the National Capital Commission to share ideas with the NCC on how to fulfill its mandate to safeguard and preserve national treasures, the Westboro Beach Community Association is proposing that the NCC protect the Kitchissippi Stromatolites.

1. Westboro Beach Community Association (WBCA)

The Westboro Beach Community is fortunate that its northern and western boundaries are the Ottawa River. (Its two others are Island Park Drive to the east and the Ottawa Transit Way to the south). As such, it has a special interest in the protection of the great Ottawa River and the treasures that it holds. Many of the community activities focus on the river, especially its recreational and educational opportunities. It is for this reason that the WBCA requests that the NCC also pay attention to a very special natural treasure.

2. The Stromatolites of the Kitchissippi – The Grand River (now known as the Ottawa River)

The ancient Kitchissippi (Ottawa) River is one of the magnificent water bodies in eastern Ontario. Sculpted 11,000 years ago by the retreat of the Wisconsin glacier, its history is rich with exploration, discovery, transport and settlement.

Between 510 and 440 million years ago (the Paleozoic period) a warm tropical sea flooded the region, which was then near the equator. The beds of limestone along the riverbank today were deposited at this time, in large part due to the life processes of organisms. Algae and bacteria were responsible for the growth of stromatolites, and the elaborate shells of lime-precipating animals such as orthocones can be seen in several places along both shores of the river today. One special location is the whole flood zone beginning near what is Churchill Ave. and going west to where the Atlantis Woods now rises, an area usually referred to as the Selby Flood Plain.

Stromatolites (The oldest known fossils on earth)

This section of the river has one of the best known displays of fossil stromatolites in the country - and certainly in any urban area. In this part of what was once the Champlain Sea and especially at the end of dry summers

and early fall, the stromatolites and other ancient creatures are easily visible in the large slabs of sedimentary rock found throughout this area.

Stromatolites are biofilm layers built up by cyanobacteria which encompasses the most primitive life forms which are generally regarded as falling somewhere between the plant and animal kingdoms (bacteria, blue-green algae, etc.). They are regarded as biogenic structures, because they are not true body fossils, as are the orthocones, stromatoperoids, brachiopods, corals, etc. and thrive in warm aquatic environments and build reefs much the same way as coral. Cyanobacteria and algae were likely responsible for the creation of the Earth's oxygen. They were the dominant life form on Earth for over 2 billion years. Today they live in abundance in only a few localities worldwide. How fortunate that the Selby Flood Plain is one of those localities and is already in the possession of the NCC.

Stromatolites in the Ottawa River area (most of the tops have been eroded by glaciation and the river) are over 450 million years old. The larger domes are arrayed in parallel north-south lines which represents control of their growth by tides. The smaller stromatolites show a distinct east-west elongation, and this, together with associated ripple marks, suggests the flow of long shore currents in a shallow-water warm saline environment, eons ago.



Stromatolite remnants on the Quebec side of the Champlain Bridge

More stromatolites are visible in the transit way walls from the pedestrian bridge at the end of Roosevelt Ave in Westboro Beach. It's interesting that this prized collection of stromatolites in the Ottawa goes virtually un-noticed while a site 1/10 the size in New York State is the basis for a State Park. It's worth noting that these stromatolites form very hard sedimentary rock which requires excessive force to break through - just ask anyone who tries to dig their basement or install a sewer or water main in the Westboro Beach area of Ottawa.

This is truly one of the natural treasures of Canada and easily available to the urban population.

Over time, however, urbanization has begun to encroach on this valuable asset. In particular, in the past two centuries, significant changes have occurred along the river altering its course, and taming its wildness. The most significant changes have resulted from the harnessing of some of the river's natural power.

But other changes were made to the river. In what was is now called Westboro Beach, Skead's Mills was one of several industrial villages that developed along the new Canada Central Railway which opened in September, 1870 between LeBreton Flats and Carleton Place. In 1869, Senator Skead bought from the Thomsons, who owned Maplelawn, an extensive block of land between the railway (the present transit route) and the river and adjoining his extensive farm which was located in the present Kirkwood - Richmond Rd area. He built a steam sawmill just down river from the current Westboro Beach, the foundations of which can be seen from the NCC parking lot at Kitchissippi. The mill was connected to the railway by a spur line. The mill burned in 1871 but was rebuilt by 1873. The mill employed 30 to 40 men and cut 15 million board feet per year as well as half a million shingles and a similar number of laths.

Skead erected a boarding house but provided no accommodation for families. His neighbour, John Birch, registered a subdivision plan consisting of two streets with lots on his farm intended for the millhands. By 1874, a number of houses had been built on these lots and a Skead's Mills post office had even been opened in Pratt's Grocery.

A depression in the early-70s resulted in Skead going bankrupt. In 1880 he lost his mill, timber limits, residence and most of his farm to his creditors who sold most of it to E.B. Eddy.

By 1890, little had changed in Skead's Mills. John Birch's two streets were in the hands of an Ottawa real estate agent, with only Birch, a mill labourer and a mill foreman living at the west end of John St. No additional dwellings would be built until around 1910. The mill had changed little since the Eddy takeover, still employing approximately 30 people.

By 1900, most of the property was owned by the C.P.R. and some of the Skead farm on lot 31 was now owned by neighbourhood cattle dealer James Magee who ran steers over the imaginary streets near the ruins of the mill.

Over time, cottages sprang up along the river. They, too, disappeared when the NCC expropriated them to build the Ottawa River Parkway.

The result has been to lay open the land where the richest ground for the ancient stromatolites can be found. The NCC already owns this land. It only needs to designate the area as an environmental heritage site.

3. The Importance of Preserving Natural Treasures

The National Capital Commission has a responsibility to protect and enhance the quality of the environment, in particular natural areas such as woodlands and wetlands. This becomes crucial when development threatens to bury these treasures. Within Ottawa, the NCC can work in collaboration the Environmental Staff of the City of Ottawa.

Current Official Plan and zoning documents of the City of Ottawa provide a number of policies and designations that recognize and protect natural features ranging from Provincially Significant Wetlands to significant forest and wildlife habitat areas. The Natural and Open Spaces Study, within the former City of Ottawa, and the Natural Environment Systems Strategy, within the former Region of Ottawa-Carleton, are both important sources of information. Such sources support the protection of the Selby Flood Plains as a natural historic site.

4. The Selby Flood Plains Land Trust

The NCC can demonstrate innovativeness by declaring this special area as being part of a land trust, to be protected for all future generations. Typically, land trusts are community-based, non-profit organizations that can be an important tool in conservation efforts. Trusts can provide constructive options for protecting and managing natural areas, particularly around urban and developing areas, where other protection tools may not exist. The City of Ottawa has been working with representatives from community groups, other government agencies, and organizations such as the Ottawa Stewardship Council, to establish an Ottawa Land Trust in cooperation with an existing organization, the Rideau Valley Conservation Foundation. Their mandate is to ensure their long-term management of unique lands – a mandate that is compatible with the mandate of the NCC.

- [Ontario Nature Trust Alliance](#)
 - [Ontario Heritage Foundation](#)
 - [Nature Conservancy Canada](#)
 - [Rideau Valley Conservation Authority](#)
 - [Land Trust Alliance \(American\)](#)
 - [Trust for Public Lands \(](#)
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