

Considering a Global Geopark for Nova Scotia

J. H. Calder and T. Fedak¹

Introduction

Nova Scotia has a rich record of Earth history, exposed in dramatic geological seascapes and coastal cliffs. Sites of exceptional value to the broader public have long been recognized by the geoscience community (Donohoe *et al.*, 2005; Atlantic Geoscience Society, 2013; Hild and Barss, 2015) and formally by the Province of Nova Scotia (Calder, 2013). In 2008, one of these, the coastal cliff section at Joggins, Cumberland County, was inscribed on the UNESCO list of World Heritage, and others are globally significant or even globally unique (Calder, 2013). The recognition that such sites are natural resource assets that can foster truly sustainable economic development has great potential for Nova Scotia in particular.

Born in Europe in the late 1990s, and supported enthusiastically by China, the Global Geoparks Network became a truly global entity in 2004. By 2015, Global Geoparks were found in 35 countries, predominantly in Europe and Asia. In November 2015, Global Geoparks became an official program of UNESCO.

Geoparks are unlike municipal, provincial, territorial and national parks that have legal boundaries and land-use restrictions. Rather, a Global Geopark is a vehicle to recognize a region's exceptional geological sites—its geoheritage—with strong emphasis on community-based economic development through geotourism (Global Geoparks Network, 2014). A requirement of an aspiring Global Geopark is that it be driven largely by the community as opposed to a top-down model that is typical of most public parks in Canada, which fall under the sole authority of a government agency or municipality.

At present, Canada has two UNESCO Global Geoparks, Stonehammer in New Brunswick and

Tumbler Ridge in British Columbia; several others across the country aspire to become Global Geoparks and are currently in preparation. The year 2015 witnessed a milestone in adding an aspiring Nova Scotian geopark to this company.

An Embarrassment of Geological Riches

The challenge in identifying a candidate geopark in Nova Scotia is to choose just one area of many that are worthy from the documented list of geoheritage sites. For this reason, it is likely that Nova Scotia will see more than one Global Geopark in the future. An assessment of geoheritage assets and potential geoparks from the 199 natural and cultural geoheritage sites identified across Nova Scotia (Fig. 1) was conducted using the template reproduced in Table 1. The geographic area surrounding the Fundy Geological Museum in Parrsboro was highly ranked and well positioned due to the presence of the facility and rich geological sites in the area that include some of the earliest mineral deposits recorded in North America by European explorers (Dewar and Miller, 2011). Complementing these natural and historical assets is a highly functioning board of local citizens that administer the Fundy Geological Museum and who expressed interest in pursuing an aspiring geopark.

Progress in 2015

Scoping of the potential for a Global Geopark in the region was explored in consultation with the Fundy Geological Museum and with Tourism Nova Scotia early in 2015. Identification of geoheritage assets for a prospective geopark was undertaken and was based on the list of geoheritage sites for Nova Scotia. This involved site visits and photography (Fig. 2). Many of these sites were mapped recently by the Nova Scotia Department of

¹Fundy Geological Museum, Two Island Rd., Parrsboro, NS B0M 1S0

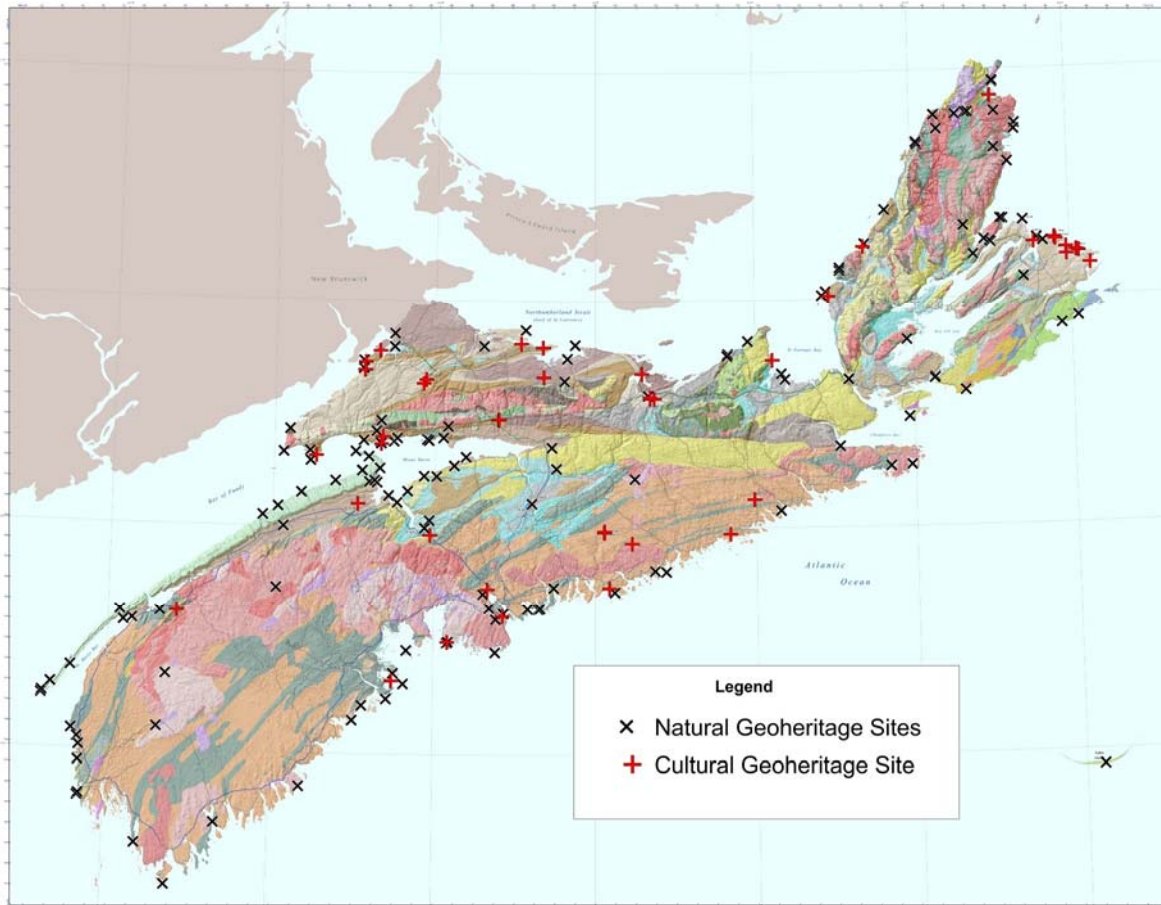


Figure 1. Location map of Nova Scotia's geoheritage sites.

Natural Resources (Calder *et al.*, 2015; MacHattie and White, 2015), which provides an important source of information for geological interpretation. Engagement and awareness-building with local community and business leaders and with ecotourism operators was conducted through one-on-one meetings. An important outcome of targeted presentations is the partnership forged among the Strategic Tourism Expansion Program (STEP) initiative of the Atlantic Canada Opportunities Agency, Tourism Nova Scotia and the Town of Parrsboro. The goal of this partnership is to develop a tourism strategy for the Parrsboro shore. The Fundy Geological Museum was identified as a key asset and hub for an aspiring geopark.

In October 2015, the Cumberland Geological Society (Fig. 3) was informed of the Global Geopark program and potential in their area. The “Self Evaluation tool” of the Global Geoparks Network (2015) identified core strength in the

categories of Geology and Landscape, Interpretation and Education, Geotourism, and Economic Development. Contributing to this core strength are the dramatic exposures of geoheritage sites, existing provincial park facilities at Cape Chignecto and Five Islands, and the facilities and programs of the Fundy Geological Museum. In December 2015, notice to pursue designation of a Global Geopark was submitted to the National Committee for Global Geoparks by the Cumberland Geological Society. In February 2016, the National Committee officially recognized the Fundy Rift Aspiring Geopark.

Plans for 2016

A comprehensive geopark workshop for the broader community is planned for 2016 following ‘town hall’ consultation sessions in communities along the shore. The goal of that workshop is to

Table 1. An example of an inventory of geoheritage assets for a prospective geopark.

Global GeoPark Candidate:	Home of Glooscap-Minas Basin: Cape Chignecto to i) Economy; ii) Burntcoat Head; iii) Cape Split
Theme:	Pangea's Breakup and the End-Triassic Extinction
Geologic Age:	Triassic-Jurassic
Level GH1 Geoheritage Sites:	ii) Burntcoat Head, Bay of Fundy iii) Blue Beach
Level GH 2 Geoheritage Sites:	i) Wassons Bluff, Old Wife/Five Islands
Level GH 3 Geoheritage Sites:	i) Cape Chignecto, Cap D'Or, Cobequid Fault at Wharton, Economy River Falls, Rams Head, West Bay, Parrsboro Gap/Lakelands, Partridge Island, Clarke Head, Red Head, Carrs Brook ii) + Victoria Park iii)+ Tennycap, Rainy Cove, Delhaven-Houston Beach, Paddys Island, Blomidon, Cape Split
Cultural Geoheritage:	i-iii) Kluscap traditional stories and sacred sites of the Mi'kmaq i) Cap D'Or copper mines ii) Londonderry iron mines; Walton
Parks & Supporting Facilities:	i) Cape Chignecto Provincial Park, Fundy Geological Museum, Cobequid Interpretation Centre, Five Islands Provincial Park ii) Cape Chignecto Provincial Park, Fundy Geological Museum, Cobequid Interpretation Centre, Five Islands Provincial Park, Burntcoat Head Municipal Park and Visitor Centre iii) Cape Chignecto Provincial Park, Fundy Geological Museum, Cobequid Interpretation Centre, Five Islands Provincial Park, Burntcoat Head Municipal Park and Visitor Centre, Blomidon Provincial Park, Blomidon Lookoff, Cape Split Trail; Blue Beach Fossil Centre

mentor community advocates, to consider the community's vision, and to broaden representation on a steering committee that will take the project forward. A governance model for the aspiring geopark will be considered here and developed in

subsequent consultation with partners. Planning will be done in collaboration with the STEP initiative to maximize resources and to incorporate knowledge from the tourism sector. An exciting opportunity for collaboration exists with the



Figure 2. Geoheritage assets of the Parrsboro shore are rich and varied, including 1) the provincial parks of Five Islands and Cape Chignecto; 2) established and potential geotourism activities; 3) exceptional, accessible coastal geology as at West Bay; all of which anchored by 4) the facilities and outreach programs of the Fundy Geological Museum. Figure 2.2 courtesy Tourism Nova Scotia.



Figure 3. Members of the Cumberland Geological Society, including mayor of Parrsboro, meeting to consider their role in pursuit of a UNESCO Global Geopark.

Mi'kmaw community, given the region's deep roots in the Kluskap legends (Fig. 4). Such collaboration has potential to be a model in

bridging indigenous knowledge and geoscience, the 'two-eyed seeing' recognized by the Mi'kmaq.

The two most important assets of an aspiring geopark are its people and its geological resources. The Geoscience and Mines Branch during 2016 will provide advice from a strategic standpoint, and in conjunction with the Fundy Geological Society will provide documentation of the geoheritage sites within the area identified by the community that will comprise the aspiring geopark. Strategic partnerships with the private sector and economic development sector will complete the collaborative team that will see the successful designation of Nova Scotia's first UNESCO Global Geopark. Based on the strong network of engaged community groups and representatives, the submission of an application for establishing a Parrsboro Shore Global Geopark seems attainable within two years with continued support and engagement of the community.



Figure 4. Mi'kmaw artist Gerald Gloade's depiction of Kluscap presenting Grandmother with a necklace of amethyst at Partridge Island, known to the Mi'kmaq as Wa'so'q (heaven). (Used by permission of Gerald Gloade).

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