The geologist's guide to Gros Morne National Park: a report on an advanced GAC Newfoundland section project

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Gros Morne National Park, in western Newfoundland, is designated as a UNESCO world heritage site largely on the basis of remarkable geology and its profound influence upon the development of the theory of plate tectonics. It may not be the *best* place to view the Cambro-Ordovician shelf sequence, or provide the most *complete* illustration of the anatomy of oceanic crust, but it is the only place where many diverse elements of the Appalachian Orogen came together to be sculpted by the forces of nature into a landscape of elemental beauty. The park is best-known for its huge peridotite-dominated ophiolites, but it also contains remarkable continental-slope sedimentary rocks, fresh alkaline mafic volcanic rocks, world-class fossil localities, global stratotypes, deep oligotrophic lakes, and much more besides.

There are already several publications that explain aspects of the park geology in nontechnical language for a tourist audience, and there are many specialized geological field trip guides that include stops within its boundaries. However, there is a need for something that lies between these extremes, to enable visitors with intermediate (i.e., undergraduate) Earth Science knowledge to locate, appreciate, understand, and learn from the many key geological localities. We are now working towards such a product, on behalf of the GAC Newfoundland Section, and hope that it will promote further learning and research within the park, as well as aid geologists in their professional development and recreation. An integrated guide of this type could perhaps also serve as a model for similar projects in other areas of outstanding geology in Newfoundland and Labrador, and across North America.

This presentation will highlight some of the remarkable geological features of Gros Morne and surrounding areas, provide an outline of the guidebook structure, and report on the progress of the project. We are now at the second draft stage, with all text complete, but much work remains to be completed on diagrams, maps, and bibliographies. With luck, and with some additional volunteers, we hope to have a "trial version" of the guide available by summer 2006 for non-destructive field testing.

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