

# Time travel at Arisaig, Nova Scotia, Canada, an Atlantic Geoscience Society video production

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The Paleozoic rocks of Nova Scotia tell a fascinating story of moving continents, mainly microcontinents, with a general drift from southern high latitudes to more equatorial climes. The rocks at Arisaig, on the province's Northumberland Strait shoreline, reveal the story of part of one of the microcontinents involved in this ancient canvas, Avalonia, which split from Protogondwana (modern Africa and South America) about 500 million years ago and drifted across the long-lost Iapetus Ocean, colliding with Laurentia (the core of ancient North America) about 400 million years ago. The Arisaig area has long been known for its exceptional exposures of Ordovician volcanic rocks and Silurian and Devonian storm-dominated, seafloor sedimentary rocks that formed on Avalonia. The volcanic rocks record a restless tectonic interval during the Ordovician, with a mix of mafic and felsic flows. By the Silurian and Devonian volcanic activity had ceased in the Arisaig area, the geological record from that time being of sedimentary rocks. In fact, the shoreline in the Arisaig area displays the world's most continuously exposed section of Silurian and Devonian sediments. The older parts of this section have no fossils, suggesting that oxygen was limited on the sea floor at the time. Higher in the section, however, more abundant fossils include *Tentaculites*, a mysterious extinct organism, brachiopods, nautiloids and burrows. In places we see evidence of ancient storms that killed off much of the animal life, creating beds of empty shells and broken fragments. This is the exciting story from deep time that we tell in the video, which is a project of the Atlantic Geoscience Society (AGS) Video Committee, who's aim is to inform the public about important geological sites in Atlantic Canada. A subcommittee of the AGS Video Committee was struck to carry out the production of the video. A storyline was developed and shooting took place in June of 2017. The camera and audio system was purchased from funds provided by the AGS Education Committee. Additional funding was received from the Canadian Geological Foundation. Most of the footage was shot in two days. Although some graphics are yet to be completed and added, it is taking shape and ready to be seen in its rough form. Excerpts will be shown in this session.