Precambrian volcanic rocks are found south of Hollow Fault, a major break in the earth’s crust. Arisaig Provincial Park is situated north of the fault on the younger Silurian rocks. The oldest rocks, dark and light coloured lava and pyroclastic flows, are found at Arisaig Point. The sedimentary rocks of the Arisaig Group, siltstones and sandstones (most with an abundance of fossils) begin at the Point and continue toward McAras Brook.

A Four Million-Year-Old Moment in Time

The rocks of Arisaig Provincial Park represent a continuous record of conditions in a shallow, storm-frequented sea from the late Ordovician period (448 million years) through the entire Silurian to Early Devonian (401 million years) periods. These rocks also highlight the differences between northern and southern Nova Scotia. The older rocks of southern Nova Scotia contain few fossils suggesting an environment that was inhospitable to most life forms. Arisaig is representative of northern Nova Scotia; and fossils found in the rocks here show an abundance of life forms that suggest warmer waters, sunlight and an abundance of food.

Between Early Silurian and Late Carboniferous time, Gondwana, North America and other continental plates collided to produce the mega-continent Pangea. When Pangea began breaking apart some 225 million years ago, the process left southern Nova Scotia attached to northern Nova Scotia. Most geologists consider southern Nova Scotia to be a fragment of Gondwana.

To Reach the Park

Arisaig Provincial Park, Antigonish County, is located near the community of Arisaig, 27 kilometres (17 miles) north of Antigonish and 57 kilometres (36 miles) northeast of New Glasgow on Route 245, the Sunrise Trail.

Arisaig Provincial Park overlooking the warm waters of the Northumberland Strait offers a fascinating window to life on Earth some 443 to 417 million years ago. One of North America’s most continuously exposed sections of Silurian rock, representing 4 million years of earth history, is found here. These sedimentary rocks are rich in fossils and features that have helped geologists interpret the ancient environment of this area.
The park is underlain by the Ross Brook Formation, a geological unit named after the bedrock exposures in Ross Brook near Arisaig Point. Cliffs on the east side of the park expose dark grey shale layers, but very few fossils. On the west side of the park, the shale layers are thinner, have more sandstones and contain abundant fossils.

**Landforms and Glaciation** Arisaig has a landscape whose history began long before glaciation and has been modified by glacial ice and running water. Nova Scotia was covered by ice during the last glacial period, the Wisconsinan, which ended 11,000 years ago. The Wisconsinan consisted of many glacial advances and retreats.

Glaciers erode the land using their weight to crush, pluck and grind bedrock. They also shape the land by depositing material. When a glacier melts and retreats, it deposits various thicknesses of sand and gravel, known as till. At Arisaig several metres of till cover the bedrock surface.

At the top of the cliffs, a nearly flat surface is visible. This was created by wave erosion more than 130,000 years ago and is evidence of ancient sea level. This old wave-cut bench at the top is similar to the present day bedrock bench at the base of the cliffs. Ancient beach gravels may be seen at the top of the cliffs on the older wave cut bench.

**Present Landforms** South of the Hollow Fault, the Precambrian volcanic rocks are hard and resistant to erosion. They underlie the high flat topped hills to the south of the park. The softer and more easily eroded rock of the Arisaig Group produces the rolling hills within the park.

The present land surface probably had its origins in events more than 60 million years ago when the surface of Nova Scotia was fairly flat with broad rivers flowing across the land. Later the land was uplifted and agents of erosion began their work. Streams and rivers began cutting into the rock, creating valleys and low areas. All of the high areas are underlain by hard resistant rocks which preserve this very old erosion surface. The flat hills of the Antigonish Highlands are a reminder of these long ago events.

**Cultural History** Arisaig was the site of the earliest settlement made in Antigonish County by Highland Scots. Between 1785 and 1791, the Highlanders settled much of the land along the Northumberland coast. Fishing has been an important industry at Arisaig since the first wharf was completed in 1813. Agriculture, lumbering and iron ore mining have all played a prominent role in the past. Much of the park was once farmed but is now largely covered with white spruce.

**Trails** A 1.6 kilometre (1 mile) loop trail provides access to many interesting features. From the interpretive kiosk, the trail winds towards the shore through a forest of white spruce. The shoreline portion includes a viewing platform and several access points to the beach. Another viewing station overlooks Arisaig Brook. Watch for fossils along the beach and near the brook.

From Arisaig Brook, the trail climbs a short but steep hill to the top of a small open field, where it returns to the kiosk along the ridge.