

Rockwood Park

Information Sheet



Location: ROCKWOOD PARK

Conservation designations: Stonehammer UNESCO Global Geopark

Grid reference: GPS: 45°17'27" N / 66°03'14.4" W

Address: 10 Fisher Lakes Drive, Saint John, NB E2K 5S6

Parking available: Yes, free, year-round

Personnel to be contacted prior to visit: City owned Public Park fully accessible year round if programming required, contact Interpretation centre Rockwood.Park@saintjohn.ca or 506-658-2883 or Inside Out Nature Centre at insideoutnaturecentre@gmail.com or 506-672-0770

Useful equipment:

- Camera
- Hiking equipment
- Compass and map or GPS
- Paid programming may have specific requirements

Relevance national curriculum:

Grade 7 Unit 2 Earth's Crust.
Grade 8 Unit 1 Water Systems on Earth.
Grade 9 Social Studies 9.2.1.
Physical Geography 110: Geological emphasis
Unit 5G:
Canadian Geography 120:

Rock types and geological processes observed: All rock types in the rock cycle can be found: igneous, sedimentary, and metamorphic; Karst landscape, glacial activity, historic graphite mine and ice cutting. Precambrian marble, Precambrian gneiss, Precambrian to Cambrian igneous granite, tonalite, granodiorite and dacite and Devonian sandstone and conglomerate

Geological structures: Fault terranes, glacial lake, glacial erratic and striations, Karst landscape and caves

Earth processes: eg. Continental Drift, Continental collision, glaciations (ice age), chemical erosion, volcanoes, subduction

Geological periods present: Precambrian, Cambrian and Devonian

Site specific hazards and risks:

- Wildlife
- Open water & Ice
- Large wilderness area, could get lost
- Do not enter caves as they are infected with the fungus that causes white nose syndrome in bats. Staying out of the caves helps prevent the spread of this threat to an endangered species.

Mitigation measures:

- Park in a designated area
- Do not collect rocks or fossils
- Do not feed or disturb wildlife habitat
- Do not litter
- Find out whether the tide is going in or out and when the next high or low tide occurs

Did you know: You can walk from South America to Africa all in Rockwood Park! This journey is possible thanks to the collision of historic micro-continents with ancient North America during the Cambrian which resulted in chunks of these moving landmasses 'sticking' to ancient North America. The incoming landmass is known as a Terrane. The two terranes in Rockwood Park are known locally as Brookville (Ganderia micro-continent, South America) and Caledonia (Avalonia micro-continent, Africa)

A major fault called the Caledonia Fault marks the point where these continents collided and began the long process of creating the Caledonian-Appalachian mountains. Evidence of this mountain chain can be found in Drifting Apart country partners: Scotland, Norway and in Western Newfoundland. Lake Road, the main entrance to the park in front of the Hathaway Pavilion, follows this fault line.

Topics to cover before visit: Plate tectonics, Wilson Cycle, erosion, fossils and fossil preservation, rock classification, minerals, rock cycle, volcanoes, glaciation, continental collision, historic mining, ice cutting and skating contests

Keywords: Iapetus Ocean, plate tectonics, plate margin, continental collide, Precambrian, Cambrian, lava, dacite, limestone, marble, volcano, intrusive, stromatolite, karst, cave, chemical erosion, contact, habitat, glacial lake, glacial erratic, glacial striation, Ashburn Formation, Brookville Terrane, Caledonia Terrane, graphite mine, Devonian, Kennebecasis Formation, conglomerate, sedimentary, igneous, intrusive, extrusive, metamorphic, bedding, ice cutting, skating, landscape design



Dacite



Limestone/Marble



Limestone/Marble

Description of Dacite:

- Igneous lava near-surface intrusive (near-extrusive)
- Small Grain size
- 554myo dacite formation has been dated

Description of:

- Limestone/Marble from the Brookville formation is found in Rockwood Park and throughout the Stonehammer area. Appearance varies from areas where sedimentary bedding from the original limestone are visible as in this sample, sometimes having stromatolite fossils present, to samples that show more evidence of metamorphism with a swirly appearance of banded minerals.
- Rockwood Park is named for its Granodiorite outcroppings. This clearly identifiable igneous rock shows large mineral grains and sometimes has mineral veins.

Geological history*:

Rockwood Park is appropriately named. With its tree-covered hills and many rocks, the park is a geological treasure right here in the middle of Saint John. Rockwood Park has a long history of scientific study and geological exploration. The Natural History Society of New Brunswick examined the geology of the park in the late 1800s and some of the rock specimens their members collected are found in the New Brunswick Museum collection.

The rock cycle is very well illustrated here with each of the rock types present in the outcroppings, including near-intrusive lava, dacite, and extrusive granodiorite of the same chemical composition but different grain size. Continued chemical erosion has resulted in caves in the Karst landscape. Glacial lakes, lakes, striations and erratics are evidence of glaciation and glacial erosion. Historically, graphite mines and ice cutting businesses operated the Park.