

Island Pathways Award Winning Map of Salt Spring Island

Natural History

Geology
About 400 million years ago, volcanic islands formed somewhere near present-day Tasmania and began to travel north and east on the spreading ocean floor. Over millions of years, these islands were surrounded by volcanic sediments and siliceous ooze and were several times ingested with igneous rocks. At times, the island groups were surrounded by reefs, forming limestone.

By about 100 million years ago, these rocks had traveled 10,000 km and collided with North America, where they now make up most of Vancouver Island, the Gulf Islands, Queen Charlotte, and parts of the mainland coast and Alaska. We call these rocks Wrangellia. Since Wrangellia arrived, parts of it have been covered with shales, sandstones, and conglomerates laid down in more recent shallow seas. Salt Spring's geological past is still evident in island-wide. Nine sites are shown on the map as examples.

1 Fernwood to Hudson Point—along the beach: Eroded southwest dipping Cedar District shales—Cretaceous Age, 80 million years old. SEE: Animal tracks and burrows in shale, which was once sea bottom mud. Around Hudson Point, fragments of the overlying (now eroded) De Conroy sandstone and rounded erratic boulders of Coast Range granite left by the ice. Two kinds of glacial deposits in the banks are bedded Quaternary and Varian boulder clay.

2 Top of Channel Ridge or St. Mary's Highland: Massive Geoffrey marine sandstone—Cretaceous Age, 70 million years old. SEE: Contact with underlying Northumberland shale at intersection of Southbank Drive and Trimmick Hill.

3 East shore St. Mary Lake, along roadway: Cliff of Northumberland shale—Cretaceous Age, 78 million years old. SEE: Thin bedding, changing dip along lake-side indicating folding. Across the lake, Channel Ridge was displaced 2 km south by faulting about 40 million years ago.

4 Across from Mount's Store: Neocretaceous De Conroy marine sandstone—Cretaceous Age, 79 million years old. SEE: Along entrance to West Harbour, contact with underlying Northumberland shale. Along shore, contact with underlying Northumberland shale at intersection of Southbank Drive and Trimmick Hill.

5 Rockerburner Corner to Cranberry Road: Extension-Protection conglomerate, 81 million years old, is part of the Outer Kango, a mountain ridge extending from Mt. Eskdale through to Mt. Bekker and along Sky Valley Road. Cranberry Road crosses the ridge, then descends into a valley of soft Hadam shale. The spectacular conglomerate and sandstone ridge on your right and massive fossil boulders on both sides of the road. Ammonite fossils are found on roadside shale banks.

6 Mount Maxwell: SEE at the peak, probably Comox marine conglomerate, 84 million years old. Look down to the full-fledged Fulford Valley. The lower slopes of Mt. Maxwell are made up of much older Tve igneous rocks—about 300 million years old. These rocks extend eastward all the way to Reginald Hill.

7 Tve Intrusion: SEE: Most of the rocks between Fulford-Ganges Road, Stewart Road, Fulford Harbour, and the entrance to Ruckle Park are grey crystalline gneisses of the Tve Intrusion, igneous rocks about 300 million years old, formed thousands of kilometers away in the ancient Pacific Ocean.

8 Ruckle Provincial Park, around picnic area: SEE: greenish Maxwell volcanic rocks, some speckled porphyries, the oldest rocks on Salt Spring, about 400 million years old. They extend several kilometers north along the coast. From the top of the stone steps south through the camping area, see a complete change to much younger Comox Sandstone forming the shore.

9 Southwestern Salt Spring: Two main rock types—Tuan phyllite (greenish or greyish hard slate-like metamorphic rock) and Kookaldia (dark greenish speckled igneous rock), which often forms peaks and ridges. The diabase (in some places) into rhyolite necks and the phyllite (in some places) into rhyolite necks and the phyllite (in some places) into rhyolite necks and the phyllite (in some places) into rhyolite necks.

10 Plants and Wildlife
Salt Spring Island is part of a small, very special natural region called the Strait of Georgia Lowlands (also known as the Dry Coastal Douglas-Fir Zone). This narrow area lies in the rain shadows created by the mountains of the Olympic Peninsula and Vancouver Island, producing an unusually mild climate.

Trees: Douglas-fir, grand fir, western hemlock, western red cedar, Sitka spruce, western white and lodgepole pine, Garry oak, arbutus, bigleaf maple, dogwood, yew, and juniper.

Shrubs: Hairy manzanita, ocean spray, Himalayan and trailing blackberry, thimbleberry, red-flowering currant, Noxosa rose, and salmonberry.

Salt Spring Under Ice
Fifteen thousand years ago, Salt Spring would have been very difficult to locate since the entire southern Vancouver Island region was covered with a nearly 2 km thick sheet of ice. The ice carried with it an immense load of rocks that ground and polished the bedrock. Evidence of the movement of this enormous ice field can be found in the Ruckle Provincial Park. When you walk along the trail between the picnic area at Beaver Point and the campground, look for large grooves in the bedrock (also see Geology 88).

Ice Fields
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Existing ice fields

MAP OF ICE AGE
University of Victoria Archives #1995-024

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the Heritages of Salt Spring Island

Ground cover and wildflowers: Salt, Oregon grape, sword fern, mosses, lichen, skunk cabbage, Indian pipe, trillium, rattlesnake plantain, vanilla leaf, calypso orchid, Easter lily, spring gold, blue and white camas, sea blanch, shooting star, chickadee, blue-eyed Mary, south-west red, parish-worm buttercup, chocolate lily, star flower, broad-leaved stonecrop, fonghoo, and dion's-fern geranium.

Animals and birds: On the land, look for deer, mice, squirrels, raccoons, mink, otters, muskrats, and beaver. In the water are seals, otters, sea lions, dolphins, and Orcas. In the air, you'll find bald eagles, ospreys, ravens, hawks, owls, woodpeckers, osprey, peregrine falcon, and a wide variety of songbirds.

Fish: Fish populations are not as healthy as in the past, but the Salt Spring Salmon Enhancement Society is working to bring them back. In lakes and streams, you'll find small-mouth bass, sticklebacks (which have been since the ice age), cutthroat trout and rainbow trout while in the bays, estuaries and off-shore, you'll find chin, coho, and herring.

Heritage Sites
The island's history is a microcosm of British Columbia history: a long period of aboriginal habitation followed by a frontier society of loggers, farmers, and even some miners.

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