Nootka Island represents a portion of an accreted volcanoplutonic arc along the western coast of Vancouver Island, British Columbia, within the Insular Belt of the Canadian Cordillera. This work provides a 1:20000 scale geologic map and synthesis of the tectonism in this region.

Two primary protolith groups are evident on Nootka Island. Group 1 contains tholeiitic basalts that have within-plate / E-MORB element signatures. Limestones and siltstones comprise the intervening sedimentary strata. Group 2 are the youngest and consist of calc-alkaline, arc-like basalts, a plutonic suite, and minor hypabyssal bodies. In general, rocks from Groups 1 and 2 resemble the Triassic Karmutsen and Jurassic Bonanza Formations, respectively.

Plagioclase-hornblende thermometry and aluminium-in-hornblende barometry indicate metamorphism to 710°C Celsius and ~3.2 kbar. $^{40}$Ar/$^{39}$Ar dating of a Group 2 basalt dyke reveals a crystallization age of ~168 Ma, and a metamorphic age of ~158 Ma from an older Group 1 hyaloclastite.