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# Glaciated terrains on the inner continental shelves of Newfoundland, Canada.

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Recently-collected data from multibeam sonars and other sources are used to describe some of the Late-Wisconsinan glacial terrains on the Newfoundland inner continental shelves. The inner shelves exhibit a great variety of glacigenic terrains, in contrast with shallow middle- and outer-shelf settings where glacigenic landforms have been modified or effaced during and after postglacial sea-level lowstands. Four types of terrain are described: 1) Suites of convergent, streamlined landforms in southern, eastern, and northeastern Newfoundland, formed when fast-moving ice flowed towards adjacent shelf troughs; 2) Moraines at fjord mouths in western and southwestern Newfoundland, formed when ice margins became established following rapid retreat. Moraine architecture can be correlated with catchment size, coastal physiography, and inner shelf depth: the numerous small-medium-sized, arcuate, submarine moraines along the southwest coast pass laterally into deep-water stratified sediments (till tongues) whereas the relatively large, arcuate submarine moraines off the west coast (Gulf of St. Lawrence) terminate in shallow water and do not pass laterally into stratified sediments. The latter have been modified by wave action to varying degrees during and after the early-Holocene sea-level lowstand, creating fjord-mouth littoral platforms terminating in systems of submarine fans that transport sand into fjord basins. 3) The deep ($\sim$600 m) fjords of northeast Newfoundland (Notre Dame Bay) lack fjord-mouth moraines, but contain transverse moraines that formed at constrictions during ice retreat. 4) Unique pitted terrains in two fjords in Bonavista Bay were probably created by the decay of stagnant glacial ice during deglaciation. In general the recently collected multibeam sonar data support a proposed conceptual model in which the island was drained by ice streams in shelf-crossing troughs, and in which retreating glaciers reached modern coasts c. 14 ka BP.