Southern Cape Breton Highlands Mapping Project

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Recent work in the southern Cape Breton Highlands has focussed on the Middle River - Crowdis Mountain area where a complex late Precambrian to Devono-Carboniferous geological history is preserved. The area is underlain primarily by volcanic and related sedimentary and intrusive rocks, is bounded on the west and east by older high-grade metamorphic rocks and foliated diorites, and intruded by granitic rocks in the north. There are probably two volcanic sequences present, separated by mylonite zones from each other and from metamorphic rocks to the northwest. The probably older northern unit consists mainly of felsic pyroclastic rocks and volcanogenic sediments, which range from mildly to strongly deformed. The probably younger southern unit consists of essentially undeformed rhyolite, mafic flows, and associated pyroclastic and sedimentary rocks. This unit has been dated by Rb-Sr at 384±10 Ma and is thought to be equivalent to the Fisset Brook Formation of western Cape Breton. The volcanic rocks are intruded by monzogranites in the north and a diorite-microgranite complex in the south. Geochemical, petrological, and geochronological studies of these volcanics are in progress to determine their role in the tectonic evolution of northwestern Cape Breton.