

***Regional significance of five new Rb-Sr dates from the Cape Breton Highlands***

*R. A. Jamieson, Department of Geology,  
Dalhousie University, Halifax, N.S. B3H 3J5*

Five new Rb-Sr isochrons have been obtained from a range of igneous and metamorphic rocks in the southern and central Cape Breton Highlands. The oldest unit dated is the Baddeck Lakes diorite-tonalite complex (752 $\pm$ 26 Ma), a variably deformed pluton that cuts previously deformed metasedimentary rocks. A variety of Devonian to Carboniferous rocks has been identified, including the North River monzogranite (401 $\pm$ 13 Ma), the Muskrat Brook - Sarach Brook mylonite zone (394 $\pm$ 28 Ma), the MacMillan Mountain volcanic (384 $\pm$ 10 Ma), and the Margaree granite (350 $\pm$ 4 Ma). The extent of Acadian and later tectonic activity is greater than expected, but agrees well with the geology of southwestern Newfoundland. The significance of Middle to Late Cambrian granites in the Highlands remains uncertain, and the age of the low grade metavolcanic and metasedimentary rocks of western Cape Breton has not been constrained by this study. The dominance of late Precambrian and Devonian-Carboniferous tectonic activity agrees well with observations elsewhere in the Avalon Zone.