

NOTE ON RECENT EARTHQUAKE IN CAPE BRETON.—BY D. S. MCINTOSH, B. A., M. SC., Lecturer on Geology, Dalhousie University, Halifax, N. S.

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On the afternoon of December 20th, 1909, about three o'clock, a distinct earthquake shock was felt in a part of Inverness county, Cape Breton. The disturbed area embraced Port Hood, Mabou, Inverness, Lake Ainslie, Whycomagh, and Orangedale. From beyond these localities it is not reported. In the towns of Port Hood and Inverness, it was thought that an explosion had taken place in the mines. At Lake Ainslie it is said that a fracture was made in the cement walls of a cellar by the shock. Mr. A. Stirling McLean thus describes it at Orangedale: "While not destructive or terrifying in any way, it was quite pronounced in this locality. One could feel the whole building trembled in a sort of rapid vibratory motion. Tin-ware and crockery on shelves danced at a great rate. The shock lasted for about five seconds—long enough for one to realize what was taking place. A loud rumbling noise was distinctly heard before the shock which was thought by some persons to be that of an approaching train, by others that of a flue on fire."

The disturbance would appear to have been merely local. At no place on the Island, other than those referred to does it seem to have been noticed. On account of the small area affected, the seat of the disturbance would not likely be far removed from the surface. Nor would it likely be found in the igneous rocks which outcrop in a few places, and probably underlie the younger rocks of the district. Did a fault take place in these rocks, the effect would likely be more widespread than the recent occurrence. The cause of the shock is

rather to be sought for in the sedimentary strata that overlie the igneous rocks. Limestones and gypsum are plentiful in these. The falling in of the roof of a subterranean cavern formed by the action of percolating water on the limestones and gypsum would account for the shock. It is highly probable that such a cave-in, or a fault produced by some readjustment of the carboniferous strata, was the cause of the recent earthquake shock.