

above sea-level, there is a rock-rimmed basin having a minimum depth of not less than 315 feet in the bottom of the Timiskaming trench.

In a paper entitled "Crustal warping in the Timagimi-Timiskaming district, Ontario," published in the *American Journal of Science* in 1910, Dr. L. V. Pirsson pointed out that a rock-rimmed basin was present at the bottom of the Timiskaming trench and suggested that the upper portion of the trench had been over-deepened by downwarping, the alternative possibility—glacial overdeepening—being dismissed as untenable, because the trend of the Timiskaming valley (as pointed out by Dr. Barlow¹) was transverse to the direction of movement of the glacial ice.

The warping hypothesis of Dr. Pirsson presents some physiographic difficulties in that if the northern portion of Timiskaming trench had been lowered 300 feet below the southern portion either by transverse warping or faulting, this would almost certainly be evident in the higher elevation of the region adjacent to the trench from Seven League Lake southward. This is apparently not the case. Furthermore, it might be pointed out with regard to the overdeepening of the trench by glacial denudation, the continental ice-sheets did not move across the valley at right angles but obliquely, so that it is not impossible that a subcurrent of the ice-sheet might have been directed down Timiskaming gorge eroding out its bottom to a depth of several hundred feet.

TOPOGRAPHIC HISTORY.

The most important events in the physiographic history of Timiskaming region have already been described in the section of the report on the topographic history of the Laurentian plateau. In the following account of the physiographic development of a particular area within the plateau, however, the various events are described in greater detail than was possible in the general outline of the development of the whole physiographic province.

The physiographic history of Timiskaming region may be regarded as commencing with the development of the great erosion plain which separates the Huronian Cobalt series from the great basal complex beneath. During geological ages which preceded the development of this ancient Pre-Cambrian erosion surface, numerous plains of denudation may have been formed in the region but these find no expression in the present topography and the evidence of the presence of even the last of them is to be found only in the wide areas of clastic sediments and in a few doubtful remnants of older denuded surfaces.

Although the floor which underlies the Cobalt series has been considerably warped and dislocated in places, during the long period which has

¹ *Geol. Surv., Can., Ann. Rept., vol. X, 1897, p. 25.*