

the latter being a large part of the basement upon which the Steeprock series was unconformably deposited.

I approached Steeprock lake from the west, coming up the Seine river from Rainy lake. In doing so I traced out nearly continuously the geological boundary between the Keewatin of Rainy lake and a series of quartzites and slates which for convenient reference I shall here call the Seine series. The Seine series lies to the south of the Keewatin, and is post-Keewatin in age. The contact between the two series is marked not only by the striking contrast in the general character and physical appearance of the rocks, but also by the occurrence of several lenses of conglomerate, of which the most important is that of Shoal lake. To the south of the quartzites and slates are the mica schists of the Coutchiching series. The relations of the Seine and Coutchiching series will not here be discussed.

It was my expectation in following the basal conglomerates of the Seine series eastward, that they would prove to be the same as one of the conglomerates described by Smyth on Steeprock lake. This expectation was, however, not realized. The boundary line between the Keewatin and the Seine series was followed with a steady E.-W. strike along the Atikokan river as far as the iron mines east of Sabawc lake. The east and west strike of the base of the Seine series is transverse to the more nearly N.W.-S.E. folds, which have involved the Steeprock series in vertical attitudes a little to the north of the Atikokan river. This stratigraphic and structural relationship indicates that the folding which involved the Steeprock series as a sharp trough sunk down into the older Archæan had taken place anterior to the deposition of the Seine series; since no such folding affects the even trend of the strike of the latter. It is, therefore, inferred tentatively that the Steeprock series is older than the Seine series, an inference which should be confirmed by a careful search in the conglomerates of the Atikokan river for pebbles of the Steeprock series. To the south of Sabawc lake the Seine series is cut by the granite gneiss which forms so large a feature of the geology of the Seine River and Shebandowan sheets. The phenomena of intrusion and the metamorphism of the Seine series consequent upon the intrusion are splendidly exemplified. No one who is at all familiar with the geology of the Thunder Bay district will question the unconformable superposition of the Animikie upon the complex of which this granite gneiss forms a