and west and measuring over five miles across the strike. They are intercepted at the south-west angle of the large island by the unconformable Animikie and Keweenian beds, which occupy the shore for about three quarters of a mile. The Keweenian amygdaloids, traversed by quartz veins, carrying native copper, dip S.S.W. at an angle of 60° to 75° from the horizon. Immediately behind them, the ferruginous cherty beds of the Animikie group are seen dipping in the same direction at an angle of only 40° to 50° to the horizon. There can be no possible doubt about the identity of the Keweenian group at this locality and I do not think I can be mistaken about the Animikie strata. This discovery of the Keweenian rocks, and also of iron-bearing Huronian schists in the vicinity, was made in 1870 when I was examining the Islands for the Geological Survey, under instructions from Dr. Bell. A year or two afterwards, I examined the Keweenian veins for native copper and found it. Then, when exploring inland the Huronian hematite-bearing schists above mentioned, I noticed a change of dip in the strata, and upon further examination I was greatly surprised to find them to be what I considered the undoubted Animikie slates. I traced them across the strike to the Keweenian beds, which lie in front, and along the shore, the contact being in the line of a fault occupied by a ferruginous trap dyke.

At the east end of Nipigon Bay, the folded schists standing on edge and associated with granite, strike westward into the bay, and they must run directly under the flat Animikie and Keweenian beds that occupy the entire width of the Bay. The latter group continue north for a hundred miles or so into the Lake Nipigon basin. The Animikie beds form a number of islands in the bay, such as those in Pays Plat Bay, and they appear in flat patches on the north shore opposite the east end of Copper Island. Here the Animikie beds are always in positions apparently conformable with and below the Keweenian beds, and in unconformable positions over the Archæan rocks. Further north, the lower beds of the Keweenian group, consisting of sandstones and marls, are found resting on the old rocks without the interposition of the Animikie. In other places, further back, higher members, consisting of the trappean beds only, overlie the old rocks—the marls, and sandstones, as well as the Animikie strata, being wanting. It would appear that the lower members of these horizontal beds were cut off by the rising of the Archæan floor upon which they were deposited.

To the west of the northern portion of Black Bay, the Keweenian beds extend back or westward ten or twelve miles, with great geological gaps or openings eroded through them down to the Archæan rocks. The latter consist of coarse granitic gneiss with a belt of the green Huronian chloritic, dioritic and fine micaceous schists. I did not see the southern boundary of this belt, but at the outer basin it is three quarters of a mile or more in width; across the strike, and four or five miles further west, at the south end of Wolf Lake, it is only about 1,800 feet wide, with an apparent unconformity on the south side against a coarse granitic rock. These gneisses and schists dip nearly vertically and strike eastward through the gaps or basins above referred to and underneath the flat-lying Keweenian beds. They must, I think, continue eastward across Black and Nipigon Bays, underneath the two flat-lying groups, i.e. the Keewenian and Animikie, and they are no doubt the same as those which appear on the shore to the east of the latter bay. At the outer basin, eight to ten miles from the bay, the rough and uneven surface of the old rocks has attained an elevation above Lake Superior of from 700