Marquette and westward across the Wisconsin boundary. On the north, they are bounded by coarse granites which occupy the north slope of the range and on the south, in Town 45, they pass into micaceous and hornblendic gneiss that carries gold in the inclosed quarz veins. No doubt these schists are a continuation of the Marquette and Menomenee schists. But I should be greatly surprised if they can be shown to be the continuation of the Penokee-Gogebic flat slates, as would appear by the arguments and the map of Prof. Irving. I mean by the Penokee-Gogebic belt, the Gogebic belt of slates in which the Colby Iron Mine is situated. Before seeing Prof. Irving's report, I was under the impression that the rocks of the Penokee Iron Range were like those of Marquette, and those of the Gogebic Iron Range like the Animikie rocks.

From all the known facts, it seems certain that the Animikie and Keweenian groups together, form the bottom of the great geological basin of Lake Superior, which covers an area of about 30,000 square miles. These strata show a moderately low dip towards the middle of the lake, but become steeper on the south side than they are on the north. They cover nearly the whole bed of Lake Superior, as may be seen by the exposures on the inlands and main shore. From the broad part or middle of the lake—say, from the meridian of Passage Island, they strike inland one both shores, and with a breadth of one hundred and fifty miles, they continue west-south-westward for more than two hundred and fifty miles—or nearly, if not quite to Mississippi River—leaving a tongue of the old rocks, from the west, to penetrate between them to the end of the lake at Duluth, as will be seen by Irving's map. The Archæan rocks, named the "Laurentian gneiss" and "Huronian folded schists," wherever seen on either side of this great basin are almost invariably highly inclined and unconformable to the comparatively undisturbed strata referred to. But, as would naturally be the case, with a basin or depression such as this, the strike of these two sets of strata (though not the angles of the dip) along the sides would be likely to agree very nearly, which is the actual condition presented, as may be seen on the south side along the South and Gogebic Ranges, and on the north side along the line of contact from Thunder Bay westward. This apparent agreement of the strike of the two sets of strata would render it the more difficult to detect unconformability between them, especially as an unstratified member of the Archæan rocks almost invariably presents itself next the flat strata of the Animikie series. These conditions exist in the only portions of the contact examined by Prof. Irving. But from Thunder Bay eastward, this conformability of strike no longer continues, as may be seen north-east of Thunder Bay and at Black and Nipigon Bays, where the flat-lying strata of the great basin referred to make a deep impression northward across the general strike of the nearly vertical folded schists and gneisses. This general want of conformity may be again seen along the north shore, south-eastward and diagonally across the strike of the Archæan rocks, from Nipigon Bay to Sault Ste. Marie. Along this part of the coast, great belts—miles in width—of the Huronian folded schists, standing on edge, strike into the lake towards the flat basin referred to, and presumably they continue underneath the Animikie group. As for instance, the schists of Michipicoten River, Homer Township, Pic and Steel Rivers, Nipigon and Thunder Bays, all of which strike into the flat geological basin referred to.

The Slate Islands are situated ten miles from the shore, opposite to Steel River. These islands are occupied by folded Huronian schists, standing on edge, running east