

various pre-Cambrian rocks in parts of Carnarvonshire and Anglesey with Messrs. Hicks, Torell and Tawney. He subsequently, in company with Dr. Hicks, visited the region in South Wales where these older rocks had been studied, and was enabled to satisfy himself of the correctness both of the observations and conclusions of Dr. Hicks, and of the complete parallelism in stratigraphy and in mineral composition between these pre-Cambrian rocks on the two sides of the Atlantic. It may here be mentioned that Dr. Torell, who, during his visit to America in 1876, had an opportunity of studying, with the writer, the petrosilexes of New England and Pennsylvania, which he regarded as identical with the hälleflinta of Sweden, at once recognized them in the Arvonian series of North Wales.

Of the many areas of these various pre-Cambrian rocks which the writer was enabled to examine in company with Dr. Hicks, may be mentioned the granitoid mass of Twt Hill in the town of Carnarvon, and the succeeding Arvonian to Port Dinorwic, followed, across the Menai strait, by the Pebidian on the island of Anglesey, near the Menai bridge. Farther on, the Pebidian was again met with near the railway station of Ty Croes, in the southwest part of the island, succeeded by a large body of Arvonian petrosilex, and a ridge of granitoid gneiss, fragments of which make up a breccia at the base of the Arvonian series. The Pebidian is again well displayed at Holyhead.

In South Wales, the similar rocks were examined by him at St. David's, where three small bands of an impure coarsely crystalline limestone are included in the Dimetian granitoid rock, which is here often exceedingly quartzose. It may be remarked that the Dimetian, as originally defined at this, its first recognized locality, included a great mass of Arvonian petrosilex, the two forming a ridge which extends for some miles in a northeast direction, flanked by Pebidian rocks, which are sometimes in contact with the one and sometimes with the other series. At Clegyr bridge was seen the base of the Pebidian, already mentioned as consisting of a conglomerate of Arvonian fragments. Another belt of the same crystalline rocks was also visited, a few miles to the eastward of the last, and not far from Haverfordwest, forming, according to Hicks, a ridge several miles in length and about a mile wide. Where seen, at Roch Castle, it was found to consist of Arvonian petrosilex, with some granitoid rock near by. The ridge is flanked on the northwest