

of grits and slates into the Silurian system. Considerable diversity of opinion has existed as to the line where the upper limit of the Cambrian division should be drawn. Murchison contended that this line should be placed below strata where a trilobitic and brachiopodous fauna begins, and that these strata cannot be separated from the overlying Silurian system. He therefore included as Cambrian only the barren grits and slates of Harlech, Llanberis, and the Longmynd. Sedgwick, on the other hand, insisted on carrying the line up to the base of the Upper Silurian rocks. He thus left these rocks as alone constituting the Silurian system, and massed all the Lower Silurian rocks in his Cambrian system. Murchison worked out the stratigraphical order of succession from above, chiefly by help of organic remains. He advanced from where the superposition of the rocks is clear and undoubted, and, for the first time in the history of geology, ascertained that the "Transition-rocks" of the older geologists could be arranged into zones by means of characteristic fossils, as satisfactorily as the Secondary formations had been classified in a similar manner by William Smith. Year by year, as he found his Silurian types of life descend further and further into lower deposits, he pushed backward the limits of his Silurian system. In this he was supported by the general consent of geologists and palæontologists all over the world. Sedgwick, on the other hand, attacked the problem rather from the point of stratigraphy and geological structure. Though he had collected fossils from many of the rocks of which he had made out the true order of succession in North Wales, he allowed them to lie for years unexamined. Meanwhile Murchison had studied the prolongations of some of the same rocks into South Wales, and had obtained from them the copious suite of organic remains which characterized his Lower Silurian formations. Similar fossils were found abundantly on the continent of Europe and in America. Naturally the classification proposed by Murchison was generally adopted. As he included in his Silurian system the oldest rocks then known to contain a distinctive fauna of trilobites and brachiopods, the earliest fossiliferous rocks were everywhere classed as Silurian. The name Cambrian was regarded by geologists of other countries as the designation of a British series of more ancient deposits not characterized by peculiar organic remains, and therefore not capable of being elsewhere satisfactorily recognized. Barrande, investigating the most ancient fossiliferous rocks of Bohemia,