

§ 2. Local Development

Britain.¹²—The area in which the fullest development of the oldest known Palæozoic rocks has yet been found is undoubtedly the principality of Wales. The rocks are there of great thickness (12,000 feet or more), they have yielded a fauna which, though somewhat scanty, is sufficient for purposes of stratigraphical correlation, and they possess additional importance from the fact that they were the first strata of such antiquity to be worked out stratigraphically and palæontologically. As already stated, they were called Cambrian by Sedgwick, from their extensive development in North Wales (Cambria), where he originally studied them. Their true base is nowhere seen. Prof. Hughes, Dr. Hicks, Prof. Bonney and others believe that a conglomerate and grit generally mark the base of the Cambrian series.¹³ According to Sir A. C. Ramsay, on the other hand, the base of the Cambrian series is either concealed by overlying formations or by the metamorphism which, in his opinion, has converted portions of the Cambrian series into various crystalline rocks. Both in Pembrokeshire and Carnarvonshire the lowest visible slates, shales, and sandstones are intercalated with and pass down into a volcanic series (felsites, diabases, and tuffs) the base of which has not been found. In certain localities, as in Anglesey, Cambrian strata are seen to lie unconformably on pre-Cambrian schists, and there not only the basement volcanic group but some of the lowest members of the fossiliferous series are wanting. There is then not only an unconformable junction, but an overlap.

Starting from the volcanic group at the base the geologist can trace an upward succession through thousands of feet

¹² See Sedgwick's *Memoirs in Quart. Journ. Geol. Soc.* vols. i. ii. iv. viii., and his "Synopsis of the Classification of the British Palæozoic Rocks," 4to, 1855; Murchison's "Silurian System" and "Siluria"; Salter's "Cat. of Cambrian and Silurian Fossils," with preface by Sedgwick, 1873; Ramsay's "North Wales," *Geological Survey Memoirs*, vol. iii.; and papers by Salter, Harkness, Hicks, Hughes and others in the *Quart. Journ. Geol. Soc.* and *Geol. Mag.*, to some of which reference is made below. J. E. Marr, in his "Classification of the Cambrian and Silurian Rocks," gives a bibliography of the subject up to 1883.

¹³ *Q. J. Geol. Soc.* xxxiv. p. 144; xl. 1884, p. 187. For references to the literature of the subject see the same Journal, xlvii. 1891, *Ann. Address*, p. 90 *et seq.*