

The Cambrian rocks of Britain vary widely in mineralogical composition, thickness, and area of exposure in the different districts where they rise to the surface. In North Wales, where they cover the widest extent of ground, they consist of purple, reddish-gray, green, and black slates, grits, sandstones, and conglomerates, with a volcanic group at the bottom, the whole attaining a thickness of probably more than 12,000 feet. In Western England this enormous mass of sedimentary material has dwindled down to a fourth or less, consisting at the base of quartzite and sandstone, and in the upper part of shales. In the east of Ireland, rocks assigned to the Cambrian system resemble on the whole the Welsh type. In the northwest of Scotland, on the other hand, the Cambrian strata, about 2000 feet thick, consist of quartzites below, graduating upward into massive limestones. The following grouping of the British Cambrian rocks has been made:

	WALES (ranging up to 12,000 feet or more)	WESTERN ENGLAND (about 3000 feet)	N.W. SCOTLAND (2000 feet)
Upper or Olenus Zones.	Tremadoc Slates. Lingula Flags (<i>Lingulella</i> , <i>Olenus</i> , etc.).	Shinerton Shales (<i>Dictyograptus</i> (<i>Dictyne-</i> <i>ma</i>) <i>Olenus</i> , etc.)	A thick mass of lime- stone divisible into seven groups with
Middle or Paradox- ide Zones.	Menevian Group (<i>Paradoxides</i>).	Conglomerates and limestones (Comley) with <i>Paradoxides</i> , etc.	<i>Archæocyathus</i> , <i>Mac-</i> <i>lurea</i> , <i>Ophæta</i> , <i>Mur-</i> <i>chisonia</i> , <i>Orthoceras</i> , and vast quantities of
Lower or Olenellus Zones.	Harlech and Llanberis group and basement volcanic rocks ("Pe- bidian" of Dr. Hicks, p. 1187), bottom not seen.	Thin quartzite passing up into green flags, grits, shales and sand- stone (Comley Sand- stone) containing <i>Ole-</i> <i>nellus</i> .	annelid castings. Shales with <i>Olenel-</i> <i>lus Salterella</i> . Quartzites, with anne- lid burrows (p. 1169).

LOWER.¹⁵—In South Pembrokeshire the lowest visible Cambrian rocks are of volcanic origin. They consist of fine

the Silurian fauna was the first to be determined; and, further, I am of opinion that the Cambrian group ought not to appear in our nomenclature as of equal rank with the Silurian group, of which it is merely a subdivision."—Bull. Soc. Geol. France (3) xi. 1882, p. 34. F. Schmidt, also, would prefer to regard the Cambrian as only part of one system extending up to the overlying unconformable Devonian rocks. Q. J. Geol. Soc. xxxviii. 1882, p. 515. My friend Prof. De Lapparent has followed the same principle, making the Silurian system range from the base of the primordial zone to the base of the Devonian rocks. "Traité de Géologie," 3d edit. 1893. See also postea, p. 1229.

¹⁵ The chief authority on the fossils of the Lower Cambrian rocks is the monograph by C. D. Walcott, "The Fauna of the Lower Cambrian or *Olenellus* Zone," published in the 10th Ann. Rep. U. S. Geol. Surv. 1890. This work