is well illustrated in the structure of the Carboniferous tracts of Britain, which, being sufficiently extensive to contain more than one type of the system, cast interesting light on the varied geographical conditions under which the rocks were accumulated. As the land, whence the chief supplies of sediment were derived, rose mainly to the north and northwest, while the centre of England and Ireland lay under clear water of moderate depth, the sea shallowed northward into Scotland, and its bottom was covered with constantly accumulating banks of sand and sheets of mud. Hence vertical sections of the Carboniferous system of Britain differ greatly according to the districts in which they are taken. The subjoined table may be regarded as expressing the typical subdivisions which can be recognized, with modifications, in all parts of the country:

3. Coal-measures	Red and gray sandstones, clays and sometimes breccias, with occasional seams and streaks of coal and Spirorbis limestone: Cythere inflata, Spirorbis pusillus (carbonarius). Middle or chief coal-bearing series of sandstones, clays and shales, with numerous workable coals: Anthracosia, Anthracomya, Beyrichia, Estheria, Spirorbis, etc. Gannister beds, flagstones, shales and thin coals, with hard siliceous (gannister) pavements: Orthoceras, Goniatites, Posidonomya, Aviculopecten, Lingula, etc.
2. Millstone Grit	Grits, flagstones and shales, with thin seams of coal.
1. Carboniferous Limestone series	Yoredale group of shales and grits, passing down into dark shales and limestones: Goniatites, Aviculopecten, Posidonomya, Lingula, Discina, etc. Thick (Scaur or Main) limestone in south and centre of England and Ireland, passing northward into sandstones, shales, and coals with limestones (abundant corals, polyzoa, brachiopods, lamellibranchs, etc.) Lower Limestone Shale of south and centre of England (marine fossils like those of overlying limestone). The Calciferous Sandstone group of Scotland (marine, estuarine, and terrestrial organisms), probably represents the Scaur Limestone and Lower Limestone Shale, and graduates downward insensibly into the Upper Old Red Sandstone.

1. CARBONIFEROUS LIMESTONE SERIES AND LOCAL EQUIVALENTS.—In the southwest of England, and in

(Q. J. Geol. Soc. ii. xviii.), Kirkby (op. cit. xxxvi.); Davis and Lees, "West Yorkshire," 1878; G. H. Morton, numerous papers in Proc. Liverpool Geol. Soc. Hull's "Coal-Fields of Great Britain," 4th ed. 1881. The Memoirs of the Geological Survey will be found to supply much detailed information for the various Carboniferous tracts of Britain; see, for example, the "Geology of the Yorkshire Coal-Field," by Messrs. Green and Russell, "Geology of Flint and Mold," by A. Strahan. Some local papers are referred to in subsequent notes.