

Lower Oolite System, with (a) Cornbrash, (b) Forest Marble, (c) Stonesfield Slate, (d) Great Oolite, (e) Lower Oolite, (f) Marl Stone.

Lias.

Between the Oolite and the Carboniferous formation, Conybeare and Phillips recognised the formation of the Red Marl and New Red Sandstone, and that of the Magnesian Limestone. No fossils had been found in the Red Marl and Sandstone formation, but Conybeare and Phillips correctly compared the group with the Bunter Sandstone on the Continent. The Magnesian Limestone of Sunderland, Durham, and Northumberland was identified by means of its characteristic fossils as an equivalent of the "Zechstein" and Copper Slate Series on the Continent (cf. p. 36). Conybeare also recognised in the Conglomerates of Devonshire a formation corresponding to the "Red Underlyer" of the Continental deposits. Finally, the Carboniferous formation was very carefully described, and was sub-divided into four groups—Coal Measures, Millstone Grit and Shales, Carboniferous Limestone, and Old Red Sandstone.

This classic work of Conybeare and Phillips demonstrated in convincing manner that only with the assistance of fossils could a secure foundation be obtained for a comparative consideration of the sedimentary rocks, and although their parallelism of the English deposits with those of the Continent is often erroneous, the method which they adopted signified the scientific recognition and marked success of William Smith's reform.

In Germany, after the collapse of Werner's system, geology seemed for a time to make no progress. It was only by slow degrees that the palæontological method could ingratiate itself with geologists. Keferstein's *Tables of Comparative Geognosy* (Halle, 1825) presents a curious combination of Wernerian ideas, Humboldt's teaching, and the influence of the new British methods. "Neptunian Formations," six in all, and "Volcanic Formations," also to the number of six, are arranged in two corresponding columns. The Granite and Syenite are placed lowest in the Volcanic formations as the oldest Volcanic rocks contemporaneous with the gneiss, schist, greywackes, and slates that were comprised in the oldest sedimentary "Formation Suite" by Werner. The "Porphyry" Volcanic formation is regarded as the contemporary of the