

It is composed of a diversified mass of Magnesian Limestone, generally of a yellow colour, but sometimes red and brown, and bituminous clay, the last black and fetid. The subordinate rocks consist of marl, gypsum, and inflammable bituminous schists. The beds of marl slate are remarkable for the numbers of peculiar fossil fishes which they contain; and from the occurrence of small proportions of argenterous grey copper-ore, met with in the bituminous shales which are worked in the district of Mansfeld, in Thuringia—the latter are called *Kupferschiefer* in Germany.

The *Lower Rea Sandstone*, which attains a thickness of from 300 to 600 feet, is found over great part of Germany, in the Vosges, and in England. Its fossil remains are few and rare; they include silicified trunks of Conifers, some impressions of Ferns, and Calamites.

In England the Permian strata, to a great extent, consist of red sandstones and marls; and the Magnesian Limestone of the northern counties is also, though to a less degree, associated with red marls.

In Lancashire thin beds of Magnesian Limestone are interstratified with red marls in the upper Permian strata, beneath which there are soft Red Sandstones, estimated by Mr. Hull to be about 1,500 feet thick. These are supposed to represent the Rothliegende, and no shells of any kind have been found in them. The upper Permian beds, however, contain a few Magnesian Limestone species, such as *Gervillia antiqua*, *Pleurophorus costatus*, *Schizodus obscurus*, and some others, but all small and dwarfed.

The coal-fields of North and South Staffordshire, Tamworth, Coalbrook Dale, and of the Forest of Wyre, are partly bordered by Permian rocks, which lie unconformably on the Coal-measures; as is the case, also, in the immediate neighbourhood of Manchester, where they skirt the borders of the main coal-field, and consist of the Lower Red Sandstone, resting unconformably on different parts of the Coal-measures, and overlaid by the pebble-beds of the Trias.

At Stockport the Permian strata are stated by Mr. Hull to be more than 1,500 feet thick.

In Yorkshire, Nottinghamshire, and Derbyshire, the Permian strata are stated by Mr. Aveline to be divided into two chief groups: the Roth-liegende, of no great thickness, and the Magnesian Limestone series; the latter being the largest and most important member of the Permian series in the northern counties of England. The Magnesian Limestone consists there of two great bands, separated by marls and sandstone, and quarried for building and for lime. In Derbyshire and Yorkshire the magnesian limestone, under the name of Dolomite, forms an excellent building-stone, which has been used in the construction of the Houses of Parliament.