

CHAPTER XXIII.

PERMIAN OR MAGNESIAN LIMESTONE GROUP.

Fossils of Magnesian Limestone and Lower New Red distinct from the Triassic—Term Permian—English and German equivalents—Marine shells and corals of English Magnesian limestone—*Palæoniscus* and other fish of the marl slate—Thecodont Saurians of dolomitic conglomerate of Bristol—Zechstein and Rothliegendes of Thuringia—Permian Flora—Its generic affinity to the carboniferous—*Psaronites* or tree-ferns.

WHEN the use of the term "Poikilitic" was explained in the last chapter, I stated, that in some parts of England it is scarcely possible to separate the red marls and sandstones so called (originally named "the New Red"), into two distinct geological systems. Nevertheless, the progress of investigation, and a careful comparison of English rocks between the lias and the coal with those occupying a similar geological position in Germany and Russia, have enabled geologists to divide the Poikilitic formation; and has even shown that the lowermost of the two divisions is more closely connected, by its fossil remains, with the carboniferous group than with the trias. If, therefore, we are to draw a line between the secondary and primary fossiliferous strata, as between the tertiary and secondary, it must run through the middle of what was once called the "New Red," or Poikilitic group. The inferior half of this group will rank as Primary or Paleozoic, while its upper member will form the base of the Secondary series. For the Lower, or Magnesian Limestone division of English geologists, Sir R. Murchison proposed, in 1841, the name of Permian, from Perm, a Russian government where these strata are more extensively developed than elsewhere, occupying an area twice the size of France, and containing an abundant and varied suite of fossils.

Prof. King, in his valuable monograph* of the Permian fossils of England, has given a table of the following six members of the Permian system of the north of England, with what he conceives to be the corresponding formations in Thuringia.

North of England.	Thuringia.
1. Crystalline or concretionary, and non-crystalline limestone.	1. Stinkstein.
2. Brecciated and pseudo-brecciated limestone.	2. Rauchwacke.
3. Fossiliferous limestone.	3. Dolomit, or Upper Zechstein.
4. Compact limestone.	4. Zechstein, or Lower Zechstein.
5. Marl-slate.	5. Mergel-schiefer, or Kupferschiefer.
6. Inferior sandstones of various colors.	6. Rothliegendes.

* Palæontographical Society, 1850, London.