

found in the Magnesian Limestone, and they are, generically and specifically, few in number, but, as a whole, their affinities and grouping are decidedly Palæozoic. Some of the genera of plants have a Coal-measure aspect, including *Calamites*, *Lepidodendron*, *Neuropteris*, *Sphenopteris*, and *Alethopteris*, besides *Walchia*, *Ullmannia*, *Cardiocarpon*, and fragments of silicified coniferous wood. Only 9 genera and 21 species of Brachiopoda are found in these strata, viz. *Camarophoria* 3, *Crania* 2, *Discina* 1, *Lingula* 2, *Producta* 2, *Spirifera* 3, *Spiriferina* 2, *Strophalosia* 4, and *Terebratula* 2. These partly belong to genera which also occur in the Carboniferous rocks. The same strata contain 16 genera and 31 species of Lamelli-branchiate molluscs, the most common of which are of the genera *Schizodus*, *Gervillia*, *Solemya*, &c.; 26 species of Gasteropoda, 2 *Nautili*, and many ganoid fishes, the most common belonging to the very characteristic genus *Palæoniscus*, of which there are 6 species (fig. 31, p. 148). All the Permian fish have heterocercal tails, like the majority of the Palæozoic genera, in which the vertebral column is prolonged into the upper lobe of the tail, whereas in most of the modern fishes the vertebral column is not prolonged into either lobe. The reptilian remains, both of the red rocks and of the Magnesian Limestone, are partly Amphibian, as shown by the Labyrinthodont *Dasyceps Bucklandi* of Kenilworth, the footprints in the red Permian sandstones of the Vale of Eden, and Corncockle Moor, in Dumfriesshire, and *Lepidotosaurus Duffii* of the lower part of the Magnesian Limestone; while others from the marl slate, *Proterosaurus Speneri* and *P. Huxleyi*, were true land Lacertilian reptiles.

Excepting the Magnesian Limestone, all the Per-