

most of the latter being new. There are 7 species of Pteropoda of 3 genera. It is remarkable that the described Gasteropoda only amount to 15 genera and 52 species, while in Bohemia, in equivalent rocks, 200 species, some years since, are mentioned by Barrande, and as many of the Brachiopoda and Lamellibranchiate molluscs. Of the Nucleobranchiata 10 *Bellerophons* are known, and 7 genera and 53 species of Cephalopoda, among which the genus *Orthoceras* decreases from 42 to 35 species.

Near the top of the Upper Ludlow strata there are several thin bone beds, containing teeth and scales of small Placoid fish of the genera *Onchus* (?) *Sphagodus*, and *Thelodus*. At present these are the oldest known fishes. They are found in strata which contain several species of the remarkable crustaceans *Pterygotus* and *Eurypterus*, some of which are small in size, while the largest *Pterygotus*, discovered by Dr. Slimmon near Lesmahagow, in the uppermost Silurian rocks, attained about 9 feet in length. The very uppermost Silurian beds in England sometimes, as, for example, near May Hill, contain the remains of land-plants, consisting of small pieces of undetermined twigs, and the sporecases of one of the Lycopodiaceæ *Pachytheca spherica*.

In these last-named facts there is much significance, bearing on the physical geography of the next so-called geological epoch, which will be explained in the subsequent chapter. In the meanwhile I may remark, that I use the words *so-called geological epoch*, in the same sense that the words epoch or period are employed in dealing with civil or political events. Taking the geological world, and the civil world, which deals with the history of man as parallel, there is no break in time