

prevail in some areas, while the probably lacustrine type of the Old Red Sandstone had already been established in others, and that by the breaking down or submergence of the barriers between these different areas, marine and lacustrine conditions alternated in the same region. The Tilestones are the records of this curious transitional time.⁹⁰

Vegetable remains, some of which seem to be fucoids, but most of which are probably terrestrial and lycopodiaceous, abound in the Downton sandstone and passage-beds into the Old Red Sandstone. The eurypterid genera still continue to occur, together with phyllopoes (Ceratocaris) and vast numbers of the ostracod *Beyrichia* (*B. Kloedeni*). Prevalent shells are *Lingula cornea* and *Platyschisma helicitis*. The Ludlow fishes are also met with.

In the typical Silurian region of Shropshire and the adjacent counties, nothing can be more decided than the lithological evidence for the gradual disappearance of the Silurian sea, with its crowds of graptolites, trilobites, and brachiopods, and for the gradual introduction of those geographical conditions which brought about the deposit of the Old Red Sandstone. The fine gray and olive-colored muds, with their occasional zones of limestone, are succeeded by bright red clays, sandstones, conglomerates, and conglomerates. The evidence from fossils is equally explicit. Up to the top of the Ludlow rocks, the abundant Silurian fauna continues in hardly diminished numbers. But as soon as the red strata begin the organic remains rapidly die out, until at last only the fish and the large eurypterid crustaceans continue to occur.

Turning now from the interesting and extremely important, though limited, area in which the original type of the Upper Silurian rocks is developed, we observe that, whether traced northward or southwestward, the soft mudstones and thick limestones give way to hard slates, grits, and flagstones, among which it is scarcely possible sometimes to discriminate what represents the Wenlock from what may be the equivalent of the Ludlow group. It is in Denbighshire and the adjacent counties that this change becomes most marked. The Tarannon shale above described passes into that region of North Wales, where

⁹⁰ On these passage-beds see Symonds, "Records of the Rocks," 1872, pp. 183-215; Q. J. Geol. Soc. xvi. 1860, p. 193; Roberts and Randall, op. cit. xix. 1863, p. 229; also the remarks made on the corresponding strata in Scotland, postea, p. 1271.