into: 1. Conglomerate ; 2. Brown stone, with Eurypterus ; 3. Marl and cornstones, with irregular courses of concrete limestone, in which are spines of Fishes and remains of Cephalaspis and Pteraspis; 4. Thin olive-coloured shales and sandstone, intercalated with beds of red marl, containing Cephalaspis and Auchenaspis. In Scotland, south of the Grampians, a yellow sandstone occupies the base of the system ; conglomerate, red shales, sandstone and cornstones, containing Holoptychius and Cephalaspis, and the Arbroath paving-stone, containing what Agassiz recognised as a huge Crustacean.

Some of the phenomena connected with the older rocks of

Devonshire are difficult to unravel. The Devonian, it is now understood, is the equivalent, in another area, of the Old Red Sandstone, and in Cornwall and Devonshire lie directly on the Silurian strata, while elsewhere with those in the Devonian beds. The late Professor Fig. 36. – Trinuthe fossils of the Upper Silurian are almost identical Jukes, with some other geologists, was of opinion that

the Devonian rocks of Devonshire only represented (Llandeilo Flags.) the Old Red Sandstone of Scotland and South Wales in part; the Upper Devonian rocks lying between the acknowledged Old Red Sandstone and the Culm-measures being the representatives of the lower carboniferous rocks of Ireland.

Mr. Etheridge, on the other hand, in an elaborate memoir upon the same subject, has endeavoured to prove that the Devonian and Old Red Sandstone, though contemporaneous in point of time, were deposited in different areas and under widely different conditionsthe one strictly marine, the other altogether fresh-water-or, perhaps, partly fresh-water and partly estuarine. This supposition is strongly supported by his researches into the mollusca of the Devonian system, and also by the fish-remains of the Devonian and Old Red Sandstone of Scotland and the West of England and Wales.* The difficulty of drawing a sharply-defined line of demarcation between different systems is sufficient to dispel the idea which has sometimes been entertained that special faunæ were created and annihilated in the mass at the close of each epoch. There was no close : each epoch disappears or merges into that which succeeds it, and with it the animals belonging to it, much as we have seen them disappear from our own fauna almost within recent times.

* For fuller details on this subject, see J. B. Jukes' "Manual of Geology," 3rd ed., p. 762. Also, R. Etheridge, Quart. Journ. Geol. Soc., vol. 23, p. 251.