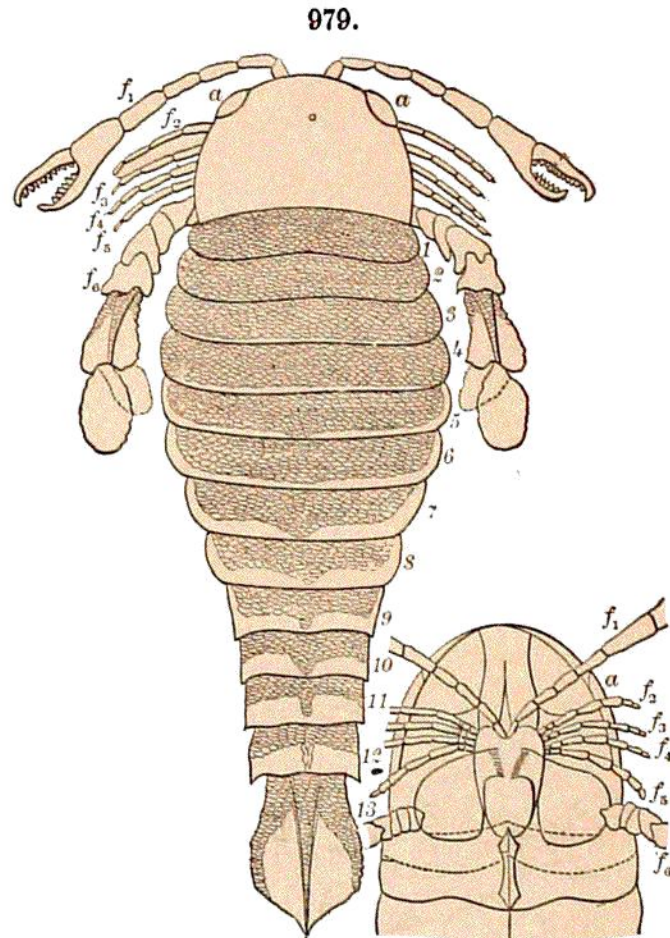


The Old Red sandstone is the rock of all the areas excepting that of Devon and Cornwall. It consists of red, purplish, and brown sandstones, coarse and fine, passing to a conglomerate and also to bituminous flags. It shows by its coarse and varying features, by the absence of fossiliferous beds bearing shells, corals, and other invertebrate remains, and by the presence here and there of relics of Fishes and Eurypterids, that its origin was much like that of the Catskill Red sandstone of eastern America—a roughly made sea-border formation, in waters that suffered in purity from the contributions of streams from the bordering hills. The American Devonian has abundant life beyond the Catskill sandstone area; and in the British seas the beds of Devon are as prolific as the Chemung, Hamilton, and Corniferous of eastern America.

The Old Red sandstone of Scotland (called Old Red in contrast with the *New Red* or Triassic) is reported to have the extraordinary thickness of 10,000 to 16,000 feet. It is divided into an Upper and Lower division, by a plane of unconformability above the level of the Caithness flags (A. Geikie). Besides sandstones the central basin of Scotland includes a great thickness (6000 feet) of igneous rocks—felsyte and felsyte porphyry, doleryte and other kinds; now forming, as Geikie states, chains of hills, as in the Pentland, Orchir and Sidlaw ranges. They occur interstratified with the ordinary beds, several thousand feet above the base of the Devonian, and indicate a long period of ejections. The basins of the Cheviot Hills and of Lorne also had their volcanic ejections.

The Old Red sandstone is remarkable for its Eurypterids. A *Pterygotus* is represented in Fig. 979, *P. Anglicus*, which has a length of six feet—more than three times that of any Crustacean now living. Other common genera are *Eurypterus* and *Stylonurus*. An Ostracoid, *Estheria*, is abundant in some places. A gigantic Isopod Crustacean, the *Præarcturus*, has been described by Woodward (1870) from the Old Red sandstone of Herefordshire.



EURYPTERID. — Fig. 979, *Pterygotus Anglicus*; *a*, eye; *f*, appendages; 1 to 13, numbering of segments.