

In the lower coal-measures of Coalbrook Dale, the strata, according to Mr. Prestwich, often change completely within very short distances, beds of sandstone passing horizontally into clay, and clay into sandstone. The coal-seams often wedge out or disappear; and sections, at places nearly contiguous, present marked lithological distinctions. In this single field, in which the strata are from 700 to 800 feet thick, between forty and fifty species of terrestrial plants have been discovered, besides several fishes of the genera *Megalichthys*, *Holoptychius*, and others. *Crustacea* also are met with, of the genus *Limulus* (see fig. 500), resembling in all essential characters the *Limuli* of the Oolitic period, and the king-crab of the modern seas. They were smaller, however, than the living form, and had the abdomen deeply grooved across, and serrated at its edges. In this specimen, the tail is wanting; but in another, of a second species, from Coalbrook Dale, the tail is seen to agree with that of the living *Limulus*.

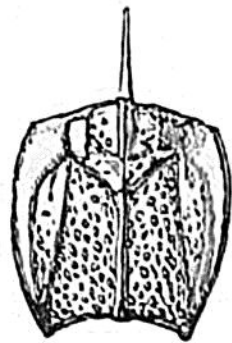
Fig. 500.



Limulus rotundatus, Prestwich.
Coal, Coalbrook Dale.

The perfect carapace of a long-tailed or decapod crustacean has also been found in the iron-stone of these strata by Mr. Ick (see fig. 501). It is referred by Mr. Salter to *Glyphea*, a genus also occurring in the Lias and Oolite. There are also upwards of forty species of mollusca, among which are two or three referred to the freshwater genus *Unio*, and others of marine forms, such as *Nautilus*, *Orthoceras*, *Spirifer*, and *Productus*. Mr. Prestwich suggests that the intermixture of beds containing freshwater shells with others full of marine remains, and the alternation of coarse sandstone and conglomerate with beds of fine clay or shale containing the remains of plants, may be explained by supposing the deposit of Coalbrook Dale to have originated in a bay of the sea or estuary into which flowed a considerable river subject to occasional freshes.*

Fig. 501.



Glyphea? dubia, Salter.
Syn. *Apus dubius*, Milne Edwards.
The oldest recorded decapod (or long-tailed) crustacean. Coal-measures, Coalbrook Dale.

One or more species of scorpions, two beetles of the family *Curculionidæ*, and a neuropterous insect resembling the genus *Corydalis*, and another related to the *Phasmidæ*, have been found at Coalbrook Dale. From the Coal of Wetting in Westphalia several specimens of the cockroach or *Blatta* family, and the wing of a cricket (*Acridites*), have been described by Germar.†

* Prestwich, Geol. Trans., 2d series, vol. v. p. 410.

† See Münster's Beitr. vol. v. pl. 13, 1842.