

ford, County of Wicklow. Other reported regions, partly metamorphic, are those of Charnwood Forest, and the Western Highlands of Scotland.

The lower part of the Cambrian of St. Davids is divided by Dr. Hicks into (1) the Caerfai group, (2) the Solva, and (3) the Menevian. The *Lower Cambrian* includes (according to Walcott) the first of these groups; it contains *Lingulella primæva*, *L. ferruginea*, *Discina Caerfaiensis*, *Leperditia Cambrensis*, but no *Olenellus* has been reported. To it, as Lapworth shows, belong also sandstone beds in Shropshire, from which he has described *Olenellus Callavei* (with which occur species of *Kutorgina*, *Acrothele*, etc.). There are there no overlying *Paradoxides* beds. Here belong also the sandstones, flags, and slates of Bangor and Llanberis, toward the Menai Straits.

The *Middle Cambrian* or *Paradoxides* section comprises the Solva and Menevian beds of St. Davids, which have afforded *Paradoxides Harknessi*, *P. Solvensis*, *P. Davidis*, with *Protospongia fenestrata* and species of *Lingulella*, *Theca* or *Hyolithes*, *Discina*, *Orthis* (*Orthisina*), *Stenotheca*, *Agnostus*, *Microdiscus*, *Conocoryphe*, *Leperditia*. The Lower Cambrian and part of the Middle of Sedgwick are here included.

The *Upper Cambrian* or *Olenus* division comprises the Lingula flags and Tremadoc slates, which occur along by Maentwrog, Festiniog, and Dolgelly in North Wales, and the Tremadoc beds both in North Wales and at St. Davids.

The genus *Olenus* here has its largest development. The beds include also *Dictyonema*, and other Graptolites; species of *Lingulella*, as *L. Davisi* (Fig. 591), *Lingula*, *Obolella*, *Kutorgina*, *Orthis*; *Hyolithes*, *Conularia*,

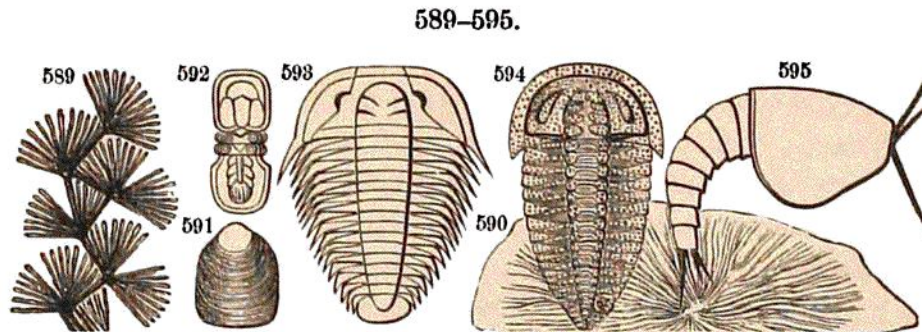


Fig. 589, *Oldhamia antiqua*; 590, *O. radiata*; 591, *Lingulella Davisi*; 592, *Agnostus Rex*; 593, *Olenus micrurus*; 594, *Sao hirsuta* (♂); 595, *Hymenocaris vermicauda* (♂).

*Bellerophon* (*B. Cambrensis*); among Trilobites the genera *Agnostus*, *Conocoryphe*, *Ampyx*, *Olenus* (among the many species, *Olenus micrurus*, Fig. 593), *Dicellosephalus*, *Sphærophthalmus*; also the Crustacean Ostracoids, *Leperditia*, *Primitia*; the Caridoid species, *Hymenocaris vermicauda* (Fig. 595). In the Tremadoc slates occur several species of Graptolites; *Dendrocrinus Cambrensis* and *Palæaster*, among the earliest Echinoderms; Lamellibranchs of the genera *Modiolopsis*, *Palæarca*, *Ctenodonta*, etc.; Pteropods of the genera *Theca* and *Conularia*; the earlier of British Cephalopods, of the genera *Ortho-*