

the Cambrian strata, while *C. variolaris* is common to the Lingula and Menevian strata. *Paradoxides Harknessii*, *P. Hicksii*, and *P. aurora* are common to all three formations, and *P. Davidis* to the two higher divisions. The same kind of passage of species upward from the Cambrian slates and grits to the Lingula flags, may be observed in some of the few genera and species of Brachiopoda, Lamellibranchiata, and Pteropoda, and I have specially insisted on this, in connection with the fact, that at the junction of the so-called three *formations*, there is no marked line of division, but a lithological gradation from the lower to the higher strata, accompanied by the passage of species from lower to higher geological horizons.

The *Tremadoc slates* succeed the Lingula flags, and may be considered as an upper member of that series, while the red and grey Cambrian rocks form a lower member. There is no clear lithological boundary-line between them, and the whole lie conformably. Fourteen genera of Trilobites are known in Wales from these strata, the most characteristic of which are *Asaphus Homphrayi*, &c., *Angelina Sedgwicki*, *Psilocephalus inflatus*, &c., and *Niobe Homphrayi*. Several of the genera of Trilobites are common to the Lingula flags and the Cambrian beds below. Of these, *Agnostus princeps* is found in the Menevian beds, and *Conocoryphe depressa*, *C. invita*, and *Olenus alatus* in the Lingula flags. *Orthis Carausii* is a characteristic brachiopod, and *Lingulella Davisii* and *L. lepis* are common to these strata and to the Lingula flags, together with *Obolella plicata* and *O. Salteri*, while *O. sagittalis* ranges from the Cambrian up to the Tremadoc slates. In Ramsey Island near St. David's many Lamellibranchiate molluscs have been found by Mr. Hicks, of