

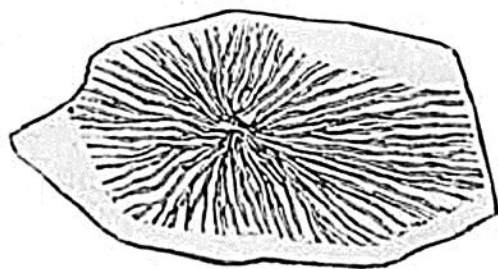
often be somewhat arbitrary, yet in no part of the world have we hitherto examined a succession of rocks having so great a thickness as 45,000 feet, even where they are made up in part of volcanic materials, which have been referred to one period as being characterized by one and the same fauna.

The first formation mentioned by Prof. Sedgwick, beneath the Bala Limestone (and its associated beds of sandstone) in N. Wales, are certain beds, 7000 feet thick, called the Arenig slates and porphyry. Under them he finds the Tremadoc Slates, 1000 feet thick, and next the Lingula Flags, already described, 1500 feet or more, which, in accordance with views first put forward by Mr. Salter, I have referred provisionally to an Upper Cambrian group.

Lower Cambrian.—To the Lingula Flags last enumerated, another series, called by Prof. Sedgwick the Bangor Group, succeeds in the descending order, comprising, first, the Harlech Grits, 500 feet thick, and next the Llanberis Slates, 1000 feet. These formations have as yet proved barren of organic remains in N. Wales; but in Ireland, immediately opposite Anglesea and Caernarvon, rocks of the same mineral character as the Bangor Group, and occupying precisely the same place in the geological series, have afforded two species of zoophytes, to which Professor Forbes has given the name of *Oldhamia* (figs. 611 and 612). The position of these rocks has been decided by the Government Surveyors,

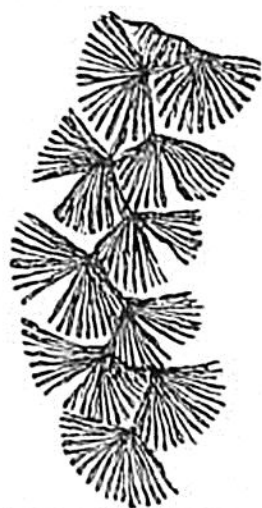
The most Ancient Fossils yet known (1851).

Fig. 611.



Oldhamia radiata, Forbes.
Wicklow, Ireland.

Fig. 612.



Oldhamia antiqua, Forbes.
Wicklow, Ireland.

and confirmed by Sir R. Murchison, so that here we behold the relics of the most ancient organic bodies yet known. We are of course unable at present to determine whether they belong to the same fauna as the fossils of the "Lingula Flags," or to an older one. The beds containing them may provisionally be called Lower Cambrian, for it will always happen that our inquiries will terminate downwards in rocks affording very imperfect materials for classification. This will continue to be the case, however many steps we may make in future in penetrating into the remoter annals of the past.