

oolite, where slabs are often found almost made up of them, with a characteristic deep-water association of *Cidaris*, *Astrogonium*, and *Astropecten*; and although not abundant in the English chalk, several species are found, and these show no tendency to degeneracy. As might be expected, such remains are rare in the shallow-water tertiaries. With regard to their distribution in modern seas, from the apparent abundance of *P. asteria* and *P. mülleri* in deep water in the West Indies, and of *P. wyville-thomsoni* off the coast of Portugal, it is very possible, as I have already said, that they may occupy a much more important place in the abyssal fauna than we at present imagine.

Nearly all the additions from the deep water to the list of the Asteridea fall into the genera *Archaster* and *Astropecten*, or into the various subdivisions of the old genus *Goniaster*. From their breaking up into a multitude of undistinguishable ossicles by the decomposition of their soft organic matter immediately after death, the fossil remains of star-fishes are comparatively rare, and are scarcely met with except in fine calcareous formations, such as the Wenlock limestone,—and in later times in the fine yellow limestones of the oolites, and in the white chalk. In the latter formation, deposited apparently very much under the same circumstances as the Atlantic chalk-mud, the general character of the group of imbedded star-fishes is almost the same as in the modern fauna of the deep Atlantic.

The Echinidea are a more typical order. From the compactness of their tests they are more readily preserved entire, and from the earliest periods their