

in their turn the third radials or axillaries. Each of these bears two primary arms, which either remain single or divide again more or less frequently; but there are rarely more than forty or fifty arms altogether, the forking taking place much less often than in certain Comatulæ.

“The recent dredgings in the Atlantic and in the Caribbean Sea have yielded six species of *Pentacrinus*; but only two were obtained in the Pacific, one of them, however, occurring at such widely separated localities as the Kermadecs (Station 170) and the Philippines (Station 214). At both these Stations, and also at others near them, several species were met with of a new genus of Pentacrinidæ, for which the name of *Metacrinus* is proposed (fig. 118). It is a close ally of *Pentacrinus*, but instead of three, has four or six radials, the second of which is a compound (syzygial) joint and bears a pinnule, as do all the following joints below the axillary. The ‘Vega’ obtained a species of this genus in 65 fathoms, in the bay of Yeddo, Japan, and eleven species were found by the Challenger distributed among four Stations in the Pacific, between 500 and 630 fathoms, Stations 192 and 214, being those where, like *Antedon*, it was found to be most abundant.

“The family Bourgueticrinidæ is well represented in the Atlantic, though no member of it has yet been obtained in the Pacific. Two species of the genus *Rhizocrinus* (fig. 119), so well known on the Norwegian coast, have been found at several localities in the North Atlantic (including Station 122), and in the Caribbean Sea, while there are several fossil forms in the Tertiary deposits. The special interest of *Rhizocrinus* is due to its being a dwarfed and degraded representative of the familiar chalk fossil *Bourgueticrinus ellipticus*, and this is itself a similarly dwarfed member of the large group of Pear-encrinites or Apiocrinidæ, which are so abundant in the Bradford Clay and the other Jurassic rocks, but seem to have died out before the middle of the Cretaceous period. The calyx of *Rhizocrinus* is comparatively long, owing to the height of the basals, while the radials are relatively small. These bear five simple arms, the joints of which are immovably united to one another in pairs by a kind of suture, which is known as a syzygy. Only the upper joint of each pair bears a pinnule, and there are no pinnules at all upon the first four or five pairs.

“Two species of *Bathycrinus* (fig. 120) were dredged by the Challenger in the Atlantic, where it has the widest distribution of all the Stalked Crinoids. The genus had hitherto been known only by a single immature specimen (fig. 121), which was brought up in 1869 by the ‘Porcupine’s’ dredge, from a depth of 2435 fathoms, in the Bay of Biscay. Like *Bourgueticrinus* and *Rhizocrinus*, it is attached by a more or less spreading root, and its dice-box shaped stem-joints are very similar to those of these two genera. But the basals are quite low, and so closely united that the sutures between them are invisible externally, except in young individuals. The radials, on the other hand, are comparatively large, and are united by a muscular joint to broad second radials. To the