

axillaries, like those visible in the next youngest specimen (Pl. IV.); whereas the hexagonal plates themselves are separated in this manner.

Further, in nearly all Neocrinoids which have ten or more arms there are three radials. This is true of all the recent Crinoids except *Metaerinus*, which has a larger number, four or six; and the only fossil genus which has two radials is the aberrant form *Plicatocrinus*.

In all the Neocrinoids, except de Loriol's recently established genus *Eudesicrinus*, there is either a syzygy or a ligamentous articulation between the two outer radials; and the existence of a syzygy in *Holopus* is therefore nothing unusual, though there is less evidence of its presence in the adult condition than is usually the case. But this is scarcely surprising when we remember the excessively intimate union of the first radials, of which no indication whatever is visible on the exterior of the calyx. Some individuals, however, exhibit distinct traces of a sutural line dividing the large axillary into two parts. Such a line is visible in the young specimen (Pl. IV.) on all the axillaries of the trivium, crossing them at the point where the medio-dorsal ridge bifurcates as described above;¹ but it is less distinct in the two bivial axillaries. On the other hand, the three trivial axillaries of the large American specimen present no indications whatever of being composite joints, and have a regular, broadly pentagonal shape. This is well shown in Pl. I. fig. 2; but the bivial axillaries represented in fig. 1 are of an entirely different character, each of them being distinctly in two parts, which look as if they were articulated rather than suturally united, while they do not present the symmetrical appearance characteristic of the corresponding parts in other Crinoids.

In the one case there is a large and wedge-shaped second radial which has all the appearance of an ordinary brachial. It supports a triangular axillary, but the apposed faces of the two do not correspond exactly. The axillary extends beyond the narrower end of the second radial, and so comes in contact with the upward extension of the first radial already described. This is shown in Pl. I. fig. 1. The broader end of the second radial, however, extends considerably beyond the axillary, and meets not only the composite axillary of the adjacent trivial ray, but also the first brachial of its own ray as well as that of the next.

The second radial of the other bivial ray, which is shown in the middle of Pl. I. fig. 1, is more oblong than its fellow. Like it, however, it is wider than the roughly triangular axillary, and supports a considerable portion of the large first brachial. But it is not overlapped by the axillary at the other end, and completely cuts it off from the first radial below.

None of the four remaining axillaries of the specimen figured in Pl. II. show any distinct traces of their being of a composite character;² though there are some lines upon

¹ These lines are not clearly seen in the positions of the specimen which are represented on Pl. IV.

² The lower angle of one of these exhibits an accidental fracture.