one or two of them which may perhaps admit of this interpretation. But not even this can be said of the originals of figs. 3 and 4 on Pl. III. I think, however, that the evidence detailed above is sufficient to bear out the statement that *Holopus* has three radials, of which the two outer ones are united by syzygy. We should accordingly expect to find a similar syzygial union between the first and second brachials; but of this there is no evidence whatever. The distal face of the first and the proximal face of the second brachial (Pl. III. figs. 3, 7) present the ordinary characters of a muscular joint. There are, indeed, in the small specimen shown in Pl. IV. some traces of lines crossing the first brachials, which might be taken as indicating a syzygial union of two primitive joints; but they are nothing like as distinct as those in the radials. I think, therefore, that for the present, at any rate, we must regard *Holopus* as an exception to the general rule which holds good in other Crinoids, as to the similarity between the modes of union of the two outer radials and the two lower brachials respectively (*ante*, p. 49). It is further remarkable from the fact that there seem to be no syzygies between any of the other arm-joints.

The outer surfaces of the composite radial axillaries were described by Sir Wyville Thomson[1] as "very gibbous, thrown out into almost hemispherical projections, studded with low tubercles" (Pl. III. figs. 3–5). They are produced dorsally a considerable distance beyond the edges of the articular faces, as is the case with all the lower arm-joints (Pl. III. figs. 6–13); and they fit very closely against their fellows, their sides being flattened and more or less marked by ridges and furrows, which interlock with those on the adjacent axillaries. These furrows are also apparent on the sides of the lower arm-joints (Pl. II.; Pl. III. figs. 6–12; Pl. Va. fig. 3; Pl. Vb. fig. 4). The muscle-plates of the axillaries, and in a less degree also those of the arm-joints, are greatly thickened, and their upper edges are cut out into coarse teeth. This is well shown in the right-hand figure on Pl. II. and in the upper part of Pl. III. fig. 2, where some of the adjacent axillaries are seen interlocking with each other.

In all the specimens of *Holopus* yet known, including the fresh fragment dredged by the "Blake" off Montserrat, the arms are strongly recurved, and by their close mutual apposition conceal the disk entirely (Pls. I., II., IV.; Pl. Va. fig. 3; Pl. Vb. figs. 4, 5). Obviously, however, this cannot be the natural condition of the living animal. There is a large food-groove on the upper surface of each arm and pinnule (Pl. Va. fig. 1; Pl. Vb. figs. 1, 4, 5); and there is every reason to think that the living animal, when undisturbed, spreads out its arms with the ventral surface upwards just as other Crinoids do for the purpose of obtaining food. The large size of the paired flexor muscles uniting the joints (Pl. Vb. fig. 1, *m*) would seem to give the power of rolling in the arms very rapidly and completely, so as to afford the utmost protection to the soft parts contained within the cup; while the small, but very close and compact bundles of elastic

[1] *Loc. cit.*, p. 408.