

There is another point in the anatomy of *Rhizocrinus* which is not brought out at all in the semidiagrammatic figure given by Ludwig (Taf. v. fig. 7). The second brachials (third radials of his nomenclature) are relatively much too small; but whether he purposely neglected the appearance presented by them, or whether they were really small and undeveloped in his specimens from reparation after injury, I cannot say. The whole of the visceral mass is occupied by the winding gut (Pl. VIIIa. fig. 8, G); so that the body-cavity is reduced to a minimum. But the outline of the visceral mass is not circular as represented by Ludwig, for a large diverticulum of the gut extends outwards between every two brachials. These approach one another over its outer end, so as to protect it, and it is supported on either side by one of the large processes bordering the ventral furrows of the brachials which were described and figured by Sars. This is well shown in the left hand portion of Pl. VIIIa. fig. 8; while the right hand side shows the second brachials almost meeting one another over the interrachial diverticulum of the rectum. The visceral mass and third radials of *Bathycrinus* present the same characters as seen in Pl. VII. fig. 4a, and Pl. VIIb. fig. 7, the first of which shows the great processes on the ventral face of the axillary radial. It would be interesting to determine whether the axillaries of *Bourgueticrinus* present similar processes.

The syzygies of *Rhizocrinus*, at any rate in the lower parts of the arms, are slightly different in character from those of other Crinoids. The apposed faces are not completely striated as in *Comatula*, or even partially so as in *Pentacrinus* (Pl. XII. figs. 7, 10, 18, 21; Pl. XXI. figs. 1 d, 2 d, 5 a; Pl. XXX. figs. 20, 21), as Sars has already pointed out in the case of *Rhizocrinus lofotensis*.<sup>1</sup> Neither, however, are they perfectly simple, as is sometimes the case in *Pentacrinus* (Pl. XXVI. figs. 5, 8; Pl. XXXVII. figs. 3, 4; Pl. L. figs. 6, 7, 12, 13). For there is an indistinct vertical ridge around the opening of the central canal of the hypozygal, resembling that of a bifascial articulation; and this forks at its lower end so as to enclose a somewhat triangular pit into which there fits a corresponding process of the epizygal. The hypozygal faces which I have found to show this character most clearly are those of the first brachials of a *Rhizocrinus rawsoni* from the Azores (Pl. X. fig. 8). It is less visible in the corresponding joints of the Havana specimen (Pl. X. fig. 6). It likewise appears, though less distinctly, on the first brachials of a specimen of *Rhizocrinus lofotensis* from Havana (Pl. X. fig. 1). Sars makes no reference to it in his description of this species, but the pit on the distal face of the first brachial is clearly shown in his Tab. iii. fig. 53, and also in a dorsal view (fig. 54). The backward projection on the second brachial of *Rhizocrinus rawsoni* is represented in Pl. X. fig. 19; while figs. 17 and 18 show the apposed faces of a syzygial union farther out on the arms, the backward process of the epizygal and the corresponding pit on the hypozygal being very distinct.

A curious peculiarity which is presented by one of the Azores specimens of *Rhizocrinus*

<sup>1</sup> Crinoïdes vivants, pp. 15, 22.