

In a considerable number of individuals from different localities on both sides of the Atlantic, I have found the radials to be marked by a circular furrow of variable depth. It crosses the body of the radial at the level of the upper angles of the basals between which the radial rests, as is well shown in the young specimen represented on Pl. LIII. fig. 8.

In the more mature individual from the Caribbean Sea, shown in Pl. IX. fig. 3, the furrow crosses the radials at about half their height; while in one of the specimens from the neighbourhood of the Azores (Station 76) the basals are much less angular at the top, so that the radials are more nearly oblong and almost entirely above a rather strong constriction at the level of the basiradial suture (Pl. X. fig. 3). Other individuals, however, are entirely destitute of any indication of such a constriction. This is the case, for example, with those dredged by Captain Cole off Panama, which are further remarkable, not only for the great relative width of the basal cup as shown in the woodcut (fig. 19), but also for the extreme variation in the position of the first pinnule.

In one individual this is on the epizygal of the seventh brachial in two arms, on that of the fifth in two others, and on that of the fourth in the remaining one. In four arms of another specimen the epizygals bearing the first pinnule are respectively those of the third, fourth, fourth, and fifth brachials; while in a third individual three arms are normal, with a pinnule on the third epizygal, the two others not bearing a pinnule till the next (fourth) joint. Lastly, in a fourth individual every one of the arms is developed abnormally. Three of them are shown in woodcut, fig. 19, B. I will not attempt to offer an opinion upon the grouping of the syzygies and muscular articulations in this specimen. But in one arm at least there appear to be two syzygies in succession; so that the composite brachial is in three parts instead of in two only. This is a variation of some interest, as it is normal in the arms of *Hyocrinus* (Pl. VI. fig. 1). Both types of brachial, that with one and that with two syzygies, occur in different species of the Palæozoic *Heterocrinus*, as pointed out already (*ante*, p. 53).

Although the occurrence of *Rhizocrinus rawsoni* in the East Atlantic and its more striking peculiarities, especially the length of the basals, were noticed in the first Report upon the Caribbean Crinoids<sup>1</sup> which Prof. Perrier quotes, he was led to describe the

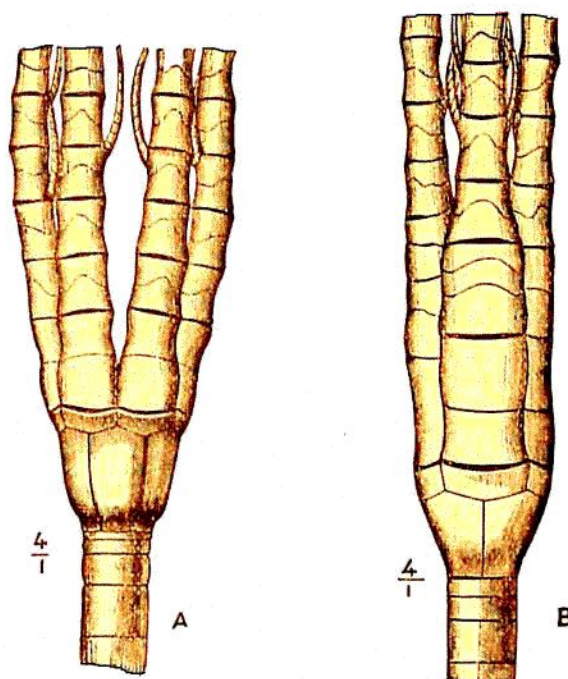


FIG. 19.—The calyx and arm-bases of two specimens of *Rhizocrinus rawsoni* from Panama;  $\times 4$ . In both cases the cup is unusually wide in proportion to its height; and in the right hand specimen (B) the grouping of the lower brachials is very irregular.

<sup>1</sup> *Bull. Mus. Comp. Zool.*, vol. x., No. 4, p. 174.