

prominent and triangular or pentagonal in shape (Pl. XXV.). The same difference appears in *Pentacrinus mülleri*. The specimens in the Copenhagen Museum, one of which is figured by Lütken,¹ have a closed ring of pentagonal basals. Some of those dredged by the "Blake" are in the same condition; but this is far from being the case in the three individuals figured in Pl. XIV. and in Pl. XV. figs. 1, 2. Sir Rawson Rawson's specimen (Pl. XV. fig. 1) has the smallest basals that I have yet seen in this species; while I have met with all intermediate stages between this condition and that of Oersted's types at Copenhagen.

There is also a certain amount of variation in *Pentacrinus blakei*, though I have not seen a sufficient number of specimens to be able to say much about it. In *Pentacrinus naresianus*, again, some individuals have pentagonal basals forming a closed ring; while in others the basals are triangular and barely meet their fellows. But as a rule their outer ends are comparatively small and separated by the radials, which are sometimes prolonged slightly downwards over the upper stem-joints (Pl. XXVIII. fig. 1; Pl. XXX. fig. 1). A few specimens exhibit both conditions, some of the basals meeting their fellows, while the rest are separated by the downward projecting radials.

But the most remarkable variations in the development of the pieces of the basal ring occur in *Pentacrinus decorus*. They are sometimes smaller than those of *Pentacrinus asterius*, and scarcely more conspicuous than the interrarial ridges on the stem beneath them (Pl. XXXIV. figs. 1, 8; Pl. XXXV.; Pl. XXXVI. fig. 3); or they may be larger rhomboidal knobs standing out prominently from the general plane of the calyx, and meeting one another by their extended lower angles (Pl. XXXVI. fig. 1; Pl. XXXVII. figs. 1, 2); or they may present any intermediate condition between these two. To some extent these differences are perhaps due to age, both the individuals figured on Pl. XXXV. being very young. But those represented in Pl. XXXVI. are apparently of about the same age, so far as can be judged from the characters of the stem, while their basals are at the two extreme stages of development; and the original of Pl. XXXIV. fig. 1 is very far from being a young individual. In the young *Pentacrinus wyville-thomsoni*, again, the basals are of about the same relative size as they are in the adult (Pl. XVIII. figs. 1-3). I do not, therefore, see any reason for regarding the variations in the development of the basals as of any more importance than the differences in the number of arm-divisions. In *Actinometra parvicirra* the number of arms may vary from thirteen to thirty-nine, and much the same is the case in some species of *Pentacrinus* and *Metacrinus*. But these differences are rarely of specific, and much less of generic value; and in the same way I find it impossible to consider the presence of a closed basal ring as a valid generic character separating *Cainocrinus* from *Pentacrinus*. There is no recent *Pentacrinus* in which the basals do not appear upon the exterior of the calyx, so as to separate the radials either wholly or partially from the

¹ Om Vestindiens Pentacriner, *loc. cit.*, Tab. iv., v., figs. 1, 2.