

from side to side, as is well seen in Pl. LXVIII. fig. 1; but it is sometimes very much restricted and not readily distinguishable from one of the larger ambulacra (Pl. LXIV. fig. 2). In a few exceptional cases the mouth is practically central, just as it is in *Antedon*, though in other individuals of the same species it is nearly marginal (Pl. LXII. figs. 2, 4).

In the endocyclic Crinoids the position of the mouth on the ventral side corresponds very closely with that of the centre of radiation on the dorsal side; though it is sometimes a little in front of the centre of the disk, as is well seen in *Atelecrinus* (Pl. VI. figs. 4, 6). But in any case the interambulacral area of the disk in which the anal tube is situated corresponds precisely with an interradius of the skeleton, and the ambulacrum opposite to it passes directly on to the joints of the corresponding ray, whether it is undivided as in *Eudiocrinus* (Pl. VI. fig. 2), or forks as in *Atelecrinus* (Pl. VI. figs. 4, 6) and *Antedon* (Pl. IX. fig. 2; Pl. XL. fig. 2; Pl. XLVII. fig. 2). In the latter genus the displacement of the mouth, if it is not quite central, is always in the direction of this anterior ambulacrum, and its position may therefore be described as radial.

This is also true of a great many forms of *Actinometra* (Fig. 6, A). Thus for example in the disk of an abnormal individual of *Actinometra fimbriata*, represented on Pl. LXII. fig. 2, a median vertical plane would be radial in front of the nearly central mouth, and interrarial behind, where it would cut the anal tube. The same is the case in the more typical specimen which is shown in fig. 4 of the same plate. In each alike there is a short but wide anterior ambulacrum, which forks twice and so sends a branch to each of the four arms on the anterior ray. Four more grooves leave the peristome in each individual. But whereas in the one (fig. 2) each primary groove supplies all the arms of one ray, just as in *Antedon* (Pl. IX. fig. 2), this is not the case in the other (fig. 4). For each of the two antero-lateral grooves supplies but two arms of the corresponding ray; and the two remaining arms receive their ambulacra as offshoots of the two primary grooves, which supply the two postero-lateral rays, and together form a sort of horse-shoe enclosing the anal interradius. This is much larger than in the endocyclic forms (Pl. LXII. fig. 4), as the two hinder ambulacra curve outwards from one another towards the margin of the disk, and so greatly reduce the size of the remaining interambulacral areas. The anal tube is at the centre of the disk, and a vertical plane, cutting mouth and anus, would pass along the short ambulacrum in front of the mouth, which is therefore radial in position, just as in *Eudiocrinus* and *Antedon* (Pl. VI. fig. 1; Pl. XL. fig. 2). This condition may be traced, though less clearly, in the disk of *Actinometra elongata* (Pl. LVII. fig. 3).

On the other hand, there are a great many forms of *Actinometra*, as shown in the diagram (Fig. 6, B), which have a distinctly interrarial mouth. Two grooves start from the sides of the peristome, instead of one from its anterior border (Fig. 6, A), and supply the oral arms of the two corresponding rays ( $A_2, B_1$ ); while the ambulacra of their aboral arms