

intermediate joints is complete. At the top of the stem five little calcareous lumps like buttons stand out from the projecting ridges, and upon these and upon the upper part of the stem the cup which holds the viscera of the animal is placed. These buttons are of but little moment in this form, but they represent joints which are often developed into large, highly-ornamented plates in the various tribes of its fossil ancestors. They are called the 'basal' plates of the cup. Next, in an upper tier, alternating with the last, we have a row of five oblong plates opposite the grooves of the stem, and all cemented into a ring. These plates are separate when the animal is young; they are called the 'first radial' plates. They are the first of long chains of joints which are continued to the ends of the arms. Immediately above these plates, and resting upon them, there is a second row of plates nearly of the same size and shape, only they remain separate from one another, never uniting into a ring. These are the 'second radials,' and immediately upon these rest a third series of five, very like the plates of the other two rows, only their upper surfaces rise into a cross ridge in the centre, and they have the two sides bevelled off like the eaves of a gable, to admit of two joints being seated upon each of them instead of one. This last ring of joints are the 'radial axillaries,' and above these we have the first bifurcation of the arms. These three rings of radial joints form the true cup. In the modern species they are very small, but in many fossils they acquire a large size, and enclose, frequently with the aid of various rows of intermediate or