face of every axillary, radial or otherwise (Pl. III. fig. 4; Pl. XXI. fig. 1*c*). A similar but larger process is formed by the fusion of the remaining muscular plate of one of the bivial facets with its fellow on the adjacent facet of the trivium (woodcut, fig. 10). This is seen in the lower part of Pl. V. fig. 1; and it is also visible projecting into the cavity of the calyx in the corresponding part of fig. 2. The other projection seen to the west of it in the same figure is formed by the united muscle-plates of two of the trivial facets, which extend inwards in a more horizontal direction than the larger processes already described.[1] These two large projections are also seen in the north-east portion of fig. 1 on Pl. III., which likewise shows very clearly the separation of the two bivial facets by a pointed upward extension of the outer surface of the calyx. This is very evident in Pl. I. fig. 1, and in the right hand figure on Pl. II. The latter on its left hand side shows traces of the same condition between the other angle of the bivium and the trivial facet next it. This is also visible on the left of Pl. III. fig. 2. But it is much less distinct in the large specimen represented on Pl. I. In the young individual shown in Pl. IV. this character is fairly well marked, except at the two angles of the trivium; while in the still younger and very remarkable specimen obtained by the "Blake" (Pl. V. figs. 9, 10), the shallow calyx is much more symmetrical, and its outer surface sends a pointed extension upwards between every two facets.

$\frac{2}{1}$

FIG. 10.—View of the upper part of the calyx-tube of *Holopus rangi* on its lower or bivial side. The two bivial facets are well shown, together with the interradial process separating them. The left hand one is separated from the adjacent trivial facet by a still larger process; but there is only a small one on the right side.

This surface is marked by an irregular row of scattered tubercles, though none are visible in the other young specimen (Pl. IV.). They are replaced, however, by tolerably well defined ridges which occupy the middle line of the radials, and extend downwards from their upper border to a little distance from the spreading base. They diminish as they go, and finally disappear altogether at a level which probably marks the downward limit of the radials. They are naturally more distinct on the trivial than on the bivial side, and are better marked on the united second and axillary radials, where they bifurcate and are continued outwards on to the arms as well defined medio-dorsal ridges. The lower joints, especially of the trivial arms, also bear one or two small tubercular elevations on either side of the median ridge. These median ridges likewise appear on the second and third radials of the youngest specimen, in which, however, they have more the appearance of a partially disconnected line of tubercles (Pl. V. figs. 9, 10). A row of ill defined tubercles is also visible immediately inside each lateral edge of the second radials. There is a good deal of difference in the external ornamentation on the calyx-tube of the two adult individuals. The large American specimen

[1] Both these figures, as well as the remaining ones on the plate, and in fact all those drawn for Sir Wyville Thomson, are reversed, having been drawn upon the stone in the natural position of the specimens.