antarctica are much smaller than those of *Antedon eschrichti*, even in individuals of equal size, not having more than thirty-five joints, a considerable proportion of which are longer than wide, while the later joints project considerably more on the dorsal side than is the case in *Antedon eschrichti* (Pl. XXIV. fig. 4; Pl. XXV. fig. 6). This is especially marked in the younger cirri which are of the "small mature" type (Pl. XXV. fig. 7), while those which develop in the usual way, though both relatively and absolutely larger, are much more smooth-jointed (Pl. XXV. figs. 4, 5).

Rather more of the first radials is visible on the exterior of the calyx in *Antedon antarctica* than in *Antedon eschrichti* (Pl. XXIV. figs. 10, 11; Pl. XXV. figs. 10–12), and in some instances the ends of the basal rays appear between their lower angles (Pl. I. fig. 6*a*). As in *Antedon eschrichti* the shape of the second radials depends considerably upon that of the axillaries. These are always wider than long (Pl. XXV. figs. 8–11), but vary considerably in shape, even in the same individual. They are almost triangular in some cases, and widely rhombic in others, owing to the strong backward projection, which forms a sort of tubercle together with the very convex centre of the second radial. There is a similar variation in the shape of the first pair of brachials (Pl. XXV. figs. 10–12), and the junctions of the following joints are by no means so tubercular as in the largest variety of *Antedon eschrichti*, though more so than in the smaller and smoother Atlantic specimens, which have about the same size as the largest individuals of *Antedon antarctica* that were obtained. In both species alike, however, as in all the members of this group, the fourth to the eighth brachials bear pinnules on their shorter sides. Beyond the third syzygy the arm-joints of *Antedon antarctica* are even shorter relatively to the width than they are in *Antedon eschrichti* (Pl. XXIV. fig. 11; Pl. XXV. fig. 12), and they have a very decided tendency to overlap which is absent in that species, the arms of which are unusually smooth (Pl. XXIV. figs. 13, 14). The same may be said of the pinnule-joints, especially of the genital pinnules nearest the calyx; while the long flagellate pinnules on the arm-bases are serrate from end to end in *Antedon antarctica* (Pl. XXV. fig. 1–3), whereas in *Antedon eschrichti* the middle joints are smooth with sharp edges but nothing more. The third pinnule of *Antedon antarctica* is much more like its successor than is the case in *Antedon eschrichti*. Its lower joints are considerably stouter than those of the second pinnule, some of them being as long as or longer than wide (Pl. XXV. figs. 2, 3), whereas in *Antedon eschrichti* they are distinctly wider than long. In fact the third pinnule of *Antedon antarctica* resembles the fourth pinnule of *Antedon eschrichti* rather than its fellow, the third pinnule. In the middle and outer pinnules there is a good deal of variation in the extent of modification in the two basal joints; but they are never so much flattened and so nearly trapezoidal in form as they are in the larger *Antedon eschrichti*.

The centro-dorsal of *Antedon antarctica* is somewhat more conical than that of *Antedon eschrichti* (Pl. I. figs. 6*a*, 8*a*), and the axial opening on the ventral surface is