

*flagellata*, &c., which it somewhat resembles in the very small size of the first pair of pinnules as compared with their successors (Pl. XXXVIII. fig. 4). The characters of these pinnules, the shortness of the arms, the large number of cirrus-joints, and the presence of the first radials externally, together with the very slightly wall-sided character of the lower joints of the rays, render it very easy to recognise the type, which has really no close allies among the other bidistichate species.

The disk is scarcely plated at all, and the brachial ambulacra but slightly so. The genital glands contained in the expanded portions of the large lower pinnules are covered by an imperfect pavement of ill-defined plates, above which the ambulacra are situated. The covering plates are tolerably distinct, but the limestone band supporting them is scarcely differentiated into side plates, except in some of the later pinnules.

The position of the side plates, however, is indicated by the sacculi, which are also abundant on the brachial ambulacra and extend down on to the outer part of the disk.

The centro-dorsal of *Antedon macronema* varies considerably in its shape. Most commonly it is a thick disk with a smooth dorsal surface and the cirrus-sockets arranged irregularly on its sides, as shown in Pl. IV. fig. 3a; but it is sometimes more nearly hemispherical, and sometimes almost columnar, with the sockets disposed in alternating vertical rows of three or four each.

A similar series of variations in the form of the centro-dorsal is characteristic of *Antedon scrobiculata* from the Oxfordian of the Jura; and the whole aspect of the calyx of *Antedon macronema* is more similar to that of the Jurassic *Antedon costata* and *Antedon gresslyi* than that of any other recent *Antedon* which I have seen. The great difference between the fossil and the recent types is that the basals of the latter undergo metamorphosis into a rosette; while in the former they persist as prismatic rods between the radials and the centro-dorsal. The positions of these are occupied in the recent form by the rays of the basal star (Pl. IV. fig. 3c), the ends of which sometimes appear on the exterior of the calyx (Pl. IV. fig. 3a). The general characters of the radials of *Antedon macronema* have been already described on pp. 23 to 26, and it is not necessary therefore to refer to them again.

The type was first discovered by Quoy and Gaimard in King George's Sound, and the Challenger dredged it in Port Jackson, while there are examples in the Sydney Museum from Port Stephens. I have never heard of its occurrence at Port Philip, however, though I have seen various other Comatulæ from that locality, where its presence might naturally be expected.

Apart altogether from its resemblance to certain Jurassic Comatulæ, *Antedon macronema* is remarkable as being a link between the species with the rays flattened laterally and an ambulacral skeleton on the pinnules, and those in which these characters do not present themselves, even as slightly as they do in *Antedon macronema*; while its