

Ten arms. First brachial almost oblong; the second bluntly triangular, with a large lateral process bearing the pinnule-facet. The next few segments each have a process of the same kind, but gradually decreasing in size. Arm-joints after the tenth, triangular, as long as wide, and slightly overlapping, but more quadrate towards the end. Syzygia in the third and between the tenth and fourteenth brachials; others at intervals of two to five, usually three, joints.

The first two pairs of pinnules have twenty or more short joints, the first of which is much expanded dorsally and the next two slightly so. This expansion gradually dies away in the following pinnules, which increase in size, becoming stiff and rod-like, and composed of long cylindrical joints, after the first two, which are laterally compressed.

Disk and brachial ambulacra much plated. Covering plates of the pinnule-ambulacra supported on a well-developed limestone band, which is not clearly divided into side plates; the sacculi concealed by it are very large and closely set.

Colour in spirit,—yellow or yellowish-white, with occasional brown or purplish bands.

Disk 6 mm.; spread about 16 cm.

*Locality*.—Station 192, September 26, 1874; near the Ki Islands; lat. 5° 49' 15" S., long. 132° 14' 15" E.; 140 fathoms; blue mud. Four specimens.

*Remarks*.—This is a singular species in many ways and is readily distinguished by the characters of the lower arm-joints and of the pinnules which they bear. The broader end of each joint projects considerably from the general lateral line of the arm, so as to form a large pinnule-facet; and the dorsal part of the first pinnule-joint is expanded into a large curved plate which covers in this facet. This plate, which is well shown in Pl. X. fig. 2a, is sometimes so large that the whole arrangement looks as if it were a malformation due to the action of an encysting *Myzostoma* which had taken up its abode in the pinnule-socket. It is largest in the first two pairs of pinnules, the remaining joints of which are relatively quite short, especially in the first pair (Pl. X. fig. 2a), but by the fourth pair (Pl. X. fig. 2b) the two basal joints are less expanded, though the third is slightly so, while the following joints are much longer and somewhat carinate. In the middle and distal pinnules this tendency disappears and the two lower joints have the usual somewhat flattened appearance.

The lateral projection of the arm-joints to form large pinnule-sockets is a point of some interest because it occurs in some forms of the Jurassic *Antedon costata*, as for example that figured by Walther on taf. xxv. fig. 6 of his memoir. He describes the arm-joints as follows "Das dickere Ende trägt einen dorsalen Knoten und einen seitlichen Fortsatz zur Insertion der Pinnula."<sup>1</sup>

The sacculi are fairly developed on the arms of *Antedon discoidea*, and in the pinnules they are large and extraordinarily abundant. They are covered, however, by the

<sup>1</sup> *Loc. cit.*, p. 172.