

much larger lower pinnules than the inner arms. That of the fourth brachial may reach 15 mm., with nearly thirty joints, the lowest of which are very stout, but not specially long. The corresponding pinnule of the inner arms is about two-thirds of its length, with fewer and smaller joints, and the pinnule of the next joint is of nearly equal size, while on the outer arms it is considerably smaller than its predecessor. The next pinnule is about equal to it, reaching 10 mm., with twenty joints, but on the inner arm it is markedly smaller than that on the fifth brachial. In like manner the first pinnule reaches 12 mm. on the outer arms, with nearly thirty joints, less stout than those of the second pinnule, but still of considerable size at the base, while on the inner arms it is small and slender. That of the third brachial is always quite small. The disk is very deeply incised, almost to the level of the radial axillaries. The outer sides of the distichal and palmar joints are much produced towards the ventral surface, so that each of the five divisions of the disk, as seen from the ventral side, has more or less distinct bony margins. Sacculi abundant along the pinnule-ambulacra.

Colour in spirit,—the disk is grey, and the skeleton white, more or less mottled with purplish- or reddish-grey in bands and patches.

Disk 17 mm.; spread 20 cm.

*Locality.*—Zebu Reefs. Two specimens.

*Remarks.*—This species may be readily distinguished by the characters of its lower pinnules, which have more numerous and much shorter joints than those of *Antedon tuberculata* and its allies, while they are not of equal size on all the arms. Excepting in one ray of each specimen there is no axillary beyond the palmars, and so there are normally eight arms, four on each distichal axillary. In the two outermost of these four arms, the first three pinnules are much larger than their fellows on the inner pair. This is especially the case with the second pinnule (on fourth brachial), so that while on the inner arms it is about equal to that on the next joint, it is one-half longer and considerably stouter on the outer arms.

A somewhat similar variation is presented by one of the types which have been distributed by the Godeffroy Museum under the MS. name *Antedon protecta*, Lütken. Thus in one individual, which I owe to the kindness of Professor Lovén, the first two pinnules on the outer pair of every four tertiary arms are greatly larger than the corresponding pinnules on the inner arms. The second one has twenty-five joints and reaches 12 mm., nearly three times the length of its fellow on the inner arm.

In this type, however, the third pinnule on both inner and outer arms alike has little more than a dozen joints, and is only some 4 mm. long. The small size of this third pinnule is remarkable, not only as distinguishing the type from *Antedon conjungens*, in which it is at least half the length of the second pinnule, if not more, but also in the whole group of species with large second pinnules.