

In many of the tropical Comatulæ the pinnule-ambulacra are fully as well or even better plated than those of the Pentacrinidæ. *Antedon acoela* and *Antedon inæqualis*,<sup>1</sup> both from Stations where Pentacrinidæ are abundant, are good instances of this (Pl. LIV. figs. 4, 6-9). The differentiation of side plates and covering plates is more complete; and the plates themselves are not only larger relatively to the pinnule-joints, but also absolutely so. When the covering plates are erected and the groove opened, as shown in *Antedon inæqualis* (Pl. LIV. fig. 8), the tentacles are extended between them. But the tentacles can be completely retracted and the plates closed down so as to convert the grooves into tunnels, as shown in *Antedon acoela* (Pl. LIV. fig. 4).

In the distal edge of each of the side plates is a small rounded notch, so that there is a series of gaps along each side of the ambulacrum, one between every two plates. These lodge the problematical "sacculi" which are so characteristic of the genus *Antedon*.

In those Comatulæ with plated pinnules which have short and rounded genital glands, instead of the long fusiform structures characteristic of *Antedon eschrichti*, *Hyocrinus*, and the Bourgueticrinidæ, there is sometimes a curious modification of the perisomatic skeleton on the genital pinnules. The enlarged part of the pinnule is protected by a very strongly developed anambulacral plating, which is much more regular and closely set than that of the disk and arm-bases, especially in the case of *Antedon acoela* (Pl. LIV. figs. 1-3). Resting upon the four or five middle joints of the short pinnules there is a double row of large plates, which are rectangular at the base but somewhat more irregular in shape at their upper ends. There are generally five or six plates in each row; but those of the two sides have no fixed relative positions, sometimes corresponding exactly, and sometimes alternating as exactly. They have the same protective function and very much the same appearance as the large side plates of *Hyocrinus* (Pl. Vc. figs. 9, 10, *sp*), but differ from them in two ways. In other species of *Antedon*, such as *Antedon angusticalyx* and *Antedon incerta* (Pl. LIV. figs. 5, 6), these protecting plates are smaller and more irregular than in *Antedon acoela*; while in *Antedon incerta* the two rows are separated by the ambulacrum with its well developed side and covering plates. But in *Antedon angusticalyx* and in *Antedon acoela* these swollen lower pinnules receive no branches from the brachial food-groove, just as in many species of *Actinometra*; and the anambulacral plates covering the genital glands consequently meet one another in the medio-ventral line of the pinnule above the gland within. The sacculi, however, which lie at the sides of the ambulacra may extend on to these grooveless pinnules, and occupy small holes between the large protecting plates; while in the outer joints of the pinnules, beyond the glands, the sacculi occupy the median groove on the upper surface of the skeleton, as is well shown in *Antedon angusticalyx* (Pl. LIV. fig. 5).

<sup>1</sup> The specific formula of this type is—A. 3(1. or 2p.)  $\frac{a^b}{ab}$ .