

Thus then the third pinnule of *Antedon quadrata* is only $\frac{1}{4}$ as long as the second; whereas in *Antedon eschrichti* it reaches $\frac{1}{2}$ of the size of the second, and a similar difference appears in the relative proportions of their component joints.

There is another consideration which, taken by itself, would have no special probative value; but it is not without importance when combined with the other evidence given above. *Antedon quadrata* has been dredged at eleven stations altogether, but at only five of these was it found in association with *Antedon eschrichti*. The "Triton," "Alert," "Valorous," "Tegetthoff" and "Varna" (*bis*) obtained examples of this type at localities where *Antedon eschrichti* did not occur; and in the last four cases they were only single individuals.

These facts would seem somewhat improbable if *Antedon quadrata* is merely an immature stage of *Antedon eschrichti* as supposed by Levinsen. It is a common experience of Arctic dredging to find individuals of *Antedon eschrichti* associated together in considerable abundance, and at various stages of development; and one would therefore not expect to find isolated examples of young individuals, unaccompanied by older ones, quite so frequently as is mentioned above.

Sladen is the only naturalist, besides myself, who has had the opportunity of directly comparing examples of the two species which were obtained at the same locality; and in spite of Levinsen's remarks, I am still inclined to think that he was right in separating the two forms. I find it difficult to believe that the fine example of *Antedon quadrata* which I have figured in the "Varna" report is merely a young stage of the *Antedon eschrichti* obtained at the same locality; though I am by no means prepared to state definitely that it is not the case.

My present impression is that we have to deal with two distinct species, the smaller of which, as I have remarked before, represents a permanently immature form of the larger one.

Antedon quadrata is another of the species in which the cirri are strikingly dimorphic in their character. The mature cirrus of an Atlantic specimen is shown in Pl. XXVII. fig. 1, while fig. 2 represents one that is still immature as shown by the relative length of the sixth and following joints. This cirrus has developed upon the ordinary plan, a much earlier stage of which is seen in fig. 4; but fig. 3 represents another young cirrus, altogether different in appearance and belonging to the "small mature" type, just as has been described in *Antedon antarctica* and *Antedon australis* (Pl. XXV. fig. 7; Pl. XXVII. fig. 18). In the young individual figured on Pl. XXVI. fig. 1, the spread of which cannot have been more than four or five centimetres, most of the cirri seem to have developed upon the small mature plan; but a few rudimentary cirri of the other type are to be found round the margin of the centro-dorsal, and there are more in a considerably older though still immature individual.

The youngest form obtained shows less of the first radials on the exterior of the