

converse is also equally true. All the three Challenger specimens of *Antedon occulta* have post-palmar axillaries (Pl. XLVIII. fig. 1; Pl. XLIX. fig. 3), but it is quite possible that other examples of the type may be eventually discovered in which these are absent. It would be premature, however, to describe them as new, simply because they did not agree with any of the species which had no axillary beyond the palmars. In all such cases as these, and we shall meet with them frequently, the general characters of the type must be carefully taken into consideration, apart from the frequency of its ray-divisions, which is often much greater in some individuals of a species than in others; thus, for instance, examples of *Actinometra parvicirra* have been described with thirteen and with thirty-nine arms respectively, palmar axillaries being altogether absent in the former and abundantly developed in the latter.

It is therefore desirable, so far as may be possible, to employ some other means of classifying any particular series of multibrachiate Comatulæ than one which is based solely on the number of post-radial axillaries; and in the present case there is no difficulty in effecting this object.

We have seen that the bidistichate species of *Antedon* fall into three sets according as there are one, two or three axillaries above the radials. Each of these sets contains species which belong to two very different types of structure, the one with and the other without an ambulacral skeleton. Most of the forms which have a distichal but no palmar axillary (A.2) resemble the members of the *Basicurva*-group in the ten-armed series in the presence of an ambulacral skeleton and in the straight-edged and wall-sided nature of the radial axillaries and of the next following joints. In fact, two members of this group (*Antedon flexilis* and *Antedon lusitanica*) have been already noticed in connection with the *Basicurva*-group, owing to the occasional absence of any distichal axillary (Pl. XXXIX. figs. 1-3; Pl. XLII.). In like manner *Antedon quinquecostata* and *Antedon pourtalèsi* always have a number of distichal series, but these are not always followed by palmars; while I have seen some examples of *Antedon spinifera* with one or more post-palmar series, and others in which there are no axillaries beyond the palmars.

All these species, together with others which will be described immediately, are the bidistichate representatives of the *Basicurva*-group, and they form a very natural assemblage which may be conveniently designated as the *Spinifera*-group. It thus includes a variety of specific types which may have one, two, or three axillaries beyond the radials, *Antedon spinifera* having sometimes two and sometimes three, and being the first species in which an ambulacral skeleton was described. The remainder of the bidistichate species of *Antedon*, which have neither an ambulacral skeleton on the pinnules nor distinctly wall-sided rays, represent the *Milberti*-group among the ten-armed species of the genus in the characters and relations of their lower pinnules, and they may be conveniently designated as the *Palmata*-group. Like the *Spinifera*-group it includes species with one, two, or three post-radial axillaries, but one or more of the pinnules