

in *Antedon longipinna*, *Antedon tenella*, and *Antedon exigua* (Pl. XXX. fig. 2; Pl. XXXI. fig. 4; Pl. XXXII. fig. 4). On the other hand, in *Antedon eschrichti* and its allies the first two or three pairs of pinnules consist of short and wide joints (Pl. XXIV. figs. 1, 2, 7-9; Pl. XXV. figs. 1, 2; Pl. XXVII. figs. 8, 9, 11, 12, 14). The species of the *Eschrichti*-group are exclusively confined to the Atlantic and Circumpolar Seas, but do not extend downwards below 650 fathoms. The *Basicurva*-group, however, is principally limited to the Pacific, ranging from 140 to 1350 fathoms. But there are three Atlantic species which occur at depths of 420 to 1600 fathoms. On the other hand the members of the *Tenella*-group are chiefly confined to the Arctic Ocean, the Atlantic, and the Southern Sea. *Antedon proluxa* is one of the two northernmost Comatulæ known; and two more (*Antedon hirsuta* and *Antedon exigua*) reach further south than any others except *Antedon australis* and *Antedon antarctica*. Of the remaining fourteen species only five occur in the Pacific; four of them range between 150 and 775 fathoms; while the fifth, obtained at 2900 fathoms in the North Pacific (Station 244), was also found at 2600 fathoms in the Southern Ocean (Station 160). These were the two deepest stations at which Comatulæ were met with. The next deepest (1600 fathoms) in the Southern Ocean (Station 147) yielded two more species of the *Tenella*-group, the remaining members of which are confined to the Atlantic. One or two of them are littoral species, like *Antedon rosacea* itself, and *Antedon dübeni*, but this is not the case with the Pacific members of the group, which are not known as yet to occur above 150 fathoms.

With a few exceptions, then, the *Tenella*-group may be regarded as especially characteristic of the Atlantic and Circumpolar Seas, just as the *Basicurva*-group is chiefly confined to the Western Pacific; and in each case the exceptional species belong to the continental or abyssal, but never to the littoral fauna.

### Long-jointed lower pinnules.

#### A. Forty or more long cirrus-joints.

I. Second pinnule as long as the first, . . . . .

1. *phalangium*, Müll, sp.

II. Second pinnule smaller than the first.

a. Axillaries longer than wide; second radials very deeply incised, . . . . .

2. *hystrix*, n. sp.

b. Axillaries as wide or wider than long; second radials incised, but not very deeply so, . . . . .

*proluxa*, Duncan and Sladen.

#### B. Fifteen to thirty cirrus-joints.

I. Second pinnule distinctly smaller than the first.

a. Cirrus-joints mostly longer than wide, the lower ones very much so.

1. First pinnule nearly three times as long as the second; syzygial interval two joints, . . . . .

3. *tenella*, Retzius, sp.