this method, which will be explained further on, but, on the other hand, the mode of formulation suggested by Bell to express the characters of the arm-divisions in the multibrachiate Comatulæ left very much to be desired. For the regular forms which have two or three joints in each arm-division and the axillary a syzygy, his notation is probably as short a one as could be devised. But it gives no means of distinguishing one of these types from the other, or from that of *Actinometra multiradiata* in which both occur together ; and where the successive arm-divisions consist of two joints only, without syzygies in the axillaries, it gives no information at all respecting the number of the arm-divisions, *Antedon palmata* with three axillaries above the radials having the same formula as *Antedon macronema* with only one.

Bell's method is totally inapplicable to irregular types like *Actinometra multifida*, which have syzygies in the distichal axillaries but none in those of the subsequent divisions ; and the consequence is that species with forty arms receive exactly the same formulæ (excepting of course for the cirrus-characters) as others with only ten to twenty. I have referred elsewhere [1] to other difficulties connected with Bell's method of formulation, which is neither elastic enough to indicate exactly on what joint the syzygy comes in the distichal or palmar series, nor does it state the number of joints in each division when there are no syzygies in the axillaries.

For some years before the publication of Bell's suggestions I had been in the habit of employing for my own use a method of formulation which should briefly express the characters of the rays and their subdivisions, and yet at the same time be elastic enough to meet all the variations of *Comatula*-structure with which I was acquainted, together with any others that I could consider as possible. It was based upon a knowledge of the structure of over two hundred species, which has enabled me to make the following generalisations.

1. All ten-armed species of *Actinometra* which have the two outer radials united by syzygy have the first two brachials united in the same way.

Examples.—*Actinometra pectinata* (Pl. LIII. fig. 15); no *Antedon* known.

2. All many-armed species of *Actinometra* which have the two outer radials united by syzygy, either have (a) all the arm-divisions of two joints also united by syzygy, and the first two brachials similarly united; or (β) there may be three distichals of which the first two are articulated and the axillary a syzygy, while the subsequent divisions (if any) consist of but two joints united by syzygy.

Examples.—(a) *Actinometra paucicirra* (Pl. LIV. figs. 1, 2, 10); (β) *Actinometra typica* (Pl. LVII. fig. 1).

3. If the two outer radials are united by bifascial articulation, the two next joints are similarly united, whether there be ten or many arms. In the former case the third brachial is always a syzygy.

On the Classification of the Comatulæ, *Proc. Zool. Soc. Lond.*, 1882, pp. 731–741.