the extent of the arm-divisions. Individuals with a similar distichal axillary on each primary arm and no further division, so that the number of arms is exactly twenty, are extremely rare, except in *Actinometra paucicirra*, and to a less degree also in *Actinometra pulchella*. Another Caribbean species (*Antedon spinifera*) not unfrequently has exactly thirty arms, owing to the very regular presence of palmar axillaries upon the inner pair of every four secondary arms. But I cannot call to mind any species of *Comatula* among the many hundred forms which I have examined in which the total number of arms is exactly forty, owing to the presence of ten distichal series and twenty series of palmars. I have seen an *Actinometra parvicirra* with thirty-nine arms, an *Antedon articulata* with forty, and Bell's unique specimen of *Antedon gyges* has forty-one. But I do not remember any species which always has exactly forty, and I doubt if there be one; while I can say with tolerable confidence that no one will ever find a specific type which always has ten distichal axillaries, twenty palmars, and forty post-palmars, thus giving rise to exactly eighty arms. The logical result of Bell's use of brackets therefore would be that every *Comatula* with eleven to nineteen arms should have the symbol for the distichals placed between brackets; for those with twenty-one to thirty-nine arms there should be brackets round the palmar sign and generally also round the distichal one as well; while the formulæ of types which have over forty and less than eighty arms should have the last, if not the two last, symbols within brackets.

A reference to Bell's formulæ[1] for *Antedon articulata* and *Antedon gyges*, and to those for *Actinometra alternans*, *Actinometra parvicirra*, and *Actinometra multifida*, will show, however, that he has not written them out according to his own system, for none of them have any brackets at all, although in each case he knows of individuals in which the number of arms is not an exact multiple of ten.

There is another point too which he does not seem to have fully considered in the construction of his formulæ. The multibrachiate Comatulæ, such as *Antedon occulta* (Pl. XLVIII. fig. 1) and *Actinometra stelligera* (Pl. LVIII. fig. 1), in which the successive arm-divisions typically consist of two joints each, the axillary without a syzygy, are as a rule extremely regular in their characters. But the case is quite different in those forms which typically have three distichals and three palmars with syzygies in both the axillaries. It is extremely rare to meet with examples of these species in which one or more of the three-jointed distichal and palmar series are not replaced by two jointed series without syzygies in the axillaries. Thus, for instance, I have described specimens of *Actinometra parvicirra* with eighteen and twenty arms respectively, in which half the distichal series were two-jointed, and the other half three-jointed; and a similar irregularity occurs among the palmars. In twelve individuals, however, ninety-six out of one hundred and eleven distichal series, and sixty-seven out of seventy-six palmar series, were three-jointed;[2] and I was thus definitely enabled to make out the characters of the type and to write its

[1] "Alert" Report, p. 155.

[2] *Trans. Linn. Soc. Lond.* (Zool.), 1879, ser. 2, vol. ii. pp. 44, 45.