speak positively as to their nature. But they must certainly belong either to *Actinometra quadrata* or to *Actinometra parvicirra*.

Remarks.—This latter variable and much be-named species is a somewhat isolated one. It is separated from *Actinometra trichoptera* and *Actinometra japonica* by its smaller number of cirri; while *Actinometra regalis* and its allies have many more arms which are united more or less completely by interradial plating (Pl. LXVIII. fig. 2). The only type which approaches *Actinometra parvicirra* at all closely is *Actinometra quadrata*, which seems to be distinguished from it by the shape of its middle and later arm-joints (Pl. LXII. fig. 1). There are, however, one or two forms among those collected at Samboangan by the Challenger which appear to approach *Actinometra quadrata*, and it may be that the latter name will have to be abandoned.

When describing the series of specimens which I called *Actinometra polymorpha*, I put down the number of arms as ranging from thirteen to thirty-nine; and among all the many specimens of this type which I have examined during the last twelve years I have found but one in which those limits have been exceeded. Bell, indeed, described his single individual of *Actinometra annulata* as having forty arms, which would mean that it has the full complement of ten distichal and twenty palmar axillaries; but I have found on examination that this is not the case in reality. Post-palmar axillaries occur in but few individuals that I have examined; and even when they are present I have only once found the number of arms to exceed thirty-nine, owing to the absence of palmars and even of distichal axillaries in other parts of the rays, as is well shown in Pl. LXVII. fig. 3. In this individual three of the primary arms do not divide at all, *i.e.*, there are only seven instead of ten distichal axillaries, and the deficiency of arms arising from their absence is partly compensated by the presence of three post-palmar axillaries. The same is true, though in a less degree, of two more Challenger specimens from Samboangan (Pl. LXI. fig. 5), and also of one from Batjan which I have seen in the Berlin Museum; but in one example from Banda which I must provisionally refer to this type, all the distichal and palmar axillaries are present, together with four post-palmars in addition. There are five more individuals in the Challenger collection which have distichals and palmars but no post-palmars, and eight more in which palmars are not present at all, a condition which also occurs in three of Semper's eleven examples, one of which has only thirteen arms. So great a variation in the number of arms as this is certainly unusual, but I have found myself quite unable to draw any fixed line of separation, often as I have attempted it. It does seem, however, as if forty were the usual limit of the number of arms in this species, even though post-palmars may sometimes be present; and I am inclined to lay more stress upon this as a character of systematic value than upon the presence or absence of palmar or post-palmar axillaries.

The potential dimorphism in the characters of the arms of *Actinometra* is very well shown in this species. It presents itself in two large individuals dredged by the