

externally between the angles of the radials, as seen in Pl. V. fig. 5*b*. The radials somewhat resemble those of *Actinometra maculata* in not completely covering the centro-dorsal (Pl. V. figs. 1*a*, 5*a*); but the ventral pair of muscle-fossæ on their articular faces is even more reduced than in that type (Pl. V. figs. 1*b*, 5*b*, 5*c*). The two species are closely allied, however, and may eventually prove to be connected by intermediate forms. *Actinometra stelligera* is the larger of the two, and has a greater number of arms, palmars being always developed, and sometimes post-palmars also; while there are no post-distichal axillaries in the two examples of *Actinometra maculata*, which also has rather more spinous cirri. The two species further present the same sort of difference in the carination of the basal pinnules as occurs between *Actinometra solaris* and *Actinometra pectinata*. In *Actinometra maculata* there may be keels on the pinnules of the second to ninth brachials, whereas in *Actinometra stelligera* there is no sign of carination on the basal joints of the first pinnule, though there may be on that of the fifth on the same side (10th br.).

Reversions to the more normal type of arm-structure sometimes occur. Thus, for example, the outer arm of the right hand ray in the figured specimen of *Actinometra stelligera* (Pl. LVIII. fig. 1) has the first two brachials articulated like the radials and distichals; whereas in the other arm borne on the same distichal axillary, and in three similar arms of the centre ray, these two joints are united by syzygy. Two curious abnormalities of the disk have also come under my notice. In one case there are two mouths and two anal tubes, as shown in Part I. pl. lvi. fig. 8; while in the other the anal tube is close up to the peristome, a little to one side of the median line, and not central as is usually the case.

The depth at which this species was dredged is not known with certainty; but it was probably either 210 or 255 fathoms, the third depth at this locality being an improbable one for an *Actinometra*, especially as the type belongs to the littoral fauna at Fiji, Samoa, and Tonga. There is a closely allied, if not identical, species from Zebu in the Museums at Dresden and Vienna. Semper's Philippine collection also contains a fine species belonging to this group, which differs from *Actinometra stelligera* in the presence of a third axillary beyond the distichals, and in the relatively smaller size of the centro-dorsal, so that not only the second radials, but also portions of the first, are visible externally. It is the type to which I have occasionally referred as *Actinometra nigra*, Semper, MS., and is remarkable for the great development of the branches of the axial cords of the arms and of the par-ambulacral network which is connected with them in the ventral perisome, and also for the large size of the radial blood-spaces beneath the ambulacra, the existence of which in *Antedon rosacea* has recently been denied by Messrs. Vogt and Yung.<sup>1</sup> Figures illustrating these points were given in Part I. pp. 121, 122, and pl. lxi. fig. 6.

<sup>1</sup> *Traité d'Anatomie comparée pratique*, 1886, Livr. vii. p. 538.