maturity have been already described on p. 14, and are illustrated on Pl. LIV. The young centro-dorsal is a rounded plate with a flattened ventral surface bearing relatively large basal grooves (Pl. IV. fig. 6*a*). These lodge the well-developed basal star, an isolated ray of which is seen in Pl. IV. fig. 6*b*. In the adult, however, the ventral surface of the centro-dorsal is much more convex, as it fits into the inverted funnel formed by the ring of radials (Pl. V. fig. 3*c*), no part of it being visible in a side view of the calyx (fig. 3*b*). Its dorsal surface is flush with that of the radials, which is often marked by the origin of a dark medio-dorsal line extending outwards over the calyx and the bases of the arms (Pl. LIV. fig. 2). These are most frequently twenty in number. Among fifty individuals I have only found one which had not got its full complement of distichal axillaries, one ray (which wants a second radial) being entirely without them, so that the number of arms is reduced to eighteen. Thirty-two examples have twenty arms; nine have twenty-one, seven twenty-two, and one twenty-three. The palmar series, when present, always resemble the distichals in consisting of two joints which are united by syzygy (Pl. LIV. fig. 2).

The arrangement of the syzygies at the bases of the arms is somewhat peculiar. There is always one between the first two brachials, even in the case where distichals are absent, so that the type then reverts to that of the *Solaris*-group, in which the distichal series, when abnormally present, resemble those of *Actinometra paucicirra*.

In both the members of the *Solaris*-group there is also a syzygy in the third brachial (Pl. LIII. figs. 1, 2, 15); and this is sometimes the case in *Actinometra maculata* (Pl. LV. fig. 2). It appears in one of the two arms of the single abnormal ray of the one individual of *Actinometra paucicirra* which has no distichal series. In normal individuals, however, the third brachial is very regularly a syzygial joint in the two outer arms of the ray, the normal sequence of the syzygies thus being 1–2, 3, 11, 15; whereas on the inner arms it is 1–2, 9, 13 (Pl. LIV. figs. 1, 2). This is a very distinct peculiarity of the species; but the syzygies are rather obscure in young individuals and it seems therefore to have escaped the notice of Bell, who makes no reference to it either in his diagnosis or in his figure of an immature specimen.

The two outside arms of each ray in young individuals are often much smaller than the inner pair (Pl. LIV. fig. 10). This is especially distinct in those from the Arrou Islands, in one of which, with a spread of 20 cm., the outside arms on some of the rays are so small as to look like unusually developed pinnules. But their true nature is shown by the fact that they bear small pinnules themselves. In the youngest of these small arms there is a relatively large pinnule on the second, and a very small one on the third brachial; but there are none on the next four joints, though they reappear again on the eighth. This is altogether in accordance with the mode of development of the pinnules in other Comatulæ, which I have described elsewhere.[1]

[1] *Bull. Mus. Comp. Zoöl.*, 1881, vol. ix. No. 4, pp. 14, 15.