

while when the lower pinnules have keels, they are developed like those of *Actinometra solaris*, i.e., on two or three joints (Pl. LIII. figs. 11, 12), and not on one only as is so usual in *Actinometra pectinata* (Pl. LIII. figs. 17-20).

We have already seen that there are similar variations, though of a somewhat more extensive character, among the largest specimens of all which would naturally be referred to *Actinometra robusta*; and I do not think therefore that any other course is possible than to consider *Actinometra intermedia* and *Actinometra robusta* as identical with *Actinometra solaris*. The variation in the extent of development of the keel—from almost nothing but a mere sharpened dorsal edge to large projections on two or three joints of from two to five pinnules—then becomes itself a character of specific value, just as Bell pointed out for *Actinometra intermedia*. For so far as my experience goes the basal pinnules of *Actinometra pectinata* are much more uniformly carinate than in *Actinometra solaris*. With the possible exception of the immature specimen which is the type of *Alecto purpurea*, Müller, I have never seen any individual which would be referred to *Actinometra pectinata* on account of its cirrus-characters, with so slightly developed keels on the lower pinnules, as are shown in Pl. LIII. figs. 5, 6; and I know of none which are absolutely keelless, like the form which I described as *Actinometra robusta*, but now refer to *Actinometra solaris*.

The habit of *Actinometra brachiolata* is only known vaguely as "Australia"; but the geographical range of *Actinometra solaris* and *Actinometra pectinata* is very much better defined. They are limited to quite shallow water, 12 fathoms or less, in the Eastern Archipelago, scarcely extending, however, beyond the limits of the tropics.

*Actinometra pectinata* ranges as far west as Java and Singapore, and has also been found among the Philippines and Moluccas. It likewise occurs along the north-west coast of Australia, in the Arafura Sea, and on the Queensland coast from Cape York to Port Curtis. I have seen examples of *Actinometra solaris* from the China Sea and from Hong Kong, Singapore, and Billiton; but I know of no other localities for it between Java and Torres Strait. Like *Actinometra pectinata*, it is abundant at Cape York and down the Queensland coast to Port Curtis, in lat. 24° S. But with this exception, I have never heard of either of these two species occurring to the south of the Tropic of Capricorn, abundant as they are on the northern shores of the continent. They represent perhaps the most characteristic type of the Crinoid fauna of the Eastern Archipelago, not extending eastwards to Fiji, nor even to Mergui on the west; though these localities have representatives respectively of the other two groups of *Actinometra*-species which have the radials united by syzygy. A form like *Actinometra paucicirra* occurs at Mergui, while *Actinometra typica* extends from Malacca to Fiji.

But so far as my present knowledge goes not one of these three types of structure is represented among the Comatulæ of Southern Australia. *Actinometra paucicirra* abounds at Cape York, was found by Jukes on the reef of Atagor, and is recorded from