

1. The *Solaris*-group.

Ten arms. The two outer radials and the first two brachials respectively united by syzygy.

- A. Less than twenty-five cirrus-joints. The basal joints of the lower pinnules usually have more or less prominent keels.
- Nine to fifteen cirrus-joints, . . . . . 1. *pectinata*, Retz., sp.  
 Seventeen to twenty-three cirrus-joints, . . . . . 2. *solaris*, Lam., sp.
- B. Thirty to thirty-five cirrus-joints. The basal joints of the lower pinnules not specially distinguished, . . . . . *brachiolata*, Lam., sp.

Seven other species besides the three contained in the above list have been referred to this group at different times, viz., *Actinometra hamata*, Herklots, *Actinometra imperialis*, Müller, *Actinometra intermedia*, Bell, *Actinometra purpurea*, Müller, sp., *Actinometra robusta*, Lütken, MS., *Actinometra rosea*, Müller, sp., and *Actinometra strotata*, P. H. Carpenter, MS. The first four are synonyms of either *Actinometra pectinata* or *Actinometra solaris*, while the only character on which Müller relied as separating *Comatula rosea* from *Comatula brachiolata* was the absence in the latter of a terminal comb on the oral pinnules; and I have since found this comb to be present in the type specimens, both at Berlin and at Vienna. *Alecto purpurea* is a small form which was described by Müller in 1843, before he had himself examined Lamarck's types at Paris, but it afterwards appeared to him to differ from *Actinometra solaris* only in showing two radials externally instead of three; and he thought that the difference might possibly be due to the immaturity of the specimen, which he regarded as probably a young form of *Actinometra solaris*. Both the Paris and Vienna specimens of this type have twenty cirrus-joints; and Müller described *Alecto purpurea* as having only twelve, so that it should probably be referred to *Actinometra pectinata*.

*Comatula (Actinometra ?) hamata* was the name given by Herklots<sup>1</sup> to a specimen in the Leyden Museum from Cape Bantano, which was figured by Kuhl and van Hasselt, but is not, however, sufficiently distinct from the general type of *Actinometra solaris* to justify the establishment of another species. I believe now that the same may be said of *Actinometra imperialis*, Müller, of Lütken's MS. species *Actinometra robusta*, of the form which I have hitherto called *Actinometra strotata*, and also of *Actinometra intermedia*, Bell. This may seem to be a somewhat comprehensive statement; but it is the result of a careful and often-repeated examination of a very large amount of material, including the type specimens at Lund, Paris, Berlin, Vienna, Leyden, Copenhagen, and in the British Museum, besides numerous isolated specimens in other collections. My

<sup>1</sup> Échinodermes peintes d'après nature par les soins de Kuhl, van Hasselt, et Sal. Müller, Bijdragen tot de Dierkunde, 1869, Bd. ix. p. 10, pl. ix.