

conclusions, however, are chiefly based on the very large series of specimens belonging to the *Solaris*-group which were collected by H.M.S. "Alert" at various localities in Torres Strait and on the Queensland coast. They are now in the British Museum, and have been placed unreservedly at my disposal by Professor F. J. Bell, to whom my best thanks are due for the ready way in which he has always done his utmost to facilitate my work.

Two years after Müller first described *Actinometra imperialis* from his own examination of the Vienna specimen with an excentric mouth, he gave a description of *Comatula*, or as he called it, *Alecto solaris*, which had been drawn up by Dr. Troschel as the result of his own examination on Müller's behalf of the Lamarckian types of *Comatula solaris* at Paris. Müller knew nothing about the structure of the disk in these last, nor even that the two outer radials are united by syzygy; and it was not till he subsequently visited Paris himself that he found Lamarck's specimens to be both specifically and generically identical with that which he had previously called *Actinometra imperialis*. He therefore withdrew the specific name *imperialis*, replacing it by *solaris*, Lamarck, which he redescribed.<sup>1</sup> All subsequent writers have accepted this identification, with the exception of Dujardin and Hupé, who described the two forms, not only as distinct species, but also as distinct genera.<sup>2</sup>

The "Neue Beiträge" in which Troschel's diagnosis of *Alecto solaris* was published, also contained a careful description, by Müller himself, of a specimen in the Retzian collection at Lund which had been referred by Retzius to the *Asterias pectinata* of Linnæus, an identification which was subsequently adopted in Gmelin's edition of the *Systema Naturæ*. Müller<sup>3</sup> described it under the name of *Asterias pectinata*, Retzius, recognising, however, its generic identity with his own *Actinometra imperialis*, though he still regarded the latter as distinct from *Comatula solaris*, Lamarck. But after examining Lamarck's type, he united the two species and also came to the conclusion that *Asterias pectinata*, Retzius, "scheint eine Farbenvarietät dieser Art zu sein . . . Die Farbenzeichnung ist aber sehr eigenthümlich. Auf der Rückseite der Arme sehr regelmässig zwei schwarze Längslinien, die in der Mitte durch eine helle Linie getrennt sind."<sup>4</sup>

I certainly cannot attach any specific importance to this peculiar marking, which I have seen in several individuals from very different localities, amongst others in that from Hong Kong which served as the basis of my own redescription of *Actinometra solaris* in 1882.<sup>5</sup> In this form, however, there are over twenty cirrus-joints. Müller gave the number as twenty in the Vienna specimen,<sup>6</sup> while Troschel's description

<sup>1</sup> *Abhandl. d. k. Akad. d. Wiss. Berlin*, 1847 [1849], p. 248.

<sup>2</sup> *Archiv f. Naturgesch.*, 1843, Jahrg. ix. Bd. i. p. 133.

<sup>3</sup> *Abhandl. d. k. Akad. d. Wiss. Berlin*, 1847 [1849], p. 249.

<sup>4</sup> *Journ. Linn. Soc. Lond. (Zool.)*, 1882, vol. xvi. p. 514.

<sup>5</sup> *Monatsber. d. k. preuss. Akad. d. Wiss. Berlin*, 1841, p. 181.

<sup>6</sup> *Op. cit.*, pp. 200, 209.