

the calyx of *Comatulæ* which was prevalent at the time of Goldfuss, and that *Comaster* is in reality nothing but a large *Antedon* or *Actinometra*.

Apart from *Phanogenia* and *Comaster*, therefore—one, if not both, of which are merely synonyms—no other Comatulid genera except *Eudiocrinus*, *Antedon*, and *Actinometra* were known, to science before the collections of the Challenger and of the United States Coast Survey ships came into my hands for examination. But one species of *Eudiocrinus* was known, and only about twenty each of *Antedon* and of *Actinometra* had been described, though many others were awaiting description in various museums. Now, however, the number of recent species of *Comatula* is probably nearly four hundred, and three new genera have been established, thus doubling the number known at the time the Challenger returned. One of these generic types, *Atelecrinus*, was actually obtained so long ago as 1868, during the earliest explorations of the Gulf Stream by Count Pourtalès; but the single specimen dredged was so small and mutilated that its very striking peculiarities escaped notice at the time. Equally imperfect and isolated examples of two other species were dredged by the Challenger; and it was not until several less mutilated individuals were obtained by the "Blake" in the Caribbean Sea, that I was able to realise that a new *Comatula* genus had been discovered.¹ It presents so many larval characters that I have called it *Atelecrinus*, as will be explained subsequently.

Atelecrinus can hardly be considered as a new genus discovered by the Challenger; but with *Promachocrinus* and *Thaumatocrinus* the case is altogether different. The former genus² differs from all other Crinoids in the composition of the calyx, which has ten primary radials instead of five only, as is normally the case; and it is represented by three distinct species, one from the North Pacific, one from Kerguelen, and one from a depth of 1800 fathoms at Station 158 in the Southern Sea. At this Station too, there was obtained a single specimen of another *Comatula* which I have no hesitation in regarding as by far the most remarkable of all the Crinoids that have been dredged of late years, viz., the extraordinarily archaic form *Thaumatocrinus*, which presents certain characters only to be found in some of the Palæocrinoids. Its peculiarities were fully described in the Report on the Stalked Crinoids,³ and I do not propose therefore to say much about it here.

¹ Report on the Results of Dredging under the Supervision of Alexander Agassiz, in the Gulf of Mexico, and in the Caribbean Sea, 1877-79, and along the Atlantic Coast of the United States during the summer of 1880, by the United States Coast Survey steamer "Blake," Lieutenant-Commander C. D. Sigsbee, U.S.N., and Commander J. R. Bartlett, U.S.N., commanding. XVI. Preliminary Report on the Comatulæ, *Bull. Mus. Comp. Zool.*, 1881, vol. ix. No. 4, p. 16.

² Preliminary Report upon the Comatulæ of the Challenger Expedition, *Proc. Roy. Soc.*, 1879, vol. xxviii. p. 385.

³ *Zool. Chall. Exp.*, part xxxii., 1884, p. 370.