

while he also gave the names *Solanocrinus* and *Glenotremites* to some other fossil forms of which only parts of the calyx were preserved. Some of Goldfuss's species were made the types of new genera by Agassiz,¹ and Müller referred to them as follows in his first communication to the Berlin Academy on the subject of the Crinoidea:²—

“Die ungestielten Crinoiden mit Armen bilden 3 Familien (1) *Articulata*, gen. *Comatula*, Lam., und *Comaster*, Ag. (2) *Costata* mit schaligem gerippten Kelch und entgegengesetzten Pinnulæ, wovon sonst bei allen übrigen Crinoiden kein Beispiel vorkommt, gen. *Saccocoma*, Ag. (3) *Tessellata*, gen. *Marsupites*.”

The above passage must not be understood as meaning that “*Articulata*,” Müller, is a synonym of “*Comatulidæ*,” d’Orbigny, and should therefore take precedence of it. For there were Stalked as well as Unstalked Crinoidea *Articulata* and Crinoidea *Tessellata*; and in the subsequent memoir on *Pentacrinus* Müller made these the two primary divisions of the Crinoidea, altogether apart from the question of the presence or absence of a stalk. But in his second preliminary communication³ he made a passing reference to “die in der Familie der Comatulinen enthaltenen Gattungen *Comatula* und *Comaster*,” the latter genus being regarded by him as identical with *Solanocrinus*, Goldfuss.

Müller never said anything more definite about the family Comatulinae, however, though he recognised *Alecto* and *Actinometra* as two subgenera of *Comatula*, Lamarck. The Stalked Crinoids remained in an equally chaotic condition for many years. But about 1850 Bronn and d’Orbigny made separate attempts to class them into families. The former author⁴ established the family Astylidæ, though without defining it, and referred to it the recent *Comatula* and three fossil genera. Among these were *Marsupites* and *Saccocoma*, both of which, as we have seen above, had been made the types of separate families by Müller. This was also done by d’Orbigny,⁵ who divided the Crinoidea into ten families, one of which was the Comatulidæ, and this name, or its shortened form “*Comatulæ*,” has been in use for the family of the Feather-stars ever since, though the number of genera referred to the family has varied enormously.

D’Orbigny included in it the recent *Comatula*, Lamarck, and three other genera which were based on the characters of various fossil species. None of these, however, are now recognised; and the same is true of a number of genera established by other palæontologists; for with one exception all the true Comatulids which have been as yet discovered in the fossil state can be referred either to de Fréminville’s genus *Antedon*, which has priority over *Comatula*, or to Müller’s subgenus *Actinometra*, which has gradually acquired generic rank. The exception is the five-armed species from the Valangien of Switzerland,

¹ *Mém. Soc. Sci. Nat. Neuchâtel*, 1835, t. i. p. 193.

² *Monatsber. d. k. preuss. Akad. d. Wiss. Berlin*, 1840, p. 91.

³ *Ibid.*, 1841, p. 179.

⁴ *Lethæa Geognostica*, 1851, Bd. i. Th. 1, p. 23.

⁵ *Cours élémentaire de Paléontologie et de Géologie stratigraphique*, 1852, vol. ii. fasc. i. p. 138.