

which represents a recent generic type first discovered by Semper and named by him *Ophiocrinus*. In consequence, however, of the preoccupation of this name it has been since changed to *Eudiocrinus*. Thus then the great number of generic names which have been given to the fossil Comatulæ become reduced to three, *Antedon*, *Actinometra*, and *Eudiocrinus*. Three new genera have been established by myself for new types of recent Comatulæ, viz., *Atelecrinus*, *Promachocrinus*, and *Thaumatocrinus*; and these six are all that could strictly be included in the family Comatulidæ until quite recently. Pictet¹ has also referred to it both *Marsupites* and *Saccocoma*, but Dujardin and Hupé² removed *Marsupites* to the Cyathocrinidæ, and added to the Comatulidæ the sessile *Eugeniocrinus* and its allies, which had been grouped under the Eugeniocrinidæ in Bronn's "Thierreich." Zittel³ restored this family to its proper position and restricted d'Orbigny's name to the Feather-stars proper; while *Saccocoma* was replaced in Müller's group, the Costata, which had been established for its reception in 1840.

Quite recently, however, it has become necessary to add a seventh genus to the family, viz., the fossil *Thiolliericrinus*, which represents a permanent form of a late stage in the development of the *Antedon*-larva. It has been well described by de Loriol⁴ as an *Antedon* with a *Bourgueticrinus*-stem. The stem-joints of the larval *Antedon* are closely similar to those which are characteristic of the family Bourgueticrinidæ, their faces bearing strong transverse ridges with a deep fossa on each side.

In ordinary Comatulæ the centro-dorsal, after separating from the stem beneath it, soon loses all trace of its previous connections, owing to a more or less extensive deposition of limestone at its dorsal pole; whereas in *Thiolliericrinus* the connection between the lower stem-joints and the cirrus-bearing centro-dorsal seems to have been maintained much longer, if not throughout life. For the under surface of the centro-dorsal bears a well-developed articular facet like that on an ordinary stem-joint of *Bourgueticrinus* or *Rhizocrinus*. It would appear therefore that the centro-dorsal with the few cirri which were developed upon it remained permanently attached to the stem below, so that *Thiolliericrinus* would represent the permanent condition of an *Antedon*-larva during the development of its second whorl of cirri. We cannot be absolutely certain about its characters, however, until an entire example of the genus has been discovered. But the presence of an articular facet on the under surface of its centro-dorsal is a feature which is sufficient to distinguish it very markedly from the six genera of recent Comatulæ.

¹ *Traité de Paléontologie*, Paris, 1857, vol. iv. p. 287.

² *Op. cit.*, p. 186.

³ *Handbuch der Palæontologie*, Bd. i., Abth. 1, p. 395.

⁴ *Description de quatre Échinodermes Nouveaux*, *Mém. Soc. Pal. Suisse*, 1880, vol. vii. p. 10.