

examined a very large number of Comatulæ; and I have almost always found a terminal comb on the oral pinnules of those species which have an excentric mouth; while a variety of other characters are more or less constantly associated with these, as will be explained in detail further on.

In the year 1866 a new Comatulid genus, *Phanogenia*, was established by Lovén<sup>1</sup> for a remarkable tropical species with a stellate centro-dorsal bearing a few rudimentary cirrus-stumps. The dredgings of the Challenger, however, have shown that this condition is common to several species of *Actinometra*, with which the genus *Phanogenia* corresponds in all essential respects. A third new genus of Comatulæ was established in 1868 by Semper<sup>2</sup> for a little five-armed type which he had discovered in the Philippines. He called it *Ophiocrinus*, and for some years it was regarded merely as a subgenus of *Antedon*. Eventually, however, after examination of the three species obtained by the Challenger in the Pacific, together with Semper's original specimen, I satisfied myself of its claim to generic rank, and I proposed to call it *Eudiocrinus*,<sup>3</sup> instead of by Semper's name *Ophiocrinus* which had been preoccupied by Salter. But about the same time that this new generic name was proposed on account of all the known species being limited to the Pacific Ocean, another specific type was discovered by the "Travailleur" in European seas, and it was subsequently described by Perrier<sup>4</sup> as *Eudiocrinus atlanticus*.

One other genus of recent Crinoids, has been described, besides those just mentioned (*Antedon*, *Actinometra*, *Phanogenia* and *Eudiocrinus*), viz., *Comaster*, Agassiz.<sup>5</sup> The leading character of this genus, according to its proposer, depended upon the number of divisions in the arms, and was rightly disregarded by Goldfuss<sup>6</sup> who thought more of the presence of basals on the exterior of the calyx as a generic distinction. Müller<sup>7</sup> adopted the genus in the sense in which it was understood by Goldfuss; but he seems eventually to have abandoned it altogether.<sup>8</sup> This will doubtless prove to be its ultimate fate, as it has not been seen by any naturalist since the time of Goldfuss, whose original specimen of it was dissected and has since disappeared. If his account of it is correct, *Comaster* must be a very remarkable type, differing in many respects from all other recent Comatulæ, as I have explained elsewhere;<sup>9</sup> but I am strongly inclined to believe that its apparent peculiarities are merely due to the want of knowledge respecting the internal structure of

<sup>1</sup> *Phanogenia*, et hittills okänt slägte af fria Crinoideer, *Öfversigt. k. Vetensk. Akad. Förhandl.*, 1866, p. 231.

<sup>2</sup> *Ophiocrinus*, eine neue Comatuliden Gattung, *Archiv f. Naturgesch.*, 1868, Jahrg. xxxiv., Bd. i. p. 68.

<sup>3</sup> Descriptions of new or little known Comatulæ. I. On the species of *Atelecrinus* and *Eudiocrinus*, *Journ. Linn. Soc. Lond. (Zool.)*, 1882, vol. xvi. p. 493.

<sup>4</sup> Sur des *Eudiocrinus* de l'Atlantique et sur la nature de la faune des grandes profondeurs, *Comptes rendus*, 1883, t. xcvi. pp. 725-728.

<sup>5</sup> Prodrôme d'une Monographie des Radiaires ou Échinodermes, *Mém. Soc. Nat. Sci. Neuch.*, 1835, t. i., p. 193.

<sup>6</sup> Beiträge zur Petrefactenkunde, *Nova Acta Acad. Cæs. Leop.*, 1839, Bd. xix. A. p. 348.

<sup>7</sup> Ueber die Gattungen und Arten der Comatulen, *Monatsber. d. k. preuss. Akad. d. Wiss. Berlin*, 1841, p. 180.

<sup>8</sup> *Abhandl. d. k. Akad. d. Wiss. Berlin*, 1849, p. 244.

<sup>9</sup> *Journ. Linn. Soc. Lond. (Zool.)*, 1877, vol. xiii. pp. 454-456.