

*semperi* and *Eudiocrinus japonicus*, while in *Eudiocrinus varians* the first pinnule is on the second brachial.<sup>1</sup> But in his description of *Eudiocrinus atlanticus*, Perrier<sup>2</sup> says "La première syzygie se trouve entre la quatrième et la cinquième pièce des bras ; c'est la cinquième qui porte la première pinnule ; la place de la première syzygie distingue l'*Eudiocrinus atlanticus* de l'*E. indivisus*, Semper ; celle de la première pinnule la distingue des trois autres espèces."

In reality, however, the position of the first syzygy and that of the first pinnule in *Eudiocrinus atlanticus* are exactly the same as in *Eudiocrinus semperi* and *Eudiocrinus japonicus*. In describing the fourth brachial of these two species as a syzygy I was using precisely the same terminology as was employed by Müller<sup>3</sup> in his diagnoses of *Antedon rosacea*, *Antedon phalangium*, and *Antedon eschrichti*, when he wrote "Das erste Syzygium befindet sich am dritten Armglied." Perrier however employs a different terminology, which, as I have explained in Part I. and elsewhere,<sup>4</sup> has several disadvantages from a morphological point of view. He describes the fourth and fifth brachials as united by syzygy. It is perfectly true that these are primitively the fourth and fifth joints of the arm, exactly in the same way as the composite third brachial of *Antedon rosacea* consists of the united third (hypozygal) and fourth (epizygal) joints of the growing arm, as described by Dr. Carpenter.<sup>5</sup> But since the hypozygals of all the brachial syzygies of *Eudiocrinus atlanticus*, *Eudiocrinus semperi*, or of *Antedon rosacea* entirely lose their individuality as arm-joints, bearing no pinnules and taking no part in the movements of the arm, I believe that it is more correct for descriptive purposes to follow Müller and to consider the compound or syzygial joint as one arm-segment only. In accordance with the Müllerian terminology, therefore, I described the fourth brachial of *Eudiocrinus semperi* as being or having a syzygy, after going into the subject rather fully in two memoirs which were published in 1882.<sup>6</sup> Perrier, however, in apparent ignorance of all that had been written on the subject by Müller, Dr. Carpenter, and myself, not only introduces, though seemingly without knowing it, a new descriptive terminology, but also imagines that I had used it before him. He has made a very similar error in his description of *Democrinus (Rhizocrinus)*, and it is much to be desired that for the sake of future workers he would take the trouble to acquaint himself with the current nomenclature before writing his descriptions ; or at any rate that if he decides to introduce a new descriptive method, he would make some statement to that effect. The present result is that he describes a difference between *Eudiocrinus atlanticus* and *Eudiocrinus semperi* or *Eudiocrinus japonicus*, which does not exist in reality. In all three species alike there is a syzygy in the fourth brachial, as Müller would have described it, with a pinnule on the epizygal.

<sup>1</sup> *Journ. Linn. Soc. Lond. (Zool.)*, 1882, vol. xvi. p. 495.

<sup>2</sup> *Comptes rendus*, 1883, t. xcvi. No. 11, p. 725.

<sup>3</sup> *Abhandl. d. k. Akad. d. Wiss. Berlin*, 1849, p. 252.

<sup>4</sup> *Proc. Zool. Soc. Lond.*, 1882, pp. 734, 735.

<sup>5</sup> *Phil. Trans.*, 1866, p. 721.

<sup>6</sup> *Journ. Linn. Soc. Lond. (Zool.)*, 1882, vol. xvi. p. 515 ; and *Proc. Zool. Soc. Lond.*, 1882, pp. 734, 735.