dire que, malgré la simplicite de leurs bras, les *Eudiocrinus*, loin d'être un type primitif de Comatules, représentent au contraire un type notablement modifié."

I do not quite know what Perrier would regard as a primitive type of *Comatula*, and I have not been able to arrive at any fixed ideas upon that subject myself. But if his inference that *Eudiocrinus* is a much modified type has no better foundation than is given in his description of *Eudiocrinus atlanticus*, as would appear from his own remarks just quoted, I do not think that much can be said for it. This species approaches more nearly to *Antedon* than any of the other four comprising the genus; for it has a bifascial articulation between the first two joints above the radials like *Eudiocrinus semperi* and *Eudiocrinus japonicus;* but it also possesses what these have not, viz., abundant sacculi; and these organs are abundant in *Eudiocrinus indivisus* as in *Antedon*. This latter form is, however, much further removed from the ordinary *Antedon*-type than *Eudiocrinus atlanticus*, owing to the syzygial union of the two joints above the radials, which only occurs in a very few species of *Antedon*. Perrier's inference as to the notably modified character of *Eudiocrinus* appears, however, to be entirely founded upon his knowledge of the single Atlantic species; while he makes some considerable errors in his comparison of it with the other Comatula genera, *Antedon* and *Actinometra*.

Eudiocrinus has a somewhat wider geographical range than *Atelecrinus*, extending over more than 70° of latitude in the West Pacific, and occurring at about 45° N. in the Atlantic. The type of the genus was found near Bohol in the Philippine Islands by Professor Semper some twenty years ago. A second species (*Eudiocrinus semperi*), was dredged by the Challenger shortly after leaving Sydney, and again off New Zealand. A third (*Eudiocrinus varians*), was met with off the north-east part of the Philippine Group, at the lowest bathymetrical limit of the genus; while a fourth came up from 565 fathoms, to the south of the Bay of Yedo, and has also been collected at lesser depths in Japanese waters. To these must now be added the Atlantic species dredged by the "Travailleur" in 896 metres[1] (486 fathoms). The bathymetrical range of the type is thus very considerable, and it has been dredged four times below 500 fathoms, on two of which occasions the depth exceeded 900 fathoms. The only fossil species known occurs in the Valangien and Lower Urgonien of Switzerland.

The species of *Eudiocrinus* fall into two unequal groups. The first one comprises Semper's type (*Eudiocrinus indivisus*), in which the first two joints beyond the radials are united by syzygy; while in the four remaining species there is a bifascial articulation between these two joints. In describing the other three Pacific species, I spoke of the fourth brachials as being traversed by a syzygy and bearing a pinnule in *Eudiocrinus*

[1] This depth (896 metres) is that mentioned by Perrier in his first description of *Eudiocrinus atlanticus* (*Comptes rendus*, 1883, t. xcvi. p. 725). Recently, however, he has said :—"Les *Eudiocrinus* vivent à environ 1200 mètres de profondeur, dans les regions vaseuses" (Les Explorations Sous-marines, p. 275), and on the same page is figured a specimen of *Eudiocrinus atlanticus* from 1000 metres. It may be well to remember that *Eudiocrinus indivisus* and *Eudiocrinus japonicus* have both been dredged in less than 50 fathoms.