

been impossible, as de Loriol¹ remarks, to differentiate the species from the numerous forms of *Antedon* which occur associated with it.

Neither arms, pinnules, nor cirri of *Eudiocrinus* present any characters which can be said to distinguish them from the ordinary *Antedon*-type; and the disc with its central mouth might be readily taken for that of an *Antedon*, except for the fact that the primary ambulacra do not divide, but proceed straight on to the five arms (Pl. VI. fig. 2). The sacculi which are usually so abundant at the sides of the ambulacra in *Antedon*, are, however, far less constant in *Eudiocrinus*. Abundant in *Eudiocrinus indivisus*, and *Eudiocrinus atlanticus*, they are scanty in *Eudiocrinus varians*, and altogether absent in the two remaining species, so far as my knowledge of them extends.

The cirri of *Eudiocrinus atlanticus* are described by Perrier² in the following terms:—"Il n'existe également entre les longues pièces des cirrhes dorsaux que de très faibles coussinets charnus, et les cirrhes, dans le plupart des échantillons, se montrent étendus en ligne droite et rassemblés dans une attitude qui rappelle celle que certaines araignées donnent fréquemment à leurs pattes."

"L'*E. atlanticus* est, au point de vue de la locomotion, une intéressante modification du type Comatule; il ne peut en effet, se fixer solidement aux corps étrangers, comme le font les autres animaux du même groupe, et il est probable qu'il repose le plus souvent les bras et les cirrhes étendus sur le limon de l'Océan, n'ayant à craindre, dans les profondeurs où il vit, ni les vagues ni les courants; mais les masses musculaires de ses bras indiquent qu'il doit être aussi un habile nageur. La plupart des *Antedon*, et surtout les *Actinometra*, sont au contraire organisés pour s'accrocher solidement aux corps sous-marins et nagent peu."

It appears to me that Perrier has (as usual) drawn a somewhat hasty conclusion from the majority of his fifteen specimens of *Eudiocrinus atlanticus*, with their cirri fully extended. A large collection of Comatulæ at any particular locality is sure to contain a number of individuals with the cirri stretched out in a straight line. *Antedon phalangium*, for example, has cirri very like those of *Eudiocrinus*, composed of elongated joints with small interarticular bundles (Pl. XXVIII. figs. 1-3). Great numbers of this species, with which Perrier is well acquainted, were dredged by the "Porcupine" off the coast of Tunis. The cirri of some are spread out horizontally; while in others they are turned directly downwards, so as to form a sort of basket below the centro-dorsal, and in yet others the cirri are mostly bent upwards, so as to lie alongside the arms, as in the examples of *Antedon gracilis*, and *Antedon valida*, figured on Pl. XV. Indeed all the three positions may occur in the same individual. The same variations appear in the long-jointed cirri of *Antedon macronema* from Sydney Harbour (Pl. XXXVIII. fig. 5). I have seen individuals of this type in which some cirri are horizontally extended, while others make two or three coils round the stem of a sea-weed or other support. The same

¹ Monog. Crin. foss. Suisse, p. 279.

² Comptes rendus, 1883, t. xcvi. No. 11, p. 726.