

and an infero-marginal series) will be found to exist. There is distinctly a double row in *Ctenodiscus*.

The young form of *Porcellanaster* from Station 137, described on a succeeding page (p. 145), presents in such a remarkable manner all the characters mentioned by Perrier as characterising *Caulaster* (excepting only the single row of marginal plates ascribed to *Caulaster*, in my opinion with doubtful accuracy), that I cannot any longer believe that the two forms belong to different genera. If my assumption is correct *Caulaster* as a generic name must obviously give place to *Porcellanaster*.

If my opinion that *Caulaster* is in reality a young *Porcellanaster* be correct, or if I read the statements concerning that form rightly, the homology which Perrier has sought to establish between, what he calls, the "pédoncule dorsal" of that starfish and the stem of a Crinoid has no morphological basis whatever. The so-called dorsal peduncle seems to me to be nothing more or less than an extraordinarily developed anal funnel (whether aborted in function or not is immaterial for the present argument), and as such it is the homologue of the anal funnel of a Crinoid. According to my views of Echinoderm morphology it could not possibly be the homologue of the stem of a Crinoid, because the dorso-central plate still exists independently in *Porcellanaster*, and clearly also in the so-called *Caulaster*, according to Perrier; and, in my opinion, it is with this plate alone that any relationship with the stem of a Crinoid could exist in the apical system of an Asterid. Furthermore, the "pédoncule dorsal" of *Porcellanaster* and *Caulaster* is excentric in position and situated at the side of the dorso-central plate, as is invariably the case with the periproct in all larval Asterids in which we have been able to observe the primitive apical plates. If therefore the assumption that the "pédoncule dorsal" of *Caulaster* is the homologue of the stem of a Crinoid be admitted, it follows logically that the anal aperture or periproct of all Asterids must be regarded as the homologue of the stem in a Crinoid; and it will impose upon those who accept this view the task of indicating a new and rational homology for the dorso-central plate, and also of explaining the extraordinary morphological changes which have led to the terminal extremity of the alimentary canal of the starfish coming to occupy the position of the stem in the Crinoid, an independent structure with which, in that type, it always has been and still remains, unconnected, and from which it is altogether distinct.

MM. Danielsen and Koren¹ have ascribed, but in more guarded terms, a similar homology to the dorsal appendage of *Ilyaster*. They accept Perrier's deductions with reference to *Caulaster*, but they do not discuss the question at issue, neither do they throw any light upon the validity of the argument. They appear, however, to consider that the

¹ *Nyt Mag. f. Naturvidensk.*, 1883, Bd. xxviii 1, pp. 7-10; *Den Norske Nordhavs-Expedition*, xi., Zoologi, Asteroidea, Christiania, 1884, pp. 102, 103.