

- B. With a simplified form of cribriform organ on the margins of each pair of marginal plates. Actinal interradial areas traversed by fimbriated transverse channels, in continuation of the fasciolar or cribriform channels between the marginal plates CTENODISCINÆ.
 a. A single genus *Ctenodiscus*.

Another genus is ranked amongst the Porcellanasteridæ by M. Perrier¹ in a recent notice of the starfishes dredged by the "Talisman" Expedition. To this form the name of *Pseudaster* is assigned, but no description or diagnosis has yet been published, and all that we know about its characters is conveyed in the following brief statement:—"Les *Pseudaster* ressemblent exactement à des *Pentagonaster* à côtés légèrement concaves; leurs organes cribriformes sont rudimentaires, et leur plaque apicale grande et en forme de cœur" (*loc. cit.*, p. 886).

The Cribriform Organs.—A peculiar structure, apparently associated with special functions, occurs in this group. So far as I am aware it is not found, at least in the form presented by the Porcellanasteridæ, in any other starfishes. As the structure is very constant, and appears to furnish a reliable character, useful for classificatory purposes, and also to be one of considerable morphological importance, I have proposed,² for the sake of brevity, to speak of it as the "cribriform organ."

The structure in question is situated on the marginal plates in the interbrachial arc; and the number of the supposed organs, which is constant in a species, may vary from one to more than a dozen in each arc. The following brief account will indicate the general character of the organ throughout the series.

In *Porcellanaster* the marginal plates are of uniform thickness and form a level plating, the successive plates fitting close together, and are not separated by any vertical furrow or marginal bevelling of the plate. In a species possessing only one of these organs in each arc (*e.g.*, *Porcellanaster cœruleus*, Pl. XX.), the structure about to be described is located in the median interradial line (fig. 3), and consists of a number of greatly compressed spinelets or lamellæ arranged in vertical parallel lines (fig. 4). Each of the lines thus formed is equal in length to the height of the two series of marginal plates, and is invested with membrane. Ten or more such lines or pseudo-lamellæ are present on each side of the median interradial suture; and these do not stand quite perpendicular to the plane of the marginal plates, but are directed at a slight angle towards the median suture. At the upper or aboral extremity, where the organ terminates on the abactinal area, there is a grouping of the spinelets that belong to the abactinal membrane, which are also rather more robust here than elsewhere on the surface. At the lower extremity of the organ, the outer lamellæ are rather shorter than the inner ones; and each being less than the next inward, a rounded outline is given to the lower or adoral extremity of the organ. Five or six flattened spinelets,

¹ *Comptes rendus*, (November 1885), t. ci. p. 886.

² *Journ. Linn. Soc. Lond. (Zool.)*, 1883, vol. xvii. p. 215.