

of a pit which occupies the median area of the adambulacral plate, and is guarded by a small scale-like papilla articulated on the surface of the plate at the side of the pit nearest the furrow. The papilla is capable of being shut down, closing the cavity or pit like a lid; but as to the function of these organs I am quite ignorant. The cavities are filled with a dark-coloured substance which may be either foreign or excreted matter. In one species I believe that the pits are aborted on the outer part of the ray, although the papillæ are present. At present I only know of the existence of segmental pits and papillæ in two species of *Porcellanaster*, both from great depths. There are two pits and their accompanying papillæ on each mouth-plate, and these afford a conspicuous indication that each mouth-plate consists of two adambulacral plates fused together (Pl. XXVII. figs. 2 and 6).

Subfamily PORCELLANASTERINÆ, Sladen, 1883.

Genus *Porcellanaster*, Wyville Thomson.

Porcellanaster, Wyville Thomson, 1877, Voy. of Challenger, Atlantic, vol. i. p. 378.

Rays five, comparatively short, upturned at the extremities, and frequently reverted over the abactinal area. Disk more or less inflated.

Supero-marginal plates not united along the median line of the ray, usually bearing a spine, and these form a series on each side of the ray.

Abactinal area covered with membrane, beset wholly or in limited areas with simple spiniferous spicules. A more or less elongate tubular epiproctal prolongation is present in the centre of the disk, which may be equal in length to the radius of the disk.

Actinal interradial areas paved with thin plates, more or less regularly disposed, but not imbricating and not arranged in definite columns, covered with delicate membrane.

Ambulacral furrows wide and exposed. Armature of the adambulacral plates consisting of one to three elongate, tapering, and sharply pointed spines, usually radiating apart.

Cribriform organs one to three in number.

Segmental pits and papillæ may be present.

Remarks.—Under favourable conditions, I have detected an extremely minute pore at the extremity of the tubular epiproctal prolongation in *Porcellanaster*. It is, however, so very small that I do not think it can act (in the adult at any rate) as an anal aperture, although it may probably be an excretory orifice. (Dr G. O. Sars¹ has

¹ *Researches on the Structure and Affinity of the Genus *Brisinga*, University-Program, Christiania, 1875, p. 50.*