

them is easily proved to be erroneous, their true office remains conjectural. Milne-Edwards says they have great analogy with the biliary vessels of insects; and they probably secrete some fluid subservient to digestion and to the more complete assimilation of the food.

As already remarked the protrusile portion of the polype is very delicate, the internal viscera being as it were enclosed in a serous bladder so transparent as to permit a view of their disposition. This envelope is itself, however, composed of two very thin membranes in intimate union: at the base of the body the outer of these assumes a considerable thickness, and in coalescing with that of the adjacent polypes, constitutes the common cortical portion into which each animalcule retreats at will by a process of invagination, which we have had occasion already to compare to that by which a snail shortens its horns. (Pl. xxvi. Fig. 2.) In the greater number of the Asteroïda this common portion secretes carbonate of lime, which is deposited in the meshes of its tissue either in granules or in crystalline spicula, and imparts more or less of consistency to the whole. The inner tunic on the contrary continues unaltered, and prolonged within the polypiferous mass, it lines the cell, the abdominal cavity, and the longitudinal canals which permeate the mass, as well as the very fine tubular net-work with which the spaces between these canals is occupied, (Fig. 5.) for Milne-Edwards has shewn that there is a free communication between these parts through the medium of numerous minute apertures perforated in the sides of the abdominal cavity.* It is probably in this tenuous inner tunic that the buds or gemmæ by whose increase and evolution the polype-mass is enlarged are generated, the shape and size of the mass depending upon the manner, or pre-ordained fashion, in which the buds are evolved, for in some, as in *Pennatula*, determinate spots only have the appropriated organization; while in others, as in *Alcyonium*, the generative faculty appears to be undefined and diffused. These buds are produced in the net-work of the crust; while the gemmules or ova by which the species is pro-

variés dans leur forme, selon les genres, paraissent s'arrêter à six grappes de gemmules oviformes qui imitent six ovaires."—*Anim. s. Vert. ii. p. 405—7; 417.*

* *Lam. Anim. s. Vert. ii. 465. 2de edit.*