

5 to 6 mm.; in their fully extended state they appear to have a greater length. Those processes communicate with both of the dorsal ambulacra, three with each. On examining the inside of the body-wall one discovers three pairs of ambulacral cavities (Pl. XLI. fig. 5) disposed one a little in front of the other; the first pair of these cavities is in connection with the two middle processes, the posterior pair with both of the outermost processes, and the middle ones with each of the others. In one individual I observed in front of those processes eight papillæ far separated from each other, and so small that they were scarcely distinguishable to the naked eye; their nature will be discussed further on. The perisoma, being particularly thick, soft, and spongy, seems to be in a very macerated condition; on its surface it is easy to distinguish by the naked eye a number of small holes (Pl. XXXIX. fig. 3) which give the integument a porous aspect; they enter small cæcal cavities, the function of which I have not been able to understand. As stated above the calcareous substances are quite dissolved, but the membranes which have surrounded the deposits are, on the contrary, easy to discover; by staining them in hæmatoxylin, one is able to form a correct idea of their former aspect (Pl. XXXIX. fig. 7). From a common centre three straight, slightly spinose arms, about 0.2 mm. long, run out, forming angles of equal size with each other; each arm gives off, close to the centre, a process directed obliquely outwards. Whether some deposits of another shape occur or not, it is difficult to decide, though I have thought I could detect traces of curved, spinose and unbranched spicula. It is also impossible to tell either the shape of the calcareous ring, or whether the madreporic canal has deposits or not.

The polian vesicle measures about 30 or 35 mm. in length. Though I have not been able to discover any pore of the madreporic canal I have succeeded in following the canal itself in its passage through the thick perisoma, and am thus persuaded that it really communicates with the exterior. The narrow alimentary canal terminates posteriorly in a very large and wide cloaca, which towards the left side has a remarkably large cæcal prolongation which ascends towards the middle of the peritoneal cavity; the breadth of the prolongation is about half that of the body or sometimes more. The reproductive organ is elongated and almost as long as the body itself, it is constituted by a single fascicle of numerous small cæca. The common efferent duct divides, where it penetrates the perisoma, into a number of larger and smaller narrow canals, which pass through the integument and end in the tops of the above-mentioned very small papilla-like dorsal processes. The organ is situated on the left side of the peritoneal cavity.

*Achlyonice lactea*, n. sp.

Body oval, about twice as long as broad. Mouth anterior, subventral. Anus posterior, dorsal. Tentacles eleven or twelve, of nearly equal size; their terminal part