

contracted and indistinguishable that their existence can be ascertained only by opening the animal and looking for their ambulacral cavities. The integument is rather thin and transparent, so that the thick yellowish muscular bands are obvious through it. The calcareous deposits (Pl. XXXIII. fig. 3) are represented by a great number of close-set small four-armed bodies with a long rod-like central part; each arm, only about 0.064 mm. in length, is spinose, enlarged towards the end, a little curved, and provided with a shorter, extremely spinose, outwardly directed process; occasionally one or two arms are destitute of those processes. There is also another kind of deposit, with the four arms only slightly spinose, about 0.16 mm. long and bent towards one another, and with the two to three 0.14 mm. long processes straight and very little spinose. The terminal part of the pedicles bears a number of larger or smaller, more or less branched and curved spinose spicula (Pl. XXXIII. fig. 4). The terminal parts of the tentacles enclose an infinite number of larger or smaller, commonly extremely arcuated spinose spicula. The calcareous ring resembles that of *Elpidia willemoësi*. In the surrounding connective tissue there are numbers of simple and ramified, more or less curved, and towards the ends very spinose spicula, of about the same shape as those encountered in the muscular layer of the integument. The madreporic canal has a number of straight or curved, simple or three- or four-branched spinose spicula. The alimentary canal forms a great circumvolution, and is all along its length attached to the inside of the body-wall by means of numerous strong muscular bands and threads; there are no mesenteric membranes; its colour is white, excepting the cloaca and the part that lies nearest to the circular water-vessel, which are violet. The cloaca is rather considerable, but has no cæcal prolongation. The two polian vesicles are 20 or 25 mm. in length. The reproductive organ is composed of two, 20 or 25 mm. long, very thick dichotomously ramified bundles of small elongated cæcal sacs; the single efferent duct bears also some very small bundles. All along the two lateral ambulacra of the ventral surface, I have observed a great number, thirty to forty, of small auditory vesicles, containing numerous otoliths; some vesicles are situated more or less distant from the ambulacral nerves and communicate with them by a branch. The number and position of the dorsal processes, the size of the terminal parts of the tentacles, the fine ramification of the reproductive organ, and the want of the internally placed calcareous deposits of the integument, constitute the characters which distinguish this species from the preceding one.

*Elpidia ambigua*, n. sp.

Body elongated; about twice as long as broad, slightly depressed. Mouth anterior, ventral. Anus posterior, subdorsal. Tentacles of almost equal size; their terminal part large, discoidal, provided with small retractile processes. The dorsal surface with a pair of long slender processes at its foremost part, and immediately behind those, two or three very small ones. Pedicels only on the posterior half of the ventral surface,