

four thick and short diverging rods with rough outlines. The polian vesicle is single, measuring only 15 to 20 mm. in length. The thick cord-like madreporic canal pierces the body-wall, thus connecting the ambulacral system with the surrounding sea water; as usual, its aperture is situated in the medio-dorsal line, about 15 mm. behind the tentacles. The wall of the madreporic canal is particularly firm and thick, containing only a small number of calcareous deposits of the same C-curved shape as those in the integument of the body. In regard to the ambulacral system, I refer to the anatomical part of my report.

The alimentary canal is rather wide. It decreases at first slightly backwards, and dilates again gradually, so as to form a large, thick-walled cloaca, from the left side of which projects forwards a considerable cæcal prolongation. The alimentary canal is attached to the inside of the body-wall not by mesenteric membranes but by a number of longer or shorter elastic bands. The madreporic canal and the efferent duct of the reproductive organ are connected with each other as well as with the adjacent portion of the alimentary canal by a mesentery. The five vessels, which the water-vascular ring emits, are united with one another by a very thin transparent membrane, thus forming a cavity or sinus around the foremost part of the alimentary canal. The reproductive organ consists of a single fascicle made up of bundles of small oval cæca, and is situated on the left side of the medio-dorsal line. The organ opens immediately behind the pore of the madreporic canal. The walls of the alimentary canal, the blood-vessels, and the reproductive organ, as well as the elastic bands, which retain the alimentary canal in a proper position, contain C-curved calcareous deposits; sometimes I have observed in the respiratory organ some scattered, spinose spicula of about the same shape as those of the integument. The individual from Station 157 differs from the others by its gigantic size, 180 mm. by 110; besides, its dorsal processes seem to be comparatively smaller. The discovery of this characteristic species in two such far distant localities, as in the South Indian Ocean, not very far from the Antarctic Sea, and in the South Pacific Ocean, near Valparaiso, is in the highest degree interesting, and justifies the supposition that its distribution must be very extensive.

*Scotoplanes mollis*, Théel (Pl. II. figs. 1, 2).

*Elpidia mollis*, Théel, Preliminary Report on the Holothuridæ, p. 14.

Body ovate, about twice as long as broad. Mouth terminal, subventral. Anus posterior, terminal. Tentacles of almost equal size; their terminal part provided with two large retractile digitiform processes, and with several small ones. Pedicels six along each side of the ventral surface, rather large. Processes of the dorsal surface two, rather large, elongated and conical, flexible, placed side by side a little in front of the middle of the body, and two smaller ones issuing from each outer side of the former near their