

6 mm. The mouth is closed by five processes or valves, which carry some smaller protuberances. The anus is slightly turned upwards, and situated much nearer the dorsal than the ventral surface; it is surrounded by five small conical teeth, alternating with five broader scales.

The perisome is hard and leathery from several kinds of deposits. The rounded or oval, thick, reticulate bodies, or, as I prefer to call them, scales, do not attain so large a size as in the preceding species, but are, on the contrary, rather small in comparison with the size of the animal. Semper seems to deny their presence. The spheres are often incomplete and of varying shape (Pl. VI. fig. 7*a*). In the external layer of the integument the "hemispheres" or cups are to be found (Pl. VI. fig. 7*b*); they very seldom present a regular appearance, hardly two being alike. In most cases they are very slightly concave, perforated by several holes, of which the four central are usually largest, and their rim is provided with spines, which are sometimes confined to one end of the flat oval plate-like cups. One or several spinous or smooth beams cross the cups on their concave side. These cups are much more finely constructed than the spheres. The pedicels are supported by terminal plates, numerous transverse perforated rods of varying shape (Pl. VI. fig. 7*c*), and perforated, irregular, flat, knobbed cups (Pl. VI. fig. 7*d*).

The three ventral pieces of the calcareous ring are considerably narrower than the rest. A single Polian vesicle is present. Numerous small madreporic canals, of which one is slightly larger and situated in the dorsal mesentery, also occur.

*Colochirus cucumis*, Semper, 1868 (Pl. XIV. figs. 9, 10; Pl. VI. fig. 9).

*Habitat*.—Station 203, October 31, 1874; lat. 11° 6' N.; long. 123° 9' E.; depth, 20 fathoms; mud; a single specimen.

The body is very distinctly quadrangular, excepting anteriorly and posteriorly, where it is pentangular, the odd ambulacrum being there more prominent so as to form a fifth angle. The two dorsal angles carry conical tubercles or processes of unequal size, some being very small, and arranged in an irregular zigzag row. Moreover, the three ventral ambulacra also carry such tubercles anteriorly and posteriorly. The dorsal interambulacra have but few tubercles. In the specimen I have seen, the mouth and anus are bent upwards, and the former is closed by the five characteristic triangular valves. No imbricating scales occur round the anus. The three double rows of pedicels are very distinct.

The deposits are of several different kinds—large rounded or oval reticulate thick scales; rounded or oval reticulate spheres, about 0.09 mm. in diameter (Pl. VI. fig. 9*a*); smaller, more delicately constructed spheres (Pl. VI. fig. 9*b*), about 0.04 mm. in diameter;