

The body of the animal being in a state of contraction, it is almost impossible to decide whether the curve of the body is a result of an accidental contraction or not. For the same reason the arrangement of the ambulacral appendages is not easy to determine. So far as I can discover, the pedicels are situated mainly on the ambulacra, where they are disposed in two to three rows. But even in the interambulacra a few scattered pedicels may be observed, especially on the dorsal surface, though the middle line of the interambulacra always seems to be naked; consequently the narrow interambulacra give the impression of being in want of pedicels. Strangely enough, the three longer, ventral ambulacra carry at the middle of the body some conical elongate papillæ, which seem to be in want of sucking-disks. This is contrary to what was stated by Semper in *Cucumaria versicolor*, which species is furnished with papillæ scattered among the dorsal pedicels.

The calcareous ring (Pl. IX. fig. 5, *a*) is composed of ten pieces, of which the five radial are prolonged into two narrow processes posteriorly, which, if my observations be right, are composed of several joints. A single Polian vesicle and madreporic canal present. The ampullæ are visible on the inner side of the body-wall. The reproductive organs are composed of two thick bundles of short simple tubes.

The tables of the perisome (Pl. IX. fig. 5, *b, c, d*) are characterised by possessing a spire composed of only two rods and by the want of a larger central hole in the disk; besides, the spire is short, without transverse beam, and terminates in several teeth. The diameter of the disk is from 0.04 to 0.05 mm., the height of the spire is about 0.028 mm. The pedicels and papillæ are supported by transformed, curved, rod-like tables (Pl. IX. fig. 5, *e, f*). The walls of the body itself, pedicels and papillæ, are rough with the deposits.

The specimen brought home from Australia closely agrees with the above description. Length, 13 mm. Its body-form is more rounded, with the ventral surface longer and more convex than the dorsal surface. Tentacles fully extended, two ventral smaller than the rest. Pedicels arranged in a double row on each ambulacrum, and, besides, scattered on the interambulacra, which, however, are almost naked at the middle of the body and along their middle line. The pedicels have well-marked sucking-disks. At the middle of the body the three ventral ambulacra carry some long, slender, almost cylindrical papillæ, which are totally devoid of sucking-disks, but terminate in a conical top without terminal plates. These "papillæ" are about 4 mm. long, thus being much larger than the pedicels.

*Cucumaria capensis*, n. sp. (Pl. V. fig. 2).

Body cylindrical, indistinctly pentangular, more tapered posteriorly than anteriorly. Arms without teeth. Tentacles ten, two ventral considerably smaller. Pedicels in a