

Besides tables, terminal plates are to be found. This species is doubtless allied to *Cucumaria longipeda* described by Semper and von Marenzeller, but it is in want of any pedicels in the ventral interambulacra.

Cucumaria serrata, n. sp. (Pl. IV. fig. 1).

Body elongate fusiform, more tapered posteriorly than anteriorly. Tentacles of almost equal or of unequal size. Pedicels arranged in a simple row along each ambulacrum, excepting anteriorly behind the tentacles, where two rows instead of one are visible. No ambulacral papillæ or processes present. The interambulacra naked. Calcareous ring in a lower state of development. Madreporic canal single. Two Polian vesicles. Calcareous deposits—very crowded, closely disposed knobbed and perforated plates with one end drawn out into a long, straight, or slightly curved, spinous, and perforated process. Surface of the integument rough, on account of the oblique outward direction of the spinous processes of the plates. Colour in alcohol, light greyish. Length about 35 or 40 mm.

Habitat.—Station 150, February 2, 1874; lat. $52^{\circ} 4' S.$, long. $71^{\circ} 22' E.$; depth, 150 fathoms; bottom temperature, $35^{\circ} \cdot 2$; coarse gravel; several specimens.

In some individuals all the tentacles are equal, but they are not so always. Thus, I have seen a specimen with six tentacles much smaller than the remaining four, and in another individual two tentacles were slightly larger than the rest, &c. The pedicels of each ambulacrum are not crowded, but arranged in a simple zigzag row at some distance from one another; only anteriorly is a double row to be observed. The pedicels do not seem to be completely retractile. The perisome is very hard, though not thick, from the very numerous densely crowded and partly overlapping plates which fill it up. Behind the tentacles, however, it has but few deposits. The plates (Pl. IV. fig. 1) are of a very characteristic form, somewhat resembling those in Semper's *Cucumaria leonina* and Brandt's *Cucumaria miniata*. They are more or less elongate, and directed obliquely outwards, so that the inner end is rounded or obtuse, broad and more closely fenestrated; the holes decrease in number towards the other, narrow, highly prolonged handle-like end, which terminates in some spines giving to the surface of the animal a high degree of roughness. Moreover, the plates are provided with larger and smaller knobs, and their margin is uneven. The handles of the plates are often more or less obviously curved. Their length is about 0.27 mm. The pedicels are strengthened by terminal plates and numerous other deposits partly of the same shape as those in the body-wall itself, though more or less deformed, partly resembling simple perforated irregular smooth plates; no supporting rods are present. The tentacles have rather large perforated, smooth plates (Pl. IV. fig. 1b), as well as numerous smaller, curved, fenestrated ones; even here no rods are to be detected.

The calcareous ring is very rudimentary, and does not appear to the naked eye unless