

plates. The tables have the perforated disk smooth, undulating, or provided with spines in the margin, and their spire, composed of four rods and one transverse beam, terminates in twelve teeth. The plates, much more numerous than the tables, and crowded in heaps, are commonly rounded, flat and disk-like, with the margin slightly uneven, and perforated by more or less numerous minute holes; among these other more or less irregularly rectangular plates with fewer but larger holes are to be found. The dorsal conical appendages are alone furnished with transverse supporting rods near the more or less incompletely developed terminal plates; the rest of the dorsal appendages as well as the ventral pedicels seem to be devoid of any rods or plates, or only have a few irregular plates round the terminal plate which is always well developed. Colour in alcohol, dark greyish-brown on the back and the sides, and light almost whitish-grey on the ventral surface; the ventral pedicels brownish. Length about 190 mm.

*Habitat.*—Simon's Bay; depth, 10 to 20 fathoms; a single specimen.

This species is remarkable in possessing, besides true minute dorsal pedicels, minute dorsal papillæ which differ from the former not only in their exterior form, but especially in the presence of simple or slightly branched, strong rods. It seems as if the dorsal papillæ are less numerous than the dorsal pedicels.

The calcareous ring seems to be of the usual shape without posterior prolongations. The Polian vesicles are numerous, up to twelve or more, of unequal size, and some of them carry small branches at their base. A bundle of from five to sixteen madreporic canals with pear-shaped ends is situated on each side of the dorsal mesentery. The reproductive organs consist of a bundle of tubes, several times branched, situated on the left side of the dorsal mesentery. The respiratory-trees are well developed.

The tables (Pl. VIII. fig. 7, *a, b, c*), when fully developed, have a simple circle of holes round the margin of the disk which attains a diameter of about 0.056 mm.; their spire is about 0.04 mm. high. Most of the disks are smooth, but I have often seen them with spines. In the pedicels, the disks of the tables are absent or reduced to a simple ring. The rounded flat plates, about 0.03 mm. in diameter (Pl. VIII. fig. 7, *e*), are characterised by their minute holes, and they seem to be collected into heaps in some parts of the body. The other plates (Pl. VIII. fig. 7, *d*), which attain about the same size as the former, have a more irregular form, but they often present themselves under the shape of a more or less irregular rectangle; they have some resemblance to disks of the tables, and their surfaces are not always quite even. The species in question is possibly identical with Ludwig's *Holothuria mexicana*.

*Holothuria spinifera*, n. sp. (Pl. VIII. fig. 1).

Body cylindrical, equally rounded anteriorly and posteriorly. The closed mouth surrounded by a collar of small papillæ. Tentacles twenty (?). Anus with five groups