

ambulacrum with fifty-five pedicels, smaller than the former, and disposed in a double row. Processes of each side of the dorsal surface numerous, about one hundred; the largest as long as half the breadth of the body. The anterior part of the back with a transverse, thin, lobe-like extension of the skin, sending out several processes. Integument rather thin with two sorts of calcareous deposits: large wheels, 0.24 mm. in diameter, with eleven to thirteen spokes; and small wheel-shaped plates, 0.052 mm. in diameter, with about fifteen holes.

Colour in alcohol, white grey; back dark violet, with the small processes and the top of the larger ones whitish; terminal parts of the tentacles and pedicels yellowish. Length, about 200 mm. Breadth, about 40 mm.

*Habitat.*—Station 164. June 12, 1874. Lat. 34° 8' S., long 152° 0' E. Depth, 950 fathoms; bottom temperature, 2.2° C.; grey ooze. One specimen. Station 169. July 10, 1874. Lat. 37° 34' S., long. 179° 22' E. Depth, 700 fathoms; bottom temperature, 4.2° C.; grey ooze. One specimen.

Although I have only had the opportunity of examining a single tolerably complete individual from Station 164, and a very defective one dredged at Station 169, I do not doubt that the variation in the number of pedicels and processes is considerable. The terminal part of the tentacles is covered with minute papilla-like projections, and, as noted in the diagnosis, one pair of small processes on the outer margin seems to be larger than the others. The pedicels of the odd ambulacrum are considerably smaller than those of the lateral ambulacra, some of them being almost rudimentary. The form of the pedicels is truncated conical, with the large rounded terminal part leathery, and measuring up to 4 mm. in diameter. The lobe-like transverse appendage on the back anteriorly is rather indistinct and macerated; it is difficult to distinguish its true shape, and from its thinness and slight height I was at first sight inclined to think that it was a piece of the outer layer of the perisoma which had been torn off and had attained that form, but on noticing its clearly marked edge and its processes, I was convinced that it was a real lobe-like appendage. The numerous dorsal processes form two longitudinal series, one along each side of the back, leaving a rather broad naked area between them; each series contains several processes side by side, though their arrangement in rows is imperceptible. Judging from the ambulacral cavities or vesicles it is evident that some of those processes belong to the lateral ambulacra of the ventral surface. The largest processes attain a length of 15 to 20 mm., but most of them, being minute and almost rudimentary, are only visible as lighter spots.

The large wheels (Pl. XXXII. fig. 1), 0.24 mm. in diameter, are almost visible to the naked eye; they are provided with eleven to thirteen spokes, and their large nave is perforated by a more or less round central hole, from the edge of which projects a crown constructed of four slightly curved arms. The wheels being slightly convex, the top of the crown lies inwards, while the felly is directed outwards; between the spokes the felly