six very soft and flexible processes disposed in an almost transverse row on its anterior part. Integument very thick, soft, spongy, and apparently porous; calcareous deposits composed of three more or less spinose arms, each arm with a process near the common central point.

Colour in alcohol light grey, inclining to green. Length, about 100 mm. Breadth, about 50 mm.

Habitat.—Station 241. June 23, 1875. Lat. 35° 41′ N., long. 157° 42′ E. Depth, 2300 fathoms; bottom temperature, 1·1° C.; red clay. Two specimens.

When preparing the Preliminary Report on the Holothuridæ of H.M.S. Challenger, I had not an opportunity of making a detailed examination of the perisoma of this species, and as it was quite impossible to detect any traces of calcareous deposits either by a microscopic examination of small pieces of the integument or by treating them with a solution of potass, I took for granted that there were none. By using such colouring matters as hæmatoxylin, however, I have been persuaded that I made a mistake in stating that the perisoma was destitute of deposits. This reagent brings out with such distinctness the extremely thin sheaths or membranes which surround the calcareous deposits, that one gets a fairly true idea of their forms, though the calcareous matter has been dissolved for a considerable time. On account of this I have thought it necessary to change the name of the species so as to avoid the chance of misapprehension.

The dorsal surface is extremely convex, the ventral, on the contrary, is almost flat or slightly concave. An obvious edge marks the transition between these surfaces. The body is especially broad posteriorly and rounded in the form of a semicircle, and decreases anteriorly towards the crown of tentacles where it is almost truncated. The mouth, the surrounding oral disk, as well as the tentacles, are almost terminal, being slightly inclined towards the ventral surface. The anus is of considerable size, and is situated on the dorsal surface, about 17 mm. from the sharp edge which separates the ventral and dorsal surfaces posteriorly. The left side of the extremely convex dorsal surface is divided into large rhomboidal or quadrangular prominent areas, separated from each other by furrows; these have been caused by abnormal contraction, though it may appear very peculiar that both of the specimens should possess them. The tentacles seem to be of almost equal size, some of the ventral or dorsal ones being slightly smaller. Their large, discoidal ends, projecting beyond the supporting stems, are provided with a number of very small, retractile processes, especially round their margin. The ventral surface bears thirteen pedicels all along its sides and an odd one posteriorly, in the middle, the first pair projecting near the tentacles. Most of them are retracted, but a few which are in a state of extension indicate that they are rather short, with their terminal part large, flat, and slightly convex. About 35 or 40 mm. behind the crown of tentacles the dorsal surface supports about six conical processes, which are arranged in an almost transverse row, and attain the length of about