

greatly in size. The arms of the largest scattered ones measure about 0.12 mm.; the small ones, on the contrary, are considerably more numerous, and have the arms about 0.036 mm. in length. There are many forms between those two extremes. In the small deposits, the processes run out from the very base of the arms, whereby those calcareous bodies have the appearance of consisting of four arms diverging from each end of the more or less elongated central part. Here and there some very small bodies have been found destitute of spines and processes.

*Peniagone vitrea*, n. sp. (Pl. VII. figs. 7-9).

Body elongated, of almost equal breadth throughout, about thrice as long as broad; its foremost neck-like part narrow and bent downwards, forming almost an acute angle with the ventral surface. Mouth anterior, directed downwards. Anus posterior, dorsal. Tentacles of almost equal size; their terminal part with small, retractile processes. Pedicels eight pairs, disposed round the posterior third of the ventral surface; the anterior two-thirds of that surface destitute of pedicels. The dorsal surface with a broad, not very high, flat, transverse lobe anteriorly, with four projections in its upper margin, the middle ones being considerably the larger; behind that lobe are two very small processes on each ambulacrum. Integument extremely hard, brittle, and very rough, with numerous calcareous deposits, composed of four long, more or less curved, slightly spinose arms, and one to four straight, spinose, rather long processes, directed outwards.

Colour in alcohol, white and glassy. Length, about 60 mm. Breadth, about 20 mm.

*Habitat*.—Station 302. December 28, 1875. Lat. 42° 43' S., long. 82° 11' W. Depth, 1450 fathoms; bottom temperature, 1.5° C.; globigerina ooze. Several specimens.

The shape of the body seems to be very peculiar, and at first sight one is almost tempted to consider the dorsal surface to be the under side of the body and contrariwise. It is possible that the individuals of this species may in their living state differ in shape from that described above, but of course one cannot be quite sure of their true aspect from the examination of specimens much deformed by preservation in spirit. That which seems most doubtful is whether the narrow neck-like part of the body is really bent downwards as much as my figures show. Anyhow, I am obliged to take the above description of the form of the body for granted, especially as it accords with the figures which were drawn from fresh materials during the voyage of H.M.S. Challenger. The breadth of the body, almost equal to the height, has the appearance of being equal or slightly greater anteriorly. The broad dorsal appendage divides the odd interambulacrum into two parts: a posterior, almost horizontal and slightly convex one, which extends almost the whole length of the animal; and an anterior shorter and curved one, which is turned downwards and slightly backwards so as to form an almost obvious angle with the former one. Both of the interambulacra of the ventral surface may