

The calcareous deposits of the rather firm perisoma are completely dissolved ; however, I believe their shape to resemble that of the deposits of *Benthodytes abyssicola*, to which this species is closely allied.

The Polian vesicle is sacciform, about 60 mm. long. The madreporic canal communicates with the surrounding medium by pores, which lie close together about 60 mm. behind the anterior extremity of the body ; its walls are strengthened by numerous deposits of the same form as those in the above-mentioned species. The cloaca is elongated and attached to the inside of the body-wall by means of numerous threads and bands. The reproductive organ of the female bears a strong resemblance to that of *Benthodytes abyssicola*, though its cæca attain uncommonly great dimensions, their length being from 15 to 20 mm. and their diameter about 8 mm. Each of the two fascicles which constitute the organ is composed of a tube which carries throughout the whole of its length from eight to twelve short branches, each terminating in one or two enormous dichotomous cæca ; sometimes the branches are so short that the cæca seem to proceed directly from the tubes. The aperture of the genital organ lies close to the pores of the madreporic canal.

Thus, this form differs from the closely-allied *Benthodytes abyssicola* by the very broad and thin brim round its head, by the large size and the arrangement of its dorsal processes, &c. The individual dredged at Station 158 is in such a state of contraction as to make a closer knowledge of its outer form impossible ; its colour is of a blackish-violet.

The specimens which are brought home from Station 157 are males, consequently their reproductive organ differs in some degree from the one above described ; each of their fascicles consists of a great many bundles of numerous small, elongated, dichotomous cæca. The colour is blackish-violet. Besides the larger processes above mentioned, the dorsal ambulacra carry five pairs of smaller ones placed in the anterior part of the back.

*Benthodytes mamillifera*, n. sp. (Pl. XXV. fig. 1).

Body elongated, of almost equal breadth, from four to five times as long as broad. Tentacles fifteen ; some of the ventral ones smaller than the others ; their large discoidal terminal part with small tuberos prominences round its edge. The dorsal surface with numerous, short, non-retractile conical processes, disposed in a more or less distinctly alternating double row all along each of its ambulacra. Integument rather thick ; its calcareous deposits fully dissolved.

Colour in alcohol violet, more or less inclining to red or blue ; the back lighter, with its processes almost white ; the ventral surface dark violet ; tentacles lighter, with brownish terminal parts. Length, about 235 mm. Breadth, about 50 mm.

*Habitat*.—Station 295. November 5, 1875. Lat. 38° 7' S., long 94° 4' W. Depth,