

2. *Umbellula g ntheri*, n. sp. (Pl. IX. fig. 34).

Exquisitely bilateral. Calcareous needles very numerous in every part of the cutis, none very large. Polyps disposed alternately, of a very light brown colour, very large, with hard thick sarcosoma. Zooids very numerous, situated on the rachis and on the stalk; those of the rachis cover every free part of it, with the exception of both middle lines; and are, therefore, ventral, dorsal, and lateral. Those of the stalk are situated in small numbers on irregular enlargements. Stalk strong, with well developed sarcosoma. Axis quadrangular, with concave surfaces and rounded edges. Of this species also I had only one imperfect specimen, which wanted the lower part of the stalk.

Stalk quadrangular, length 175 mm., broken below, where it measures 1.5 mm. in diameter. It is beset with many irregular but mostly spindle-shaped enlargements, where it attains over 2.0 mm. in width, and shows invariably in these places a certain number of zooids, of the form of those of the rachis but less prominent, all disposed irregularly, singly, in pairs or more, even eight together, and in this case all in one longitudinal line. The stalk, being broken in several places, it was impossible to make out on which side these zooids were placed, only this, that they are situated on opposite aspects, and are probably lateral. The needles of the stalk are of different sizes, longer in the upper, shorter in the lower parts. All possess very distinct edges, and besides this a granular surface. Their length is from 0.11 to 0.20 mm., and their breadth from 0.026 to 0.045 mm.

Rachis without inferior enlargement, and so evidently bilateral that it suggests a young *Kophobelemnon* with only a few polyps. The ventral side shows a direct continuation, a kind of keel, which ends with a bend or curvature where the uppermost polyp is situated. Expansions at the sides of this keel, covered with zooids, are directly continuous with the bases of the polyps, so that no other trace of demarcation exists, except that given by the zooids. On the dorsal side the rachis shows a deep groove between the polyps, which is totally covered with zooids, with the exception of a very small space in the middle line. The polyps are very large, 44 mm. long, with the tentacles extended; five well-developed, and one rudimentary, and are disposed quite regularly on both sides of the rachis in the usual alternating manner, so that the fifth developed polyp has its seat at the dorsal side of the end of the rachis. The cutis of the polyps is studded with needles, which show this peculiarity, that they are all about the same size in the same place. Those of the bodies of the polyps measure 0.27 to 0.72 mm. in length, and 0.041 to 0.045 mm. in breadth, and are in general disposed in a transverse direction. The same holds good of the needles of the principal stem of the tentacles, only these are smaller, 0.38 to 0.62 mm. in length, and 0.022 to 0.041 mm. in breadth. Those of the lateral branches or pinnules are disposed lengthways on their aboral side, and measure 0.19 mm. in length, and 0.011 to 0.020 mm. in breadth. All these needles are three-edged, and slightly granular at the end.

The zooids fill all interspaces between the polyps, and are in general conical bodies of