

ment in rows visible, excepting in the conical caudal portion, which is characterised by five double rows of light brownish pedicels, corresponding to the ambulacra. Only the ends of the pedicels are retractile, while the rest is hard, very rough, and more or less conical in shape. Perisome thick, hard, leathery, and very rough from numerous closely disposed, more or less overlapping tables composed of a mostly elongate or irregular fusiform, perforated disk and a long conical spire made up of two rods united towards the pointed top. The spire is especially long in the pedicels. Length of the contracted specimen about 35 mm. Colour in alcohol, brown with light pedicels and tentacles.

Habitat.—Station 167A, June 27, 1874; Queen Charlotte Sound, near Long Island; lat. $41^{\circ} 4' S.$, long. $174^{\circ} 19' E.$; depth, 10 fathoms; mud; a single complete, contracted specimen, and caudal portions of numerous other specimens.

The only complete specimen I have had at my disposal is rather contracted, so that the pedicels appear more crowded than they really may be. Only the caudal portion seems to be devoid of pedicels on the interambulacra. The pedicels decrease in size towards the posterior extremity of the body, and they are uncommonly rough from the long spires of the tables. The anal aperture is surrounded by some small cylindrical papillæ, strengthened by reticulate plates without spires. The tentacles are retracted, their true position being difficult to determine. In conformity with the general condition in the genus *Thyonidium*, the tentacles are unequal and arranged in pairs, five pairs being several times smaller than the eight remaining tentacles, which are distributed as three pairs and two odd tentacles. Thus, these species deviate from the typical forms with twenty tentacles by the circumstance that two of the tentacles are unpaired.

The calcareous ring (Pl. V. fig. 5, *a*) is characterised by having its ten pieces composed of numerous small parts; the radial pieces are prolonged posteriorly and measure 25 to 30 mm. in length. The figure will give an idea of its construction. I only found a single madreporic canal and Polian vesicle. In consequence of the contracted state, the retractors are short but very thick; they seem to be attached at about the middle of the body. The respiratory organs are well developed.

The tables present themselves under very variable sizes and shapes, some being small and having a somewhat rounded or angular disk, others being elongate or fusiform, with a varying number of holes (Pl. V. fig. 5, *b* and *c*). The largest tables have a length of 0.50 mm. or more. The outwardly directed spires attain their greatest length, 0.16 mm. or more, in the pedicels. The spire is formed by two rods, united towards the elongated conical top, and separated at the base by a hole. At the ends of the pedicels the disks become more irregular and rod-like (Pl. V. fig. 5, *d*). The terminal plates of the pedicels appear to be rather incompletely developed.

Thyonidium rugosum is certainly nearly allied to *Thyonidium japonicum*, von Marenzeller.