

be slightly larger and more numerous, and they partly resemble those figured by v. Marenzeller, but mostly have a more complicated form (Pl. I. fig. 8, *b*). At first sight it may appear as if the difference presented by the miliary granules were of such importance as to justify a new species, but at the same time I have seen a great number of transitional forms, which evidently prove that the simple ×-shaped granules can pass over into the more complicated ones.

The individual in question has twelve tentacles, each with four slender digitations. The integument is of a whitish colour, inclining to yellowish, and is covered with numerous minute papillæ. The madreporic canal is single and dorsal as to its position. No cartilaginous ring behind the calcareous ring. Five ventral Polian vesicles about 15 mm. long are present. The form of the calcareous ring is best seen by reference to the plates.

There is no doubt that *Synapta distincta*, v. Marenzeller, is very nearly related to several previously known species, viz., *Synapta pseudo-digitata*, Semper, *Synapta innominata*, Ludwig, *Synapta molesta*, Semper, and *Synapta benedeni*, Ludwig. All the forms here enumerated seem to be very closely allied to one another. When comparing their calcareous deposits, &c., one cannot but think that their distinguishing characteristics are mostly very unimportant. Moreover, our present knowledge is too unsatisfactory to decide to what degree the deposits of the same species are capable of varying in form as well as in size.

*Synapta verrilli*, n. sp. (Pl. I. fig. 1).

Tentacles twelve, each with four slender digitations. Two larger ventral Polian vesicles, about 5 mm. long, and between these two smaller ones. Madreporic canal single. No cartilaginous ring. The calcareous ring (Pl. I. fig. 1, *c*) almost like that in *Synapta similis*, Semper, or *Synapta molesta*, Semper. The anchors (Pl. I. fig. 1, *a*) often more or less distinctly asymmetrical, and their flukes commonly provided with about five serrations; the posterior margin of the handle rough from minute serrations. Length of the anchors about 0.3 mm. The irregularly rounded plates (Pl. I. fig. 1, *b*) with the margin rather uneven and never completed; their holes are large, comparatively few in number, and provided with minute spines round the margin. The holes are smaller and more numerous in the articular end of the plates. Length of the plates about 0.27 mm., and their greatest breadth about 0.25 mm. The miliary granules (Pl. I. fig. 1, *d*) only in the form of oval or oblong bodies. Colour in alcohol, yellowish-white. Length of the largest individual about 23 mm.

*Habitat*.—Station 186, September 8, 1874; lat. 10° 30' S., long. 142° 18' E.; depth, 8 fathoms; coral mud; two specimens.

This species seems to bear the greatest resemblance to *Synapta innominata*, Ludwig,