

*Synapta glabra*, Semper, 1868 (Pl. I. fig. 6).

*Habitat*.—Zebu Reefs; several mostly rather incomplete specimens.

I hesitated long whether to refer the animals in question to *Synapta glabra*, Semper, or to *Synapta grisea*, Semper, or *Synapta serpentina*, Müller, forms which are very nearly related to it. According to Semper, however, the fact that the branches of the tentacles are webbed together by a thin membrane characterises *Synapta glabra* and distinguishes it from the remaining forms. Some of the specimens brought home from Zebu Reefs also seem to be in possession of such a web between the branches or digits, which are rather short, while in other forms this web is almost inconspicuous. Mostly, the branches of the tentacles are highly contracted, whence it is difficult to discern their arrangement, a difficulty greater inasmuch as the animals themselves have undergone some changes by reason of their long immersion in spirits. The calcareous ring is more nearly allied to that of *Synapta glabra* than to those of the other species. The stock or handle of the anchor (Pl. I. fig. 6, a) is provided with six to eight small processes which are rough with minute spines, and that part of the anchor where the arms or flukes join each other carries as many as eight or more small teeth.

Colour in alcohol, dark brownish on the upper surface and lighter on the under. Length of the largest specimen about 500 mm.

Another individual, also obtained at the same Station, possibly forms another species, but unfortunately the calcareous matters have been dissolved by the impure alcohol, and the crown of tentacles is destroyed, so as to make closer investigations impossible.

*Synapta lappa*, Müller, 1850 (Pl. I. fig. 7).

*Habitat*.—Gomera, off Tenerife, February 10, 1873; depth, 70 fathoms; several fragments.

The highly macerated and fragmentary condition of the individuals I have had at my disposal prevents minute examination. To judge from what I have observed, they must belong to this species of Müller. The Polian vesicles, the single madreporic canal, the shape of the calcareous ring and of the deposits in the body-wall, &c., agree most strikingly with the description of Müller. The tentacles, however, fifteen in one individual and sixteen in another, do not seem to be of quite equal size. Besides, the anchors have, as a rule, anteriorly where the flukes join each other, as many as eight small teeth. The numerous miliary granules resemble those in *Synapta grisea*, Semper, and *Synapta glabra*, Semper.

*Synapta picta*, n. sp. (Pl. I. figs. 9, 10).

Tentacles twelve, each with about twenty-five digits; one ventral tentacle considerably smaller than the others. Calcareous deposits closely resembling those in