

Genus 9. *Phymosoma*, Quatrefages (Selenka and de Man).

Longitudinal musculature divided into bands. There are numerous tentacles arranged in a single row, not however around the mouth, but above it dorsally in three-fourths of a circle. The body is covered with papillæ. Hooks are almost always present. The intestine is coiled in a spiral fashion. The eggs are elliptical and flattened. The proboscis has four retractor muscles. There are two eye spots. The members of this genus are mostly of considerable size, and the majority are tropical forms.

21. *Phymosoma japonicum*, Grube.

*Phymosoma japonicum*, Grube, 54th Jahresbericht der Schlesischen Gesellschaft für vaterländische Cultur, Breslau, 1877, p. 73.

*Phymosoma japonicum*, Selenka and de Man, Die Sipunculiden, &c. (*loc. cit.*), pp. 76–78, Taf. ii. figs. 18, 19, Taf. x. figs. 145, 146.

The body is compressed. The proboscis is as long as the body. Even with the naked eye one can clearly recognise the reddish-brown papillæ on the greyish-brown body. They are largest and most abundant at the base of the proboscis and at the hinder end of the body. On the older specimens there may be thirty rings of hooks, and on the young forms as many as a hundred. These hooks are flattened, measuring 0·07 mm. in height and the same in breadth; they have a sharply bent point with a side tooth. There are not more than twenty-eight tentacles. There may be as many as thirty longitudinal muscle-bands, which repeatedly anastomose. The intestine exhibits ten to twelve double coils. The two segmental organs are fixed by mesenteries throughout half their length.

*Habitat.*—Port Jackson, shallow water. There were only two tolerably large specimens.

22. *Phymosoma scolops*, Selenka and de Man.

*Phymosoma scolops*, Selenka and de Man, Die Sipunculiden, &c. (*loc. cit.*), pp. 41, 42, Taf. ii. fig. 17, Taf. x. figs. 138–144.

A small species with slender body, and proboscis equal to the body in length. The skin is thin. The proboscis frequently exhibits brown cross stripes on the dorsal surface. The whole body is studded with small papillæ. The proboscis has about sixteen rings of hooks, which are bent and measure 0·07 mm. in height, and 0·074 mm. at the base. On the concave side of the bent point there is a lateral tooth. The tentacles number twelve or more. There are about twenty longitudinal muscles which rarely anastomose, but unite just in front of the anus to form a continuous sheath. The four retractors of the proboscis originate about the middle of the body. The broader ventral retractors