

in outline, with their walls rising to a height of about 3 or 4 mm. above the basal mass. Septa often irregular, owing to the constant fission of the calicles, but in the rounded calicles disposed with more or less regularity in six systems and four cycles, with some septa of a fifth cycle. Quaternary septa prominent and much larger than the tertiaries, which lie far back on the sides of the fossa, sometimes with their inner margins confluent in the deeper parts of the fossa over the margins of the tertiaries. Fossa moderately deep, with a spongy mass at its bottom not at all prominent representing the columella.

This species differs from *Heteropsammia michelini* in no point of importance excepting in being compound. *Heteropsammia michelini* in many specimens shows a tendency in the calicles to divide into two, and *Heteropsammia cochlea* (Spengler), from Ceylon, bears two calicles, sometimes three imperfect ones. I have examined specimens in the British Museum of this species, and it obviously forms a simple stepping-stone between *Heteropsammia michelini* and the present form. It would be absurd to place the present form and *Heteropsammia cochlea* in a genus apart from *Heteropsammia michelini* because of their compound nature. The characters of MM. Milne-Edwards and Haimes' genus must be modified to include compound forms as well as simple. I can find no evidence in the adult coralla of the present species of any remains of a spiral shell within the basal mass. If a shell were originally present, as is quite possible, it has become entirely absorbed. The walls of the spiral chamber occupied by the Sipunculid are composed of bare hard coral tissue. In decalcified spirit specimens, moreover, no trace of any membranous tissue was seen corresponding with the spiral cavity. The Sipunculid was left hanging in a simple spiral cavity excavated within the spongy cœnenchymal mass of soft tissue. Semper, in his account of the *Heterocyathi* and *Heteropsammias* of the Philippines, comes to the same conclusion as to the absence of a spiral shell in *Heteropsammia* and all species of *Heterocyathus*, excepting *Heterocyathus parasiticus*. He says, "the Sipunculid lives always only in a cavity formed by itself in the base of the coral."¹ Semper described in the same paper two new species of *Heteropsammia* obtained by him off the Philippine coast, but curiously enough seems to have met with no compound specimens. He remarks on the interest of Verrill's *Heteropsammia geminata* from Burmah (Amer. Jour. of Science and Arts, vol. xlix., 1870), which has two calicles. Milne-Edwards' two genera *Heteropsammia* and *Stephanoseris* are clearly most closely allied, and should be merged into one. The presence of synapticulæ in the latter genus is a matter of small importance.

Extreme length of the base of the largest specimen, 20 mm. Extreme breadth of the base, 15 mm. Extreme height of the corallum, 16 mm. Diameter of one of the nearly circular calicles, 8 mm.

Numerous specimens dredged. Off Samboangan, Mindanao Island, Philippine Islands. 10 fathoms.

¹ C. Semper, Ueber Generationswechsel bei Steinkorallen, &c., Z. für Wiss. Zoologie, Bd. xxii. 1872, s. 255, u. 261.