

Report of the Biological Survey of Mutsu Bay.  
23. *Rhizopsammia minuta* VAN DER HORST var.  
*mutsuensis*, nov., an Eupsammid Coral.<sup>1)</sup>

By

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(With Plate IX).

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The object of this communication is to describe an interesting coral living in Mutsu-Bay; the specimens were collected\* by Professor S. HÔZAWA from the littoral zone of a small islet Moura-shima, near the Asamushi Marine Biological Station. We are grateful for his kind offer of the material to our study.

The genus *Rhizopsammia* was established by A. E. VERRILL<sup>2)</sup> in his "Notes on the Radiata in the Museum of Yale College, with descriptions of new genera and species," 1867, on a recent species from the Pearl Islands. The generic diagnosis quoted in DUNCAN's<sup>3)</sup> "Revision of Madreporaria" is as follows: "Colony low, incrusting, extending by stolon-like expansions of the base, from which buds arise. Corallites cylindrical or nearly so, connected by thin creeping expansions, which have the same texture as the wall. Calices subcircular or elliptical. Septa thin, crowded, a little projecting, arranged in four or five cycles; last cycle well developed, uniting to those of the preceding cycle, which rise up the form of prominent paliform lobes, beyond which the central region of the calice is deep. Columella very porous and its surface papillose. Wall very porous. No epitheca. Costae scarcely distinct, represented by series of rough granules."

In 1922, VAN DER HORST described two new species of the genus based on the materials of the Siboga Expedition, *Rhizopsammia verrillii* and

\*Collected from within a cave situated on the western side of Moura-shima, average depth at low tide about 1.5 m.

<sup>1)</sup>A contribution from the Marine Biological Station, Asamushi, Aomori-ken. No. 82.

<sup>2)</sup>A. E. VERRILL: Notes on the Radiata in the Museum of Yale College, with Descriptions of New Genera and Species. Trans. Conn. Ac. of Arts and Sciences, Vol. I, 1866-1871. (Not accessible, cited after P. M. DUNCAN, 1884 and VAN DER HORST, 1922.)

<sup>3)</sup>P. M. DUNCAN: A Revision of the Families and Genera of the Sclerodermic Zoantharia, Ed. & H., or Madreporaria, 1884, p. 182.

*Rhizopsammia minuta*, and pointed out that the presence of paliform lobes of septa and the absence of epitheca can not be regarded as diagnostic features of the genus, because paliform lobes are absent in both of his species and epitheca is present, though to a very variable amount, in one of his species (*Rhizopsammia minuta*).

*Rhizopsammia* is, as stated by VAN DER HORST<sup>1)</sup>, closely allied with *Balanophyllia* and the budding of its corallites by means of stolon-like basal expansions is peculiar to it and distinctive from the latter genus. It is one of the interesting genera of corals, its species inhabiting the the warm waters of the Pacific and having a wide vertical range; one species (*R. verrilli*) was obtained from the depth 27-278 m. and the other (*R. minuta*) from 36 m. of the Malay Archipelago, while our new variety of the latter species lives on the rocky floor of the littoral region in Mutsu Bay, Northern Japan (L. 40° 55.5' N.). The genotype is from the Gulf of Panama (Pearl Islands).

*Rhizopsammia minuta* VAN DER HORST var. *mutsuensis* nov.  
(Pl. IX, Figs. 1-3.)

Compare:

1922. *Rhizopsammia minuta* VAN DER HORST, The Madreporaria of the Siboga Expedition, part II, *Eupsammidae*, Siboga-Expeditie, p. 65, Pl. VII, figs. 9-10.

Corallum spreading over the surface of rhyolite blocks and consisting of a large number of corallites connected at the base by stolon-like processes. Corallites fragile, small, 5 mm. or less in diameter, cylindrical or sometimes slightly contracted near the base, projecting at most 8 mm. above the base, usually a few millimeters apart and sometimes almost in contact. Stolon-like expansions 2-4 mm. broad and distinctly costated, costae being continuous with those on the lateral surface of the corallites. Calice circular, as broad as the corallites; 4 mm. deep and surrounded by vertical inner edges of septa. Small or young corallites usually covered by a dense epitheca, with annular rugose lines, from the base to the very margin of calice; sometimes worn out and then exposing the vertically costated lateral surface of wall; epitheca mostly lose in the larger corallites. Wall perforated, pores lying within vertical furrows in alternation with costae. Costae somewhat elevated, rounded and minutely vermiculated. Septa 4 cycles complete in large calices, thin and subequal in thickness.

<sup>1)</sup> VAN DER HORST: The Madreporaria of the Siboga Expedition, Pt. II, *Eupsammidae*, Siboga-Expeditie, Monographie XVI a, p. 64, 1922.

Septa of the first and second cycles slightly exsert near the calicular margin where their edge is semicircular in outline, short except on the base of the bottom of calice where they extend to a well developed spongy columella, subcircular in cross section and 1×1.5 mm. broad. Septa of the third cycle short and those of the fourth cycle uniting in pairs in front of the former at the base of the calice. All the septa are finely dentated on the edge, densely granulated on the lateral surfaces, and perforated, pores being especially numerous near the wall. In the smaller corallites the septa of the second cycle do not extend to the columella. No paliform lobes.

The present material agrees fairly well with the typical form of *Rhizopsammia minuta* VAN DER HORST<sup>1)</sup> from the Roma Islands, but some slight differences are appreciable between them referring to the relative height of the corallites and the surface feature of the stolons. In the typical form, the corallites are more depressed and the stolons are always smooth on their surface instead of being costated. The dimensions of them and other features are compared in the annexed table.

	Breadth of Stolon-like expansion	Height of corallites	Depth of calice	Sculpture of stolon	Septal character
Typical form	1-5 mm.	up to 2 mm.	5 mm.	smooth	4 cycles complete
N. var.	2-4 mm.	up to 8 mm.	4 mm.	ribbed	4 cycles complete

Distinctly costated stolons and septa with spongy margin are features characterizing another species, *Rhizopsammia verrilli* VAN DER HORST<sup>2)</sup> from the Malay Archipelagoes; from this the present form is easily distinguished by its smaller and shorter corallites and a different septal arrangement.

Locality: Moura-shima, near Asamushi, province of Mutsu, Japan.

Five living colonies examined, all spreading over rhyolite blocks.

Collector: Prof. S. HÔZAWA.

EXPLANATION OF PLATE IX.

Fig. 1. *Rhizopsammia minuta* VAN DER HORST var. *mutsuensis* nov. (nat. size), with tentacles. (Specimen stored in the Biological Institute.)

Fig. 2. *Rhizopsammia minuta* VAN DER HORST var. *mutsuensis* (nat. size). Type specimen. Soft part removed. (Specimen stored in the Palaeontological Institute, Reg. No. 41391.)

Fig. 3. A part of Fig. 2 enlarged three times.

<sup>1)</sup> VAN DER HORST, 1922, Op. cit., p. 65, Pl. VII, figs. 9-10.

<sup>2)</sup> VAN DER HORST, 1922, Op. cit., p. 64, Pl. VIII, figs. 1-2.

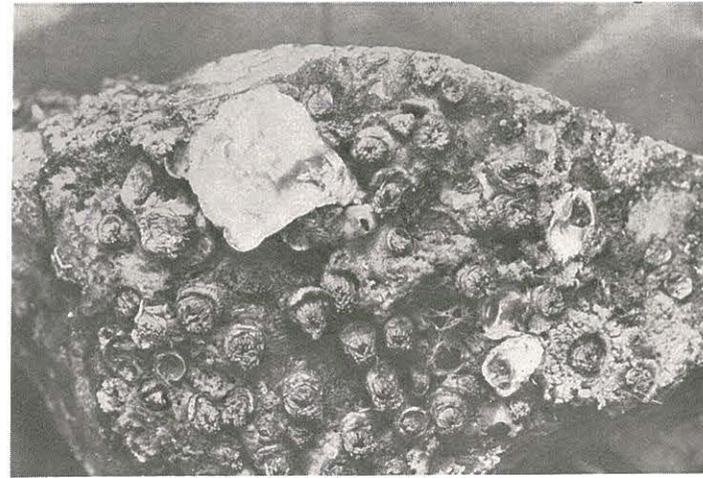


Fig. 1.

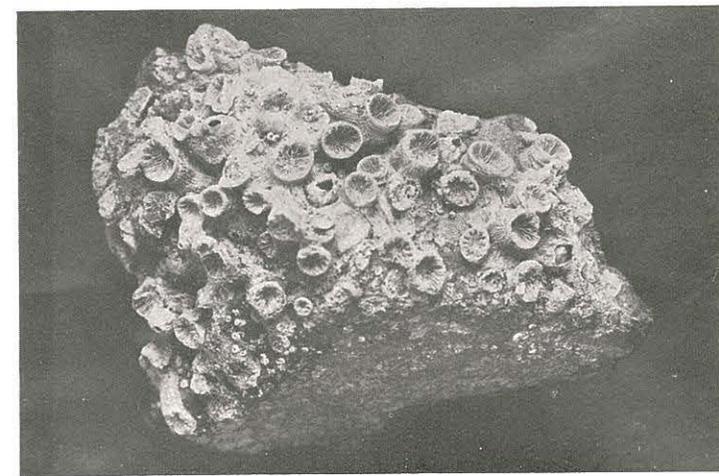


Fig. 2.

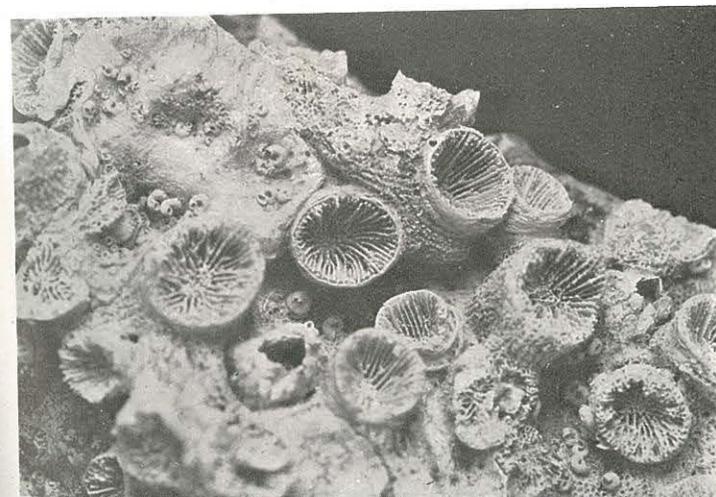


Fig. 3.