

panying them which were made at the Exhibition state particularly that the localities from which they came were not ascertainable, and it is probable that they were exhibited simply as merchandise sold in Taipeh. I have therefore no specimen which is certainly known to have come from points further south than Kagoshima.

Outside of Japan, I have specimens from Vladivostok, and from different points on the eastern coast of Korea facing the Sea of Japan, most of these specimens being those dried by the Japanese fishermen who go out to these parts, so that the species is found all around the shores of the same sea. I have no specimen from the western coast of Korea or from any spot on the Yellow Sea or from any place in China. These parts have simply not been explored, and whether the species extends to them or not I have no means of ascertaining. So far as my present experience goes, the species is confined to Japan proper and to the coast of the Asiatic continent facing the Sea of Japan. Remarkable, therefore, is the locality given by THÉEL, viz. Hong-Kong, especially as I have been unable to find any in the Liu-Kiu Islands.

Locality:—Japan (SELENKA '67, v. MARENZELLER '81, THÉEL '86); Hako-daté (SELENKA '67); Northern Japan (LAMPERT '85); Amboina? (LAMPERT '85); Yokohama (LUDWIG '87); Hong Kong (THÉEL '86); Sitka (CLARK :02); Saghalien; Kiūshū; Vladivostok; Eastern Coast of Korea.

39. *Stichopus oshima*, sp. n.

(Textfig. 30).

Specimens examined:—5 specimens from Katsuyoki, Kageroma I. in Ōshima, obtained near shore in 1—3 fathoms. Collected by Mitsukuri and S. Ikeda. Apr. 1, 1901. (Sci. Coll., Spec. No. 1325).

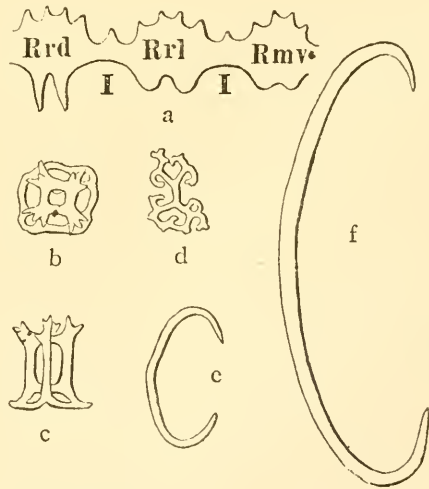
Description :—The four specimens measured were respectively 18×4 cm., 14×4 cm., 15×4.5 cm., and 15×4 cm. Tentacles 20. Body, as viewed from above, somewhat narrowed toward the posterior end. The dorsal and ventral surfaces are clearly marked off from each other by a series of large papillæ which project laterally and make up the edge of the body. The papillæ are not all single, but sometimes two or more are united together, a membrane going round the anterior end. The whole dorsal surface together with the lateral papillæ may be described as variegated in color, presenting various shades of brown or yellowish-brown, on the whole growing darker toward the posterior end in all the five individuals. The dorsum is roughly divided into right and left halves by an irregular broken black line running along the dorsal median part and sending out irregular branches towards both sides. This line may be taken to represent the median dorsal interradius, and the two halves of the dorsum the lateral dorsal ambulacra. The large and small papillæ, scattered irregularly over these halves, therefore, belong to the dorsal ambulacra. These papillæ are comparatively large, some being more than 1 cm. in height, quite thick at the base and conical in shape. Although generally single, some of them are double, two starting from a common base. They are not very numerous. Their tips were sometimes black, but oftener reddish-brown, and the surface of all the papillæ was marked by incomplete and unclosed dark rings.

There are some strikingly characteristic points on the ventral surface. The mouth is surrounded by a membrane. The general color was a somewhat dark brown, but there were dark patches. In one specimen there were two pairs of black patches on the anterior two-thirds, while the posterior one-third was entirely

black. The pedicels in the former parts are closely set in three zones, while in the latter they are markedly more sparse: in this part, the middle zone presents an irregular double row of them, while in the lateral zones they are very much reduced in number, or one or both of the lateral zones are entirely absent. The posterior third therefore presents a striking appearance. It will be remembered that very much the same thing was described for *Stichopus naso* SEMPER, which however narrows toward the *anterior* end and not toward the *posterior* as in this species.

Color of the tentacles reddish brown. Polian vesicles six. Calcareous ring as indicated in textfig. 30 *a.*, resembling that of *S. variegatus* SEMPER, *S. naso* SEMPER, etc. It is oblique, the posterior prolongations of the radialia becoming longer dorsally. Stone-canal attached to the mesentery, much meandering.

Calcareous deposits: (i) C-shaped bodies of various sizes, measuring 0.052 — 0.144 mm., and frequently bent a little at the center (*e, f*). (ii) Rosettes very numerous, much smaller than C-shaped bodies (*d*). (iii) Tables delicate, slender; disk small, 0.02 mm. in diameter; spire 0.032 mm., 12 or more toothed, teeth spreading outward and reminding one of a stag's horn (*b, c*).



Textfig. 30.

Stichopus oshima: *a*—Calcareous ring; *b, c*—Tables; *d*—Rosette; *e, f*—C-shaped bodies. (*b*— $f \times 400$). I—Interradialia; Rmv—Midventral radialia; Rrd—Right dorsal radialia; Rrl—Right lateral radialia.

Remarks:—All the specimens were obtained in 1—3 fathoms

of water by spearing from the boat. Unfortunately, all the specimens became very much distorted during their transmission to Tokyo.

Although I obtained this species only in Ōshima, there is very little doubt that it occurs in the Liu-Kiu group also; for when I showed my sketch of this species to NABISA, an intelligent native fisherman, he at once recognized it and said that in his part of the islands it was called "Daru-ga," meaning "skin that hangs down."

This species evidently belongs to that group of the *Stichopus*-species which have as their calcareous deposits C-shaped bodies and one or more kinds of tables with or without incomplete rosettes, and which are very difficult to distinguish from one another. It seems very probable that some of these species will be found to be synonyms representing different ages or mere local varieties of one and the same species. The present species can not be identified with any of the species hitherto described. While I am prepared to learn that it is identical with one of the already known species, I have at present no grounds for thinking so; and as there are well-marked differences from any of the species already described, I have no choice but to describe this as a distinct and new species.

The species is certainly close to *S. variegatus* and perhaps closest to *S. naso*.

The species is called "Gazumaru" in Japan.