

Genus **Mesothuria** LUDWIG 1894.10. *Mesothuria deani*, sp. n.

(Textfig. 9).

Specimens examined :—

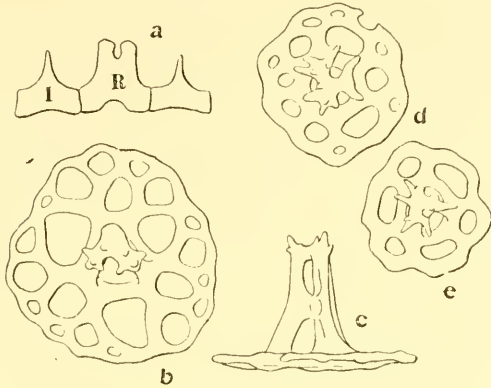
| Sci. Coll., Spec. No. | No. of individual | Preserva- tion | Size in cm. | Locality | Depth in <i>hiro</i> | Collector | Date |
|--------------------------|----------------------|-------------------|----------------|--|-------------------------|---------------------|-------------------|
| 1068 | 1 | Alc. | 8 × 1.4 | Okinosé, outer edge, Iwado-line, Sagami S. | 350 | Aoki | Apr. 12, 1897. |
| 1076 | 1 | „ | | Ōshima, Izu. | 350 | „ | Nov. 4, 1898. |
| 1467 | 1 | Formal. | 7 × 1.6 | Nishi-no-Yodomi, Sagami B. | 300 | „ | Jun. 16, 1901. |
| 1478 | 1 | Alc | 8 × 2.3 | Uraga Channel (Na- kazé, east of Numa, Tateyama B. Ta- keyama in line with Amezaki). | 340 | Mitsukuri & Aoki | Aug. 13, 1903. |

Description :—Body almost cylindrical. No marginal border. Skin much ruffled and full of creases. Color at present deep brown, probably purple or violet in life-time. Mouth distinctly ventral, anus terminal.

Ambulacral appendages distributed uniformly over the whole body. Pedicels on lateral ambulacra larger than those in other parts of the body, forming three or four irregular rows. The middle parts of the ventral surface with smaller pedicels, which in some specimens could be easily recognized, but were in one specimen so minute that I thought for a long time they were here entirely absent. Dorsal surface with small pedicels (1.04 × 0.32 mm.) scattered all over the ambulacra as well as the interambulacra.

Genital bundle one on the left. Calcareous ring as in textfig. 9 a. Polian vesicle one, 9 mm. long. No tentacular ampullae.

The animal in life clothes itself with sand grains, small shells and shell fragments, which adhere by action of its numerous pedicels.



Textfig. 9.

Mesothuria deami: a—Calcareous ring; b, c—Tables of ventral perisome; d, e—Same of pedicel. (c—e $\times 225$). I—Interradialia; R—Radialia.

With the exception of endplates which are found on the ends of the small dorsal, the large lateral and small ventral pedicels, there is only one kind of calcareous deposit, viz., the tables (b—e). In the ventral perisome, the tables measure from 0.07 to 0.10 mm. in diam., and their spire 0.05 mm. in height. Spire consists almost always of three pillars. It has generally only one crossbeam. The crown has several teeth on the top of each of the three pillars. No elongated diverging ends to the pillars as in some species. Tables on the pedicels not different in shape, but smaller in size, the disks measuring 0.05—0.07 mm. in diameter. No supporting rods.

Remarks:—The fact that these specimens are without any tentacular ampullae and that their two-branched respiratory tree does not intermingle with the blood vessels of the alimentary tract, at once puts them in the sub-family Synallactinae; and the presence of only one genital bundle on the left side makes them referable to the genus *Mesothuria*. Even in the narrowed definition of the genus given by PERRIER, the presence of pedicels on the odd ventral ambulacrum fits them to that genus. The specimens have tables of the triradial type and are very close to *M.*

maroccana PERRIER, but the tables in that species of PERRIER have the disk showing either six holes only, or two or three more holes of the primary circle in addition, but never any outside that circle. *M. murrayi* (THÉEL) is also very near our species, but in that species large lateral pedicels exist in a single row on the outer edge of each lateral ambulacrum, other pedicels of the zone being small. Besides, the shape of the spire of the tables is different: it terminates in three long prongs garnished with teeth, while in our species there is no such long prong.

I believe, *M. murrayi* var. *parva* (THÉEL) comes closest to the present species, but the general configuration of the body in that form is almost lozenge-shaped, while in the latter it is more uniformly broad and longer. Moreover, the pedicels of the median ventral surface are minute and almost invisible to the naked eye, while in my species they are, although small, yet very distinct, numerous and easily seen. Finally, the tip of the pillars in the tables is provided with many teeth in *parva*, while in my species it has generally only three or often even a smaller number of teeth. The color of the former species is said to be yellowish white, while that of the latter is purple or violet. The present species is also somewhat near *M. holothurioides* SLUTTER, but that species has the middle part of the ventrum entirely naked.

There seems therefore nothing to do but to constitute this into a new species. I therefore name the species for Dr. BASHFORD DEAN of Columbia University, New York, who joined us for a time in the study of the fauna of Sagami Bay.