

type," a single Polian vesicle and a dorsal stone canal attached to the integument; a relatively short muscle stomach, usually mud-filled intestine, the first loop attached in dorsal interambulacrum, the second below left dorsal muscle band, the third in right ventral interambulacrum, nearest the median muscle band; two large free respiratory trees with large lobes; muscle bands undivided, of equal width; genital organs attached near oral end, of the usual type, with several large ducts ending in a number of divided tubes, the anterior tubes smaller and of a distinctly different color and containing the opposite kind of sexual products than the large tufts; posteriorly a well-developed genital basis with small brown spots, indicating the scars left by resorbed genital tubes; one specimen seems to be an almost ripe female; the large tubes are yellow and filled with eggs.

Deposits.— Exactly as in Norwegian specimens; well-developed tables with large central holes and about 8 marginal holes which are oval, usually with the outer end of the oval more pointed; accessory holes may also be present; the feet are filled with spicules of the same type and size, and there are also well-developed end plates with relatively dense network.

Type locality.— Coast of Norway.

Type not existing.

This species has to some extent been confused with *M. verrilli*, and it is at present impossible to give any exact account of its distribution. It seems to range from the coast of Norway to the Mediterranean Sea and coast of North Africa (Talisman). It is said to range from 18 to about 1,000 m. in vertical direction, and von Marenzeller is undoubtedly right when he regards it as the shallow water form, whereas *M. verrilli* is the deep water form, although it must be remembered that the latter also occurs in a few hundred fathoms depth.

From the western part of the Atlantic Ocean I have examined 3 specimens, one from Grenada, depth 748 m., and two from "Fish Hawk" station no. 7,514, off Florida in 200 fms.

Remarks.— The differences between this species and *M. verrilli* have been very carefully worked out by von Marenzeller and Perrier; they are also briefly mentioned above.

MESOTHURIA GARGANTUA sp. nov.

Plate 7, fig. 1

Holothuria verrilli Thél (partim), 1886a, p. 6.

Several specimen of this species are at hand, varying in size from 7 to 20 cm. in length. The species resembles a very robust form of

M. intestinalis. Mouth ventral, surrounded by about 20 tentacles, which in all cases are retracted; anus terminal; appendages absent on the foremost part of ventrum and otherwise uniformly distributed over the entire body; they are stout, cylindrical, and of almost equal size throughout, perhaps slightly smaller on dorsal side; integument in the older specimens firm, rough to the touch; color white or yellowish.

Anatomy almost exactly like that of *M. intestinalis* but the genital organs which are shorter in *intestinalis* seem to contain only one kind of sexual products; the posterior part of the genital basis shows scars of atrophied genital tubes, but the anterior tufts, although they are small, are of the same kind as the large tufts placed on the middle of the stolon. One of the specimens was peculiar in that it had "viscera inversa," the intestine being attached in the opposite interambulaera (except the dorsal loop), and the genital organs being attached on the right side of the mesentery.

Deposits.— Very large tables (diameter up to 0.25 mm.), most of them being 2–3 times as wide as the tables found in *M. intestinalis*; with about 8 inner holes which are oval in outline and become reduced in size in the larger tables; outside these we find a variable number of small holes arranged without any definite order; the spire is low, solid, with few to many blunt spines on top; a few tables with delicate mesh-work and 8 large regular holes may be found; these are evidently juvenile tables which have not been resorbed yet.

The feet are covered with tables which are almost as large as those found in the body wall; I have in most cases failed to find any end plate; they seem to be few in the small specimens, and I believe that they are totally absent in the large specimens, where the end of the pedicel usually is contracted; in the tentacles a few large-meshed plates.

Type locality.— Off Barbados; depth 720 m.

Type in Museum of Comparative Zoölogy, cat. no. 449.

Also from off Dominica, and St. Vincent, 659 and 825 m. depth.

Remarks.— This large species differs from *M. intestinalis* in the much larger and more solid tables; the reduction of end plates, the presence of numerous large feet on the posterior part of ventrum, the larger size, and the fact that the sexes are separate (as far as the present material shows).

PLATE 7

Mesothuria gargantua spec. nov.

Fig. 1. Typical table of the large kind.

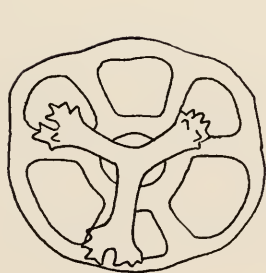
Mesothuria marrocana Perrier

Fig. 2-5. Tables from body wall.

Figs. 6, 7. Lateral view of tables from appendages.



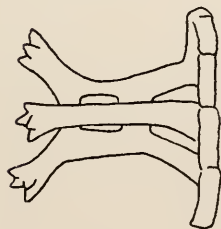
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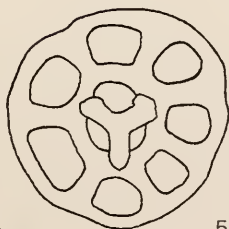
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3



4



5



7



6

