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TURBELLARIA.

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& Leiper 1907); southern part of Tierra del Fuego (Zahony 1907, Bock 1932); Falkland Islands (Zahony 1907); Kerguelen (Bock 1932).

All specimens in the collection are determined by Bock, but none are sexually matured as far as I can see. The biggest specimen measures only 1,5 mm in length. The species is fairly well-known (see Bock 1913 and 1932).

Gen. Laidlawia HERZIG 1905.

L. trigonopora HERZIG 1. c.

South Georgia: st. 33 (1 sp.).

Further distribution: Tierra del Fuego, Punta Arenas (Herzig, l. c., Zahony 1907); Chile, Borja Bay (1 badly preserved specimen from the Swedish Tierra del Fuego Expedition 7. 4. 1896, sectioned and determined by Bock; in the collections of R. M.; not published before as far as I can ascertain); Kerguelen (Bock 1932).

The sexually matured specimen from South Georgia, determined by Bock, exactly corresponds in its anatomy to the description he has given from the German South Polar expedition (1932).

3. Suborder Macrostomida.

Gen. Dolichomacrostomum LUTHER 1947.

D. mortenseni Marcus 1950. Fig. 3.

Falkland: st. 57 (4 sps.).

Further distribution: Brazil (the island of São Sebastião; MARCUS 1..c.).

The genus Dolichomacrostomum contains 3 species already described, one of them — D. uniporum (Luther l. c.) — from the Gulf of Finland, two others — D. lutheri (Marcus 1948) and mortenseni (Marcus 1950) — from Brazil. Ax (1951) has recently given a careful anatomical description of two closely related species from the southernmost part of the Baltic (Kiel), which he has placed in a new genus, Paromalostomum. It is characteristic for the two genera that there is only one gonopore and a fairly complicated male copulatory apparatus, while the Macrostomids in general have two separated gonopores, the anterior female, the posterior male. They are all litoral or sublitoral sand forms.

D. mortenseni has a habitus which clearly separates it from the other species mentioned above, viz. a circular furrow in the anterior part and a fairly short body in relation to its breadth. The specimens from Falkland are only c. o, 4 mm in length, probably strongly contracted, while Marcus states I, I—I, 2 mm in length in his specimens from Brazil. The anatomical characteristics are the paired ovaries (single in D. uniporum and lutheri), the complicated male copulatory apparatus, and a mass of caudally situated gland cells with separated ducts emptying their secretion in the copulatory apparatus. The latter

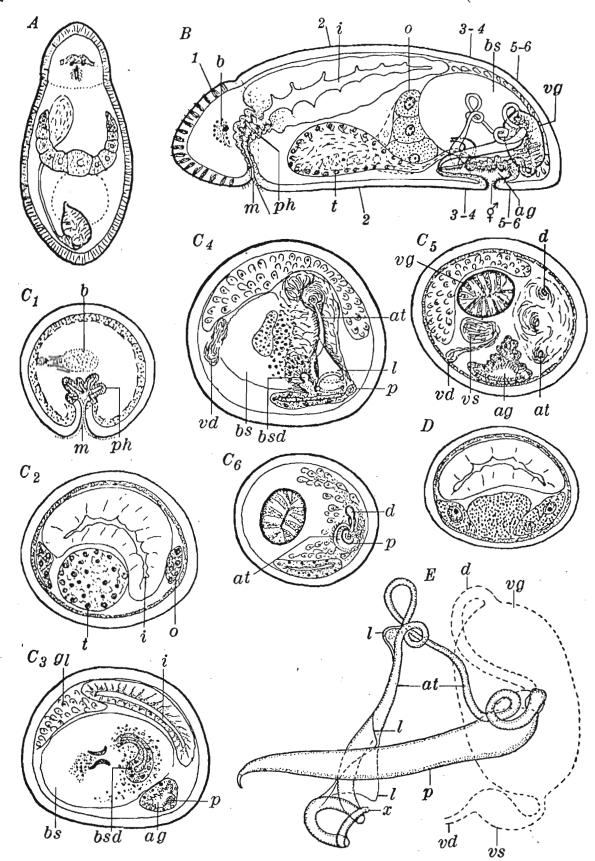


Fig. 3. Dolichomacrostomum mortenseni Marcus. A habitus, B in sagittal section (all details in the structure of the bursa seminalis omitted), C_1 — C_6 transverse sections from the anterior end (C_1) to the posterior end (C_6) corresponding to the lines 1—1 to 5—6 in fig. B, D transverse section of another specimen in pure female stage, E the copulatory apparatus drawn from an animal in toto, cleared up in anis oil (x the probable opening of the accessory apparatus). Abbreviations see p. 54.

consists of a tubular, stiletto-shaped, cuticular penis, bent like a hook at its distal end, and a narrow, twisted, accessory tube, both connected in their posterior parts and ending with separated orifices in the proximal part of the genital atrium. Our species corresponds very closely to Marcus' description and figures in all these respects.

However, the Falkland specimens correspond more closely to Paromalostomum notandum in other respects. According to MARCUS the accessory tube consists of three parts: the first one - connected to the penis stiletto - has a strongly muscular envelope, the second one has a glandular structure and the distal part has a little dilatation and a short annular tube opening into the genital atrium. Fig. 3, E makes clear the whole copulatory apparatus in one of my specimens (the accessory glands omitted because only appearing in sections). Fig. 3, C6 corresponds to a transverse section through the orifices of the granular gland vesicle duct (at the same time serving as a ductus ejaculatorius), the accessory glands, and the above-named accessory tube into the dilated hind part of the penis. The accessory tube is surrounded by spiral or circular muscles in its whole length, and is provided with lamella-shaped formations in its distal part something like those drawn by Ax (l. c., T. 12, fig. 7, 8) as regards Paromalostomum notandum. There is a single lamella at that part of the accessory tube, where its narrow, twisted part passes over into the distal, wider part directed towards the genital atrium. A bundle of glandlike cells is lying round this point, and there is a secretion inside the tube although empty in its other parts (C₄). The accessory tube indubitably opens into the genital atrium with its spirally twisted end part (x in E), though the sections do not provide clear figures with regard to that subject. I cannot find any distal part with an annular end piece (see abovel) in every case. - Laterally or latero-dorsally of the orifice of the accessory tube one can notice the mouth of the bursa duct (bursa »shaft») surrounded by strong constrictors and dilators (C4, bsd). The bursa duct has glandular walls and reminds one very much of that part of the accessory duct which has this structure according to Marcus (l. c., fig. 52, 1). There is a hollow, cuticular appendix at the inner mouth of the bursa duct (Ca) as is the case in the Paromalostoma species described by Ax and probably corresponding to the end part of the accessory duct in Marcus' figures (s and u in his fig. 50-52). One of my specimens has a quantity of appendices similar to those reproduced by MARCUS (x in his fig. 50, 51).

1), mortenseni corresponds fairly closely in its genital apparatus to the Paromalostoma species, particularly P. notandum, described by Ax, as may be evident from the figures and the preceding lines. The main difference, it seems, is that D. mortenseni lacks a female duct (atrium femininum according to Ax) and a connection (ductus spermaticus) between that duct and the bursa. On the other hand the genital atrium in D. mortenseni has a proximal continuation bordering on the matured egg cells and surely corresponding to the waginas in Ax' figures. — It seems to be a minor difference that the accessorial gland cells are not united with a tubular organ in D. mortenseni: D. uniporum has such tubular organs like those in the Paromalostoma species.