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MEMOIRS AND PROCEEDINGS

OF THE

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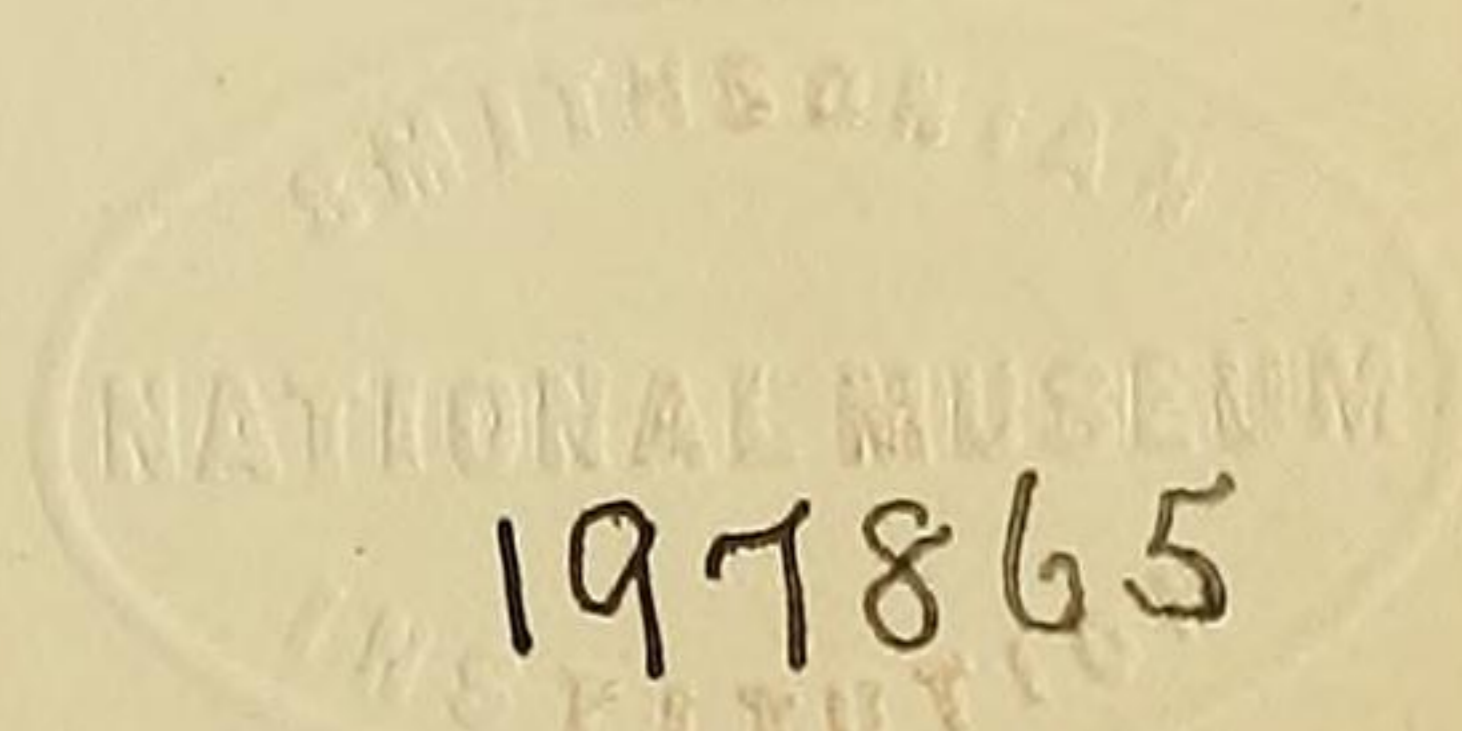
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1904.



XV. Notes on some Polyclad Turbellaria in the British Museum.

By F. F. LAIDLAW, B.A. (Cantab.)

Received and Read March 29th, 1904.

PLANOCERIDÆ.

PLANOCERA PELAGICA (Moseley).

Stylochnus pelagicus, Moseley ['77].

Planocera pelagica, Lang ['84].

Stylochoplana sargassicola, von Graff ['92] (partim).

Three specimens, collected "from February 28th to March 5th, 1889. Surface of N. and S. Atlantic, and from Cape [of Good Hope?] to Australia. Capt. Carvasso."

This is the smallest species of the genus with the exception of *Pl. simrothi* which is of about the same size with it. There can be no doubt that this species is a true *Planocera* closely allied to *Pl. pellucida* but distinctly smaller and with differently arranged eye-spots.

The length of the three specimens in the collection ranges from 8 to 10 mm. and the breadth from 5 to 7 mm. In Moseley's figure 11 ['77, pl. III.] *MG* is really, I think, the female opening whilst *FG* is the opening of the non-muscular part of the vagina into the muscular part or bursa copulatrix.

The species is quite distinct from *Stylochoplana sargassicola*. (Mertens)

It would be interesting to compare its distribution with that of *Planocera pellucida*. The latter appears to have a very wide range, whilst *P. pelagica* is perhaps confined to the Atlantic.

STYLOCHIDÆ.

STYLOCHINÆ.

Genital openings close to each other and to the hinder end of the body. Penis without stylet. Tentacles and marginal eyes present. The prostate frequently has its walls strongly folded. [: 03 a.]

STYLOCHUS VIGILAX, sp. n.

"Beach. Thursday Id. H.M.S. 'Alert,' 26-10-81."
One specimen.

Length about 35 mm. Breadth 22 mm.

A *Stylochus* with marginal eyes on the anterior part of the margin only. Ovaries dorsal, genital openings separated but very close to each other, about 0.15 mm. apart and about 4 mm. from the hinder end of the body. A peculiarity of this species is the complete absence of any muscular vesicula seminalis. Where the two vasa deferentia unite there is a feeble dilatation but its walls are no more muscular than those of the vasa deferentia themselves.

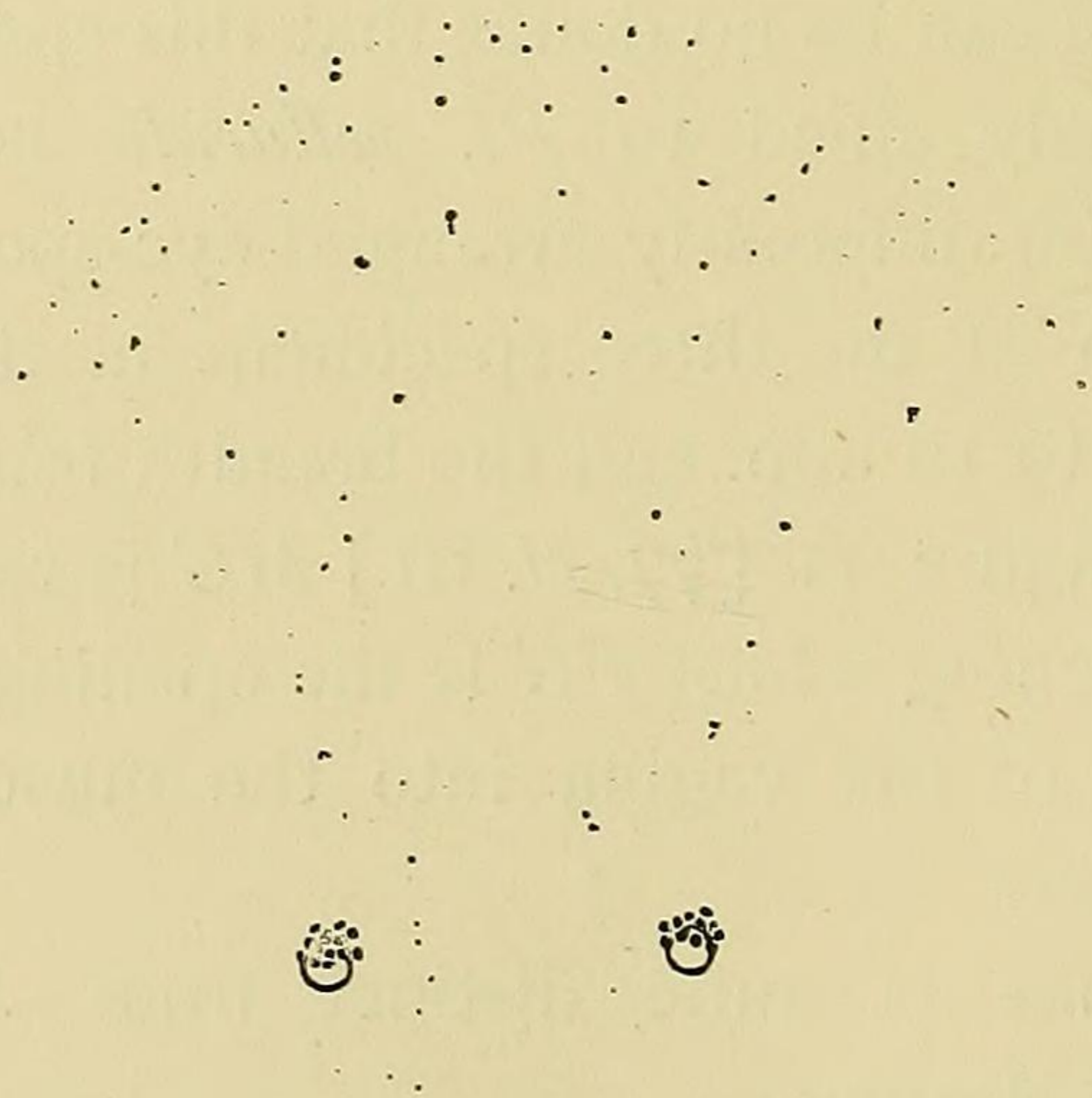


FIG. 1.

Stylochus vigilax × 4.

The cluster of eye-spots at the base of either tentacle is rather denser than in most species of the genus. These

eyes are considerably larger than those lying over the brain or about the anterior margin. (See *Fig. 1.*) The dorsal epidermis contains large numbers of the "Schleimstäbchen" which are characteristic of the genus. As in other species the walls of the prostate are strongly folded.

LEPTOPLANIDÆ.

LEPTOPLANA AUSTRALIS, sp. n.

"Port Phillip. Presented by Dr. R. v. Lendenfeld."
Six specimens.

Dimensions of the largest specimen. Length about 30 mm. Breadth about 15 mm.

The arrangement of the eye-spots is shown in the accompanying text-figure (see *Fig. 2.*) Colour a dark

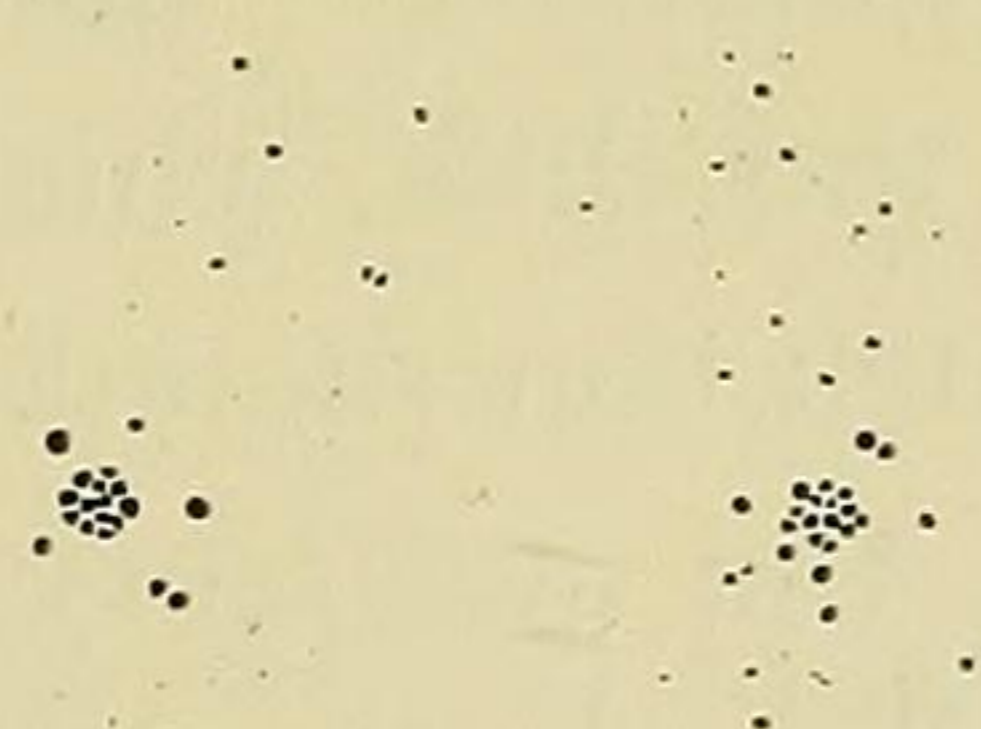


FIG. 2.

Leptoplana australis $\times 3$.

chocolate-brown, deepest on the margin, ventral surface rather lighter. Two of the specimens have lost their colour to a great extent. Penis armed with a long, nearly straight stylet, about 2 mm. in length, directed backwards and downwards. Prostate divided into some six or seven longitudinal chambers. The lower part of the vagina is modified to form a large muscular bursa copulatrix. One of the specimens shows distinctly traces of nuchal tentacles. I believe that *Leptoplana alcinoi*, an allied species, occasionally exhibits a similar feature.

LEPTOPLANA DRÆBACHENSIS. Oersted.

Leptoplana dræbachensis, Lang ['84], Jensen ['78], Gamble ['93].

"Godthal. Mr. Holböhl's collection. 60 faths."— One specimen.

The external features and as much of the anatomy as could be determined from the inspection of a specimen cleared in cedar oil agreed closely with the specimen so beautifully figured by Jensen ['78]. I cut serial sections through the genital tract; these have revealed the following points of interest. The prostate gland is divided up longitudinally into about twelve chambers. The vagina is not developed into a bursa copulatrix, and the accessory parts are without muscular walls. These accessory parts consist of a duct, which Jensen described as having a curious moniliform appearance; the accessory duct, and a large accessory vesicle. The cells lining the duct form here and there little glandular 'bunches' or clusters of cells on either side of the duct, which in their neighbourhood has its lumen much contracted. It is no doubt their presence which gives the accessory duct its moniliform appearance. The walls of the accessory duct are but poorly furnished with muscle fibres. The 'bunches' consist of small pear-shaped darkly staining cells, with rather large nuclei. The smaller ends of these cells project into the lumen of the duct.

The accessory vesicle is also only feebly muscular, it is lined with columnar secreting cells, which recall in appearance to some extent those of the receptaculum seminis of *Paraplanocera*. The shell glands *lie about the accessory vesicle*.

It is evident, I think, that this species is closely related to *Leptoplana nationalis* described by Plehn ['96]. I am not able to determine whether the relative extent of the main-gut is the same in the two species as the specimen of *L. dræbachensis* at my disposal is very much contorted. Plehn's specimen however differs

markedly in having thick muscular walls to the accessory vesicle of the vagina.

In a previous paper [:03] I attempted to arrange the sufficiently known species of *Leptoplana* according to certain characters which can readily be determined. The two specimens already noted in this paper both belong to the division of the genus in which the penis is armed with a stylet. Their places in this division are indicated in the amended table given below.

A. Penis provided with a stylet

(a)

(b) Prostate divided into longitudinal chambers.

(a) Lower part of vagina very muscular, forming a bursa copulatrix.

(i.) Stylet extending the whole length of the penis.

L. vitrea.

L. australis.

(ii.) Stylet not more than half the length of the penis

L. alcinoi.

(β) Lower part of vagina not very muscular, no bursa copulatrix present.

L. dræbachensis.

L. nationalis.

CRYPTOCELIDIDÆ.

CRYPTOCELIDES LOVENI, Bergendal.

Labelled "J. B. Wilson, 88-1-27, Port Phillip." I imagine that there must be some error in the locality given for this specimen. I have in my possession a single specimen from the Firth of Clyde dredged in 10 fathoms.

In concluding I wish to thank Professor Hickson for permission to carry on my work in the Zoological Laboratories of the Manchester University.

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