Annals and Magazine of Natural History: Series 7

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/tnah13>

XXVI.—Natural history notes from the Royal Indian marine survey ship 'Investigator,' captain T. H. Heming, R.N. (retired), commanding.—Series III., No. 11. On two new genera of deep-sea Nemertines

F.F. Laidlaw M.A.

Published online: 29 Sep 2009.

To cite this article: F.F. Laidlaw M.A. (1906) XXVI.—Natural history notes from the Royal Indian marine survey ship 'Investigator,' captain T. H. Heming, R.N. (retired), commanding.—Series III., No. 11. On two new genera of deep-sea Nemertines , Annals and Magazine of Natural History: Series 7, 17:98, 185-188, DOI: [10.1080/00222930608562511](https://doi.org/10.1080/00222930608562511)

To link to this article: <http://dx.doi.org/10.1080/00222930608562511>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

narrow outer margin of the anal area fuscous; opercula small, obliquely transverse, very thickly palely pilose, not passing base of abdomen nor meeting internally.

Long., excl. tegm., 18-20 mm.; exp. tegm. 44-47 mm.

Hab. N.W. India, Aglar Valley, Masuri (P. W. Mackinnon).

Allied to *C. sankara*, Dist., from the same district.

Division FIDICINARIA.

Majeoroma lutea, sp. n.

♂. Body and legs dark luteous; abdomen above thickly greyishly pilose on each lateral area; tegmina and wings hyaline, both narrowly sanguineous at base, the venation luteous; tegmina with the costal membrane and basal cell luteous; head with the front laterally striate and with a deep linear central longitudinal incision; face strongly narrowly longitudinally sulcate and strongly transversely striate; vertex with a longitudinal impression at the area of the ocelli; mesonotum with two obscure central anterior obconical spots and with a small foveate impression in front of each anterior angle of the cruciform elevation, which is very concave posteriorly; opercula short, transverse; rostrum reaching the posterior coxæ.

Long., excl. tegm., ♂ 37 mm.; exp. tegm. 108 mm.

Hab. Brazil? (Coll. Dist.).

XXVI.—*Natural History Notes from the Royal Indian Marine Survey Ship 'Investigator,' Captain T. H. Heming, R.N. (retired), commanding.*—Series III., No. 11. *On Two new Genera of Deep-sea Nemertines.* By F. F. LAIDLAW, M.A.

[Plate VIII.]

THE two remarkable deep-sea Nemertines briefly described below are unfortunately each represented in the 'Investigator' collection by a single specimen only. As they are Museum specimens and unique I have not thought it proper to make a complete series of sections, but have had in each case a few sections prepared from a small part of the body, removed in such a way as to impair as little as possible the value of the specimen as a whole.

My thanks are due to Major Alcock for permission to examine these interesting specimens, and to Professor Hickson for permission to work in the Beyer Laboratories of the University of Manchester.

METANEMERTINI.

HOLORHYNCHOCELA.

Pelagonemertidæ.

DINONEMERTES, gen. nov.

Mouth and proboscis openings separate and distinct. Median dorsal vessel present. Gut-diverticula very numerous, not branching dendritically. Body broad, flattened, hyaline, sides parallel; bluntly rounded at its anterior and posterior extremities.

This genus is somewhat closely allied to *Planktonemertes*, Woodworth ['99], and resembles it in appearance. It is readily distinguished from Woodworth's genus by the separation of the mouth and proboscis openings.

Dinonemertes investigatoris, sp. n.

(Pl. VIII. fig. 1.)

Station 319, lat. 12° 2' N., long. 73° 46' E., 1154 fath. (Z. E. V. ¹⁹⁵⁷/₇). Indian Marine Survey, 1903-1904, east of Laccadives.

Length 15 cm., breadth 4.8 cm., thickness 4 mm.

There is no note as to colour; in the preserved specimen this is whitish yellow. Bands of longitudinal muscle-fibres can be distinguished without the aid of a lens.

The specimen is a male.

The epidermis has completely disappeared, leaving exposed the basal membrane, which is about .02 mm. in thickness and has stained deeply. Immediately below it lies a very thin layer of circular fibres, and within these is the layer of longitudinal fibres, which are grouped in fascicles having a triangular outline in cross-section, the apex of the triangle being directed inwards. These fascicles are embedded in gelatinous parenchyma, which shows no cellular structure and is quite without nuclei, but presents a finely fibrillar structure.

The parenchyma is very similar to that described by Hubrecht for *Pelagonemertes* ['87], and, as in that genus, it is traversed in all directions by nerve-fibres which have a

remarkable zigzag course. I have not found any structures comparable to those which Hubrecht thinks may be of a glandular character, observed by him in *Pelagonemertes*. At the thin margin of the body the muscles are reduced to a single layer of fibres apiece. The epithelium of the gut has the appearance of being in a macerated condition. It presents a finely reticular structure surrounding the gut-cavity, but no cell-characters can be determined in it.

The longitudinal nerve-chords occupy relatively the same position as in *Pelagonemertes*. As in that genus, the parenchyma stains most deeply where it surrounds the organs of the body.

BATHYNEMERTES, gen. nov.

Body somewhat cylindrical, but flattened, especially at its hinder end; with a slightly constricted neck; tapering gradually from the neck backwards, whilst the head is large and pointed anteriorly. The mouth and proboscis open together apically. The parenchyma is similar to that of the preceding genus. The body is pigmented. The gut branches freely.

The position of this genus is somewhat obscure. It certainly differs considerably from other genera referred to the *Pelagonemertidæ*, all of which are flattened dorsi-ventrally to a much greater extent than is *Bathynemertes*. The constrictions at the "neck" may be, perhaps, supposed to indicate some relationship to *Nectonemertes*, Verrill ['92], but there is no trace of "cirrhi," and the mouth and proboscis openings are united. It is possible that when this form is more fully known it will be found necessary to create a special family for its reception.

Bathynemertes Alcocki, sp. n.
(Pl. VIII. figs. 2, 3.)

Station 310, lat. 13° 29' N., long. 95° 29' E. (Z. E. V. 177¹/₇). 1902.

Length 10·5 cm., greatest breadth 2·7 cm.

Resembles externally to some extent a *Euborlasia*. The integument is tough and wrinkled and of a purple-brown colour; the hinder extremity is to a great extent devoid of pigment, whilst there is a narrow colourless band running along either side of the body, commencing at the apex.

The *epidermis* is not in a condition for histological description, but appears to be of the usual type. The basement-membrane is well-developed, about ·06 mm. thick and deeply

pitted externally to receive the bases of epidermal cell (Pl. VIII. fig. 3). It may be described as consisting of two distinct zones. Of these the inner is much the thicker and has a finely fibrillar structure. A few small nuclei are visible in this layer. The outer layer has a stratified appearance, as though it had been secreted by the epidermal cells which lie upon it. The layers of which it is formed lie parallel to its surface. The stratification is marked out as a series of deeply stained bands alternating with thicker layers of a clear hyaline material.

The circular muscle-fibres lie immediately below the basement-membrane, and next to them are the longitudinal fibres. These form a continuous layer, not broken up into fascicles, as is the case in *Pelagonemertes*.

Within the muscular system is the parenchyma, here greatly diminished in bulk by the numerous branches of the gut which lie in it. The parenchyma is traversed by bundles of nerve-fibres.

My sections, which were cut from a part of the body about 3 cm. from the hinder end, give no indication of the sex of the individual.

Bathynemertes Alcocki has the appearance of being a bottom-living species, unlike *Dinonemertes* and the other genera referred to the Pelagonemertidæ, which have all of them the characteristics of pelagic creatures.

Literature.

- ['87] HUBRECHT, A. W. W.—Report on the Nemertea collected by H.M.S. 'Challenger.' 'Challenger' Report, Zoology, vol. xx. (1887).
 ['92] VERRILL.—Trans. Connecticut Acad., New Haven, viii. (1892).
 ['99] WOODWORTH, W. McM.—Bull. Mus. Comp. Zool., Cambridge, Mass., xxvii.

EXPLANATION OF PLATE VIII.

- Fig. 1. *Dinonemertes investigatoris*. A., anterior; P., posterior end of body.
 Fig. 2. *Bathynemertes Alcocki*. n, constriction at neck.
 Fig. 3. Part of a transverse section of *Bathynemertes Alcocki*. e, epidermis; b¹, outer zone of basement-membrane; b², inner zone of basement-membrane; c.m., circular muscle-fibres; l.m., longitudinal muscle-fibres.

Figs. 1 and 2 about natural size.

P.