

Pelagic Nemerteans.<sup>1</sup>

THE power of progressing through the water by swimming has long been known in the nemerteans; thus Nardo mentions it in *Cerebratulus marginatus*, Grube in *Meckelia aurantiaca*, De Quoy in stages in *Polia bembix*, whilst more recently it has been described in *Amphiporus pulcher*, J. M. A. (*Drephanophorus*) *spectabilis*, De Quoy, *Micrura fusca*, McL., and *Tetrastemma* *insais*, Abild. But the first truly pelagic nemertean was only brought into notice by Prof. Moseley during the voyage of the *Challenger* (1875). Now, through the labours of Hubrecht, Verrill, Craven and Heath, Brinkmann, Joubin, Gerarda Stiasny-Wijnhoff, and others, a long list of species from all the great oceans, except perhaps the Antarctic, demonstrates their wide distribution, though they are always thinly scattered, so that, as regards some, only one sex is known. Moreover, whilst the littoral nemerteans as a rule form two marked groups of the Enopla and the Anopla (the armed, with the mouth in front of the ganglia, and the unarmed, with the mouth behind the ganglia), the pelagic forms fall under a section of the armed. They are further distinguished by their comparatively short, flattened, and, in some, translucent bodies, the walls of which are in marked contrast to the firmer tissues of the littoral forms, for the almost gelatinous parenchyma is largely developed. Further, some possess a caudal fin, and a few, in addition, a lateral fin. The dorsal and the ventral longitudinal muscles with vertical bands are best developed. Eyes are often absent and sense organs few and peculiarly modified. The typical proboscis and its sheath, with the armature of the former leaning to that in *Drephanophorus*, is present, though no mention is made by either Prof. Brinkmann or the present author of the remarkable corpusculated fluid in its sheath. Moreover, the males of the pelagic group carry their spermaries in the cephalic region with or without *penes*, whilst the females follow the littoral nemerteans in having the ovaries arranged along the body—in this case interdigitating with the alimentary caeca. Lastly, some males are provided with a pair of muscular tentacles anteriorly.

The monograph of Mr. Wesley R. Coe has appeared nine years later than that of Prof. Brinkmann,<sup>2</sup> and thus has the advantage of that masterly treatise, the classification in which the author follows, namely, the order Holopnemertini of Hubrecht being divided into the sub-orders Polystylifera and Monostylifera. The former has two tribes, the Reptantia, including the family Drephanophoridae, whilst the Pelagia has

<sup>1</sup> "The Pelagic Nemerteans." By Wesley R. Coe. (Memoirs of the Museum of Comparative Zoology at Harvard College, Cambridge, U.S.A.) Vol. 49, pp. 242+30 Plates. 1926.

<sup>2</sup> Vide NATURE, July 4, 1918, p. 353.

no less than nine families. Further investigations and discoveries may perhaps lead to changes and simplification, but in the meantime order is maintained. The treatise contains a description of the pelagic nemerteans obtained (1) off the west coast of Mexico, Central and South America, and the Galapagos Islands, (2) those from the eastern tropical Pacific, and (3) those from the North-West Pacific Expedition.

The collections were originally taken in hand by the late Dr. Woodworth, but, on his death, the task fell to Mr. Coe. After an introduction, in which the history of the pelagic group is outlined, the author gives a general survey of their structure under the head of morphological peculiarities. He differs from Gerarda Wijnhoff and Brinkmann in not reckoning the layers of the proboscis as if it were entirely evaginated, and he gives the anterior region nine layers, the most remarkable of which is the main nervous layer with its numerous longitudinal trunks and reticulations, the whole forming a system far larger than the two original (anterior) nerves, and which misled the reviewer in 1868<sup>3</sup> in thinking it a reticulated non-nervous layer. Like Brinkmann, he does not allude to the corpusculated fluid in the cavity of the sheath, nor is any light thrown on the function of this complex organ. He points out the importance in a pelagic form of the dorso-ventral bundles of muscle which are interdiverticular in position, and he agrees with Brinkmann that the muscular tentacles in the males of certain forms may be of use in holding the females whilst the sperm-sacs shed their contents, though in the littoral forms it is sufficient for the male to be in the proximity of a spawning female to cause an immediate issue of a cloud of sperms. He describes the subcutaneous sense organs as differentiated parts of the integument, and alludes to peculiar organs in connexion with the dorsal nerve in *Neuronemertes aurantiaca*—hinting that they may be phosphorescent organs, but such is unproved.

The contrast with the littoral forms in sense organs is striking, and yet it might have been expected that a free-swimming race was more in need of them. Mr. Coe devotes much attention to the minute structure of the reproductive organs both in text and illustration. He concludes with remarks on their food, habits, parasites, and enemies, and a detailed description of the 47 species in the collections. The whole forms a notable and independent contribution to our knowledge of the group in text, text-figures, and plates, and is alike creditable to the Museum and the author.

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<sup>3</sup> Trans. R. Soc. Edin., vol. 25, pp. 305-433.

## Tribute to Prof. H. F. Osborn.

THE seventieth birthday of Prof. Henry Fairfield Osborn, president of the American Museum of Natural History, was celebrated by the presentation to him of a Queen Anne cup made by Thomas Folkingham in 1711, and an illuminated book containing an address of congratulation, with the signatures of his colleagues and friends all over the world. These signatures were made on individual slips of vellum and included nearly a thousand names. The design and decorations of the book were executed by Mr. William E. Belanske. Owing to Prof. Osborn's absence from the city on Aug. 8—the date of his birthday—the Committee in charge of the celebration waited upon him at Garrison on July 28 to make the presentation. They also invited Prof. and Mrs.

Osborn to be the guests of honour at a reception to be given them on Sept. 29, on which occasion the balance of the birthday fund raised by his friends, amounting in all to nearly seven thousand dollars, will be presented to Prof. Osborn for his research work.

The congratulatory address in the album presented to Prof. Osborn reads as follows:

"On your seventieth birthday your colleagues and friends join to salute you, to congratulate you, and to express their delight in finding you radiant in health and spirit, joyously carrying on your life work.

"We desire to thank you most heartily for your leadership in many fields. Drawing around you in the American Museum of Natural History a staff of explorers and co-workers who are animated by your