

CONSEIL INTERNATIONAL POUR L'EXPLORATION DE LA MER

**Zooplankton.**

**Sheet 64.**

**PELAGIC NEMERTEA**

**Keys to Families and Genera**

(By Wesley R. Coe)

**1956**

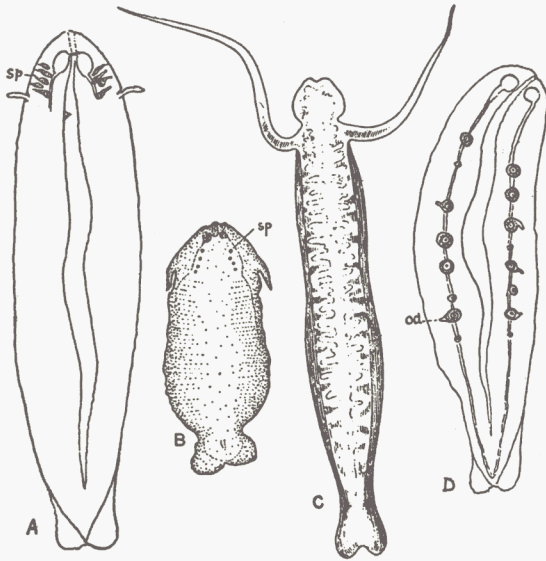


Fig. 1.

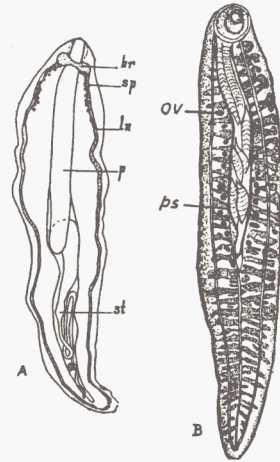


Fig. 2.

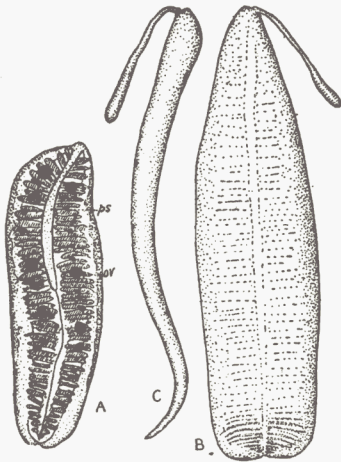


Fig. 3.

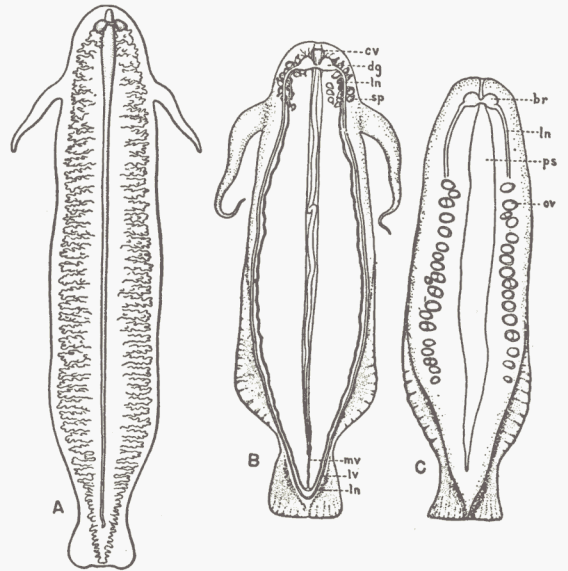


Fig. 4.

Figure 1. *Nectonemertes primitiva*. A, outline of body of male with short tentacles, showing position of spermaries. B, male with contracted body and 4 pairs of spermaries (after Brinkmann). C, outline of body of living individual (after Bürger). D, female with 8 pairs of ovaries.

Figure 2. A, *Chuniella lanceolata*, male showing spermaries (sp) in an irregular row behind the brain (br), the long proboscis (p) with stylet chamber (st) and the lateral nerve cords (ln). B, *C. agassizii*, female with ovaries (ov) and short proboscis sheath (ps). (A, after Brinkmann; B, after Bürger).

Figure 3. *Dinonemertes investigatoris*. (A, after Joubin; B, C, after Brinkmann).

Figure 4. *Nectonemertes mirabilis*. A, male with relatively short tentacles, showing arrangement of lobed intestinal diverticula. B, male, showing spermaries and extent of proboscis and proboscis sheath. C, female with 16 pairs of ovaries.

Figures after Coe except where stated.

## Bathypelagic Nemerteans of the Eastern and Central North Atlantic Ocean.

Bathypelagic nemerteans have been found in all the great oceans, but not in shallow bays. They generally float idly, usually at depths of 500 to 2000 metres or more, and the populations may be carried for thousands of miles by the deep ocean currents, reproducing successive generations on the way. Because of the wide distribution of these currents, (Fig. 5) some of the species have been found not only throughout the North Atlantic but also in the South Atlantic, as well as in the Pacific. Consequently it is unnecessary to give the table of distribution usually given in these sheets. For six of the 25 known species from the eastern and central North Atlantic, the positions of capture are shown in Figure 5.

Associated with this system of currents there are presumably numerous vast eddies in which a population may be more or less completely localized for generations.

Known geographical distribution. N = North Atlantic, S = South Atlantic, P = Pacific, I = Indian.

### Key to Families.

- |   |                      |
|---|----------------------|
| 1. Anterior end of body without tentacles in either sex .....   | 2                    |
| 1. Anterior end of body with pair of tentacles in one or both sexes .....   | 9                    |
| 2. Dorsal blood vessel extends entire length of body .....  | 3                    |
| 2. Dorsal vessel ends blindly in rhynchocoel a short distance posterior to brain .....  | Pelagonemertidae     |
| 3. Posterior end of body narrow, not differentiated into caudal fin .....   | 4                    |
| 3. Posterior end of body broad and flat, usually terminating in flattened caudal fin .....  | 6                    |
| 4. Musculature of proboscis sheath of interlacing circular and longitudinal fibres .....  | Protopeleonemertidae |
| 4. Musculature of proboscis sheath of separate circular and longitudinal layers .....   | 5                    |
| 5. Intestinal diverticula numerous, with few branches and without distinct ventral branch .....                                   | Chuniellidae         |
| 5. Intestinal diverticula few, divided repeatedly into numerous slender branches .....  | Buergeriellidae      |
| 6. Dorsal vessel does not enter rhynchocoel .....   | Armaueriidae         |
| 6. Dorsal vessel enters rhynchocoel .....   | 7                    |
| 7. Intestinal diverticula with both dorsal and ventral branches, the latter extending laterally beneath the nerve cords .....     | Planktonemertidae    |
| 7. Intestinal diverticula without distinct ventral branches .....   | 8                    |
| 8. Body broad and flat; spermaries without external phalli .....  | Dinonemertidae       |
| 8. Body slender; spermaries with external phalli .....  | Phallonemertidae     |
| 9. Anterior portion of body with pair of lateral tentacles in adult males only; dorsal vessel extends entire length of body ..... | Nectonemertidae      |
| 9. Head with pair of small lateral tentacles in both sexes; dorsal vessel rudimentary ending blindly in rhynchocoel .....         | Balaenanemertidae    |

### Key to Genera.

- Family PROTOPELAGONEMERTIDAE**
- Mouth and proboscis opening united; proboscis sheath extends to posterior end of body .....  
 ..... *Protopelagonemertes* 2
- Mouth and proboscis opening separate .....
- Proboscis sheath about half as long as body; nerve-cord muscles present; glandular adhesive organs absent ..... *Pendonemertes*
- Proboscis sheath three-fourth as long as body; nerve-cord muscles absent; ventral surface of body with pair of convoluted glandular organs, more highly specialized in the male ..... *Plotonemertes*

Genus *Protopelagonemertes* Brinkmann

1. *Protopelagonemertes hubrechtii* Brinkmann.  
*Bathynectes hubrechtii* Brinkmann, 1912, 1917, 1917a; *P. hubrechtii* Brinkmann, 1917a; Coe, 1926, 1935, 1936, 1945, 1954; *Bathynemertes hubrechtii* Wheeler, 1934. (N. S. P.)

Genus *Plotonemertes* Brinkmann

2. *Plotonemertes adhaerens* Brinkmann, 1917.  
*P. adhaerens* Brinkmann, 1917, 1917a; Coe, 1926, 1935, 1936, 1945, 1954. (N. P.)

Genus *Pendonemertes* Brinkmann

3. *Pendonemertes levensini* Brinkmann, 1917.  
*P. levensini* Coe, 1926, 1936, 1945. (N.)

Family PLANKTONEMERTIDAE

Mouth and proboscis united into a short atrium ...  
..... *Mononemertes*  
Mouth and proboscis opening separate .....  
..... *Crassonemertes*  
Genus *Mononemertes* Coe.

- 4. *Mononemertes sargassicola* (Joubin).  
*Planktonemertes sargassicola* Joubin, 1906; *Mononemertes sargassicola* Coe, 1926, 1936, 1945. (N.)  
Genus *Crassonemertes* Brinkmann.
- 5. *Crassonemertes robusta* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945, 1954; Wheeler, 1934. (N.P.)

Family BUERGERIELLIDAE

Genus *Buergeriella* Brinkmann.

- 6. *Buergeriella notabilis* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945. (N.)

Family DINONEMERTIDAE

Mouth on ventral surface of head, well separated from rhynchodeal opening; proboscis sheath almost as long as body; wall of sheath of interwoven longitudinal and circular fibres ..... *Paradinonemertes*  
Mouth anterior to brain; wall of proboscis sheath composed of separate muscular layers ..... 2  
Proboscis sheath limited to anterior two-thirds of body ..... *Dinonemertes*  
Proboscis sheath nearly as long as body .....  
..... *Planonemertes*  
Genus *Paradinonemertes* Brinkmann.

- 7. *Paradinonemertes drygalskii* Brinkmann, 1915, 1917; Coe, 1926, 1936, 1945. (N.)  
Genus *Dinonemertes* Laidlaw.
- 8. *Dinonemertes alberti* (Joubin).  
*Planktonemertes alberti* Joubin, 1906; *D. alberti* Brinkmann, 1917; Coe, 1926, 1936, 1945. (N.)
- 9. *Dinonemertes grimaldii* (Joubin).  
*Planktonemertes grimaldii* Joubin, 1906; *D. grimaldii* Brinkmann, 1917; Coe, 1926, 1936, 1945. (N.)
- 10. *Dinonemertes investigatoris* Laidlaw, 1906; Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945. (I.N.)

Family PHALLONEMERTIDAE

Genus *Phallonemertes* Brinkmann.

- 11. *Phallonemertes murrayi* (Brinkmann).  
*Bathynectes murrayi* Brinkmann, 1912; *P. murrayi* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945. (N.)

Family CHUNIPELLIDAE

Genus *Chuniella* Brinkmann.

- 12. *Chuniella lanceolata* Brinkmann, 1917; Coe, 1926, 1936, 1945. (N.)

Family NECTONEMERTIDAE

Genus *Nectonemertes* Verrill.

Males with 5 to 7 pairs of spermaries posterior to brain; females with about 25 pairs of ovaries.

- 13. *Nectonemertes minima* Brinkmann, 1915.  
*Hyalonemertes atlantica* Bürger, 1909; *N. minima* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945. (N.S.)  
Males with 15 to 24 pairs of spermaries beside brain; females with 20 to 30 pairs of ovaries.
- 14. *Nectonemertes mirabilis* Verrill.  
*N. mirabilis* (*Hyalonemertes atlantica*) Verrill, 1892; Brinkmann, 1917, 1917a; Coe and Ball, 1920; Coe, 1926, 1936, 1945, 1954; Wheeler, 1934; *N. grimaldii* Joubin, 1904, 1906. (N.S.P.)  
Males with 4 to 6 pairs of spermaries posterior to brain; females with 8 to 10 pairs of ovaries.
- 15. *Nectonemertes primitiva* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945, 1954; *N. mirabilis* Bürger, 1909. (N.P.)

Family ARMAUERIIDAE

Genus *Armaueria* Brinkmann.

- 16. *Armaueria rubra* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945.

Family PELAGONEMERTIDAE

Body pointed at posterior end, without caudal fin .. 2

Body with more or less well demarcated caudal fin . 3

Spermaries in a single row on each side of body near brain ..... *Gelanemertes*

Spermaries in a compact group on each side of body near brain ..... *Natonemertes*

Caudal fin not distinctly demarcated .....  
..... *Parabalaenanemertes*

Caudal fin well developed ..... 4

Intestinal diverticula closely appressed .....  
..... *Probalaenanemertes*

Intestinal diverticula separated by much gelatinous tissue ..... *Pelagonemertes*

Genus *Natonemertes* Brinkmann.

- 17. *Natonemertes acutocaudata* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945. (N.)  
Genus *Gelanemertes* Coe.
- 18. *Gelanemertes richardi* (Joubin).  
*Pelagonemertes richardi* Joubin, 1906; *G. richardi* Coe, 1926, 1945. (N.)



Figure 5. Correlation of the distribution, insofar as at present known, of six of the species of bathypelagic nemerteans found in the Bermuda area with the approximate directions of flow of the water masses which they inhabit. Numerals indicate the approximate distances from the surface at which the intermediate water masses are flowing. Broken lines are used for less well authenticated currents. Abbreviations indicate: A. I. W. arctic intermediate water; A. A. I. W. antarctic intermediate water; M. W. Mediterranean water; B. Bermuda area. (After Coe, 1945).

Genus *Parabalaenanemertes* Brinkmann.

19. *Parabalaenanemertes fusca* Brinkmann, 1917, 1917a; Coe, 1926, 1945. (N.)

Genus *Probalaenanemertes* Brinkmann.

20. *Probalaenanemertes wijnhoffi* Brinkmann, 1917, 1917a; Coe, 1926, 1945. (N.)

#### Family BALAENANEMERTIDAE

Genus *Balaenanemertes* Bürger.

21. *Balaenanemertes chavesi* (Joubin).  
*Nectonemertes chavesi* Joubin, 1906; *B. chavesi*

Brinkmann, 1917, 1917a; Coe, 1926, 1945. (N.)

22. *Balaenanemertes grandis* Brinkmann, 1917, 1917a; Coe, 1926, 1945. (N.)  
23. *Balaenanemertes hjorti* Brinkmann, 1917, 1917a; Coe, 1926, 1945. (N.)  
24. *Balaenanemertes lata* Brinkmann, 1917, 1917a; Coe, 1926, 1936, 1945. (N.)  
25. *Balaenanemertes lobata* (Joubin).  
*Nectonemertes lobata* Joubin, 1906; *B. lobata* Brinkmann, 1917, 1917a; Coe, 1945. (N.)

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