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**XXIII.**—DINOPHILIDÆ OF NEW ENGLAND. BY A. E. VERRILL.

No representatives of this group have hitherto been described from this coast, so far as I am aware. Two species have been known to me for several years, but I have delayed publishing descriptions of them, hoping to be able to obtain additional specimens in order to make the figures and descriptions more complete. But since this group is supposed by many writers to be related to the Nemerteans, it seems to me desirable that our species should be put on record in this connection.

Both our species may be referred, provisionally, to *Dinophilus*, though they differ considerably in structure. One of them (*D. simplex*) may not be a true *Dinophilus*.

Family, DINOPHILIDÆ Graff.

*Dinophilus pygmæus*, sp. nov.

WOOD-CUT 10.

Body very small, translucent, in extension long-ovate or nearly cylindrical, capable of contracting into a short-ovate or subglobular form, composed of five segments, exclusive of the head and tail; the posterior segments are usually the largest. Each segment is surrounded near its middle by a circle of rather long and strong cilia. The head is usually rounded in front, often nearly semicircular, and has a tuft or fringe of strong cilia around its front margin, and two transverse lateral tufts which are parts of two continuous preoral bands, one before and one behind the eyes. The eyes are rather wide apart, small, reniform, conspicuous.

The mouth is small and appears to be bilobed. The pharynx or œsophagus is short and swollen. On each side of the pharynx there is a small pharyngeal gland. The stomach is large, oblong-cylindrical, and occupies about three body-segments in ordinary extension; the intestine is narrow and terminates in an anal opening at the

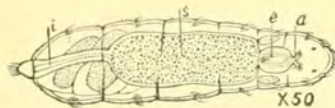


Fig. 10.—*Dinophilus pygmæus*, dorsal view, somewhat compressed; a, mouth; e, pharynx and pharyngeal glands; s, stomach; i, intestine.

base of the caudal segment, which is small, short-triangular, and terminated by a tuft of large cilia. In the posterior part of the body are two relatively large, ovate, opaque, reproductive bodies, but whether they were ovaries or spermaries I did not ascertain, so that the sex of the specimen described and figured is uncertain, but it is probably a female. Color whitish. Length  $\cdot 7^{\text{mm}}$ ; breadth, as compressed,  $\cdot 16^{\text{mm}}$ .

Taken on the piles of a wharf at Wood's Holl, Mass., Aug. 10, 1883.

This species is closely allied to *D. gyrociliatus* of Europe. The latter has, however, six post-oral segments, and differs also in the form of the head, pharynx, and stomach. How much importance should be attached to these differences is uncertain, for they may be due largely to different conditions of the specimens examined. The two may eventually prove to be identical.

#### *Dinophilus simplex*, sp. nov.

PLATE XXXVI, FIGURES 6, 6a.

Body nearly smooth, distinctly segmented, in extension elongated and more or less cylindrical, the anterior part usually broadest, composed of four evident segments, exclusive of the large head and abortive tail. Segments well defined, but without any conspicuous bands of cilia. Head-segment large and long, subtriangular in front, and often pointed, but sometimes rounded. Eyes nearly lateral, small, but conspicuous. Mouth simple, elongated, situated between, or a little in front of the eyes. Stomach long and not much enlarged; intestine nearly as wide as the stomach, terminating in a nearly terminal anal pore. The tail segment appears to be rudimentary or abortive. The sex was not ascertained. Color pale yellow. Newport, R. I., Aug., 1880.

The affinities of this species are somewhat uncertain. The pharynx and stomach differ considerably from a typical *Dinophilus*. Reproductive organs were not observed.

- Figure 7.—The same. Dorsal view of the variety with a single pale dorsal stripe;  $\times 3$ .  
 Figure 8.—*Tetrastemma vermiculus*. Dorsal view;  $\times 8$ . Wood's Holl, Mass., low-water.  
 Figure 9.—*Tetrastemma candidum* (?). Dorsal view of a very young specimen, much enlarged; compressed under the microscope, while living. Newport, R. I., sta. 851,  $12\frac{1}{2}$  fath., September 1, 1880.  
 Figure 10.—The same. Dorsal view of a somewhat older specimen. Savin Rock, Conn., October 18, 1887.  
 Figure 11.—*Tetrastemma vermiculus*, var. *catenula*;  $\times 2$ .  
 Figures 1, 6, 8 are by J. H. Emerton; figures 3, 11, are by J. H. Blake; the rest are by the author. All are from living specimens.

## PLATE XXXVI.

- Figure 1.—*Micrura affinis*. Dorsal view;  $\times 4$ . Off Martha's Vineyard, 1887.  
 Figure 2.—*Cerebratulus lacteus*. General view of a living specimen of the pinkish variety, natural size. Wood's Holl, July 17, 1875.  
 Figure 3.—*Cerebratulus luridus* V. Natural size. Noank, Conn., Aug. 8, 1874.  
 Figure 4.—*Cephalothrix linearis*. General view;  $\times 8$ .  
 Figure 5.—The same. Dorsal view of the head and anterior portion of the body of a young specimen, much enlarged. Wood's Holl, Mass., August 19, 1881.  
 Figure 6.—*Dinophilus simplex*, sp. nov. Dorsal view, much enlarged; 6a, the same, ventral view of head and mouth, much enlarged. Newport, R. I.  
 Figures 1, 2, 3 are by J. H. Blake; 4, 5, 6 are by J. H. Emerton. All are from living specimens.

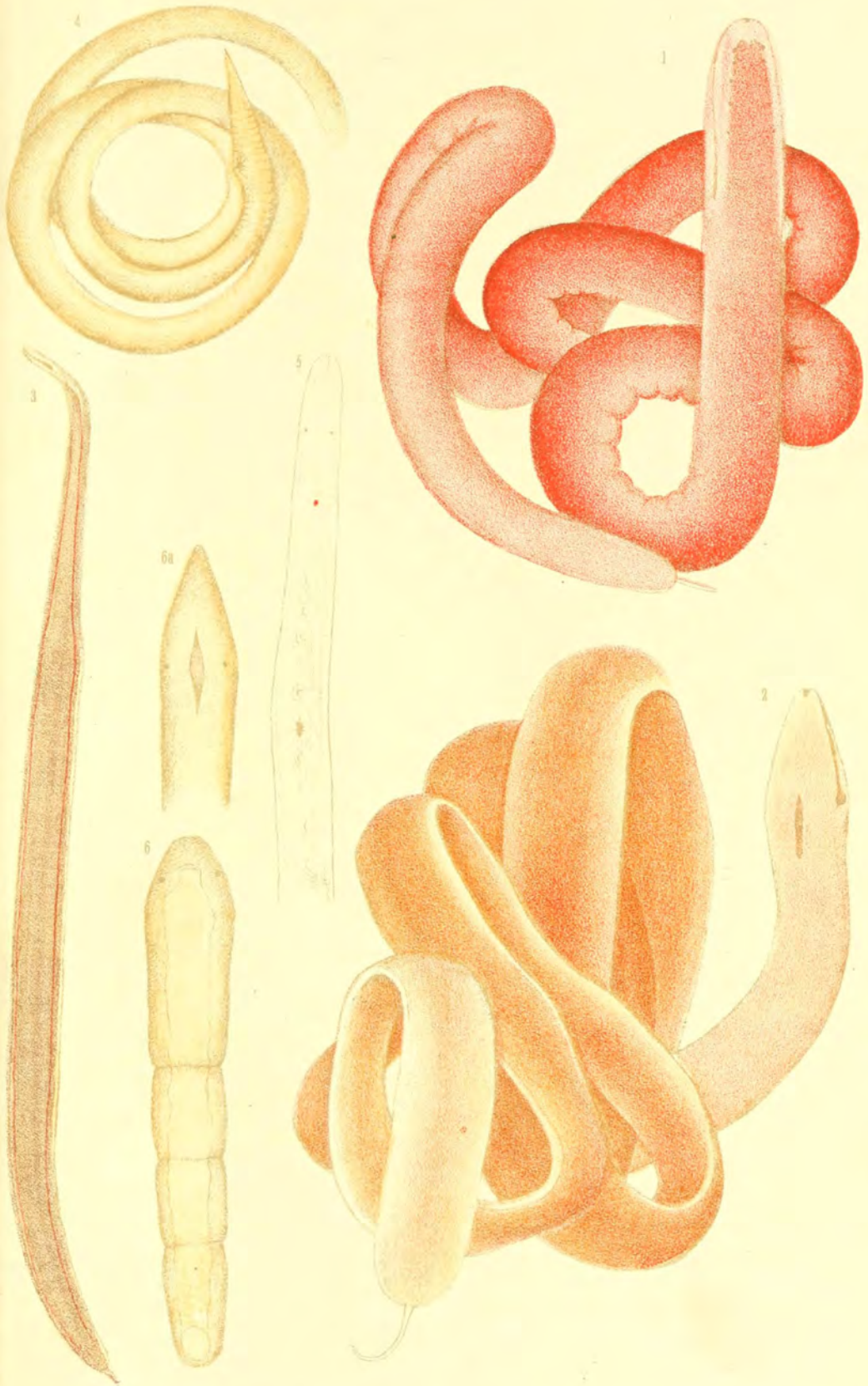
## PLATE XXXVII.

- Figure 1.—*Cerebratulus lacteus*. Pale variety,  $\frac{1}{2}$  natural size; 1a, the same, side view of head, in extension; 1b, the same, ventral view of head, in partial contraction.  
 Figure 2.—*Cerebratulus fuscus*. Dorsal view of head and anterior part of body in moderate extension; 2a, the same specimen in a state of contraction; 2b, 2c, ventral views of the same specimen in different degrees of extension. All natural size.  
 Figure 3.—*Cerebratulus luridus*. Natural size, but considerably contracted in length.  
 Figure 4.—*Lineus dubius*. Ventral view;  $\times 2$ ; 4a, dorsal view of the head, more enlarged. August 18, 1878.  
 Figure 5.—*Lineus viridis*. Green variety, natural size; 5a, the same, side view of head, natural size; 5b, the same, ventral view of head, more enlarged. Eastport, Me., low-water.  
 Figure 6.—*Micrura affinis*. Enlarged  $1\frac{1}{2}$ ; from Eastport, Me.; 6a, the same, posterior end of another specimen.  
 Figure 7.—*Micrura inornata* V. Dorsal view;  $\times 2$ . Massachusetts Bay, sta. 135, 25 fath., 1878.  
 Figure 8.—*Lineus socialis*. General view of the light green variety;  $\times 2$ ; 8a, the same, side view of head and anterior part of body, more enlarged.  
 Figure 9.—*Lineus pallidus*. Dorsal view;  $\times 2$ ; 9a, the same, side view of head; more enlarged. Massachusetts Bay.  
 Figures 3, 5, 6, 9 are by J. H. Emerton; 1 and 8 by A. H. Verrill; the rest are by the author. All are from living specimens.

## PLATE XXXVIII.

- Figure 1.—*Nectonemertes mirabilis*, sp. nov. Dorsal view with proboscis partially extended;  $\times 2$ . Atlantic Ocean, sta. 2036, 1883.





E. Cresson, lith., New Haven, Ct.

NEMERTEANS.