

A NEW SPECIES OF *LIMNODRILUS* (OLIGOCHAETA: TUBIFICIDAE) FROM JAMAICA

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Abstract.—The new tubificid oligochaete *Limnodrilus variesetosus* from Jamaica differs from the other twelve or thirteen species in the genus in the form of the setae and of the penis sheaths.

Loden (1977) recently described two new *Limnodrilus* species from the southeastern United States, bringing the total list of species to 12 (or 13 if one includes *L. spiralis* as a recognizable species). While Loden suggested that *L. grandisetosus* be removed from synonymy with *L. silvani* in that paper, subsequent investigation has caused him to reverse that stand by virtue of evidence that he will present elsewhere. This evidence relates to the presence of giant ventral setae in specimens with penis sheaths of the *silvani* type, which is highly characteristic. In *L. rubripenis* the ventral setae of IV or V to IX differ from the rest, making only two species in which the dorsal and ventral setae are not always identical.

Specimens sent to the author from Jamaica by M. C. Taylor (Fisheries and Environment Canada) proved to have ventral setae from II-IV or V different from the rest, but otherwise all of the characteristics of the genus *Limnodrilus*, and hence these must be regarded as belonging to a new species.

Limnodrilus variesetosus new species

Fig. 1

Holotype.—NMNH 5617. Jamaica: Black River, Holland, 23.3.78, below a sugar factory. 1 slide. Coll. E. Ross.

Paratypes.—NMNH 56172. Same locality and date, 10 specimens in alcohol.

Etymology.—"variesetosus"—setae not all alike.

Description.—Immature worms 12-14 mm \times 0.3-0.5 mm, mature worms up to 50 mm \times 1.0 mm, segments up to 170. Ventral setae of II-IV or some of V 4-5 (immature) or 6-8 in number, generally most numerous in II, large with very long upper teeth. Dorsal anterior setae slightly fewer in number, upper teeth less elongate. All other setae diminishing to 2 or 3 per bundle progressively, teeth of about equal length, the lower thicker than the upper. Reproductive system with all structures paired and of characteristic form for the genus. Atria somewhat narrow and tubular; prostates attached near proximal end, glands very large and lobed. Penis sheaths about 4-5 times

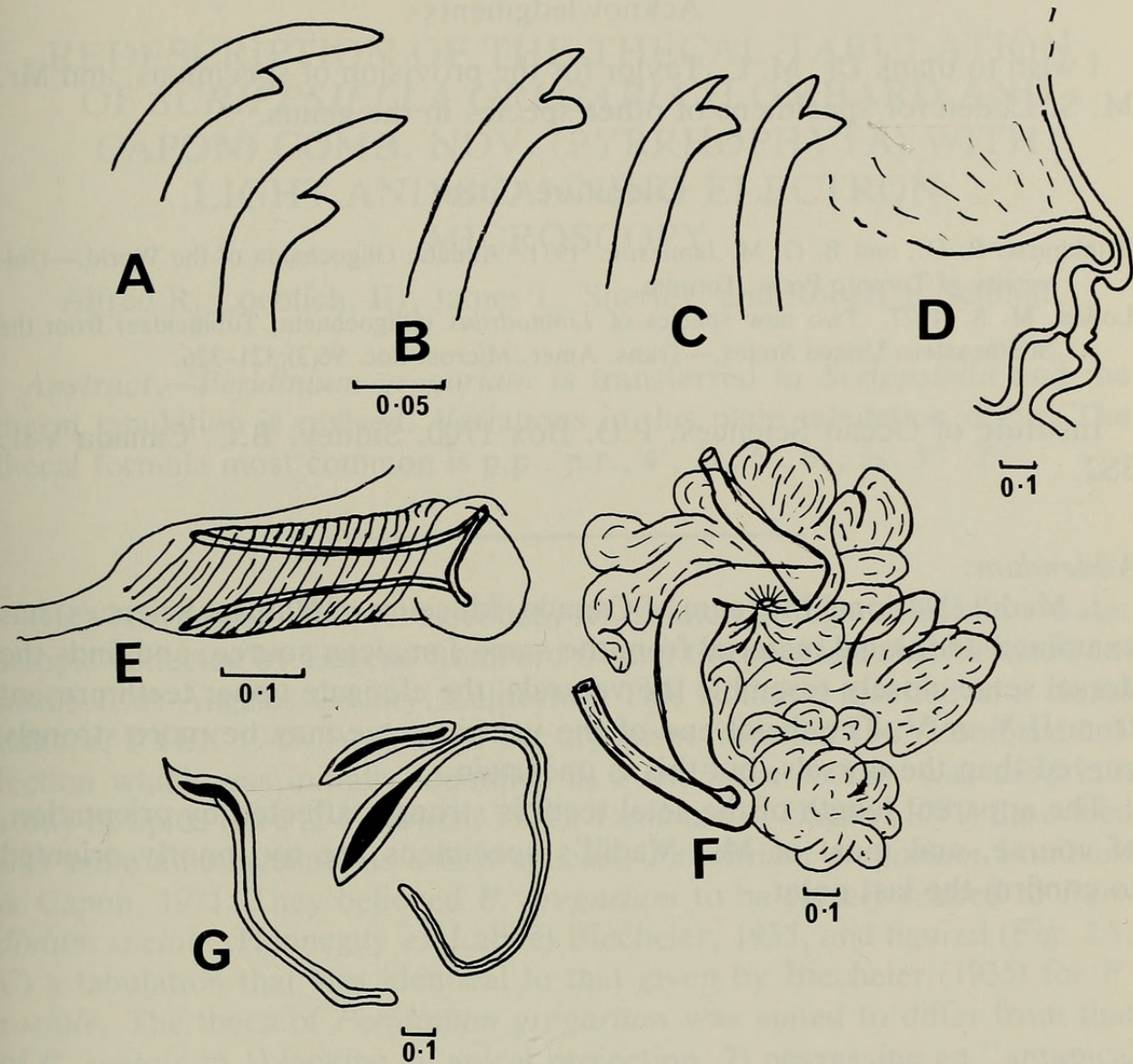


Fig. 1. *Limnodrilus variesetosus*. A, Ventral setae of IV; B, Dorsal setae of IV; C, Setae of median segment; D, Spermathecal vestibule and duct; E, Penis sheath; F, Atrium and prostatic gland; G, Spermatzeugmata. All lengths in mm.

longer than average breadth, basal third tapering quite sharply, the rest more or less cylindrical. Spermathecal ducts relatively long, terminating in vestibulae. Spermatzeugmata elongate, slightly expanded, club-like at one end.

Discussion.—This is a typical *Limnodrilus* species, with bifid setae and long, heavily cuticularized, penis sheaths surrounded by spiral muscles. It is distinguishable from *L. udekemianus* in that the upper teeth of the anterior ventral setae are not significantly thicker than the lower, and those setae are limited to a few anterior ventral bundles. The penis sheaths of *L. udekemianus* and the new species are basically similar, but differ in proportions and form from those of other species in the genus (Brinkhurst and Jamieson, 1971).

Acknowledgments

I wish to thank Dr. M. C. Taylor for the provision of specimens, and Mr. M. S. Loden for specimens of other species in the genus.

Literature Cited

- Brinkhurst, R. O., and B. G. M. Jamieson. 1971. Aquatic Oligochaeta of the World.—University of Toronto Press. Toronto.
- Loden, M. S. 1977. Two new species of *Limnodrilus* (Oligochaeta, Tubificidae) from the Southeastern United States.—Trans. Amer. Micros. Soc. 96(3):321–326.

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Addendum:

J. Madill (National Museum of Canada, Museum of Natural Sciences) has examined additional material from the same Jamaican source, and finds the dorsal setae closely resemble the ventrals, the elongate upper teeth present from II-V or V. The distal end of the ventral setae may be more strongly curved than the dorsals, but this is uncertain.

The apparent length of the setal teeth is strongly affected by orientation, of course, and most of Ms. Madill's specimens are too poorly oriented to confirm the last point.



Brinkhurst, Ralph O. 1979. "A New Species Of *Limnodrilus* (Oligochaeta: Tubificidae) From Jamaica." *Proceedings of the Biological Society of Washington* 92, 42-44.

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