

Calomicrolaimus compridus (Gerlach, 1956) n. comb., a marine nematode with a female producing a copulatory plug

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SUMMARY

Microlaimus compridus Gerlach, 1956 is redescribed and transferred to the genus *Calomicrolaimus*; females and juveniles are described for the first time. In the impregnated female, a copulatory plug is present and produced by her own perivulvar glands.

RÉSUMÉ

Calomicrolaimus compridus (Gerlach, 1956) n. comb., *nématode marin dont la femelle secrète un bouchon copulatoire.*

Microlaimus compridus Gerlach, 1956, dont seul un mâle était connu, est redécrit sur un matériel comprenant mâles, femelles et juvéniles. Cette espèce est attribuée au genre *Calomicrolaimus*. Il est observé chez la femelle fécondée la présence d'un bouchon copulatoire sécrété par ses propres glandes périvulvaires.

In this paper, a species of the Microlaimidae which shows the interesting feature that the impregnated females possess a copulatory plug in the vulvar region, is described.

Calomicrolaimus compridus (Gerlach, 1956) n. comb. is up to now only known from one male collected in muddy sand of the Kiel Bight (Gerlach, 1956, 1958). We found the species in sands (with a low amount of silt) in the Bay of Morlaix (Gourbault, 1981), mainly in the

Females (n = 7) : L = 1 060 ± 70 (1 000-1 205 µm);
a = 55.9 ± 2.4 (52.5-57.5); b = 11.5 ± 0.5 (10.5-12);
c = 11.5 ± 0.6 (10.7-12.3); V = 55.6 ± 1.5 (53.6-56.6).

Female 1 $\frac{5\ 56\ 102\ 665\ 1107}{9\ 16\ 17\ 22\ (15)\ 14}$ 1 205 µm; a = 54.8; b
= 11.8; c = 12.3; V = 55.2.

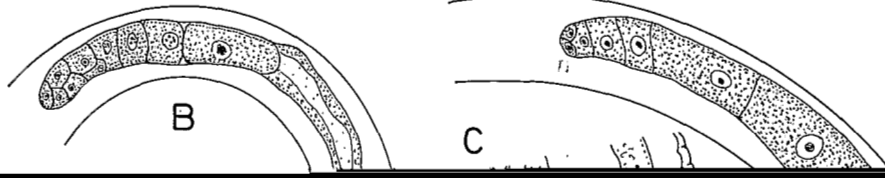


appearance; the remainder of the intestinal cells are rather flat. Genital system extending till 440 μm from the anterior end; the whole system is about 500 μm long (or 48 % of the total body length). Diochic with opposed and short testes; anterior testis situated at the right, posterior testis situated at the left of the intestine. Numerous elongated sperm cells (4-5 μm long) in the distal part of the testes. The sperm cells have a dense cell content (condensed chromatine) directed to the junction with the *vas deferens*. The *vas deferens* contains fine

LOCALITIES

Bay of Morlaix, station 1, 1 male Oct. 1978 and 4 males, 1 fem. and 1 juv. Aug. 1981; station 2 : 1 male, 6 fem., 1 juv. Feb. 1980; station 4 : 1 male Aug. 1980 and 1 male, 1 juv. Aug. 1983; station 5 : 1 male Aug. 1980; station 6 : 1 fem. Nov. 1984. Rance maritime, St-Suliac : 1 juv. fem. May 1983.

Data on these stations are given by Gourbault (1981) and by Gourbault and Renaud-Mornant (1986).



phenomenon is also mentioned for *Pelodera strongyloides* by Wagner and Seitz (1984) who compare this cement-like substance with a two component glue. However, in *Pelodera strongyloides*, the plug is produced by the male and adheres to the female cuticle after copulation because the females produce a secretion by epidermal glands, which holds the plug to the cuticle.

In the case of *Calomicrolaimus compridus*, we could hypothesize that the females may produce the copulatory plug to grip the male during copulation. This plug might be able to protect also the vulvar region against external infection, or even against repetitive copulations; however this last protection has been demonstrated as ineffective in some Insects (Eberhard, 1985).

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