Endotokia matricida in a Xiphinema sp.

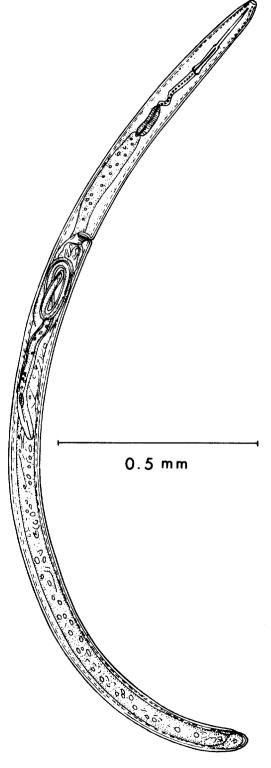
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Endotokia matricida or intra-uterine birth, according to Maupas (8), is widespread in all Rhabditis species (Rhabditida) and has been reported in the Tylenchida (1,2,3,4,5,6,10,11,12,13). Paetzold (9) reported that larvae normally succeed in leaving the female body and continue normal development and reproduction. My paper reports on endotokia matricida in an undescribed species of Xiphinema. This is the first report of this phenomenon in Longidoridae.

Soil samples collected by Ing. C. Ochoa from a potato field near Limbani (Department of Puno, Province of Sandia, 14° 18'00" S, 69° 25'30" W), Peru, were brought to the International Potato Center in Lima, Peru. In one of the samples a female of an undescribed species of Xiphinema was moving peculiarly. Closer examination revealed that an egg had embryonated within the female body and the larva had partially escaped from it (Fig. 1). Movement by both showed that both were alive. Loos (7) attributed the intra-uterine development of Radopholus similis (Cobb, 1893) Thorne, 1949, to disturbance, change of environment, or damage to the female. The female Xiphinema sp. showed no apparent damage to the cuticle or internally except for that caused by the escaping larva.

This Xiphinema sp. is monodelphic, opisthodelphic, and closely related to X. ensiculiferum (Cobb, 1893) Thorne, 1937, except for the shorter stylet length and other similar differences. Taxonomic studies are in progress.

Fig. 1. Drawing showing endotokia matricida (a larva which developed and hatched within the female) in *Xiphinema* sp.



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LITERATURE CITED

- COBB, N. A. 1920. A newly discovered parasitic nema (Tylenchus mahogani n. sp.) connected with a disease of Mahogany tree. J. Parasitol 6:188-191.
- GUPTA, P., and G. SWARUP. 1968. Occurrence of living adult males and second stage larvae inside live adult females of Anguina tritici. Nematologica 14:157.
- IVANOVA, T. S. 1962. The phenomenon of "endotokia matricida" in species of the eelworm genus Anguina Scopoli, 1777. lzv. Akad. Nauk Tadzh. SSR, Otd. Biol. Nauk 3:99-101.
- JAIRAJPURI, M. S. 1964. Intra-uterine egg development in Aphelenchus avenae. Nematologica 10:183.
- KRALL, E. 1967. Occurrence of endotokia matricida in Paranguina agropyri with a note on the hibernation of this eelworm. Nematologica 13:466.
- LOOF, P. A. A. 1959. Über das Vorkommen von endotokia matricida bei Tylenchida. Nematologica 4:238-240.
- LOOS, C. A. 1962. Studies on the life-history and habits of the burrowing nematode, Radopholus

- similis, the cause of black-head disease of banana. Proc. Helminthol. Soc. Wash. 29:43-52.
- 8. MAUPAS, E. 1899. La mue et l'enkystement chez les nématodes. Arch. Zool. Exp. Gén. 7:562-628.
- PAETZOLD, D. 1958. Bemerkungen zur "endotokia matricida" von Lordello 1951. Wiss. Z. Martin Luther Univ. Halle-Wittenberg Math-Naturwiss. Reihe 7:81-83.
- 10. POINAR, G. O. JR. 1969. Praecocilenchus rhaphidophorus n. gen., n. sp. (Nematoda: Aphelenchoidea) parasitizing Rhynchophorus bilineatus (Montrouzier) (Coleoptera: Curculionidae) in New Britain. J. Nematol. 1:227-231.
- WEHUNT, E. J., and D. I. EDWARDS. 1971. Intrauterine egg development of Pratylenchus coffeae (Zimmerman) Filipjev and Schuurmans-Stekhoven. J. Nematol. 3:422-423.
- YUEN, P. H. 1964. The female gonad in the subfamily Hoplolaiminae with a note on the spermatheca of Tylenchorhynchus. Nematologica 10:570-580.
- YUEN, P. H. 1965. Further observations on Helicotylenchus vulgaris, Yuen. Nematologica 11:623-637.

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