

NOTE BREVI - SHORT COMMUNICATIONS

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MATRICIDAL HATCHING
IN *RHABDITIS (CRUZNEMA) TRIPARTITA*

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Matricidal hatching is the intra-uterine larval development leading to the destruction of the female by the larvae (Luc *et al.*, 1979). Perez (1866) was the first to record intra-uterine hatching in *Rhabditis* and since then it has been recorded in various Rhabditidae (Ludwig, 1938; Lordello, 1951; Wessing, 1953; Paetzold, 1958; Scott and Whittaker, 1970; Lam and Webster, 1971; Lordello and Zem, 1977; Gonzalez, 1979 and Chongti, 1982). This paper reports a case of matricidal hatching occurring in *Rhabditis (Cruznema) tripartita* von Linstow, 1906.

Among the nematodes collected from around the roots of turnip (*Brassica rapa* L. subsp. *rapa*) at the Escola Superior Agrária, Coimbra, Portugal, were several females of *R. tripartita* showing intra-uterine hatching of juveniles. Microscopic observations showed gravid live females containing eggs in different stages of maturity together with up to 16 living juveniles (Fig. 1 A, B). Dead females containing numerous living juveniles inside were also found; in these females all the body contents, except the oesophagus, were destroyed and the juveniles filled almost all of the body cavity except for the head

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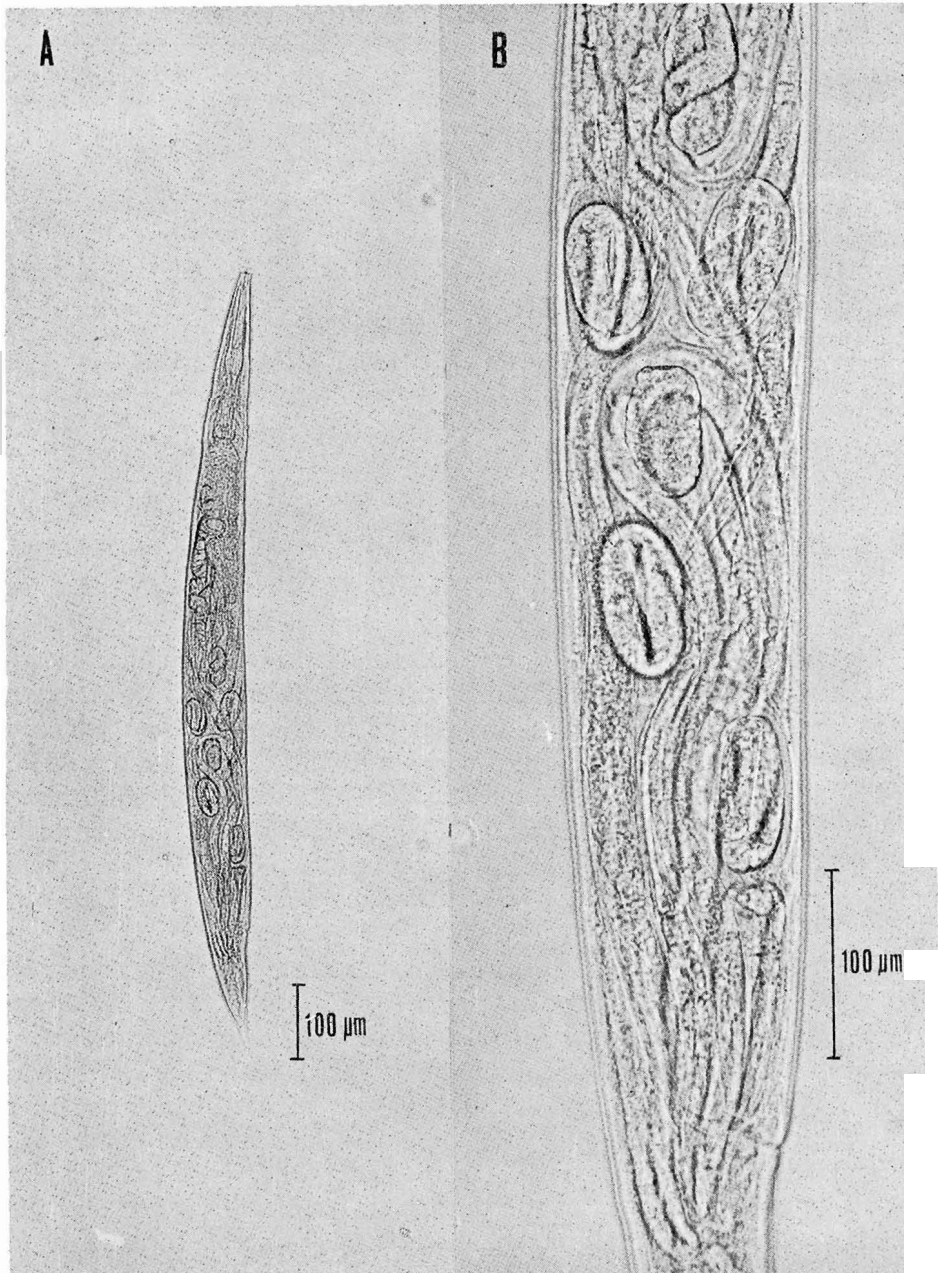


Fig. 1 - *Rhabditis (Cruzanema) tripartita* containing eggs and juveniles: A, Entire female; B, Portion of body.

end. The juveniles were orientated randomly and moved very actively in the body cavity. Some juveniles forced their way out through a rupture in the maternal cuticle while others reached the exterior by the oral opening. Males were also found in this population of *R. tripartita* and thus cross-fertilization may be assumed to occur.

Matricidal hatching has attributed to several factors. Most authors (Hirschmann, 1960; Lam and Webster, 1971; Singh and Khera, 1976; Lordello and Zem, 1977 and Gonzalez, 1979) postulate that in rhabditis the phenomenon of intra-uterine development is due to some kind of disfunction of the reproductive apparatus of the female, probably associated with senescence of the female. Laughlin *et al.* (1978) consider that the frequency of intra-uterine development of eggs naturally occurring in nematode populations indicates a genetic basis for the phenomenon and suggest that it may represent one stage in the evolutionary process. From our observations the occurrence of matricidal hatching in *R. tripartita* is very common and also seems to be associated with the inability of the females to expel eggs.

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