MATRICIDAL HATCHING
IN RHABDITIS (CRUZNEMA) TRIPARTITA

by

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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 Agraria, 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 (Crucnema) 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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**LITERATURE CITED**


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