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Abstract

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Biology of *Macrocheles merdarius* (Berlese) (Acari: Mesostigmata: Macrochelidae)*

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Macrocheles is the largest genus in the family Macrochelidae which contains some species that act as biological control agents of pests on crops. *Macrocheles merdarius* is a cosmopolitan species and often found in large numbers in comparison to other species in the genus. The aim of the current study is to investigate the biology of *M. merdarius* using *Musca domestica* eggs as food source, in an incubator at 30ºC ± 2ºC, 70% ± 10% RH in the dark. *M. merdarius* was originally extracted from sheep manure samples on pasture using a Berlese-Tullgen funnel. Fifty females were individually placed in plastic containers with gypsum-charcoal base (ratio 9:1) provided with *M. domestica* eggs as prey. Oviposition and longevity assessments were carried out on a daily basis. Twenty-eight immature reached adulthood. The developmental time from egg to adult was 3 days; reproductive rate (R_0) and the intrinsic rate of natural increase (*rm*) were 0.48 and -0.08, respectively. The overall sex ratio was 1 female to 2.1 males, indicating *M. merdarius* is an arrhenotokous species.

Keywords: Mite, oviposition, longevity, reproduction, sex ratio

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