

## Biological parameters of *Amblyomma coelebs* Neumann, 1906 (Acari: Ixodidae) under experimental conditions

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### Abstract

*Amblyomma coelebs* (Neumann, 1906) is an ectoparasite that when adult prefers parasitizing tapirs (*Tapirus* sp.), while its juvenile instars present a wide range of hosts, including humans, being a potential vector for pathogens. Therefore, in this study, we evaluated the biological parameters under experimental conditions of this species. Specimens of *A. coelebs* were collected in the forest and identified. Ten couples were fed on rabbits, obtaining six engorged female (60% recovery rate) with a mean weight of 1403.91 mg, of which two were kept in a forest reserve under natural conditions (NC), together with the roots of trees in the soil, and the other four incubated in greenhouses under laboratory conditions (LC). The recovery rate and the engorgement period of the engorged female was 10.33 days. The pre-oviposition period for engorged females on NC and LC was 10.75 and 22 days, respectively. The egg mass weight average was 514.76 mg and the feed conversion rate was 36.67% in LC. Incubation periods for eggs kept in NC and LC were 91 and 56.33 days, and larval hatchability of 50% and 28.33%, respectively. For both larvae from females in NC and LC, the period of engorgement ranged from 4 to 10 days, with an observed average weight of 1.1mg. Engorged larvae were also incubated in NC and LC. For such, a period of 27 to 36 days of pre-molt was observed. The rate of molting success of engorged larvae incubated in NC and LC was only 7.1% and 28.7%, respectively. Nymphs presented engorgement period ranging from 5 to 7 days, mean weight of 18.8 mg and a recovery rate of 54.54%. When maintained only under LC, the mean period for ecdysis was 24.5 days, with a molting success rate of 44.44%, resulting in 24 adults of *A. coelebs*. We conclude from the evaluated parameters that the life cycle of this species under experimental conditions can be of 187.45 days when partially maintained under NC, and 149.53 days in LC.

**Key words:** *Amblyomma coelebs*, life cycle, biological parameters, experimental conditions, rabbit

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