

Life cycle of *Amblyomma mixtum* (Acari: Ixodidae) parasitizing different hosts under laboratory conditions

Francisco T. Barradas Piña^{1,5}; Vinicius da S. Rodrigues¹; Leandro de O. S. Higa¹; Marcos V. Garcia²; Jacqueline C. Barros³; Pâmella O. Duarte¹; Isabella M. Z. Blecha⁷; Barbara G. Csordas¹; Namor P. Zimmermann⁸; Alexandre da S. Souza⁶; Adalberto A. P. de León⁴; Renato Andreotti³.

¹Pós-Graduação em Doenças Infecto-Parasitárias - Faculdade de Medicina, UFMS - Universidade Federal Mato Grosso do Sul, Campo Grande, MS, Brasil/ Laboratório de Biologia do Carrapato, Embrapa Gado de Corte, Campo Grande, MS, Brasil. ²Laboratório de Biologia do Carrapato, Empresa Brasileira de Pesquisa Agropecuária, Embrapa Gado de Corte, Campo Grande, MS, Brasil/ Bolsista DCR Fundect, MS – Governo do estado de Mato Grosso do Sul.

³Empresa Brasileira de Pesquisa Agropecuária, Embrapa Gado de Corte, Campo Grande, MS, Brasil. ⁴USDA-ARS, Knippling-Bushland U.S. Livestock Insects Research Laboratory, and Veterinary Pest Genomics Center, Kerville, TX, USA. ⁵Instituto Nacional de Investigaciones Forestales Agrícolas y Pecuarias INIFAP-México. ⁶Graduando em Medicina Veterinária – Anhanguera Uniderp agrárias, Campo Grande, MS, Brasil/Bolsista iniciação científica CNPq/ Laboratório de Biologia do Carrapato, EMBRAPA Gado de Corte, Campo Grande, MS, Brasil.

⁷Pós-Graduação em Ciência Animal - UFMS, Campo Grande, MS, Brasil/Laboratório de Biologia do Carrapato, EMBRAPA Gado de Corte, Campo Grande, MS, Brasil.

Amblyomma mixtum is a tick species in the *Amblyomma cajennense* complex. The geographic range of *A. mixtum* extends from Texas in the United States to western Ecuador and some islands in the Caribbean,. *A. mixtum* is an ectoparasite and a vector of disease agents of veterinary and public health importance. The objective of this study was to characterize the life cycle of *A. mixtum* under laboratory conditions. To achieve this objective, bovines, rabbits, and sheep were infested with larvae, nymphs and adult ticks using a feeding chamber for each instar on the different hosts. Ticks in a non-parasitic phase were kept in an incubator with a 27°C temperature and 80% relative humidity. The life cycle of *A. mixtum* lasted for 88.8 and 79.6 days on average when fed on rabbits and cattle, respectively. In the three life cycle phases the *A. mixtum* was not able to develop having sheep as a host. The *A. mixtum* colonization in laboratory conditions offers an opportunity for continuous support of future research regarding the biology of ticks involved in vectors of pathogenic agents and control technology. However, the potential laboratory condition effects on tick biology, when rabbits were used as hosts, presented a higher recuperation rate, considering that there are no differences in the biological parameters evaluated for the three instars in bovines and rabbits ($p>0.05$).

Keywords: Bovine; Rabbit; laboratory colonization; host suitability; life cycle.

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