



Hosts of *Amblyomma dissimile* Koch, 1844 and *Amblyomma rotundatum* Koch, 1844 (Acari: Ixodidae)

ALBERTO A. GUGLIELMONE¹ & SANTIAGO NAVA²

Instituto Nacional de Tecnología Agropecuaria, Estación Experimental Agropecuaria Rafaela and Consejo Nacional de Investigaciones Científicas y Técnicas, CC 22, CP 2300 Rafaela, Santa Fe, Argentina.

E-mail: ¹aguglielmone@rafaela.inta.gov.ar, ²snav@rafaela.inta.gov.ar

Abstract

Host records of *Amblyomma dissimile* Koch, 1844 and *Amblyomma rotundatum* Koch, 1844 from the literature were critically reviewed. A total of 417 records on 101 species of tetrapods, and 193 records in 74 species of tetrapods were determined for *A. dissimile* and *A. rotundatum*, respectively. Aves have been found only once infested with *A. dissimile*. This tick has been detected on four species of Bufonidae, while *A. rotundatum* has been recorded on 13 species from six families of Anura. Crocodylia has been recorded infested by *A. rotundatum* (captive host, one species) and *A. dissimile* (two species). Sixteen species of Mammalia from ten families and eight species from eight families have been found infested with *A. dissimile* and *A. rotundatum*, including humans, respectively. A total of 63 species of Squamata (10 families) were found infested with *A. dissimile*, while the corresponding numbers for *A. rotundatum* are 45 species in nine families. A total of 15 species of Testudines (four families) and nine species (three families) have been found infested with *A. dissimile* and *A. rotundatum*, respectively. When infestation on captive and laboratory hosts were excluded from the analysis the number of species naturally infested with *A. dissimile* diminished to 88 and 58 for *A. rotundatum*. However, natural hosts infested with larvae, nymphs and adults of *A. dissimile* are *Bufo marinus* (Linnaeus), *Bufo peltocephalus* Tschudi, *Proechimys semispinosus* (Tomes), *Boa constrictor* Linnaeus, *Epicrates striatus* (Fischer), *Oxybelis aeneus* (Wagler), *Cyclura cyclura* (Cuvier), *Iguana iguana* (Linnaeus), *Tupinambis teguixin* (Linnaeus) and *Trachemys scripta* (Thunberg), but the commonest hosts harbouring all parasitic stages are *B. marinus*, *B. constrictor* and *I. iguana*. Hosts for all parasitic stages of *A. rotundatum* are *B. marinus*, *Bufo schneideri* Werner and *B. constrictor*, although records on *B. marinus* are considerably higher than the records on the other two hosts. The contribution of sheep and *Hydrochoerus hydrochaeris* (Linnaeus) as hosts of *A. dissimile*, and *Dasyus novemcinctus* Linnaeus as host of *A. rotundatum*, were overestimated in previous studies. The ample host-range of these tick species may partly explain their wide distribution from southern U.S.A. to northern Argentina, but there are also chances that more than one species are represented under the names *A. dissimile* and *A. rotundatum*.

Key words: Anura, Aves, Crocodylia, Mammalia, Squamata, Testudines, food source, Prostriata, Nearctic, Neotropical

Introduction

Amblyomma dissimile Koch, 1844 and *Amblyomma rotundatum* Koch, 1844 are species considered of importance in tick evolution because of their unique relationship with Amphibia. Oliver (1989) even found the feeding of *A. rotundatum* on *Bufo marinus* as an indication of a Devonian origin of ticks without any further elaboration apart from noting that a great variety of Amphibia were present at that historical time. Hoogstraal and Aeschlimann (1982) consider both species of ticks feeding on reptile and amphibian hosts, but BurrIDGE and Simmons (2003) and BurrIDGE (2010) presented more detailed information on hosts of *A. dissimile* and *A. rotundatum* showing a quite ample range of hosts with an unexpected contribution of mammals.

Amblyomma rotundatum is a parthenogenetic species, but there is a description of one male obtained from a natural infestation in Labruna *et al.* (2005b) and a gynander male reared in the laboratory (Keirans & Oliver 1993). The females of these species have morphological similarities and authors such as Morel (1967) stress