

## Ticks (Acari: Ixodidae) of northern Misiones Province, Argentina

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### Abstract

Information on distribution and hosts of hard ticks of northern Misiones Province in Argentina is presented in this study. Ticks were identified by morphological characters and by sequences of a 410 bp fragment of the mitochondrial 16S rRNA gene. A total of 292 ticks collected from the environment and wild and domestic mammals were identified: *Amblyomma coelebs*, *A. brasiliense*, *A. dubitatum*, *A. incisum*, *A. ovale*, *Haemaphysalis juxtakochi* and *Rhipicephalus microplus*. The presence of *A. coelebs* was confirmed for Argentina and the first record of *H. juxtakochi* in Misiones was presented. Some of the species as *A. incisum*, *A. ovale* and *R. microplus* are ticks of medical and veterinary importance. Therefore, further studies on the vectorial role of these species in Misiones Province are necessary to determine their epidemiological relevance.

**Key words:** Ticks, Ixodidae, Misiones, Argentina

### Introduction

Ticks are among the most important arthropod vectors of pathogens affecting humans and domestic and wild animals. They transmit a greater variety of infectious agents than any other blood-sucking arthropods group. Also, ticks can cause paralysis, toxicoses, irritation and allergy, and are able to produce large economic losses due to deleterious effects on livestock (Sonenshine 1991, Jongejan & Uilenberg 2004).

In Argentina, 37 species of hard ticks were recorded, including 25 species of *Amblyomma* (Guglielmone & Nava 2006, Nava *et al.* 2009, Nava *et al.* 2014 a, b), 1 of *Dermacentor*, 2 of *Haemaphysalis*, 9 of *Ixodes* and 2 of *Rhipicephalus* (Guglielmone & Nava 2005). In the particular case of Misiones Province, information on tick species is scarce. So far the species recorded for Misiones are *Amblyomma aureolatum* (Pallas, 1772), *Amblyomma calcaratum* Neumann, 1899, *Amblyomma incisum* Neumann, 1906, *Amblyomma longirostre* (Koch, 1844), *Amblyomma tigrinum* Koch, 1844, *Ixodes loricatus* Neumann, 1899, *Rhipicephalus microplus* (Canestrini, 1888), *Amblyomma ovale* Koch, 1844, *Amblyomma dubitatum* Neumann, 1899, *Rhipicephalus sanguineus* sensu lato and *Amblyomma brasiliense* Aragão, 1908 (Boero 1957; Boero & Delpietro 1971; Guglielmone & Mangold 1984; Ivancovich & Luciani 1992; Sinkoc *et al.* 1998; Mastropaolo *et al.* 2004; Nava *et al.* 2012; Guglielmone & Nava 2014; Welschen *et al.* 2014).

In Misiones Province, the Paranaense Rainforest covers an area of 26,860 km<sup>2</sup> and has the largest forest fragments of the Atlantic Forest ecoregion, one of the most biodiverse ecosystems in