

Ticks (Acari: Ixodidae, Argasidae) of Coyotes in Panama

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Abstract

Data are presented for 103 tick specimens collected from four coyotes in two provinces of Panama. Six tick species were recovered: *Amblyomma cajennense* s.l., *Amblyomma oblongoguttatum*, *Amblyomma ovale*, *Amblyomma* sp. near *parvum*, *Haemaphysalis juxtakochi*, and *Ornithodoros* sp. near *puertoricensis*. These collections constitute a preliminary checklist of ticks from the southern coyote population.

Key words: ticks, coyotes, Panama, zoonosis risk

Introduction

Coyotes, *Canis latrans* Say, are common large carnivores in North and Central America, occupying ecosystems in both natural and human-dominated environments (De la Rosa & Nocke 2000, Bekoff & Gese 2003). Like other Carnivora, coyotes play an important role in controlling populations of smaller mammals; however, from an economic perspective, they are a threat because they hunt sheep, calves and poultry, and even attack pets and humans (Connolly 1992, Bekoff & Gese 2003, Literák *et al.* 2012). Coyotes may also spread pathogens, increasing the risk of infections to domestic animals and humans (Stull & Mengak 2009, Niehaus *et al.* 2012).

In North America, it is known that coyotes are parasitized by different groups of mites, ticks, fleas and lice, which are important vectors of several diseases (Bekoff & Gese 2003, Gompfer *et al.* 2003, Stull & Mengak 2009). However, data on Central American ectoparasites of coyotes are scarce, particularly in the case of ticks, where there is but a single record of coyote parasitism by *Amblyomma ovale* Koch in Panama (Murgas *et al.* 2013).

The first observation of *C. latrans* in Panama dates back to 1981, but coyotes are now widely distributed along Panama's Pacific coast (Méndez *et al.* 1981, Vaughan-Dickhaut 1983, DGD unpublished data). Recently, we had an opportunity to collect ticks from coyotes in two of Panama's provinces, and our results constitute a preliminary checklist of ticks that may be expected to occur on these important mammals in southern Central America.

Materials and methods

We collected ticks from four road-killed coyotes in Panama: one in Los Santos Province (Tonosí) and three at sites in Panama province (La Chorrera, Arraiján and Paraíso) (Fig. 1). Tonosí lies in a