

Tick surveillance of dogs in the Republic of Korea

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Abstract

From April 2008 through May 2009, ticks were collected from domestic, stray, and military working dogs when they were examined at any of the four US Army veterinary treatment facilities within the Republic of Korea. Approximately 2,500 dogs were examined during this period, and a total of 411 ticks (125 larvae, 200 nymphs, 67 females, 19 males) were collected from 18 dogs. The collected species were *Haemaphysalis longicornis* (6F, 195N), *Haemaphysalis flava* (19M, 52F), *Ixodes nipponensis* (7F), and *Rhipicephalus sanguineus* (2F). Five nymphs and all larvae were identified to genus only. Military working dogs received routine veterinary care, including preventive ectoparasite treatments, and were found to be free of ticks.

Key words: *Haemaphysalis longicornis*, *Haemaphysalis flava*, *Ixodes nipponensis*, *Rhipicephalus sanguineus*, dogs, Korea

Introduction

Periodic tick surveillance of host animals provides bionomic information concerning the status of the infesting tick population, its distribution, the developmental stage(s) attacking the host, the seasonality of the tick-host association, and the efficacy of tick control measures. Further analysis using diagnostic methods can determine the presence of disease pathogens in the tick or the host. When bionomic and diagnostic data are evaluated together, the relative risk of acquiring tick-borne diseases can be determined.

Yamaguti *et al.* (1971) reviewed the published tick literature for Japan, the Korean Peninsula, and the Ryukyu Islands and examined tick collections made throughout Japan and at some sites in Korea. Their data for Japan and the Ryukyu Islands were extensive and included collections of 14 species from dogs: *Amblyomma testudinarium* Koch, *Haemaphysalis campanulata* Warburton, *Haemaphysalis concinna* Koch, *Haemaphysalis cornigera* Neumann, *Haemaphysalis flava* Neumann, *Haemaphysalis hystricis* Supino, *Haemaphysalis japonica* Warburton, *Haemaphysalis longicornis* Neumann, *Ixodes acutitarsus* (Karsch), *Ixodes granulatus* Supino, *Ixodes nipponensis* Kitaoka and Saito, *Ixodes ovatus* Neumann, *Ixodes persulcatus* Schulze, and *Rhipicephalus sanguineus* (Latreille). Relatively little information was gathered on Korean tick-dog associations, and only *H. campanulata*, *H. longicornis*, and *I. persulcatus* were listed as having been collected