

FAUNA OF TICKS (ACARI: IXODIDAE, ARGASIDAE) OF SOUTH-EAST KOSOVO

MARIJA MILUTINOVIĆ*, I. PAVLOVIĆ** and Z. KULIŠIĆ***

Institute for Medical Research, POB 721, Belgrade, **Veterinary Scientific Institute of Serbia, Belgrade, *Faculty of Veterinary Medicine, Belgrade, Yugoslavia*

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Research on the fauna and distribution of ticks in southeast Kosovo (the area of Prizren and Gora) revealed the following eight tick species of the family Ixodidae, namely: Ixodes ricinus, Hyalomma savignyi, Haemaphysalis punctata, Haemaphysalis inermis, Dermacentor marginatus, Rhipicephalus bursa, Boophilus calcaratus. One species of the Argasidae family: Ornithodoros lahorensis was also detected. This is the first finding of this species on sheep in Yugoslavia.

Key words: tick, Ixodidae, Argasidae, sheep, goats

INTRODUCTION

Sheep and goats play an important role in livestock breeding in South East Kosovo, especially in the area of Prizren and Gora. These regions vary in topography and consist of a mountain zone including the slopes of Šara and Prokletije mountains and flat plains especially in the south part of Prizren region. As hematophagous arthropods, the zoogeographic distribution of fauna and ecology of ticks is of great importance. Namely, the eventual presence of species which are indicator species for that region and disease should be monitored. Geographical position, climatic factors (macro and microclimatic), vegetation and hydrobiological conditions have an important influence on the rich and heterogeneous fauna of ticks. In the mentioned regions sheep and goats are usually kept under extensive conditions and occupy pastures on any land that is not being cultivated.

The tick fauna of Kosovo has neither been systematically researched, nor wholly examined, whereas results from the rest of Serbia were being acquired since the fifties (Mekuli, 1952; Angelovski et al., 1963; Petrović, 1979).

In 1991, both, the prevalence of brucellosis and the faunistic composition of tick populations in sheep and goats, have been placed in the centre of our research, so as to provide a better understanding of epidemiological and epizootological factors inside a specific region, Prizren and Gora respectively.

MATERIAL AND METHODS

A study of estoparasites was carried out at eight places in the area round Prizren, namely: Donje Ljubinje, Gornje Ljubinje, Mušnikovo, Manastirica, Lokvica, Drajići, Lez and Kuštendil and at 8 places in the region of Gora: Kuklibeg, Leštane, Ljubovište, Brodosavce, Bljač., Brod, Šainovac and Zaplužje respectively.

Ticks were collected by means lightly sprung forceps, and placed into glass specimen bottles. Each bottle had a piece of hard paper inserted bearing the name of the locality, name of host and date of collection.

The species were identified using the schemes of Herms, (1950), Kapustin, (1955) and Lapage, (1969). The identification of tick species was done in the Scientific Veterinary Institute of Serbia and verified in the Institute for Medical Research.

RESULTS AND DISCUSSION

The material consisted of approximately 120 ticks. The number of hosts which were examined for ticks totalled approximately 430 animals consisting of two mammalian species, sheep and goats, which were not considered separately.

Eight species of tick were found in the present study. Data concerning the detection of *Ornithodoros lahorensis* (Neumann, 1908) have not been published previously in Yugoslavia (Pavlović et al., 1995).

Seven tick species from the Ixodidae family, were recorded namely: *Ixodes ricinus*, *Dermacentor marginatus*, *Rhipicephalus bursa*, *Hyalomma savignyi*, *Haemaphysalis punctata*, *Haemaphysalis inermis* and *Boophilus calcaratus*, and one species from the Argasidae family, namely: *Ornithodoros lahorensis*.

Relative abundance analysis revealed the following: the species *Ixodes ricinus* was absolutely dominant (42.96%), followed by *Dermacentor marginatus* (28.24%), *Rhipicephalus bursa* (11.36%), *Hyalomma savignyi* (8.04%), *Haemaphysalis punctata* (9.40%), *Haemaphysalis inermis* (3%) and finally 2% *Boophilus calcaratus* (Figure 1).

The population dynamics of *Ixodes ricinus*, *Dermacentor marginatus* and *Haemaphysalis punctata* are known for their two maxima a year - in spring and in autumn. These species were found in the investigated area from March till October with the spring peak in April and the autumn one in September- October (Milutinović, 1992; Milutinović et al., 1996).

The species *Rhipicephalus bursa*, has its first appearance in May and maximal abundance in June. It is a summer tick species, as was also confirmed by other authors (Rivosecchi et al., 1980); Milutinović et al., 1989; Aydin and Tinar, 1994).

Hyalomma savignyi reached its maximum in the April - May interval in contrast to the results obtained by Petrović et al. (1955) who marked this species in the region of Ključ as a predominantly winter species, but with considerable abundance during May and June.

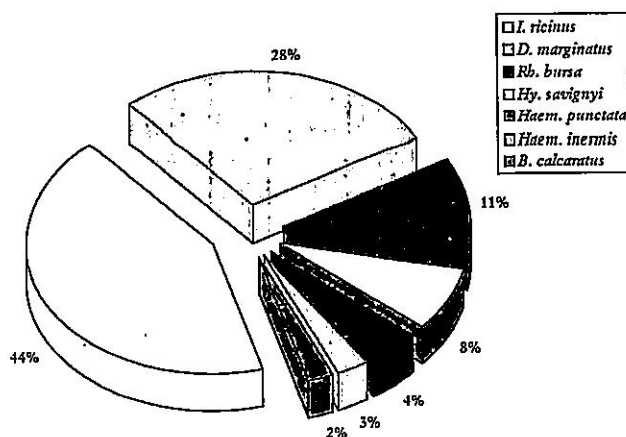


Figure 1. Relative abundance of seven tick species in South-East Kosovo.

The investigated region is known as an endemic and epidemiological focus of CCHF and HF with renal syndrome (Tmušić et al., 1996).. Therefore, knowledge concerning tick species, especially the distribution of *Ixodes ricinus* and *Hyalomma savignyi*, and host relations is of great importance for understanding the circulation of pathogens in natural foci.

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FAUNA KRPELJA (ACAR: IXODIDAE, ARGASIDAE) JUGOISTOČNOG KOSOVA

MARIJA MILUTINOVIĆ, I. PAVLOVIĆ I Z. KULIŠIĆ

SADRŽAJ

U okviru akcije detekcije bruceloze ovaca i koza u jugoistočnom delu Kosova, područje Prizrena i Gore, kod istih domaćina je praćena i fauna krpelja. Ustanovljene su sledeće vrste: *Ixodes ricinus*, *Dermacentor marginatus*, *Rhipicephalus bursa*, *Hyalomma savignyi*, *Haemaphysalis punctata*, *Haemaphysalis inermis*, *Boophilus calcaratus* i *Ornithodoros lahorensis*. Od značaja je prvi nalaz *Ornithodoros lahorensis* u Jugoslaviji, u stadu ovaca na Šar planini u blizini granice prema Makedoniji.