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Study on Hard Tick species found in Golpayegan County, Esfahan Province Center of Iran, summer and autumn 2014 and winter 2015

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Introduction

Background: Ticks are one of the main vectors which transmit different pathogens to human and animals. Ticks play important roles in disease transmission. They are vector of many diseases; including Crimean-Congo hemorrhagic fever (CCHF), Anaplasmosis, Babesiosis, Ricketsiosis, Borreliosis and Ehrlisiosis. They can also be caused economic damage to livestock. Esfahan province, and Golpayegan County, in particular is one of the most important regions for bringing up livestock and dairy products in Iran. This survey was carried out for detecting the distribution of ticks, which infected the domestic ruminants in Golpayegan County, Esfahan Province, Center of Iran during summer and autumn 2014 and winter 2015.

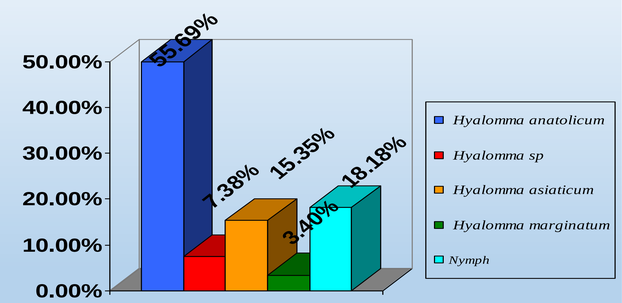
Material & Methods

Ten villages were selected randomly and ticks were collected from different parts of the body of goats, cows and sheep. All collected ticks were transported to laboratory of medical entomology, school of public health, Tehran University of Medical Sciences for identification.

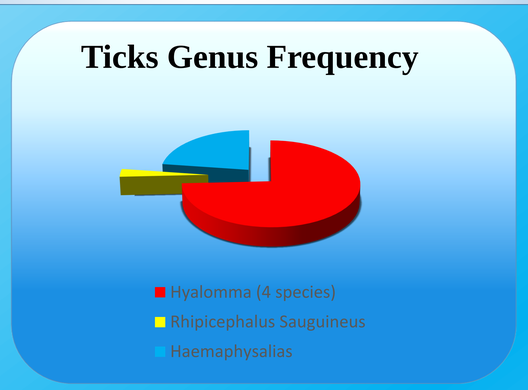
Results

In this study, total number of 237 ticks was collected. Approximately, 10.75% of the domestic animals were infected by ticks. All ticks were belonged to family Ixodidae and classified into 3 genera and 5 species. Totally, 74.26% of ticks were belonged to *Hyalomma genus;* while 22.79% of ticks were *Haemaphysalis sulcata* and 2.95% of them were *Rhipicephaluss sanguineus.* Interestingly, 18.18% of the samples were at nymph stage. The species of *Hyalomma* genus; including *Hyalomma anatolicum*(55.69%), *Hyalomma sp*(7.38%), *Hyalomma asiaticum*(15.35%), *Hyalomma marginatum* (3.4%). were the most prevalent species.

Ticks Species Frequency of Hyalomma Genus



Ticks Genus Frequency



*Rhipicephalus sanguineus (*Male**)**

*Haemaphysalis sulcata (*Male**)**

Hyalomma anatolicum (Female**)**

Hyalomma asiaticum (Female**)**

Hyalomma marginatum (Male**)**

Conclusions

Golpayegan is an area that is important for production of livestock and dairy products. A lot of livestock products are exported to other parts of Iran from this region annually; therefore considering the rate of pollution and safety factors on livestock are important issues for economy of the region and health of livestock keepers. The results of this study will provide a clue for vectors of tick-borne diseases in the region for local authorities for implementation of disease control.

Keywords: Ticks, Golpayegan, livestock, Ixodidae, Iran

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