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Adaptation of Ixodid Ticks (Ixodidae) to Parasitism on the Cattle in the Northeastern Armenia

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ABSTRACT

The study of the behavior of ixodid ticks when attacking the host and their parasitism on certain parts of the body will make it possible to develop more effective tick control measures to reduce the economic damage caused by ixodid ticks to livestock in certain natural areas of Armenia. For the first time on the territory of the recreational zones of the National Park "Dilijan" in the mountain-forest biotope of Armenia the ecology, abundance, and behavioral characteristics of ixodid ticks, parasitizing on the body of farm animals and having epidemiological and epizootological significance, were studied. The study was carried out in 2019 - 2021 in the mountain-forest biotopes of the Dilijan National Park. Body of cattle was subjected to a full examination and registration of the areas of the body most affected by ixodid ticks during the entire period of activity of ixodid ticks on pastures and on driving routes. Besides, the collection and registration of affected areas on the body of cattle and sheep were carried out in the paddock, during milking in the morning and evening hours. The collected material was processed in the laboratory of general helminthology and parasitology of the Scientific Center of Zoology and Hydroecology of the National Academy of Sciences of the Republic of Armenia. Yerevan, Armenia. As for our observation, the species diversity of ixodid ticks in the mountain-forest zone of Armenia is rather high. The following tick species were detected: *Ixodes ricinus*, *I. redikorzevi*, *I. trianguliceps*, *Rhipicephslus sanguineus*, *Rh. annulatus*, *Rh. bursa*, *Hyalomma marginatum* (= *H. plumbeum*), *H. asiaticum*, and *Dermacentor marginatus.* Typically, ticks will first cling to the animal forelimbs, head and neck that is facilitated by the grazing posture of the animal. The distribution of ticks over the animal's body also depends on the host's ability to self-clean and "self-defense". The research data on seasonal dynamics of ticks in the region can be used by agricultural enterprises in planning the timing and conditions of tick control measures in Dilijan National Park.

Keywords: Ixodidae, cattle, sheep, localization, Dilijan National Park

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