


1939

Translation from Russian of Kurchatov, V. I. (1939)  
Biological Peculiarity of the Tick *Hyalomma marginatum* Koch, Vector of Equine Piroplasmiasis.  
*Sovetsk. Vet.*, 16(5): 45-46.

V.I. Kurchatov

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Kurchatov, V. I., "Translation from Russian of Kurchatov, V. I. (1939) Biological Peculiarity of the Tick *Hyalomma marginatum* Koch, Vector of Equine Piroplasmiasis. *Sovetsk. Vet.*, 16(5): 45-46." (1939). *U.S. Naval Medical Research Unit Publications*. 10.  
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## TRANSLATION 6 (T6)

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UNITED STATES  
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c/o American Embassy  
Cairo, Egypt

TRANSLATION FROM RUSSIAN of KURCHATOV, V. I. (1939)  
Biological peculiarity of the tick Hyalomma marginatum Koch,  
vector of equine piroplasmiasis. Sovetsk. Vet., 16(5):45-46.

This work was done in the laboratory and in the field and includes questions of development, behavior, and viability of ticks, their propagation and season of attack.

H. marginatum: Two-host tick, larvae and nymphs parasitize mainly birds, also hares, adults on all kinds of domestic animals.

In the laboratory at temperatures between +7 and +37°, rapidity of development of all stages is in direct proportion, but length of life is in inverse proportion to temperature.

Temperatures +7, +10, and +42° are unfavorable for ticks. Best for propagation are temperatures between +22 and +27° and relative humidity between 75 and 100%.

Engorged nymphs: This is the most stable stage in respect to conditions of temperature and humidity; it partly survives and retains ability to molt at temperature from +7 to +42° and humidity from 0 to 100%.

In natural surroundings (foothills of Crimea) during summer-autumn period, larvae and nymphs are most active in the morning and evening (temperature +24 to +34°, humidity 50 to 75%). During daytime heat over 30°, nearly all hide in shady places and some even burrow into the soil. At temperatures below 21 or 22°, at night, and also during high humidity and strong wind, almost no tick activity was noticed.

Seasonal attack of cattle by adult H. marginatum is from February to December (maximum April to June). In summer and autumn, especially in open semideserts and in deserts, attack of cattle is negligible. Overwintering is usually by unfed adults and engorged nymphs. Larvae and nymphs are found on cattle from May to November.

This tick inhabits the southern areas of the Soviet Union. Northern boundary of mass propagation is 46 to 49.5° northern latitude and yearly isotherms +9°. Most heavily infested are lowlands and foothills of steppe, forest steppe, and low mountain forest zone. In high mountain belts and deserts, this tick is rare. Birds must play a part in the distribution of this species during seasonal migration. By this phenomenon, in particular, one can explain isolated findings of H. marginatum in northern latitudes.