
Hyalomma franchinii Tonelli-Rondelli, 1932

A. Estrada-Peña

Life Cycle and Host Preferences

Hyalomma franchinii is a three-host tick with one life cycle per year under natural conditions (Hoogstraal and Kaiser 1958b). The immature stages of *Hy. franchinii* parasitize lizards and, less commonly, rodents. Adult hosts are camels, cattle, sheep and donkeys. Immature stages are found on lizards all year around, having been recorded on *Acanthodactylus boskianus*, *Acanthodactylus schreiberi*, *A. scutellatus* and *Agama mutabilis* according to data summarized by Apanaskevich et al. (2008). Adults appear to be most common during the cooler months of the year. Observations in Egypt (July and August) mentioned a duration of egg development of about 25 days, and a duration of larval moult of about 14–16 days (recorded in September–October).

Ecology

Hyalomma franchinii has a Mediterranean distribution and is adapted to dry and warm environmental conditions. Its distribution area is typically desert and it has not been recorded in areas with more than 10 or 20 l of rainfall/m² per year. However, it can be relatively abundant near watering points. The immatures are endophilic and are commonly found in the burrows of the lizards. Some observations published by Morel (2003) state that the adults can be found at the entry point of the lizard's shelter and are exophilic.

Distribution

The known distribution of *Hy. franchinii* is restricted to the eastern part of the Mediterranean subregion of the Palaearctic zoogeographic region in Africa (Egypt, Libya, Tunisia) and Asia (Israel) (Hoogstraal 1956; Hoogstraal and Kaiser 1958a, b, 1960; Cwilich and Hadani 1962; Bouattour et al. 1999; Apanaskevich et al. 2008).

Vectorial Capacity and Pathogen Burden

The relationships between disease inducing agents and *Hy. franchinii* have not been investigated. It is common in areas where protozoa of the genus *Theileria* circulate in nature, but its role in the circulation of these agents has been never tested either under natural or laboratory conditions.

References

- Apanaskevich D, Santos-Silva MM, Horak IG (2008) The genus *Hyalomma* Koch, 1844. IV. Redescription of all parasitic stages of *H. (Euhyalomma) lusitanicum* Koch, 1844 and the adults of *H. (E.) franchinii* Tonelli Rondelli, 1932 (Acari: Ixodidae) with a first description of its immature stages. *Folia Parasitol* 55:61–74
- Bouattour A, Darghouth MA, Daoud A (1999) Distribution and ecology of ticks (Acari: Ixodidae) infesting livestock in Tunisia: an overview of eight years field collections. *Parassitologia* 41:5–10
- Cwilich R, Hadani A (1962) The identification of the tick *Hyalomma franchinii*, Tonelli-Rondelli, 1932. *Refu Vet* 19:178–180

A. Estrada-Peña (✉)

Department of Animal Health, Faculty of Veterinary Medicine,
Zaragoza, Spain
e-mail: aestrada@unizar.es

- Hoogstraal H (1956) African Ixodoidea. I. Ticks of the Sudan (with special reference to Equatoria Province and with preliminary reviews of the genera *Boophilus*, *Margaropus*, and *Hyalomma*). Department of the Navy, Washington DC, 1101 pp
- Hoogstraal H, Kaiser MN (1958a) Observations on Egyptian *Hyalomma* ticks (Ixodoidea, Ixodidae). I. Parasitism of lizards by nymphs. *Ann Entomol Soc Am* 51:7–12
- Hoogstraal H, Kaiser MN (1958b) Observations on Egyptian *Hyalomma* ticks (Ixodoidea, Ixodidae). 4. Identity, distribution, and hosts of *H. franchinii* Tonelli-Rondelli (new combination). Systematic status of *H. tunesiacum* Sc. & Sc. and its subspecies. *Ann Entomol Soc Am* 51:397–400
- Hoogstraal H, Kaiser MN (1960) Observations on ticks (Ixodoidea) of Libya. *Ann Entomol Soc Am* 53:445–457
- Morel PC (2003) Les tiques d'Afrique et du Bassin méditerranéen (1965–1995). CIRAD-EMVT, 1342 pp