

Ticks in rabbits

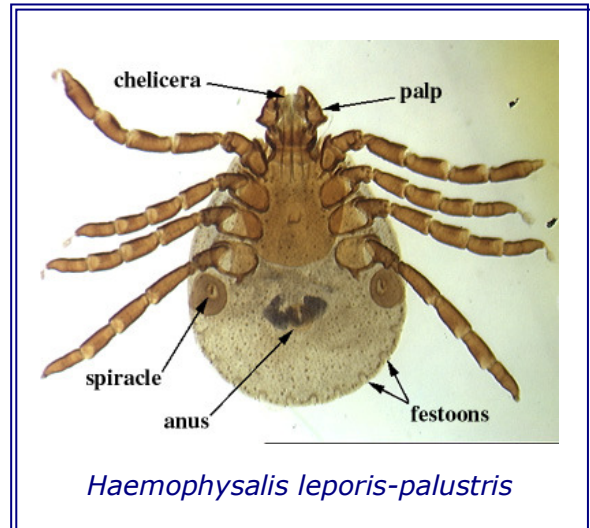
Esther van Praag, Ph.D.

Ticks plague all members of the lagomorph family, including wild and domestic rabbits, living indoors. Intermediate stage ticks are indeed light and easily carried by wind. They can enter a home through windows left open, or ventilators placed in front of an open window. Ticks can be categorized in two types:

- Ixotid ticks are protected by a hard shield and their mouthpieces can clearly be seen. They include commonly found ticks all over the world, like *Ixodes* sp., *Amblyomma* sp., *Boophilus* sp., *Rhipicephalus* sp., and *Haemophysalis* sp. All can affect rabbits.
- Argasid ticks are soft ticks whose mouthparts and "false head" (capitulum) cannot be seen when viewed from the dorsal side. They live essentially in arid regions on the American continent, Africa and India. Members of the *Otobius* sp., and *Ornithodoros* sp. can plague rabbits.

Ticks are small (less than 5 mm in length) and have a reddish or brownish color. Their life cycle is complex. Wild rabbits, cottontails and hares are commonly plagued by *Haemophysalis leporis palustris*. This tick has typically three developmental phases, which occur on three different hosts. After feeding blood or serum from its host, the tick larva will fall to the ground, in order to molt. The next stage larva or nymph will find

a new host to feed on. Once adult, the tick will hide in the vegetation. When it detects the presence of a host thanks to organs sensing its release of CO₂ release and body temperature, it will crawl onto its fur and



start engorging with blood. During the feeding, the tick will release saliva and enzymes into its host, to keep the bite open. During this phase, tick-borne diseases can be transmitted.

Soft ticks also affect lagomorphs. The commonly found one is the red tick *Otobius lagophilus*. All the larval and nymphal intermediates are found on rabbits, where they feed on lymph secretions. Soft ticks can be vector for various diseases affecting rabbits.



Clinical signs and diagnosis

Ticks are usually found while inspecting the fur of a rabbit. Preferred locations are the ears, the area between the ears, the neck and the dewlap of female rabbits.

Severe infection can lead to macrocytic (Enlarged red blood cells) normochromic (referring to a red blood cell of normal color, usually because it contains the right amount of hemoglobin) anemia.

contamination or spreading diseases carried by the tick host.

If the presence of further ticks is noticed, or if the infection is severe, administration of ivermectin (400 µg/kg, SC, once) is will successfully get rid of the ticks.

Although successfully killing ticks, the use of insecticide products containing pyrethrin, permethrin, amitraz must be avoided, due to their secondary toxic effects in rabbits. Fipronil is forbidden for use in rabbits.



Ticks found on rabbits in Switzerland.
Left: walking on the hind feet of a rabbit.

Treatment

As much ticks as possible should be carefully removed with forceps and killed rapidly by immersion in an acaricide solution, alcohol, or chloroform solution. This avoids eventual

Further Information

1. McGowan MJ. Relationship between skin-sensitizing antibody production in the snowshoe hare, *Lepus americanus*, and infestations by the rabbit tick, *Haemaphysalis leporispalustris* (Acari: Ixodidae). J Parasitol. 1985; 71(4):513-5.

The information and pictures contained in these pages cannot be reproduced, or republished on another webpage, website, or elsewhere.

OCTOBER 2004
updated: July 2009

