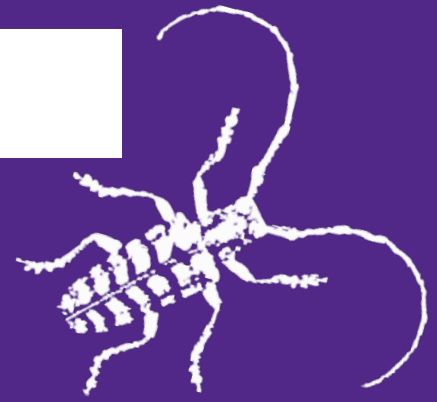


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Learning Corner

- Common ticks in Kansas

LEARNING CORNER

Common ticks in Kansas

Ticks are small arachnids more closely related to spiders and mites than insects. Ticks have three life stages, larva, nymph and adult all of which need to blood-feed. Larva (often called seed ticks) have six legs arranged in three pairs while nymphs and adults have four pairs of legs, eight in total. Humans often encounter adult ticks both on themselves and on their animals and correct identification can inform on the risk of tick-borne pathogen transmission. Here are some of the most commonly ticks humans encounter in Kansas.

American dog tick (*Dermacentor variabilis*)

American dog ticks are common throughout Kansas, larvae usually feed on small mammals such as rats and mice. Nymphs can be found on cats, dogs, opossums, rabbits, raccoons, and other medium to small sized mammals. Preferred adult stage hosts include dogs, cats, cattle, horses, and other large mammals, including humans. In Kansas, ticks can be encountered from March through September in grasslands and along forest edges. American dog ticks are of importance because they can transmit Rocky Mountain Spotted Fever (*Rickettsia rickettsii*) to dogs, cats and

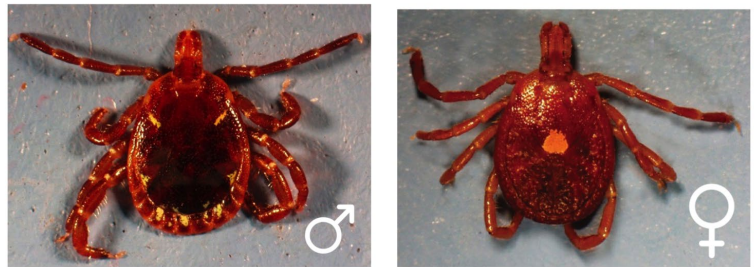


American dog tick (*Dermacentor variabilis*)

humans, and Cytauxzoonosis (*Cytauxzoon felis*) – an often-fatal blood parasite to cats. The American dog tick can also induce tick paralysis which is caused by components in tick saliva. Tick paralysis occurs more frequently in children and smaller animals and can often be reversed by fast removal of the tick.

Lone star tick (*Amblyomma americanum*)

This tick is named for the easily recognizable single white spot on the dorsal shield of the female. Males do not have the white spot, instead they have a few short white to yellow lines on the edge of their dorsal shield. This is a common tick found in the eastern half of Kansas especially in woodland habitats with dense underbrush. Reforestation in urban and rural environments and encroachment of woody shrubs like Eastern redcedar in prairie has expanded suitable environments for this tick species. This tick is an aggressive feeder with a wide host range with wildlife, humans, livestock and pets all being suitable hosts. Adults and nymphs are often encountered in Kansas from early spring through till late fall, larvae are frequently found in the late summer and fall. While the lone star tick is considered a major nuisance parasite, it is also a vector of *Ehrlichia chaffensis* (human monocytic ehrlichiosis) and *Borrelia lonestari*, which causes a Lyme disease-like infection called Southern tick-associated rash illness. This tick has also been implicated in the transmission of *Francisella tularensis* (Tularemia), Heartland and Bourbon viruses. This tick is also commonly associated with alpha-gal syndrome, also known as the red meat allergy. Although not as common, the closely related Gulf Coast tick, *Amblyomma maculatum* can be found feeding on the ears of cattle causing an inward turning and scarring called gotch ear. It is also a vector for *Hepatozoon americanum*, the etiologic agent of American canine hepatozoonosis. The transmission of this pathogen is unclear, but it is thought dogs need to ingest the tick to become infected.



Lone star tick (*Amblyomma americanum*)



Gulf coast tick (*Amblyomma maculatum*)

Brown dog tick (*Rhipicephalus sanguineus*)

The brown dog tick is reddish brown in color, lacking the dorsal markings seen on the American dog tick and lone star tick. Larvae, nymphs, and adults can all successfully feed on dogs which are the preferred host. It is the only species of tick that infests human dwellings and kennels in North America and the entire life cycle can be completed indoors. These ticks often crawl up into the ceilings and into cracks and crevices along floors to molt or lay eggs. Infestations of homes or kennels are distressing to pet owners and are extremely difficult to eradicate. Infestations in kennels may be associated with outbreaks of *Ehrlichia canis* (canine ehrlichiosis) and *Babesia canis*.



Brown dog tick (*Rhipicephalus sanguineus*) - female partially fed.

Black-legged tick (*Ixodes scapularis*)

Only found on the easternmost parts of Kansas, the black-legged tick is also referred to as the deer tick or Lyme disease tick. The distribution of the black-legged tick is linked to the distribution and abundance of its primary host, the white-tailed deer. In Kansas, juveniles occur from May through July. Adults occur most commonly from September through December but also can be encountered in the spring. Adults feed primarily on white-tail deer and occasionally on coyotes, dogs, raccoons, and other wildlife. The black-legged tick is the vector of *Borrelia burgdorferi* (Lyme disease) in the central and eastern United States, and also the vector of *Anaplasma phagocytophilum* (human granulocytic ehrlichiosis).



Black-legged tick (*Ixodes scapularis*)

Kansas Insect Newsletter

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Sincerely,

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