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Ixodidae, "hard" ticks

About 20 species of hard ticks occur in Kansas,
but most are associated only with wildlife and seldom parasitize domestic animals or people.

Description: wingless arthropods lacking obvious body segmentation and with no true head; 8-legged as adults; flattened dorsoventrally, often teardrop-shaped from dorsal view; dorsolateral eye spots on body, except on *Ixodes* species which are eyeless.

Domestic animals affected: All domestic animals and humans may be parasitized by one to several species of hard ticks, each.

Damage caused: All ticks are obligate blood-feeding ectoparasites; most species feed only a few days in each crawling stage and spend most of their lives off the host. Blood loss is seldom significant, but many diseases are vectored by hard ticks including: anaplasmosis, tular-emia, Lyme disease, Q fever, Rocky Mt. spotted fever, and ehrlichioses and babesioses (piroplasmoses) of various animals. Toxin in saliva of many species can cause paralysis in the host.

Development: gradual metamorphosis: egg, 6-legged larva ("seed tick"), 8- legged nymph, adult.

Generational time: one to two years for species that occur in Kansas.

Ovipositional site: on the soil beneath vegetation, leaves, etc. or in cracks in the soil; the brown dog tick, *Rhipicephalus sanguineus* oviposits in cracks or crevices in doghouses, kennels, homes.

Habitat, feeding: Larvae and nymphs of hard ticks such as the brown dog tick and the winter tick, *Dermacentor albipictus*, feed on the same host species as adults do. In most species there is a tendency for larvae to feed on small mammals and ground-nesting birds, nymphs on the same kinds of hosts and on medium-sized mammals, and adults on medium-sized and large animals. Off the host, ticks are quiescent near the soil line as they molt or oviposit; after hatching or molting, ticks that are ready to feed again climb onto vegetation and quest for passing hosts.

Method of dispersal or infestation: Short-distance dispersal is accomplished by crawling (attracted to CO_2, host odors, warmth); longer dispersal by being carried on hosts or hosts being transported.

Seasonality: varies with species; in Kansas our most common species (*Dermacentor variabilis*, the American dog tick, and *Amblyomma americanum*, the lone star tick) are active as early as late February and as late as November but are most evident from mid-April through August. Human and animal infestation by *Ixodes scapularis* (blacklegged tick) is most common in November and December; animals become infested by the winter tick, *D. albipictus*, in the fall and carry them throughout the winter.

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