

Ticks

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Approximately 75 species of ticks are present in nearly all habitats of North America. Those most likely to be found on humans are the American dog tick (*Dermacentor variabilis*), blacklegged or deer tick (*Ixodes scapularis*), and lone star tick (*Amblyomma americanum*) (Figure 1).

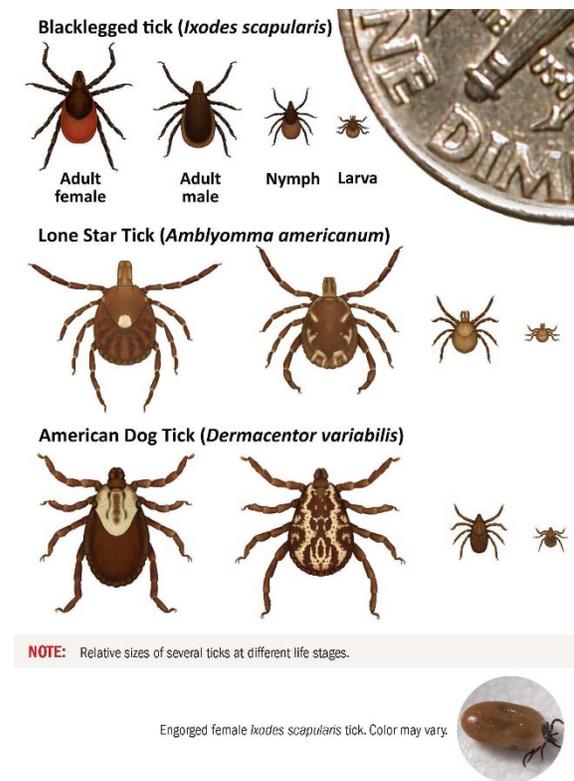
Problems in Humans

Ticks are parasites of many land vertebrates, including birds, snakes, tortoises, and most species of mammals. Both male and female ticks require blood meals and may remain attached to their hosts for long periods of time (several days).

Ticks typically cause minor symptoms at the feeding location, such as redness and swelling. However, they can transmit human diseases because they feed on multiple hosts during their life cycle. If a host has a bloodborne infection, the tick can ingest the pathogen and transmit it to a different host during the next feeding. Over 15 tickborne illnesses are commonly reported in North America and many have similar symptoms.

Lyme disease, caused by a bacterium, is transmitted by blacklegged ticks. It is the most common vectored disease in the US and Canada. Symptoms of Lyme disease may include a skin rash, headache, fever and fatigue. Chronic infections can have long-term effects.

Figure 1: Tick species typically found on humans
Photo credit: Centers for Disease Control and Prevention, <https://www.cdc.gov/ncezid/>



Rocky Mountain spotted fever, also caused by a bacterium, is transmitted by many tick species, most commonly American dog ticks. Rocky Mountain spotted fever symptoms include a fever followed by a rash.

Biology

Ticks are most closely related to spiders and mites, not insects. Life cycles are complex and may last one or more years. Tick life stages include egg, larva, nymph and adult. Blood meals are required prior to each life stage. Tick larvae prefer to feed on smaller hosts, such as white-footed mice (Figure 2). Nymph and adult ticks prefer to feed on larger hosts, such as deer and humans. People typically encounter more ticks in areas with high rodent and deer populations, such as at the edge of a forest or in locations with tall grasses and shrubs.

Figure 2: White-footed mouse, human, and deer are possible tick hosts



Preventing Tick Problems

1. **Inspect** yourself, family members, and pets after spending time outside.
2. **Use repellants** containing DEET and apply to socks, pants, and exposed parts of the body. Wear protective clothing, such as permethrin-treated long pants and boots, when entering tick-infested areas.
3. **Mow grass and rake leaves** to reduce habitat for ticks and rodents.
4. **Create a 3 foot wide barrier** between the woods edge and the managed landscape using wood chip mulch to reduce movement of ticks into the landscape.
5. **Apply tick treatments** to manage populations in high incidence areas. Treatments are generally applied to grass and brushy areas at the edge of a managed landscape, along roadsides, picnic areas, and footpaths. Please contact your Bartlett Arborist Representative to learn about management strategies.



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