

## TICKS IN NEW HAMPSHIRE

There are two families of ticks, hard ticks and soft ticks. The hard ticks are of greatest concern for human disease in New Hampshire. Several species of concern are discussed here.

**Hard Tick Life Cycle.** All hard ticks go through four different life stages during their life cycle: the egg, the larva, the nymph, and the adult male and female state. The tick feeds only three times during its life cycle, once during each stage except the egg stage. After the first two feedings, the tick will molt or transform into the next stage. This transformation involves shedding skin, growing larger, and sometimes adding new body parts. For example, the larval tick has six legs but gains two more legs when it becomes a nymph.

### Deer Tick (*Ixodes scapularis*)



(Source: CDC/Michael L. Levin, PhD)

The **Black-legged tick** (*Ixodes scapularis*) is sometimes called the **Deer tick**. This species is the vector that spreads Lyme disease. Adult males are dark brown. Adult females (shown above) are two-toned: dark brown on the head and legs, and orange-red on the rear half of the body. Nymphs are about the size of a pinhead (1-2mm), and adults are just over 1/16" (2-3mm) long. Adults are most active from mid-September to mid-November. Nymphs are most active in May, June and July.

### Life Stages of a Deer Tick



(Source: CDC/John Monteneri)

From left to right: Adult female, adult male, nymph, and larva.

### American Dog Tick (*Dermacentor variabilis*)



(Source: CDC/DVBID/Gary O. Maupin)

The **American Dog tick**, (*Dermacentor variabilis*), is the most frequently encountered tick in New Hampshire. It is about 1/8" (4-5mm), reddish-brown with white or yellow markings. This tick is most active from May through July in New Hampshire.

**Brown Dog tick (*Rhipicephalus sanguineus*)**



(Source: CDC/James Gathany; William Nicholson)

The **Brown Dog tick**, (*Rhipicephalus sanguineus*), is sometimes found in New Hampshire. This species is slightly smaller and slightly different in shape than the American dog tick. It is reddish-brown in color, and lacks the mottling the *Dermacentor* species have. This tick is commonly found on dogs and rarely bites people.

**Winter tick (*Dermacentor albipictus*)**



(Source: Mat Pound, USDA Agricultural Research Service)

The **Winter tick**, (*Dermacentor albipictus*) is reddish-brown to grayish-brown in color and easy to see. The winter tick is a species that feeds on large mammals like deer and moose and does not transmit agents that may cause disease to humans.

<b>Diseases Transmitted by Ticks in New England*</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>Disease(s)</b>
Black-legged tick	<i>Ixodes scapularis</i>	Lyme Disease, Anaplasmosis, Babesiosis, Ehrlichiosis
American dog tick	<i>Dermacentor variabilis</i>	Rocky mountain spotted fever, Tick paralysis, Tularemia
Brown dog tick	<i>Rhipicephalus sanguineus</i>	Rocky mountain spotted fever, Tick-borne typhus, Tularemia
Lone star tick	<i>Amblyomma americanum</i>	Human monocytic ehrlichiosis, Southern tick-associated rash illness, Tularemia
Groundhog tick	<i>Ixodes cookei</i>	Powasson encephalitis
Squirrel tick	<i>Ixodes marxi</i>	Powasson encephalitis

\*Only Lyme disease has been frequently sighted in New Hampshire. The remaining diseases are rarely reported or have not been reported in New Hampshire.