

Tick Surveillance Field Guide

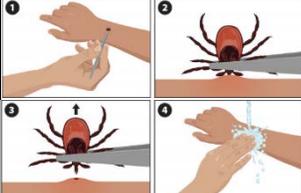
In hard bodied ticks, which are the most common pests of humans in the U.S., the life cycle begins with a mass of thousands of eggs. The six-legged larvae, which are often called ‘seed ticks’, emerge from the eggs. Larvae feed and molt into the eight-legged nymphal stage. Nymphs will then feed and molt into the eight-legged adult stage. The full life cycle is shown below. Most ticks of importance to human health that are found in Arkansas have a three host life cycle wherein each life stage (Larvae, Nymph, Adult) feed on different hosts. Ticks will quest on vegetation and wait for hosts to pass. Once on a host, they will attach for several days before dropping off and molting to the next stage. Any life stage will be accepted for submission, but non-engorged (i.e. unfed) ticks are preferred for surveillance purposes.

Tick Life Stages	Tick Engorgement
 <p style="text-align: center;">Egg Larva Nymph ♂ ♀ Adult</p>	 <p style="text-align: center;">Unfed Day 1.5 Day 2 Day 2.5 Day 3 Day 4 Day 7 Day 9</p> <p style="text-align: center;"> Female Adult-stage <i>Amblyomma americanum</i> Growth Comparison</p>

Common Tick Species in Arkansas

<p>Lone Star Tick (<i>Amblyomma americanum</i>)</p> <p>Bio: Found mostly in woodlands with dense undergrowth and around animal resting areas. Feed on a wide host range, and all stages are aggressive human biters. Capable of transmitting: <i>Ehrlichia chaffeensis</i> and <i>E. ewingii</i> (Ehrlichiosis), <i>Francisella tularensis</i> (Tularemia), Heartland virus, Bourbon virus, and Southern Tick Associated Rash Illness (STARI). Allergic reaction to alpha galactose (Red Meat Allergy) have been reported .</p> <p>I.D. See image to right. Adult female ticks have a characteristic white spot in the middle of their back (scutum), with adult males having small white stripes along their hind end (festoons) and sides.</p>	 <p style="text-align: center;">Larva Nymph Adult Male Adult Female</p>
<p>American Dog Tick (<i>Dermacentor variabilis</i>)</p> <p>Bio: Found in a variety of habitats including grassy fields, forested areas, along walkways and trails. Feed on a variety of hosts. Capable of transmitting: <i>Francisella tularensis</i> (tularemia) and <i>Rickettsia rickettsii</i> (Rocky Mountain Spotted Fever).</p> <p>I.D. See image to right. Adults have short mouthparts. Female ticks have a silvery pattern on their back. Male ticks have a silvery pattern that ‘zig zags’ across their back.</p>	 <p style="text-align: center;">Larva Nymph Adult Male Adult Female</p>
<p>Gulf Coast Tick (<i>Amblyomma maculatum</i>)</p> <p>Bio: Found predominantly in open grassy field with little to no tree cover. Immature stages typically feed on small animals (e.g. birds and rodents) with adult ticks feeding on larger mammals (e.g. Deer). Capable of transmitting: <i>Rickettsia parkeri</i> (included in the Spotted Fever Rickettsiosis group).</p> <p>I.D. See image to right. Adults have long mouthparts. Female ticks have a silvery pattern on their back. Male ticks have a silvery pattern that ‘zig zags’ across their back.</p>	 <p style="text-align: center;">Larva Nymph Adult Male Adult Female</p>

Continued on back side

<p>Blacklegged Tick (<i>Ixodes scapularis</i>)</p> <p>Bio: Generally found in deciduous forests. Immature stages feed on small and medium sized mammals (e.g. Rodents) but will also feed on larger hosts (e.g. Deer, humans). Adults feed on medium and large mammals. Capable of transmitting: <i>Anaplasma phagocytophilum</i> (Anaplasmosis), <i>Borrelia burgdorferi</i> and <i>B. mayonii</i> (Lyme disease), <i>Babesia microti</i> (Babesiosis), <i>Borrelia miyamotoi</i> (B. miyamotoi disease), <i>Ehrlichia muris euclairensis</i> (Ehrlichiosis), and Powassan virus.</p> <p>I.D. See image to right. General body shape is ‘tear drop’. Adult females are orange to red with a dark brown or black scutum that lacks ornamentation. Adult males are entirely dark brown or black in color.</p>	
<p>Brown Dog Tick (<i>Rhipicephalus sanguineus</i>)</p> <p>Bio: Predominantly found in and around structures such as homes, animal pens, and dog kennels. All life stages prefer to feed on dogs but will feed on other mammals, occasionally biting humans. All life stages of this tick can transmit <i>Rickettsia rickettsii</i> (Rocky Mountain Spotted Fever) to dogs, and rarely to humans.</p> <p>I.D. See image to right. Adults are uniformly dark brown with no distinct ornamentation.</p>	
Invasive tick	
<p>Asian Longhorned Tick (<i>Haemaphysalis longicornis</i>)</p> <p>Bio: Recently discovered in Arkansas, with not much known about its biology here in the U.S. Based on information from other countries where the tick is native, this species has a wide host range, and all life stages can bite large animals. This species is known to build large infestations on animals. The adult females of this species are able to reproduce parthenogenically, meaning they do not need to mate with a male to lay viable eggs. This tick transmits several pathogens in other countries, but as of yet there have been no reports on infection with human or animal pathogens in specimens collected from the U.S.</p> <p>I.D. All life stages are uniformly dark reddish brown and lack ornamentation or distinctive markings.</p>	
Tick Removal	
<p>To remove a tick, follow these steps: (1) Use clean, fine-tipped tweezers to grasp the tick as close to the skin’s surface as possible. (2) Pull upward with steady, even pressure. Do not twist or jerk the tick; this can cause the mouth parts to break off and remain in the skin. If this happens, remove the mouth-parts with tweezers. (3) After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol or soap and water.</p>	

For any questions or concerns, please contact us:

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