Common Ticks of Virginia

**Distribution and Hosts**

The four most common ticks in Virginia that are encountered by humans are the lone star tick, the American dog tick, the brown tick, and the deer tick. The lone star tick is found predominately east of the Blue Ridge mountains. The American dog tick is found predominately west of the Blue Ridge mountains. The brown dog tick can be found throughout Virginia but tends to be uncommon. The deer tick is uncommon also and is found primarily in the northern and eastern sections of Virginia.

**Description of Disease**

The brown dog tick is not known to carry any disease in Virginia. Both the lone star tick and the American dog tick are potential carriers of Rocky Mountain Spotted Fever (RMSF). The deer tick is a potential vector of Lyme disease and has been implicated in the transmission of ehrlichiosis. In any case of suspected tick transmitted disease, consult with a physician.

**Rocky Mountain Spotted Fever**

A tick needs to be attached for four to six hours in order to transmit RMSF to its human host. The first symptoms noticed are usually severe headache, chills, fever, muscle aches, nausea, vomiting, and other flu-like symptoms. These first symptoms usually start 2 to 12 days after the tick bite. By the third day after the bite, a red rash develops on the wrists and ankles, in most cases, and often spreads to the entire hand or foot. A blood test is needed to confirm the disease, and early use of antibiotics has a very high rate of cure.

**Lyme Disease**

Lyme disease, *Borrelia burgdorferi*, initially develops as an oblong rash, usually 2 or more inches in size, with a clear center that develops at the site of the tick bite, although only 70% of people develop this symptom. At a later time people usually develop flu-like symptoms such as nausea, headache, fever, and general stiffness of the neck joints. Chronic symptoms of a small percentage of untreated people include arthritis and nervous system complications.

**Identification**

All ticks have eight legs in the adult stage, but have six legs as newly hatched larvae. Small ticks of all species are called seed ticks, a common name that does not refer to one particular species. Important characteristics for identification are indicated in the key on page 3.

The **American dog tick**, *Dermacentor variabilis* (see key), is about 5 mm long with short stout mouthparts. It is dark brown with light wavy lines or reticulations on its back.

The **lone star tick**, *Amblyomma americanum* (see key), is about 5 mm in length or less with long mouthparts. It is light reddish-brown with a central white spot on the back of most of the adults.

The **brown dog tick**, *Rhipicephalus sanguineus* (see key), is about 5 mm long with short stout mouthparts. It is distinguished from the American dog tick by its dark reddish-brown color and lack of any white markings.
The **deer tick**, *Ixodes scapularis* (see key), is a small tick about 2-3 mm in length with long mouthparts. It is off-white or reddish when fed and has black legs.

*the deer tick until recently was known as *Ixodes dammini.*

**Life History**

Ticks pass through three feeding stages: the larva, nymph, and adult. Typically, each stage feeds on a different host. Hosts include a variety of animals (i.e., mice, rabbits, deer), and each stage of the tick has a different host depending on the life stage. Humans are accidental hosts that are not part of the tick's natural life cycle. After feeding on a host, a tick becomes engorged with blood and drops from the host. Once in a protected place, immature ticks molt to the next stage, and adult females produce eggs after their final blood meal.

**Control**

The following methods of prevention are recommended by the Virginia Department of Health.

- Avoid tick infested areas such as tall grass and dense vegetation
- Walk in the center of trails and avoid brushing against weeds and tall grass
- Keep grass and underbrush cut and thinned
- Wear light colored clothing so ticks can be found easily
- Tuck pant legs into socks so ticks stay on the outside of pants.
- Conduct tick checks on children and pets every 4 hours
- Keep pets outside from April to September to help keep ticks out of the house
- Use tick repellents that contain at least 30% DEET
- Ask your veterinarian to recommend tick controls for your pets
- Treat your lawn with an approved pesticide for tick control
- Treat clothes with permanone (be sure to follow all label precautions)

Ticks are best removed with tweezers or by wrapping the tick in tissue paper and pulling out with fingers. Do not twist or jerk, and pull slowly to avoid leaving the mouthparts in the wound. Do not use nail polish, petroleum jelly, alcohol, or hot matches to remove the tick. Wash the wound with an antiseptic after the tick is removed. Kill the tick in rubbing alcohol and keep it in a small vial for a few months in case any disease symptoms develop.

**Remarks**

Ticks cannot fly or jump.

**References**


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Ticks: Pictorial Key To Some Common Species

capitulum visible from above, scutum present, family Ixodidae,

HARD TICKS

capitulum not visible from above, scutum absent, family Argasidae,
(found in VA but not covered in the factsheet)

SOFT TICKS

Anal groove either behind anus, indistinct, or absent.

Submit all Ixodes to Insect Identification Laboratory, Virginia Tech

mouthparts short, about as long as basis capituli

mouthparts much longer than basis capituli white spot on tip of scutum of female

scutum with white markings; basis capituli with parallel sides

scutum without white markings; basis capituli produced laterally to form an angle

Dermacentor variabilis and D. andersoni

AMERICAN DOG TICK AND WOOD TICK

Rhipicephalus sanguineus

BROWN DOG TICK