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Minnesota Ticks and Their Control

Two kinds of ticks may annoy man in Minnesota. You can distinguish the *American dog tick* (also called the *wood tick*) by the grayish markings on its back. The *brown dog tick* is somewhat smaller than the American dog tick and reddish brown in color. Both of these ticks are hard-bodied. Occasionally soft-bodied species are encountered in the home. These species are associated with bats, birds, or poultry.

THE AMERICAN DOG TICK

American dog ticks are pests of man during spring and early summer. They are found in large numbers in areas where there are rodents and small animals to feed on.

The adult ticks attack humans and are found on grass, shrubs, brush, and other vegetation—particularly along animal trails or footpaths. When brushed by a moving body, they quickly let loose of the plant on which they are resting and attach to the animal or human.

There is a superstition that these ticks crawl up trees and drop down on humans and animals. Another superstition contends that ticks twist their mouthparts into the bite wound and have to be "unscrewed" to be removed. Neither is true.

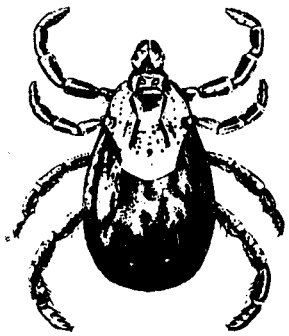
The American dog tick can be a carrier of several infections of man, including tularemia or "rabbit fever" and spotted fever. For this reason, they should always be removed immediately. Often a person is completely surprised to find a tick attached to his body because it can bite without being felt. So if you are in a tick-infested area, carefully examine your body for ticks at night before retiring. The American dog tick may be carried into human living quarters but does not establish itself as a pest there.

Dogs must be examined closely for ticks during the tick season. They should be examined daily if they have had an opportunity to become infested. The female tick must feed on the dog for several days before she is full of blood and ready to drop off and lay eggs.

THE BROWN DOG TICK

This tick has only the dog as its host. It cannot winter outdoors in Minnesota, but it may be found year-round on dogs in heated kennels and homes. Most commonly the family pet, when placed in an infested kennel, becomes infested with ticks and carries them home. The ticks then reproduce in the home. They may be found on carpeting, furniture, draperies, and walls and can become most annoying.

The female tick obtains a large blood meal from the dog and then drops off to seek a hiding place under baseboards, behind radiators, or in floor spaces. Here she may lay up to 3,000 brown eggs. Within three weeks to two months the small "seed" ticks hatch and crawl around in search of a dog. They attack the dog, fill up with blood in a few days, and again drop off and hide. Then they shed their skins, which permits them to grow and prepare for a second blood meal. A third blood meal is needed to become an adult. After mating the female lays a single batch of eggs, then dies.



The American dog tick: adult female, enlarged.

BAT, BIRD, or POULTRY TICKS

Another tick that occasionally annoys humans in Minnesota is the bat tick—a soft-shelled tick of brownish-gray or dirty gray color. It is found in homes where bats roost in the upper floors of buildings. In the absence of their normal hosts, these ticks may wander into the home and bite humans. However, they cannot survive for long periods without their hosts because they are unable to reproduce on human blood. The behavior pattern of the bat tick also holds true for ticks associated with birds and poultry.

REMOVAL METHODS

Whenever you find a tick attached to an animal or human (the host) and feeding, grasp it very close to the skin of the host with tweezers or tissue paper held in your fingers. Then pull it off. The mouthparts are short; they will not be left in the bite wound if you follow this procedure.

Another removal method involves placing a piece of tape over the back of the tick. Under this pressure the tick pulls out his mouthparts. Always treat the wound with a good germicidal agent such as iodine.

Never destroy ticks by crushing them in the fingers; infection has occurred due to this practice. You may kill the removed ticks with kerosene or turpentine or with a match or lighted cigarette.

CONTROL MEASURES

American Dog Tick or Wood Tick

1. If possible, eliminate dense woody underbrush in a wooded area. Cut the grass and vegetation along paths and areas where people are apt to contact ticks. Because the American dog tick feeds on small mammals, elimination of mice, gophers, rabbits, and other rodents helps reduce the tick population.
2. If a lawn borders a tall, grassy field and ticks are moving from the field into the lawn, you may use a chemical barrier to *temporarily* stop this migration. First, mow the grassy area approximately four feet back from the lawn and then treat this mowed area with one of the following chemicals:

a. Sevin® 50 percent wettable powder, 3 ounces (18 level tablespoons) in 15 gallons of water to cover 500 square feet.
b. Diazinon 25 percent liquid concentrate, ½ cup in 15 gallons of water to cover 500 square feet.

3. Chemically treat dogs by using one of the following materials after checking with your veterinarian:
   a. Dip or thoroughly spray dogs with a pyrethrins emulsion—this is the safest treatment. Use a concentrate containing 1 percent pyrethrins; dilute 1 part to 50 parts of water. A spray or dip containing ¼ pound of a 4 or 5 percent rotenone plus 1 ounce of neutral soap in a gallon of water is effective.
   b. Use 1 ounce of 25 percent wettable powder coumaphos (Co-Ral) per gallon of water as a bath. Or thoroughly cover the dog with a ½ percent dust or a 1 percent pressurized spray. Don't use oftener than once a week.
   c. Treat the dog thoroughly with a pressurized spray containing 1 percent coumaphos plus 2 percent trichlorfon (Neguvon). Don't use oftener than once a week.
   d. Rub a 5 percent dust of carbaryl (Sevin) into dog's hair; also apply this dust to dog's sleeping quarters.
   e. Use a 10 percent dichlorvos (Vapona) collar. Trim collar to fit snugly, but not tightly, on neck. Provides some tick control on neck and head area only.

The pyrethrum treatment only *rids* a dog of ticks—it has no lasting power. Coumaphos kills ticks for at least 2 or 3 days after treatment.

4. "Extra-strength" repellents are quite useful if applied thoroughly to clothing that ticks contact. However, at the present time no insect repellent is very effective against ticks when applied to the skin.

Repellents are most useful if applied by hand or sprayed on socks, trouser cuffs, trouser legs, and parts of clothing that may brush tall grasses where ticks concentrate. The repellents remain effective for several wearings if the garments are not washed.

Effective clothing repellents include:
1. N, N-diethyl toulamide (deet)
2. Indalone

Brown Dog Tick and Bat, Bird, and Poultry Ticks

Larval and adult ticks may crawl some distance so they can be found along door and window casings and even on curtains. Direct sprays into these hiding places, along baseboards, and on rugs so that crawling ticks have to contact the insecticide. Carbaryl (Sevin) provides good tick control in the home, but do not apply to carpets or rugs because damage may occur. Control of bat, bird, or poultry ticks also involves elimination and exclusion of the *host* from nests or roosts in and around the home.

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