

TICK PARALYSIS IN BRITISH COLUMBIA

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In British Columbia about a dozen different kinds of ticks are found. The female of one of these ticks (*Dermacentor venustus*) may under certain conditions cause paralysis, sometimes followed by death in man and animals. Those chiefly affected are children and sheep.

The Tick.

In the first place attention is drawn to the fact that the six-legged parasites commonly found on sheep and which are usually called ticks are not ticks at all but are in reality wingless flies (*Melophagus ovinus*). It would perhaps avoid confusion if they were more generally called by another common name, that of *ked*. While the sheep ked has only six legs the tick when fully grown has eight.

The paralysis tick (*D. venustus*) in certain parts of Montana is itself affected by small parasites which it passes on to man, causing the disease known as Rocky Mountain Fever or Spotted Fever. Although we fortunately have no records of these ticks carrying Spotted Fever in British Columbia, we have a number of records of them causing paralysis in man and animals.

Paralysis is caused by the female tick when she is feeding fast, if she is sucking blood slowly paralysis does not occur. The explanation for this is not properly known, but it is assumed that when she is feeding fast a large amount of the substance she secretes to keep the blood fluid, is injected into the body in a comparatively short time. The same substance is undoubtedly secreted when she is feeding slowly, but it is not injected into the body in a sufficient amount at one time to cause trouble.

A single tick may cause paralysis or even death.

Distribution.—*D. venustus* is found over the greater part of south-eastern British Columbia and in the adjacent portion of southern Alberta. It is known to occur 100 miles north of Kamloops. It is occasionally found in southwestern British Columbia, but is not plentiful as wet weather is detrimental to its early stages which are passed on small animals (see under life-history).

Life-history of the Paralysis Tick (*D. venustus*).

This tick appears as an adult early in the spring and attaches itself to the skin of large wild and domesticated animals and on man. The sexes mate when on the animal; the female after feeding for about seven days (sometimes more or less), and having increased five or six hundred times in weight, drops off on to the ground and lays about 4,000 eggs. After about thirty-six days the eggs hatch into minute six-legged larval or "seed" ticks.

The small larval ticks crawl up on to grass or other supports, and when the opportunity offers get on to small animals such as rabbits, squirrels, chipmunks, ground squirrels, field mice or other rodents. They remain on such an animal for about four days, drop off to the ground, moult, and after about thirty-eight days emerges as an eight-legged middle-sized tick or nymph, which is sexually immature.

The middle-sized tick or nymph attaches itself to the same kinds of small animals that the larval ticks feed on. After about seven days they drop to the ground, moult, and in about ninety days emerge as adult ticks.

Hot or cold weather influences the length of each stage; also, the length of time that the larval or nymph ticks have to wait for a suitable host may prolong the whole life-cycle.

Longevity.—Unfed larval ticks usually die in thirty days, but they may live for 117 days; unfed nymphs may live for 300 days; adults captured in the spring on vege-