



MEMORANDUM

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Dog ticks introduced and establishing in Alaska: Protect yourself and your dogs from disease

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Most Alaskans, including dog owners, are under the mistaken impression that there are no ticks in Alaska. This has always been incorrect as ticks on small mammals and birds are endemic to Alaska (meaning part of our native fauna), it was just that the typical 'dog' ticks found in the Lower 48 were not surviving, reproducing and spread here. The squirrel tick, *Ixodes angustus*, for example, although normally feasting on lemmings, hares and squirrels is the most common tick found incidentally on dogs and cats in Alaska. However, recently the Alaska Dept. of Fish & Game along with the Office of the State Veterinarian have detected an increasing incidence of dog ticks that are exotic to Alaska (that is Alaska is not part of the reported geographic range). These alarming trends lead to an article on the ADFG webpage last year.

http://www.adfg.alaska.gov/index.cfm?adfg=wildlifeneews.main&issue_id=111

Of additional concern is that many of these ticks are potential vectors of serious zoonotic (diseases transmitted from animals to humans) as well as animal diseases and are being found on dogs that have never left the state. Wildlife disease specialists expect there to be profound impacts of climate change on animal and parasite distributions, and with the introduction of ticks to Alaska, we should expect some of these species will become established. Along with the ticks, which are competent vectors (carriers able to transmit) of disease, we should expect that tick-borne diseases in humans and animals will follow.

The conclusion that I must draw from the circumstances leading to the 48 tick infestations I investigated over the past 3 years is that we now have both the Brown Dog Tick *Rhipicephalus sanguineus* and the American Dog tick *Demacentor variabilis* are established in the Fairbanks and North Pole area (also in Anchorage). Unfortunately, at least three infestations of the brown dog tick were picked up at the same local boarding facility in just one month.

What serious (and potentially deadly) diseases do ticks carry, you ask? The American dog tick is a vector of Rocky Mountain Spotted Fever (RMSF) and tularemia. The American dog tick is even more concerning as it is a vector of not only RMSF and tularemia but also Canine ehrlichiosis, canine babesiosis, Lyme Disease, and Q-fever. Of those, only tularemia and Q-fever are already present in Alaskan wildlife but the others could be easily introduced by just a single tick biting an infected traveler or pet carrying the infection and passing it on to their next meal. Recently a new tick borne disease related to RMSF was identified in four people in California. In addition, another new tick-borne disease

was found to be transmitted in just 15 minute of tick feeding, rather than the hours of tick attachment that most diseases require to be infective.

In addition to the two species of ticks I have evidence are already established, we identified two instances each of two other species, the Rocky Mountain Wood tick, *Dermacentor andersoni*, which of course is the main vector for RMSF, as well as Anaplasmosis, tick paralysis, tick fever and Q- fever; and the Lone star tick, *Amblyomma americanum*. The latter tick likes deer as well as dogs and is a vector of Ehrlichiosis and tularemia.

What should you do about this? Whenever you travel with your dogs out of state or you have them boarded, treat them with an appropriate systemic product that kills ticks. Products that contain fipronil or permethrin are the most effective against ticks. **Frontline Plus and K9 Advantix II** are examples for effective products, apply monthly. The current products that some local clinics are dispensing for fleas and heartworms have no effect on ticks so you may have to purchase two products to protect against heartworm as well as ticks before you travel. It is well worth the investment to save your pet's life. Please also encourage your friends and visitors coming up to Alaska treat their pets too, prior to arrival. If you do find a tick on your dog, seek veterinary attention to remove the tick and submit it to ADF&G for identification. If you aren't too squeamish to remove it yourself, remember you don't need to torture ticks with solvents or heat which risks setting your pet on fire, use fine pointed tweezers, grasp the tick close to the skin, apply firm, steady tension straight out and in just a few seconds, it will release. Note that the fluids released are infective too so you don't want to get any of the fluid in a cut or even on your skin, don't squash it. Wash up afterward. Follow your veterinarian's advice for treatment of the dog and your house (the brown dog tick spends a most of its life off the dog hiding in cracks, crevices and bedding).

Please report all ticks (other than if you see an squirrel or hare with ticks, we know that is normal) on pets or people to dfg.dwc.vet@alaska.gov

