
DETECTION OF COLORADO TICK FEVER VIRUS IN *DERMACENTOR ANDERSONI*

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Colorado tick fever virus is a double stranded RNA (dsRNA) virus transmitted by Rocky mountain wood ticks (*Dermacentor andersoni*), which can be found at high elevations in a number of western states including Montana. Although Colorado tick fever often presents as flu-like symptoms that are usually not life threatening, twenty percent of those infected are hospitalized. Little is known about the evolution of CTFV. The reference strain, Florio, has been sequenced, but this particular strain was isolated in Colorado in 1943. We hypothesize that isolates collected in Montana would have novel mutations because of the geographic distance and time between them and the reference strain. Ninety-seven ticks were collected in a previous SURF project this summer, mostly from Maud S. Canyon. RNA was extracted from crushed ticks and reverse transcribed. PCR successfully amplified CTFV cDNA from a positive control, but none have been detected in the tick samples to date. In contrast, using primers for a tick actin gene, PCR resulted in an amplicon of the expected size. This would suggest that the nucleic acids were collected from the tick. While no positive results for CTFV in the ticks have been obtained, there is reason to believe that the protocols developed are working. Our results are inconsistent with other studies that have found the virus in 21% of ticks sampled in Wyoming.