

EXPERIMENTAL EVALUATION OF CAPABILITY OF DERMACENTOR ALBIPICTUS TICKS TO SURVIVE IN ALASKA

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Dermacentor albipictus is an ectoparasite of both wild and domestic animals in North America. Tick infestations of moose cause loss of hair in many individuals, occasionally approaching 100%. Such severe loss of hair combined with loss of blood decreases the ability of moose to survive severe winter temperatures.

Historically, 60° North Latitude has been accepted as the northern limit of the range of D. albipictus. The tick apparently does not occur naturally in Alaska. Winter temperatures are not the critical factor. Rather, summer weather is the controlling factor in the ticks' ability to survive. Climatological data indicate that minimum temperature and rainfall requirements are not met in most parts of Alaska. However, weather in portions of the State may indeed satisfy these requirements. Therefore, the possibility exists for these ticks to become established if they were to be introduced. As agriculture development expands in Alaska and importation of domestic livestock increases, the possibility of such tick introduction on domestic livestock increases. The possibility of introduction of D. albipictus on such animals and the potential threat which these ticks might pose are the primary reasons for conducting this study.

Engorged adult female D. albipictus ticks from Alberta, Canada were placed in tick-proof cages near Fairbanks, Palmer and Soldotna, Alaska. Females laid eggs in all 3 locations. Eggs subsequently hatched at Fairbanks and Palmer, but not at Soldotna. Cooler microhabitat conditions are believed to be responsible for the eggs not hatching at Soldotna. These results indicate that this parasite could survive and propagate in Alaska if introduced into the State. Strict enforcement of existing domestic animal importation regulations could prevent such an introduction.



Technology and the Scientist

Proceedings of the
1985 ARCTIC SCIENCE CONFERENCE
(36th Alaska Science Conference)

September 27-29, 1985
University of Alaska-Fairbanks