
A REVIEW OF PARASITES AND DISEASE IMPACTING MOOSE IN NORTH AMERICA

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Moose (*Alces alces*) are relative newcomers to North America, believed to have crossed the Beringian land bridge during the late Pleistocene, 10,000–15,000 years ago. Their evolution in Asia may have left them relatively ill-prepared to cope with a suite of North American parasites that have proportionately greater impacts on moose than other cervids. We review the current state of knowledge regarding impacts of parasites on North American moose populations, including brainworm (*Parelaphostrongylus tenuis*), arterial worm (*Elaeophora schneideri*), giant liver fluke (*Fascioloides magna*), winter tick (*Dermacentor albipictus*), and others. We then pay specific attention to recent research and monitoring of moose, parasites, and disease, in the context of potentially declining moose populations in Montana and elsewhere. Notably we have preliminary evidence suggesting minimal impacts of winter ticks in Montana relative to the eastern US, but also a separate and poorly understood parasite- or disease-induced reduction of adult female moose survival in a southwest Montana population. These results are preliminary and we discuss them as yielding more questions than answers thus far.