QuickNotes
Science Summaries from fRI Research

Moose Populations in Alberta: Exploring trends through time

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Moose populations differ over time and across Alberta. While populations in the boreal and foothills regions have fluctuated since the 1980s, they have increased in the parkland and grassland regions.[1-3] Changes in moose population sizes, trends and distributions have important cultural and economic implications for Indigenous and non-Indigenous people in Canada.

Both natural and human-caused disturbances affect resource availability,[4-5] which is a limiting factor for the size of wildlife populations.[6] As such, the population that the landscape can support (carrying capacity), and a population's growth rate, may reflect the variation in landscape conditions.[7]

Studies report negative, mixed, and positive effects of forestry on moose populations.[8] While links between moose population demographics – notably carrying capacity – and forest harvest have been observed in Ontario,[6] the effect of these and other environmental factors have not been examined in Alberta. Studying this will help inform evidence-based landscape management that maintains moose populations.[9]

Objectives

We are using historical and current aerial survey data provided by the Government of Alberta to assess the influence of forest management and landscape condition on moose population sizes and trends for 65 forested wildlife management units across five natural subregions. We will conduct two analyses:

1) broad-scale population parameters, specifically Allee threshold and growth rate, and
2) year-matched aerial survey and landscape condition data.

Throughout, we intend to build relationships and work with local Indigenous communities to support the inclusion of Indigenous knowledge and understanding of moose.

For more information about this research, contact:
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Current Progress

We have fit preliminary demographic models and are working on including two additional variables that are resource intensive to derive. We are also preparing for the second (year-matched) analysis.

Citations

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