



# University of Alaska Fairbanks **THE SUN STAR**



## Moose or caribou: who wins on the climate change battleground?

**Natalie Taylor/ Sun Star Contributor**

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Climate change is a scientific certainty. The earth is getting warmer, and habitats are changing as a result. As those habitats shift in the future, some of Alaskans' favorite animals—moose and caribou—could be severely affected.

As part of the webinar series put on by the Alaska Center for Climate Assessment and Policy, Kris Hundertmark of the Institute of Arctic Biology at the University of Alaska Fairbanks will present a webinar titled "Moose and caribou in the face of climate change: winners or losers?" The webinar will be online May 20 at 10 a.m. You can register for free online at [aacap.uaf.edu](http://aacap.uaf.edu).

"I'm going to project into the future and see who wins and loses in the climate change scenario," says Hundertmark. The webinar will look at moose and caribou and the potential effects climate change will have on them in Alaska and continent-wide.

A recent article published in *Nature* and coauthored by Hundertmark studies the genetic diversity of caribou in relation to climate change and habitat. The article proves that "caribou that are in those stable habitats also have the greatest genetic diversity. Obviously genetic diversity is important in order to be able to adapt to future changes," says Hundertmark.

This means that as the climate changes here in the north, the increasing instability could affect animals' ability to adapt to the changing environment.

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For example, scientists predict an increase in forest fires as the earth warms. As anybody who has lived in Alaska for a summer knows, fires are difficult to fight when they're inaccessible by road. They're left to burn—a smoky inconvenience for people in Fairbanks when the wind shifts—but for caribou, this could mean losing their major food source.

“More forest fires are good for moose because moose like to eat young trees and shrubs. Forest fires are bad for caribou because in the winter caribou eat lichens,” says Hundertmark.

When a lichen bed burns, it takes at least 50 years for the lichen to replenish itself. So while moose might thrive for 25 years on fresh green shrubbery, the caribou might be forced to adapt, move, or die. All because of the changing climate.

“Moose are winners in that particular scenario,” but in other scenarios Hundertmark plans to discuss in the AACAP webinar, the moose don't fair as well.

Since moose don't get cold, they're more easily affected by warmer weather—“particularly in the winter and in these warming spells like we've had this year in Fairbanks.” Hundertmark references a study in Minnesota in which the number of days a moose experiences heat stress is “directly related to their survival rate.” It's precisely linked to climate change.

“Climate change is happening faster here than anywhere else in the world,” says Hundertmark.

While everybody knows climate change isn't good, he wants to provide the general public “with concrete examples of why it is bad — something they're familiar with.”

This could even affect subsistence hunting. If habitat change causes caribou to migrate differently, they might completely bypass villages that are now on migration routes. “It might be much more difficult to get meat in the freezer,” says Hundertmark.

You can register for the May 20 webinar online at [aacap.uaf.edu](http://aacap.uaf.edu), or you can participate in the webinar at the AACAP office in the Denali Building on College Road, as well as many satellite viewing sites across the state. If you can't make it on May 20, the webinar will be recorded and saved on AACAP's website. AACAP's website has more details about this webinar, as well as those coming up through the summer months.

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