

Can forest harvest emulate fire in the eyes of a woodland caribou?

Woodland caribou are declining across Canada due to habitat loss and associated predation. The effects of forest harvesting on caribou might be reduced by mirroring wildfire, a natural disturbance they have evolved alongside.

We reviewed the research describing woodland caribou responses to wildfire and harvest across Canada.

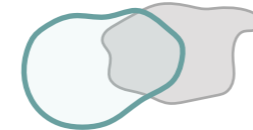
HABITAT SELECTION & DISTRIBUTION



Caribou avoid recently burned or harvested areas.



Home range is unaffected.



Home range contracts or is abandoned.



MOVEMENT



Early seral plants and deep snow impede movement.



Downed trees impede caribou movement.



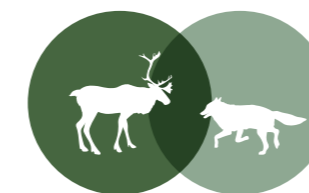
Road networks impede caribou and facilitate predator movement.



DEMOGRAPHICS



Caribou have increased overlap with predators.



Little to no effect on mortality and recruitment.



Increased predation risk, increased mortality and variation in recruitment.



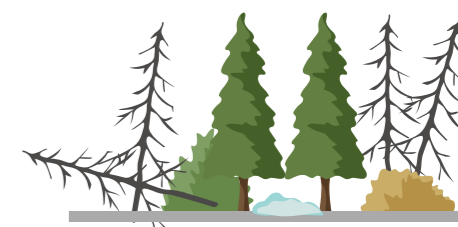
FORAGE



Overall lichen abundance is reduced.



Lichens may persist in unburned areas.



Lichens are uniformly reduced, but loss can be mitigated.



Our review indicates that forest harvest has a greater effect on woodland caribou than wildfire. The differences may inform how ecosystem-based management could be implemented to better meet the needs of caribou.