

The Role of Predation in Woodland Caribou Population Declines in Northeastern Alberta

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Populations of woodland caribou (*Rangifer tarandus caribou* (Gmelin, 1788)) have declined across much of their range. Wolves (*Canis lupus* L., 1758) are believed to be responsible for the majority of mortality in adult female caribou; however, we hypothesize that other predators such as black bears (*Ursus americanus* Pallas, 1780) may be important contributors to calf mortality. We assessed habitat selection by black bears and spatial relationships of caribou – black bears during the caribou calving season in northeastern Alberta, Canada. Black bears avoided bogs and fens, while selecting upland mixed woods and various industrial features. Conversely, caribou showed strong selection for bogs and fens relative to bears, supporting the hypothesis that caribou in the boreal forest attempt to minimize predation risk by selecting peatlands to avoid areas frequented by predators. However, habitat selection by individual black bears was highly variable and some bears selected habitats similar to those selected by

caribou, i.e., bogs and fens. Bears that specialize on foraging in peatlands might be responsible for some of the predation on caribou calves. Because declines in caribou populations have resulted from a combination of high adult female and calf mortalities, management actions to conserve woodland caribou should consider the entire suite of potential predators rather than focusing only on wolves.

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Policy Issue

Biodiversity: Species Conservation; Boreal and Mountain caribou

Knowledge Gap

boreal caribou behavioral responses to oil and gas developments

boreal caribou calving habitat selection (predation risk)

predator -prey relationships

Herds Studied: Alberta: *Boreal*; West Side Athabasca River