

Spatial predictors of human-black bear (*Ursus americanus*) interactions in Nova Scotia, Canada

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The increased global frequency of human-wildlife conflict with large, wild carnivores and omnivores negatively impacts human, wildlife, and ecosystem health. The goal of this study was to determine what landscape characteristics best predicted where human-black bear (*Ursus americanus*) interactions occurred in Nova Scotia to support management efforts. We compared the location of 3278 human-bear conflict reports and 867 non-conflict reports collected between 2017 and 2021 to 12,000 randomly generated locations. Data were analyzed using logistic additive mixed models. We found that interactions (conflict and non-conflict reports) occurred near roads and farther from forests and surface water features. These events were more likely in areas with higher forest edge density, and moderate housing density characteristic of fragmented and shared landscapes with humans and bears. These results can be used to better allocate limited resources, and target bear management efforts and approaches in this region based on the likelihood of human-bear interactions.

Keywords: black bear, habitat preferences, human-wildlife interactions, Nova Scotia, public reporting, spatial distribution, *Ursus americanus*