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## A COMPARISON OF WOLF DEPREDATION SITES IN AREAS WITH MIGRATORY AND RESIDENT ELK

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As large carnivores recover in many wilderness areas and mixed-use landscapes, wildlife management agencies must seek ways to minimize private property damage while maintaining viable populations. Although much is known about carnivore-livestock conflicts, drivers of these processes in the Northern Rocky Mountains are still emerging amid the dynamic conditions of recovering predator populations (gray wolves [*Canis lupus*] and grizzly bears [*Ursus arctos horribilis*]), declining elk productivity, and the re-distribution of migratory and resident elk subpopulations. There has been little research to date that examines the influence of fine-scale elk distribution and movements on patterns of livestock depredation. In this study, we analyze four years of cattle depredation data, two years of summer and fall wolf predation data ( $n = 4$  wolves), and three years of elk movement data ( $n = 86$  elk) to assess the influence of migratory and resident prey on the location and occurrence of wolf depredations on cattle. Wolves living in migratory elk areas face low densities of their preferred prey in summer, when elk depart for higher elevations inside Yellowstone National Park (YNP), while wolves living in the resident elk area have access to abundant elk year-round. Wolves living in both areas have the potential to interact with several thousand head of cattle. We used logistic regression to compare the relative influence of landscape features on the risk of livestock depredation in the migratory and resident elk areas. Locations of wolf-killed cattle showed differences between the migratory elk area and the resident elk area. Depredation sites in the resident elk area were associated with habitats closer to roads and with high elk density, while depredation sites in the migratory elk area were associated with dens, streams, and open habitat away from the forest edge. Our findings indicate that knowledge of ungulate distributions and migration patterns can help understand and predict hotspots of wolf conflict with livestock.