

HABITAT AND LAND-USE EFFECTS ON SCAVENGING RATES AND POTENTIAL BRUCELLOSIS TRANSMISSION IN SOUTHWEST MONTANA (POSTER)

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Brucellosis, a bacterial disease caused by *Brucella abortus*, is a major concern in the Greater Yellowstone Ecosystem due to potential transmission from elk (*Cervus elaphus*) to livestock. *B. abortus* can lead to abortion in infected animals and is primarily transmitted between elk and livestock when individuals contact infected abortion materials. Therefore, the risk of transmission may be a function of how long abortion materials remain on the landscape. Previous studies suggest the rate of fetus removal by scavengers may vary spatially and that scavengers may play a vital role in the persistence of *B. abortus* on the landscape and the dynamics of brucellosis transmission. To investigate fetus removal in southwest Montana, we placed bovine fetuses and placentas at 266 sites within suitable elk habitat during the brucellosis transmission risk period from February-June 2017 and 2018. We used remote cameras to quantify the scavenging rate of abortion material, as well as the community of scavengers that participate in fetus removal. Preliminary estimates suggest abortion materials were scavenged at an average of 84 hours (± 8.5 SE) across all habitat types. When comparing habitat types, fetuses were removed quicker in grasslands (55 hours ± 8.2 SE) than in sagebrush steppe (102 hours ± 17.0 SE) and forest (102 hours ± 7.4 SE). Abortion materials were consumed by a variety of scavengers including magpies, ravens, red-tailed hawks, eagles, turkey vultures, skunks, foxes, coyotes, wolves, mountain lions, and black bears. This research will help identify management options aimed at decreasing the risk of brucellosis transmission from elk to livestock in Montana.