

HAWK SHOOTING: NOT JUST A PROBLEM OF THE PAST^{TWS}

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During the winters of 1997-1998 and 1998-1999, I investigated the causes, frequencies, and characteristics of human-related winter mortality of raptors in the Mission Valley, Montana, by systematically searching along roadside corridors for dead birds. Surveys included both primary and secondary roads, and most were paralleled by power lines. I found a total of 126 dead raptors during the two winters, including 58 in 1997-98, and 68 in 1998-99. Nine different species were found, but most were Rough-legged Hawks (*Buteo lagopus*) (49%) and Red-tailed Hawks (*Buteo jamaicensis*) (29%). Of 88 birds collected and examined, 74 (84 %) were shot, 8 (10%) were electrocuted, 4 (5%) the cause remained unknown, 1 (1%) died by collision, and 1 (1 percent) died from predation. Those not examined were either too scavenged or too decomposed for necropsy, but did not differ in location from those examined. Although 52 percent of dead birds were found directly beneath power poles or lines, and dead birds were found under a wide variety of pole configurations, very few were actually electrocuted. Furthermore, electrocuted birds were associated with only a few types of pole configurations, and most included jumper wires and/or transformers. As for characteristics, shot birds more often had shattered bones and bruising and/or hematomas and were characterized by shearing of flight feathers, sprayed or spattered blood, and bullet fragments within entrance wounds. Electrocuted birds always showed some evidence of burns, but many (44%) required magnification optics to verify singeing of feathers. Curled, deformed, or incinerated talons also occurred with many electrocutions (33%). So, although electrocution and car collision are well recognized as major causes of winter mortality of raptors, and continue to be major sources of raptor mortality around the world, in certain areas shooting may still be the leading cause of raptor mortality.