Red-headed Woodpecker by Steve Lubahn
Vehicle-caused Mortality and the Red-headed Woodpecker in Wisconsin

The author compares data from a recent study of road-killed birds with historical information on vehicle-caused mortality of Red-headed Woodpeckers in Wisconsin.

by William P. Mueller

Many individuals of hundreds of animal species, including birds, are killed by vehicles on and along roadways (Farmer 1998, Forman and Alexander 1998, Groot Brunderik and Hazebroek 1996, Hornaday 1931, Lalo 1987, Loos and Kerlinger 1993, Seibert and Conover 1991, Trombulak and Frissel 2000, Wilkins and Schmidly 1980). The Wisconsin species that possibly has been the most seriously impacted by vehicle-caused mortality is the Red-headed Woodpecker (Melanerpes erythrocephalus). This species has shown a decline in Wisconsin since 1930 (Robbins 1991, Robbins et al. 1996), and mortality resulting from collision with vehicles may be a factor in this decline. Red-headed Woodpeckers inhabit oak savannah and open woodland, and flycatch over open fields and adjacent roads more than any other woodpecker species (Smith et al. 2000). Their proximity to roads brings them into contact with vehicles, and this may have been a significant source of mortality for this species during the twentieth century.

Study Area, Methods and Results

I studied the effect of highway mortality on the Red-headed Woodpecker in Wisconsin, by gathering data on bird-vehicle collisions during 1999. In order to avoid bias in the collection of data, I asked cooperators to collect records of all species found dead on roads in Wisconsin. With the help of 90 cooperators statewide, I gathered records of 1,548 deaths of 109 species of birds from 64 counties throughout the state. The cooperators transmitted records of species found, dates, and locations via electronic mail or regular post throughout 1999. Only four Red-headed Woodpeckers were found killed statewide during 1999, which was only 0.26% of the total.

Historical Road Mortality Data for the Red-headed Woodpecker

A.W. Schorger commented on losses of this species in a study of road-kills, stating that there had been “a steady and marked decline” over the 18-year
period of the study (Schorger 1954, p. 54). The numbers of road-killed Red-headed Woodpeckers in his study declined from 47 in 1932 to only 6 in 1949 (Robbins 1991, Schorger 1954). Of all species found during his study, the Red-headed Woodpecker was the second most frequently killed by vehicles in southern Wisconsin at that time. Of Schorger’s observations of road-killed birds, 7.9% were Red-headed Woodpeckers; this contrasts with less than 1.0% of the records collected during the 1999 study.

Losses caused by collisions with vehicles have been noted in many other areas of the range of the Red-headed Woodpecker. D. Stoner reported 37.1% of road-killed vertebrates found on a 1924 trip to be Red-headed Woodpeckers. He found these birds to be vulnerable to vehicle collisions due to their habit of feeding upon insects and spilled grain on roadways (Stoner 1932, in Bent 1992). Woodliffe (1987), in Ontario, mentions road mortality as one possible cause of decline in this species, as do Eaton (1914) and Bull (1974) in New York State, Zeranski and Baptist (1990) in Connecticut, Bucklew and Hall (1994) in Virginia, and Mengel (1965) in Kentucky. Sharp (1980) noted that the Red-headed Woodpecker was more frequently killed by vehicles in Iowa and eastern Nebraska than any other bird species.

DISCUSSION

Does vehicle-caused mortality presently influence the population of the Red-headed Woodpecker in Wisconsin? Judging from the very small number of road-killed individuals of this species found in Wisconsin during 1999, it seems that collision with vehicles may not be a significant source of mortality under current conditions. Perhaps the species has declined to the extent that sufficient numbers of Red-headed Woodpeckers are simply not present to be involved in many collisions. Some species learn to avoid roads (see data on the Florida Scrub-Jay, Mumme et al. 2000). There is no evidence to suggest this has happened with the Red-headed Woodpecker, however. Over the past 75 years, this source of mortality may have been a significant factor in the decline of the Red-headed Woodpecker in Wisconsin. Loss of one adult of a nesting pair may result in no net production of young in a given season, due to starvation of the young (Robbins 1991).

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LITERATURE CITED


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