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Unusually High Rate of Barn Owl Roadkills in Kansas — During an early spring trip to Meade, Meade Co. on 23 March 1998, I encountered what appeared to be a high number of dead Barn Owls (*Tyto alba*) along U. S. Highway 54. During the 61-mile route from Meade, west to Greensburg, Kiowa Co., I came across at least nine dead Barn Owls, an average of one individual every 6.78 miles. This route began in northeastern Meade County, continued through the northwestern corner of Clark County, the southeast corner of Ford County, and ended partway into Kiowa County. Conditions of the afternoon were those of previous days: relatively warm daytime temperatures (ca. 60°F) under cloudy skies.

In order to determine whether or not this number of individuals is as alarming as it first appeared, I looked to published accounts on Barn Owl mortality rates, especially in relation to automobile collisions. Glues work (Glue, D. E. 1973. Seasonal mortality in four small birds of prey. Ornis Scand. 4:97-102) with seasonal mortality in birds of prey found that the main period of mortality in British Barn Owls was in September and he found that collisions with automobiles were an important source of mortality in this species. The work of Marti and Wagner (Marti, C. D. and P. W. Wagner. 1985. Winter mortality in common Barn Owls and its effect on population density and reproduction.. Condor 87:111-115) showed that of 98 Barn Owls found during the winter in Utah, only 21 were found to have

Owls *Tyto alba*, with a discussion of aldrin-dieldrin poisoning. Ibis 133:162-169) reported that of 629 Barn Owls in Britain found dead between 1963-1989, the majority of these individuals (41.5%) were found to have died due to a collision with automobiles. They also found that the number of individuals found during the year was bimodal with the first peak in October-November and the second peak in March, the same month in which my observation was made.

Recent work by Massemin et al. (Massemin, S., Y. Le Maho, and Y. Handrich. 1998. Seasonal pattern in age, sex and body condition of Barn Owls *Tyto alba* killed on motorways. Ibis 140:70-75) found that in road-killed Barn Owls in France the highest number of birds found dead were discovered within the dispersal period between early fall and late winter. Additionally, they found that the highest number of road-killed owls correlated with day length and peak of traffic. They concluded that the mortality along roadways was highest during the immature dispersal period and when the peak traffic along highways coincided with the onset of evening hunting activities.

It is unknown as to what the effect of roadway mortality in southwestern Kansas may have on local populations. Marti and Wagner (ibid.) found a 40% decline in breeding attempts in the season after a major die-off due to auto and weather-related mortality in northern Utah. The population they studied recovered only after individuals immigrated from other populations. Along U. S. Highway 54, roadside ditches may act as ecological traps that lure owls because of good prey habitat and plentiful perches in the form of utility poles and powerlines. Owls may perceive these locations as good hunting areas even though many owls may ultimately perish in highway collisions in these good hunting areas.

It is interesting to note that several raptor species, including the Red-tailed Hawk (*Buteo jamaicensis*) and Northern Harrier (*Circus cyaneus*) were encountered often along the same stretch of highway yet no road-killed individuals were found. This indirect evidence reinforces the idea that Barn Owl collisions most likely take place after dark and the time of day used for hunting likely has an effect on collision rates. The high number of individuals found seems rather alarming if it is any indication as to the rate that this species collides with automobiles. Although one individual per 6.78 miles of highway seems like a high rate, this number may even be higher because some individuals that are not killed outright might be able to retreat to protective cover before dying of their injuries or being taken by a predator. Further analysis of dead Barn Owl through necropsy examinations may answer questions surrounding the age, sex, and condition of road-killed individuals.

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