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EVALUATION OF THE EFFECT OF ENVIRONMENTAL FACTORS ON WILDLIFE ROADKILL IN CENTRAL TURKEY

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Abstract

Transport networks, including highways, have many negative ecological impacts, such as habitat loss and landscape fragmentation. One of the most consicuous negative effects is wildlife vehicle collision (WVC). The basic aims of this study, conducted on the Kırıkkale-Çankırı Highway, Turkey, are the following: i) identifying locations of WVC events, ii) modeling the effects of landscape pattern and traffic characteristics on WVC and iii) proposing a solution to mitigate WVC. In the study area, 389 medium and large mammal wild animals of 9 species were recorded. Approximately 93% of road deaths in the study area belonged to three species (Red fox, hedgehog and stone marten). The animal that was killed most often from WVC was the eastern hedgehog (*Erinaceus concolor*) with 182 deaths. The model showed that for all species the probability of a fatal accident increases with decreasing of traffic volume and distance to agricultural land, and with increasing of road width and distance to orchards.

Key words: accident, ecological, animal, highway, traffic, territory

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