



“Gheorghe Asachi” Technical University of Iasi, Romania



THE LINK BETWEEN ROADKILLS DISTRIBUTION AND THE SURROUNDING LANDSCAPE IN TWO HIGHWAYS IN NAVARRE, SPAIN

Jordi Puig^{*}, Arturo H. Ariño, Luis Sanz

University of Navarra, Department of Zoology and Ecology, E-31080 Pamplona, Spain

Abstract

A research on wildlife road-kills, mostly medium-sized mammals, has been conducted for two years along two highways (namely A-15 and A-10) in the Euro Siberian area of northwest Navarre (Northern Spain) between the westernmost side of the Pyrenees and the Basque Mountains. The study intended to find out a link between their distribution and the structure of the landscape surrounding it. The roads were segmented into 100-m stretches, and inspected weekly for roadkill by research staff with the collaboration of the maintenance service of both freeways. The data of the 539 animals recorded and geolocated in the segments were analysed spatially and matched to the surrounding landscape and presence of crossing structures. Results showed that the spatial distribution of wild medium-sized mammal road-kills along these freeways was not random, and that the surrounding landscape and the potential permeability of these roads did affect the road-kill rates. Existence of permeable crossings and heterogeneous landscape units reduced roadkill, while homogeneous agricultural and human landscapes increased roadkill rates.

Key words: highway, landscape, Pyrenees, road ecology, roadkill, wildlife

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^{*} Author to whom all correspondence should be addressed: E-mail: jpbaguer@unav.es; Phone: +34 948 425 600 (Ext. 6496); Fax: +34 948 425 649