

## THE EFFECTS OF HUMAN SETTLEMENTS ON BIRD SPECIES RICHNESS IN LANDSCAPES OF DIFFERENT ALTITUDES

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Different species, even within the same taxonomic group, may exhibit different responses to factors affecting their ecology such as habitat deterioration. To assess whether human activity is a predictor of bird diversity loss we examined its effects on the total bird species richness and breeding density of eight priority bird species. We surveyed birds, using the point count method, at 12 lowland, 12 midland and 12 upland sites during the bird breeding season of 2009. We investigated the possible relationship between: (1) the estimated total bird species richness and altitudinal zone as it was affected by human presence, and (2) the breeding density of priority bird species and human settlements. A General Linear Model (GLM) was applied to explore the variables affecting total bird species richness and breeding density of priority bird species in the study area. Results suggest that there was a significant relationship between total bird species richness and altitude ( $F=18.650$ ,  $d.f.=2$ ,  $P<0.0001$ ), as well as distance from farming buildings ( $F=4.072$ ,  $d.f.=1$ ,  $P=0.045$ ), while no significant relationship with human population was detected. Regarding the priority bird species of the study area, a significant relationship between breeding density of *Dendrocopos medius* and *Milvus migrans* with distance from livestock buildings ( $F=4.431$ ,  $d.f.=1$ ,  $P=0.036$  and  $F=6.000$ ,  $d.f.=1$ ,  $P=0.015$ , respectively) was found. Thus, we concluded that livestock activity and human settlements may benefit some priority bird species such as *D. medius*, *M. migrans* and *Lanius collurio*.