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Optimization of sampling effort to determine wildlife road mortality.

Key words: Wildlife, Road kill, Sampling methodology.

Preferred type of presentation: Poster

Abstract

When a study of wildlife road mortality is performed it is always assumed that the amount of registered road kills is an underestimate of the real number of animals killed. The accuracy of estimation greatly depends on the sampling frequency of the study. The discrepancy in the road kills found related to the difference in sampling effort is important when we want to compare results from other studies that employed different sampling frequencies. The aim of this study was to determine the magnitude of data losses that can be a consequence of different sampling effort and propose an optimal sampling frequency depending on it. Five roads with different characteristics of two Natural Parks in Valencia (Albufera and Marjal Pego-Oliva) were sampled. The roads were sampled twice a week for 5 weeks each season. The first time the road was visited; the road kills were recorded and marked with a bright colour spray. The second time we registered both the new casualties and the carcasses registered the first time that were still on the roads. This time all the carcasses were removed from the road. This methodology was repeated for 20 weeks during the year 2009. The number of casualties registered in the two wetlands was 572 (422 in Albufera and 150 in Marjal Pego-Oliva). Approximately 16% of road kills were lost between the two consecutive visits to the road whereas another 11%, despite still being on roads, were so damaged that they were unrecognizable. The permanency of the carcasses on roads depends on the road and traffic characteristics and the characteristics of the species killed.

Comments on changes: The language and spelling of this abstract was checked with the help of a native English speaker. We have abridged the prologue and we have included specific results and methodology.