

Living on the verge: are roads a more suitable refuge for small mammals than streams?

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Abstract: Retaining natural remnant corridors of habitat is a useful and practical conservation tool, which can attenuate the effects of habitat loss and fragmentation on wildlife. By providing additional habitat for small fauna living in highly modified environments linear structures may contribute to the conservation of biodiversity. We assessed the importance of road verges as refuge areas for small mammals, in highly intensified grazed pastures in a Mediterranean landscape, and compared road function as refuge with the one of riparian galleries, which have already been described as important shelter location for these species in the Mediterranean context. For this purpose, a small mammal trapping study was undertaken in October 2007 on two road verges and two small stream sides in the vicinity of Évora, southern Portugal. We captured a total of 457 individuals of five different species. *Mus spretus* was the most common species captured, followed by *Crocidura russula*. Captures were 4.6 times higher inside both linear habitats (roads and streams) than 12m away on the surrounding matrix. Individuals captured in the matrix presented a smaller body size and a lower body condition, suggesting that this suboptimal habitat is mainly occupied by subadults, probably making dispersing movements. *M. spretus* was 46% more abundant on roadsides than on streamside vegetation, whilst *C. russula* had similar abundances in both habitats. *M. spretus* were bigger on streams, but showed no differences in body condition between roads and streams. *C. russula* had better body condition and slightly higher body lengths on roadsides. Our results thus show that roadside verges, in intensively grazed Mediterranean landscapes, act as important refuge habitat for small mammals and constitute equally vital habitats for small mammals as do riparian vegetation strips, in landscapes where other suitable habitat is scarce.