# Distribution and habitat use by sympatric dormice species in two Natura 2000 sites in central Macedonia, Greece

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## Abstract

There has been little research on the distribution and ecology of the four dormouse species occurring in Greece; the Edible Dormouse (*Glis glis*), Forest Dormouse (*Dryomys nitedula*), Hazel dormouse (*Muscardinus avellanarius*) and Mouse-tailed Dormouse (*Myomimus roachi*). As a result, the latter three species are listed as data deficient (DD) in the National Red Data Book. Recently, the government has tried to address this knowledge gap, funding dormouse surveys within the Natura 2000 network. In this context, we used a combination of nest-tubes (n=442) and track-tunnels (n=238) to study dormouse distribution and habitat use across 37 sites representing different habitat types (with varying levels of grazing) of two mountainous N2K sites (GR1270001, GR1270005) in central Macedonia. We detected *G. glis* at 28 sites, *D. nitedula* at 32 sites, and *M. avellanarius* at seven sites. Positive identification of the different species was twice as likely in track-tunnels (unbaited; metal sheets covered in soot) than nest-tubes. We estimated relative abundance across sites using Royle-Nichols occupancy models, except for *M. avellanarius* due to data limitations. For all species, we examined habitat use using MaxEnt ecological-niche models. Our findings show that *D. nitedula* has the widest distribution, occurring even in sparse forests and maqui with moderate or high livestock grazing intensity. *G. glis* is common, but restricted to medium-high elevation forests. *M. avellanarius* appears to have a discontinuous distribution. If this study is representative of its status across the country, that species requires conservation efforts.

## Keywords

Forest Dormouse, Edible Dormouse, Hazel Dormouse, track-tunnels, nest-tubes

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## Conflicts of interest