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223. DOES FRAGMENTATION INCREASE EXTINCTION THRESHOLDS? A WESTERN EUROPEAN-WIDE TEST IN SEVEN FOREST BIRDS

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The extinction threshold hypothesis predicts the existence of a threshold along a continuum of habitat amount below which population extinction probability increases dramatically. Whereas theoretical results support this hypothesis, indicating that fragmentation sensu strictu aggravates the impacts of habitat loss on population persistence, empirical studies find that the effects of fragmentation are weaker that those of habitat amount. Here, we analyze seven forest bird species in relation with forest amount and fragmentation in Western Europe to determine whether fragmentation is related with their extinction thresholds. We used the percentage of forest amount and the proportion of this percentage occurring in the largest forest patch to distinguish between scenarios reflecting low and high fragmentation. We found that the extinction threshold hypothesis was supported for two species, the capercaille and the hazel grouse, characterized by their highly specialized habitat requirements and reduced dispersion. One species, the black woodpecker, was favored by forest fragmentation whereas four other species were unaffected. We conclude that the extinction threshold hypothesis applies primarily to extreme forest specialists with limited dispersal abilities.

224. MODELING HABITAT SUITABILITY TO PREDICT THE POTENTIAL DISTRIBUTION OF TWO AMPHIBIAN SPECIES, THE COMMON SPADEFOOT (*PELOBATES FUSCUS*) AND THE SYRIAN SPADEFOOT (*PELOBATES SYRIACUS*) TOADS IN EUROPE

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The Common Spadefoot toad (*Pelobates fuscus*) is widely distributed on the main continental Europe and in the north of the Balkan region. The Syrian spadefoot toad (*Pelobates syriacus*) has a range covering parts of the Balkans, the Caucasus and the Middle East. Though IUCN classified both species as Least Concern, they are considered priority species for conservation within the EU since their populations are declining in many regions; therefore niche modeling may act as a powerful tool in assessing their current or future distributions. Maxent and openModeller were used to predict the habitat suitability of these two species based on presence-only occurrence data compiled from several thousand records of UTM or CGRS referenced data and quite a few GPS records for each species in combination with various bioclimatic, topographic and vegetation variables. The most important factors contributing to the spadefoot toads distribution were precipitation and temperature variables, altitude, insolation and NDVI. The area predicted as suitable encompassed the expected habitat range, but also a much broader habitat range.