

Assessing legacy effects of forest harvesting on the distribution of the Ural owl (*Strix uralensis*) in Romania

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Abstract

The Ural owl (*Strix uralensis*) is an umbrella species and therefore associated with high levels of biodiversity in its habitat. Its preferred habitat is deciduous primary forest with high numbers of old trees whose cavities provide nesting sites. Although the forested area in the Carpathians is increasing due to cropland abandonment, there are considerable disturbances especially in primary forests that threaten to impair the habitat quality and quantity of Ural owls. To assess the effect of forest disturbances on the habitat of Ural owls, it is important to consider the effects of land use history because past land use decisions may influence ecosystems for a long time.

Conclusion:

The most important result of my analysis is the emphasis on the irreplaceability of primary forest features like old trees with cavities for nesting to guarantee the protection of the Ural owl inside the Romanian Carpathians. Although Ural owls can survive if provided with artificial breeding sites, I argue that the long-term protection of primary forests and the retention of old cavity-forming trees is the more reasonable approach because it ensures the survival of many other species apart from the Ural owl. Therefore, I suggest that the Ural owl as umbrella and flagship species should be adequately considered by conservation and political planning. In general, the protection of the temperate primary forests of the Carpathian ecoregion should be the main objective of conservation measures in this region, especially when considering the high conservation responsibility for species like the Ural owl. This emphasises the importance of sustainable forest management that takes responsibility for the conservation of species like the Ural owl and takes long-term and effective measures to prevent illegal logging.

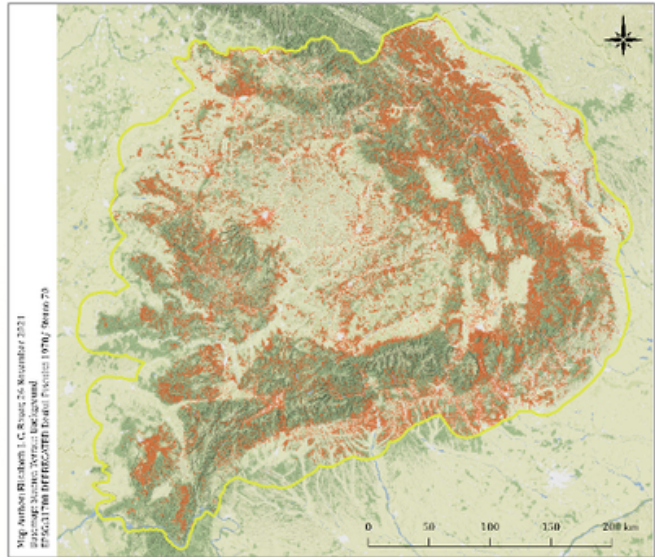


Fig.1. Left: illustration by the author. Right: Binary distribution map indicating habitat suitability for the Ural owl in the Romanian Carpathians.