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# Impact of landscape linear features on movements and home range distribution in 5 species of large herbivores

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## Abstract

Identifying the environmental or behavioral factors that promote or constrain animal movement and the establishment of their home range is an essential step in understanding the ecological consequences of habitat fragmentation. Among these factors, the configuration of the landscape, in particular the distribution of anthropogenic and natural linear features has been found to favor or to impede the movements of animals. In territorial species, these elements of the landscape are also often very important in the division of space between neighboring individuals/groups. However, we can expect a strong variability of the role of linear features on the movements and spatial distribution of home ranges, related to the environmental context, the nature of anthropogenic disturbances, both the evolutionary and ecological traits of species and finally, individual characteristics. A better understanding of how these different factors influence the behavioural response of individuals to linear features requires to rely on comparative approaches contrasting species and populations. We present here a comprehensive spatial analysis of GPS data collected in 7 populations of 5 species of ungulates (ibex, roe deer, chamois, red deer, and mouflon). Populations differ in their level of heterogeneity and anthropic disturbance, whereas species are contrasted in terms of territoriality, gregariousness, and diet. Our work should help to better understand the link between the rules governing the movement of individuals, according to the species-specific evolutionary constraints and the environmental characteristics they encounter, and the design of their home ranges in fragmented landscapes. This presentation would be suitable for a thematic session on "Movement Ecology" (main organiser: Simon Chamillé-James).

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