5th European Ground Squirrel Meeting

Perspectives on an endangered species

ABSTRACTS

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Vulnerability of European ground squirrel colonies in the Pannonian region of Romania

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Distribution of the European ground squirrel in western Romania is patchy, nevertheless these isolated colonies are among the largest within the central-European population of the species, and as such, have a remarkable implication for conservation. Our goal was to collect basic geographic information about the size of ground squirrel habitats, the isolation among them and the frequency of the two major threats leading to habitat destruction and fragmentation in the region, i.e. transformation to arable land and construction activities. Distribution of ground squirrels was mapped between 2006 and 2014, with 151 colonies located. The surface of each colony was assessed as the surface of the largest continuous grassland area apparently suitable for the species. The area of ground squirrel habitats was drawn using the most recent Google Earth satellite imagery, as well as own GPS data. The shortest distances of discrete colonies to the nearest neighbour colony, as well as to settlements were measured in order to assess their degree of isolation, and the likelihood of facing threats owing to the close proximity of humans, respectively. By comparing recent satellite images with previous ones, we were able to assess the frequency of grassland habitat losses owing to transformation into arable land or to construction. The mean area of colonies was 133 ha, with 39% being smaller than 50 ha. The mean shortest distance between colonies was 3018 m. 40% of the colonies have witnessed losses owing to transformation into arable land in the past decade, while construction activities affected 17%. Colonies near settlements were significantly more affected by both construction and agriculture compared to those remote from settlements. However, overlap with protected areas did not decrease the effect of these threats. With habitat destruction progressing at an alarming rate, our results suggest that immediate action is required to save these shrinking colonies from extinction.