

Individual territories, activity and degree of brown bear (*Ursus arctos*) synanthropization on the territory of Stara Planina mountain

Individual territory of 9 individuals brown bear on the territory of Stara Planina was studied. A connection was made between the size of the individual territories and gender and age. Artificial feeding of wild animals is considered a common practice that the brown bear often takes advantage of. A GPS-GSM telemetry study of nine individuals examined how feeding sites affected individual territory size, mobility, and hibernation. The results show that bears are not directly dependent on feeding stations. The analyzes show that the size of the individual territories is on average 148.9 km² (between: 24.6–605.1 km²) with 190.1 km² for the males and 76.9 km² for the females. Five of the nine marked bears have never visited the feeding stations and the density of these places does not affect the differences in the size of the territories.

Neither the density of the feeders nor the proportions of the acorn forests in the range of the individual plots affect the size of the individual areas during hyperphagia. In addition, the similarity in the size of the individual territories during and outside the hyperphagia season suggests a balance between the variables forming the territories during these periods.

Most bears in the study overwinter in their core area, mostly in its very center (0.1 percentile).

The results showed a high degree of avoidance of capture sites, as sites presenting an immediate risk of recapture (70% of all cases), followed by avoidance of feeders (60%). Thus, the study confirmed that capture has a significant impact on animal behavior and can be an effective tool (at least in the short term) in managing unwanted behavior in bears. However, the results also showed that despite capture, bears do not completely avoid capture sites or feeders.

The data on the activity of the 7 monitored individuals largely coincide with the data from other studies of the species in Europe, with a characteristic morning peak, followed by a break at noon and a new peak in the late afternoon and evening. Well-defined daily activity was also found in the two individuals recently weaned from their mothers, following the pattern of behavior learned by the mother to avoid meeting mature males.

Although with a very small sample, a change in the activity during the period of active hunting is also established.

The period with the most frequent bear attacks on domestic animals or beehives in July-August was also established, as more than 65% of all cases fall in these months.