



*Original Contribution*

**EUROPEAN BADGER (*MELES MELES* LINNAEUS, 1758) PREFERENCES  
TO THE TERRAIN EXPOSURE FOR DIGGING DENS  
IN SOUTHEASTERN BULGARIA**

**S. Peeva<sup>1\*</sup>, D. Georgiev<sup>2</sup>, K. Kirilov<sup>1</sup>**

<sup>1</sup>Department of Animal Production - Non-ruminants and Other Animals, Faculty of Agriculture,  
Trakia University, Stara Zagora, Bulgaria

<sup>2</sup>Department of Ecology and Environmental Protection, Plovdiv University "Paisii Hilendarski",  
Plovdiv, Bulgaria

**ABSTRACT**

A total of 47 active badger burrows in the Southeastern Bulgaria were described in order to find whether there are preferences to terrain exposure for its digging activity. The most of the dens were found on terrain with south exposure - 23.4%, followed by these on the east and west side -19.15% each. The dens faced to these three directions, together with these to intercardinal directions connected with south, represented 80.85% of the active badger dens found. A tendency in the preference of the European badger to the southern exposure of the terrain for its digging activity in the region of South-eastern Bulgaria was established.

**Key words:** south, cardinal directions, burrow

**INTRODUCTION**

The European badger (*Meles meles* Linnaeus, 1758) is known as an animal constructing underground burrow systems (1). It inhabits the whole territory of Bulgaria (2). However, it spends most of its life processes outside the den (feeding, socializing, part of breeding and resting), making it dependent on weather conditions and in particular on the microclimate in the den area.

In Bulgaria, it is not known whether the badger demonstrates preferences for its burrowing activity to the terrain exposure.

**MATERIAL AND METHODS**

The study area lies between 150 and 430 m a.s.l. and is a part of South-eastern Bulgaria (Figure 1). In order to provide a long-term study for mapping the badger dens in the region, the active burrows in the study area

were described. The dens with presence of well-worn paths, latrines and footprints were defined as "active". The information on dens location provided by local foresters and hunters was used, considering that using different methods for detecting badger dens will minimize biases associated with individual approach in searching. The investigation was based on 47 active badger dens exposures determined by compass.

**RESULTS AND DISCUSSION**

The most of the dens found were on terrain with south exposure - 23.4% (Figure 2), followed by these on the east and west side - 19.15% each. The dens faced to these three directions, together with these to intercardinal directions connected with south, represented 80.85% of the active badger dens found. Similar preferences were described for badgers from Western Carpathian mountains (3) and from Southern Lombardy (4). The small number of the dens found facing north and north-east could be connected with the worse climatic conditions caused by the main northeastern winds in the region (5). For other

\*Correspondence to: Stanislava Peeva -  
Department of Animal production - Non-ruminants  
and other animals, Faculty of Agriculture, Trakia  
University, 6000 Stara Zagora, Bulgaria, email:  
st.peeva@abv.bg

parts of Europe, such as England (6) and Ireland (7, 8), the majority of the described dens were facing to the north, east and northeast. According to 9 the badger preferences for digging dens were related with local climatic conditions, in particular with

avoiding prevailing winds. Taking into account that badger spends part of its resting time outside the den, especially in spring and summer (10), the microclimate around it is important.

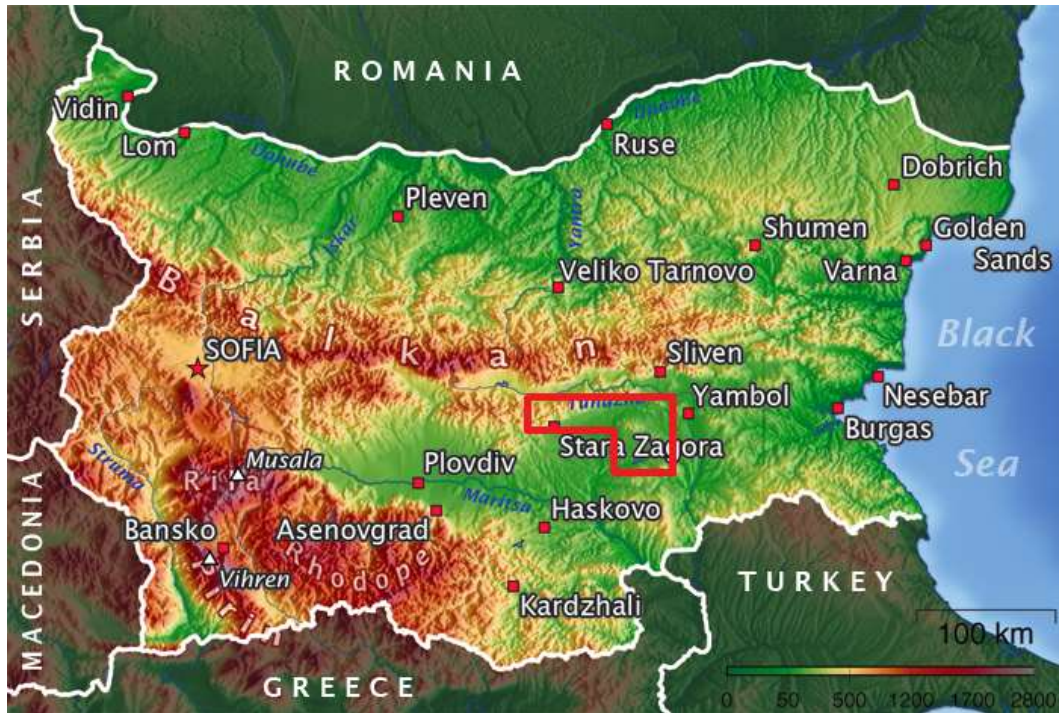


Figure 1. Location of the area for determining of European badger dens exposure in South-eastern Bulgaria

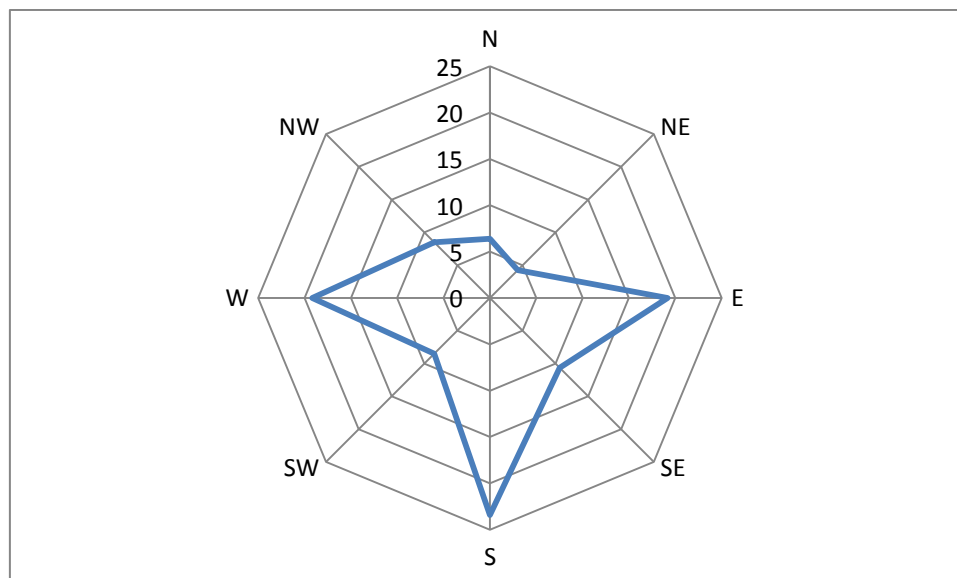


Figure 2. Exposure of 47 European badger (*Meles meles*) burrows found in Southeastern Bulgaria, expressed as a percent

**CONCLUSION**

A tendency in the preference of the European badger to the southern exposure of the terrain for its digging activity in the region of South-eastern Bulgaria was established.

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