

# Coleoptera and Hymenoptera (Insecta) from Bulgarian Section of Maleshevska Planina Mountain: Study of an Until Recently Unknown Biodiversity

*Borislav V. Guéorguiev<sup>1</sup>, Toshko Ljubomirov<sup>2</sup>*

<sup>1</sup>National Museum of Natural History, 1 Tsar Osvoboditel Blvd., 1000 Sofia, Bulgaria; E-mail: bobivg@yahoo.com

<sup>2</sup>Institute of Zoology, 1 Tsar Osvoboditel Blvd., 1000 Sofia, Bulgaria; E-mail: tljubomirov@zoology.bas.bg

**Abstract:** The present study is a result of over 3-year period of fieldwork on biodiversity, abundance, seasonality and habitat preferences of the insect orders Coleoptera and Hymenoptera in the eastern slopes of Maleshevska Planina Mountain – an almost unknown in terms of insect biodiversity border area. Sixty families of Coleoptera and five families of Hymenoptera were explored. The material was collected using hand collecting, pitfall traps, Moericke traps, and Malaise traps. A brief description of the previous investigations as well as the planning and methodology applied to the inventory of Coleoptera and Hymenoptera fauna is made and a tabulated summary of the established species is presented. The list includes 750 species (566 Coleopterans and 184 Hymenopterans) from Bulgarian part of Maleshevska Planina. Newly added are 679 species (500 from Coleoptera and 179 from Hymenoptera) as 23 of them are firstly recorded for the fauna of Bulgaria; two species (*Crossocerus denticoxa* (BISCHOFF, 1932) and *Trypoxylon megriense* ANTROPOV, 1985) are new records for Balkan Peninsula as well. Both altitudinal distribution and seasonal species progression are provided for Hymenopteran families Ampulicidae, Chrysididae, Crabronidae, Mutillidae, and Sphecidae. The cleptoparasitic load for the solitary wasps of Maleshevska Planina is estimated to be 20.9%. The comparatively high value of cleptoparasitic load does not support the WCISLO's (1987) hypothesis about the correlation between the geographical latitude of the explored area and value of the cleptoparasitic load. In addition, 39 species of conservation importance from Coleoptera are defined, as correlation between their abundance and both the altitude and the type of habitat is found. The present rich biodiversity established as a result of study of only part of the two biggest insect orders in a poorly explored (former) border area of Bulgaria demonstrate the need of systematic and continued samplings in other similar areas of the country in order to explore and eventually to protect their local biodiversity.

**Key words:** Coleoptera, Hymenoptera, biodiversity, Maleshevska Planina Mountain, Bulgaria