

Serbian Society of Soil Science  
University of Belgrade, Faculty of Agriculture

# **BOOK OF ABSTRACTS**

3<sup>rd</sup> International and 15<sup>th</sup> National Congress

## **SOILS FOR FUTURE UNDER GLOBAL CHALLENGES**



21–24 September 2021  
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## RESEARCH ON THE FAUNA OF EARTHWORMS (ANNELIDA: LIGOCHAETA) OF SOKOBANJA

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### Abstract

Soil is a complex and dynamic entity, made up of abiotic and biotic components. Earthworms are one of the most important organisms of terrestrial ecosystems. They are often presented as bioindicators of soil quality. That is why it is extremely important to know their diversity, ecology and distribution. The aim of this paper is to present new data on the earthworm fauna of Sokobanja and to summarize the published data. The list underlines earthworm diversity and provides a general overview of their distributions, zoogeographical positions, and ecological categories. The earthworms were obtained by the diluted formaldehyde method complemented with digging and hand sorting as well as turning over rocks, debris, and logs. The total number of earthworm species in Sokobanja comprises 7 taxa belonging to 7 genera. Our analysis showed that almost all species are peregrines (six out of seven). The only species of *Dendrobaena byblica byblica* is Circum-Mediterranean. According to the ecological category classification, four species were epigeic, two species were endogeic, and one species was anecic. In our research, we found three new species for this area (*Aporrectodea rosea*, *Dendrobaena byblica byblica*, *Eisenia fetida*). The Lumbricidae fauna of Sokobanja, with several cosmopolitan species, is fairly uniform. However, the investigations are still insufficient and the earthworm inventory of Sokobanja is far from complete. Also, in order to protect the biodiversity, we need to increase our knowledge of biological diversity, especially considering its link to the soil functioning. Hence, this study indicates the importance of such studies.

Keywords: earthworms, soil, Sokobanja, Serbia