Predatory nematodes of the order Mononchida from riparian habitats in Bulgaria

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Abstract

The riparian zones represent habitats of high and specific biodiversity; however, historically they have been subject to intensive exploitation and most of them are drastically changed. Predatory nematodes are widespread terrestrial organisms and play an important role in biological regulation of litter/soil communities. Some preliminary results on the mononchid fauna in riparian habitats in South Bulgaria are presented. Thirty-four samples were collected from 29 localities with various vegetation types in three districts: Sofia, Smolyan and Burgas. Multiple core soil samples (3 per site) were collected from each habitat (15×15 m sampling site or along the river bank) around the roots of the dominant tree at a depth of 40–60 cm and from litter. The most intensively sampled plant tree was Salix spp. (11 samples) followed by Fraxinus spp. (8), Alnus glutinosa (L.) Gaertn. (6) and Ulmus spp. (3). Nematodes were isolated from 200 g of soil (by decanting and sieving method) and 10 g of litter (Baerman funnel method), fixed, dehydrated and mounted on permanent slides. More than 90% of all soil and litter samples contained at least one mononchid genus. Six genera: Prionchulus (Cobb, 1916) Wu and Hoepli, 1929, Clarkus Jairajpuri, 1970, Mononchus Bastian, 1865 (fam. Mononchidae), Mylonchulus Cobb, 1916 (fam. Mylonchulidae), Miconchus Andrassy, 1958 and Anatonicus Cobb, 1916 (fam. Anatonicidae) were recovered. Prionchulus spp. prevailed in litter, occurring in half of the collected samples, while Mylonchulus spp. were most common in soil samples (35%). Representatives of Clarkus and rarely Mylonchulus occurred in both litter and soil. The highest diversity of mononchids (4 genera) was detected in the rhizosphere of Ulmus laevis.
Pall. along a small river in Strandzha Mt. Further morphological and molecular studies on populations and species identification are envisaged.

**Keywords**

Anatonchidae, fauna, litter, Mononchidae, Mylonchoidae, soil

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**Presented at**

Vth International Congress on Biodiversity: „Taxonomy, Speciation and Euro-Mediterranean Biodiversity“

**Acknowledgements**

This study was supported by the National Program for Support of Young Researchers and Post-doctoral Students 2019, Ministry of Education and Science of Republic of Bulgaria.