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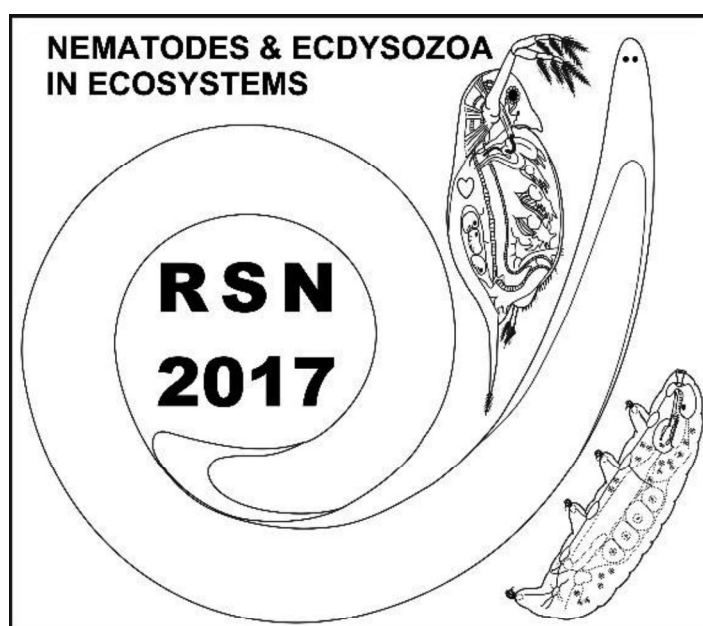
Russian Society of Nematologists
Society of Russian Parasitologists

Ministry of Education and Science of the Russian Federation
Lobachevsky State University of Nizhni Novgorod

ABSTRACTS

**of the 12th International Symposium of the Russian
Society of Nematologists**

**“Nematodes and other Ecdysozoa under the
growing ecological footprint on ecosystems”**



July 31 – August 6, 2017, Nizhny Novgorod, Russia

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Abstracts of the 12th International Symposium of the Russian Society of Nematologists “The nematodes and other Ecdysozoa under the growing ecological footprint on ecosystems” coverages a wide spectrum of scientific topics: nematode communities and their role as efficient bioindicators of ecosystem changes; modern views on origin and phylogeny of Nematoda and molting pseudocoelomates; structure of nematodes and molting pseudocoelomates; physiology and biochemistry of roundworms and ecdysozoans; host-parasite relations, vectors, infection refugia; invasive and quarantine species; control and management of nematodes; new techniques to study ecdysozoans.

Adressed to nematologists, parasitologists, ecologists, invertebrate zoologists, entomologists, experts in forest protection, agriculture, veterinary, and medicine.

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**Pen-Mouratov S.^{1,2}, Steinberger Y.¹, Meller R.¹, Shukurov N.³, Liu R.^{1,4}
FREE-LIVING NEMATODES AS THE BEST BIOLOGICAL TOOLS
FOR ASSESSING SOIL DISTURBANCES**

Numerous studies have shown that soil free-living nematode communities are among the best biological tools for assessing soil ecosystem disturbances, including such prominent factors as intensive livestock trampling and industrial contamination. Livestock grazing and trampling are important factors in the formation and development of different terrestrial ecosystems. However, despite numerous studies on soil compaction, there is still no consensus as to which kind of effect (positive or negative) animal trampling exerts on soil nematodes. Various ecological studies have reached the conclusion that industrial contamination exerts significant effects on soil nematode trophic and species abundance and diversity. The main goal of this study was to compare similarities and differences between the effects of livestock activity and industrial contamination on a soil nematode community and to evaluate the protective effect of the vegetation cover. Our results demonstrate that livestock activity and industrial contamination exerts significant, separate, and integrated effects on soil nematode abundance, genera, and trophic diversity. However, the negative impact of the disturbances on soil nematode communities has been attenuated due to the protective effect of vegetation cover. The diversity indices indicated an increase of the contribution of rare species to the undisturbed area, while in the disturbed area, the common nematodes were the main contribution to the soil ecosystem. The omnivore-predators, which are characterized by hypersensitivity to different disturbances in ecosystems, were very scanty compared to the other trophic groups in the industrial area, especially near the source of contamination, but, surprisingly, were relatively numerous in the livestock area. – ¹*The Mina and Everard Goodman Faculty of Life Sciences, Bar-Ilan University, Ramat-Gan Israel (stanislavpm@post.tau.ac.il)*; ²*School of Zoology, George S. Wise Faculty of Life Sciences, The Steinhardt Museum of Natural History, Israel National Centre for Biodiversity Studies, Tel Aviv University, Tel Aviv, Israel*; ³*Institute of Geology and Geophysics, Academy of Sciences, Tashkent, Uzbekistan*; ⁴*Key Laboratory for Restoration and Reconstruction of Degraded Ecosystem in Northwestern China of Ministry of Education, Ningxia University, Yinchuan, China*