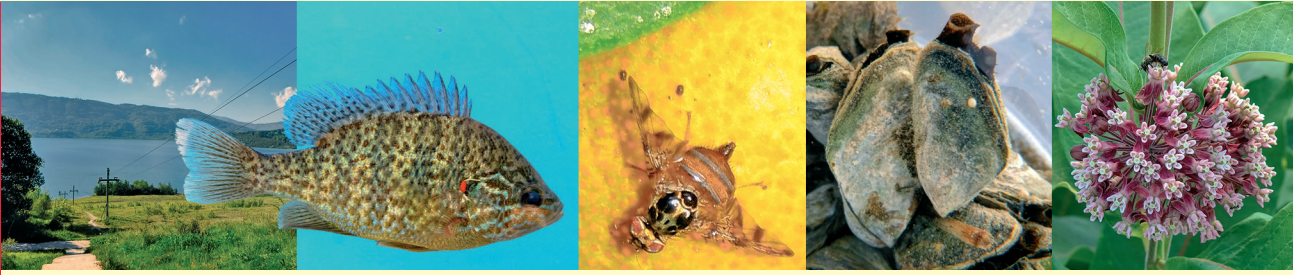


University "St. Kliment Ohridski" Bitola  
PSI Hydrobiological Institute Ohrid



*A special edition of the "REVIEW" dedicated to:*

# Joint ESENIAS and DIAS Scientific Conference and 9<sup>th</sup> ESENIAS Workshop

Species, ecosystems and areas of  
conservation concern under threat from  
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03-06 September 2019

# Book of Abstracts

Ohrid, Republic of North Macedonia  
2019

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## The role of *Harmonia axyridis* in the Coccinellidae complex in forest-steppe agrolandscapes in Ukraine

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Ladybirds (Coleoptera: Coccinellidae) are important secondary consumers in the trophic food chains of cereal and other crops. Their high ecological plasticity and developed migration capabilities allow them to occupy various biocenoses. The imago and larvae feed on Aphids, Diaspididae, Psyllidae, Acarines, and some other phytophagous animals. However, practical questions about the use of ladybirds in protecting plants from pests in Ukraine are solved quite slowly.

The study of Coccinellidae species composition was carried out during 2006–2019 in Kiev and Cherkasy regions on farms located in the Central Forest-Steppe of Ukraine. The sampling was made during routine surveys of grain cereal fields and adjacent forest fallows, forest shelter belts, edges and other habitats. Methods and techniques commonly used in entomology and plant protection were applied.

A total number of 14 species of Coccinellidae family was recorded: *Adalia bipunctata*, *A. decempunctata*, *Calvia qatuordecimguttata*, *Coccinula qatuordecimpustulata*, *Coccinella divaricata*, *C. septempunctata*, *C. quinquepunctata*, *Harmonia axyridis*, *Hyppodamia variegata*, *Oenopia conglobata*, *Psyllobora (Thea) vigintiduopunctata*, *Propylea quatuordecimpunctata*, *Tytthaspis sedecimguttata*, and *Scymnus frontalis*. *Coccinella septempunctata* was the most common species in all studied biocenoses. In the general collection the share of this species was 52.6% of all detected ladybirds. On cereal crops, the percentage of *C. septempunctata* was also the highest (19.3%), followed by *H. variegata* and *P. quatuordecimpunctata* (12.6% each). The ladybirds recorded showed different trophic preferences: *P. quatuordecimpunctata* was a polyphage, *C. quinquepunctata* and *H. variegata* fed on aphids on cereal crops, while *P. (Thea) vigintiduopunctata* fed on powdery mildew.

Among the identified ladybirds, the share of the invasive alien species *H. axyridis* was 9.7%. We detected this species first in 2013 in Bila Tserkva Park (Kiev Region). *Harmonia axyridis* has shown excessive adaptability and fertility. Further studies need to focus on the potential impact of this species on other species of Coccinellidae family and biodiversity in the in forest-steppe agrolandscapes in Ukraine.

**Key words:** Coccinellidae, *Harmonia axyridis*, invasive species, agrolandscapes.

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