

ON THE HISTORY OF THRIPS (THYSANOPTERA)  
RESEARCH IN BRATISLAVA REGION (SW SLOVAKIA)

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**ABSTRACT.** The paper is to summarize the history of thysanopterological research in Bratislava region, list all the relevant papers including their short annotation. Research on thrips (Thysanoptera) in Bratislava and its surroundings dates back to the end of the 19<sup>th</sup> century. Since that time most papers have brought more sporadic and faunistic data without special ecological consequences, which however enhanced elaboration of several national checklists and determination keys. Some more complex studies refer to the conservatory areas around the city. Recently there has been a real progress in the field of thysanopterology in this region. A special emphasis has been put on phytosanitary aspects.

**KEY WORDS:** Thysanoptera, Bratislava, history, literature.

Research on thrips (Thysanoptera) in Bratislava and its surroundings dates back to the end of the 19<sup>th</sup> century. In that time, the first record on the foliophagous synanthropic thrips *Heliothrips dracena* in the town of Pozsony (Hungarian name for Bratislava) occurred in the extensive work Fauna Regni Hungariae (JABLONOWSKI, 1899), however with no detailed faunistic information. This period was significantly affected by Uzel's monograph (UZEL, 1895), the first compendium on Thysanoptera worldwide.

Since that time most papers have brought more sporadic and faunistic data without special ecological consequences (e.g. PELIKÁN, 1951, 1965, 1990, 1992, FEDOR, 2003 a, 2004 a, 2005 a, 2006 a, b, SIERKA, 2004, 2005, 2006), which enhanced elaboration of several national checklists (e.g. PELIKÁN, 1952, 1977, FEDOR, 2004 b, FEDOR et al., 2003 a, 2004 a, SIERKA et FEDOR, 2004 b) and determination keys (PELIKÁN, 1957, SIERKA et FEDOR, 2004 a).

Some more complex studies refer to the conservatory areas around the city. National Nature Reserve Jurský Šúr is a locality where thrips and its ecological conditions are very well known. In 1959 HEŠKOVÁ (1967) studied graminicolous and floricolous elements in the reserve, recorded 56 species at 5 sites and underlined the negative impact of spring floods on the thrips assemblages. Later SIERKA et HALGOŠ (2003) repeated the analyses and collected more than 8,000 specimens of 67 species at 13 study sites, including numerous first records. The paper has significantly contributed to trophical ecology of Thysanoptera in the conservatory area.

In the extensive research on nidicolous fauna in Jurský šúr (1973 – 1999) 781 thrips specimens of 21 species and 2 families (Thripidae and Phlaeothripidae) were obtained (FEDOR et al., 2001) from 105 nests of 19 bird and 2 mammal species. *Limothrips denticornis* (34.83 %) and *Chirothrips manicatus* (22.02 %) were classified as the most dominant ones. From the

ecological point of view, foliicolous species (47.62 %) formed the majority, but the assemblages were also represented by graminicolous (28.57 %), corticolous (14.29 %) and floricolous (9.52 %) thrips. Thysanoptera have not been considered as typical nidicoles, therefore their presence in nests is probably caused by passive transport mostly on nest material.

Another relatively detailed research on thrips refers to the National Nature Reserve Devínska Kobyla (FEDOR, 2005 b, PELIKÁN, 1951 a, 1952, DOBROVODSKÁ, 1973). Despite two thirds of the area have been covered by xerothermophilous woods (*Galio sylvatici-Carpinetum*), open habitats being exposed to sun are inhabited by many thermophilous elements, what has actually attracted many zoologists.

The analyses from 2000 – 2001 (FEDOR, 2005 b) have declared occurrence of 44 species of the families Aeolothripidae, Thripidae and Phlaeothripidae, including dominant *Limothrips denticornis* (29.2 %) and *Thrips viminalis* (17.6 %). Most of the thrips were recorded at xerothermous sites and were represented by numerous species of *Aptinothrips*, *Chirothrips* and *Limothrips* genera as well as by *Stenothrips graminum*. Arboricolous synusia on oaks included species such as *Aeolothrips melaleucus*, *A. versicolor*, *Dendrothrips saltatrix*, *Haplothrips kurdjumovi*, on willows *Thrips viminalis*, on ashes *Dendrothrips degeeri* and *Dendrothrips ornatus*. Most species belong to phytophagous insects, however *Aeolothrips albicinctus* and *A. versicolor* is classified as a predatory thrips feeding on mites, booklice and barklice (FEDOR, 2005 b).

The research on thrips in the conservatory area Ostrov Kopáč (FEDOR et al., 2007 b) has brought information on 32 Thysanoptera species of 3 families

(Aeolothripidae, Thripidae, Phlaeothripidae). From the zoogeographical point of view the fauna consists of European, Holarctic and Eurosiberian elements predominantly (66%). Structure of the assemblages generally reflects wide heterogeneity of ecological conditions. The communities include many floricolous (*Melanthrips fuscus*, *Frankliniella intonsa*, *Aeolothrips intermedius*) and graminicolous species (*Aeolothrips albicinctus*, *Chirothrips manicatus*, *Stenothrips graminum*) which undisputedly belong to important guilds of phytophagous Thysanoptera. Shaking method has brought evidence on several arboricolous species such as *Aeolothrips melaleucus*, *Dendrothrips degeeri*, *Mycterothrips salicis*. Corticolous thrips inhabiting bark in ecotone zone or on sporadic trees right in the xerothermous site are represented by several species of Phlaeothripidae, e.g. *Haplothrips phyllophilus* (FEDOR et al., 2007 b).

Bioindication potential of aeroplanktonic stratocoenoses in Danubian wetland forests was analysed by GRUEA (2007). During the years 2003 – 2005, 47,399 invertebrates of 28 systematic groups were gathered, using an air-photoeclector method. The traps were installed at the height of 4 up to 7 metres in a poplar-monoculture and natural wetland forest of *Salici-Populetum*. The author recorded 12 thrips species of 8 genera and 3 families (Aeolothripidae, Thripidae, Phlaeothripidae), including *Thrips major* and *Mycterothrips salicis* being classified as eudominant in the poplar monoculture. According to topical and trophical interactions floricolous species were found the most dominant (60.13%). Using the principal component analysis (PCA), the spectra was divided into 3

separate clusters with their specific bioindication potential.

Recently there has been a real progress in the field of thysanopterology in Bratislava region. A special emphasis has been put on phytosanitary aspects (FEDOR et VARGA, 2007, VARGA, 2007, 2008, KLÍMOVÁ, 1992), which have not been studied in detail yet. There are many more localities which enhanced entomologists to make research more intensive (DAVID et al., 2007, DUBOVSKÝ et MASAROVÍČ, 2007, HOLECOVÁ et al., 2005). The survey of all the relevant papers is presented in the references.

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