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PREDACEOUS THRIPS *AEOLOTHRIPS VITTATUS*, HALIDAY 1836 (THYSANOPTERA, AEOLOTHRIPIDAE) – THE FIRST RECORD FROM SLOVAKIA

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ABSTRACT. This paper deals with the first record of predaceous thrips species Aeolothrips vittatus, Haliday 1836 (Thysanoptera: Aeolothripidae) in Slovakia. It was recorded in the soil photoeclector samples from Veľký les forest (Lariceto – Piceetum), situated close to the village of Tatranská Lomnica (N Slovakia), in the National Park Vysoké Tatry (High Tatras) Mountains.
KEY WORDS: thrips, Thysanoptera, Aeolothripidae, predator, Vysoké Tatry (High Tatras) Mts.

Introduction

Thrips are mostly known as insects living in flowers, but many species live only on leaves and grass, probably about half of the species feed on fungi, and a few are predatory. (Palmer at al., 1989). Generally speaking, predatory arthropods probably play an important role in determining the numbers of plant-feeding „pests“ on plants under natural conditions. There are several species of thrips with predominantly predatory ecology. They feed mostly on eggs or slow-moving stages of a wide range of small arthropods, including mites, moths, psocids, bugs, flies, beetles, sawflies and thrips (Kirk, 1997). The family of Aeolothripidae, especially the genus *Aeolothrips*, is known to contain many predaceous species of thrips. Some of them are considered as potentially important autochtonous facultative predators (Trdan et al., 2005).

The species of *Aeolothrips vittatus* is considered to be the predatory species feeding also on thrips, mostly on the species *Thrips pini* (Sabelis et van Rijn, 1997, Lewis, 1973). Kratochvíl et Farský (1942) obtained *Aeolothrips vittatus* from the larch stands and nursery stock. It occured there in association with eudominant *Thrips pini* and another predatory species *Aeolothrips fasciatus*. They were collected from twigs, bark and branches. According to the data collected in Scots pine (*Pinus sylvestris*) canopy in Norway, Thunes et al. (2004) found the species to be a canopy specialist, occuring mainly on needles. *Aeolothrips vittatus* is a zoophagous species on coniferous trees, such as *Abies alba, Picea abies, Pinus sylvestris, Larix decidua*, but sometimes it can also be found on deciduous trees, such as *Quercus* sp. (Schliephake et Klimt, 1979; Kucharczyk et Sęczkowska, 1990; Kucharczyk, 1999; zur Strassen, 2003), where it is considered to be a facultative predator (Moritz, 2006).

Aeolothrips vittatus is characterized by uniformly dark brown head and thorax.. Both sexes are always macropterous. Posterior margin of forewing is dark except at base and apex. There is a single transverse dark band on forewing of the species (Mound et al. 1976; zur Strassen 2003, Moritz, 2006). At rest, when the wings are folded over the abdomen, the insects have a striking banded appearance which may serve to distract larger predators. The larvae are creamy

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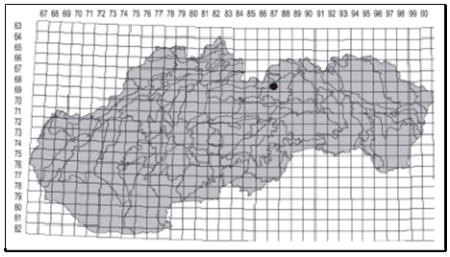
yellow to white. When mature, the larvae spin a silken cocoon in the soil or leaf litter, but the overwintering stage is not known. Adults emerge in May, possessing the fore tarsal tooth which probably assists in breaking the cocoon (Mound et al. 1976).
The species *Aeolothrips vittatus* is typical European element (Vasiliu-Oromulu, 2001), that occurs in Europe from North to South, palearctic Asia, and was introduced also into North America (Pelikán, 1952; Schliephake et Klimt, 1979; Olsen et Midtgaard 1996; Jenser, 2011; Vasiliu-Oromulu et al., 2001; Trdan et al., 2003; zur Strassen, 2003; Sierka et Fedor, 2004a; Moritz 2006; Vasiliu-Oromulu et al., 2009).

Study area

The research on thrips presented in this paper was carried out during the 2013 vegetation period. It refers to the area of the National Park Vysoké Tatry Mts. situated in the North of Slovakia, which is known as the oldest National Park in Slovakia. The material was sampled at the locality of Velký les forest (Fig. 1) situated near cableway station Start, over the village of Tatranská Lomnica (49°10´N, 20°14´E, Databank of Slovak fauna: 6887, 1150 m a. s. l.) (Fig. 2). This forest was characterized by the 140 years old forest stand Lariceto-Piceetum with tree species composition of *Picea abies* (52%), *Larix decidua* (46%) and *Pinus cembra* (2%). The area has been suffered by the bark beetle outbreak and characterized also by the presence of dry and fallen trees.
One specimen of *Aeolothrips vittatus* was sampled using the soil photoeclector trap (Fig. 3). This trap is constructed of plastic walls with a metal bar frame covered by textile and equipped with a collecting jar on the top. It is rather a rarely used and entomological method, which covers isolated space above soil area, usually 1 m^2. Therefore it is usually applied to observe phenology in various geobiont arthropods (Majzlan et Fedor, 2003). The trap was installed at the study plot for the period of 106 days (June 6,2013 – September 19, 2013). Ethyleneglycol was used as a conservation liquid. Standard preparatory techniques using in thysanopterology were applied for mounting thrips (Fedor et al., 2012; Sierka et Fedor, 2004b). The material has been deposited in the collections of the authors.

Fig.1. The locality of *Aeolothrips vittatus.* (Photo: R.Masarovič)

Fig. 2. Study area in the map of Slovakia



Aeolothrips vittatus Haliday 1836 (Thysanoptera: Aeolothripidae) (Fig. 4)
Material examined: N Slovakia, Vysoké Tatry Mountains, Veľký les forest (Lariceto – Piceetum) (49°10´N, 20°14´E), at the south-eastern oriented slope over the village of Tatranská Lomnica. 19.IX.2013, 1 ♀, the specimen was collected using the soil

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photoeclector. Leg. R. Masarovič, det. M. Doričová.
Distribution: Europe (Fig. 5) , palearctic Asia, North America.

Fig. 3. The soil photoeclector trap.

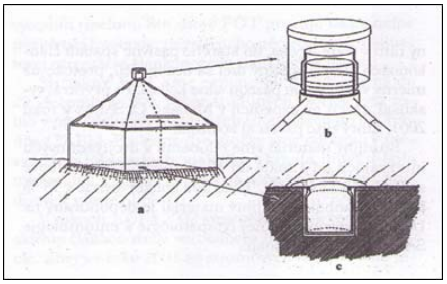

Fig. 4. *Aeolothrips vittatus*, Haliday 1836. (Photo: Wojciech Sierka)

Fig. 5. Distribution of *Aeolothrips vittatus* in Europe (http://www.faunaeur.org.)

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