

FIRST RECORD OF *AEOLOTHRIPS GLORIOSUS* BAGNALL (THYSANOPTERA: AEOLOTHRIPIDAE) IN SLOVENIA

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Abstract – In May 2011, females of *Aeolothrips gloriosus* were found in the blossoms of olive trees in olive plantations at Dekani and Škocjan. This is the first record of the species in Slovenia, and its occurrence may be of economic importance because the larvae can be efficient predators of plant pests. In this paper the detection, morphology, distribution and hosts of *A. gloriosus* are presented.

Key words: *Aeolothrips gloriosus*, Aeolothripidae, Thysanoptera, first record, Slovenia

INTRODUCTION

On May 25, 2011, field monitoring of thrips fauna in olive plantations in the Goriška region (Kromberk at Nova Gorica) and Kopraska region (Dekani, Škocjan) in Slovenia was carried out by the first two authors. Samples were collected on olive tree flowers (*Olea europaea* L.) in the period of full blooming with a standard detection method for thrips: shaking off twigs over bright solid grounding followed by transferring specimens to Eppendorf tubes containing AGA solution (Mound and Kibby, 1998). Three samples were obtained. The specimens were identified morphologically to species level at the Dutch National Plant Protection Organization, Wageningen, the Netherlands (Table 1). To date, *Aeolothrips gloriosus* Bagnall (Aeolothripidae) has not yet been recorded in Slovenia, and it was found at Dekani and Škocjan, at both locations in one female, and represents the 116th Thysanoptera species in the country (Trdan et al., 2003; Trdan, 2008).

Aeolothrips gloriosus is the ninth representative of *Aeolothrips* recorded in Slovenia. The genus consists of about 100 species, which are, apart from three species known from Southern Africa, all found in the northern hemisphere. The majority of them live in flowers, where their imagines feed on pollen, and, to a lesser extent, on smaller arthropods. Their larvae are less floricolous and are usually found on leaves where they mainly feed on small arthropods (Bournier et al., 1979; Mound and Kibby, 1998). The most known and distributed representative predator of the genus, *A. intermedius* Bagnall, was collected in Slovenia, Croatia and Serbia from 30 cultivated plant species from 16 botanical families (Trdan et al., 2005). This species can easily be separated from *A. gloriosus* by its completely dark brown antennal segment four and having all abdominal segments dark brown.

Aeolothripidae females have an ovipositor turned upwards towards the body and a 9-segmented antenna. *Aeolothrips* species have a pronotum without any long posteroangular setae and they have closely

Table 1. Results of Thysanoptera samplings in olive plantations in Slovenia on May 25, 2012.

Species	Škocjan	Dekani	Kromberk
<i>Aeolothrips gloriosus</i> Bagnall	1♀	1♀	
<i>Haplothrips kurdjumovi</i> Karny	1 larva II		1♀
<i>Thrips major</i> Uzel	22♀♀, 3♂♂	10♀♀	1♀
<i>Thrips meridionalis</i> (Priesner)			5♀♀, 16♂♂

united antennal segments VII-IX. The antennal segments III and IV possess usually linear sensoria. The forewings are broad with well-developed cross veins (Mound and Kibby, 1998).



Fig. 1. Female *Aeolothrips gloriosus* – right side (dorsal) of the body. Photo G. Vierbergen.

The most important morphological characteristics of *Aeolothrips gloriosus* are: antennal segments I and II, and lower half of segment III are whitish yellow, while the upper half of segment III and segments IV-IX are dark brown (Fig. 1, 2). The meso- and metanotum and abdominal tergite I are light brown (Fig. 3). Head and tergites V-VI have a light brown shading in the middle; abdominal tergites



Fig. 2. Female *Aeolothrips gloriosus* – antenna, segments III-IX. Photo G. Vierbergen .



Fig. 3. Female *Aeolothrips gloriosus* – antenna, segments III-IX. Photo G. Vierbergen .

VIII-X are dark brown (Fig. 4, 5). Dark transversal stripes on the forewings are longer than broad and their color is almost even (Fig. 1). Discal setae on the pronotum are brown and they differ significantly in coloration from the yellow surface. The total body length (distended) of the females is 1710-2160 μm , and of the males 1170-1300 μm (zur Strassen, 2003).

Little is known about the biology of *Aeolothrips gloriosus*. Iordanou and Ioannou (1979) regard the species to be a medium important representative of the thrips fauna in the flowers of citrus trees in Cyprus. Halperin and zur Strassen (1981) report that *A. gloriosus* also lives in Israel, especially on members of Oleaceae: *Fraxinus ornus* L., *Olea europaea* L. and *Phillyrea* spp. Tunç (1991) reports that in the period 1988-1990 he found this species in Antalya – mostly on the flowers of woody species – of over 30 host species, the olive included. He indicated the species is mainly represented by females. It thrives particularly on the south coast of Turkey in the period from February to July and its presence



Fig. 4. Female *Aeolothrips gloriosus* – abdominal tergites I-VIII. Photo G. Vierbergen.

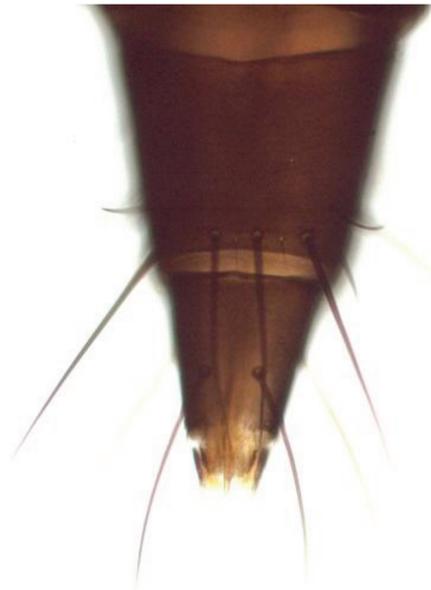


Fig. 5. Female *Aeolothrips gloriosus* - abdominal tergites IX-X. Photo G. Vierbergen.

on the mainland is very rare. Zur Strassen (2003) reports that *A. gloriosus* has a Mediterranean distribution and is additionally found on the Azores. The records of Great Britain are based on atypical specimens (Collins, 2010); a study of this material could confirm its identity.

Aeolothrips gloriosus is a common species, at least on the northern borders of the Mediterranean Sea (Vesmanis, 1984), and probably due to its small population sizes its economic impact as a predatory species on pest species is limited. Larvae, however, are not described and have not been sampled (or recognized) and therefore the significance of the thrips is still unknown. This first record in Slovenia, detected by taking three samples with a small number of thrips specimens only (Table 1), confirms its common occurrence on *Olea* in the small Mediterranean zone in the country.

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