**THYSANOPTERON**
PISMO ENTOMOLOGICZNE

Vol. **8(1)**, 2013**:** 1–3 ISSN 1733–7631 Katowice, 01.12.2013

# FIRST RECORD OF BARK-DWELLING AND MYCOPHAGOUS THRIPS *HOPLOTHRIPS UNICOLOR* (VUILLET, 1914) (THYSANOPTERA, PHLAEOTHRIPIDAE) IN SLOVAKIA

RUDOLF MASAROVIČ[1], MARTINA DORIČOVÁ[1], PETER FEDOR[1], HALINA KUCHARCZYK[2]

[1] Department of Environmental Ecology, Faculty of Natural Sciences, Comenius University, Mlynská dolina B2, 842 15 Bratislava, e-mail: rudolf.masarovic@gmail.com, doricovamartina@gmail.com; fedor@fns.uniba.sk
[2] Department of Zoology, Faculty of Biology and Biotechnology, Marii Curie-Skłodowska University, Akademicka 19; 20−033 Lublin, email: halina.kucharczyk@poczta.umcs.lublin.pl

**ABSTRACT**. This short communication presents the first record of corticicolous and mycophagous thrips *Hoplothrips unicolor* (Vuillet, 1914) in Slovakia. The species was found in the National Park Vysoké Tatry (High Tatras) Mountains, close to the village of Tatranská Lomnica (N Slovakia). The material was collected using a soil photoeclector.
**KEY WORDS:** Thysanoptera, fungus-feeding, the Tatra Mts., soil photoeclector.

## Introduction

Several species of tubuliferan thrips live on dead wood, and for some of them, fungi are given as hosts (MOUND et al. 1976, SCHLIEPHAKE et KLIMT, 1979). They are associated with fungi on dead leaves and bark on dead trees. Some feed on hyphae or fungal decay while others feed on spores (MOUND et PALMER, 1983). Their small size and the cryptic habitat are the main reasons of the fragmentary knowledge on their biology (MOUND, 2005). Species representing the genus *Hoplothrips* are almost mycophagous. Several of them are considered rare, but some are simply more likely to be overlooked. (KOBRO, 2001). SCHLIEPHAKE et KLIMT (1979) noted 11 *Hoplothrips* species from Europe of which two have been synonymised (VIERBERGEN, 2004). One hundred and thirty species are known for this genus world wide (MOUND et WALKER, 1986).

There may be a big problem with identification of *Hoplothrips* adults (KOBRO et RAFOSS, 2006). The extreme polymorfism of adults (OKAJIMA, 1987) is probably one of the reason why identification literature (PRIESNER, 1926, 1964, MOUND et al. 1976, SCHLIEPHAKE et KLIMT, 1979, MOUND et WALKER, 1986, KIRK 1996, MOUND et MARULLO 1996) gives no single key character for reliable identification.

*Hoplothrips unicolor* belongs to the bark-dwelling phlaeothripids that feed on fungus or on extra-cellular products of the fungal decay. This species is also known as *Hoplothrips flumenellus* (Hood, 1931), that has been regarded as the synonym after a comparison of type-material for both forms with specimens from Scotland (HOOD, 1940, MOUND et al, 1976). *Hoplothrips unicolor* is characterized by shorter mediolateral satae on pronotum (less than 110 μm). Distance between the medioposteromarginal setae on tergite IX is the same as or larger than the width of tubus. The anteroangular seate are on the margin of pronotum (KOBRO et RAFOSS, 2006). KOBRO (2001) found 3 specimens of this species in Norway on two logs infested by fungus *Trichaptum abietinum*, which is one of

**THYSANOPTERON**
PISMO ENTOMOLOGICZNE

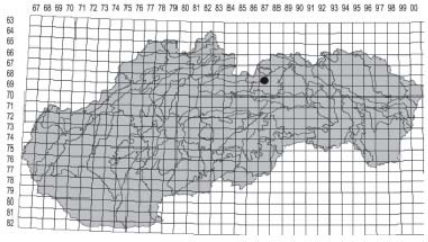
Vol. **8(1)**, 2013**:** 1–3 ISSN 1733–7631 Katowice, 01.12.2013

the most common wood-rotting fungi on Norway spruce (*Picea abies*) and Scots pine (*Pinus sylvestris*) (RYVARDEN et GILBERTSON, 1994). *Hoplothrips unicolor* is widespread but infrequent thrips species in Europe (MOUND et al, 1976). It is known from Britain, the Czech Republic, Norway, Sweden (VIERBERGEN et de JONG, 2013) and Poland (KUCHARCZYK, 2013 in verb).

Study area

This paper refers to the area of the Vysoké Tatry Mts. situated in the north of Slovakia, close to the village of Tatranská Lomnica. (49°10´N, 20°14´E, Databank of Slovak fauna: 6887, 1150 m a. s. l.) (Fig. 1).

Fig. 1. Study area in the map of Slovakia.



Two female specimens of *Hoplothrips unicolor* were found using the soil photoeclector (POT) at the meadow characterized by old death trees of *Picea abies* covered by fungi and dense stands of rosebay willowherb (*Chamaenerium angustifolium*) and European blueberry (*Vaccinium myrtillus*). The meadow is situated in the centre of the 140 years old forest Lariceto – Piceetum (*Picea abies* (52 %), *Larix decidua* (46 %) and *Pinus cembra* (2 %)).

Both of the specimens were captured in the soil photoeclector that is usually applied to observe eclosion phenology in various geobiont invertebrates. There were published numerous papers on this matter in Slovakia (e.g. MAJZLAN and FEDOR, 2005, 2009). The soil photoeclectors were installed at the study site for the period of 106 days (June 6,2013 – September 19, 2013).

*Hoplothrips unicolor*, (Vuillet, 1914) (Fig. 3), (syn. *Hoplothrips flumenellus* (Hood, 1931))

Material examined: N Slovakia, Vysoké Tatry Mts., SE slope near cableway station Start, at the meadow in the centre of the Velký les forest (Fig. 2), over the village of Tatranská Lomnica (49°10´N, 20°14´E):

18.VII.2013, 1 ♀, 4.VIII.2013, 1 ♀, the specimens were obtained from the soil photoeclector. Leg. R. Masarovič, det. R. Masarovič and H. Kucharczyk.

Distribution: Europe and Northern Asia (excluding China).

Fig. 2. The locality of *Hoplothrips unicolor* (Photo: R.Masarovič).

Fig 3. *Hoplothrips unicolor*, (Vuillet, 1914) ♀, tubus, pronotum
(Photo: H. Kucharczyk, R. Masarovič)

Vol. **8(1)**, 2013**:** 1–3 ISSN 1733–7631 Katowice, 01.12.2013

Acknowledgement
The project was supported by VEGA 1/0137/11 and VEGA 1/0544/11.

References

HOOD, J. D., 1940. Microscopical whole mounts of insects. Cornell University, 2. Mimeographed Edn., 31 pp.
KIRK, W. D. J., 1996. Thrips. Naturalists handbooks 25. The Richmond Publishing Co. Ltd. England. 70 pp.
KOBRO, S., 2001. Hoplothrips polystici (Thysanoptera) on the wood-rotting polypore Trichaptum abietinum infesting dead Picea abies in Norway. Entomologica Fennica 12: 15-21.v
KOBRO, S., RAFOSS, T., 2006. Identification of adult males and females of Hoplothrips species (Thysanoptera: Tubulifera) known from Norway, and some deductions on their life history. Entomologica Fennica, 17: 184-192.
MAJZLAN, O., FEDOR, P. 2005. An influence of the Casoron G Herbicide on the soil macrofauna (Eclectorfauna). *Phytopedon* (*Bratislava*), 4/2: 40–48.
MAJZLAN, O., FEDOR, P. 2009. The phenology of geobiont beetles (Coleoptera) and other arthropods (Arthropoda) in the Vysoké Tatry Mts. *Folia oecol*., 36: 116–124.
MOUND, L. A., 2005. Thysanoptera: diversity and interactions. – Annu. Rev. Entomol. 50: 247 – 269.
MOUND, L. A., PALMER, J.M., 1983. The generic and tribal classification of spore-feeding Thysanoptera (Phlaeothripidae: Idolothripinae). Bull. Br. Mus. Nat. Hist. Ent., London, 46 (1), 174 pp.
MOUND, L. A., MORISON,G. D., PITKIN,B.R., PALMER, J. M.1976: Thysanoptera. Handbooks for the Identification of British Insects.Vol. I, Part 11. – Royal Entomological Society of London, England.
MOUND, L. A., WALKER, A.K., 1986. Tubulifera (Insecta: Thysanoptera). Fauna of New Zealand 10., 140 pp.
MOUND, L. A., MARULLO, R., 1996. The thrips of central and south America: an introduction (Insecta: Thysanoptera). Associated Publishers, Gainesville, USA., 487 pp.
OKAJIMA, S., 1987. Studies on the Old World species of Hoplothrips (Thysanoptera: Phlaeothripidae). Bull. Br. Mus. Nat. Hist. Ent., London, 54 (1), 74 pp.
PRIESNER, H., 1926: Die Thysanopteren Europas. Wagner-Verlag, Wien, 755 pp.
PRIESNER, H., 1964: Ordnung Thysanoptera (Fransenflügler, Thripse). Akademie-Verlag, Berlin, 242 pp.
RYVARDEN, L., GILBERTSON, R.L.,1994: European Polypores. 2. Synopsis fungorum 7., Fungiflora-Oslo-Norway, pp. 675 – 679.
SCHLIEPHAKE, G., KLIMT, K., 1979. Thysanoptera. Die Tierwald Deutschland, 66. G. Fischer Verlag, Jena, 477 pp.
VIERBERGEN, G., 2004. Eight species of thrips new for The Netherland and some taxonomical changes in Stenochaetothrips, Thrips and Hoplothrips (Thysanoptera). Acta Phytopathol. Entomol. Hung., 39 (1 – 3) : 199 – 209.
VIERBERGEN, G., de JONG, Y., 2013. Fauna Europaea: Thysanoptera, Phlaeothripidae. Fauna Europaea version 2.6.2.,http://www.faunaeur.org..