

***Pteroxanium kelloggi* (Ribaga, 1905) and *Mesopsocus fuscifrons* Meinander, 1966: two Psocoptera new to Belgium**

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Abstract

Two Psocoptera are reported here for the first time for the Belgian fauna. *Pteroxanium kelloggi* (Ribaga, 1905) is the first representative of the family Lepidopsocidae in Belgium and the species was observed in Bellem and Nismes. *Mesopsocus fuscifrons* Meinander, 1966 from the family Mesopsocidae was found in Antwerp and Mechelen.

Keywords: barkfly, Lepidopsocidae, Mesopsocidae, *Mesopsocus fuscifrons*, *Pteroxanium kelloggi*.

Samenvatting

Twee stofluizen of Psocoptera worden hier voor het eerst gemeld voor de Belgische fauna. *Pteroxanium kelloggi* (Ribaga, 1905) is de eerste vertegenwoordiger van de familie Lepidopsocidae in België en de soort werd waargenomen in Bellem en Nismes. *Mesopsocus fuscifrons* Meinander, 1966 van de familie Mesopsocidae werd in Antwerpen en Mechelen gevonden.

Résumé

Deux Psocoptères sont rapportés ici pour la première fois pour la faune belge. *Pteroxanium kelloggi* (Ribaga, 1905) est le premier représentant de la famille des Lepidopsocidae pour le pays et l'espèce a été observée à Bellem et Nismes. *Mesopsocus fuscifrons* Meinander, 1966 de la famille des Mesopsocidae a été trouvé à Anvers et Malines.

Introduction

Psocoptera, with vernacular names such as booklice, barklice or barkflies, are a small order of insects that are rarely investigated in Belgium. LIENHARD (1998) reported 72 species from Belgium. Recently, SCHNEIDER & CARRIÈRES (2008) added *Lachesilla bernardi* Badonnel 1938 to the Belgian fauna. Here, two additional species are reported for Belgium: *Pteroxanium kelloggi* (Ribaga, 1905) and *Mesopsocus fuscifrons* Meinander, 1966.

Material and methods

Psocoptera are usually collected by beating or sweeping the vegetation, directly inspecting bark or extraction from leaf litter. Most species measure only a few millimetres, so careful attention is required. However, both species reported here were found on bark accidentally, without the goal of finding Psocoptera. No specimens have been collected.

The Belgian Psocoptera can all be identified with the book of LIENHARD (1998), of which a pdf is freely available (www.faunedefrance.org). However, identification is tedious since all European species are treated in this volume and in addition, microscopic features are often used, although a lot of species can be easily identified in the field. A more user friendly key containing only the local species would be a great improvement. Although keys such as those provided by NEW (2005) and SVENSSON & HALL (2010) are easier to use, they are incomplete for the Belgian fauna.

Results

Pteroxanium kelloggi was observed by the second author on 27.VII.2011 and 26.II.2012 in a garden on wood along Ter Goedingen in Bellem (province of Eastern Flanders) and on 31.XII.2014 by the third author on plane (*Platanus hispanica*) in the town park of Nismes (province of Namur). This species is the first representative in Belgium of the family Lepidopsocidae, which can be recognised by the scales on the wings, body and legs (Fig. 1). In *P. kelloggi*, the pointed forewings have a characteristic pattern and reach the middle of the abdomen (Fig. 1), while the hind wings are reduced.



Fig. 1. Habitus of *Pteroxanium kelloggi* (Ribaga, 1905) (photograph by Stéphane CLAEREBOUT).



Fig. 2. Habitus of *Mesopsocus fuscifrons* Meinander, 1966 (photograph by Jan SOORS).

Mesopsocus fuscifrons was found by the fourth author while looking for insects on plane (*Platanus hispanica*) on 7.XI.2014, 26.XI.2014 and 4.VIII.2015 along the Beatrijslaan in Antwerpen-Linkeroever (province of Antwerp). Additionally, the fourth author also found the species on 13.VIII.2015 on a fence in a garden underneath a maple tree (*Acer pseudoplatanus*) in the Jan Bolstraat in Mechelen (province of Antwerp). The species can easily be recognised by the blackish area between the eyes and the base of the antennae and the dark V-shaped line on the eyes (Fig. 2). The females of this species, which are most commonly encountered, are micropterous. Only one male with wings was found in Antwerp.

Discussion

Pteroxanium kelloggi is a cosmopolitan species that has, among others, been observed in France, Great Britain, Ireland (LIENHARD, 1998; NEW, 2005), Sweden and Denmark (SVENSSON & HALL, 2010). The species was recently also observed in the Netherlands in Rhenen (BELGERS, unpublished data). It is mostly found in leaf litter, but sometimes also on bark or dead leaves of trees or under stones.

Mesopsocus fuscifrons has been found in France, Italy, ex-Yugoslavia, Morocco, Algeria (LIENHARD, 1998), Malta (LIENHARD & MIFSUD, 2015) and Sweden (SVENSSON & HALL, 2010). Recently, the species was also observed in urban areas in the Netherlands in Haarlem, Barendrecht and Eindhoven (BALTUS, DE KONING & GUÉGAN, unpublished data). It is a corticolous species that lives on different shrubs and trees, mainly broadleaved trees such as oak, chestnut and hawthorn, but also coniferous trees.

Since Psocoptera are only moderately investigated in Belgium, several additional species can still be expected based on their occurrence in adjacent countries: *Amphigerontia intermedia* (Tetens, 1891), *Loensia pearmani* Kimmins, 1941, *Valenzuela corsicus* (Kolbe, 1882) and *Valenzuela gynapterus* (Tetens, 1891) were for example observed in the Netherlands (LIENHARD, 1998), while *Ectopsocus meridionalis* Ribaga, 1904, *Kolbia quisquiliarum* Bertkau, 1882, *Loensia pearmani* Kimmins, 1941, *Trichadenotecnum incognitum* Roesler, 1939 and *Valenzuela gynapterus* (Tetens, 1891) were observed in Luxembourg (LIENHARD, 1998).

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References

- LIENHARD C., 1998. – Psocoptères euro-méditerranéens. *Faune de France*, 83: 1-517.
- LIENHARD C. & MIFSUD D., 2015. – Psocids from Malta (Insecta: Psocodea: Psocoptera), with new synonymy for *Peripsocus stagnivagus* based on the discovery of its first Palearctic male. *Zootaxa*, 3936: 251-260.
- NEW T.R., 2005. – Psocids : Psocoptera (booklice and barklice). *Handbooks for the Identification of British Insects*, 1(7): 1-146.
- SCHNEIDER N. & CARRIÈRES E., 2008. – Piégeage de psocoptères à l'aide de tentes Malaise installées dans dix sites appropriés du Bon-Pays (Luxembourg) (Insecta, Psocoptera). *Bulletin de la Société des naturalistes luxembourgeois*, 109: 101-105.
- SVENSSON B.W. & HALL K., 2010. – *Nationalnyckeln till Sveriges flora och fauna. Stövsländer. Psocoptera*. ArtDatabanken, SLU, Uppsala, 204 pp.