

***Trigonocranus emmeae* Fieber, 1876: a lacehopper new to Belgium (Hemiptera: Cixiidae)**

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Abstract

On 22.VII.2017, *Trigonocranus emmeae* Fieber, 1876 was observed for the first time in Belgium. One macropterous female was collected by sweeping the vegetation in the nature reserve ‘La Rochette’ in Trooz.

Keywords: Auchenorrhyncha, Fulgoromorpha, La Rochette

Samenvatting

Op 22.VII.2017 werd *Trigonocranus emmeae* Fieber, 1876 voor het eerst in België waargenomen. Eén macroptere vrouwtje werd verzameld door in de vegetatie te slepen in het natuurreervaat ‘La Rochette’ in Trooz.

Résumé

Le 22.VII.2017, *Trigonocranus emmeae* Fieber, 1876 a été observé pour la première fois en Belgique. Une femelle macroppte a été collectée en fauchant la végétation dans la réserve naturelle ‘La Rochette’ à Trooz.

Introduction

Cixiidae or lacehoppers are a family of Auchenorrhyncha. They belong to the Fulgoromorpha and the insertions of the median coxae are thus widely separated, while these insertions are situated close to the body axis in Cicadomorpha. Cixiidae bear a regular row of spines apically on the second hind tarsi, but the hind tibiae do not bear a strongly enlarged spine as in Delphacidae and the head is not elongated as in Dictyopharidae. So far, 10 species have been observed in Belgium (VAN STALLE, 1987). Here, *Trigonocranus emmeae* Fieber, 1876 is added to the Belgian fauna.

Material and methods

Plant- and leafhoppers were sampled by sweeping the vegetation. Species were identified using BIEDERMANN & NIEDRINGHAUS (2009) in combination with KUNZ *et al.* (2011). The collected specimen of *Trigonocranus emmeae* Fieber, 1876 was deposited to the entomological collection of the Royal Belgian Institute of Natural Sciences (RBINS, I.G.: 33649).

Results

On 22.VII.2017, one female of *Trigonocranus emmeae* Fieber, 1876 was collected in the nature reserve ‘La Rochette’ in Trooz (Province of Liège, UTM: 31UFS8807). The reserve is about 100 hectares and was strongly polluted by metals such as zinc in the past by the nearby metallurgical factory of Prayon. Several plant species that are adapted to high metal concentrations occur here, including *Viola lutea* var. *calaminaria* and *Silene vulgaris* var. *humilis*.



Fig. 1. Lateral view of *Trigonocranus emmeae* Fieber, 1876 (photograph by Koen Lock).

In *T. emmeae*, the vertex has a median keel and is broader than long, the pronotum is uniformly light, the scutellum has three longitudinal keels and the hind tibiae bear one to three lateral spines. Macropterous individuals can be recognised by the single black streak along the outer edge of the mainly transparent forewing (Fig. 1).

Discussion

Larvae and brachypterous adults of *T. emmeae* live in topsoil and leaf litter on open, at least moderately warm sites with scattered scrub, while macropterous adults mainly live in the herb layer, but can also undertake dispersion flights (HOLZINGER *et al.*, 2003; BIEDERMANN, & NIEDRINGHAUS, 2009). Adults are mainly found from May till July (KUNZ *et al.*, 2011).

Trigonocranus emmeae was expected in Belgium because it was already observed in the Grand Duchy of Luxembourg (DEN BIEMAN *et al.*, 2011), the German federal states Nordrhein-Westfalen and Rheinland-Pfaltz bordering Belgium (KUNZ *et al.*, 2011) and recently also in the Netherlands (DE HAAS, unpublished data). At least four additional lacehoppers are still expected in Belgium: *Myndus musivus* (Germar, 1825) has already been found in the Netherlands, while *Cixius (Acanthocixius) sticticus* Rey, 1891, *Hyalesthes obsoletus* Signoret, 1865 and *Reptalus (Reptalus) quinquecostatus* (Dufour, 1833) have already been found in the Grand Duchy of Luxembourg (DEN BIEMAN *et al.*, 2011).

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