

***Nicoletia phytophila* Gervais, 1844 new to Belgium (Zygentoma: Nicoletiidae)**

Koen LOCK

Merelstraat 27, B-9000 Gent, Belgium (e-mail: Koen_Lock@hotmail.com)

Abstract

On 26.I.2016, a population of *Nicoletia phytophila* Gervais, 1844 was found for the first time in Belgium in a tropical greenhouse of the botanical garden of Ghent University. It is a cosmopolitan species, however, the species is restricted to greenhouses in Europe.

Keywords: *Nicoletia phytophila*, Nicoletiidae, Zygentoma

Samenvatting

Op 26.I.2016 werd een populatie van *Nicoletia phytophila* Gervais, 1844 gevonden voor het eerste keer in België in een tropische serre van de plantentuin van Universiteit Gent. Het is een kosmopolitische soort, maar in Europa komt de soort enkel in serres voor.

Résumé

Le 26.I.2016, une population de *Nicoletia phytophila* Gervais, 1844 a été trouvée pour la première fois en Belgique, dans une serre tropicale du jardin botanique de l'Université de Gand. C'est une espèce cosmopolite, mais en Europe l'espèce est limitée aux serres.

Introduction

Zygentoma are wingless insects with dorso-ventrally strongly flattened coxae that are very large and do not bear styli. The body bears three caudal filaments, but in contrast to Microcoryphia, Zygentoma are not able to jump. The silverfish *Lepisma saccharina* Linnaeus, 1758 has been imported in Belgium more than a century ago and is now firmly established in our country. Since 1998, also *Ctenolepisma longicaudata* Escherich, 1905 has been found in Belgium (LOCK, 2007). Because it is extremely suited to modern houses as it prefers temperatures of 20-25°C, is very mobile and relatively resistant to drought, the species quickly spread all over the country. This species can cause considerable damage, because its ability to digest cellulose allows it to feed on paper. In 2012, also *Atelura formicaria* Heyden, 1855 was discovered in Belgium; this is a myrmecophilous species and it is the only species of the order Zygentoma that occurs in the wild in Belgium (PARMENTIER *et al.*, 2013). Here, *Nicoletia phytophila* Gervais, 1844 is reported for the first time for the Belgian fauna.

Material and methods

On 26.I.2016, a population of *Nicoletia phytophila* Gervais, 1844 was discovered in a tropical greenhouse of the botanical garden of Ghent University (UTM: ES5054). The species was identified using the identification key made by WYGODZINSKY (1980). Three specimens have been deposited to the collection of the Royal Belgian Institute of Natural Sciences.



Fig. 1. *Nicoletia phytophila* (Photograph: Koen Lock).

Results

In contrast to Lepismatidae, Nicoletiidae lack eyes. *Nicoletia phytophila* Gervais, 1844 is the only species of the genus *Nicoletia* in Europe. Unlike the other species occurring in Belgium, the body is covered by hairs instead of scales and unlike Atelurinae, it does not live in ant nests. In contrast to the closely resembling genus *Coletinia*, of which several species are indigenous in Europe, the ventral abdominal sclerites II-VII of *Nicoletia* are divided into a median sternite and lateral coxites and the last segment of the maxillary palps is relatively broad. The known European populations of *N. phytophila* are thelytokous (type of parthenogenesis in which females are produced from unfertilized eggs). The antennae and the caudal filaments are shorter than the subcylindrical body of about 4 mm length. On 26.I.2016, a population of *N. phytophila* was discovered under stones in a tropical greenhouse of the botanical garden of Ghent University.

Discussion

Nicoletia phytophila is a tropical species and it is therefore not expected that the species will establish populations outside greenhouses in Europe.

References

- LOCK K., 2007. - Distribution of the Belgian Zygentoma. *Notes Fauniques de Gembloux*, 60: 25–27.
- PARMENTIER T., VAN KERCKVOORDE M. & DEKONINCK W., 2013. - First record of the myrmecophilous silverfish *Atelura formicaria* Heyden, 1855 in Belgium (Zygentoma: Nicoletiidae). *Bulletin S.R.B.E./K.B.V.E.*, 149: 127–128.
- WYGODZINSKY P.W., 1980. - A survey of the Nicoletiinae of Europe (Nicoletiidae, Thysanura, Insecta). *American Museum novitates*, 2695: 1–24.