

***Stenotaenia linearis* (C.L. Koch 1835): an expected species new to the Belgian fauna (Myriapoda Chilopoda)**

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Abstract

Stenotaenia linearis, a centipede that was expected to occur in Belgium, is now reported for the first time for Belgium. The species was found on the 10th of April 2009 on a rural border of a graveyard in Oostende. A brief description and some notes on the distribution are given. With this species, the number of centipedes in Belgium has risen to 38.

Keywords: Belgium, centipede, new record.

Samenvatting

Stenotaenia linearis, een duizendpoot waarvan het voorkomen in België werd verwacht, wordt hier voor de eerste keer gemeld voor België. De soort werd gevonden in een ruderaal boord van het kerkhof van Oostende op 10 april 2009. Een korte beschrijving wordt gegeven en de verspreiding wordt besproken. Met deze soort stijgt het aantal soorten duizendpoten in België tot 38.

Résumé

Stenotaenia linearis, un chilopode auparavant considéré comme potentiellement présent en Belgique, est formellement recensé pour la première fois dans ce pays. L'espèce a été trouvée le 10 avril 2009 dans un bord rudéral d'un cimetière à Ostende. Une brève description et quelques notes sur la distribution sont données. Avec cette espèce, le nombre de chilopodes pour la Belgique s'élève à 38.

Introduction

On the 10th of April 2009, *Stenotaenia linearis* (C.L. KOCH, 1835) was discovered for the first time in Belgium. Three specimens of the species were found under stones in the rural border of a graveyard of Oostende (province of West-Vlaanderen, UTM DS9274).

Due to its occurrence in the surrounding countries, the species was expected for Belgium (LOCK, 2000; LOCK & BAUGNÉE, 2005; LOCK, 2009). However, despite intensive pitfall sampling campaigns in 56 Flemish forest stands (LOCK *et al.*, 2001), 12 inland dunes in eastern Flanders (LOCK & DEKONINCK, 2001) and 15 forests in Voeren (LOCK *et al.*, 2005), the species was not observed until present.

Description

S. linearis belongs to the order Geophilomorpha and the family Geophilidae. Apart from this species, 14 Geophilomorpha were observed in Belgium of which 7 species belong to the family Geophilidae (LOCK, 2009). *S. linearis*

(Fig. 1) is a yellow species, with the head and the first segments somewhat darker, reaching about 20-30mm and sometimes even up to 50mm. Males possess 63-75 and females 67-79 segments, those in the anterior half having a well-circumscribed pore-group in a slightly depressed, circular area situated just behind the centre of the sternite. However, the most distinctive characteristic of *S. linearis* can be found on the last pair of legs. The last coxae contain numerous glands arranged in a rosette and opening into a pit at the base of the coxa and a few more arranged in a smaller rosette, also opening into a pit. There are thus no external pores as in other species but the glands themselves are easily seen both dorsally and ventrally in cleared preparations. All Geophilidae observed so far in Belgium can be identified using the recent key of BARBER (2009), however, the species described as *Henia brevis* (SILVESTRI, 1896) is actually *H. montana* (MEINERT, 1870) (LOCK, 2009).



Fig. 1. *Stenotaenia linearis*: anterior extremity, ventral (left); posterior extremity, ventral (right).

Distribution and co-occurring species

S. linearis has been found throughout Europe. It has been reported for the Netherlands, where it occurs in rural habitats such as parks and gardens, bushes along road boards, graveyards, harbors, along dikes and in duck cages on clay soil (BERG *et al.*, 2008). It often lives quite deep in the soil and it can be found under stones or logs and sometimes under bark or litter on humid, heavy soil, especially clay soil (BERG *et al.*, 2008). The species also occurs in Northwestern and Southwestern Germany (JEEKEL, 1964; SPELDA, 1991), in Northeastern France (IORIO, 2007) and in other French areas (BROLEMANN, 1930; IORIO, 2006).

Co-occurring species on the graveyard of Oostende were *Lithobius (Lithobius) forficatus* (LINNAEUS 1758), *L. (Sigibius) microps microps* MEINERT, 1868, *Schendyla nemorensis* (C.L. KOCH, 1837), *Geophilus flavus* (DE GEER, 1778) and *Cryptops parisi* BROLEMANN, 1920. The first four species are all relatively common species in Belgium and they do not have any specific requirements concerning their habitat (LOCK, 2000). The latter species is also quite common (LOCK, 2000), but does usually not occur on sandy soils, where it is replaced by *C. hortensis* (DONOVAN, 1810) (LOCK *et al.*, 2001).

Discussion

LOCK (2009) reported 37 centipedes in a checklist for the Belgian Chilopoda. With the discovery of *S. linearis*, the number of centipedes occurring in Belgium has therefore risen to 38. When the Belgian fauna is compared with that of the Netherlands (BERG *et al.*, 2008), Luxembourg (REMY & HOFFMANN, 1960), Northeastern

and Northwestern France (IORIO, 2006, 2007) and Germany (JEEKEL, 1964; SPELDA, 1991, 2005), undoubtedly some more species can be expected for Belgium such as *Schendyla dentata* (BRÖLEMANN & RIBAUT, 1911), *Geophilus proximus* C.L. KOCH, 1847, *G. studeri* ROTHENBÜHLER, 1899, *Arctogeophilus inopinatus* (RIBAUT, 1912), *Himantarium gabrielis* (LINNAEUS, 1767), *Lithobius (Lithobius) erythrocephalus* KOCH, 1847 and *L. (L.) subtilis subtilis* LATZEL, 1880.

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First confirmed records of *Microdon mutabilis* and *Microdon myrmicae* (Diptera: Syrphidae) for Belgium

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Abstract

Recently, the Syrphidae species *Microdon mutabilis* (LINNAEUS, 1758) has been recognized to cover a cryptic species duo, *M. mutabilis* and *M. myrmicae* SCHÖNROGGE *et al.*, 2002. Both species can only be differentiated based on larval and pupal characters and the difference in host ant species. In the framework of an update of the Belgian Syrphidae checklist, we visited the collection of the Royal Belgian Institute of Natural Sciences and discovered an adult of *M. mutabilis* s.l. that was reared from a larva collected in March 1938 at Hockai, eastern Belgium. We were able to match the collection number of the *Microdon* with that of *Formica lemani* BONDROIT, 1917 workers collected on the same locality and date by the same entomologist, and we therefore assume that the collected *Microdon* was a *M. mutabilis*. During 2009 we also could show the presence of *M. myrmicae* in Belgium at Maasmechelen, where puparia of this species were found in nests of the host ant *Myrmica scabrinodis*. For two other *M. mutabilis* s.l. populations we could not find the puparia, but we could show the presence of multiple nests of *M. scabrinodis*, suggesting these population also are *M. myrmicae*. Both species of *Microdon* can now be added to the Belgian checklist, but *M. mutabilis* may have gone extinct in Belgium.

Keywords : *Microdon*, myrmecophilous, critically threatened, *Formica lemani*, *Myrmica scabrinodis*, host-parasite co-evolution.