

# Updated checklist of the Belgian centipedes (Chilopoda)

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Since the publication of the previous checklist of the Belgian centipedes, there have been a lot of discoveries. Several additional species have been reported: *Lithobius valesiacus*, *Lithobius mutabilis* and *Lithobius pelidnus* and also a historical record of *Scutigera coleoptrata* was found in literature. Due to the confusion in literature, *Geophilus proximus* was incorrectly listed for the Belgian fauna, the correct name for the species under consideration is *Geophilus insculptus*. There also have been a lot of taxonomical changes, especially in the order Geophilomorpha. Finally, two additional species are reported here for the first time for Belgium: *Henia montana* and *Geophilus osquidatum*.

**Keywords:** Chilopoda, Belgium, checklist, *Henia montana*, *Geophilus osquidatum*, *Geophilus insculptus*, *Geophilus proximus*.

Depuis la publication de la précédente liste des espèces de chilopodes de Belgique, il y a eu beaucoup de découvertes. Plusieurs espèces additionnelles ont été rapportées: *Lithobius valesiacus*, *Lithobius mutabilis* et *Lithobius pelidnus* et aussi une observation historique de *Scutigera coleoptrata* qui a été trouvée dans la littérature. A cause des confusions dans la littérature, *Geophilus proximus* était incorrectement mentionné pour la faune belge, le nom correct pour l'espèce concernée est *Geophilus insculptus*. Il y a eu aussi beaucoup de changements dans la taxonomie, surtout dans l'ordre Geophilomorpha. Finalement, deux espèces sont rapportées ici pour la première fois pour la Belgique: *Henia montana* et *Geophilus osquidatum*.

**Mots-clés:** Chilopoda, Belgique, inventaire, *Henia montana*, *Geophilus osquidatum*, *Geophilus insculptus*, *Geophilus proximus*.

## 1. INTRODUCTION

Since the publication of the checklist of the Belgian centipedes (Lock, 2001a) and the preliminary atlas of the centipedes of Belgium (Lock, 2001b), there have been a lot of changes considering the fauna of the centipedes in Belgium. Therefore, an updated checklist is presented here.

## 2. MATERIAL AND METHODS

For the construction of the updated checklist, all the centipedes which have been found in Belgium until present are included. The taxonomy of Fauna Europaea (2007) has been followed.

## 3. RESULTS

An updated checklist of the Belgian centipedes is given in Table 1. Changes in comparison with the

previous checklist (Lock, 2001a) are discussed in order of appearance.

In the present study, *Henia montana* (Meinert 1870) is reported for the first time for the Belgian fauna. The species was found on 23.ix.2005 near the city Marche-en-Famenne in the nature reserve Fond des Vaux (UTM: FR6866). The species of the genus *Henia* in Belgium can be separated on the base of the number of legs: *H. (Pseudochaetechelyne) brevis* (Silvestri 1896), which occurs in the neighbouring countries Germany and France and can be expected in Belgium, possesses only 43-47 pairs of legs, *H. montana* 55-61 and *H. vesuviana* 61-87. The sternal pore areas of *H. montana* are lengthwise oval, each with about 50 pores when fully developed, the coxae each have a single large pore adjacent to the metasternite and both sexes possess small claws on the last legs. A good description of the species can be found in Attems (1929).

**Table 1: Updated checklist of the Belgian centipedes**

## Class Chilopoda

## Order Geophilomorpha

## Family Dignathodontidae

1. *Henia (Chaetechelyne) montana* (Meinert 1870)
2. *Henia (Chaetechelyne) vesuviana* (Newport 1845)

## Family Geophilidae

3. *Geophilus carpophagus* Leach 1815
4. *Geophilus electricus* (Linnaeus 1758)
5. *Geophilus flavus* (De Geer 1778)
6. *Geophilus insculptus* Attems 1895
7. *Geophilus osquidatum* Brölemann 1909
8. *Geophilus truncorum* Bergsoe & Meinert 1866
9. *Pachymerium ferrugineum* (C.L. Koch 1835)

## Family Himantariidae

10. *Stigmatogaster subterraneus* (Shaw 1789)

## Family Linotaeniidae

11. *Strigamia acuminata* (Leach 1815)
12. *Strigamia crassipes* (C.L. Koch 1835)
13. *Strigamia maritima* (Leach 1817)

## Family Schendylidae

14. *Schendyla nemorensis* (C.L. Koch 1837)

## Order Lithobiomorpha

## Family Henicopidae

15. *Lamyctes emarginatus* (Newport 1844)

## Family Lithobiidae

16. *Lithobius (Lithobius) agilis agilis* C.L. Koch 1847
17. *Lithobius (Lithobius) calcaratus* C.L. Koch 1844
18. *Lithobius (Lithobius) dentatus* C.L. Koch 1844
19. *Lithobius (Lithobius) forficatus* (Linnaeus 1758)
20. *Lithobius (Lithobius) lapidicola* Meinert 1872
21. *Lithobius (Lithobius) valesiacus* Verhoeff 1935
22. *Lithobius (Lithobius) macilentus* L. Koch 1862
23. *Lithobius (Lithobius) melanops melanops* Newport 1845
24. *Lithobius (Lithobius) mutabilis* L. Koch 1862
25. *Lithobius (Lithobius) muticus* C.L. Koch 1847
26. *Lithobius (Lithobius) pelidnus pelidnus* Haase 1880
27. *Lithobius (Lithobius) piceus piceus* L. Koch 1862
28. *Lithobius (Lithobius) tenebrosus tenebrosus* Meinert 1872
29. *Lithobius (Lithobius) tricuspis* Meinert 1872
30. *Lithobius (Monotarsobius) aeruginosus* L. Koch 1862
31. *Lithobius (Monotarsobius) crassipes* L. Koch 1862
32. *Lithobius (Monotarsobius) curtipes* C.L. Koch 1847
33. *Lithobius (Sigibius) microps microps* Meinert 1868

## Order Scolopendromorpha

## Family Cryptopidae

34. *Cryptops anomalans* Newport 1844
35. *Cryptops hortensis* (Donovan 1810)
36. *Cryptops parisi* Brolemann 1920

## Order Scutigermorpha

## Family Scutigerae

37. *Scutigera coleoptrata* (Linnaeus 1758).

The genera *Brachygeophilus* and *Necrophloeophagus* are now considered as synonyms of the genus *Geophilus*.

Due to confusion in literature, the species *Geophilus proximus* C.L. Koch 1847 was incorrectly reported for Belgium (Lock, 2001a, b; Lock *et al.*, 2001). The species described as *G. oligopus* (Attems 1895) by Koren (1986) is in fact *G. insculptus* Attems 1895, while the species described as *G. insculptus* is actually *G. proximus*. In the checklist of the Netherlands (Berg, 1999), the species reported as *G. oligopus* is in fact *G. proximus*, while the species reported as *G. proximus* is actually *G. insculptus*. The species occurring in Belgium is *Geophilus insculptus*. Good descriptions of *G. insculptus* can be found in Attems (1929), Brolemann (1930) and Eason (1964). Actually, *G. insculptus* is a junior synonym of *G. alpinus* Meinert 1870, but it has been proposed to conserve the species name *G. insculptus* (Fauna Europaea, 2007). However, it should be noted that not all centipede taxonomists accept the conservation of the name *G. insculptus* (i.e. Spelda, 2005).

A second species that is reported here for the first time for the Belgian fauna is *Geophilus osquidatum* Brolemann 1909. The species was found in a forest in the village 's Gravenvoeren (UTM: FS9826) on 12.vi.2006. In contrast to the other species of *Geophilus* with a carpophagus structure occurring in Belgium, *G. osquidatum* has a poison-claw with a crenulated concavity with about 30 rounded scallops. The species has 51-63 pairs of legs; the articles of the antennae are about two times as long as broad, with very long and sparse setae; the claw of the second maxillary telopodite is well developed; the carpophagus fossae occupy up to two-thirds of breadth of the sternite where fully developed and the last trunk segment has 3 pores or occasionally 4 pores opening ventrally in a row adjacent to the edge of the metasternite. Good descriptions can be found in Attems (1929), Brolemann (1930) and Eason (1964).

*Haplophilus* is now considered as a synonym of *Stigmatogaster*.

*Lamyctes fulvicornis* Meinert 1868 is now considered as a junior synonym of *L. emarginatus* (Newport 1844).

*Lithobius pelidnus pelidnus* Haase 1880 was recently reported for Belgium (Kime, 2003; Lock & Baugnée, 2005; Pontégnie *et al.*, 2005). Pontégnie *et al.* (2005) also added *L. lusitanus valesiacus* Verhoeff 1935 and *L. mutabilis* to the Belgian fauna. *L. lusitanus valesiacus* is now valid as *L. valesiacus* because it has been elevated to species level by Spelda (2005) and this change has also been recognized in a recent work on lithobiids of south-eastern France (Iorio, 2008), where a good description of this species can be found.

*Scutigera coleoptrata* (Linnaeus 1758) was already reported by De Selys-Longchamps (1897), however, this reference was overlooked during the construction of the previous checklist (Lock, 2001a). The species was observed indoors in Longchamps in 1830 (De Selys-Longchamps, 1897). The species was probably introduced, but it is difficult to determine if it was durably established in Belgium or not: on the one hand, it has been found indoors in many cities of northern France (Iorio & Geoffroy, 2007); on the other hand, since no observations were done since 1830, the species was perhaps unable to establish viable populations in Belgium until present.

#### 4. DISCUSSION

Apart from the species listed in the updated checklist, also two additional subspecies have been reported for Belgium. *Lithobius (Lithobius) macilentus pyrenaica* Brolemann 1930 was reported from Brandehaag (Pontégnie *et al.*, 2005). However, this record is today unimportant because this subspecies is now considered as a synonym of the typical species (Iorio, 2008). Also *Lithobius (Sigibius) microps exarmatus* Brolemann 1926 was reported for Belgium (Kime, 2003; Pontégnie *et al.*, 2005). The species has been found in Robertville in the Mont Rigi site in the Hautes Fagnes region in 1977 and 1978, where it is the only form of *L. microps* found (Kime, 2003). In 2003, it was also found in Moelenbusch, which is also situated in the Hautes Fagnes region (Pontégnie *et al.*, 2005). Fauna Europaea (2007) does not recognize it as a subspecies, however, as it was the only form of the species captured at the two locations, it can be considered as a subspecies according to Eason (Kime, 2003).

*Geophilus osquidatum* is reported here from 's Gravenvoeren, which is close the border with the

Netherlands. Because this species has not yet been reported for the Netherlands (Berg, 1999), it is suggested that *G. osquidatum* should be searched in the forests in the south of the province of Limburg in the Netherlands.

Eason (1964) reported *Henia montana oblongocribellata* Verhoeff 1898 for Great Britain, which is now considered as a synonym of *Henia (Pseudochaetechelyne) brevis* (Silvestri 1896) (Minelli, 1982). However, the description of Eason (1964) indicates that *H. montana* was described because 55 pairs of legs were present. It is therefore more likely that it is *H. montana* that occurs in Great Britain instead of *H. brevis*. *H. brevis* should therefore probably be changed to *H. montana* in the checklist of Britain and Ireland (Barber, 2006).

## 5. CONCLUSIONS

In this updated checklist of the Belgian centipedes, all the species that have been observed until present are listed. The Belgian fauna now contains 37 species of Chilopoda. However, based on the checklists of the surrounding areas (Berg, 1999; Spelda, 1999, 2005; Iorio, 2007), it can be concluded that several additional species can still be expected in Belgium, such as *Lithobius (Lithobius) subtilis subtilis* Latzel 1880, *Geophilus studeri* Rothenbühler 1899 and *Stenotaenia linearis* (C. L. Koch 1835).

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