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Symphyla of Belgium

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A checklist of the Symphyla occurring in Belgium is presented and the existing literature about the Belgian fauna is discussed. Eight species were found of which four are new to the Belgian fauna: *Symphylella elongata*, *S. vulgaris*, *Scutigerella causeyae* and *S. palmonii*. On the other hand, *Hanseniella nivea* and *Scutigerella immaculata* could not be confirmed and are removed from the checklist. Based on the species occurring in the neighbouring countries, several additional species can be expected.
Keywords: Myriapoda, Belgian fauna, distribution, diversity.

Une liste d'espèces de Symphyla de la Belgique est présentée et la littérature de la faune belge est passée en revue. Huit espèces ont été trouvées dont quatre nouvelles pour la faune belge: *Symphylella elongata*, *S. vulgaris*, *Scutigerella causeyae* et *S. palmonii*. Par contre, *Hanseniella nivea* et *Scutigerella immaculata* ne pouvaient pas être confirmés et sont enlevés de la liste. Basé sur les espèces présentes dans les pays voisins, quelques espèces additionelles sont susceptibles d'être ajoutées.
Mots-clés: Myriapoda, faune belge, distribution, diversité.

1. INTRODUCTION

Symphyla is one of the four classes of the Myriapoda. Due to their small size and the difficulty of their identification, they have hardly received any attention in Belgium and only a few scattered records have been published. In the present paper, the literature dealing with Symphyla in Belgium is reviewed and the results are presented from the study of all available material encountered in collections and during recent field trips.

2. MATERIALS AND METHODS

In the collection of the Royal Belgian Institute of Natural Sciences, only a few animals were present. Most of the studied Symphyla were recently collected during field trips all over Belgium. After the preparation of microscopic slides using Hoyer solution, animals were identified, mainly based on Edwards (1959) and Scheller (1978).

3. RESULTS

Lameere (1895) listed three species for the Belgian fauna: *Hanseniella nivea* (Scopoli 1763), *Scolopendrella notacantha* Gervais 1844 and *Scutigerella immaculata* (Newport 1845). However, a lot has changed in the taxonomy of the Symphyla since that time. *H. nivea* could not be confirmed for Belgium and also Remy and Hoffmann (1960) indicated that this record could be incorrect. Therefore, *H. nivea* is not retained for the Belgian checklist (Table 1). In addition, Bagnall (1914) reported *Hanseniella caldaria* (Hansen 1903) from a hothouse in the Brussels botanical gardens. Old records of *H. nivea* could thus possibly refer to *H. caldaria*. Also *S. immaculata* could not be confirmed for Belgium, however, two other species of *Scutigerella* that were described more recently are reported here for the first time for Belgium: *S. causeyae* Michelbacher 1942 and *S. palmonii* Michelbacher 1942. Schubart (1936) and Leruth (1939) reported *S. immaculata* from caves in Aisne-Heydt-lez-Bomal, Tohogne and Ehein. This material was present in the Royal Belgian Institute of Natural Sciences and belonged to the species *S. causeyae*. Biernaux (1966) reported high numbers of *S. immaculata* in a garden in Rochefort, however, also this record might concern a different species of *Scutigerella*. Remy & Hoffmann (1960) and Dethier (1998) reported the presence of *Symphylella isabellae* (Grassi 1886) in Belgium.

Hubart (1970) found *Symphylella major* Scheller 1961 in a cave in Goé. Two additional species of *Symphylella* are reported here for the first time for Belgium: *S. elongata* Scheller 1952 and *S. vulgaris* (Hansen 1903). Other references dealing with Symphyla occurring in Belgium do not present additional information but only refer to the articles mentioned above.

Scolopendrella notacantha was found in a forest in ‘s Gravenvoeren and in caves in Godinne and Ramioul. Only one observation of *Symphylella elongata* was done in a forest in Everbeek-Boven. *S. isabellae* was found in a forest in Kanne and in caves in Bévercé (Dethier, 1998) and Ramioul. *S. major* was only once reported from a cave in Goé (Hubart, 1970). Observations of *S. vulgaris* were done in forests in Han-sur-Lesse, Loen, Merlemont and Sy. *Hanseniella caldaria* is restricted to hothouses. It was only observed in the botanical gardens of Brussels (Bagnall 1914) and Ghent. *Scutigerella causeyae* is the most common species in Belgium. It is a typical woodland species that was found in Aisemont, Aisne-Heydt-lez-Bomal, Anhée, Ave-et-Auffe, Bourseigne-Neuve, Clairefontaine, Coo, Durbuy, Eben, Eeklo, Ehein, Embourg, Ename, Eupen, Falaën, Faulx-les-Tombes, Flône, Freyr, Halle, Halleux, Han-sur-Lesse, Hastière, Hockai, Huccorgne, Humain, Jemappes, Kanne, Kelmis, Lamorteau, Lanaye, Lompret, Malmédy, Marche-en-Famenne, Mariakerke, Merlemont, Nazareth, Nismes, Oignies, Olloy, Pin, Prayon, Presgaux, Pry, Ramioul, ‘s Gravenvoeren, Samson, Seilles, Sint-Martens-Voeren, Solwaster, Stokkem, Sy, Tienen, Tilff, Tohogne, Torgny, Tournai, Wachtebeke, Watermaal-Bosvoorde and Yvoir. In contrast to *S. causeyae*, *S. palmonii* was not only found in natural habitats, but also in more cultivated areas such as gardens and mine pits. It was found in Boha, Denderleeuw, Engis, Eupen, Halonzy, Jamioulx, Martelange, Salmchâteau, Sint-Martens-Bodegem and Tournai.

4. DISCUSSION

Of the eight species that were found in Belgium (Table 1), five occurred in caves. However, only *S. major* was restricted to caves. In comparison with other habitats, caves are especially well studied in Belgium (Dethier 1998, Delhez *et al.* 1999), which resulted in the relatively high number of species. A more intensive sampling campaign in other habitats would probably reveal additional species. Based on the distribution of Symphyla in the neighbouring countries (Remy, 1942; Scheller, 1968), several species might be expected in Belgium such as *Geophilella pyrenaica* Ribaut 1913, S*colopendrellopsis arvernorum* (Ribaut 1931), *Scolopendrellopsis subnuda* (Hansen 1903), *Scutigerella immaculata* (Newport 1845) and *Scutigerella remyi* Juberthie-Jupeau 1963.

Table 1: Checklist of the Belgian Symphyla

Class Symphyla

Family Scolopendrellidae

1. *Scolopendrella notacantha* Gervais 1844
2. *Symphylella elongata* Scheller 1952
3. *Symphylella isabellae* (Grassi 1886)
4. *Symphylella major* Scheller 1961
5. *Symphylella vulgaris* (Hansen 1903)

Family Scutigerellidae

6. *Hanseniella caldaria* (Hansen 1903)
7. *Scutigerella causeyae* Michelbacher 1942
8. *Scutigerella palmonii* Michelbacher 1942

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