Contribution to the knowledge of entomofauna of a Belgian Famenne village.

v. Fungus gnats (Diptera: Bolitophilidae, Diadocidiidae, Ditomyiidae, Keroplatidae, Mycetophilidae)

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The composition of fungus gnats (Sciaroidea : Bolitophilidae, Diadocidiidae, Ditomyiidae, Keroplatidae, Mycetophilidae) in a village of Belgian Famenne have been studied based on material of 378 specimens. Altogether 69 species are recorded, viz. one species of Bolitophilidae, one species of Diadocidiidae, one species of Ditomyiidae, six species of Keroplatidae and 60 species of Mycetophilidae. Eleven species of Mycetophilidae are recorded from Belgium for the first time: *Mycomya (Mycomya) tumida* (Winnertz 1863), *Acnemia angusta* Zaitzev 1982, *Sciophila thoracica* Stæger 1840. *Docosia fuscipes* (von Roser 1840), *Brachypeza (Brachypeza) armata* Winnertz 1863, *Pseudexechia tuomikoskii* Kjærandsen 2009, *Epicypta fumigata* (Dziedzicki 1923), *Mycetophila mohilevensis* Dziedzicki 1884, *Mycetophila perpallida* Chandler 1993, *Mycetophila uninotata* Zetterstedt 1852, *Zygomyia pseudohumeralis* Caspers 1980. Provided data represent also the first record of the genus *Pseudexechia* Tuomikoski in Belgium.
Key words: Belgium, Diptera, distribution, faunistics, fungus gnats, new records, Sciaroidea

La composition faunistique des Sciaroidea (Bolitophilidae, Diadocidiidae, Ditomyiidae, Keroplatidae, Mycetophilidae) d'un village de Famenne belge a été étudiée sur base d'un matériel regroupant 378 spécimens. Un total de 69 espèces ont été identifiées, à savoir une espèce de Bolitophilidae, une espèce de Diadocidiidae, une espèce de Ditomyiidae, 6 espèces de Keroplatidae et 60 espèces de Mycetophilidae. 11 espèces de Mycetophilidae sont nouvelles pour la Belgique: *Mycomya (Mycomya) tumida* (Winnertz 1863), *Acnemia angusta* Zaitzev 1982, *Sciophila thoracica* Stæger 1840. *Docosia fuscipes* (von Roser 1840), *Brachypeza (Brachypeza) armata* Winnertz 1863, *Pseudexechia tuomikoskii* Kjærandsen 2009, *Epicypta fumigata* (Dziedzicki 1923), *Mycetophila mohilevensis* Dziedzicki 1884, *Mycetophila perpallida* Chandler 1993, *Mycetophila uninotata* Zetterstedt 1852, *Zygomyia*

pseudohumeralis Caspers 1980. Le genre *Pseudexechia* Tuomikoski est également cité pour la première fois en Belgique.
Mots-Clés : Belgique, Diptera, distribution, faunistique, nouvelles occurrences, Sciaroidea

1. INTRODUCTION

The superfamily Sciaroidea of Diptera comprises eight families (and *incertae sedis* group; Ševčík *et al*., 2016a), six of which can be grouped to a common name 'fungus gnats'. Five families of them occur in Europe, viz. Bolitophilidae, Diadocidiidae, Ditomyiidae, Keroplatidae, Mycetophilidae. They are small to medium sized nematocerous flies preferring shady and humid habitats, especially those in the forests. At larval stage, majority of the species with known biology inhabit fungal fruiting bodies, both epigeal and wood growing fungi. There are more than 1,200 species of fungus gnats, of which about 970 species belong to Mycetophilidae, recorded in Europe (Chandler, 2005). A summary of the study history of fungus gnats in Belgium is presented by Kurina & Grootaert (2016). Up to the present, 295 species are recorded from Belgium, including 10 species of Bolitophilidae, 2 species of Diadocidiidae, 2 species of Ditomyiidae, 41 species of Keroplatidae and 240 species of Mycetophilidae (Chandler, 2005; Kurina & Grootaert, 2016, Kurina & Chandler, 2018). In comparison with the neighbouring countries, there are 303 species known from the Netherlands (Beuk, 2001, 2015, 2018), 535 from France mainland (Bouchard & Bouchard-Madrelle, 2010; Chandler, 2005, 2015, 2020b; Gibbs, 2009; Kjærandsen, 2009; Papp & Ševčík, 2007; Plassmann, 2010; Ševčík & Laštovka, 2008; Withers, 2007, 2014), 673 from Germany and only 6 species from Luxembourg (Chandler, 2005). In the British Isles, there are 570 species of fungus gnats recorded (Chandler, 2020a, 2020b).

In the current paper we provide results of fungus gnats collected in Somal, a village of Famenne, a natural region in Southern Belgium (**Figure 1**). The studied territory is about 9 km², centered on the hamlet of Somal. It covers the places called „La Chavée" and „La Foulerie" in the north-west, „Campagne de Somal" et „Bois des Aloux" in the north, „Moulin de Leuze" in the north-east, the „Château de Ramezée" in the west, the „Bois des Avennes" in the south-west, the village „Moressée" in the south and „Bon Bonî" in the south-east (IGNB, 1981).

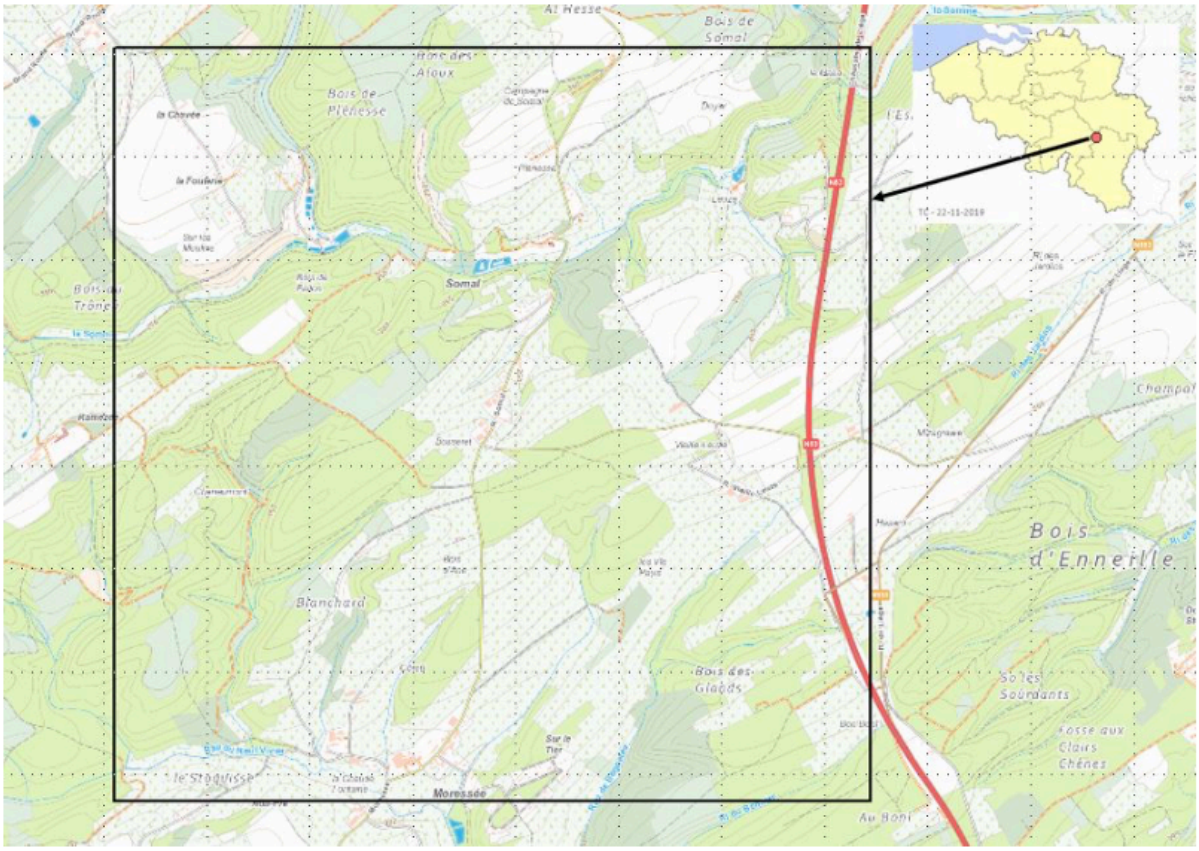

Figure 1 **: Location map of the village of Somal (background map :©IGN).**

2. MATERIAL and METHODS

All the specimens underpinning this study were collected either by sweep netting or with a Malaise trap from 2012 to 2019. The Malaise trap was installed, during the year 2019, in a meadow owned by the second author at the edge of a forest (**Figure 2**).

Two particular habitats were collected by sweep netting:

- Ivy flowers (*Hedera helix*) which are blooming very late in the season (October-November);
- Steep damp overhanging banks of a forest path, between the roots of the trees (**Figure 3**) particularly in April-May.

Figure 2 : Malaise trap installed in a meadow at the edge of a forest. (©LIBERT P.-N.)

Figure 3 : Steep damp overhanging banks of a forest path. (© LIBERT P.-N.)

This last habitat was mentioned as interesting by Hutson *et al*. (1980).

All collected fungus gnat specimens were glued to a card point (**Figure 4**), pinned and thereafter identified using a stereomicroscope Leica S8APO. In many cases, the detailed study of male terminalia was unavoidable for species-level identification. For that, the terminalia were detached and treated in a solution of hot KOH for maceration, followed by washing in distilled water. The remaining chitinous parts were inserted into glycerine and examined. Finally, the terminalia were preserved as glycerine preparations in small polyethylene micro-vials attached to the same pin as the rest of the specimen (see also e.g. Kurina, 2006). The exact label data are referred to for each specimen in the material examined section. The material is deposited mainly in the second author's private collection, while a few specimens are deposited in the Institute of Agricultural and Environmental Sciences, Estonian University of Life Sciences [former Institute of Zoology and Botany], Tartu, Estonia (IZBE).

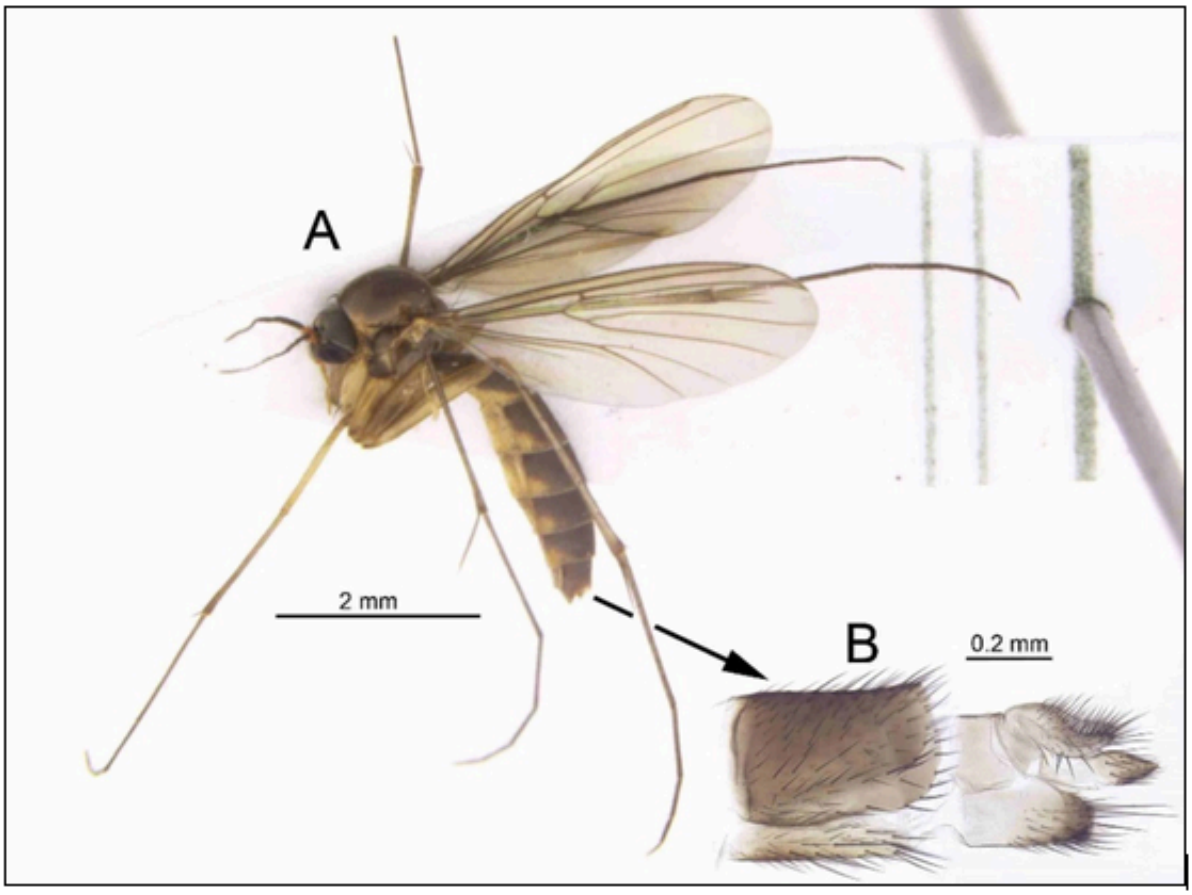

Figure 4 : *Pseudexechia tuomikoskii* Kjaerandsen 2009, female **A**, habitus, lateral view; **B,** terminalia, lateral view. (© KURINA.O.)

3. RESULTS

Altogether 378 specimens of fungus gnats were studied but 128 female specimens were determined to the genus level only and are not included to the following list of species. The rest of the specimens (228 males and 22 females) were determined to 69 species, viz. one species (1 ♂) of Bolitophilidae, one species (2 ♂♂) of Diadocidiidae, one species (1 ♀) of Ditomyiidae, six species (18 ♂♂ 4 ♀♀) of Keroplatidae and 60 species (207 ♂♂ 16 ♀♀) of Mycetophilidae. Eleven species, which are indicated as "**Belg. sp. nov.**", were found from Belgium for the first time and their distribution, systematics and biology are briefly discussed. The recent paper about fungus gnats of Botanical garden Jean Massart in Brussels (Kurina & Grootaert, 2016) had described new species occurrences from Belgium for which the presence of some of them is confirmed here. Those nine species are preceded by an asterisk (*). The subfamily-level classification is applied according to Chandler (2005) and Kaspřák *et al*. (2019). The complete list of the species captured in Somal is summarized in **table 1** at the end of the note.

4. MATERIAL EXAMINED

Bolitophilidae

1. *Bolitophila (Bolitophila) cinerea* Meigen 1818
   Material : Somal, 22.iv.2019, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.

Diadocidiidae

2. *Diadocidia (Diadocidia) ferruginosa* (Meigen 1830)
   Material : Somal, 4-15.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 16–27.v.2019, 1♂, same as previous.

Ditomyiidae

3. *Symmerus annulatus* (Meigen 1830)
   Material : Somal, 4.vi.2018, 1♀, on a window inside a house.

Keroplatidae

Macrocerinae

4. *Macrocera stigma* Curtis 1837
   Material : Somal, 9.vi.2014, 1♂, on a window inside a house; 1.vi.2017, 1♀, same as previous.

5. *Macrocera vittata* Meigen 1830
   Material : Somal, 15.vi.2010, 1♂, on a window inside a house.

Keroplatinae

6. *Keroplatus testaceus* Dalman 1818
   Material : Somal, 10.viii.2017, 1♂, on *Angelica sylvestris* flowers, wet meadow; 3.ix.2017, 1♂, on herbaceous vegetation, forest path.

7. *Orfelia nemoralis* (Meigen 1818)
   Material : Somal, 30.v.2018, 1♂, on a window inside a house; 1-3.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 4-15.v.2019, 4♂♂, same as previous; 16-27.v.2019, 2♂♂, same as previous.

8. *Platyura marginata* Meigen 1804
   Material : Somal, 10.v.2015, 1♂, sweep netted in a meadow with *Heracleum sphondylium*; 2.vi.2015, 1♂, on dried *Polyporus squamosus* on blasted *Acer* sp.; 4.vi.2015, 1♀, on *Quercus* sp., forest path, in the sun; 5.vi.2017, 1♂, on herbaceous vegetation (*Juncus, Iris*, etc.), edge of a pond; 16.v.2018, 1♀, on leaves, in the sun, forest path; 16-27.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest.

9. *Urytalpa dorsalis* (Staeger 1840)

Material : Somal, 18.v.2008, 1♂, sweep netted on *Quercus robur,* garden; 16-27.v.2019, 1♂ 1♀, Malaise trap in a meadow at the edge of a forest.

Mycetophilidae
Mycomyinae

10. *Mycomya (Mycomya) marginata* (Meigen 1818)
Material : Somal, 22.iv.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon; 30.iv.2019, 1♂, same as previous.

11. *Mycomya (Mycomya) tenuis* (Walker 1856)
Material : Somal, 2.xi.2017, 1♂, on ivy (*Hedera helix*) flowers, garden.

12. *Mycomya (Mycomya) tumida* (Winnertz 1863) **Belg. sp. nov.**
Material : Somal, 22.iv.2018, 2♂♂, flying around steep damp overhanging banks in woods, Bois de Failon; 7-14.iv.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods.
Remarks : A Palearctic species, widely distributed in Europe, recorded also from neighbouring countries except Luxembourg (Chandler, 2005). The larvae have been found on fruit bodies of *Trametes versicolor* (Plachter, 1979). Some specimens have also been reared from larvae found in winter (Väisänen, 1984).

Sciophilinae

13. *Acnemia angusta* Zaitzev 1982 **Belg. sp. nov.**
Material : Somal, 1-3.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest.
Remarks : A not common European species with rather scattered distribution. Described from Northwestern part of European Russia (Zaitzev, 1982) the species has subsequently been recorded from Russian Karelia, Finland, Sweden and Bulgaria (Chandler, 2005; Kjærandsen, 2015). Not recorded from neighbouring countries (Chandler, 2005). Kjærandsen *et al*. (2007) characterized the species as possibly boreal-mountainous but the current record suggests a wider distribution. However, some earlier records may be overlooked because the species can be reliably distinguished only by details of the male terminalia. According to Jakovlev *et al*. (2008), the larval microhabitat in southern Sweden has been described as wood growing fungi in deciduous forest.

14. *Sciophila thoracica* Stæger 1840 **Belg. sp. nov.**
Material : Somal, 4-15.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest.
Remarks : A Palearctic species, widely distributed in Europe, from neighbouring countries recorded from Germany and France (Chandler, 2005). At larval stage, the species is known to be associated with the fruit bodies of *Suillus luteus* (Khalidov, 1984).

Gnoristinae

15. *Apolephthisa subincana* (Curtis 1837)
Material : Somal, 2.iv.2012, 1♀, settled on a pile of wood, garden.

16. *Boletina gripha* Dziedzicki 1885

Material : Somal, 22.iv.2018, 2♂♂, flying around steep damp overhanging banks in woods, Bois de Failon; 7.v.2018, 1♂, same as previous; 25-31.iii.2019, 2♂♂, Malaise trap in a meadow at the edge of a forest; 1–6.iv.2019, 2♂♂, same as previous; 7-17.iv.2019, 5♂♂, same as previous; 18-21.iv.2019, 2♂♂, same as previous; 1-3.v.2019, 1♂, same as previous; 4-15.v.2019, 1♂, same as previous; 16-27.v.2019, 1♂, same as previous.

*17. *Boletina nitida* Grzegorzek 1885
Material : Somal, 2.xi.2017, 1♂, on ivy (*Hedera helix*) flowers, garden.

*18. *Boletina sciarina* Stæger 1840
Material : Somal, 1-3.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 4-15.v.2019, 1♂, same as previous.

19. *Coelosia fusca* Bezzi 1892
Material : Somal, 6-18.iii.2019, 2♂♂, Malaise trap in a meadow at the edge of a forest; 19-24.iii.2019, 1♂, same as previous.

20. *Docosia fuscipes* (von Roser 1840) **Belg. sp. nov.**
Material : Somal, 10.iv.2017, 1♀, on a window inside a house; 22.v.2018, 1♀, flying around steep damp overhanging banks in woods, Bois de Failon; 19-24.iii.2019, 2♂♂ 1♀, Malaise trap in a meadow at the edge of a forest; 25-31.iii.2019, 2♂♂, same as previous; 1-6.iv.2019, 3♂♂, same as previous; 7-14.iv.2019, 2♂♂, same as previous; 23-30.iv.2019, 2♀♀, same as previous; 1-3.v.2019, 1♀, same as previous; 4-15.v.2019, 3♀♀, 1♂, same as previous.
Remarks : A western Palaearctic species with rather scattered distribution in Europe, recorded also from Germany and the Netherlands but not found in Luxembourg and France (Chandler 2005; Kjærandsen, 2015). Biology unknown.

21. *Docosia gilvipes* (Haliday *in* Walker 1856)
Material : Somal, 6-18.iii.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 25–31.iii.2019, 1♂, same as previous; 1-6.iv.2019, 1♂, same as previous; 7-17.iv.2019, 1♂, same as previous.

22. *Ectrepesthoneura hirta* (Winnertz 1846)
Material : Somal, 4-15.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest.

23. *Tetragoneura sylvatica* (Curtis 1837)
Material : Somal, 4-15.v.2019, 3♂♂, Malaise trap in a meadow at the edge of a forest.

Leiinae

*24. *Greenomyia mongolica* Laštovka & Matile 1974
Material : Somal, 10.x.2014, 1♂, on ivy (*Hedera helix*) flowers, in the sun, garden; 17.xi.2014, 1♂1♀, same as previous; 10.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden.

*25. *Megophthalmidia crassicornis* (Curtis 1837)
Material : Somal, 26.v.2017, 1♂, sweep netted in a meadow with *Ranunculus acris*; 9.ix.2017, 1♀, on *Angelica sylvestris* flowers, meadow.

Mycetophilinae

26. *Allodia (Allodia) lugens* (Wiedemann 1817)
Material : Somal, 25.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 30.x.2017, 2♂♂, same as previous; 30.iv.2019, 7♂♂, flying around steep damp overhanging banks in woods.

27. *Allodia (Allodia) ornaticollis* (Meigen 1818)
Material : Somal, 30.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 6♂♂, same as previous.

28. *Allodiopsis rustica* (Edwards 1941)
Material : Somal, 30.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden.

29. *Brachypeza (Brachypeza) armata* Winnertz 1863 **Belg. sp. nov.**
Material : Somal, 10.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden.
Remarks : A Palearctic species, mainly northwesterly in Europe (Kjærandsen *et al*., 2007; Chandler, 2005), from neighbouring countries recorded only from Germany (Chandler, 2005). According to Ševčík (2010), all species of *Brachypeza* are oligophagous, restricted to fruit bodies of mainly *Pleurotus* spp.

30. *Brevicornu griseicolle* (Stæger 1840)
Material : Somal, 30.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden.

31. *Brevicornu sericoma* (Meigen 1830)
Material : Somal, 30.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 1♂, same as previous.

32. *Cordyla crassicornis* Meigen 1818
Material : Somal, 30.x.2017, 4♂♂, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 3♂♂, same as previous; 19-24.iii.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 25-31.iii.2019, 1♂, same as previous; 4-15.v.2019, 1♂, same as previous.

33. *Cordyla murina* Winnertz 1863
Material : Somal, 4-15.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest.

*34. *Exechia cincta* Winnertz 1863
Material : Somal, 10.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 25.x.2017, 3♂♂, same as previous.

35. *Exechia contaminata* Winnertz 1863
Material : Somal, 25.x.2017, 2♂♂, on ivy (*Hedera helix*) flowers, garden.

36. *Exechia dorsalis* (Stæger 1840)
Material : Somal, 25.x.2017, 2♂♂, on ivy (*Hedera helix*) flowers, garden.

37. *Exechia fusca* (Meigen 1804)
Material : Somal, 25.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 15.ii.2019, 1♂, flying around steep damp overhanging banks in woods; 30.iv.2019, 2♂♂, same as

previous; 7-17.iv.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 16-27.v.2019, 1♂, same as previous.

38. *Exechia nigroscutellata* Landrock 1912
Material : Somal, 25.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 2♂♂, same as previous.

39. *Exechia seriata* (Meigen 1830)
Material : Somal, 25.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 1♂, same as previous.

*40. *Exechia spinuligera* Lundstrom 1912
Material : Somal, 10.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 1♂, same as previous; 12.xi.2017, 1♂, same as previous.

41. *Pseudexechia tuomikoskii* Kjærandsen 2009 **Belg. sp. nov.** (**Figure 4**)
Material : Somal, 25.x.2017, 1♀, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 1♂, same as previous.
Remarks : A recently described species, so far recorded only from Europe: Norway, Sweden, Denmark, Great-Britain, Slovakia and probably from France (Kjærandsen, 2009; Ševčík & Kurina, 2011). Biology unknown but an allied congener – *Pseudexechia trisignata* (Edwards 1913) – has been reared from *Naucoria* sp. and *Galerina* sp. (Chandler, 1993). Very similar to *P. trisignata* and to *P. pectinacea* (Ostroverkhova 1979) and can reliably be distinguished in details of male and female terminalia. Kjærandsen (2009) revised European species of the genus and provided also figures of female terminalia that allowed association of the studied female specimen (**Figure 4**). This is the first record of a *Pseudexechia* Tuomikoski species from Belgium.

42. *Pseudobrachypeza helvetica* (Walker 1856)
Material : Somal, 7.v.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.

43. *Tarnania nemoralis* (Edwards 1941)
Material : Somal, 22.iv.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.

44. *Epicypta fumigata* (Dziedzicki 1923) **Belg. sp. nov.**
Material : Somal, 7.v.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.
Remarks : A not common Palearctic species, in Europe recorded from Fennoscandia (Sweden, Finland and Russian Karelia), Great Britain, Switzerland and Austria but not from neighbouring countries of Belgium (Chandler, 2005, 2020; Kjærandsen, 2015). Biology is unknown but the larvae of a congener – *E. aterrima* (Zetterstedt 1852) – are found on the surface of rotting wood (Zaitzev, 2003).

*45. *Mycetophila britannica* Laštovka & Kidd 1975
Material : Somal, 2.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 12.xi.2017, 3♂♂, same as previous; 22.iv.2018, 2♂♂, flying around steep damp overhanging banks in woods, Bois de Failon.

46. *Mycetophila curviseta* Lundstrom 1911
Material : Somal, 12.xi.2017, 1♂, on ivy (*Hedera helix*) flowers, garden.

47. *Mycetophila edwardsi* Lundstrom 1913
Material : Somal, 22.iv.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.

48. *Mycetophila formosa* Lundstrom 1911
Material : Somal, 22.iv.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon; 30.iv.2019, 5♂♂, flying around steep damp overhanging banks in woods.

49. *Mycetophila mohilevensis* Dziedzicki 1884 **Belg. sp. nov.**
Material : Somal, 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods.
Remarks : A rare Palearctic species, in Europe recorded from Fennoscandia (Norway, Sweden, Finland and Russian Karelia), Belarus, Great Britain and Germany (Chandler, 2005; Kjærandsen, 2015). Ševčík (2010) reared the species from *Tyromyces chioneus* which is the only record on its biology.

50. *Mycetophila ocellus* Walker 1848
Material : Somal, 2.xi.2017, 2♂♂, on ivy (*Hedera helix*) flowers, garden; 15.ii.2019, 1♂, flying around steep damp overhanging banks in woods; 30.iv.2019, 4♂♂, same as previous.

51. *Mycetophila perpallida* Chandler 1993 **Belg. sp. nov.**
Material : Somal, 2.xi.2017, 1♂ 2♀♀, on ivy (*Hedera helix*) flowers, garden; 7.v.2018, 2♂♂, flying around steep damp overhanging banks in woods, Bois de Failon; 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods; 1-3.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 4-15.v.2019, 2♂♂, same as previous; 16-27.v.2019, 1♂, same as previous.
Remarks : A Western Palaearctic species, recorded also from all neighbouring countries of Belgium (Chandler, 2005). Very close to one of the most frequent fungus gnat species, *M. fungorum* (De Geer 1776), from which it can be distinguished only by details of the male terminalia. At larval stage, the species is known to be associated with the fruit bodies of epigeal fungi (Jakovlev *et al*., 2008).

52. *Mycetophila pumila* Winnertz 1863
Material : Somal, 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods.

53. *Mycetophila rudis* Winnertz 1863
Material : Somal, 22.iv.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.

54. *Mycetophila ruficollis* Meigen 1818
Material : Somal, 22.iv.2018, 2♂♂, flying around steep damp overhanging banks in woods, Bois de Failon; 7.v.2018, 1♂, same as previous; 30.v.2018, 1♂, on a window inside a house.

*55. *Mycetophila signatoides* Dziedzicki 1884

Material : Somal, 30.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 12.xi.2017, 1♂, same as previous.

56. *Mycetophila unicolor* Stannius 1831

Material : Somal, 30.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 2.xi.2017, 2♂♂, same as previous.

57. *Mycetophila uninotata* Zetterstedt 1852 **Belg. sp. nov.**

Material : Somal, 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods.

Remarks : A Palaearctic species, widely distributed in Central and Northern Europe including neighbouring countries except Luxembourg (Chandler, 2005). It has been reared from fruit bodies of *Collybia, Cortinarius* and *Lactarius* (Yakovlev, 1994). By molecular data *M. uninotata* has been observed to include cryptic species (Jürgenstein *et al*., 2015).

58. *Phronia basalis* Winnertz 1863

Material : Somal, 22.iv.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon; 19-24.iii.2019, 2♂♂, Malaise trap in a meadow at the edge of a forest; 25-31.iii.2019, 2♂♂, same as previous; 1-6.iv.2019, 3♂♂, same as previous; 7-17.iv.2019, 3♂♂, same as previous; 23-30.iv.2019, 1♂, same as previous; 4-15.v.2019, 1♂, same as previous;

59. *Phronia biarcuata* (Becker 1908)

Material : Somal, 25.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 30.iv.2019, 18♂♂, flying around steep damp overhanging banks in woods.

60. *Phronia cinerascens* Winnertz 1863

Material : Somal, 30.iv.2019, 3♂♂, flying around steep damp overhanging banks in woods.

61. *Phronia conformis* (Walker 1856)

Material : Somal, 22.iv.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.

62. *Phronia forcipata* Winnertz 1863

Material : Somal, 22.iv.2018, 2♂♂, flying around steep damp overhanging banks in woods, Bois de Failon; 7.v.2018, 1♂, same as previous.

63. *Phronia humeralis* Winnertz 1863

Material : Somal, 30.x.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 12.xi.2017, 1♂, same as previous; 30.iv.2019, 3♂♂, flying around steep damp overhanging banks in woods.

64. *Phronia nitidiventris* (van der Wulp 1859)

Material : Somal, 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods.

*65. *Phronia notata* Dziedzicki 1889

Material : Somal, 2.xi.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods.

66. *Trichonta submaculata* (Stæger 1840)
Material : Somal, 7.v.2018, 1♂, flying around steep damp overhanging banks in woods, Bois de Failon.

67. *Zygomyia pseudohumeralis* Caspers 1980 **Belg. sp. nov.**
Material : Somal, 4-15.v.2019, 1♂, Malaise trap in a meadow at the edge of a forest; 16-27.v.2019, 1♂, same as previous.
Remarks : A Palaearctic species, widely distributed in Europe, recorded also from neighbouring countries except Luxembourg (Chandler, 2005; Kjærandsen, 2015). According to Jakovlev *et al*. (2008), at larval stage associated with wood growing fungi.

68. *Zygomyia valida* Winnertz 1863
Material : Somal, 2.xi.2017, 1♂, on ivy (*Hedera helix*) flowers, garden; 30.iv.2019, 1♂, flying around steep damp overhanging banks in woods.

69. *Zygomyia vara* (Stæger 1840)
Material : Somal, 2.xi.2017, 1♂ 1♀, on ivy (*Hedera helix*) flowers, garden.

Table 1 : Checklist of the fungus gnats (Diptera : Bolitophilidae, Diadocidiidae, Ditomyiidae, Keroplatidae, Mycetophilidae) collected in Somal. New occurrences from Belgium are followed by the symbol « ** ».

N°	Family	Subfamily	Species
1	Bolitophilidae		*Bolitophila (Bolitophila) cinerea* Meigen 1818
2	Diadocidiidae		*Diadocidia (Diadocidia) ferruginosa* (Meigen 1830)
3	Ditomyiidae		*Symmerus annulatus* (Meigen 1830)
4	Keroplatidae	Macrocerinae	*Macrocera stigma* Curtis 1837
5			*Macrocera vittata* Meigen 1830
6		Keroplatinae	*Keroplatus testaceus* Dalman 1818
7			*Orfelia nemoralis* (Meigen 1818)
8			*Platyura marginata* Meigen 1804
9			*Urytalpa dorsalis* (Staeger 1840)
10	Mycetophilidae	Mycomyinae	*Mycomya (Mycomya) marginata* (Meigen 1818)
11			*Mycomya (Mycomya) tenuis* (Walker 1856)
12			*Mycomya (Mycomya) tumida* (Winnertz 1863)**
13		Sciophilinae	*Acnemia angusta* Zaitzev 1982**
14			*Sciophila thoracica* Stæger 1840**

15		Gnoristinae	*Apolephthisa subincana* (Curtis 1837)
16			*Boletina gripha* Dziedzicki 1885
17			*Boletina nitida* Grzegorzek 1885
18			*Boletina sciarina* Stæger 1840
19			*Coelosia fusca* Bezzi 1892
20			*Docosia fuscipes* (von Roser 1840)**
21			*Docosia gilvipes* (Haliday *in* Walker 1856)
22			*Ectrepesthoneura hirta* (Winnertz 1846)
23			*Tetragoneura sylvatica* (Curtis 1837)
24		Leiinae	*Greenomyia mongolica* Laštovka & Matile 1974
25			*Megophthalmidia crassicornis* (Curtis 1837)
26		Mycetophilinae	*Allodia (Allodia) lugens* (Wiedemann 1817)
27			*Allodia (Allodia) ornaticollis* (Meigen 1818)
28			*Allodiopsis rustica* (Edwards 1941)
29			*Brachypeza (Brachypeza) armata* Winnertz 1863**
30			*Brevicornu griseicolle* (Stæger 1840)
31			*Brevicornu sericoma* (Meigen 1830)
32			*Cordyla crassicornis* Meigen 1818
33			*Cordyla murina* Winnertz 1863
34			*Exechia cincta* Winnertz 1863
35			*Exechia contaminata* Winnertz 1863
36			*Exechia dorsalis* (Stæger 1840)
37			*Exechia fusca* (Meigen 1804)
38			*Exechia nigroscutellata* Landrock 1912
39			*Exechia seriata* (Meigen 1830)
40			*Exechia spinuligera* Lundstrom 1912
41			*Pseudexechia tuomikoskii* Kjærandsen 2009**
42			*Pseudobrachypeza helvetica* (Walker 1856)
43			*Tarnania nemoralis* (Edwards 1941)

44			*Epicypta fumigata* (Dziedzicki 1923)**
45			*Mycetophila britannica* Laštovka & Kidd 1975
46			*Mycetophila curviseta* Lundstrom 1911
47			*Mycetophila edwardsi* Lundstrom 1913
48			*Mycetophila formosa* Lundstrom 1911
49			*Mycetophila mohilevensis* Dziedzicki 1884**
50			*Mycetophila ocellus* Walker 1848
51			*Mycetophila perpallida* Chandler 1993**
52			*Mycetophila pumila* Winnertz 1863
53			*Mycetophila rudis* Winnertz 1863
54			*Mycetophila ruficollis* Meigen 1818
55			*Mycetophila signatoides* Dziedzicki 1884
56			*Mycetophila unicolor* Stannius 1831
57			*Mycetophila uninotata* Zetterstedt 1852**
58			*Phronia basalis* Winnertz 1863
59			*Phronia biarcuata* (Becker 1908)
60			*Phronia cinerascens* Winnertz 1863
61			*Phronia conformis* (Walker 1856)
62			*Phronia forcipata* Winnertz 1863
63			*Phronia humeralis* Winnertz 1863
64			*Phronia nitidiventris* (van der Wulp 1859)
65			*Phronia notata* Dziedzicki 1889
66			*Trichonta submaculata* (Stæger 1840)
67			*Zygomyia pseudohumeralis* Caspers 1980**
68			*Zygomyia valida* Winnertz 1863
69			*Zygomyia vara* (Stæger 1840)

5. DISCUSSION

The European fungus gnats' fauna is relatively well known compared to that of other regions. However, even in Europe, new species are described almost in every year (e.g. Kurina *et al*.,

2015; Ševčík *et al.*, 2016b; Salmela & Kolcsár, 2017) and there are still several neglected areas with minimal data of species composition available. In terms of fungus gnats, one of the best studied area in Europe is the Scandinavian Peninsula with more than 920 species known up to date and tens awaiting descriptions (Kjærandsen, 2015; Kjærandsen *et al.*, 2007). The 306 species, currently known from Belgium represent no more than two thirds (probably less) of the real species diversity. Five out of eleven species recorded newly from Belgium are widely distributed and common in Europe. Six species, viz. *Acnemia angusta, Docosia fuscipes, Brachypeza (B.) armata, Pseudexechia tuomikoskii, Epicypta fumigata* and *Mycetophila mohilevensis* are considerably rare and/or have a rather scattered distribution in Europe. However, that may be caused by insufficient collecting and study effort. As these species can reliably be identified only according to the male/female terminalia, at least some of them are probably confused with allied congeners in several earlier studies.

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