

New records of fungus gnats for Norway (Diptera, Mycetophilidae)

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Søli, G., Rindal, E. & Hansen, L. O. 2009. New records of fungus gnats for Norway (Diptera: Mycetophilidae). *Norw. J. Entomol.* 56, 69–73.

Fifteen species of Mycetophilidae are reported new to Norway, and their distribution and biology are commented on. Among the new species, *Neuratelia subulata* Zaitzev, 1994 has previously not been recorded from the Nordic region. The total number of species of Mycetophilidae in Norway is thus increased to 589.

Key words: Diptera, Mycetophilidae, Norway, new records.

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Introduction

Fungus gnats in the family Mycetophilidae form an extremely common and species rich group of Diptera in northern temperate regions, and our knowledge about their taxonomy has increased considerably during the last two decades (for a review, see Kjærandsen et al. 2007). Members of the family expose a rather diverse biology, but know, the majority of species are associated with fungi in one or another way. A number of species develop in sporophores, while others feed on mycelium in decaying or rotting organic matter, above all in dead wood. Økland (1994, 1996) demonstrated that species of fungus gnats may be vulnerable to modern forestry practices, and as such good indicators of undisturbed forests. This is one reason why the family was assessed in the last two editions of the Norwegian Red List (Direktoratet for naturforvaltning 1999, Kålås et al. 2006). In the most recent edition, as many as 108 species of Mycetophilidae were included (Gammelmo et al. 2006). An updated and revised edition is prepared in these days, and we thus find it advantageous to publish records of new Norwegian species.

Our knowledge about Norwegian Mycetophilidae is rapidly increasing (see Søli & Kjærandsen 2008). Since the compilation of the first Norwegian check list which comprised 473 species (Gammelmo & Søli 2006), as many as 101 more species have already been added (Kjærandsen & Jordal 2007, Søli & Kjærandsen 2008). By the present contribution, our fauna comprises 589 species. Though, compared to the number of species in our neighbouring countries, one may assert that a high number of species will be discovered in the years to come. In Sweden, which is supposed to have a much similar fauna of Mycetophilidae to that in Norway, the number of species has just exceeded 800! (Kjærandsen, pers. com.).

We find it noteworthy that eight of the species here reported as new to Norway, were found in dry, sandy areas. These species were sampled as part of a project designed to study various families of Hymenoptera and Diptera normally found in such habitats. As fungus gnats are most frequent in humid areas, dry areas are seemingly less well investigated by those studying fungus gnats. Hence, there is a possibility that there exists a much ignored assemblage of species living in dry

and sandy surroundings, or more precisely, species associated to fungi preferring such habitats.

The new species

The genera are listed alphabetically. Where nothing else is stated, data on distribution is taken from Fauna Europaea (Chandler 2004). The indicated Nordic distribution patterns, follow the system of concepts developed for Sweden by Kjærandsen et al. (2007). The material is kept in the collection of the Natural History Museum, University of Oslo, Norway (NHMO).

Anatella dampfi Landrock, 1924

Material: NORWAY, EIS 27, **BØ:** Kongsberg, Skollenborg (32V NM 3822 0911), 2 August–28 September 2008, 1♂, Leg. L. O. Hansen (Malaise trap. Sandy area); EIS 36, **AK:** Oslo, Maridalen, Dausjøen (32V NN 997 541), 19 July–26 August 2002, 1♂, Leg. K. M. Olsen & S. Reiso (Malaise trap, near river outlet).

Nordic distribution: A boreal species. In Sweden recorded from Lule Lappmark only (Kjærandsen et al. 2007).

World distribution: Holarctic; in Palearctic recorded from Great Britain, Germany, Czech Republic, Slovakia, Switzerland, Italy, Sweden, North Russia, and Estonia. In Sweden only recorded from Lule Lappmark (Kjærandsen et al. 2007).

Biology: As for the great majority of species in this genus, the biology is unknown.

Brachypeza (Paracordyla) obscura Winnertz, 1863

Material: NORWAY, EIS 27, **BØ:** Kongsberg, Skollenborg (32V NM 3822 0911;), 2 August–28 September 2008, 1♂, Leg. L. O. Hansen (Malaise trap); EIS 37, **AK:** Ullensaker, Sessvollmoen W, (32V PM 1780 8054, 208 masl), 11–26 June 2007, 1♂, Leg. L. O. Hansen (Malaise trap. Sandy pine forest).

Nordic distribution: Boreal-boreonemoral. In Sweden recorded from Västergötland and Lule Lappmark (Kjærandsen et al. 2007). It is a conspicuous species, resembling a large *Cordyla*, and unlikely to be overlooked in any sample.

World distribution: Palearctic; in Europe recorded from Germany, Czech Republic, Poland, Belarus, Estonia, Latvia, Faroe Island, Sweden, Finland, North and Northwest Russia. Also recorded from the East Palearctic.

Biology: The larvae have been reported to develop in a various agaricales, but also in Polyporaceae (Zaitzev 2003).

Brevicornu arcticoides Caspers, 1985

Material: NORWAY, EIS 27, **BØ:** Kongsberg, Skollenborg, Labro (32V NM 3822 0911; 120 masl), 2 August–28 September 2008, 1♂, Leg. L. O. Hansen (Malaise trap, pine forest - sand-pit).

Nordic distribution: Boreal. In Sweden recorded from Lule Lappmark (Kjærandsen et al. 2007).

World distribution: Palearctic, recorded from Great Britain, France, Switzerland, The Netherlands, Germany, North and Northwest Russia.

Biology: Unknown.

Brevicornu fissicauda (Lundström, 1911)

Material: NORWAY, EIS 28, **AK:** Oslo, Østensjø, Ljanselva, Skullerud, (32V PM 0314 3745), 17 June 2009, 1♂, Leg. G. Søli.

Nordic distribution: Nemoral – boreonemoral. In Sweden recorded from Skåne and Öland (Kjærandsen et al. 2007).

World distribution: Holarctic; widely distributed in Europe. Also recorded from East Palearctic.

Biology: Unknown.

Exechia spinigera Winnertz, 1863

Material: NORWAY, EIS 28, **BØ:** Nedre Eiker, Mjøndalen, Ryggkollen [W] (32W NM 5903 2453), 3 August–28 September 2008, 1♂, Leg. L. O. Hansen (Malaise trap. Sand pit in pine forest).

Nordic distribution: A boreal species. In Sweden recorded from Lule Lappmark only (Kjærandsen et al. 2007).

World distribution: Palearctic, in Europe recorded with certainty from Sweden, Finland and North Russia only. Records from e.g. The Netherlands, and Poland, probably refer to *E. spinuligera* Lundström, Also recorded from East Palearctic.

Remarks: A difficult name with questionable

identity as the original type material is lost (see Kjærandsen et al. 2007).

***Greenomyia mongolica* Laštovka & Matile, 1974**

Material: NORWAY, EIS 28, **AK:** Oslo, Bleikøya [N] (32V NM 9750 4035), 29 August–1 November 2008, 1♂, Leg. A. Endrestøl (Malaise trap. Forest edge).

Nordic distribution: A boreonemoral species. In Sweden known from the Stockholm area (Kjærandsen et al. 2007).

World distribution: Palaearctic; in Europe known from Russia C (Moscow Prov.), Estonia and Sweden.

Remarks: This rare species has according to Kurina (1997) a distribution of the Balto-Eurasian distribution, connected to the spruce and fir forests of the South Taiga. The records from Sweden and Norway, however, point to an even more western

distribution.

Biology: Larvae observed on dead wood with mycelium (Zaitzev 1982 in Kurina 1997).

***Mycetophila britannica* Laštovka & Kidd, 1975**

Material: NORWAY, EIS 37, **AK:** Ullensaker, Sessvollmoen, Aurtjernet W (32W PM 1684 7912, 200 masl), 30 August–1 October 2008, 1♂, Leg. L. O. Hansen (Malaise trap. Sandy area).

Nordic distribution: Nemoral. Not recorded from Sweden.

World distribution: Palearctic; in Europe with a southern and western distribution, recorded from Denmark, Germany, The Netherlands, Great Britain, Ireland, France, Portugal, Spain, Italy, Greece, Crete, and Cyprus. Also recorded from the Near East.

Biology: Larvae polyphage, reared from *Armillaria mellea*, *Hebeloma crustuliniforme*,



Figure 1. The striking fungus gnat *Greenomyia mongolica* Lastovka & Matile, 1974 was found in Oslo in 2008. The species has previously only been recorded from Sweden, Estonia and near Moscow in Russia. (Photo: Karsten Sund, Natural History Museum, Oslo)

Russula nigricans and *Melanopus squamosus*. In England recorded from all months except February and March (Laštovka & Kidd 1974)

***Mycetophila distigma* Meigen, 1830**

Material: NORWAY, EIS 28, **AK:** Oslo, Hengsenga (32V NM 9341 4318), 8 August–7 September 2007, 2♂♂, Leg. A. Endrestøl (Malaise trap); Søndre Nordstrand, Ljanselva, Liadalen (32V PM 0051 3589), 12 May–13 June 2009, 1♂, Leg. G. Søli & E. Rindal (Malaise trap); Nordstrand, Ljanselva, "Urskog" (32V PM 0179 3679), 1 August–11 September 2009, 1♂, Leg. G. Søli & E. Rindal (Malaise trap).

Nordic distribution: Boreal. In Sweden recorded from Lule Lappmark only (Kjærandsen et al. 2007).

World distribution: Palearctic; in Europe with a northern distributions, recorded from Germany, Switzerland, Czech Republic, Slovakia, Poland, Belarus, Northwest Russia and Sweden.

Biology: Unknown.

***Mycetophila sigillata* Dziedzicki, 1884**

Material: NORWAY, EIS 28, **AK:** Oppegård, Prosted (32V NM 9749 2997), 9–10 June 2007, 1♂, Leg. G. Søli (sweep net)

Nordic distribution: Boreal – boreonemoral. Not recorded from Sweden.

World distribution: Holarctic; a wide distribution in the Palearctic, recorded from most of Europe. Also recorded from East Palaeartic and from the Near East.

Biology: Larvae reported to feed on a wide variety of fungal fruiting bodies (Zaitzev 2003).

***Mycetophila stricklandi* (Laffoon, 1957)**

Material: NORWAY, EIS 17, **TEI:** Kviteseid, Øvre Landsverk, 1 June–15 July 1999, 1♂; 15 July–15 September 1999, 4♂♂, Leg. L. O. Hansen & D. Wisland (Malaise trap); EIS 28, **AK:** Bærum, Skustadfossen (32 VNM 82024 37593 ±150 m), 17 May 2009, 4♂♂, Leg. G. Søli.

Nordic distribution: Boreal – boreonemoral. In Sweden recorded from Östergötland and Jämtland (Kjærandsen et al. 2007).

World distribution: Holarctic; in the Palearctic recorded only from Great Britain, Sweden,

Finland, North and Central Russia.

Biology: Unknown.

***Mycomya (Mycomya) bisulca* Lackschewitz, 1937**

Material: NORWAY, EIS 37, **AK:** Ullensaker, Sessvollmoen W (32V PM 1780 8054, 208 masl), 11–26 June 2007, 3♂♂, Leg. L. O. Hansen (Malaise trap. Sandy pine forest).

Nordic distribution: Boreal. In Sweden recorded from Lule Lappmark only (Kjærandsen et al. 2007).

World distribution: Palearctic; in Europe only recorded from Sweden, Finland, Estonia and Latvia. Also recorded from East Palaeartic.

Biology: Unknown.

***Neuratelia subulata* Zaitzev, 1994**

Material: NORWAY, EIS 28, **AK:** Oslo, Østensjø, Ljanselva, Skullerud (32V PM 0314 3745), 17 June 2009, 1♂ 1♀ (?), Leg. G. Søli.

Nordic distribution: Boreal-boreonemoral. Not recorded from Sweden.

World distribution: Palearctic, with a scattered distribution in Europe. Recorded from Switzerland, Czech Republic, Hungary, Latvia, and Central Russia.

Biology: Unknown.

***Rymosia fraudatrix* Dziedzicki, 1910**

Material: NORWAY, EIS 79, **STI:** Oppdal, Kongsvold, Spranbekken (1100 masl), 10 August–7 September 1994, 1♂, Leg. J. Skartveit.

Nordic distribution: Boreal. In Sweden recorded from Lule Lappmark only (Kjærandsen et al. 2007).

World distribution: Palearctic, recorded from Germany, Switzerland, Czech Republic, Slovakia, Latvia, Sweden, Finland, and North Russia.

Biology: Unknown.

***Sceptonia pilosa* Bukowski, 1934**

Material: NORWAY, EIS 27, **BØ:** Kongsberg, Skollenborg, Labro (32V NM 3822 0911, 120 masl), 2 August–28 September 2008, 1♂, Leg. L. O. Hansen (Malaise trap. Pine forest/ Sand pit); EIS 37, **AK:** Ullensaker, Sessvollmoen W (32V PM 1780 8054, 208 masl), 11–26 June 2007, 1♂;

26 June–25 August 2007, 2♂♂, Leg. L. O. Hansen (Malaise trap. Sandy pine forest).

Nordic distribution: Boreonemoral. In Sweden recorded from Småland and Östergötland (Kjærandsen et al. 2007).

World distribution: Palaearctic, recorded from France, Great Britain, North Russia, Germany, Switzerland, The Czech Republic, Slovakia, Ukraine, Slovenia, Croatia, and Bulgaria.

Biology: Unknown.

Tetragoneura obirata Plassmann, 1990

Material: NORWAY, EIS 37, **AK:** Ullensaker, Sessvollmoen, Aurtjernet W (32W PM 1684 7912, 200 masl), 30 August–1 October 2008, 1♂, Leg. L. O. Hansen (Malaise trap. Sandy area).

Nordic distribution: Boreal-boreonemoral. In Sweden recorded from Småland, Östergötland, Västergötland, Västerbotten and Lule Lappmark (Kjærandsen et al. 2007).

World distribution: Palaearctic; with a Nordic distribution, recorded from Sweden, Finland and North Russia only.

Biology: Unknown.

Acknowledgements. We are most grateful to Norsk Naturarv and Maridalens venner for financially supporting our collecting activity in the Oslo area. Our sincere thanks also to Dr. Jostein Kjærandsen (ArtDatabanken, Sweden) for valuable information, among others concerning the identity of *Mycetophila distigmata*, and to Karsten Sund for taking the great photo of *Greenomyia mongolica*.

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Received: 3 November 2009
Accepted: 30 November 2009