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NINE NEW FUNGUS GNATS (DIPTERA, SCIAROIDEA, MYCETOPHILIDAE) OF PORTUGAL

EUGÉNIA RIBEIRO *

SUMMARY: In Vilar de Mouros (North of Portugal) we used a Malaise trap, to access entomological biodiversity of the region. Some of the specimens collected are treated in this work. Data for nineteen mycetophilid species are given. Nine of these species are new records to the entomofauna of Portugal. For ten species, a new locality is presented. The new species for Portugal are: *Apolephthisa subincana* (Curtis, 1837); *Mycomya fimbriata* (Meigen, 1818); *Mycomya occultans* (Winnertz, 1863); *Neoempheria bimaculata* (Von Roser, 1840); *Neoplatyura modesta* (Winnertz, 1863); *Phronia tyrrhenica* Edwards, 1928; *Platurocypta testata* (Edwards, 1925); *Sceptonia pilosa* Bukowski, 1934 and *Tetragoneura sylvatica* (Curtis, 1837).
Key words: Mycetophilids, Malaise traps, Portugal.

RESUMO: Utilizou-se uma armadilha Malaise em Vilar de Mouros (Norte de Portugal), para estudar a sua biodiversidade de entomofauna. Alguns dos espécimens colhidos são estudados neste trabalho. São dados elementos acerca de dezanove espécies de micetofilídeos. Nove destas espécies são novas para a entomofauna de Portugal e para dez outras é dada uma nova área de distribuição. As espécies novas para Portugal são: *Apolephthisa subincana* (Curtis, 1837); *Mycomya fimbriata* (Meigen, 1818); *Mycomya occultans* (Winnertz, 1863); *Neoempheria bimaculata* (Von Roser, 1840); *Neoplatyura modesta* (Winnertz, 1863); *Phronia tyrrhenica* Edwards, 1928; *Platurocypta testata* (Edwards, 1925); *Sceptonia pilosa* Bukowski, 1934 e *Tetragoneura sylvatica* (Curtis, 1837)
Palavras chave: Micetofilídeos, armadilhas Malaise, Portugal.

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LUNA 1990

INTRODUCTION

Mycetophilids are a group of Diptera Nematocera with a large repartition along all the zoogeographical regions, which can be found in quite different habitats. In many species the larvae inhabit fungi and the adults look for wet places in forests.

The specimens from this study were collected by a Malaise trap, installed in Vilar de Mouros in the North of Portugal (U.T.M.: 29TNG 23). Ten species are new for that area and nine other mycetophilid species are recorded as new for Portugal (Fig. 1), being *Apolephthisa*, *Neoempheria*, *Platurocypta* and *Tetragoneura* new genus for the country. A total of 154 specimens from 19 species are the material of this study (Tab. 1).

For each genus some global data will be given and for each mycetophilid species data will be listed according to the type-locality, date(s) of collection and number of males and females collected. A sign (*) is added to the new records and their distribution is referred according to the catalogue of Palaearctic Diptera (SÓOS & PAPP, 1988). The site for each species is not listed because all the material proceeds from the same locality: Vilar de Mouros.

STUDIED MATERIAL

Apolephthisa Grzegorzek

Apolephthisa Grzegorzek, 1885: 205.

Type species: *Apolephthisa rara* Grzegorzek, 1885: 206 (Mon.) [=*subincana* (Curtis, 1837)].

It is a genus formed by a single species in the Palaearctic region. The larvae live under bark inside a mucilaginous tube and the adult activity is unknown (Hutson et *al.*, 1980). They are black and medium size.

* ***Apolephthisa subincana*** (Curtis, 1837)

Sciophila subincana. Brit. Ent., **13**: 641.

Type-locality: Holywood (Ireland).

Material examined: 31-VIII to 7-IX-2002, 1 ♂ + 1 ♀; 7-IX to 14-IX-2002, 1 ♀; 14-IX to 21-IX-2002, 1 ♀; 21-IX to 28-IX-2002, 1 ♀; 5-X to 12-X-2002, 2 ♀♀; 12-X to 19-X-2002, 1 ♀; 19-X to 26-X-2002, 1 ♀.

Distribution: Widely distributed in Europe.

Table 1 - Mycetophilid species, number of males and females and their respective total.

Species	Number of males	Number of females	Total
Apolephthisa subincana	1	8	9
Mycomya fimbriata	2	0	2
Mycomya flavicollis	7	2	9
Mycomya occultans	1	0	1
Mycomya sp.	0	1	1
Neoempheria bimaculata	8	13	21
Neoplatyura modesta	23	5	28
Neoplatyura nigricauda	8	0	8
Neoplatyura sp.	0	1	1
Phronia nigricornis	0	2	2
Phronia nitidiventris	1	0	1
Phronia tyrrhenica	2	0	2
Platurocypta testata	4	2	6
Rymosia fasciata	4	2	6
Sceptonia cryptocauda	1	0	1
Sceptonia nigra	1	0	1
Sceptonia pilosa	1	0	1
Synapha fasciata	5	2	7
Tetragoneura sylvatica	38	6	44
Trichonta vitta	0	1	1
Zygomyia semifusca	1	1	2
TOTAL	**108**	**46**	**154**

Mycomya Rondani

Mycomya Rondani, 1856: 194.

Type species: *Sciophila marginata* Meigen, 1818: 249 (original designation).

It is one of the largest genera of fungus gnats, appearing in a great number of habitats. In some species the males show a long spur on the inner apex of the mid-coxa that curves up towards the body. The group was particularly studied by VAISANEN (1984), who revised the genus in the Holarctic region. Our specimens belong to three different species, two of them new to Portugal: *Mycomya fimbriata* (Meigen) and *Mycomya occultans* (Winnertz). One female is designated as *Mycomya* sp. because it was not possible to reach the specific level.

* ***Mycomya fimbriata*** (Meigen, 1818)

Sciophila fimbriata. Syst. Beschr., **1**: 247.

Type-locality: not given (? Germany).

Material examined: 19-X to 26-X-2002, 1 ♂; 2-XI to 9-XI-2002, 1 ♂.

Distribution: Widespread in Europe and known from India in Asia.

Mycomya flavicollis (Zetterstedt, 1852)

Sciophila flavicollis. Dipt. Scand., **11**: 4121.

Type-locality: "Gottlandia ad Westo in Hall" (Sweden).

Material examined: 24-VIII to 31-VIII-2002, 3 ♂♂; 31-VIII to 7-IX-2002, 1 ♂; 7-IX to 14-IX-2002, 1 ♂; 12-X to 19-X-2002, 1 ♀; 9-XI to 16-XI-2002, 1 ♂; 16-XI to 23-XI-2002, 1 ♂ + 1 ♀.

* ***Mycomya occultans*** (Winnertz, 1863)

Sciophila occultans. Verh. zool.-bot. Ges. Wien, **13**: 719.

Type-locality: not given (? Germany)

Material examined: 2-XI to 9-XI-2002, 1 ♂.

Distribution: Widely distributed in Europe and known from Japan in Asia.

Mycomya sp.

Material examined: 28-IX to 5-X-2002, 1 ♀.

Neoempheria Osten-Sacken

Neoempheria Osten-Sacken, 1878: 270.

Type species: *Sciophila striata* Meigen, 1818: 246 (designation Coquillett, 1910: 574).

Mainly a Neotropical genus with few species in the Palaearctic region. Many of these ones show patterns in the wings.

* ***Neoempheria bimaculata*** (Von Roser, 1840)

Sciophila bimaculata. Correspbl. wurtt. landw. Ver. Stuttg. (N.S.), **17**(1): 51.

Type-locality: not given (? Wurttemberg).

Material examined: 17-VIII to 24-VIII-2002, 1 ♀; 14-IX to 21-IX-2002, 1 ♀; 21-IX to 28-IX-2002, 1 ♀; 5-X to 12-X-2002, 1 ♂; 12-X to 19-X-2002, 1 ♀; 19-X to 26-X-2002, 4 ♂♂ + 1 ♀; 26-X to 2-XI-2002, 1 ♀; 2-XI to 9-XI-2002, 3 ♂♂ + 6 ♀♀; 9-XI to 16-XI-2002, 1 ♀.

Distribution: Known for many countries in Europe.

Neoplatyura Malloch

Neoplatyura Malloch, 1928: 601.

Type species: *Platyura setiger* Johannsen, 1910: 252 (original designation); not Palaearctic.

It is well represented in all the zoogeographical regions and presents a high variation in the structure of the genitalia. In our material two species appear: *Neoplatyura modesta* (Winnertz) and *Neoplatyura nigricauda* (Strobl), the first one being a new record for Portugal. A female is considered *Neoplatyura* sp. because there are no available males.

* ***Neoplatyura modesta*** (Winnertz, 1863)

Platyura modesta. Verh. zool.-bot. Ges. Wien, **13**: 691.

Type-locality: not given [im Walde, ?Crefeld (=Krefeld)] [D].

Material examined: 17-VIII to 24-VIII-2002, 1 ♂; 24-VIII to 31-VIII-2002, 4 ♂♂ + 1 ♀; 31-VIII to 7-IX-2002, 1 ♂ + 2 ♀♀; 7-IX to 14-IX-2002, 2 ♂♂; 14-IX to 21-IX-2002, 5 ♂♂ + 1 ♀; 21-IX to 28-IX-2002, 4 ♂♂; 28-IX to 5-X-2002, 3 ♂♂ + 1 ♀; 5-X to 12-X-2002, 3 ♂♂.

Distribution: Known in North, West and Central Europe.

Neoplatyura nigricauda (Strobl, 1893)

Platyura nigricauda. Wien. ent. Ztg., **12** (5): 164.

Type-locality: "Lesina" (=Hvar) (Croatia).

Material examined: 7-IX to 14-IX-2002, 4 ♂♂; 14-IX to 21-IX-2002, 1 ♂; 21-IX to 28-IX-2002, 1 ♂; 5-X to 12-X-2002, 2 ♂♂.

Neoplatyura sp.

Material examined: 19-X to 26-X-2002, 1 ♀.

Phronia Winnertz

Phronia Winnertz, 1863: 875.

Type species: *Phronia rustica* Winnertz, 1863: 875 (designation Johannsen, 1909: 126) [= *exigua* (Zetterstedt, 1852)].

Authors as WINNERTZ (1863), DZIEDZICKI (1889), EDWARDS (1925) and HACKMAN (1970) contributed greatly to the knowledge of this genus in the Palaearctic

Region. In North America, JOHANNSEN (1912), LAFFOON (1965) and GAGNÉ (1975) were some of the authors that increased the number of records studying these small brown and black fungus gnats. Though the biology is scarcely known, studies from STEENBERG (1924, 1943), EDWARDS (*op. cit.*), FREEMAN (1956) and BUXTON (1960) brought some knowledge about the larvae in this genus.

Phronia nigricornis (Zetterstedt, 1852)

Mycetophila nigricornis. Dipt. Scand., **11**: 4245.

Type-locality: "in Jemtlandia ad alpem Mulfjellet" (Sweden).

Material examined: 12-X to 19-X-2002, 1 ♀; 16-XI to 23-XI-2002, 1 ♀.

Phronia nitidiventris (Van der Wulp, 1858)

Mycetophila nitidiventris. Tijdschr. Ent., **2**: 181.

Type-locality: Netherlands.

Material examined: 12-X to 19-X-2002, 1 ♂.

* ***Phronia tyrrhenica*** Edwards, 1928

Phronia tyrrhenica. Encycl. ent. (B.II) Dipt., **4**: 163.

Type-locality: Corsica (France).

Material examined: 19-X to 26-X-2002, 2 ♂♂.

Distribution: Well distributed in Europe.

Platurocypta Enderlein

Platurocypta Enderlein, 1910: 76.

Type species: *Platurocypta limbatifemur* Enderlein, 1910: 76 (mon.); not Palaearctic.

It is a large genus in the tropics but only two species are known from Europe. It is close to *Mycetophila*, but in *Platurocypta* the Costa is extended beyond the tip of vein R5.

* ***Platurocypta testata*** (Edwards, 1925)

Epicypta testata. Ent. Tidsskr., **45** (4): 167.

Type-locality: not given (? Krefeld) [D].

Material examined: 19-X to 26-X-2002, 1 ♂; 26-X to 2-XI-2002, 2 ♂♂ + 1 ♀; 2-XI to 9-XI-2002, 1 ♂ + 1 ♀.

Distribution: Widely distributed in Europe and also known from the Nearctic Region.

Rymosia Winnertz

Rymosia Winnertz, 1863: 810.

Type species: *Mycetophila discoidea*: Winnertz, 1863: 810 (not Meigen, 1818) (designated Johannsen, 1909: 102) [=*fasciata* (Meigen, 1804)].

It is a genus mainly of Holarctic distribution, with more than forty Palaearctic species. The adults are found in wet places in forests or inside caves and the larvae breed in fungi. They possess a certain preference to infest the fungi through the bottom of the stipe. Authors as WINNERTZ (1863), JOHANNSEN (1909), EDWARDS (1925), LANDROCK (1927), MATILE (1963), BURGHELE-BALACESCO (1967) and CHANDLER (1994) largely contributed for the better knowledge of this genus.

Rymosia fasciata (Meigen, 1804)

Mycetophila fasciata. Syst. Beschr., **1**: 131.

Type-locality: not given (? Germany).

Material examined: 12-X to 19-X-2002, 2 ♂♂; 26-X to 2-XI-2002, 1 ♂ + 2 ♀♀; 2-XI to 9-XI-2002, 1 ♂.

Sceptonia Winnertz

Sceptonia Winnertz, 1863: 907.

Type species: *Mycetophila nigra* Meigen, 1804: 92 (designation Johannsen, 1909: 113).

It is a Holarctic genus with small slender body and black specimens. Most species are rather similar, the male genitalia being the better distinctive character to separate them. The females are mainly identified on characters based on colour and also by their association with males. From our three species, two of them represent new records to Portugal: *Sceptonia nigra* (Meigen) and *Sceptonia pilosa* Bukowski.

Sceptonia cryptocauda Chandler, 1991

Sceptonia cryptocauda. Brit. J. Ent. Nat. Hist., **4**: 151.

Type-locality: Ireland, Roscommon, Lough Key Forest Park

Material examined: 26-X to 2-XI-2002, 1 ♂.

* ***Sceptonia nigra*** (Meigen, 1804)

Mycetophila nigra. Klass. Beschr., **1**: 92.

Type-locality: not given (Germany).

Material examined: 17-VIII to 24-VIII-2002, 1 ♂.

Distribution: Widely distributed in Europe.

* ***Sceptonia pilosa*** Bukowski, 1934

Sceptonia pilosa. Konowia, **13**: 192.

Type-locality: "im Naturschutzgebiete von Krim unweit Aluscha" (USSR)

Material examined: 7-IX to 14-IX-2002, 1 ♂.

Distribution: Known for Ukrania and most countries in Europe.

Synapha Meigen

Synapha Meigen, 1818: 227.

Type species: *Synapha fasciata* Meigen, 1818: 227 (mon.).

It is a widespread genus with only two species in the Palaearctic region. Both of them are already known from our country.

Synapha fasciata Meigen, 1818

Synapha fasciata. Syst. Beschr., **1**: 227.

Type-locality: not given (?Aachen).

Material examined: 12-X to 19-X-2002, 3 ♂♂ + 1 ♀; 19-X to 26-X-2002, 2 ♂♂ + 1 ♀.

Tetragoneura Winnertz

Tetragoneura Winnertz, 1846: 18.

Type species: *Tetragoneura distincta* Winnertz, 1846: 19 (designation Johannsen, 1909: 34) [= *sylvatica* (Curtis, 1837)].

It is mainly a Neotropical genus, being represented by a few species in the Palaearctic region. They are small black fungus gnats which genitalia characters are important to distinguish the species.

* ***Tetragoneura sylvatica*** (Curtis, 1837)

Sciophila sylvatica. *Brit. Ent.*, **13**: 641.

Type-locality: England (Great Britain).

Material examined: 17-VIII to 24-VIII-2002, 1 ♂ + 1 ♀; 24-VIII to 31-VIII-2002, 6 ♂♂; 31-VIII to 7-IX-2002, 5 ♂♂ + 1 ♀; 7-IX to 14-IX-2002, 3 ♂♂; 14-IX to 21-IX-2002, 1 ♂; 21-IX to 28-IX-2002, 1 ♂; 28-IX to 5-X-2002, 8 ♂♂ + 3 ♀♀; 5-X to 12-X-2002, 6 ♂♂; 12-X to 19-X-2002, 3 ♂♂; 19-X to 26-X-2002, 4 ♂♂ + 1 ♀.

Distribution: Widespread in Europe.

Trichonta Winnertz

Trichonta Winnertz, 1863: 847.

Type species: *Mycetophila melanura* Staeger, 1840: 259 (designation Johannsen, 1909: 94).

The genus was revised in the Holarctic region by GAGNÉ (1981) and it is related to *Phronia*. *Trichonta* is a large genus with a more Northern distribution and the adults, from yellow to brown or black in colour, appear usually in wet forests near damp ravines.

Trichonta vitta (Meigen, 1830)

Mycetophila vitta. *Syst. Beschr.*, **6**: 300.

Type-locality: not given (Europe).

Material examined: 12-X to 19-X-2002, 1 ♀.

Zygomyia Winnertz

Zygomyia Winnertz, 1863: 901.

Type species: *Mycetophila vara* Staeger, 1840: 266 (designation Johannsen, 1909: 112).

It is a small genus, mainly from the Holarctic Region with some species more frequent in the South of Europe.

Zygomyia semifusca Meigen, 1818

Mycetophila semifusca. *Syst. Beschr.*, **1**: 267.

Type-locality: Europe.

Material examined: 5-X to 12-X-2002, 1 ♀; 19-X to 26-X-2002, 1 ♂.

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