Bonn. zool. Beitr.	Bd. 50	H. 4	S. 293–304	Bonn, Januar 2003
			1	

Revisionary notes on European Phoridae (Diptera)

R. H. L. Disney

Abstract. Eleven new synonyms are proposed in the genus *Megaselia*. A checklist of corrections and additions to the latest Catalogue is provided.

Key words. Diptera, Phoridae, new synonyms, catalogue update.

Introduction

The most recent key to the European genera of Phoridae and guide to the literature required for species identifications is given by Disney (1998b). This needs supplementing by several subsequent works that are cited in context below. The most recent catalogue (Disney 1991a) was already ten years out of date when published, having been in press for that period of time. The most recent checklist of British Diptera (Chandler 1998) updates these publications. The purpose of the present paper is to report newly recognised synonyms and to provide updates to the checklist for the western Palaearctic, mainly European, species.

Methods

Pinned specimens do not allow examination of details that are now known to be critical for the recognition of many species, especially in the giant genus *Megaselia* Rondani. Furthermore the pin has sometimes been found to obscure critical features (for example see under *M. pedatella* below). It has proved necessary to remount many pinned specimens from museums on slides in order to resolve taxonomic problems. The Museum Koenig has been particularly helpful in allowing me to remount many critical specimens. To remount a pinned specimen it is first wetted with 70% alcohol before being placed in a watchglass of water. After an hour or two it can be carefully slid off its micropin or card point. It is then briefly blotted on a piece of tissue before being placed in a vial of Barber's Fluid (a mixture of the following proportions: 330 ml 95% alcohol, 300 ml distilled water, 150 ml ethyl acetate, 120 ml ether, 10–20 drops of glacial acetic acid) for 24 hours. It is then washed for a minute in 70% alcohol before proceeding to slide mounting.

In the present study all specimens have been mounted on slides in Berlese Fluid. This can be purchased from some commercial suppliers. One should specify the formula when ordering from such suppliers, as some unsatisfactory variants have been appearing on the market. I use the following formula, which has been found to be the best, in terms of its clearing properties and durability without discolouration (Disney 1994b):

12 g
C
20 g
5 ml
5 ml
30-40 ml

For permanent storage slide mounts in Berlese Fluid are dried on a hotplate and then the coverslips ringed with a modern tough nail varnish. Cheap varnish is apt to flake off in time, so one should use brands that claim to be extra durable (the brand I use contains ethyl

acetate, butyl acetate, toluene, nitrocellulose, tosylamide/formaldehyde resin, dibutyl phthalate, camphor, nylon-66 and serica). It is recommended that slide mounts are stored horizontally. The collection should be checked at least once a year for the occasional specimen where inadequate ringing has allowed entry of air beneath a coverslip. Remedial work should prevent the need for the remounting that will be required if such slide mounts are left to deteriorate further.

Notes on western Palaearctic species of Megaselia Rondani

The identification of the species of the giant genus *Megaselia* Rondani,1856, has been bedevilled by inadequate descriptions that usually lack figures of critical characters, by poorly constructed keys based on variable characters (such as the costal index), by descriptions based on one sex only, and by the high frequency of misidentifications of museum specimens used as voucher specimens to check identifications. A further complication is that the boundaries of the genus remain uncertain (see Disney 1994b). Existing keys frequently exclude species formerly assigned to other genera but now reassigned to *Megaselia*. Nowhere are these problems more manifest than in the situation for the European species of the genus.

This genus is apparently one of the largest in the Diptera, but most species remain undescribed. Immense confusion prevails at the species recognition level. This is unfortunate, as the genus probably embraces a greater variety of larval lifestyles than any other genus of insects (Disney 1994b). The resolution of the alpha taxonomy is the necessary prerequisite for an understanding of this most extraordinary manifestation of biodiversity. To this end the current priority is to produce a reliable key to the males. The Handbook on the males of the British species (Disney 1989a), being the first such key based on slide mounted specimens, is the point of reference when considering those species not covered by it.

Previous keys were all based on micropinned specimens. My Handbook and subsequent revisionary studies (e.g. Disney 1999) have demonstrated that a high frequency of misidentifications are present among classic collections of pinned Phoridae, with type series frequently being mixtures of two or more species. It is essential, therefore, that holotypes, lectotypes or neotypes are employed as voucher specimens whenever possible.

Megaselia berndseni (Schmitz)

Megaselia undulans Schmitz, 1940a: 55. Syn. nov.

Schmitz distinguished *M. undulans* from *M. berndseni* by minor differences in the thin veins of the wing. However, the latter species is widely distributed and variable in size, with consequential small allometric variations in the wing veins. I have remounted a cotype male of *M. undulans* (in the ZFMK) labelled 'Maciera de Cambra, 4. 7. 1938'. It is indistinguishable from *M. berndseni*. I therefore propose the synonymy of *M. undulans* with *M. berndseni*.

Megaselia chorogi Naumov

This species of Naumov (1979) is covered by no key. It runs to couplet 8 in my Handbook (Disney 1989a), by virtue of its distorted proctiger, or to couplet 76. It is immediately recognised by the brown patch at the wing tip, lying between the ends of veins 4 and 5.

Megaselia emarginata (Wood)

Plastophora furcilla Schmitz, 1956a: 43. Syn. nov.

I have remounted the unique holotype male of *M. furcilla* (in ZFMK) and report that it proves to be merely a pale (probably still slightly teneral) specimen of *M. emarginata*. I therefore herewith propose the synonymy of *M. furcilla* with Wood's species.

Megaselia infraposita (Wood)

Megaselia similifrons Schmitz, 1934: 31. Syn. nov.

Schmitz (1938a) reported *M. similifrons* from Ireland on the basis of a single female. As the females of this group of species are poorly known I therefore deleted this species from the British List (Disney 1989a). I have now remounted a male from the type series (in the ZFMK) labelled 'St Wendel, Saargebiet, 18.vi.1920, 1 male, Duda leg.'. It proves to be *M. infraposita*. Schmitz, however, compared his *M. similifrons* with *M. uliginosa* (Wood) and *M. angustifrons* (Wood), a synonym of *M. minor* (Zetterstedt). I herewith formally propose the synonymy of *M. similifrons* with *M. infraposita*.

Megaselia lactipennis (Lundbeck)

Aphiochaeta tibiella Lundbeck, 1920: 24. Syn. nov.

Schmitz (1952) designated the lectotype of M. lactipennis, which I subsequently remounted on a slide and compared with a fresh specimen from England; and I then illustrated its hypopygium (Disney 2000b). I have subsequently examined further specimens from Austria and Germany. In the light of the variation within this series I borrowed and remounted the lectotype of M. tibiella for comparison. Its hypopygium is indistinguishable from that of M. lactipennis. Both lectotypes were collected in the same month at the same locality. Lundbeck (1920) distinguished the two species by noting that the upper supra-antennal bristles were as far apart as the pre-ocellars in *M. tibiella*, in contrast to those of *M. lactipennis*, and by the sudden contraction at the base of the hind tibia in M. tibiella. However, in the remounted lectotype of this species the basal sockets of the pre-ocellars are 0.07 mm apart but the upper SA's only 0.04 mm apart. Likewise the hind tibiae of it and those of M. lactipennis are indistiguishable. In his subsequent key, Lundbeck (1922) separated the two species on the basis of the costal cilia being 'short' or 'long'. In both the lectotypes the costal cilia of section 3 are 0.07 mm long. I conclude that M. tibiella is a synonym of M. lactipennis.

Megaselia latifrons (Wood)

Megaselia proprior Colyer, 1956: 97. Syn. nov.

Colyer described M. propior on the basis of a single male from Yugoslavia. I have remounted this specimen on a slide and find it to be M. latifrons, but with a bare mesopleuron. The latter species normally has a few hairs on each mesopleuron, but with the number being different on the two sides. The range is 0–10 hairs, with a mean of 4.2 and mode of 4 (n = 60). Colyer failed to allow for there being 0 hairs in some specimens. I therefore synonymise M. propior with M. latifrons.

Megaselia longicostalis (Wood)

Megaselia ardua Schmitz, 1940b: 3. Syn. nov.

This is a variable and widely distributed species in the western Palaearctic. Its recognition has been clarified recently (Disney, 1999). Since then I have remounted

a male paratype of *M. ardua* (in the ZFMK) that was collected in the Azores by Frey. I have also examined a set of slides (in the ZFMK), made by Schmitz, of the parts of two male paratypes from the Azores but collected by Stora. These three paratypes are indistinguishable from *M. longicostalis* and so I herewith propose the synonymy of *M. ardua* with Wood's species.

Megaselia pedatella (Schmitz)

Megaselia rara Colyer, 1962: 266. Syn. nov.

I have remounted the holotype male (and only known specimen) of *M. rara*, which had been pinned through both mesopleura. This remount revealed that, contrary to Colyer's perception, the mesopleuron is not bare but has four small hairs on the right mesopleuron and three on the remains of the left side. This error meant that Colyer failed to recognise that his specimen is *M. pedatella*. I therefore synonymise *M. rara* with the latter species. In my key to British species (Disney 1989a) *M. pedatella* will run to couplet 80 lead 1. The hypopygium (Fig. 1) and the costal cilia exceeding 0.1 mm will immediately distinguish it from *M. fenestralis* (Schmitz).

Megaselia striolata Schmitz

Megaselia durskae Disney, 1989c: 250. Syn. nov.

This species was named after a dull long streak near the lower edge of the second quarter of the male's hind femur. When I examined the pinned holotype (and its slide-mounted wing, the other wing being missing) and a pinned paratype (in the ZFMK) I was unable to discern this feature. However, a fleeting, unfocussed impression of such a streak was obtained when viewed from some angles in which the out-of-focus other legs were partly blocking one's view. I therefore remounted these two specimens. This showed that the hind femora are normal and lack any distinctive streaks. Furthermore, Schmitz (1940a) referred to the darkened wing membrane as a feature of this species; but his photograph of his slide-mounted wing (Taf. III, fig. 1) belies this description, as does the wing of the remounted paratype. Nevertheless Schmitz's slide-mounted wing of the holotype is indeed darker than his photo of it. It would seem, therefore, that this darker appearance is an artefact induced by the mounting medium employed, and that this change occurred between his photographing of the wing and his preparation of the description of it.

Having thus negated two diagnostic features of this species, I then ran these males through the keys in my Handbook. They run out at couplets 258 or 182. As *M. durskae* also runs to 258 I compared the two holotypes. The only difference is in the wing measurements. Schmitz gave those of *M. striolata* as costal index 0.39 and costal ratios 11½:4:3 (i.e. 3.83:1.33:1). My measurements of the same wing are length 1.22 mm, costal index 0.39–0.40, costal ratios 3.62:1.06:1, and costal cilia 0.07 mm. For the holotype of *M. durskae* they are length 1.04 mm, costal index 0.43, costal ratios 2.79:1.21:1, and costal cilia 0.07 mm. The only significant difference is in the costal ratios. The ratios for the remounted paratype of *M. striolata* are 4.27:1.42:1 and for the paratype of *M. durskae* 2.83:1.32:1. Thus the ratios are evidently variable for both segregates. In proposing the synonymy of *M. durskae* with *M. striolata*, therefore, I merely increase the recorded ranges of these ratios for the one species. The hypopygium is figured by Disney (1989c).

Megaselia sulphuripes (Meigen)

A male specimen in the Schmitz Collection (ZFMK) labelled 'M. tibiella Godesbg 14.10.49' has been remounted and found to be M. sulphuripes. This is probably a case of a label having been attached to the wrong specimen in error.

Megaselia trichorrhoea (Schmitz)

Megaselia smirnovi Naumov, 1979: 418. Syn. nov.

I have remounted a male paratype on a slide and find it to be *M. trichorrhoea*. Naumov referred to the key of Zaitsev (1969 [1989]), which was compiled from Schmitz (1938b–1958) and Lundbeck (1922) by collation, having first eliminated species not then recorded from the USSR. The result is that this key must "be used with caution" (Disney 1998b). Specimens not running down in this key should have been taken through the keys of Schmitz (*loc. cit.*) before concluding that they belonged to an undescribed species. However, Naumov made no reference to Schmitz's monograph. I have no hesitation, therefore, in proposing the synonymy of *M. smirnovi* with *M. trichorrhoea*.

This species runs to couplet 291 lead 1 in my Handbook (Disney 1989a). It is immediately distinguished from *M. latifrons* (Wood) by the short anal tube (Fig. 2). I have remounted the damaged holotype of *M. ustulata* (Schmitz), from the Schmitz Collection, on a slide. It also runs to couplet 291. It has far more hairs on each cercus but much weaker hairs on the epandrium (Fig. 3). The male of *M. pamirica* (1979) also runs to couplet 291. It not only has fewer than ten hairs on each cercus but the labella are enlarged and below their apical halves they have numerous short blunt spinules, which gradually give way to small scales anteriorly.

Megaselia tumida (Wood)

Aphiochaeta setifer Lundbeck, 1920: 31. Syn. nov.

I have remounted the holotype of *Megaselia setifer* and found it to be a male of *M. tumida*. At couplet 33 in Lundbeck's (1922) key he fails to allow for the male of this species, as the thickened costa character he employs only applies to the female. Consequently males of *M. tumida* run out to *M. setifera* (sic) at couplet 42, instead of with the females at couplet 36. I therefore synonymise *M. setifer* with *M. tumida*.

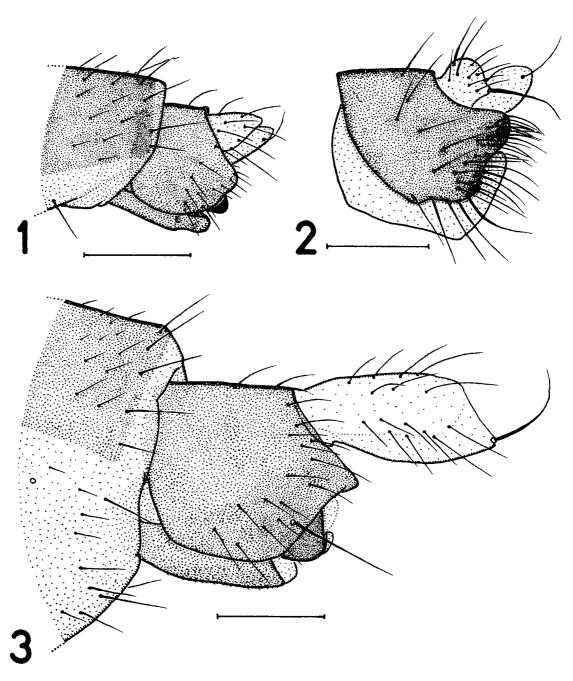
A female in the Schmitz Collection is labelled "Ostpreussen, Grauz. 30. vii. 1930. P. Speiser. 81. 1935 verglichen *Meg.* (*M.*) *setifera*", but it is not *M. tumida*.

Megaselia ultrabrevis Schmitz

Megaselia pseudobrevior Disney, 1988b: 157. Syn. nov.

Schmitz (1937) cited the very short costal index of 0.26–0.27 as being diagnostic for this Spanish species, as reflected in its name. My measurements for his slide mounted wing are 1.7 mm long; costal index 0.26–0.27, costal ratios 3.91:1.37:1 and costal cilia 0.06 mm long. Schmitz gave the wing length as 1.32 mm and the costal ratios as 17:5:4 (= 4.25:1.25:1). I have remounted a cotype male (in the ZFMK) and find its measurements to be 1.08 mm long, costal index 0.30–0.32, costal ratios 3.09:0.93:1 and costal cilia 0.06 mm long. The costal index of the type series of *M. pseudobrevior*, from the Canary Islands, is 0.34–0.36. However, since then I have seen specimens from Spain with a costal index of only 0.30. The hypopygia of all these specimens are indistinguishable. I conclude that Schmitz selected a

specimen, to measure, whose costal index happened to be at the lowest end of a spectrum of variation of 0.26–0.36. The very short (<0.3) costal index, therefore, is not diagnostic for this species. Furthermore, I conclude that *M. pseudobrevior* is a synonym of *M. ultrabrevis*. The species will run to couplet 217 lead 1 in my Handbook. It differs from *M. brevior* (Schmitz) in the details of the hypopygium (see Disney, 1988b).



Figs 1–3. Megaselia males, left faces of hypopygia. 1 - M. pedatella, 2 - M. trichorrhoea, 3 - M. ustulata. (Scale bars = 0.1 mm).

Additions and amendments to the checklist of western Palaearctic Phoridae

The most recent key to European genera includes citation of the literature required for the identification of the species of each genus (Disney 1998b). Although the most recent Catalogue (Disney, 1991a) was published later than a checklist of British species (Disney 1983, 1989a), it was compiled earlier. The most recent checklist of British species (Chandler 1998) updates these publications but omits the non-Palaearctic synonyms for the cosmopolitan and Holarctic species. These were all included in the typescript submitted for the Catalogue but were then excised by the editors. This geographic criterion for exclusion of synonyms is not helpful. Sometimes valuable biological data, gathered outside the Palaearctic Region, have been published under such synonyms. The following list includes amendments and additions to the Catalogue and these checklists of British species, but repeating additions subsequent to the 1989 list already included in Chandler (1998). Citation of the works responsible for amendments (synonyms, misidentifications, etc.) are only given when not covered by Chandler's work. Asterisks indicate species rescued from synonymy. The designation Syn. nov. refers to the notes in the preceding section of this paper.

Notes in square brackets indicate couplets (c.) that these species will run to in the keys to the British species (Disney 1983, 1989a) and/or citation of works giving critical figures published subsequent to original descriptions or key works, or of previously undescribed sexes.

```
Aenigmatias franzi Schmitz, 1950. [Disney 1993]
A. lubbockii (Verrall, 1877). [Disney 1993]
  lubbocki auctt., lapsus
Chaetopleurophora spinosa Schmitz, 1935. [Disney 1998a - male]
Conicera crassicosta Disney, 1991c
C. tibialis Schmitz, 1925
  sobria Schmitz, 1936, Disney 1993
Diplonevra florescens (Turton, 1801)
  florea (Fabricius, 1794), Chandler 1998
D. praealpina (Schmitz, 1948)
  prealpina auctt., lapsus
Gymnophora prescherweberae Disney, 1997a
Lepta mendesi Schmitz, 1938. [Disney & Michailovskaya 2000]
Megaselia analis (Lundbeck, 1920). [Disney 1999]
M. andrenae Disney, 2000; in Disney, Scanni et al. 2000
M. angularis (Schmitz, 1924). [Disney 1991b]
M. angusta (Wood, 1909), *Disney 1999
  dimidia Schmitz, 1926, Disney 1999
  angusts subspecies angustina Schmitz, 1936, Disney 1999
  setulifera Smith, 1977, Disney 1999
  pulicaria auctt. nec (Fallén, 1823), Disney 1999
M. apophysata Schmitz, 1940. [Disney 1990a]
M. ashmolei Disney, 1990b
M. baezi Disney, 1990b
M. barbulata (Wood, 1909). [Disney 1991b]
M. berndseni (Schmitz, 1919)
   M. undulans Schmitz, 1940a, Syn. nov.
M. bistruncata Schmitz, 1936. [Disney 1990b, 1999]
M. brunneipennis Costa, 1857. [Disney 1995a, 1999]
M. buchsi Disney, 1999
```

```
M. canaryae Disney, 1990b
M. chorogi Naumov, 1979. [c. 8, 76]
M. clemonsi Disney, 1984
   apophysata Schmitz, 1940 partim (male only), misidentification, Disney 1993
M. coaetanea Schmitz, 1929. [Disney & Bayram 1999. c. 142 via 249]
M. costalis (von Roser, 1840). [Disney 1995a, 1999]
M. curvivenia Schmitz, 1928. [Disney 1999]
   curtivenia auctt., lapsus
M. devia Schmitz, 1936.
   compacta Schmitz, 1940, Disney & Durska 1999.
M. diversa (Wood, 1909)
   sordescens Schmitz, 1927, Disney 1993
   pollex Schmitz, 1937, Disney 1993
M. emarginata (Wood, 1908)
   M. furcilla (Schmitz, 1956a), Syn. nov.
M. eupygis Schmitz, 1929, *Disney 1999
M. exarcuata Schmitz, 1927. [Disney 1993]
M. fennicola (Beyer, 1958). [Disney 1993]
M. haraldlundi Disney, 1995b
M. henrydisneyi Durska, 1998: in Disney & Durska 1998. [c. 81]
M. iberiensis Disney, 1999
M. infraposita (Wood, 1909)
   M. similifrons Schmitz, 1934, Syn. nov.
M. intercostata (Lundbeck, 1921). [Disney 1995b]
M. jameslamonti Disney, 1995b
M. joannae Disney, 1998: in Disney & Durska 1998. [c. 218]
M. lactipennis (Lundbeck, 1920). [Disney 2000b, c. 182, 87]
   tibiella (Lundbeck, 1920), Syn. nov.
M. largifrontalis (Schmitz, 1939). [Disney 1999]
M. latifrons (Wood, 1910)
  proprior Colyer, 1956, Syn. nov.
M. longicostalis (Wood, 1912). [Disney, 1999]
  hybrida Schmitz, 1939, Disney 1999
  ardua Schmitz, 1940b, Syn. nov.
  clementsi Disney, 1978, Disney 1999
M. longifurca (Lundbeck, 1921), *Disney 1999
  spinolabella Disney, 1989, Disney 1999
M. marekdurskii Disney, 1998: in Disney & Durska 1998. [c. 166]
M. melanostola Schmitz, 1942
  balearica (Colyer, 1969), Disney 1993
M. monochaeta (Strobl, 1892), *Disney 1999
M. nectergata Disney, 1999
M. oviaraneae Disney, 1999
M. pamirica Naumov, 1979. [c. 291]
M. pedatella (Schmitz, 1926). [c. 80]
  rara Colyer, 1962, Syn. nov.
M. perfusca Schmitz, 1935. [Disney 1999]
M. petraea Schmitz, 1934. [Disney 1999]
M. pictorufa (Colyer, 1957)
  picotrufa auctt., lapsus
M. praeacuta (Schmitz, 1919)
  arietina Disney, 1991, Disney & Campadelli 1997
M. producta (Schmitz, 1921)
  sordescens auctt., nec Schmitz, 1927, Disney 1993
M. pulicaria (Fallén, 1823). [Disney 1999]
  sinuata Schmitz, 1926, Disney 1999
```

```
M. rotundapicis Disney, 1999
M. rupestris Schmitz, 1934. [Disney 1999]
M. spinata (Wood, 1910). [Disney 2000b]
M. stenoterga Disney, 1988b
M. striolata Schmitz, 1940b. [c. 182, 258]
  durskae Disney, 1989c, Syn. nov.
M. subtumida (Wood). [Disney 1999]
M. tamilnaduensis Disney: in Mohan et al. 1996, Disney & Durska 1999. [c. 285]
M. tenebricola Schmitz. [Disney 1999]
M. teneripes Schmitz, 1957. [Disney 1995b, 1999]
M. tergata (Lundbeck). [Disney 1999]
M. teresamajewskae Disney, 1998: in Disney & Durska 1998. [c. 203]
M. trichorrhoea (Schmitz, 1921). [c. 291]
  smirnovi Naumov, 1979, Syn. nov.
M. trojani Disney, 1998: in Disney & Durska 1998.
M. tumida (Wood). [Disney 1999]
  setifer (Lundbeck, 1920), Syn. nov.
M. ultrabrevis Schmitz, 1937. [c. 217]
   pseudobrevior Disney, 1988b, Syn. nov.
M. ustulata (Schmitz, 1920). [c. 291]
M. wickenensis Disney, 2000: in Disney & Perry 2000. [c. 285]
M. zeuzerae Disney: in Disney & Campadelli 1997. [c. 182]
Menozziola obscuripes (Schmitz, 1927). [Gadau & Disney 1996]
M. schmitzi (Menozzi, 1921). [Gadau & Disney 1996]
Microselia southwoodi Disney, 1988a
Phalacrotophora beuki Disney, 1997: in Disney & Beuk 1997
P. delageae Disney, 1979. [Disney & Beuk 1997]
Phora greenwoodi Disney, 1989b
P. limpida Schmitz, 1935. [Disney 1993]
P. michali Disney, 1998: in Disney & Durska 1998
Poloniphora Disney & Durska, 1998
Poloniphora bialoviensis Disney, 1998: in Disney & Durska 1998
Pseudacteon brevicauda Schmitz, 1925. [Disney 2000a]
  palpatus Schmitz, 1938, Disney 2000a
P. claridgei Disney, 2000a
P. fennicus Schmitz, 1927. [Disney 2000a]
P. lundbecki Schmitz, 1924. [Disney 2000a]
  lusitans Schmitz, 1938, Disney 2000a
P. tubiceroides Disney, 2000a
Puliciphora rufipes Silva Figueroa, 1916. [Disney 1993]
Razorfemora Disney, 1990a
R. nussbaumi Disney, 1990a. [Disney 1994b – female]
Spiniphora punctipennis (Zetterstedt, 1848). [Disney 1990b - male]
Triphleba nivalis (Rondani, 1856). [Gori 1999]
  novembrina Schmitz, 1943, Gori 1999
T. withersi Disney, 1994a
Trucidophora Brown, 1991: in Brown et al. 1991
T. ewardurskae (Disney, 1990a)
Tubicera algeriae Coomer, 1999
T. lichtwardi Schmitz, 1920. [Coomer 1999]
Veruanus oldenbergi (Schmitz, 1919). [Disney 1997b, Disney & Durska 1998]
  memorabilis Schmitz, 1927, Disney 1997b
Xenotriphleba Buck, 1997
X. dentistylata Buck, 1997
```

Acknowledgements

My work on Phoridae is funded by the Isaac Newton Trust (Trinity College, Cambridge). I am most grateful to Dr Hans Ulrich (formerly of the Museum Koenig, Bonn – ZFMK) for allowing me to remount many critical specimens in his care; and also, for allowing me to remount further specimens, to Dr Rudolf Meier (Zoological Museum, University of Copenhagen), Nigel Wyatt (Natural History Museum, London) and Dr Mikhail Mostovski, who organised the loan of specimens from the Zoological Institute, Russian Academy of Sciences, St Petersburg.

Zusammenfassung

Beiträge zu einer Revision der europäischen Phoriden (Diptera). – Elf neue Synonymien in der Gattung *Megaselia* werden begründet. Berichtigungen und Nachträge zum Katalog der paläarktischen Phoriden (Disney 1991) sind in einer Liste zusammengefasst.

References

- Brown, B. V., Francoeur, A. & Gibson, R. L. (1991): Review of the genus *Styletta* (Diptera: Phoridae), with description of a new genus. Ent. scand. 22: 241–250.
- Buck, M. (1997): A new genus and species of Phoridae (Diptera) from Central Europe with remarkably primitive male genitalia. Ent. scand. 28: 351–359.
- Chandler, P. (editor). (1998): Checklists of Insects of the British Isles (New Series). Part 1: Diptera. Handbk Ident. Br. Insects 12: i-xx, 1–234.
- Colyer, C. N. (1956): Two new species of *Megaselia* (Dipt. Phoridae) from Yugoslavia. Bull. Mus. Hist. nat. Pays serbe B 8: 97–100.
- Colyer, C. N. (1962): Ten new species of Phoridae from Yugoslavia (Diptera). Studia ent., Petropolis 5: 257–76.
- Coomer, R. P. C. (1999): A new species of Tubicera Schmitz, 1920 (Diptera: Phoridae) from Algeria. Entomologist's Gaz. 50: 109–114.
- Disney, R. H. L. (1983): Scuttle Flies Diptera, Phoridae (except *Megaselia*). Handbk Ident. Br. Insects 10(6): 1–81.
- Disney, R. H. L. (1988a): A new species of *Microselia* (Dipt. Phoridae) from France. Ann. Parasitol. hum. comp. 63: 85–88.
- Disney, R. H. L. (1988b): The Palaearctic species resembling *Megaselia pygmaea* (Diptera, Phoridae), including two new species. Ann. ent. fenn. 54: 153–161.
- Disney, R. H. L. (1989a): Scuttle Flies Diptera Phoridae Genus *Megaselia*. Handbk Ident. Br. Insects 10(8): 1–155.
- Disney, R. H. L. (1989b). A new species of *Phora* (Dipt., Phoridae) from France. Entomologist's mon. Mag. 125: 81–82.
- Disney, R. H. L. (1989c): A new species of *Megaselia* (Diptera, Phoridae) from France and Poland. Polskie Pismo ent. 59: 249–252.
- Disney, R. H. L. (1990a): Problem genera close to *Megaselia* (Diptera: Phoridae). Br. J. Ent. nat. Hist. 3: 11–22.
- Disney, R. H. L. (1990b): Three new species of scuttle fly (Diptera, Phoridae) from the Canary Islands. Vieraea 18: 135–141.
- Disney, R. H. L. (1991a): Family Phoridae. In: So–s, A. & Papp, L. (Editors), Catalogue of Palaearctic Diptera. Volume 7 (Dolichopodidae Platypezidae) Akademiai Kiado, Budapest. 143–204.
- Disney, R. H. L. (1991b): Two rare scuttle flies (Diptera, Phoridae) from Yorkshire, including one new for Britain. Naturalist, Hull 116: 93–94.
- Disney, R. H. L. (1991c): A new species of Conicera (Diptera, Phoridae) from Germany. Zool. Anz. 227: 240–244.
- Disney, R. H. L. (1993): Notes on European Phoridae (Diptera). Br. J. Ent. nat. Hist. 6: 107–118.
- Disney, R. H. L. (1994a): A new species of *Triphleba* (Diptera: Phoridae) from France and the subfamily assignment of this genus. G. it. Ent. 6: 135–139 (1992).

- Disney, R. H. L. (1994b): Scuttle Flies: The Phoridae. Chapman & Hall, London, xii + 467 pp.
- Disney, R. H. L. (1995a): The type species of *Megaselia* Rondani (Dipt., Phoridae). Entomologist's mon. Mag. 131: 167–170.
- Disney, R. H. L. (1995b): Two new species of *Megaselia* (Diptera: Phoridae) from Europe. Br. J. Ent. nat. Hist. 8(3): 113–119.
- Disney, R. H. L. (1997a): A new species of *Gymnophora* (Dipt., Phoridae) from Germany. Entomologist's mon. Mag. 133: 73–75.
- Disney, R. H. L. (1997b): *Veruanus* Schmitz (Diptera: Phoridae). Br. J. Ent. nat. Hist. 10: 69–71.
- Disney, R. H. L. (1998a): The hitherto unknown male of *Chaetopleurophora spinosa* (Diptera: Phoridae). Br. J. Ent. nat. Hist. 10: 193–195 (1997).
- Disney, R. H. L. (1998b): Family Phoridae. In: Papp, L. & Darvas, B. (Editors), Contributions to a Manual of Palaearctic Diptera. Volume 3. Higher Brachycera Budapest, Science Herald. 3.4: 51–79.
- Disney, R. H. L. (1999): A troublesome sibling species complex of scuttle flies (Diptera: Phoridae) revisited. J. nat. Hist. 33: 1159–1216.
- Disney, R. H. L. (2000a): Revision of European *Pseudacteon* Coquillett (Diptera, Phoridae). Bonn. zool. Beitr. 49: 79–91.
- Disney, R. H. L. (2000b): The first and second British records for two species of Phoridae (Dipt.). Entomologist's mon. Mag. 136: 199–202.
- Disney, R. H. L., Baez, M. & Ashmole, N. P. (1990): A revised list of Phoridae (Diptera) from the Canary Islands, with habitat notes. Vieraea 18: 261–265.
- Disney, R. H. L. & Bayram, S. (1999): Recognition, biology and first Turkish record of Megaselia coaetanea Schmitz (Dipt., Phoridae). Entomologist's mon. Mag. 135: 233-236.
- Disney, R. H. L. & Beuk, P. L. Th. (1997): European Phalacrotophora (Diptera: Phoridae). Entomologist's Gaz. 48: 185–192.
- Disney, R. H. L. & Campadelli, G. (1997): A new species of *Megaselia* Rondani (Diptera: Phoridae) reared from a moth larva (Lepidoptera: Cossidae) in Italy. Boll. Ist. Ent. Univ. Bologna 51: 63–68.
- Disney, R. H. L. & Durska, E. (1998): A new genus and new species of Phoridae (Diptera) from Poland. European J. Ent. 95: 437–53.
- Disney, R. H. L. & Durska, E. (1999): A new subspecies of scuttle fly (Diptera: Phoridae) that feeds on oyster mushrooms (*Pleurotus ostreatus*) in Poland. Fragmenta faunistica 42: 127–32.
- Disney, R. H. L. & Michailovskaya, M. V. (2000): The poorly known genus *Lepta* Schmitz, 1938 (Diptera: Phoridae). Entomologist's Gaz. 51: 187–189.
- Disney, R. H. L. & Perry, I. (2000): A new species of *Megaselia* from Cambridgeshire (Diptera, Phoridae). Dipterists Digest. 7: 5–7.
- Disney, R. H. L., Scanni, B., Scamoni, E. & Andrietti, F. (2000): A new species of scuttle fly (Diptera: Phoridae) whose larvae are kleptoparasites of a bee (Hymenoptera: Andrenidae). G. it. Ent. 9: 99–104 (1998).
- Gadau, J. & Disney, R. H. L. (1996): The ant host (Hymenoptera: Formicidae) and hitherto unknown female of *Menozziola obscuripes* (Diptera: Phoridae). Sociobiology 28: 177–181.
- Gori, M. (1999): I Foridi della collezione Rondani (Diptera Phoridae). Boll. Soc. entomol. ital. 131: 139–146.
- Lundbeck, W. (1920): New species of *Aphiochaeta* from Denmark. Vidensk. Meddr. dansk naturh. Foren. 71: 1–34.
- Lundbeck, W. (1922): Diptera Danica Part VI Pipunculidae, Phoridae. Wesley, London: 455 pp.
- Meigen, J. W. (1830): Systematische Beschreibung der bekannten europaeischen zweifluegeligen Insecten. 6. Theil. iv + 401 pp., 12 pls (55–66). Schulz, Hamm.
- Naumov, A. N. (1979): New species of Phoridae (Diptera) from the European part of the U.S.S.R. and Central Asia (in Russian). Entomologicheskoe Obozrenie 58: 417–420.

- Santos Abreu, E. (1921): Monografia de los Phoridos de las Islas Canarias. Mem. R. Acad. Cienc. Artes Barcelona 17: 1–90.
- Schmitz, H. (1934): Zur Kenntnis der Phoriden Oesterreichs. Natuurh. Maandblad 23: 1–21, 30–31, 47–48.
- Schmitz, H. (1937): Spanische Phoriden des Madrider Museums. Broteria 33: 119–127.
- Schmitz, H. (1938a): On the Irish species of the Dipterous family Phoridae. Proc. R. Irish Acad. 44B: 173–204.
- Schmitz, H. (1938b): Phoridae. In: Lindner E (editor), Die Fliegen der palaearktischen Region 4(33) (Lieferung 123): 1–64.
- Schmitz, H. (1940a): Die ersten hundert Phoriden von Portugal (concl.). Broteria 36: 49–74.
- Schmitz, H. (1940b): Die Arthropodenfauna von Madeira nach den Ergebnissen der Reise von Prof. Dr. O. Lundblad Juli-August 1935. Ark Zool. 32B10: 1–6.
- Schmitz, H. (1941) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 141): 65–128.
- Schmitz, H. (1943) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 147, 149): 129–92.
- Schmitz, H. (1949) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 160): 193–240.
- Schmitz, H. (1951) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 165): 241–272.
- Schmitz, H. (1952): Über W. Lundbecks Sammlung und Beschreibung Dänischer Phoriden. Ent. Meddel. 26: 350–79.
- Schmitz, H. (1953) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 171): 273–320 (1952).
- Schmitz, H. (1955) Phoridae. In: Lindner E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 180): 321–68.
- Schmitz, H. (1956a): Eine neue Plastophora-Art aus Kalksburg b. Wien. Broteria 52: 43–47.
- Schmitz, H. (1956b) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 187): 369–416.
- Schmitz, H. (1957) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33), (Lieferung 196): 417–64.
- Schmitz, H. (1958) Phoridae. In: Lindner, E. (ed.), Die Fliegen der palaearktischen Region 4(33) (Lieferung 202): 465–512.
- Wood, J. H. (1908): On the British species of Phora (Part II). Entomologist's mon. Mag. 44: 164–74, 215–8, 253–4.
- Wood, J. H. (1909): On the British species of Phora. Part II contd. Entomologist's mon. Mag. 45: 24–9, 59–63, 113–20, 143–9, 191–5, 240–4.
- Wood, J. H. (1912): Notes on British Phora (corrections and additions). Entomologist's mon. Mag. 48: 94–9, 166–81.
- Zaitsev, V. F. (1969): 47. Sem. Phoridae Gorbatki In: Opredelitel' nasekomykh evropeiskoi chasti SSSR, Tom V (Dvukrylye, blokhi), chast' 1, 753-802. Nauka, Leningrad. [English translation (1989): 47. Family Phoridae. In: Bei-Bienko, G. Ya. & Steyskal, G. C. (editors): Keys to the Insects of the European part of the USSR, volume V. (Diptera and Siphonaptera), Part I, 1156–1233 (in English). E. J. Brill, Leiden.
- Dr R. Henry L. Disney, University Department of Zoology, Downing Street, Cambridge CB2 3EJ, England.