- Chandler, P.J. 2002. Another fungus association for Meoneura neottiophila Collin (Diptera, Carnidae). Dipterists Digest (Second Series) 9, 159.
- Collin, J.E. 1930. Some species of the genus *Meoneura* (Diptera). *Entomologists monthly Magazine* **66**, 82-89.
- Courtney, G.W., Sinclair, B. and Meier, R. 2000. 1.4. Morphology and terminology of Diptera larvae, pp 85-161. In Papp, L. and Darvas, B. (Eds) *Contributions to a Manual of Palaearctic Diptera*, Volume I, 978 pp. Science Herald, Budapest.
- Dowding, V.M. 1967. The function and ecological significance of the pharyngeal ridges occurring in the larvae of some cyclorrhaphous Diptera. *Parasitology* 57, 371-388.
- Engel, E.O. 1930. Fliegenmaden im Schnupftabak. (Meoneura obscurella Fall.). Zeitschrift für Angewandte Entomologie 17, 184-188.
- Ferrar, P. 1987. A guide to the breeding habits and immature stages of Diptera Cyclorrhapha. Entomonograph 8(1 & 2), 1-907.
- Gregor, F. and Papp, L. 1981. Czechoslovak species of the genus *Meoneura* with description of *Meoneura moravica* sp. n. *Acta Entomologica Bohemoslovaca* **78**, 199-204.
- Grimaldi, D. 1997. The bird flies, genus Carnus: Species revision, generic relationships, and a fossil Meoneura in amber (Diptera: Carnidae). American Museum Novitates No 3190, 1-30.
- Hackman, W. and Meinander, M. 1979. Diptera feeding as larvae on macrofungi in Finland. *Annales Zoologici Fennici* **16**, 50-83.
- Hennig, W. 1937. 60a. Milichiidae et Carnidae. Die Fliegen der Palaearktischen Region 6 (60a), 1-91.
- McAlpine, J.F. 1989. Phylogeny and Classification of the Muscomorpha. In McAlpine J.F. (Ed.) Manual of Nearctic Diptera, Monograph No. 32, Research Branch, Agriculture Canada 3, 1397-1518.
- Nordberg, S. 1936. Biologisch-őkologische Untersuchung über die Vogelnidicolen. *Acta Zoologica Fennica* **21**, 1-168.
- Nuorteva, P. and Järvinen, U. 1961. The insect fauna of the nests of the sand martin (*Riparia riparia* L.) in Finland. *Annales Entomologici Fennici* 27, 197-204.
- Papp, L. 1998. Family Carnidae. pp 211-217. In Papp, L. and Darvas, B. (Eds) *Contributions to a Manual of Palaearctic Diptera*, Vol. 3: Higher Brachycera. 880 pp. Science Herald, Budapest.
- Pridantseva, Y.A. 1967. The pasture fly (Diptera) fauna associated with camels in south Tuva. Entomological Review 46, 491-494.
- Rotheray, G.E. 1989. E.B. Basden's collection of Diptera from bird and mammal nests, and mammal runs, burrows and droppings. *Entomologist's monthly Magazine* 125, 5-8.
- Rotheray, G.E. and Robertson, D. 1998. Breeding habits and early stages of seven saproxylic acalypterates (Diptera). *Dipterists Digest (Second Series)* 5, 96-107.
- Rotheray, G.E. and Gilbert, F. 2008. Phylogenetic relationships and the larval head of the lower Cyclorrhapha (Diptera). *Zoological Journal of the Linnean Society* **153**, 287-323.
- Rotheray, G.E. and Wilkinson, G. 2010. The puparium and larval feeding behaviour of *Meiosimyza affinis* (Zetterstedt, 1847) (Diptera, Lauxaniidae) *Dipterists Digest* (Second Series) 17, 65-72.
- Rotheray, G.E. 2011. The puparia of *Chyromya femorellum* (Fallén) (Chyromyidae), *Camilla atrimana* Strobl and *Camilla fuscipes* Collin (Camillidae) (Diptera) reared from bird and mammal nests and burrows. *Dipterists Digest* (Second Series) 18, 81-93.
- Roberts, M.J. 1971. The structure of the mouthparts of some calypterate dipteran larvae in relation to their feeding habits. *Acta Zoologica* 52, 171-188.

First records from France of Eumerus obliquus (Fabricius), E. subornatus Claussen, Ferdinandea fumipennis Kassebeer and Platycheirus transfugus (Zetterstedt) (Diptera, Syrphidae): notes on separation of females of E. subornatus and E. ornatus (Meigen)

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Summary

The species Eumerus obliquus, E. subornatus, Ferdinandea fumipennis and Platycheirus transfugus (Diptera: Syrphidae) are recorded for the first time from continental France. Morphological features to aid in distinguishing the females of Eumerus ornatus and E. subornatus are identified.

The most recent list of the Syrphidae of France was given by Speight et al. (2010). The species Merodon confusus Marcos-Garcia et al., Microdon major Andries. Neoascia unifasciata (Strobl), Orthonevra plumbago (Loew), Pelecocera caledonica (Collin) and Xanthogramma stackelbergi Violovitsch are also now known from France (Dussaix et al. 2007, Lair 2007, Marcos-Garcia et al. 2011, Speight and Castella 2011, Vallet 2010). The present note adds a further four species, Eumerus obliquus (Fabricius), E. subornatus Claussen, Ferdinandea fumipennis Kassebeer and Platycheirus transfugus (Zetterstedt), bringing to 524 the number of syrphid species known from France. This note also provides characters that can be used in the separation of E. ornatus and E. subornatus females and supplementary information on the separation of the males of these two species. Species accounts for all of these species were provided by Speight (2011).

Different systems of co-ordinates have been employed by collectors in the records cited here. Latitude/longitude is self-evident. Where a grid reference is given on the Lambert grid (the French National Grid) it is preceded here by the letters LG. Universal Transverse Mercator grid references are preceded by the letters UTM.

Eumerus obliquus (Fabricius, 1805)

Pyrenées-Orientales: Sorède Village, 42°31'46,17" N, 2°57'23,54" E, male, 26 October 2009, on *Hedera helix* flowers, coll. J. Garrigue, det. MS, in coll. MS.

Eumerus obliquus is known from various Mediterranean islands, Italy, the Canaries and N. Africa, but has not previously been recorded from continental France. It is not known on the Iberian peninsula. It is a distinctive species in the male, with tufts of long, black, bristly hair on the tarsal segments of the hind leg. Both male and female can be identified using Stackelberg's (1961) key. It is a species of open, semi-arid/arid grassland, where it may be found in the vicinity of the channels of seasonal rivers and streams. What the indigenous European plant host of its larvae might be is unknown, but it is now developing successfully in the decaying fruit and platyclades of the introduced cactus Opuntia ficus-indica (Ricarte et al. 2008), and can be expected to occur where the cactus is found i.e. not necessarily in association with dry watercourses. Given the increasing frequency of Opuntia in southern Spain it would be surprising if E. obliquus remains unrecorded there. It has a highly

Mediterranean-type flight period, the adults only being found in September /October, although it flies from mid January through to mid November in Malta, where it is probably bivoltine (Martin Ebejer *pers. comm.*).

Eumerus subornatus Claussen, 1989

Pyrenées-Orientales: Font Rovillada, UTM 31T 0645 1718, close to D 71, L'Albère, nr. Le Perthus; females, 8-11 July 1999; 400m; drinking at edge of spring in *Quercus ilex/Q. pubescens* forest; coll. and det. MS.

Eumerus subornatus was described by Claussen from a single male originating in Morocco. Its presence in Europe ("Pyrenees") was subsequently indicated by Schmid (1995). and more recently it has been found abundantly in the Cabañeros National Park, in central Spain (Ricarte and Marcos-García 2008). Carles-Tolrá and Rosado (2009) and Van Eck (2011) provided records from Portugal. To date, these are the only published records of the species. The female has never been described.

It is extremely similar in appearance to *E. ornatus*. Indeed, the two species can be almost indistinguishable in the field and may be found in flight together. Claussen (1989) figured differences in the male terminalia and the male frons. Differences between these two species are listed below, other than differences in the male terminalia, for which reference should be made to Claussen (1989).

E. ornatus

Male and female

Eye hairs: moderately dense and long, in the vicinity of the vertex nearly 2x as long as the length of the anterior ocellus.

Haltere: capitulum (and most of stalk) entirely lemon yellow.

Abdominal tergite 2: entirely without orange markings.

Male

Eyes: meeting above antennae for a distance almost 3x the median length of the frons.

<u>Female</u>

Lunule: in the form of an almost parallel-sided, raised bar, usually with a shallow, rounded, medio-dorsal projection (see Fig. 1A).

Scutellum: usually metallic bronze, contrasting in colour with the anterior part of the mesoscutum, which is almost black; hairs on posterior margin outstanding, longer than one third the median length of the scutellum.

E. subornatus

Male and female

Eye hairs: sparse and short, in the vicinity of the vertex shorter than the length of the anterior ocellus.

Haltere: parts of capitulum much darkened (dark grey/black), the rest of the haltere greyish-yellow.

Abdominal tergite 2: often narrowly orange along the anterior margin of the two transverse bars of silver-grey dusting, but otherwise as in *E. ornatus*.

Male

Eyes: meeting above antennae for a distance only slightly greater than the median length of the frons.

Female

Lunule: boomerang-shaped, much wider in centre than laterally, not elevated and with dorsal edge smoothly rounded, without any medio-dorsal projection (see Fig. 1B).

Scutellum: almost black, hardly metallic, mesoscutum and scutellum of uniform colour throughout; hairs on posterior margin curved around the edge of the scutellum and shorter than one third the median length of the scutellum.

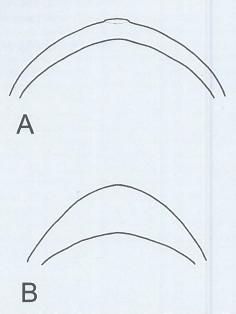


Fig. 1. Shape of lunule in female *Eumerus*, A = E. ornatus; B = E. subornatus.

The most comprehensive key to European *Eumerus* species is still that of Stackelberg (1961). When Claussen described *E. subornatus* only a single male was available to him and its tergites were without any orange markings. Both males and females of *E. subornatus* in which orange marks are absent from tergite two would run to *E. ornatus* in Stackelberg's (1961) key. But specimens in which orange marks are visible on tergite 2 (as is the case in nearly all Spanish *E. subornatus*) would run to a completely different part of the key. Orangemarked males of *E. subornatus* do not run convincingly to any species covered by Stackelberg. Orange-marked females run to *E. persarum* Stackelberg, a species described only from the female and still seemingly known only from the type material. The description Stackelberg (1961) provided of the abdominal markings in *E. persarum* does not coincide very well with the appearance of the markings observed in Spanish and French females of *E. subornatus*, but without checking the type material of *E. persarum* some doubt must remain as to how distinct these taxa are from one another.

The French record of *E. subornatus* extends the known European range of the species to the Massif des Albères, on the south-eastern flanks of the Pyrenees, in the Mediterranean zone of the Roussillon. In the Cabañeros National Park *E. subornatus* has been found in forest of *Quercus faginea*, *Q. pyrenaica* and *Q. suber* (Ricarte and Marcos-García 2008). The French record is from *Q. ilex/Q. pubescens* forest, which would also fall within the

thermophilous oak/evergreen oak forest habitat categories. At the Font Rovillada locality, females of *E. subornatus* were found in flight with females of *E. ornatus*.

Ferdinandea fumipennis Kassebeer, 1999

Pyrenées-Orientales: Thuir, male, 21 March 2004, on sap-run on ancient *Quercus humilis*. coll. J. Garrigue, det. MS.

Var: island of Porquerolles, male, 22 February 2007, white trap; male 10 October 2007, yellow trap; collector unknown, det. MS, in coll. J.-P. Sarthou.

This syrphid was described from North Africa. Its presence in Europe was first noted by Ricarte and Marcos-Garcia (2007), who discovered that it is widely distributed in Spain, where it had previously been confused with the closely-related F. cuprea (Scopoli). All four European Ferdinandea species are now known from Spain (Ricarte et al. 2010). Ricarte et al. (2007) described the developmental stages of F. fumipennis. In Spain F. fumipennis is a species of Ouercus pyrenaica forest and riparian Fraxinus angustifolia forest (Ricarte and Marcos-Garcia 2007). Neither of these tree species is present at the Thuir locality where F. fumipennis was found in France, the record suggesting that this hoverfly may under some circumstances develop in sap runs on trees of *Quercus pubescens* agg. The flight period of F. fumipennis is characteristic of many Mediterranean-zone syrphids, in that it is both very early in the year (February/March) and very late (September/October), with very few recorded occurrences from the intervening months. The flight season of another Mediterranean Ferdinandea species, F. aurea, is even more extreme, the insect being found on the wing only in September/October. Ferdinandea fumipennis may be separated from other European species using the keys provided by Speight and Sarthou (2011). Re-examination of Ferdinandea cuprea material collected in Mediterranean parts of France would be worthwhile, to check whether it includes F. fumipennis.

Platycheirus transfugus (Zetterstedt, 1838)

Alpes-Maritimes: Val de Haute Boréon, 1800-2000m, LG 999.1915, PN de Mercantour, male, 2 June 2000, coll. P. Withers, det. T.R. Nielsen, in coll. P. Withers.

In Europe, this is essentially a Scandinavian species, though there is also a record from southern Germany. Outside Europe it is known from Kazakhstan, Kirgizistan, Mongolia and the Altai mountains (SE Siberia). In Scandinavia it is a denizen of *Pinus/Picea* forest and the Mercantour record is from a high valley with *Abies/Picea* forest (P. Withers *pers. comm.*). It is a member of the *Platycheirus ambiguus* group, best identified using Nielsen (2004) and Bartsch (2009). Its larval biology remains unknown.

Acknowledgements

Tore Nielsen kindly confirmed the identity of the *Platycheirus transfugus* specimen. We are also grateful to Henri-Pierre Aberlenc, Joseph Garrigue, Jean-Pierre Sarthou and Phil Withers, for the opportunity to examine material collected by them, and/or in their collections. We thank Martin Ebejer and Axel Ssymank for their helpful comments on an earlier version of the text.

References

Bartsch, H., Binkiewicz, E., Rådén, A. and Nasibov, E. 2009. Blomflugor: Syrphinae. Nationalnyckeln till Sveriges flora och flora, DH53a. 406 pp. Artdatabanken, SLU, Uppsala.

- Carles-Tolrá, M. and Rosado, J. 2009. Algunos dípteros de Portugal capturados mediante trampas de emergencia (Insecta, Diptera). *Boletín de la Sociedad Entomológica Aragonesa* **44**, 343-348.
- Claussen, C. 1989. Syrphiden aus Marokko (Diptera, Syrphidae). Zeitschrift für Entomologie, Linz 10, 357-375.
- Dussaix, C., Stallegger, P. and Livory, A. 2007. *Microdon major* Andries, 1912, nouvelle espèce pour la faune de France (Diptera, Syrphidae). *L'Entomologiste* **63**, 265-269.
- Lair, X. 2007. *Pelecocera caledonica* Collin 1940 (Diptera Syrphidae). Nouvelle espèce pour la France. *L'Argiope* **58**, 56-66.
- Marcos-García, M. A., Vujić, A., Ricarte, A. and Ståhls, G. 2011. Towards an integrated taxonomy of the *Merodon equestris* complex (Diptera: Syrphidae) including description of a new species, with additional data on Iberian *Merodon. Canadian Entomologist* **143**, 332-348.
- Nielsen, T.R. 2004. European species of the *Platycheirus ambiguus* group (Diptera, Syrphidae), with description of new species. *Volucella* 7, 1-30.
- Ricarte, A., Marcos-García, M.A., Pérez-Bañón, C. and Rotheray, G.E. 2007. The early stages and breeding sites of four rare saproxylic hoverflies (Diptera: Syrphidae) from Spain. *Journal of Natural History* **41**, 1717-1730.
- Ricarte A.R. and Marcos-García, M.A. 2007. Ferdinandea fumipennis Kassebeer, 1999 (Diptera: Syrphidae), nueva especie para el continente europeo. Boletín de la Asociación Española de Entomología 31, 205-208.
- Ricarte, A.R. and Marcos-García, M.A. 2008. Hoverflies (Diptera: Syrphidae) of Cabañeros National Park (Spain): a tool for the management. *Boletín de la Asociación Española de Entomología* 32, 19-32.
- Ricarte, A., Marcos-García, M.A. and Rotheray, G.E. 2008. The early stages and life histories of three *Eumerus* and two *Merodon* species (Diptera: Syrphidae) from the Mediterranean region. *Entomologica Fennica* 19, 129-141.
- Ricarte, A., Nedeljković, Z., Quinto, J. and Marcos-García, M.A. 2010. The Genus *Ferdinandea* Rondani, 1844 (Diptera, Syrphidae) in the Iberian Peninsula: First Records and New Breeding Sites. *Journal of the Entomological Research Society* 12, 57-69.
- Schmid, U. 1995. New Palaearctic hoverfly species (Diptera, Syrphidae) and new synonyms: a survey. *Volucella* **1,** 29-44.
- Speight, M.C.D. 2011. Species accounts of European Syrphidae (Diptera), Glasgow 2011. Syrph the Net, the database of European Syrphidae, Vol. 65, 285 pp. Syrph the Net publications, Dublin.
- Speight, M.C.D. and Castella, E. 2010. Diagnostic de quelques habitats des Hauts de Chartreuse (Isère, France) à l'aide des Syrphidés (Diptères). Syrph the Net, the database of European Syrphidae, Vol. 63, 36 pp. Syrph the Net publications, Dublin.
- Speight, M.C.D. and Castella, E. 2011. Dix-neuf additions à la liste des Syrphidae (Diptera) de Haute-Savoie, incluant *Orthonevra plumbago* (Loew, 1840) et *Xanthogramma stackelbergi* Violovitsh, 1975, deux espèces nouvelles pour la France. *Entomo Helvetica* 4, 45-58.
- Speight, M.C.D. and Sarthou, J.-P. 2011. StN keys for the identification of adult European Syrphidae (Diptera), Glasgow 2011/Clés StN pour la détermination des adultes des Syrphidae Européens (Diptères), Glasgow 2011. Syrph the Net, the database of European Syrphidae Vol. 66, 120 pp. Syrph the Net publications, Dublin.

Speight, M.C.D., Monteil, C., Castella, E. and Sarthou, J.-P. 2010. StN 2010. In Speight, M.C.D., Castella, E., Sarthou, J.-P. and Monteil, C. (Eds). Syrph the Net on CD, Issue 7. The database of European Syrphidae. ISSN 1649-1917. Syrph the Net Publications, Dublin.

Stackelberg, A.A. 1961. Palaearctic species of the genus *Eumerus* Mg. (Diptera, Syrphidae). *Trudy vsesoyuznogo entomologicheskogo, Obshchestva* **48**, 181-229.

Vallet, A. 2010. Une espèce nouvelle pour la France: *Neoascia unifasciata* (Strobl. 1898) (Diptera Syrphidae). *L'Entomologiste* **66**, 237-238.

Van Eck, A. 2011. A Checklist of the hoverflies of Portugal. *Boletín de la Sociedad Entomológica Aragonesa* No. 49, 127-144.

Some new records of Phaonia latipalpis Schnabl (Diptera,

Muscidae) from Wales and Devon — During 2011 two specimens of a shining grey muscid with yellow legs and scutellum were swept in damp woodland, one male at a site in Wales and a female in Devon. These were identified as *Phaonia latipalpis* Schnabl using the key by d'Assis-Fonseca (1968. Diptera Cyclorrhapha. Calyptrata. Section (b) Muscidae. *Handbooks for the Identification of British Insects* 10(4b), 1-119), in which the name *P. umbraticola* d'Assis-Fonseca is used for this species. A male was found on 14 May 2011 at Cwm Coed y Cerrig Nature Reserve (SO2921), Monmouthshire, a mixed broad-leaved woodland at the south end of the Black Mountains with alder (*Alnus glutinosa*) woodland in the valley bottom. Then a female was caught on 4 July 2011 at Water Cleave and Wansford Woods (SX7680) in the Bovey Valley Woodlands Nature Reserve, Devon, mixed broadleaved woodland with streams.

This species was first recorded in Britain by E.C.M. d'Assis-Fonseca (1957. Some interesting and uncommon Diptera from East Kent, including a new species of *Phaonia* (Muscidae). *Entomologist's Record & Journal of Variation* **69**, 14-18), who described it as *P. umbraticola* He found it at Woolwich Wood in East Kent from 1955 to 1958 and again in 1968, and also included a 1933 record from Farley Down, Hampshire. It has since been recorded at Wychwood Forest NNR, Oxfordshire in 1965, 1970 and 1973 (Pont, A.C. 1990. A list of Fanniidae and Muscidae (Insecta: Diptera) from the Wychwood Forest and Cothill Reserve, Oxfordshire. *Oxford Invertebrate Group* **3**, 19-25). There are a small number of other British records (Falk *et al.* in preparation) from Wiltshire, Norfolk, Yorkshire and the Isle of Mull, the last in 1991 being the only previous record more recent than those mentioned above. Most of the sites are broad-leaved woodland but the Mull site was on a south-facing cliff with calcareous flushes.

The Welsh male has a pair of long presutural acrostichal bristles, while these bristles are entirely lacking in the Devon female. The infraspecific variation in this character is taken into account in the handbook to the British species by d'Assis-Fonseca (1968), where the species is included in both sections of the key. The black palpi are broader in the female than in the male, but not significantly broader than in most species of the genus, so it is unclear why the name *latipalpis* was selected for the species.

The biology is unknown but adults have sometimes been found on butterbur (*Petasites hybridus*). The name *umbraticola* referred to its occurrence in shady woodland, perhaps a more appropriate name — **PETER J. CHANDLER**, 606B Berryfield Lane, Melksham, Wilts SN12 6EL

A new species of the genus *Syntormon* Loew from Bulgaria (Diptera, Dolichopodidae)

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Summary

A new species close to Syntormon sulcipes (Meigen), S. bulgariensis sp. n., is described from Bulgaria.

Introduction

Species of the genus *Syntormon* Loew, 1857 are spread through all zoogeographical regions of the world, but are poorly known outside the Palaearctic Region. According to Grichanov (2011) and Yang *et al.* (2006) they are distributed as follows: Afrotropical 17, Oriental 15, Australasian 7, Nearctic 20, Neotropical 3 and Palaearctic 50 species and 2 subspecies.

Keys to the species of *Syntormon* have been published for the Palaearctic Region by Becker (1918), Parent (1938) and Negrobov (1975). Becker's key (1918) included 16 species and 1 subspecies, Parent (1938) included 21 species and 1 subspecies and Negrobov (1975) provided a key for 36 species and 2 subspecies, including 7 new species and 1 new subspecies. Subsequently the following new species have been described: *Syntormon dobrogicum* Parvu, 1985 from Romania; *Syntormon pseudopalmarae* Negrobov & Shamshev in Negrobov, 1985 from Russia; *Syntormon valae* Negrobov & Zhilina, 1986 from Mongolia; *Syntormon beijingense* Yang, 1998, *Syntormon zhengi* Yang, 1998, *Syntormon xinjiangense* Yang, 1999 and *Syntormon xizangense* Yang, 1999 from China.

Parent (1938) included, in his key to the females of *Syntormon* species, a new subspecies of *S. sulcipes* (Meigen) as *Syntormon sulcipes obscurior* Parent, while this name is only otherwise mentioned in the description of the male of *S. sulcipes*; its geographical distribution and designation of a typical specimen were not indicated.

Among material collected by MK in Bulgaria a male specimen has been found, which is considered to be a species distinct from *S. sulcipes*, and to possibly correspond to Parent's subspecies *obscurior*. It has not, however, been possible to study the specimens to which Parent applied this name and enquiries at the Paris Museum have found that there are no specimens labelled *obscurior* in Parent's collection, and no dark legged specimens under the name *sulcipes* (Christophe Daugeron *pers. comm.*). As it cannot be confirmed that it is conspecific with *obscurior*, it has therefore been decided to describe the Bulgarian specimen as a new species.

Syntormon bulgariensis sp. n. (Figs 1-4)

Material

Holotype male, BULGARIA, Pamporovo, Rhodopes Mts, 7.vii.2005, leg. M. Kechev. Type in collection Department of Agrotechnology, Higher School "Agricultural College".