

## Two new European species of *Docosia* (Diptera: Mycetophilidae)

Jan ŠEVČÍK & †Petr LAŠTOVKA

Silesian Museum, Tyršova 1, CZ-74601 Opava & University of Ostrava, Chittussiho 10, CZ-70010 Ostrava, Czech Republic;  
 e-mail: sevcikjan@hotmail.com

**Abstract:** Two new species of *Docosia* Winnertz, 1863 are described, *Docosia chandleri* sp. n. from Austria and Italy and *Docosia matilei* sp. n. from France and Italy. Both species resemble *Docosia montana* Laštovka et Ševčík, 2006 and they are characterized by bare laterotergites, yellow legs and long flagellomeres.

**Key words:** taxonomy; new species; Sciarioidea; fungus gnats; Palaearctic region

### Introduction

The genus *Docosia* Winnertz, 1863 comprises 26 described European species of medium-sized fungus gnats with black body and hyaline wings without markings (Chandler 2004; Chandler et al. 2006; Laštovka & Ševčík 2006; Ševčík 2006). The World fauna of this genus is poorly known, with only a few described species outside Europe, e.g., from the Nearctic and Neotropical regions (Laffoon 1965; Papavero 1978) and recently also from China (e.g., Xu et al. 2003) and Kazakhstan (Kurina 2006). The biology of most species of the genus is poorly known, with the exception of the common Palaearctic species *Docosia gilvipes* (Walker, 1856), whose larvae are associated with sporophores of various species of fungi.

The Czech and Slovak species of this genus have been recently reviewed by Laštovka & Ševčík (2006). Ševčík (2006) described an additional species from Slovakia. A further two European species are described in this contribution.

### Material and methods

The present work is based on material deposited in the Muséum National d'Histoire Naturelle (Paris) and in the Natural History Museum (London). Altogether, nine pinned specimens (males) were studied. The genitalia were cleared in a solution of KOH, neutralized in acetic acid and placed in a microvial filled with glycerol. The genitalia of two males from Austria had already been cleared and mounted in a drop of dimethyl hydantoin formaldehyde on a paper label.

Morphological terminology follows that of Söli (1997).

### *Docosia chandleri* sp. n. (Fig. 1)

**Description. Male.** Head black with white bristling. Outer ocellus almost touching eye margin. Antenna

blackish brown, except pedicel, which is yellow. Flagellomeres long, about 2 to 2.5 times as long as broad. Palpus yellow. Thorax black, scutum covered with rather short white setae, prothorax and lateral margins of scutum with longer brown setae. Scutellum about twice as broad as long, apically with six long yellowish brown setae. Both laterotergite and mediotergite bare.

Wing colourless, with costa, radial veins and r-m dark brown. The other veins brownish yellow. Length of wing 4.2 mm. Costa extends about 0.4 distance from R<sub>5</sub> to M<sub>1</sub>. Sc bare, ending in R. Ratio of R<sub>1</sub> to r-m about 2.5. Crossvein r-m about twice as long as the stem of M-fork. Haltere whitish yellow. Legs almost entirely yellow, including all coxae. Femora slightly darkened on ventral margin. Femora entirely yellow or darkened only at extreme tip. Trochanters yellow, with narrow dark lines. Tibiae slightly darkened on dorsal surface, but without any dark markings. Tarsi brownish yellow. Fore tarsus about 1.5 times as long as fore tibia. Coxae and femora with white bristling. Tibiae and tarsi with black setae and setulae, tibial spurs brownish yellow. Abdomen blackish, with pale hairs.

Terminalia as in Fig. 1. Tergite 9 almost as long as wide. Gonocoxites relatively short, about 1.5 times as broad as long. Posterior margin of gonocoxites straight, slightly concave, covered with short black thorns. Gonostylus with longer dorsal lobe rounded, the smaller ventral lobe bearing a black apical tooth.

**Female.** Unknown.

**Type material. Holotype** (male): Austria, Tyrol, Oberurgl, Pirchhüttberg, 1850 m a.s.l. (46°52' N, 11°1' E), 2.–3.8.1972, leg. A.C. & B. Pont (Malaise trap), coll. Natural History Museum, London (BM 1972–400). **Paratypes:** Austria, Tyrol, Oberurgl, Pirchhüttberg, 1850 m a.s.l. (46°52' N, 11°1' E), 6.–7.8.1972, 1 ♂, leg. A.C. & B. Pont (Malaise trap), coll. Natural History Museum, London (BM 1972–400); Italy, Aosta, Valnontey, 1620–1750 m

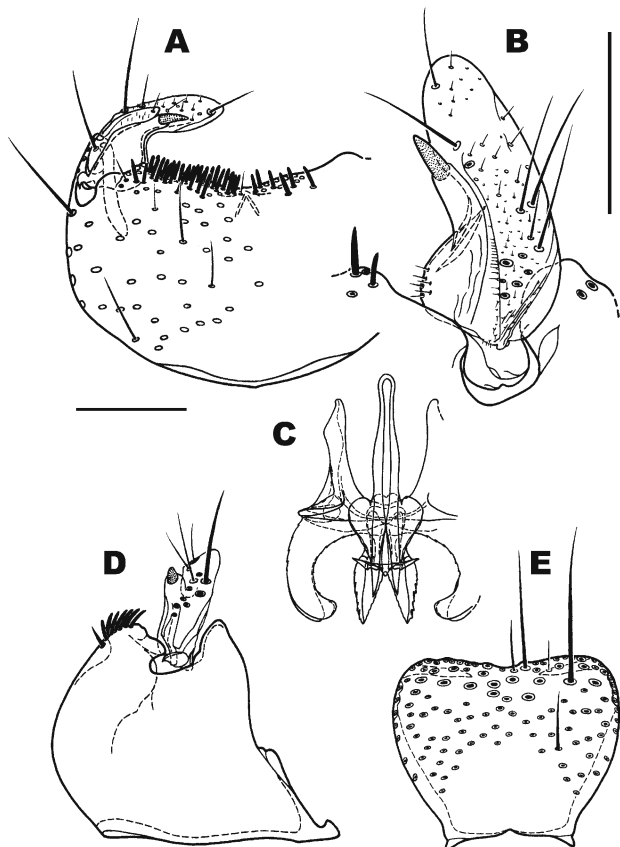


Fig. 1. *Docosia chandleri* sp. n., male: A – ventral view of gonocoxites; B – detail of gonostylus; C – aedeagal complex; D – lateral view of gonocoxites; E – dorsal view of tergite 9. Scales 0.1 mm.

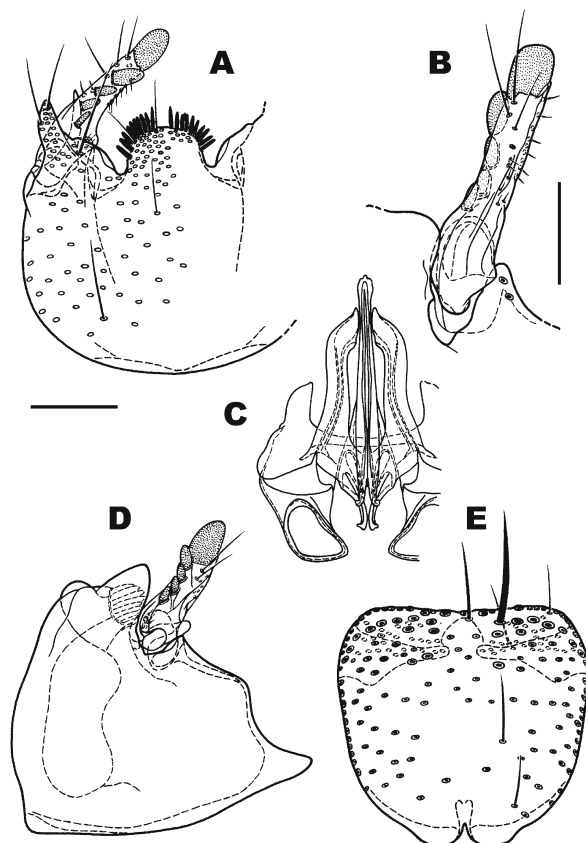


Fig. 2. *Docosia matilei* sp. n., male: A – ventral view of gonocoxites; B – detail of gonostylus; C – aedeagal complex; D – lateral view of gonocoxites; E – dorsal view of tergite 9. Scales 0.1 mm.

a.s.l. (45°35' N, 7°20' E), 10.7.1975, 2 ♂♂, 14.6.1976, 1 ♂, Vallée de Cogne (45°36' N, 7°21' E), 25.7.1975, 1 ♂, all leg. L. Matile, coll. Muséum National d'Histoire Naturelle, Paris.

**Etymology.** This species is named in honour of the excellent British dipterist Peter J. Chandler (Melksham, U.K.) to acknowledge his great contribution to the knowledge of the genus *Docosia* as well as his many-sided help to the authors during their study of fungus gnats.

**Distribution.** Austria and Italy.

**Biology and immature stages.** Unknown. Probably a mountain species as all the type material was collected in high mountains (above 1600 m a.s.l.).

*Docosia matilei* sp. n. (Fig. 2)

**Description. Male.** Head black with white bristling. Outer ocellus almost touching eye margin. Antenna blackish brown, including scape and pedicel. Flagellomeres long, about twice as long as broad. Palpus yellow. Thorax black, scutum covered with rather short white setae, prothorax and lateral margins of scutum with longer brown setae. Scutellum about twice as broad as long, apically with six long yellowish brown setae. Both laterotergite and mediotergite bare.

Wing colourless, with costa, radial veins and r-m dark brown. The other veins brownish yellow. Length of wing 4.1 mm. Costa extends about 0.4 distance from  $R_5$  to  $M_1$ . Sc bare, ending in R. Ratio of  $R_1$  to r-m about 2. Haltere whitish yellow. Legs almost entirely yellow, including all coxae. Femora slightly darkened on ventral margin and hind femur darkened dorsally at tip. Trochanters dark. Tibiae slightly darkened on dorsal surface, but without any dark markings. Tarsi brownish yellow. Fore tarsus relatively long, about twice as long as fore tibia. Coxae and femora with white bristling. Tibiae and tarsi with black setae and setulae, tibial spurs brownish yellow. Abdomen blackish, with pale hairs.

Terminalia as in Fig. 2. Tergite 9 as long as wide. Medioventral margin of gonocoxites with a round lobe densely covered with black thorns. Posterolateral margins of gonocoxites pointed. Gonostylus long, with five large black teeth along its ventral margin, the apical one covering the entire tip of gonostylus.

**Female.** Unknown.

**Type material. Holotype** (male): Italy, Aosta, Vens, 1700 m a.s.l. (45°43' N, 7°8' E), 1.7.1984, leg. L. Matile ("prairies à fleurs"), coll. Muséum National d'Histoire Naturelle, Paris. **Paratypes:** Italy, Aosta, Bertolaz (Villeneuve), 800 m a.s.l. (45°42' N, 7°12' E), 1.7.1973, leg. L. Matile & F. Lavy, 1 ♂; France, Cirque de Navacelles (43°53' N, 3°30' E),

23.–24. 4. 1970, 1 ♂, leg. L. Matile, both specimens in coll. Muséum National d'Histoire Naturelle, Paris.

**Etymology.** This species is named after the late Loïc Matile (Paris), who collected all the type specimens.

**Distribution.** France and Italy.

**Biology and immature stages.** Unknown.

### Discussion

Both these species are characterized by almost entirely yellow legs, bare laterotergites and long flagellomeres. In the key to the Central European species of *Docosia*, provided by Laštovka & Ševčík (2006), they would run to *Docosia montana* Laštovka et Ševčík, 2006. *Docosia chandleri* is easily separated within this group by its yellow pedicels. The terminalia of *D. chandleri* are most similar to those of *Docosia lastovkai* Chandler, 1994, *Docosia melita* Chandler et Gatt, 2000 and *Docosia cephaloniae* Chandler, Bechev et Caspers, 2006, all of which have pedicels black. *Docosia matilei* can be safely distinguished from *D. chandleri* and these other species by its characteristic terminalia, which are similar to those of *D. montana*, differing mainly in the structure of the gonostylus.

### Acknowledgements

The visit of the first author to the Muséum National d'Histoire Naturelle (Paris) in 2005 was supported by the Czech Grant Agency (Grant No. 206/03/D078) and in 2007 by the European Commission's Research Infrastructure Action via the SYNTHESYS project No. FR-TAF-3453. His visit to the Natural History Museum (London) in 2006 was supported by the European Commission's Research Infras-

tructure Action via the SYNTHESYS project No. GB-TAF-2092. The first author wishes to thank to Dr. J. Ježek (National Museum, Prague) and Ms. Z. Laštovková (Litvínov) for the opportunity to study the material from the collection of the second author.

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Received January 30, 2007

Accepted March 26, 2007