

Kurzmitteilung – Short note

Nr. 2/2006 No. 2/2006

Faunistik - Faunistics

Paläarktische Region – Palaeartic Region

A blackbird's nest as breeding substrate for insects – first record of *Docosia fumosa* EDWARDS, 1925 (Diptera: Mycetophilidae) from Germany

[Ein Amselnest als Entwicklungssubstrat von Insekten – Erstfund von *Docosia fumosa* EDWARDS, 1925 (Diptera: Mycetophilidae) in Deutschland]

by

Björn RULIK and Uwe KALLWEIT

Dresden (Germany)

A large amount (34 ♂♂/13 ♀♀) of *Docosia fumosa* EDWARDS, 1925 was reared from a single bird nest of the blackbird *Turdus merula* LINNAEUS, 1758. The nest was collected by T. TÖPFER (Dresden/Germany) close to the Museum of Zoology in urban environment. The exact collection data are as follows:

GERMANY: Saxony, northern part of Dresden, quarter Klotzsche, near the tramway stop "Arkonastraße", 4th January 2006.

The blackbird's nest was placed in a big sealed freezer bag and stored at room temperature. In order to assure ventilation a tube (diameter 30 mm) equipped with fine gauze was added. Arthropods were removed using an exhaustor, inserted into the bag through a small, reclosable hole. The insects were transferred into 70 % alcohol, determined and stored in glass vials. Within three months a total of 234 specimens of different orders (mainly Diptera) was recorded (Tab. 1). Of the *Docosia* material discussed here 7 ♂♂/6 ♀♀ are deposited in the State Collection of Natural History Dresden, Museum of Zoology. The other part of material remains in the collection of the senior author.

Among the individuals which emerged from the nest are members of 11 families of flies as shown in Table 2. Mycetophilids are represented by two species: One ♂ belongs to *Exechia fusca* (MEIGEN, 1804) and 34 ♂♂/13 ♀♀ belong to *Docosia fumosa*. Other families will be treated elsewhere.

Docosia fumosa is hitherto only known from parts of Scandinavia (Norway, Sweden) and also from Great Britain, the Czech Republic, France and Corsica (CHANDLER 2006). The new record presented

Tab. 1: Insects emerged from a blackbird's nest [earliest and latest dates are given].

Order	no. of specimens	coll. date (2006)
Coleoptera	2	23 Jan – 22 Feb
Collembola	1	22 March
Diptera	133	19 Jan – 20 April
Hymenoptera	77	02 Feb – 02 April
Lepidoptera	19	06 Feb – 08 March
Thysanoptera	2	23 Jan
total	234	19 Jan – 20 April

Tab. 2: Dipterous families emerged from a blackbird's nest.

Family	♂♂	♀♀	in copula	total
Anthomyiidae	2	2	–	4
Carnidae	1	6	–	7
Cecidomyiidae	2	1	–	3
Chloropidae	9	10	–	19
Fanniidae	4	–	–	4
Heleomyzidae	5	4	–	9
Lauxaniidae	–	1	–	1
Mycetophilidae	34	12	2	48
Phoridae	–	1	–	1
Sciaridae	24	11	–	35
Stratiomyidae	–	2	–	2
total	81	50	2	133

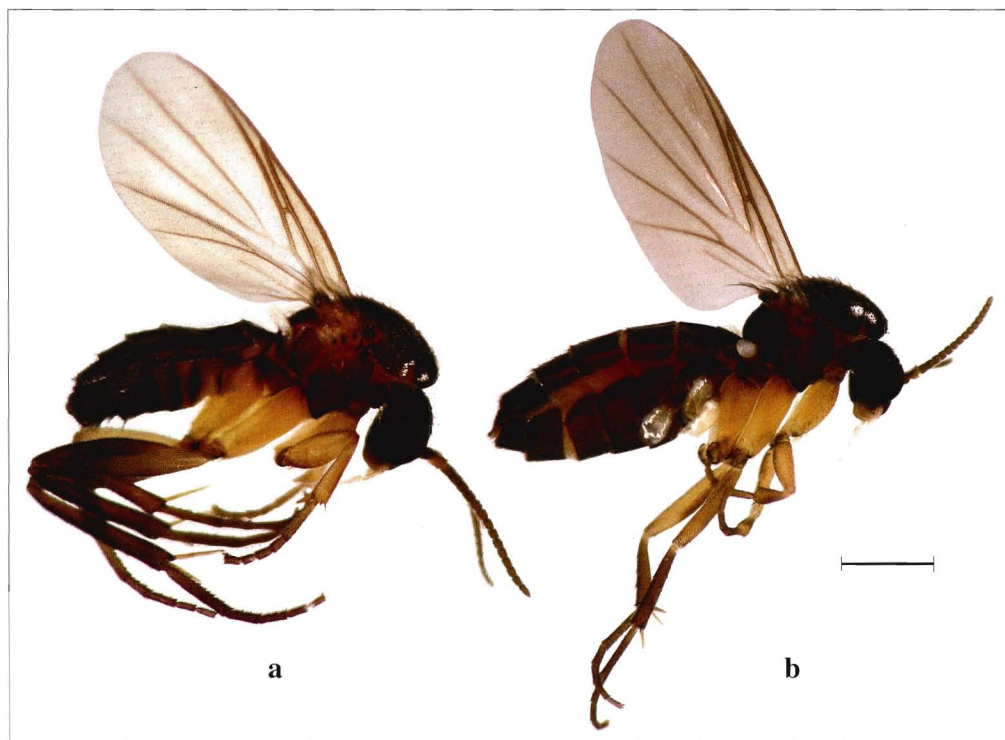


Fig. 1a, b: Habitus of *Docosia fumosa* EDWARDS. – **a:** Male; – **b:** Female, note the whitish gamasid mites attached to the abdomen. Scale bar = 0.5 mm.

here fills the gap in the known Western Palaearctic distribution. The original description by EDWARDS (1925) is based on material reared from nests of hedge-sparrows [*Prunella modularis* (LINNAEUS, 1758)] and thrushes (*Turdus* spp.). This species is well characterized by a double-row of bristles on the parameres and the shape of 9th tergite, allowing a reliable identification. The wings are conspicuously darkened, especially in the female (Fig. 1b). Although several species of different families were reared, only *D. fumosa* carried many small, whitish gamasid mites (ALBERTI pers. comm.) attached to the body (Fig. 1b). *D. fumosa* shows a remarkable behaviour: Contrary to other species, it does not climb up the inner sides of the rearing bag rather than staying constantly in the upper layers of the nest. If disturbed, it escapes to the deeper layers where it hides. Larval breeding sites show a variety of nests of several bird species (*Corvus* species, finches: Fringilidae, *Prunella* species to *Turdus* species), and larvae are believed to be saprophagous (HICKS 1959, 1962, 1971; HUTSON et al. 1980). Due to its cryptic life history and its association with bird nests a much wider distribution than currently known is assumed. With respect to this we would like to draw our colleagues' attention to this unusual "collecting site", which might bear more interesting records of diverse dipterous families in the future.

Acknowledgements

We thank Till TÖPFER (Dresden/Germany) for collection and determination of the bird nest and Prof Gerd ALBERTI (Greifswald /Germany) for identification of the mites.

Literature

- CHANDLER, P. J. (2006): Mycetophilidae. – Fauna Europaea, Version of 9th November 2006. Available on: www.faunaeur.org
- EDWARDS, F. W. (1925): British fungus-gnats (Diptera, Mycetophilidae). With a revised generic classification of the family. – The Transactions of the Entomological Society of London **1924**: 505–670.

- HICKS, E. A. (1959): Check-list and bibliography on the occurrence of insects in birds' nests. – 681 pp.; Ames: Iowa State College Press.
- HICKS, E. A. (1962): Check-list and bibliography on the occurrence of insects in birds' nests. Supplement I. – Iowa State Journal of Science 36(3): 233–348.
- HICKS, E. A. (1971): Check-list and bibliography on the occurrence of insects in birds' nests. Supplement II. – Iowa State Journal of Science 46(2): 123–338.
- HUTSON, A. M.; ACKLAND, D. M. & KIDD, L. N. (1980): Mycetophilidae (Bolitophilinae, Ditomyiinae, Diadocidiinae, Keroplatinae, Sciophilinae and Manotinae). Diptera, Nematocera. – Handbooks for the identification of British insects 9(3): 1–111; London: Royal Entomological Society.

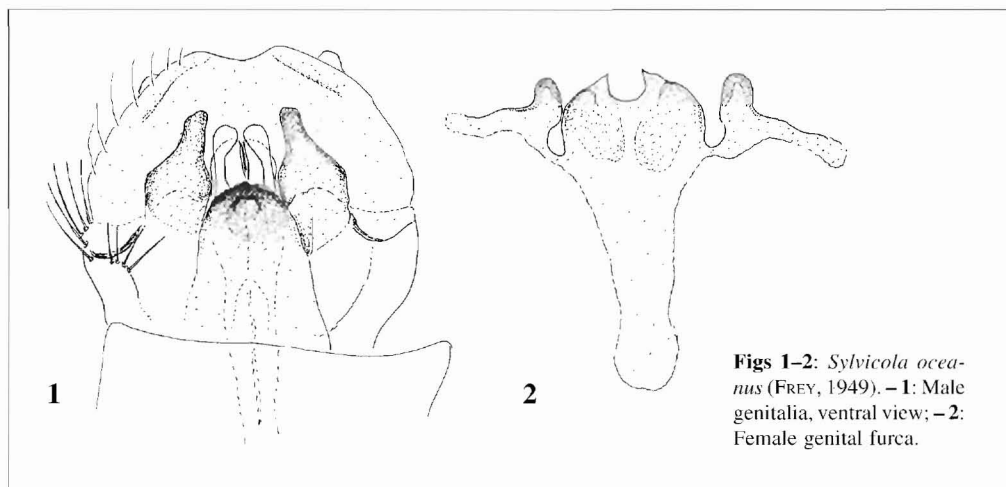
Author's address

Björn RULIK
 Uwe KALLWEIT
 Federal State Collection of Natural History Dresden
 Museum of Zoology, Division of Diptera
 Königsbrücker Landstrasse 159
 D-01109 Dresden, Germany
 E-mail: bjoern.rulik@snsd.smwk.sachsen.de
 uwe.kallweit@snsd.smwk.sachsen.de

The paper was accepted on 10 November 2006.
Editum: 22 December 2006.

Continuation of the short note 1(2006) by J.-P. HAENNI: **“Faunistic and taxonomic notes on European Anisopodidae (Diptera)”** from page 28. – Fortsetzung der Kurzmitteilung 1(2006) von J.-P. HAENNI: „Faunistische und taxonomische Bemerkungen über europäische Anisopodidae (Diptera)“ von Seite 28.

The aedeagal guide is very distinctive, heavily sclerotized and broadly rounded apically with a short median point; the parameres are rounded apically, resembling those of *S. fenestralis*. The shape of the gonostyles is quite similar to those of *S. cinctus*, bearing however a small lateral basal external tooth, that is only visible in lateral view. In the female (Fig. 2), the genital furca is devoid of strongly sclerotized apodemes, resembling that of *S. fenestralis*, but *S. oceanus* may be easily distinguished from that species by a pair of rounded, apically directed and weakly sclerotized submedian lobes. The eyes of the male are widely separated, with frons width larger than ocellar triangle.



Figs 1–2: *Sylvicola oceanus* (FREY, 1949). – 1: Male genitalia, ventral view; – 2: Female genital furca.