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**Contributions to the knowledge of the scuttle fly fauna
of Hungary (Diptera: Phoridae)**

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Abstract – Three Phoridae species are reported as new to Hungary. Three other interesting records are discussed. The unknown female of *Peromitra cephalotes* SMITZ, 1922 is described. With 2 figures.

Key words – Phoridae, faunistics, *Peromitra cephalotes*, description, new records.

INTRODUCTION

Research on the Phoridae fauna of Hungary was nearly abandoned after the great ‘phoridologist’, Pater SCHMITZ’s death in 1960. The few exceptions are the checklist by ÁDÁM & PAPP (1996, 2001) and some other papers (PAPP 2002, 2003, 2007, 2009).

Unfortunately the collection of Pater SCHMITZ housed in the Hungarian Natural History Museum (HNHM) with representatives of more than two hundred species and with numerous types (e.g. *Conicera tibialis* SCHMITZ, 1925) perished in the fire in 1956. PAPP began to rebuild the HNHM’s Phoridae collection in 1995. Until now, more than 20,000 specimens were collected by him.

In 2008 the author had an opportunity to sort this collection into genera and to identify some of them to species level. The largest genus in the family, *Megaselia* RONDANI, 1856 represents more than seventy percent in terms of the number of both species and usually also specimens. Unfortunately there is no up-to-date key to identify the Hungarian phorid flies,

therefore the work started with smaller genera. In the first part of the identified material three species were found to be new to Hungary. Three additional interesting species are also amongst them, including one where the female was previously unknown.

MATERIALS AND METHODS

The flies were collected by netting, by exhaustor, or by hand. For identification of the species works of SCHMITZ (1951) and DISNEY (1998, 2000) were used.

The specimens are deposited in the Diptera Collection of the Department of Zoology of the HNHM.

RESULTS

Billotia SCHMITZ, 1944

Billotia inermis SCHMITZ, 1944 – 1 female: Villánykövesd, halastó mellett, 2008.06. 23., leg. PAPP L. – This species has recently been reported from Hungary, from two sites only (PAPP 2009). This new locality is far from the others.

Peromitra ENDERLEIN, 1924

The status of the genus *Peromitra* has long been disputed. ENDERLEIN (1924) established it for the species in *Hypocera* LIOY, 1864, which has a raised ocellar region. Later SCHMITZ (1929) ranked it as a subgenus of *Borophaga* ENDERLEIN, 1924. BROWN (1992) raised it again to generic level in his work on classification of Phoridae. He found that the raised ocellar region, the shape of the lower ocellus and the male terminalia were characteristic for this genus. DISNEY (1994) disputed BROWN's opinion and suggested to keep this taxon as a subgenus 'at least until a consensus is achieved'.

After examining the specimens of *Borophaga* s.l. deposited in HNHM, I accepted the standpoint that the species belonging to '*Peromitra*' should be a separate genus. I think it so because of their distinct features, which are more characteristic than many others used separating in some other genera in Phoridae.

Peromitra agilis (MEIGEN, 1830) – 1 male: Bátorliget, Fényi-erdő, 1988.06.13–16., leg. DELY-DRASKOVITS; 1 female: Bátorliget, rét, Malaise cs., 1988.10.13–14., leg. DELY-DRASKOVITS; 1 female: Bátorliget, talajcsapda, 1990.02.01., leg. LOKSA; 2 females: Bükk NP. Szilvásvár, 1984.07.30., leg. PAPP L.; 1 female: Zempléni TK, Nagyhuta, Kőkapu, Kemence-patak, égeres, 2000.07.04., leg. PAPP L. – PAPP (2002) reported this latter

specimen from Hungary under the name *Borophaga germanica* (SCHMITZ, 1918) as new to our fauna. I found it to be a misidentification. *B. germanica* should be deleted from the Hungarian list for now, but we still expect this species to occur in Hungary. *Peromitra agilis* is new to the Hungarian fauna.

Peromitra cephalotes (SCHMITZ, 1922) – 1 female: Göd, Mária utca, kertben [Mária street, in garden], 2008.10.03., leg. LENGYEL G. D. – This species was described based on a single male (SCHMITZ 1922). The holotype was deposited in the HNHM, but unfortunately this specimen perished in the fire in 1956. There are no more published data of *P. cephalotes*. The species was published in the following combinations: *Hypocera cephalotes* (SCHMITZ 1922), *Peromitra cephalotes* (ENDERLEIN 1924), *Epicrana cephalotes* (SCHMITZ 1924), *Borophaga (Peromitra) cephalotes* (SCHMITZ 1951), *Peromitra cephalotes* (BROWN 1992). The female was previously unknown.

Description of the female – Habitus (Fig. 1) similar to the male described by SCHMITZ (1922). There is a conspicuous wide projection on the head (Fig. 2), which ca. as wide as long. This projection is the frontal part of ocellar triangle. There are only two ocelli, the frontal missing. The surface of the head shiny black, with stout lengthwise furrows. Palpus and third antennal segment dark brown, pilose. The frons behind the third antennal segment pilose too. Supra-antennal setae and precellar bristles absent. Antials emerge under the projection, antero-, medio- and posterolaterals close to the eye margin.

Thorax considerably high and strong in lateral view, strongly humped (Fig. 1). Anepisternum bare.

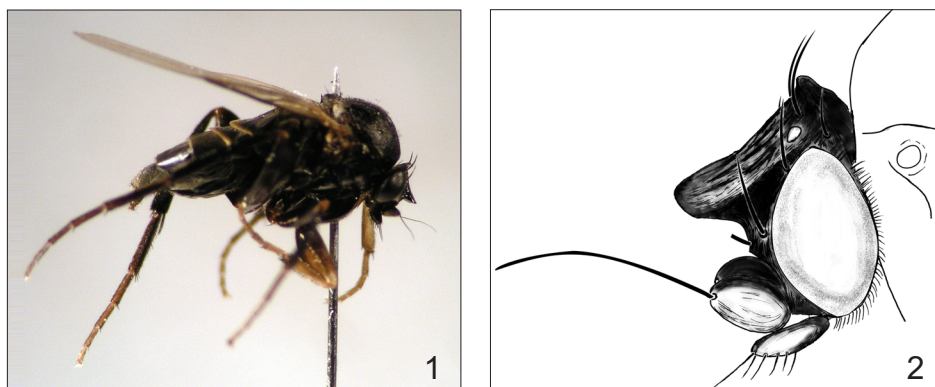
Wings clear. Vein *R*_s with a few (ca. 10) short and thick setulae along its whole length. Apex of *R*₄₊₅ swollen. First quarter of *M*₁ strongly curved backward as on *Borophaga subsultans* (LINNAEUS, 1767) and *B. irregularis* (WOOD, 1912). Knob of halteres dark brown, the base of the stalk light brown.

All femora stout. Fore tarsus and tibia light brown to yellowish, femur apically light, basally and ventrally dark brown. Fore tibia with one dorsal bristle and several (ca. 12) black spines. Mid and hind legs dark brown. Mid tibia with two bristles, one dorsal and one antero-dorsal in the upper part. Hind tibia with only one antero-dorsal bristle in the upper third part.

First abdominal tergite with hairs on latero-caudal margin. Tergite 1 narrow in the middle, tergite 2 wide, with a caudal projection. Caudal margins of tergites 1 to 5 fading from black to light brownish-yellowish. There are no conspicuous sternites.

Remarks – The voucher specimen's left wing is lost, the antial bristles on the head are broken. Not much is known about its biology. The specimens were collected close to sandy habitats both in Hungary and in Israel. The projection of the head and the stout legs suggest that this species can dig itself into the soil.

Distribution – Hungary and Israel – latter is an unpublished record from the Internet in the database of Natural History Museum of Los Angeles County (<http://www.discoverlife.org/mp/20o?guide=Phoridae>, accessed 20 January 2009), therefore we cannot state much about its distribution.



Figs 1–2. 1 = Lateral view of female *Peromitra cephalotes* (SCHMITZ, 1922); 2 = Head of *Peromitra cephalotes* (SCHMITZ, 1922) in lateral view. The antial bristle broken, the right flagella omitted

Pseudacteon COQUILLET, 1907

The genus includes six species from Europe (DISNEY 2000), three of them were reported from Hungary until now (DISNEY 2000, SCHMITZ 1924, 1953). The species *Pseudacteon tubicroides* DISNEY, 2000, described from Hungary, is missing from the Hungarian checklist (ÁDÁM & PAPP 2001). In the Diptera collection of HNHM there are several specimens which may belong to the related genus *Microselia* SCHMITZ, 1934.

Pseudacteon brevicauda SCHMITZ, 1925 – 1 female: Baláta TK, Somogyszob, Kis-Baláta, égeres, 2008.06.24., leg. PAPP L.; 1 female: Budapest, Pestszentlőrinc, Péterhalmi-erdő, tölgyes, 2002.06.08–09., leg. PAPP, L.; 1 female: Kiskunság, Ócsa, Kisturjánosok, 1980.06.21., leg. DRASKOVITS Á. – This species is new to Hungary.

Pseudacteon fennicus SCHMITZ, 1927 – 5 males: Újtelek [in fact, Szakmár], Felsőerek, tópart és mocsár, 2004.05.26., leg. PAPP L.; 1 male: Csévharaszt TT., nyíres, 2002.06.25., leg. FÖLDVÁRI M.; 2 males: Budapest, Pestszentlőrinc, Péterhalmi-erdő, erdei utak mellett, 2004.07.13–14., leg. PAPP L.; 1 male: ibid. 2004.07.17.; 1 female: ibid., tölgyes, 2002.07.01.,

leg. PAPP L.; 1 female: ibid., erdei avar, 2001.05.19–20., leg. PAPP L.; 1 female: ibid., nyáras, 2008.05.25., PAPP L.; 1 female: Csévharaszt, fátylvirágról, 2002.06.25., leg. PAPP L.; 1 female: Mátrai TK, Parád, Várbükk, öreg lucfenyves, 360 m, 2007.07.03–06, leg. PAPP L.; 1 female: Verőce: Magyarkút, Keskenybükki-patak-völgye, patak mellett, 2002.07.24., leg. PAPP L.; 1 male, 1 female: ibid., 2003.06.09. – This species is new to Hungary.

Xenotripleba BUCK, 1997

Xenotripleba dentistylata BUCK, 1997 – 1 male: Budapest, Pestszentlőrinc, Péterhalmi-erdő, 2007.03.15., leg. PAPP L. – This is the third record of this interesting species from Hungary.

DISCUSSION

At this time we cannot determine the exact number of Phoridae species known from Hungary, because of the changes after the checklist by ÁDÁM & PAPP (2001). However, there are more than 230 species recorded so far, and at least 300 species expected to occur in Hungary (*cf.* ÁDÁM & PAPP 2001). The whole checklist should be updated after identifying the *Megaselia* material in the HNHM.

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REFERENCES

- ÁDÁM, L. & PAPP, L. 1996: Check-list of the Phoridae (Diptera) of Hungary. – *Folia entomologica hungarica* 57: 65–76.
- ÁDÁM, L. & PAPP, L. 2001: Phoridae. – In: PAPP, L. (ed.): *Checklist of the Diptera of Hungary*. Hungarian Natural History Museum, Budapest, pp. 228–243.
- BROWN, B. V. 1992: Generic revision of Phoridae of the Nearctic region and phylogenetic classification of Phoridae, Sciadoceridae, and Ironomyiidae (Diptera: Phoridae). – *Memoirs of the Entomological Society of Canada* 164: 1–144.
- DISNEY, R. H. L. 1994: *Scuttle Flies: The Phoridae*. – Chapman & Hall, London etc, 467 pp.

- DISNEY, R. H. L. 1998: 3.4. Family Phoridae. – In: PAPP, L. & DARVAS, B. (eds): *Contributions to a Manual of Palaearctic Diptera, Higher Brachycera. Volume 3*. Science Herald, Budapest, pp. 51–79.
- DISNEY, R. H. L. 2000: Revision of European Pseudacteon Coquillett (Diptera, Phoridae). – *Bonner Zoologische Beiträge* **49**: 79–91.
- ENDERLEIN, G. 1924: Zur Klassifikation der Phoriden und über vernichtende Kritik. – *Entomologische Mitteilungen* **13**: 270–281.
- PAPP, L. 2002: New records of Phoridae (Diptera) from Hungary. – *Folia entomologica hungarica* **63**: 163–180.
- PAPP, L. 2003: Further additions and corrections to the Hungarian checklist (Diptera). – *Folia entomologica hungarica* **64**: 309–339.
- PAPP, L. 2007: Further Diptera species new for Hungary. – *Folia entomologica hungarica* **68**: 111–122.
- PAPP, L. 2009: Additions to the Diptera fauna of Hungary. – *Folia entomologica hungarica* (in press).
- SCHMITZ, H. 1922: Neue europäische Phoriden des Ungarischen Nationalmuseums. – *Entomologische Berichten* **6**: 33–39.
- SCHMITZ, H. 1924: Europäische Phoriden des Ungarischen National-Museums. – *Annales historico-naturales Musei nationalis hungarici* **21**: 79–86.
- SCHMITZ, H. 1929: *Revision der Phoriden*. – F. Dümmler, Bonn & Berlin, 211 pp.
- SCHMITZ, H. 1951: 33. Phoridae. – In: LINDNER, E. (ed.): *Die Fliegen der palaearktischen Region. 4* (7), *Lieferung 165*. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, pp. 241–272.
- SCHMITZ, H. 1953: Ungarische und andere paläarktische Phoriden des Ungarischen Nationalmuseums (Diptera). – *Annales historico-naturales Musei nationalis hungarici* **3**: 203–211.