

## SPECIES OF 22 DIPTERA FAMILIES OF THE AGGTELEK NATIONAL PARK

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Locality and flight period data of 249 species (by more than 4200 voucher specimens) of 22 dipterous families Bibionidae (8 spp.), Pleciidae (1 sp.), Scatopsidae (12 spp.), Anisopodidae (2 spp.), Coenomyiidae (1 sp.), Xylophagidae (1 sp.), Scenopinidae (1 sp.), Megamerinidae (1 sp.), Lauxaniidae (32 spp.), Heleomyzidae (27 spp.), Clusiidae (8 spp.), Sphaeroceridae (90 spp.), Asteiidae (4 spp.), Aulacigastridae (2 spp.), Camillidae (1 sp.), Drosophilidae (43 spp.), Odiniidae (1 sp.), Milichiidae (4 spp.), Carnidae (6 spp.), Acartophthalmidae (2 spp.), Gasterophilidae (1 sp.) and Hypodermatidae (1 sp.) are given with remarks on life-habits. Seven species new for the Hungarian fauna were found, incl. the type of one species formerly described (*Paramyia hungarica* L. Papp, 1993), which had been collected in the Aggtelek National Park but no new species is described in this part.

As in my previous papers on the flies of the Bükk National Park (Papp 1993a, 1996), the families in the present paper are not phylogenetically related. They are those 22 families, which I can identify down to species without difficulties. Unfortunately, a bigger part of all the materials (and species) collected in the Aggtelek National Park (ANP) and preserved in the collection of the Department of Zoology, Hungarian Natural History Museum, Budapest (HNHM) will not be identified and recorded, since there is no specialist for them in our country. However, papers in this volume are representative enough to show also the richness of the dipterous fauna of our mountainous national park, which is protected mainly for the sake of its numerous caves.

Among the old specimens in the HNHM we list also those with labels "Gombaszög" (Silica, Gombasecká jaskyna) and "Szádélő, Szádélői-völgy" (Zádiel, Zádielska dolina) which sites are just on the other side of the Hungarian-Slovakian border.

### LIST OF SPECIES

#### BIBIONIDAE

All bibionid materials preserved in the collection of the HNHM from the ANP were identified. Much to our bad surprise, the number of specimens preserved is not high (61 individuals only). Since the old collection of the HNHM was destroyed in 1956, the newly collected material is not so numerous. Eight species were found. *B. ferruginatus* is new to Hungary.

*Bibio clavipes* Meigen, 1818 — Aggtelek: Medvés-kert; Jósavfő: Tohonya-patak; Szin: Patkós-völgy; Szögliget: Patkós-völgy. 8.IX–11.X. — An autumn species, four males and two females were caught in the ANP. Zilahi-Sebess (1960) recorded as "IV–VI., IX–X.", however, his specimens were destroyed (his identification cannot be checked) and we do not know specimens from the spring months.

Phyll. dohisl. , 2g Mal, Trop.  
↳ equ. & 1g along creek

Paramyia hung. HT

Mad flat

Meo carpa. <sup>17072g</sup> : on cut and rottn grass, on marshy veg., on sheep dung

Meo fla : on sheep, horse & cow dung

Meo min. : sheep dung

Meo heg.

Meo tri : on horse dung

Meo vng

preserved, since it is very difficult to distinguish specimens from those of *D. pinnata* in the field.

*Drosophila (Drosophila) limbata* von Roser, 1840 — Aggtelek: Almás(kerti)-völgy, Ménes-völgy, Medvéskert; Jósavfő: Gerge-bérc; Perkupa: Telekes-völgy. VII-X. — Three males and three females, plus one was collected on apple-bait (Papp 1992b).

*Drosophila (Drosophila) littoralis* Meigen, 1830 — Aggtelek: Ménes-völgy, Medvéskert. IX. — Two specimens were collected on apple-bait (Papp 1992b). A rare species in Hungary.

*Drosophila (Drosophila) phalerata* Meigen, 1830 — Aggtelek: Lófej-forrás, Ménes-völgy, Medvéskert; Jósavfő; Szin: Patkós-völgy. VII-X. — More than 280 voucher specimens were preserved, because they are hardly separable from those of *D. kuntzei* in the field. It is very common also on apple-bait (Papp 1992b).

*Drosophila (Drosophila) repleta* Wollaston, 1858 — Szin: Szelcepuszta; Szögliget: Derenk. IX-X. — One male and four females of this synanthropic species were collected.

*Drosophila (Drosophila) testacea* von Roser, 1840 — Aggtelek: Lófej-forrás, Ménes-völgy, Medvéskert. VII-X. — It was collected on apple-bait (Papp 1992b).

*Drosophila (Drosophila) transversa* Fallén, 1823 — Aggtelek: Lófej-forrás, Ménes-völgy, Medvéskert; Szin: Ménes-völgy, Patkós-völgy; Szögliget: Ménes-patak völgye. VII-X. — It was collected on also apple-bait (Papp 1992b); over 150 specimens preserved.

*Drosophila unimaculata* Meigen, 1830 — Aggtelek: Ménes-völgy, Medvéskert. VII-X. — It was collected in high number on apple-bait (3 ind. in the ANP, but 311 in the Bükk NP, see Papp 1992a,b), though reported as new for the Hungarian fauna rather recently. Bächli and Burla (1985) listed it in the "melanica-Gruppe", together with the next species.

*Drosophila (Drosophila) tsigana* Burla et Gloor, 1952 — Jósavfő: Tengersizem. VII. — It was collected on oozing sap of an oak tree at Jósavfő and also on apple bait samples in other parts of Hungary (Papp 1992a,b). Formerly known only from France and Portugal.

#### ODINIIDAE

Rare flies with special habits (the larvae are mostly predators of xylophilous insects), and since there were no special collectings for odiniids in the ANP., only one species was found in these materials.

*Odinia boletina* (Zetterstedt, 1848) — Aggtelek: Lófej-forrás. — 15.IX. — A single female was caught.

#### MILICHIIDAE

Seven specimens of four species were found in the collection of the HNHM from the ANP. On the one hand, the holotype of *Paramyia hungarica* L. Papp, 1993 was collected (Papp 1993b), which represents a genus new to the whole Palaearctic Region; on the other, representatives of some very common species are missing. For instance, no specimens of the genus *Desmometopa* was found in the material from the ANP.

*Phyllomyza donisthorpei* Schmitz, 1923 — Jósavfő. 20.VII-20.VII. — Two females were caught by a Malaise trap.

*Phyllomyza equitans* (Hendel, 1919) — Aggtelek: Medvéskert. ?-25.IX. — One female of this rare species was collected along a creek.

*Paramyia hungarica* L. Papp, 1993 — Aggtelek: Medvéskert. 19.VII. — The unique holotype male was collected (on fermenting fruit bait) during our survey programme.

*Madiza glabra* Fallén, 1820 — Jósavfő: Nagy-Tohonya-forrás; Szin: Szelcepuszta. ?-15-20.IX. — Only three males of this common species were preserved.

Collectings for carnids need special methods and much time, since they are not collectible by the routine methods. In the Aggtelek Mts special attention was paid to the flies in horse and sheep dung; so the material contains some species, which develop in dung of large hoofers. The whole carnid material (32 ind. of six spp.; two females left unnamed) — though it is not very rich — is still more significant both in specimens and species than that from the Bükk NP (cf. Papp 1996).

*Meoneura carpathica* L. Papp, 1977 — Aggtelek: Almás-völgy, Medvéskert; Komjáti: Lótusz-forrás; Szögliget: Ménes-patak völgye. 7.V-6.IX. — Seven males and two females were caught on cut and rotten grass, on marshy vegetation and on sheep dung. Formerly only one male of this species — which has been collected in the Alps and in the Carpathians — was known from Hungary. So this material from the ANP is very important.

*Meoneura flavifacies* Collin, 1930 — Aggtelek: Almás-völgy; Jósavfő: Gerge-bérc, Lófej-forrás, Tohonya-forrás. 17.V-13.X. — It is common on several kinds of dung. In the ANP it was caught on sheep, horse and cow dung (seven males, three females).

*Meoneura minutissima* (Zetterstedt, 1860) — Aggtelek: Almás-völgy. 7.V-?. — Two males of this interesting species were caught on sheep dung.

*Meoneura neglecta* Collin, 1930 — Jósavfő: Gerge-bérc; Szögliget: Ménes-patak völgye. 12.V-13.IX. — This is also a coprophagous species, less abundant than *M. flavifacies* in Hungary (four males, two females).

*Meoneura triangularis* Collin, 1930 — Jósavfő: Gerge-bérc. 17.V-?. — A coprophagous species, which seems rare in Hungary. Only one male was captured on horse dung.

*Meoneura vagans* (Fallén, 1823) — Aggtelek: Szelcepuszta. 7.V-?. — Based on our experience, it does not seem a specialised species: it has been caught on carrion, meat bait and on several kinds of dung. Here only one male was caught.

#### ACARTOPHTHALMIDAE

Twenty-six specimens of two species were found but since there are only three species known from Hungary, this seems a satisfactory material for our purposes.

*Acartophthalmus bicolor* Oldenberg, 1910 — Aggtelek: Ménes-völgy, Medvéskert; Jósavfő: Tohonya-forrás. 9.V-20.VII. — Less abundant than the next species. In the ANP it was caught on apple-bait, on a dead bird and on a humid pasture (four males and two females).

*Acartophthalmus nigrinus* (Zetterstedt, 1848) — Aggtelek: Lófej-forrás, Ménes-völgy, Medvéskert; Hídvégardó: égerláp; Jósavfő: Szelcepuszta; Komjáti: Alsó-hegy; Perkupa: Telekes-völgy. 11.V-25.IX. — The adults can be found on various kinds of dead organic material (carrion, human feces, other dung, decaying wood with fungi, etc. (10 males, 10 females).

#### GASTEROPHILIDAE

*Gasterophilus intestinalis* (De Geer, 1776) — Jósavfő: Gerge-bérc. — Egg-shells and dead eggs attached to hairs of several horses were collected on the 13th of October 1988, and so the presence of this species is ascertained in the Park. It is obvious from the data that empty egg-shells remain on hairs for several weeks and so their identification is the best (easiest) way to detect *gasterophilosis* in a stud.

#### HYPODERMATIDAE

*Hypoderma diana* Brauer, 1858 — Aggtelek: Hollófészék-v., Ménes-völgy; Jósavfő: Lófej-völgy; Szögliget: Derenk, Ménes-völgy; Perkupa: Telekes-völgy. 9-18.V. — Nineteen specimens (16 males and three females) were caught on the roads. It must be a common parasite of the roe-deer and the red deer in the ANP.