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Milichiidae and Carnidae from Afghanistan (Diptera)*

By

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Abstract: Faunistical data of fourteen milichiid and carnid species from Afghanistan. Meoneura subfreta sp. n. and Hemeromyia afghanica sp. n. are described, a key for the Palaearctic Hemeromyia is given; other nine species are new for the fauna of Afghanistan.

During a collecting trip in 1974 a total of 5879 milichiid and carnid specimens were collected (PAPP 1975). It was expected that this material would be rich also in species. Contrarily, only fourteen species were found. The fauna of Milichiidae and Carnidae of Afghanistan is rather inadequately known. SABROSKY (1961) published three species, two of which were found also in this material, GREGOR (1971) described two Meoneura species from Afghanistan, one of them is missing from the present material. The majority of the specimens (5315 specimens) belong to Leptometopa niveipennis (STROBL, 1900). Some rather common species were found, nine are new for the fauna of Afghanistan. Two new species are described below, one of them Hemeromyia afghanica sp. n. is very interesting and after its description a short key for the Palaearctic species of Hemeromyia is given.

During my studies on this material I had difficulties with the identification of the Desmometopa species. I asked and received help from Dr. CURTIS W. SABROSKY (USDA, Systematic Entomology Laboratory, Washington), who identified the Desmometopa species for me, thus, it is my agreeable duty to express my most sincere thanks to Dr. SABROSKY.

Some specimens of the Desmometopa species are deposited in the U.S. National Museum, all the other specimens, including all the type-specimens, are preserved in alcohol in the collection of the Hungarian Natural History Museum, Budapest (some specimens were minutia-pinned during elaboration).

MILICHIIDAE

Milichiella lacteipennis (Loew, 1865): 6 ♀: Prov. Nangarhar: Jalalabad, 560 m, 8 May (No. 83). - A widespread species on the subtropic and tropic areas of the World, new for Afghanistan.

Madiza glabra Fallén, 1820 - Prov. Kabul: 1 ♂: Bini Hesar, 6 km SE from Kabul city

* Contributions by Hungarian zoologists to the exploration of invertebrates in Afghanistan, No. 5.

centre, 1820 m, 12 May (No. 92); 1 ♀: ibid., State Farm for cow and cattle (No. 91b); 1 ♀: Tsemtala, 10 km NW from Kabul city centre, 1800 m, 18 May (No. 107); 1 ♀: Kabul, Tshelsotun, 1850 m, 27 May (No. 135); Prov. Parwan: 1 ♀: Estalef, 1950 m, 15 April (No. 30); Prov. Herat: 1 ♀: southern slopes of Paropamisus Mts., about 10 km N from Herat, 1150 m, 21 May (No. 115); Prov. Nangarhar: 1 ♂: Jalalabad, 560 m, 8 May (No. 83). - A widely distributed Holarctic species, locality data from Afghanistan by SABROSKY (1961).

Desmometopa microps Lamb, 1914 - Prov. Kabul: 32 ♂, 9 ♀: Bini Hesar, 6 km SE from Kabul city centre, 1820 m, 12 May (No. 92) (8 ex. Prov. Nangarhar: 1 ♀: Jalalabad, 560 m, 8 May /No. 83/; 6 ♂, 14 ♀: in USNM). ibid., 580 m, (No. 85). - Described from the Seychelles but it is rather widespread on the tropical parts of the Old World. New for Afghanistan.

Desmometopa m-nigrum (Zetterstedt, 1848) - Prov. Kabul: 2 ♀: Kabul, Aliabad, University Park, 1800 m, 1-2 June (No. 143); Prov. Kandahar: 32 ♂, 29 ♀: Kandahar, 1000 m, 23 May, (No. 128) (8 additional specimens in the USNM); Prov. Nangarhar: 27 ♂, 8 ♀: Jalalabad, 560 m, 8 May (No. 83) (+ 3 ex. in USNM); 100 ♂, 17 ♀: ibid., 580 m (No. 85) (+ 2 ex. in USNM). - Almost cosmopolitan but hitherto it has not been recorded from Afghanistan.

Desmometopa singaporensis Kertész, 1899 - 1 ♀: Kabul, Darulaman, 1820 m, 18 June (No. 159); Prov. Nangarhar: 2 ♂, 7 ♀: Jalalabad, 580 m, 8 May (No. 85); 2 ♂, 6 ♀: ibid., 560 m (No. 83) (2 ♂, 1 ♀ additional specimens in USNM). - Widely distributed in the tropical and subtropical zones of the World, including the Mediterraneum, known also from Iran (Hennig, 1965). New for Afghanistan.

Desmometopa varipalpis Malloch, 1927 - Prov. Nangarhar: 1 ♂, 3 ♀: Jalalabad, 560 m, 8 May (No. 83). - A very interesting Oriental species, new for the fauna of Afghanistan.

Leptometopa latipes (Meigen, 1830) - 2 ♂: Kandahar, 1000 m, 23 May (No. 128); Prov. Nangarhar: 5 ♂, 4 ♀: Jalalabad, 580 m, 8 May (No. 85). - Widespread in the Holarctic and Oriental regions, known also from Cuba. New for Afghanistan.

Leptometopa rufifrons (Becker, 1903) - Prov. Kabul: 2 ♂, 2 ♀: Tshemtala, 10 km NW from Kabul city centre, 1800 m, 18 May (No. 107); Prov. Herat: 1 ♀: southern slopes of Paropamisus Mts., about 10 km N from Herat, 1150 m, 21 May (No. 115); Prov. Kandahar: 3 ♀: Kandahar, 1000 m, 23 May (No. 128). - A South Palaearctic species, first record from Afghanistan by SABROSKY (1961).

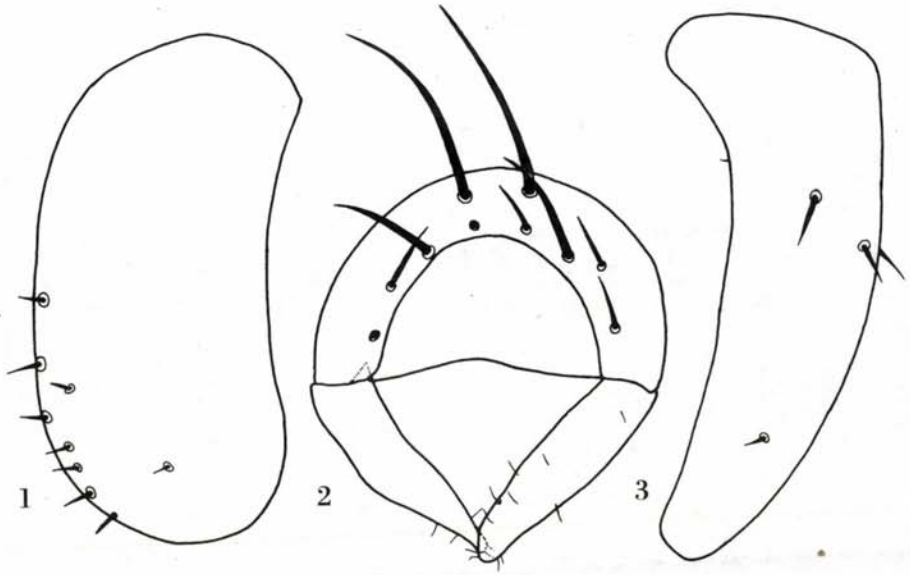
Leptometopa niveipennis (Strobl, 1900) - Prov. Kabul: 1 ♂, 2 ♀: Paghman river, 16 km W from Kabul city centre, 1850 m, May 1, 10 (No. 62, 90); 1 ♀: Kabul, Aliabad, 1850-1920 m, 4 May (No. 73); 112 ♂, 102 ♀: Bini Hesar, 6 km SE from Kabul city centre, 1820 m, 12 May (No. 92); 2 ♂, 1 ♀: ibid., State Farm for cow and cattle, netted in stable for calves (No. 91a); 163 ♂, 53 ♀: ibid., Bini Hesar lake, 1780 m, 17 May, 1 June (No. 106, 142); 1 ♂: Kabul, Aliabad, 1800 m, University park, 1-2 June (No. 144); 11 ♂, 1 ♀: Kabul, Tshelsotun, 1850 m, 27 May (No. 135); Prov. Herat: 20 ♂, 11 ♀: Hari Rud river, about 8 km SW Herat, 950 m, 20 May (No. 111); 1 ♂, 2 ♀: southern slopes of Paropamisus Mts., about 10 km N from Herat, 1150 m, 21 May (No. 115); 1 ♂, 3 ♀: Hari Rud river, about 15 km SE from Herat city centre, 950 m, 21 May (No. 120); 1 ♀: Herat, 1000 m, city park, 21 May (No. 121); Prov. Kandahar: 2 ♂, 1 ♀: Kandahar, Arghandab river, 5 km from Kandahar, 1000 m, 23 May (No. 126); 4186 ♂, ♀: Kandahar, 1000 m, flowering Umbelliferae (No. 128); Prov. Ghazni: 1 ♀: 2 km SE from Moqur, 1970 m, 3 June (No. 146); Prov. Nangarhar: 1 ♀: Dašt-e Gamberay, 8 km NNE from Hydroelectric Plant of Band-e Darunta, 650 m, 8 May (No. 82); 4 7 ♀: Jalalabad, 560 m, 8 May (No. 83); 622 ♂, ♀: ibid., 580 m (No. 85). - 5315 specimens.

CARNIDAE

Meoneura hennigi Gregor, 1971 - Prov. Kabul: 1 ♂, 1 ♀: Kabul, Aliabad, 1850-1920 m, 3 April, on donkey droppings (No. 9). - Described from Pakistan (Tirich valley, 3650 m), and from Afghanistan (Ishmurkh valley, 4500 m). It is a very interesting montane species, closely related to M. inversa L. Papp, 1976, from Mongolia.

Meoneura glaberrima Becker, 1910 - Prov. Kabul: 5 ♂: Kabul, Aliabad, 9-11 April, University park (No. 16); 22 ♂, 3 ♀: ibid., 1-2 June, 13 June (No. 143, 148); 2 ♂, 1 ♀: Paghman, 2500 m, 5 May (No. 76); 5 ♂, 3 ♀: Kabul, Darulaman, 1820 m, 18 June (No. 159). 41 specimens. - Hitherto known from Corsica and from Tunisia. New for the fauna of Afghanistan. The genitalia of the males from Afghanistan were compared with that of the holotype from Corsica.

Meoneura prima (Becker, 1903) - Prov. Kabul: 3 ♂, 2 ♀: Kabul, Aliabad, 1800 m, 3-4 April (No. 8); 22 ♂, 9 ♀: ibid., 1850-1920 m, 3 April (No. 9); 2 ♂, 1 ♀: Bini Hesar, 6 km SE from Kabul city centre, State Farm for cow and cattle, 1820 m, 12 May (No. 91 b, c); 24 ♂, 6 ♀: ibid., 1 June (No. 140 c); 19 ♂, 3 ♀: ibid., 1 June (No. 140 b: as Meoneura sp. n. in Papp, 1975a); 1 ♂: Kabul, Aliabad, 1850-1920 m, 4 May (No. 73); 4 ♂, 1 ♀: Bini Hesar, 1820 m, 12 May (No. 92); 1 ♀: Tshemtala, 10 km NW from Kabul city centre, 1800 m, 18 May (No. 107); Prov. Parwan: 64 ♂, 20 ♀: Estalef, 1950 m, 15 April (No. 30); Prov. Herat: 1 ♂, 5 ♀: Herat, Hotel Minarets, 1000 m, 20 May (No. 114). - A scarcely known Holarctic species (publications under the synonymic name seducta Coll.). It appears to be a common species in Afghanistan, though no published data were known for this country.



Figs. 1-2: Meoneura subfreta sp. n., paratype male: 1 = surstylus in its widest extension, 2 = epandrium (genital arch) with surstyli; Fig. 3 = Hemeromyia afghanica sp. n., holotype male: surstylus

Meoneura subfreta sp. n.

Ocellar triangle shining black, reaching anterior 3/4 of frons, other parts of frons mat red to dark reddish brown. Genae wide, longitudinal axis of eyes only 2.5-times longer than smallest genal width. Antennae very short, in big facial foveae. Thorax shining black, only 1 dc pair, chaetotaxy as in its congeners (no pteropleural, 1 h, 2 np, 1 prst, 1 sa, 1 pa, 1 small posterior ia, 2 sc, 2 mp, 1 st). Acrostichal microchaetae comparatively long but scattered (only 4 disarranged rows between dc lines). Legs short and black, tarsi light brown. Mid metatarsus somewhat longer than half (0.52) of the length of mid tibia. Wings light milky, veins light yellow. Costal fringe only moderately strong. Wing length of holotype male: 1.04 mm, that of paratypes: 0.96-1.31 mm; width of wing of holotype male: 0.46 mm, that of paratypes: 0.44-0.55 mm. Male epandrium (genital arch) small, very short, dorsomedially with a pair of long bristles (Fig. 2) and with other 4 pairs of short bristles. Aedeagus long, in recurved position describing a circle, with fine dense hairs. Surstylus (Fig. 1) very simple,

comparatively long and very broad, apex very broad, rounded with some very short hairs, aedeagal apodeme very short (less than 0.1 mm). Female sternites small, cerci with short hairs only.

Body length of holotype male: 1.36 mm, paratypes: 1.29-1.82 mm.

Holotype male: Afghanistan, Kandahar, 1000 m, 23 May, 1974, leg. L. Papp (No. 128). - Paratypes: 2 ♂, 10 ♀: data same as for holotype; 4 ♀: ibid. (No. 129); Prov. Nangarhar: 1 ♂, 4 ♀: Jalalabad 580 m, 8 May, 1974 (No. 85); Prov. Kabul: 3 ♂, 5 ♀: Tsemtala, 10 km NW from Kabul city centre, 1800 m, 18 May, 1974 (No. 107).

Meoneura subfreta sp. n. is close to M. kaszabi L. Papp, 1976 (Mongolia) as regards its outer characteristics (it has only 1 dc pair, mesonotum shining black, acmi sparse in 4 disarranged rows) but the structure of its male genitalia is similar to that of freta Collin, 1937. Contrarily to freta, it has only 1 pair of long bristles on its epandrium (2 pairs in freta), its surstyli (Fig. 1) are much wider and not bipartite as in freta (cf. COLLIN, 1937).

Hemeromyia afghanica sp. n.

Body greyish brown (probably owing to dying in alcohol). Genae moderately wide (about 0.05 mm), longitudinal axis of eyes 4-times longer than smallest genal width. Genal edge with two pairs of strong bristles. Ocellar triangle reaching anterior 3/4 of frons. Palpi minute (only about 0.08 mm), proboscis short, labellae very short (less than 0.1 mm). Antennae and arista short, arista bare. Thoracic chaetotaxy: 1 h, 2 np, 1 prst, 1 sa, 1 pa, 1 small posterior ia, 1 + 3 dc, 0 prsc, 2 sc, 1 long and 1 short hind marginal mp and 1 discal mp, 1 st pairs of bristles. Legs short, brown, mid metatarsus somewhat shorter than half of length of mid tibia. Anteroventral side of fore femur with 2 long and several short bristles. Wings transparent, veins light yellow. Costa reaching m, t_a-t_p/t_p = 0.82. Knob of halteres white, very big. Male epandrium small, 0.12 mm wide, 0.04 mm long dorsally, aedeagus very long, in recurved position describing one and a half circles, with dense stiff black hairs; epandrium with some very short bristles. Surstylus (Fig. 3) simple, rather long with a few short bristles, apex rounded.

Body length of holotype male: 1.45 mm, wing length: 1.18 mm, width of wing: 0.52 mm.

Holotype male: Afghanistan, Prov. Kabul: Bini Hesar, 6 km SE from Kabul city centre, State Farm for cow and cattle, 1820 m, 12 May, 1974, leg. L. Papp (No. 91 g: reared from manure sample collected in cow stable under cribs) (Hemeromyia sp. n. in Papp, 1975a, wherein two specimens were mentioned owing to typing error).

Key to Palaearctic Hemeromyia Coquillett, 1902

1 (2) Proboscis very long, labellae elongated. One pair of prescutellar bristles. Ocellar triangle narrow and reaching only middle of frons. Genal edge rounded in profile with 3 pairs of strong bristles. Genae comparatively narrow, not broader than length of third antennal joint. Mesonotum dull, dark. 1.5-1.75 mm (Yugoslavia, Hungary, ? Egypt)
remotinervis (Strobl, 190?

2 (1) Proboscis short, labellae short. No prescutellar bristles present. Ocellar triangle broader and reaching at least anterior 3/4 of frons.

3 (4) Genal edge protruding in profile with 4 pairs of strong bristles, genae very wide, 1.5-2-times broader than length of third antennal joint. Ocellar triangle very long, apex near to lunule. Mesonotum shining black. 1.9-2.25 mm (Libyian Desert, Hungary)
anthracina Collin, 1949

4 (3) Genal edge not protruding in profile with only 2 pairs of strong bristles, genae not as wide, only slightly broader than length of third antennal joint. Ocellar triangle reaching anterior 3/4 of frons. Mesonotum subshining. 1.45 mm (Afghanistan)
afghanica sp. n.

A female specimen (Prov. Kabul, Kareze Mir, 15 km NW from Kabul city centre, 1950 m, 28 May /No. 137/) of a fourth species was found in the present material. It has very

short ocellar triangle, its mesonotum is shining black, wings brownish, veins dark brown (!) its t_a-t_p section is very long, $t_a - t_p / t_p = 2.33$. Unfortunately, it is a female, being insufficient for proper description.

REFERENCES

GREGOR, F. (1971): New species of Mycetaulus Loew (Piophilidae) and Meoneura Rond. (Milichiidae) from Hindukush (Diptera). - Acta ent. bohemoslov., 68: 52-57.

HENNIG, W. (1937): 60a. Milichiidae et Carnidae. - In: Lindner: Die Fliegen der palaearktischen Region, 6 (1): 1-91.

HENNIG, W. (1965): Diptera Acalyptratae aus dem Iran. - Stuttg. Beitr. z. Naturk., 1965/139: 1-6.

PAPP, L. (1975): A report on a zoological study and collecting trip to Afghanistan. - Folia Ent. Hung., 28: 321-336.

PAPP, L. (1975a): Dipterological studies in some Hungarian and Afghan large-scale cattle farms. - Folia Ent. Hung., 28: 137-145.

PAPP, L. (1976): Milichiidae and Carnidae (Diptera) from Mongolia. - Acta Zool. Hung., 22: 369-387.

PAPP, L. (1978): Milichiidae, Carnidae. - In: Fauna Hungariae 15/9: 9-50.

SABROSKY, C. W. (1959): The Nearctic species of the filth fly genus Meoneura (Diptera, Milichiidae). - Ann. ent. Soc. Amer., 52: 17-26.

SABROSKY, C. W. (1961): A report on Chloropidae and Milichiidae from Afghanistan (Diptera). - Opusc. Ent., 26: 61-66.

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