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**FAUNISTIC DATA ON SOME DIPTERAN FAMILIES (INSECTA:  
DIPTERA) FROM MOROCCO  
(Results of „Hamada” Expedition 2005)**

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Abstract. Faunistic and distributional data on 50 species, collected in March and April 2005, in Morocco, are presented; they belong to 23 families, most of them of suborder Brachycera (only 4 families belong to Nematocera). Families Opomyzidae and Camillidae are reported for the first time from Morocco, i. e. 26 species, and 17 are new reports for North Africa.

Résumé. On présente des données faunistiques et de distribution sur 50 espèces, capturées en mars et avril 2005, en Maroc; elles appartiennent à 23 familles, la plupart d'entre elles du sousordre Brachycera (seulement 4 familles appartiennent à Nematocera). Les familles Opomyzidae et Camillidae sont rapportés pour la première fois de Maroc, c'est-à-dire 26 espèces, et 17 rapports sont nouveaux pour l'Afrique du nord.

Key words: Diptera, faunistic data, faunistical news, Morocco.

Senior author previously made faunistic studies on some dipterans from the Mediterranean area, namely from Turkey (Pârvu & Giray, 1984) and Israel (Pârvu, 1996, 1997).

Within March 11<sup>th</sup> – April 11<sup>th</sup>, 2005 “Oceanic Club” Society of Oceanographical Explorations and Marine Environment Protection from Constanța collected a new lot of dipterans from Morocco at senior author's suggestion, the identification results of a part of the material being presented further on.

Working hypothesis started from the analysis of the 13 volumes of the „Catalogue of the Palearctic Dipterans”, published after 1980. We found that now, in dipterans, the faunistic and distributional data are still so poor that the geographical affinities valuable between Morocco and the other areas of the Palearctic Zoogeographical Region can not be established.

Among the 23 studied families, 2 families, Opomyzidae and Camillidae, are reported for the first time from Morocco. Most of the families belong to the suborder Brachycera, only 4 of them (Tipulidae, Limoniidae, Pediciidae, Bibionidae) belong to the suborder Nematocera. A general perspective on the list of species and on their distribution shows that, from the 50 identified species, 26 are not mentioned from Morocco in the „Catalogue of the Palearctic Dipterans”, and 17 species and one family (Opomyzidae) were not reported from North Africa.

*MATERIAL AND METHOD*

The material was collected by the junior authors from different localities, most of them originating in the marshy area Orader Merja Zerga (Fig. 1).

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English translation by Mihaela Barcan Achim.

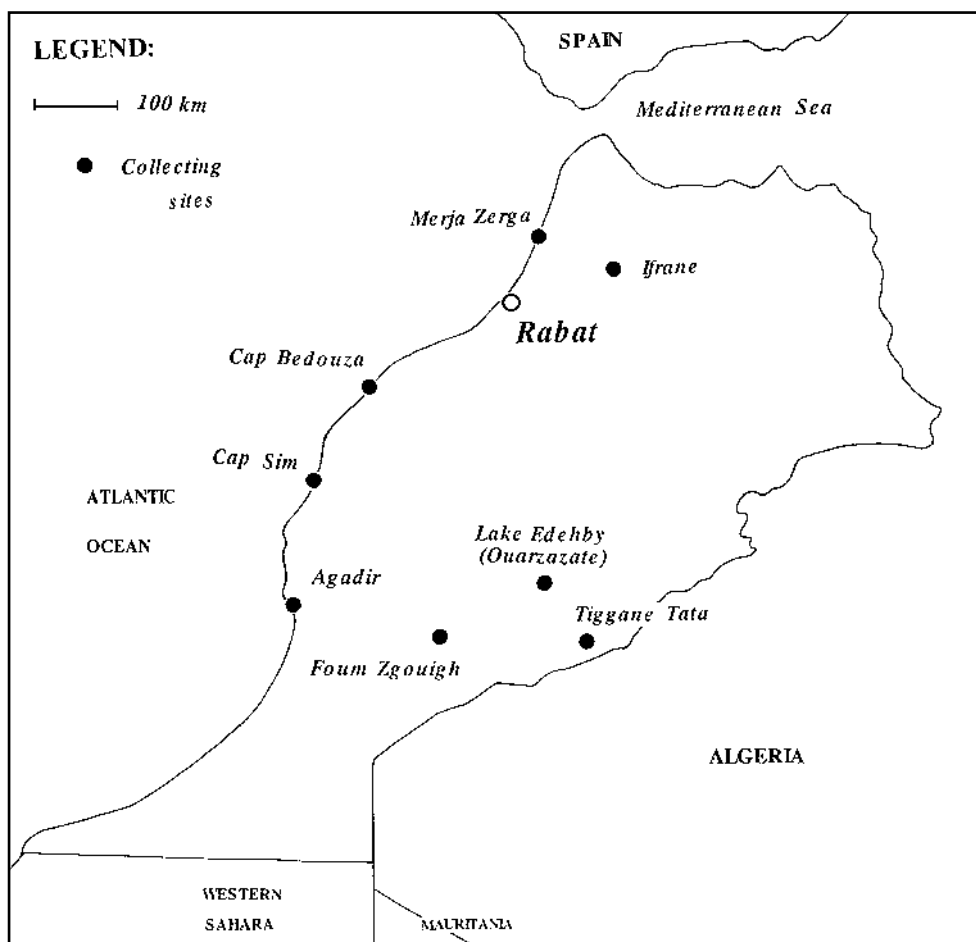


Fig. 1 – The mape of Morocco with the collecting places.

This material was collected using the entomological net and Barber traps, and it was preserved in 70 % alcohol. The identification was made after the hand book of the insects from the European region of the ex-SSSR – Shtackel'berg & Narchuk (1969, 1970), after different other hand books and French, Polish, Russian, Hungarian, Romanian fauna fascicles, as well as after well-known papers of synthesis as Erwin Lindner's German collection, "Les Syrphides de Roumanie (Diptera, Syrphidae), Clés de détermination et répartition" by Brădescu (1991), "Empididae - British Flies" by Collin (1961) or "The Tachydromiinae (Dipt. Empididae) of Fennoscandia and Denmark" by Chvála (1975). Also, we used individual papers which are mentioned at a certain species in the list of species; not the least, we used the scientific collections of "Grigore Antipa" National Museum of Natural History from Bucharest.

#### RESULTS

Taxonomical list includes the families and genera phylogenetically ordered (cf. Chvála, 1997) and, within them, the species are alphabetically ordered. In the list,

the black point marks the species considered faunistic novelties. For their distribution we used the well-known sigles from the international catalogues, therefore we do not explain them.

*Taxonomical and distributional list*

Family Limoniidae

- *Neolimnomyia adjuncta* Walker, 1848 (Fig. 2 A): 1 ♂, Merja Zerga 1.IV.  
Distribution: Europe: B, CH, D, E, F (including Corsica), GB, I, IRE, NL, R;  
USSR: SET (South east), TC (Ge); Asia: ? Lebanon *New report for North Africa*.  
*Dicranomyia (s.str.) mitis* (Meigen 1830): 10 ♂♂, 5 ♀♀, near Agadir, 22.III,  
on thorny plants.

Distribution: Europe: A, AL, B, BG, CH, CS, D, DDR, DK (incl. Faeroes), E, F (incl. Corsica), GB, H, I, IRE, L, N, NL, PL, R, S, SF, YU; USSR: NET (South), CET, SET, TC, SMA (Tu), North Africa: Morocco, Algeria.

Family Pediciidae

- *Dicranota (Paradicranota) candelisequa*, Starý, 1981: 1 ♂, Merja Zerga 1.IV.

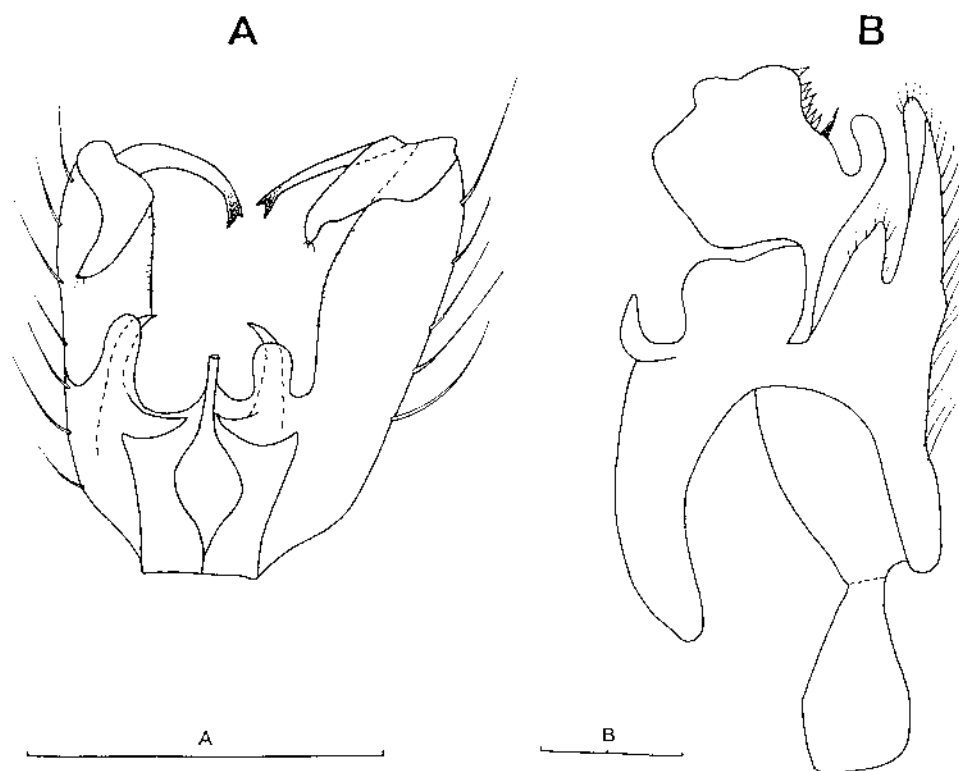


Fig. 2 – A, *Neolimnomyia adjuncta* Walker, ♂: genital capsule in dorsal view; B, *Platypalpus nigratarsis* (Fallén), ♂: genital capsule in lateral view. Scales (in mm): A, 0.5; B, 0.2.

Distribution: Europe: A, BG, CS, D, R; USSR; SET (Carpathians, Crimea), TC (Adzhar ASSR).

#### Family Tipulidae

*Nephrotoma crocata luteata* (Meigen 1818): 1 ♂ Merja Zerga 1.IV.

Distribution: E, F (Southwest), P, North Africa: Morocco, Algeria.

Identified after Oosterbroeck (1979) (page: 64).

*Tipula (s.str.) mediterranea* Lackschewitz, 1930: 7 ♂♂, 1 ♀, Merja Zerga 1.IV.

Distribution: E, I (Sicilia), Morocco, Algeria, Canary Is. (Tenerife).

#### Family Bibionidae

*Dilophus femoratus* Meigen, 1804: 2 ♂♂, 1 ♀, Merja Zerga 1.IV.

Distribution: Europe: from Scandinavia and Is.to E and R; from GB to PL, USSR: NET, CET, SET, ES (South part); Asia: Mongolia; North Africa: Morocco, Canary Is., Madeira.

#### Family Tabanidae

*Tabanus barbarus* Cocquebert, 1804: 1 ♂, 1 ♀, Merja Zerga 1.IV.

Distribution: P, E, Morocco, Algeria, Tunisia.

*Tabanus cordiger* Meigen, 1820: 1 ♀ Edehby, Ouarzazate, 26.III.

Distribution: all parts of Europe; URRS: NET, CET, SET, TC; Asia: Turkey, Iran; North Africa: Morocco; Canary Is.

#### Family Stratiomyidae

*Chloromyia formosa* (Scopoli, 1763): 1 ♂, Merja Zerga 1.IV.

Distribution: Europe from Scandinavia to P, E, I and GR; USSR: CET, SET, TC, WS, Es; Asia: Turkey; North Africa: Morocco; Algeria, Tunisia, Nearctic Region (introd.).

#### Family Therevidae

• *Thereva brevicornis* Loew, 1847: 2 ♂♂, Cap Sim, 21.III.

Distribution: Europe: A, CH, F, I, R, Yu; Asia: Turkey. *New report for North Africa.*

#### Family Hybotidae

*Platypalpus annulatus* (Fallen, 1815): 1 ♀, Merja Zerga 1.IV.

Distribution: Europe: northern, western and central parts, South to F (incl. Corsica), I, R, BG; USSR: NET, CET (Est, La, Rs), SET (Uk), SMA (Tu), WS, Es; North Africa: Morocco, Tunisia, Lybia; Nearctic Region.

• *Platypalpus calceatus* (Meigen, 1822): 1 ♂, Foug Zghouig 1 ♀, 22.III.

Distribution: Europe: S, SF, IRE, GB, B, NL, DK, central parts South to F, RG USSR: NET, CET (Est La, Rs) SET (Uk). *New report for North Africa.*

• *Platypalpus nigratarsis* (Fallén, 1816) (Fig. 2 B): 2 ♂♂, Ifrane, 30.III.

Identified after Collin (1961) and Chvála (1975).

Distribution: Europe: widespread incl. Faroe Is., South to E and R; USSR: throughout European territory. *New report for North Africa.*

## Family Dolichopodidae

- *Sciapus longulus* (Fallen, 1823): 1 ♀ Orader Merja Zerga 2.IV.  
Identified after Meuffels & Grootaert (1990).  
Distribution: Europe: SF, GB, D, DDR, S, B, DK, F, BG, YU, PL, I, R, USSR (Leningrad region), CET (Est, Rs). *New report for North Africa.*
- *Schoenophilus versutus* (Haliday 1851): 3 ♂♂, 1 ♀, Merja Zerga 1.IV.  
Distribution: Europe: GB, IRE, S, DK, NL, DDR, D, F, H, PL, I, E, BG, R; USSR: SET; North Africa: Algeria, Morocco.
- *Thinophilus flavipalpis* (Zetterstedt, 1843): 1 ♀ Edehby Ouarzazate 26.III.  
Distribution: Europe: S, SF, GB, B, D, DDR, DK, F, A, H, CS, PL, R, I, YU, BG, E; USSR: SET (Uk, Rs, Crimea, North Caucasus), KZ, SMA (Ki), Asia: Mongolia, China (North); North Africa: Egypt Afro-Tropical Region: ?
- *Campsicnemus magius* (Loew, 1845): 2 ♂♂, Edehby Ouarzazate 26.III.  
Distribution: Europe: F, NL, GB, CS, A, H, BG, B, D, DDR, E, YU, I, R; USSR: SET (Rs, North Caucasus), SMA (Ts, Tu), St. Helena Is. *New report for North Africa.*
- *Syntormon pumilus* (Meigen, 1824) 1 ♂, Edehby Ouarzazate 26.III.  
Distribution: A, JU, BG, E, I, R; USSR: NET (Murmansk, Karelia), CET (Est, Rs, By), SET (Rs, North Caucasus), TC, SMA; Asia: Afghanistan; North Africa: Morocco, Tunisia, Egypt, Canary Is.
- *Syntormon rufipes* (Meigen, 1824): 1 ♂, Edehby Ouarzazate 26.III.  
Distribution: Europe: F, D, DDR, PL, BG, I, R; USSR: NET (Leningrad), CET (Rs), SET (Uk, Kerson), SMA, WS (Ural). *New report for North Africa.*
- *Syntormon zelleri* (Loew, 1850): 3 ♀♀, Merja Zerga 1.IV.  
Distribution: Europe: IRE, GB, F, CS, H, R, I, USSR: SET (North Caucasus), SMA. *New report for North Africa.*
- *Teuchophorus spinigerellus* (Zetterstedt, 1833) (Fig. 3 B): 1 ♂, Edehby Ouarzazate 26.III.  
Distribution: Europe: GB, IRE, S, SF, NL, F, DK, D, DDR, BG, A, E, I, R, CS; USSR: NET (Leningrad region), CET (Est), SET (Rs, North Caucasus), KZ; North Africa: Egypt.

## Family Lonchopteridae

- *Lonchoptera lutea* Panzer, 1809: 2 ♂♂ Ifrane, 30.III.  
Distribution: Europe: USSR: NET, CET, SET, TC, SMA, ES, FE; Asia: Jordan, Iran; North Africa: Tunisia, Madeira; Canary Is.

## Family Syrphidae

- *Chrysotoxum intermedium* Meigen 1822: 1 ♂, Cap Bedouza.  
Distribution: Europe: B, D, PL, CS, F, CH, H, R, P, E, I, YU, BG, AL, GR; USSR: SET, TC, KZ, SMA; Asia: Afghanistan; North Africa: Morocco, Algeria, Tunisia.
- *Neoascia podagrica* (Fabricius, 1991) (Fig. 3 C): 1 ♂, 1 ♀, Merja Zerga 1.IV.  
Identified after Verlinden (1991) (genitalia).  
Distribution: Europe: from Scandinavia to P, E, I, YU, BG; USSR: CET, SET, TC, WS (Sayan), ES (pribaikalye); Madeyra. *New report for North Africa.*
- *Syrretta pipiens* (Linnaeus, 1758): 1 ♀ Merja Zerga 1.IV.

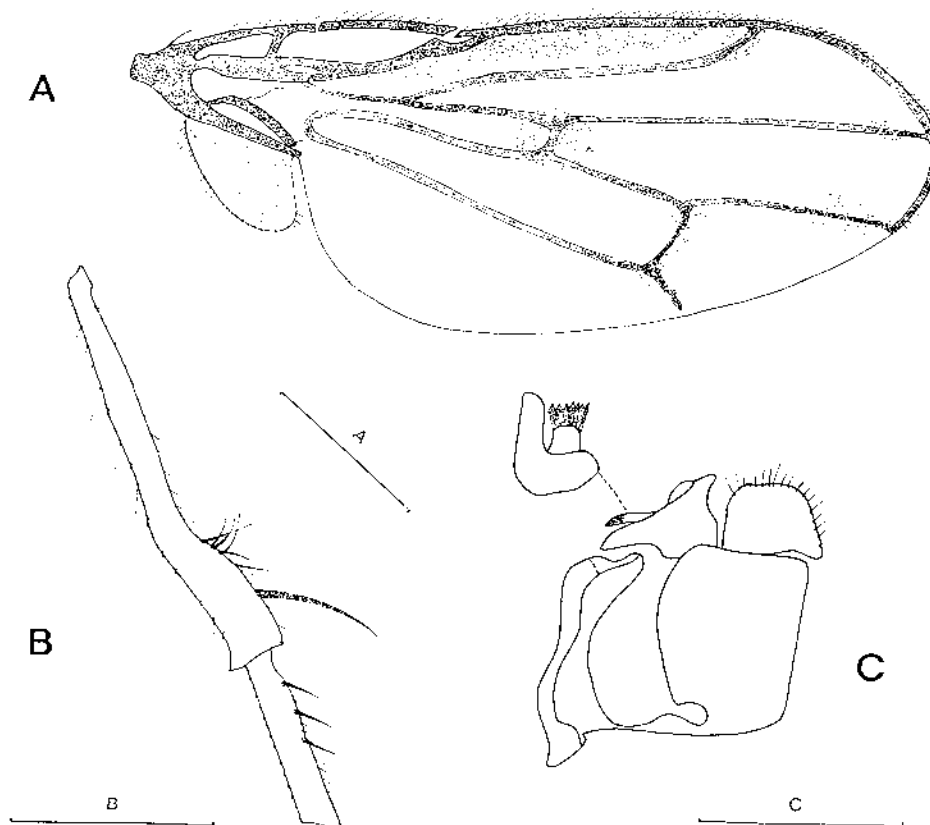


Fig. 3 – A, *Parydra nubecula* Becker, ♂: wing; B, *Teucophorus spinigerellus* (Zett.), ♂: hind tibia and metatarsus; C, *Neoascia podagrica* (F.), ♂: genital capsule in lateral view. Scales (in mm): A 0.5; B, C, 0.3.

Distribution: Europe: from Scandinavia to P, E, I, YU, GR, all parts of USSR; Asia: Mongolia, China, Turkey, Iran, Afghanistan; North Africa: Morocco, Algeria; Madeira, Canary Is; Nearctic and Oriental Region.

#### Family Conopidae

- *Thecophora pusilla* (Meigen, 1824): 1 ♀, Ifrane, 30.III.

Distribution: Europe: SF, D, DDR, PL, CS, CH, A, H, E (incl Balearics), F, I, YU, R, BG, AL, GR, CY; USSR: throughout; Asia: Syria, Turkey, Iran, Afghanistan, Mongolia, China, Japan; North Africa: Tunisia; Madeira.

#### Family Tephritidae

- *Trupanea augur* (Frauenfeld, 1857): 1 ♀ Edehby Ouarzazate 26.III.

Distribution: Israel, Egypt, Sudan.

#### Family Sciomyzidae

- *Hydromya dorsalis* (Fabricius 1775): 2 ♂♂, Merja Zerga 1.IV.

Distribution: Europe from Lapland to E, GR and Cy, USSR: NET, CET, SET, SMA, TC (Ge, Az), WS, ES, FE; Asia: Turkey, Israel, Syria, Iran, Afghanistan, Mongolia, Japan; North Africa: Algeria, Tunisia.

• *Pherbina coryleti* (Scopoli 1763) (Fig. 4): 2 ♂♂, Merja Zerga 1.IV

Distribution: Europe; USSR: NET, CET, SET, TC (Az), Kz, SMA (Tu), WS, ES; Asia: Turkey, Iran, Afghanistan. *New report for North Africa.*

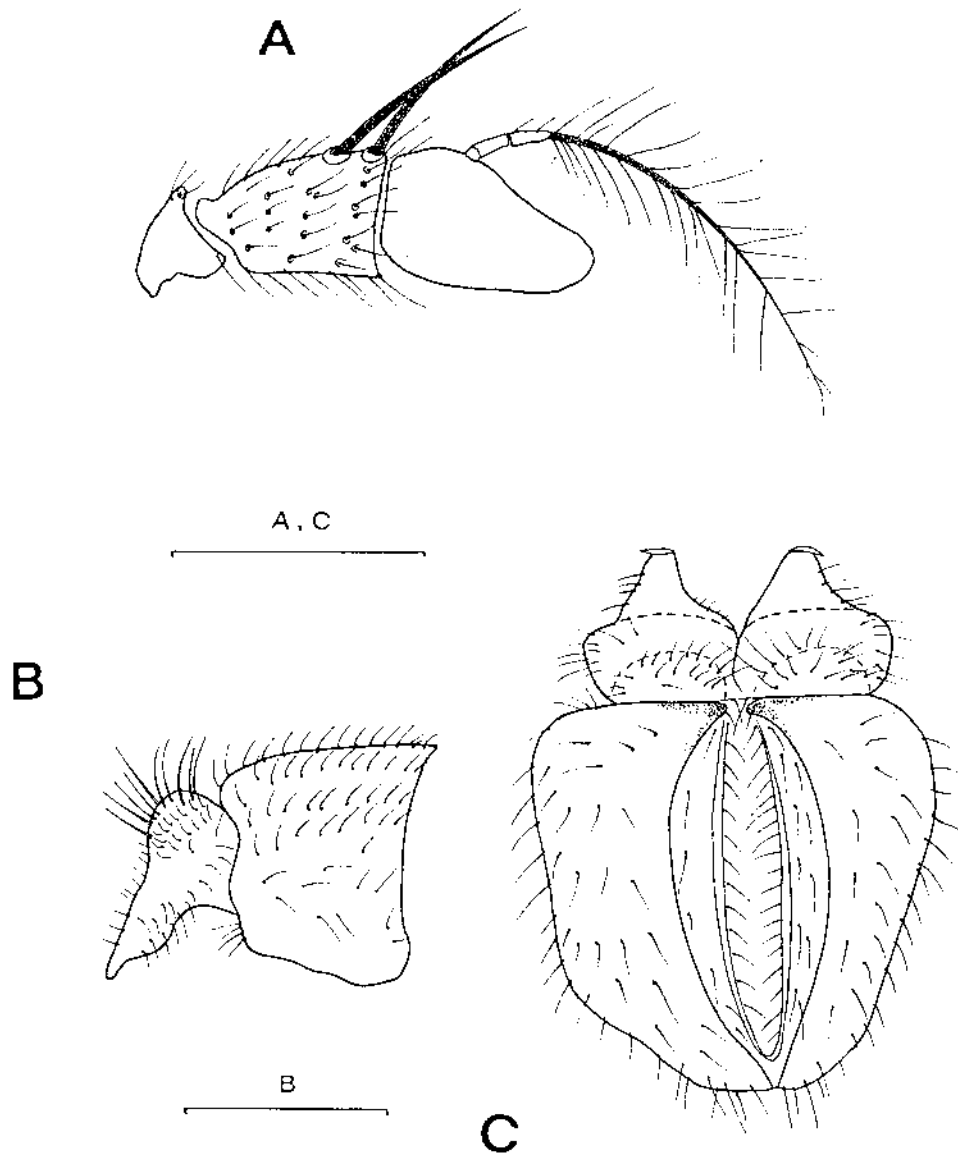


Fig. 4 – *Pherbina coryleti* (Scopoli), ♂: A, antenna; B, abdominal apex in lateral view; C, genital capsule in lateral view. Scales (in mm): A, C 0.5; B, 0.3.

## Family Sepsidae

*Sepsis fulgens* Hoffmannsegg in Meigen, 1826: 1 ♂, Ifrane, 30.III.

Distribution: Europe: IRE, GB, N, S, SF, P, E (incl. Balearics), AND, F (incl. Corsica), B, D, DDR, PL, CH, FL, A, CS, H, R, I, YU, AL, GR (incl. Corfu and Crete), BG, TR, CY; USSR: CET (Li, Uk, Rs), SMA (Tu); Asia: Lebanon, Israel, Syria, Jordan, Iran, Afghanistan; North Africa: Morocco, Algeria, Tunisia.

*Sepsis punctum* (Fabricius, 1794): 2 ♂♂, Merja Zerga 1.IV.

Distribution: Europe: IRE, GB, N, S, P, E (incl. Balearics), F (incl. Corsica), B, L, D, DDR, PL, CH, A, CS, H, R, I, (incl. Sardinia), YU, GR (incl. Crete and Corfu), BG, TR, CY; USSR: CET (Li, Est, Rs), SET (Rs), SMA; FE (Kuril Is.); Asia: Lebanon, Syria, Jordan, Afghanistan, China; North Africa: Morocco, Algeria, Tunisia, Libya, Egypt; Madeira, Canary Is.; ? Nearctic Region.

*Sepsis thoracica* (Robineau-Desvoidy, 1830): 1 ♂, Merja Zerga 1.IV.

Distribution: Europe: GB, P, E, (incl. Balearics), F, (incl. Corsica), B, NL, D, DDR, CH, A, CS, H, R, I, YU, AL, GR (incl. Crete), BG, TR, CY; USSR: SMA (Uz); Asia: Lebanon, Israel, Syria, Jordan, Iraq, Iran, Afghanistan, Mongolia, China, Japan; North Africa: Morocco, Algeria, Tunisia, Egypt; Azores, Madeira, Canary Is.; Afro-Tropical and Oriental Regions, Hawaii.

*Sepsis violacea* Meigen, 1826: 2 ♂♂, 3 ♀♀ Merja Zerga 1.IV.

Distribution: Europe: IRE, GB, N, S, SF, P, E (incl. Balearics), F (incl. Corsica), B, D, DDR, PL, CH, A, CS, H, R, I, YU, GR, BG, TR; URSS: CET (Li, Est, Uk, Rs), SET (Rs), SMA (Tu, Tj, Uz), ES; Asia: Lebanon, Israel, Iran, Afghanistan, Mongolia; North Africa: Morocco, Tunisia.

• *Themira paludosa*: 1 ♂, 1 ♀, Merja Zerga 1.IV.

Distribution: Estonia, Romania. *New report for North Africa.*

## Family Opomyzidae

• *Geomyza apicalis* (Meigen, 1830): Ifrane, 30 III.

Distribution: GB, CH, ?D. Larvae develops in the grass stems. *Family not mentioned in North Africa.*

## Family Chloropidae

*Platycephala scapularum* (Becker, 1907): 2 ♂♂, 1 ♀ Edehby Ouarzazate 26.III.

Distribution: Asia: Israel, Iran, Mongolia; North Africa: Morocco, Tunis, Algeria, Egypt.

## Family Camillidae

• *Camilla flavicauda* Duda, 1921 (Fig. 5): 3 ♀♀, Cap Sim. Identified after Papp (1973).

Distribution: GB, D, H, CH, URSS: NET.

*Family not mentioned in North Africa.*

## Family Diastatidae

• *Diastata unipunctata* Zetterstedt, 1847: 1 ♂, Merja Zerga 1.IV

Distribution: Europe: S, SF, DK, D, DDR, A, CS, H, R, YU, Al, E; USSR: WS; North Africa: Tunisia.

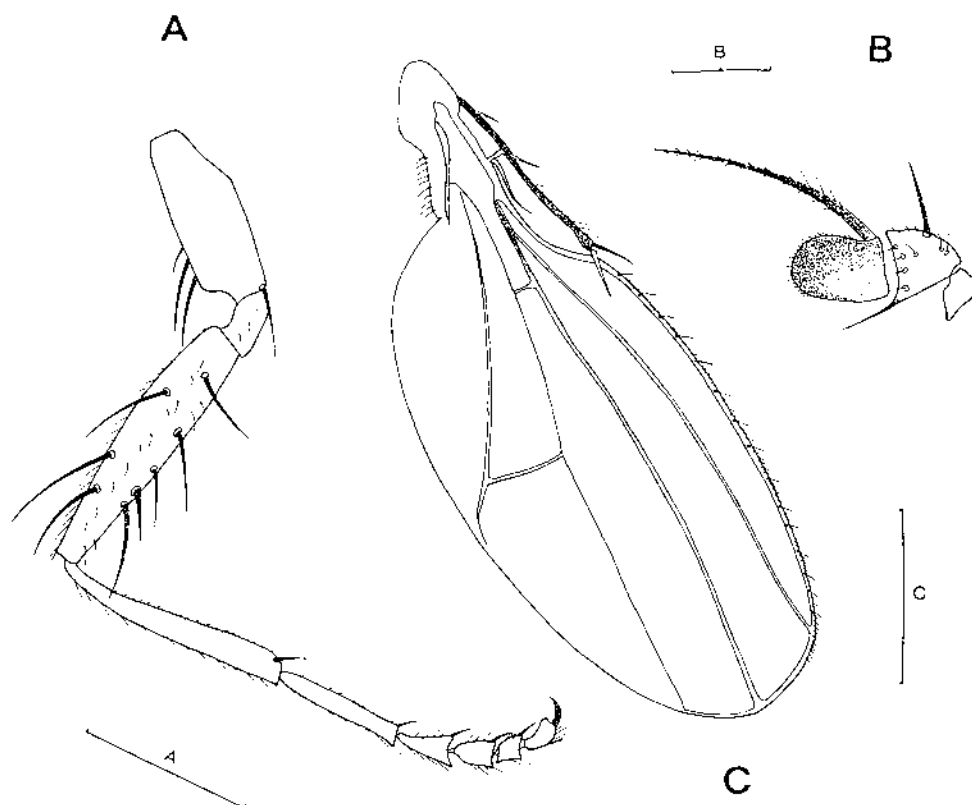


Fig. 5 – *Camilla flavicauda* Duda, ♀: A, fore leg; B, antenna; C, wing. Scales (in mm): A, 0.5; B, 0.2; C 1.

#### Family Ephydriidae

- *Atissa pygmaea* (Haliday 1833): 1 ♂, Lac Edehby , Ouarzazate 26.III.  
Distribution: widespread: Europe, Asia: Syria, Japan; North Africa: Canary Is., Azore Is.
- *Notiphila* (*s.str.*) *cinerea* Fallen 1813: 3 ♂♂, Merja Zerga 1.IV.  
Distribution: largely spread in Palaearctic area, Azore, Canary, Spanish Sahara
- *Notiphila* (*s.str.*) *stagnicola* (Robineau-Desvoidy, 1830): 10 ♂♂, Edehby Ouarzazate 26.III.  
Distribution: Europe: GB, H, F, R. *New report for Africa.*
- *Hecamede albicans* (Meigen, 1830) 1 ♀, Orader Merja Zerga 2.IV.  
Distribution: Europe: F, GB, S; Asia: Japan; North Africa; Azores, Canary Is, Madeira.
- *Parydra nubecula* Becker, 1896 (Fig. 3 A): 6 ♂♂ Edehby Ouarzazate 26.III.  
Distribution: PL, D, H, Moravia, Slovakia. *New report for Africa.*
- *Parydra* (*s.str.*) *quadripunctata* (Meigen, 1830): 1 ♂, Merja Zerga 1.IV.  
Distribution: widespread Europe, Afghanistan, Japan. *New report for Africa.*
- *Neoscatella subguttata* (Meigen, 1830): 1 ♀, Merja Zerga 1.IV.  
Distribution: widespread in Europe; North Africa.

## Family Anthomyiidae

*Anthomyia pluvialis* (Linnaeus, 1758): 1 ♀ Foum Zghouig 22.III.

Distribution: Europe: A, CS, D, DDR, DK, E, F (incl. Corsica), GR, H, R, SF, YU, USSR: NET, CET, SET, TC, SMA; Asia: China, Japan; North Africa: Morocco; Azores, Madeira.

• *Delia flavogrisea* (Ringdahl, 1926): 7 ♂♂, Merja Zerga, 1.IV.

Distribution: Europe: N, PL, S, R; Asia: China. *New report for North Africa.*

## Family Muscidae

*Musca domestica* Linnaeus, 1758: 1 ♂ Tiggane Tata 23.III.

Distribution: cosmopolitan.

*Stomoxys calcitrans* (Linnaeus, 1758): 2 ♂♂, Tiggane Tata 23.III.

Distribution: cosmopolitan.

## Family Calliphoridae

*Pollenia amentaria* (Scopoli, 1763) (= *vespillo* auct. nec. Fabricius, 1794): 1 ♂ Foum Zghouig 22.III.

Distribution: all parts of Europe and European parts of USSR; North Africa: Morocco.

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DATE FAUNISTICE ASUPRA UNOR FAMILII DE DIPTERE (INSECTA: DIPTERA)  
DIN MAROC

(Rezultatele Expediției "Hamada" 2005)

## REZUMAT

Sunt prezentate rezultatele determinării unui lot de diptere colectate în Maroc în martie și aprilie 2005 de autorii juniori în cadrul Expediției "Hamada" organizată de Societatea de explorări oceanografice și protecția mediului marin "Oceanic Club" din Constanța.

Fauna dipterologică a Marocului este departe de o cunoaștere echitabilă față de alte țări din regiunea zoogeografică Palearctică; acest fapt este demonstrat de numărul mare de specii (26 din 50 identificate) care nu sunt citate în cele 13 volume ale „Catalogului Diptereleor Palearctice” apărute după 1980. Două familii, Opomyzidae și Camillidae sunt semnalate pentru prima dată din această țară. De asemenea, pentru întreg nordul Africii 17 specii sunt semnalate acum pentru prima dată.

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