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Catalog of the hoverflies (Diptera: Brachycera: Syrphidae) from the collection of Vladimir Brădescu deposited in Țării Crișurilor Museum, Oradea

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Abstract. The present catalog includes data on the 45 species (92 specimens) of syrphids from the collection of the eminent Romanian dipterist Vladimir Brădescu (1915 – 2004) preserved in Țării Crișurilor Museum, Oradea, Romania.

Introduction

Vladimir Brădescu (1915 – 2004) was arguably the most important Romanian syrphidologist. Always an investigative spirit, in his youth he was active in many fields, including music, literature and theater. But then, after working for almost 20 years as a paleographer and afterwards as a geologist, it was his late passion for dipterans which made him best remembered, due to the accuracy and seriousness of his work. He concentrated his field activity mainly in some of the most interesting and diverse ecosystems in Romania (mountainous Banat, Mt. Retezat and Dobrudja), and his collected material entered the collections of many natural history museums, mainly the „Grigore Antipa” National Museum of Natural History in Bucharest and the „Brukenthal” National Museum in Sibiu, but also the

museums in Tulcea, Timișoara, Oradea, and Retezat National Park. He was the author of 10 new syrphid species and of more than 50 publications, mentioning hundreds of syrphid species new for the Romanian fauna and thus making a major contribution to the good level of knowledge concerning the country's syrphids (Pârvu 2004).

Material and methods

In 1991, V. Brădescu sold to the Țării Crișurilor Museum 92 specimens from his syrphidological collection. For the present paper, the labels were transcribed and listed systematically, the specimens were sexed, revised and updated according to monographic and more recent publications (Suster 1959, Brădescu 1991, Ball & Morris 2000, Stănescu & Pârvu 2005, <http://www.hoverfly.org.uk>), and data on distribution and biology were included (Tóth 2008).

In collection data, specimen numbers and sex are mentioned in square brackets [] and district names abbreviations in capital letters within round brackets (). Flight periods are indicated with Roman numerals in round brackets.

Abbreviations. BV = Brașov, BZ = Buzău, CAs. = Central Asia, Ch. = China, CS = Caraș Severin, EAs. = East Asia, Eu. = Europe, GR = Giurgiu, IF = Ilfov, Ir. = Iran, Jp. = Japan, Kaz. = Kazakhstan, Ko. = Korea, L. = lake, Mo. = Mongolia, Mt. = mountains, NAF. = North Africa, PH = Prahova, Sb. = Siberia, SV = Suceava, TCa. = Transcaucasia, Tu. = Turkey, V. = valley, WAs. = West Asia;

Catalog

Subfam. SYRPHINAE

Tribus Syrphini

Dasysyrphus friuliensis (van der Goot 1960)

Palearctic (Eu., Sb., EAs., Mo.), sylvicoline, in mountains, univoltine (V-VII), rare. Herculane (CS) 12 V 1990, leg. M. Brădescu [1 ♂]; Gemenele, Mt. Retezat 12 VII 1990 [1 ♀].

Dasysyrphus pinastri (De Geer 1776)

[syn. *D. lunulatus* (Meigen 1822)]

Holarctic (Eu., TCa., Sb., EAs., Mo.), sylvicoline, in hills and mountains, univoltine (IV-VII), frequent.

Vatra Dornei (SV) 30 V 1990, 1 VI 1990 [2: ♂, ♀].

Dasysyrphus tricinctus (Fallén 1817)

Palaearctic (Eu., TCa., CAs., EAs., Sb., Mo., Jp.), sylvicoline, generally univoltine (IV-X), frequent.

Predeal (BV) 5 IX 1984 [1 ♂]; Herculane (CS) 3 V 1988 [1 ♀].

Dasysyrphus venustus (Meigen 1822)

Holarctic (Eu., TCa., Sb., EAs., Mo.), sylvicoline, univoltine (III-VIII), frequent.

Cheia (PH) 10 VI 1988 [1 ♀]; Herculane (CS) 12 V 1990, leg. M. Brădescu [1 ♂].

Epistrophe (s. str.) *eligans* (Harris 1780)

Palaearctic (Eu., TCa., WAs., CAs., EAs.), sylvicoline, probably bivoltine (II-IX), frequent.

Herculane (CS), 800 m., 11 IV 1990 [1 ♂]; Gemele, 1750 m., Mt. Retezat 9 VII 1990 [1 ♀].

Epistrophe (s. str.) *grossulariae* (Meigen 1822)

Holarctic (Eu., TCa., Sb., EAs., Mo., Jp.), sylvicoline, univoltine (IV-IX), frequent.

L. Negru, Mt. Retezat 17 VIII 1981 [1 ♂]; Gemele, Mt. Retezat 31 VIII 1988 [2 ♀♀].

Episyrphus balteatus (De Geer 1776)

Probably cosmopolite, eurytopic, polyvoltine (I-XII), frequent.

Gemele, Mt. Retezat 17 VIII 1981 [1 ♀]; Herculane (CS) 20 VIII 1989 [1 ♂].

Eriozona erratica (L. 1758)

(labeled *Megasyrphus annulipes*)

Palaearctic (Eu., TCa., Sb., WAs., EAs., Mo.), sylvicoline, probably bivoltine (IV-IX).

Mt. Făgăraș, V. Sâmbetei 900-1400 m., 14 VII 1988 [1 ♂]; Gemele, 1920 m., Mt. Retezat 10 VII 1990 [2 ♀♀].

Eupeodes (s. str.) *corollae* (Fabricius 1794)

(labeled *Metasyrphus corollae*)

Holarctic (Eu., Sb., WAs., EAs., Mo., Ch., Jp.), oriental, eurytopic, polyvoltine (I-XII), frequent.

V. Sâmbetei, 1400 m., Mt. Făgăraș 22 VII 1983 [1 ♀]; V. Sâmbetei, Mt. Făgăraș 7 VIII 1989 [1 ♂]; Vatra Dornei (SV) 7 VII 1991 [2: ♂, ♀].

Eupeodes (s. str.) *luniger* (Meigen 1822)

(labeled *Metasyrphus luniger*)

Holarctic (Eu., Sb., Kaz., Naf., Mo., Jp.), oriental, eurytopic, probably polyvoltine (III-XII), frequent.

Gemenele, 1920 m., Mt. Retezat 10 VII 1990 [1 ♂]; L. Știrbu, 2000 m., Mt. Retezat, 10 VII 1990 [1 ♀].

Eupeodes (Lapposyrphus) lapponicus (Zetterstedt, 1838)
(labeled *Metasyrphus lapponicus*)

Palearctic (Eu., TCa., Sb., WAs., EAs., Mo.), sylvicoline, probably bivoltine (II-IX), frequent.

Gemenele, Mt. Retezat 17 VIII 1981 [1 ♂]; Predeal (BV) 22 VIII 1983 [1 ♂]; Herculane (CS), 800 m., 10 V 1990 [1 ♀]; Gemenele, 1750 m., Mt. Retezat 11 VII 1990 [1 ♀].

Leucozona lucorum (L. 1758)

Holarctic (Eu., WAs., EAs., Sb., Mo., Jp.), sylvicoline, univoltine (IV-VIII), frequent. Vatra Dornei (SV) 5 VII 1991 [1 ♀].

Melangyna (s. str.) compositarum (Verrall 1873)

Holarctic (Eu., TCa., Kaz., WAs., EAs., Sb., Mo., Jp.), probably sylvicoline, in hills and mountains, univoltine or possibly bivoltine (IV-IX), frequent.

Gemenele, Mt. Retezat 11 VII 1990 [1 ♀].

Melangyna (s. str.) lasiophthalma (Zetterstedt 1843)

Palearctic (Eu., TCa., WAs., EAs., Sb., Mo., Jp.), sylvicoline, in hills and mountains, univoltine (II-VI), frequent.

Herculane (CS) 1 V 1988 [2: ♂, ♀].

Melangyna (Meligramma) cincta (Fallén 1817)

Palearctic (Eu., TCa., WAs., EAs.), sylvicoline, in hills and mountains, probably bivoltine (IV-X), frequent.

Herculane (CS) 23 IV 1988 [1 ♂].

Meliscaeva cinctella (Zetterstedt 1843)

Holarctic (Eu., TCa., WAs., EAs., Sb., Mo., Jp.), oriental, sylvicoline, probably univoltine (IV-X), frequent.

Predeal (BV) 23 VII 1985 [1 ♂]; Vatra Dornei (SV) 5 VI 1990 [1 ♀].

Parasyrphus lineolus (Zetterstedt 1843)

Holarctic (Eu., Sb., EAs., Mo., Ch.), sylvicoline, bivoltine (IV-IX), frequent.

Vatra Dornei (SV) 5 VII 1990 [1 ♀].

Parasyrphus punctulatus (Verrall 1873)

Palearctic (Eu., TCa., W Sb., EAs., Jp.), sylvicoline, univoltine (II-VII), frequent.
Herculane (CS) 3 V 1988 [1 ♀]; Vatra Dornei (SV) 5 VII 1990 [1 ♂].

Parasyrphus vittiger (Zetterstedt 1843)

Palearctic (Eu., TCa., E Sb., EAs., Mo.), sylvicoline, probably bivoltine or polyvoltine (III-X), frequent.

Gemelele, 1900 m., Mt. Retezat 6 VII 1990 [1 ♀]; L. Știrbu, 2000 m., Mt. Retezat, 10 VII 1990 [1 ♂].

Scaeva pyrastris (L. 1758)

Holarctic (Eu., TCa., Kaz., CAs., Sb., Naf., Mo., Northern Ch., Jp.), eurytopic, polyvoltine (I-XII), frequent.

Gemelele, Mt. Retezat 31 VIII 1988 [1 ♂]; Gemelele, 1900 m., Mt. Retezat 11 VII 1990 [1 ♀]; Vatra Dornei (SV) 5 VII 1991 [2: ♂, ♀].

Scaeva selenitica (Meigen 1822)

Palearctic (Eu., TCa., WAs., CAs., EAs., Sb., Naf., Mo., Ch.), oriental, eurytopic, polyvoltine (I-XII), frequent.

Gemelele, Mt. Retezat 28 VIII 1988, 12 VII 1990 [2: ♂, ♀].

Syrphus ribesii (L. 1758)

Cosmopolite, eurytopic, bivoltine or polyvoltine (II-XI), frequent.

Predeal (BV) 22 VIII 1983 [1 ♀]; L. Negru, Mt. Retezat 30 VIII 1988 [1 ♂]; Herculane (CS) 20, 25 VIII 1989 [2 ♀♀].

Syrphus torvus Osten-Sacken 1875

Holarctic (Eu., Kaz., Sb., EAs., Mo., Ch., Jp.), sylvicoline, polyvoltine (II-XI), frequent.

Gemelele, Mt. Retezat 28 VIII 1988 [1 ♂]; Herculane (CS), 800 m., 13 V 1990 [1 ♀]; Vatra Dornei (SV) 30 V 1990 [1 ♂]; Gemelele, 1750 m., Mt. Retezat 9 VII 1990 [1 ♀].

Syrphus vitripennis Meigen 1822

Holarctic (Eu., Sb., CAs., EAs., Naf., Ch., Jp.), oriental, eurytopic, polyvoltine (II-XI), frequent.

Comana (GR) 11 IV 1974 [1 ♂]; L. Negru, Mt. Retezat 30 VIII 1988 [1 ♀].

Xanthogramma citrofasciatum (De Geer 1776)

Paelearctic (Eu., TCa., Kaz., CAs., N Sb.), sylvicoline, univoltine (III-VI), frequent.
Cernica (IF) 28 IV 1983, leg. V. Gheorghiu [1 ♂].

Xanthogramma pedissequum (Harris 1776)

Paelearctic (Eu., TCa., Sb., CAs., EAs.), sylvicoline, probably polivoltine (III-X), frequent.
Herculane (CS) 12 V 1990, leg. M. Brădescu [1 ♂].

Tribus Chrysotoxini

Chrysotoxum arcuatum (L. 1758)

Paelearctic (Eu., TCa., Kaz., Sb., CAs., EAs., Mo., Jp.), oriental, probably xerophilous, bivoltine (IV-X), frequent.
V. Sâmbetei, Mt. Făgăraș 7 VIII 1989 [1 ♀]; Gemenele, Mt. Retezat 14 VII 1990 [1 ♂].

Chrysotoxum bicinctum (L. 1758)

Holarctic (Eu., TCa., Kaz., Sb., CAs., Mo.), sylvicoline, bivoltine (IV-X), frequent.
Buzău, Crâng park (BZ) 20 VII 1981 [1 ♀].

Chrysotoxum cautum (Harris 1776)

Holarctic (Eu., TCa., Kaz., CAs., N Sb.), sylvicoline, bivoltine (IV-VIII), frequent.
Cernica (IF) 28 IV 1983, leg. V. Gheorghiu [2: ♂, ♀].

Tribus Melanostomini

Melanostoma mellinum (L. 1758)

Probably holarctic (Eu., N Af., Ir., Mo., Jp.), eurytopic, polyvoltine (III-XI), frequent.
Predeal (BV) 23 VII 1985 [1 ♀]; Vatra Dornei (SV) 5 VI 1990 [1 ♂].

Melanostoma scalare (Fabricius 1794)

Probably cosmopolite (Eu., TCa., Kaz., Sb., CAs., EAs., N Af., Mo., Ch., Jp.), sylvicoline, probably polyvoltine (III-XI), frequent.
Predeal (BV) 23 VII 1985 [1 ♂]; Herculane (CS) 13 V 1990 [1 ♀].

Platycheirus albimanus (Fabricius 1781)

Holarctic (Eu., TCa., Kaz., Sb., CAs., EAs., Mo.), oriental, eurytopic, probably bivoltine (II-X), frequent.
Herculane (CS) 22 VIII 1989 [1 ♂]; Gemenele, 1750 m., Mt. Retezat 14 VII 1990 [1 ♀].

Platycheirus clypeatus (Meigen 1822)

Holarctic (Eu., TCa., CAs., EAs., Sb., Naf., Mo., Jp.), eurytopic, probably bivoltine (IV-X), frequent.

V. Sâmbetei, Mt. Făgăraș 4 VIII 1989 [1 ♀].

Spazigaster ambulans (Fabricius 1798)

Palearctic (Eu., TCa.), probably sylvicoline, bivoltine (V-IX), rare.

Vatra Dornei (SV) 5 VII 1991 [1 ♂].

Subfam. MILESIINAE

Tribus Cheilosini

Cheilosia illustrata (Harris 1780)

Palearctic (Eu., Kaz., CAs., Sb.), sylvicoline, in hills and mountains, bivoltine (IV-X), frequent.

Vatra Dornei (SV) 5 VII 1991 [2: ♂, ♀].

Tribus Volucellini

Volucella inflata (Fabricius 1794)

Palearctic (Eu., TCa., Sb.), sylvicoline, univoltine (IV-VIII), frequent.

Bucharest, Băneasa forest 10 VII 1985, 11 VI 1991 [2: ♂, ♀].

Volucella pellucens (L. 1758)

Palearctic (Eu., TCa., Kaz., CAs., EAs., Sb., Mo., Ch., Ko., Jp.), oriental, mainly sylvicoline, bivoltine (IV-IX), frequent.

Comana (GR) 18 VII 1989 [1 ♀]; Vatra Dornei (SV) 5 VII 1991 [1 ♂].

Volucella zonaria (Poda 1761)

Palearctic (Eu., TCa., CAs., EAs., N Sb., Ir., Mo.), sylvicoline, mainly in hills and mountains, bivoltine or possibly polyvoltine (IV-X), frequent.

Bucharest, Băneasa forest 6 VI 1985 [1 ♂]; Comana (GR) 27 VII 1991 [1 ♀].

Tribus Chrysogasterini

Hammerschmidtia ferruginea (Fallén 1817)

Palearctic (Eu.), sylvicoline, only in large European aspen (*Populus tremula*) or mixed woodlands, probably univoltine (VI-VIII), rare.

Gura Zlata, Mt. Retezat 17 VII 1990 [1 ♂].

Tribus Sericomyiini

Arctophila bombiforme (Fallén 1810)

Palearctic (Eu., TCa.), sylvicoline, in hills and mountains, univoltine (V-VIII), rare.
 Gemele, Mt. Retezat 31 VIII 1988 [1 ♂]; Gura Zlata, Mt. Retezat 1 IX 1988 [1 ♀].

Sericomyia lappona (L. 1758)

Palearctic (Eu.), sylvicoline, hygrophilous, probably univoltine (V-IX), rare.
 Gemele, Mt. Retezat 14 VII 1990 [1 ♂]; Vatra Dornei (SV) 5 VII 1991 [1 ♀].

Tribus Eumerini

Merodon aberrans Egger 1860

Palearctic (Eu., TCa., Tu.), xerophilous, mainly in hills and mountains, univoltine (V-VII), rare.
 Comana (GR) 30 VII 1987 [1 ♂]; Bucharest, Băneasa forest 1 VIII 1991 [1 ♀].

Merodon ruficornis Meigen 1822

[syn. *M. recurvus* (Strobl 1898), labeled *M. strobli* Brădescu 1986 – see Discussion]
 Palearctic (Eu., TCa.), sylvicoline, probably bivoltine (IV-IX), frequent.
 Bucharest, Băneasa forest 21 V 1991 [2: ♂, ♀].

Tribus Eristalini

Myathropa florea (L. 1758)

Palearctic (Eu., TCa., CAs., Sb., NAF.), eurytopic, probably polyvoltine (IV-XI), frequent.
 Herculane (CS) 14 V 1990 [1 ♂]; Gemele, 1920 m., Mt. Retezat 10 VII 1990 [1].

Tribus Milesiini

Criorhina berberina (Fabricius 1805)

Palearctic (Eu., TCa., Sb., Jp.), sylvicoline, mainly in hills and mountains, univoltine (IV-VI), frequent.
 Vatra Dornei (SV) 6 VI 1989 [1 ♀]; Cheia (PH) 11 VI 1989 [1 ♂].

Discussion

All the material is from Romania and belongs for the most part to widespread European species. Unless otherwise mentioned, it was collected and first

determined by V. Brădescu himself, between 1974 and 1991, mainly in mountainous areas. A few exceptions were collected by his second wife Maria and the dipterist Victor Gheorghiu. 45 species from 24 genera are represented, and the collection comprises no species included in Red Lists for Romania, nor protected species. One should remark the specimens collected within Gemecele, the important scientific reserve in Mt. Retezat.

Remarkable species in the collection are *Eupeodes (Lapposyrphus) lapponicus* (Zetterstedt, 1838), a Scandinavian, migratory species (Falk 1991), and the rare *Arctophila bombiforme* (Fallén 1810), *Dasysyrphus friuliensis* (van der Goot 1960), *Hammerschmidtia ferruginea* (Fallén 1817), *Merodon aberrans* Egger 1860, *Sericomyia lappona* (L. 1758), and *Spazigaster ambulans* (Fabricius 1798).

The once thought Balkanic endemism *Merodon strobli* Brădescu 1986, distributed in southern, southwestern and western Romania, Serbia and Montenegro (Pape 2004, Stănescu & Pârvu 2005), is actually identical to *M. recurvus* (Strobl 1898) and both are synonyms of *M. ruficornis* Meigen 1822 (Dirickx 1994, quoted in Vujić & al. 2002; Radenković & al. 2002).

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The present paper is dedicated to the commemoration of five years since the passing away of Vladimir Brădescu.

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