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RIASSUNTO

Sono riportati i dati di raccolta relativi a 965 specie di Coleotteri nuovi per la Sila e comprendenti: 220 specie nuove per la fauna della Calabria, 38 specie presenti in singole regioni o a diffusione alpina. Si riportano inoltre i dati bibliografici, ed eventuali dati originali, per le 776 specie già segnalate per l'altipiano della Sila.

Complessivamente della Sila oggi sono note 1.741 specie di Coleotteri, comprendenti 4 presunti endemismi e 275 specie che hanno in tale altipiano il loro limite meridionale di diffusione.

ABSTRACT

Coleoptera of the Sila plateau (Calabria, Italy).

965 new species of Coleoptera from the Sila plateau (Calabria, Italy) are recorded, each with collecting data. They include 220 new records from Calabria and 38 species which were known from single districts in Italy or Alpine regions.

Data from literature and original ones are given for the 776 species which were already known from Sila. Altogether, 1,741 species of Coleoptera are known so far from Sila, including 4 presumable endemisms and 275 species that exhibit their southern distributional border in this plateau.

STEPHEN SCHEMBRI, PAUL GATT & JAMES SCHEMBRI

RECENT RECORDS OF FLIES FROM THE MALTESE ISLANDS

(Diptera)

Introduction

The Diptera of the Maltese Islands have received very little attention when compared with other insect groups. The oldest citations are probably those of RONDANI (1856 - 1880) whose eight volume work, *Dipterologicae Italicae Prodromus*, includes some Maltese records. This work was not consulted by us. TAGLIAFERRO (1893) published the first local advisory booklet on economic entomology, which deals with the damage caused by the Mediterranean Fruitfly, *Ceratitis capitata* and its control.

NEWSTEAD (1912) published a medically important work on *Phlebotomus* species from the Maltese Islands. He described two new species of this genus: *P. perniciosus*, "widely distributed over the island of Malta" and *P. nigerrimus* from 2 females. NEWSTEAD also recorded *P. minutus* Rondani and *P. papatasi* (Scopoli).

Ceratitis capitata was again the subject of an article in the agricultural magazine *Melita Agricola* (MICALLEF, 1935). This work, more or less followed the same lines as TAGLIAFERRO's earlier work.

FALCOZ (1926) mentioned *Lynchia falcinelli* (Rondani), an ectoparasite of birds, as occurring in Malta, but without giving any host information. This species is regarded as being the same as *Pseudolynchia canariensis* Macquart (SCHEMBRI, 1978).

CARUANA GATTO (1926) published a descriptive list of the plant-damaging and gall-causing organisms which he encountered locally. Among the Diptera are included the Cecidomyiidae *Aploneura lentisci* Pass., *Contarinia nasturtii* Kieff., *Cantarinia* sp., *Asphondilia Stefani* Kieff. (sic!), *Asphondilia verbasci* Vallota, *Stephaniella* sp. and a *Cecidomya* sp.; also the Tephritidae *Tephritis marginata* Fallen, *Tephritis megacephala* Low and *Ceratitis Savastani* Martelli (sic!).

A series of papers and reports were published between 1970 and 1977 in connection with the Fly Control Research Scheme (see HARRIS *et al.*, 1973, 1976 a & b; SALIBA *et al.*, 1976, 1977; GROSE *et al.*, 1977 and references contained therein). Species dealt with are the farm flies *Musca domestica* and *Stomoxys calcitrans*, but GROSE (1972) also mentioned the genera *Fannia* and *Lucilia*.

BORG (1922) in his book on the cultivation and diseases of fruit trees in the Maltese Islands mentioned seven species of economically important flies. These species represent 4 families: the Tephritidae, *Ceratitis capitata* Wied. (also referred to as *Halterophora capitata* Rondani and *Ceratitis citriparda* Uied. [sic!]), and

Halterophora hispanica (mentioned also under the name *Ceratitis hispanica* [sic!]), two species chiefly affecting citrus trees; *Daucus Oleae* Rossi (sic!), (additional names given are *Musca Oleae* and *Stomomus Keironi* [sic!]), which attacks olive trees; and *Spilographa Cesari* Fb. (sic!), larvae of which were in cherries imported from Sicily and Italy (adults were not reported from Maltese orchards); the Lonchaeidae, *Lonchaea aristella* Beck, which attacks fig trees; and the Cecidomyiidae, *Cecidomyia Piri* Becé (sic!), (specifically mentioned as occurring on local pear trees).

SALIBA'S (1963) work on local pests of crop plants includes four families of flies: Muscidae (*Delia antiqua* Meig, *Hylemia brassicae* Bouche), Lonchaeidae (*Lonchaea arystilla* Beck.), Trypetidae (*Ceratitis capitata* Wied., *Dacus oleae* Rossi), and Cecidomyiidae (*Contarina nasturtii* Kieff., *Dichelomyia oenophila* Haimh., *Cecidomyia pyri* Bouche).

CILIA (1973) published a list of common Diptera consisting of 20 species representing 11 families: Tipulidae (*Tipula oleracea* L.), Bibionidae (*Bibio marci* L., *Bibio hortulanus* L.), Culicidae (*Culex pipens* L.), Psychodidae (*Psychoda phalaenoides* L.), Tabanidae ("a least three species"), Asilidae (*Machimus pyragra* Zeller), Syrphidae (*Plarycheirus albimanus* F. = *peltatus* Mg., *Syrphus balteatus* Deg., *Chrysotoxum festivum* L., *Eristalis tenax* L., *Myatropa florea* Meigen), Hippoboscidae (*Ornithomya avicularia* L.), Muscidae (*Fannia canicularis* L., *Musca domestica* L., *Delia cepetorum* Meade (= *Phorbia cepetorum* Med.), Calliphoridae (*Lucilia caesar* L., *Calliphora erythrocephala* Meigen, *Sarcophaga carnaria* L.) and Tachinidae (*Gymnochaeta virides* Fallen, *Echinomyia fera* L.).

More recent works on Maltese Diptera mention mainly isolated records. The annotated list of moths by VALLETTA (1973) includes *Sarcophaga larvarum* (sic!) [possibly referring to *Exorista larvarum* (L.)] as parasitic on *Acherontia atropos* L., and *Echinomyia feros* Panz. (sic!) [possibly *Nowickia ferox* (Panzer)] as a parasite of *Antitipe canescens* Dup. GOEDLING (1976) redescribed the syrphid *Paragus coadunatus* Rondani from two males collected in Malta. MUNARI & VIENNA (1979) added *Sepsis fissa* Becker to the Italian fauna from material taken from Malta and Sicily. Previously the species was known only from Egypt. RAMPINI (1981) also recorded from Malta and Sicily the dolicipodid fly *Medetera roghii* Ramp. & Canz., previously known only from Minorca. CHVÁLA (1980) described the endemic acrocerid *Ogcodes schembrii* (holotype from Fort St. Lucian, Marsaxlokk), while SCHEMBRI (1982) reported new localities for this species. DANDRIA (1984) mentioned *Ceratitis capitata* and *Daucus olea* in a popular account on these flies. An undescribed species of *Stilpon* (Hybotidae) is mentioned by CHVÁLA (1988). The same author also recorded *Microphor rostellatus* Loew (Microphoridae) from Comino, CHVÁLA (1986). SCHEMBRI & SCHEMBRI (1979) recorded the genera *Chironomus*, *Culex*, *Aedes*, *Eristalis* and *Stratiomys* as Diptera associated with local freshwater. SCHEMBRI (1981) mentioned *Pericoma* and *Psychoda*, while SCHEMBRI & GAUCI (1984) recorded the larvae of Simuliidae from Malta.

Only five families have been revised as a group. SPENCER (1972) recorded 18 species of Agromyzidae, mainly of general European distribution, but including a few Mediterranean species and one, *Liriomyza melitensis* Spencer, new to science and presumably endemic. Western and southern European species are: *Agromyza abiens* Zett., *A. nata* Mg., *A. nigrescens* Hd., *Liriomyza bryoniae* Kalt., *L. congesta* Beck., *L. orbona* (Mg.), *L. pedestris* Hd., *Napomyza carotae* Sp., *Phytomyza ane-*

mones Hg., *P. conyzae* Hd., *P. horticola* Gour., and *P. orobanchia* Kalt.; the Mediterranean species are: *Agromyza apfelbecki* Str., *A. hiemalis* Beck., *Phytomyza bellidina* Hg., *P. ferulivora* Griffiths., and *P. mallorcensis* Sp.

Five species of Hippoboscidae have been taken from various birds and other vertebrates within these islands (see SCHEMBRI, 1978, 1979, 1985 and new records in the present work). The Ephydrididae and Canaceidae inhabiting the "small islands" around Italy were the subject of a paper by CANZONERI (1985), who listed 11 ephydrids from the Maltese Islands: *Ochthera schembrii* Rond., *Ephydra macellaria* Egger, *Ephydra falvipes* (Macq.), *Notiphila cinerea* Fall., *Hydrellia gri-seola* (Fall.), *Mosillus subsultans* (F.), *Allotrichoma laterale* (Loew), *Atissa heptacoloris* Beck., *Psilopa nigrigella* Stenh., *Psilopa nitidula* (Fall.) and *Psilopa compta* (Meig.). The same species were again recorded from the Maltese Islands in the *Fauna d'Italia* series volume on Ephydridae and Canaceidae (CANZONERI & MENE-GHINI, 1983). EBEJER (1988 a) listed 22 species of Bombyliidae, based partly on material mentioned in the present work. EBEJER'S additional records include *Bombylius citrinus* Loew, *Anthrax fuscipennis* Ricardo, *Spongostylum* sp. (aff. *dubium* Zaitsev), *Exoprosopa grandis* Wiedemann and *Thyridanthrax polymenrus* Wiedemann. EBEJER (1988 b) also recorded 29 species of Syrphidae including the following: *Melanostoma mellinum* (L.), *Paragus coadunatus* Rond., *P. bicolor* (F.), *P. quadrifasciatus* Meig., *P. strigatus* Meig., *Ceriodes vespiformis* (Latr.), *Eumerus barbarus* (Conq.), *E. etnensis* Van der Goot, *E. pusillus* Loew, *E. terminalis* Santos-Abreu, *Merodon gemiculata* Strobl and *M. pruni* Rossi.

The aim of this work is to provide a list of the Diptera which are known to occur in the Maltese Islands and which have been personally collected by the authors. This list is based on collections made in recent times, chiefly between the years 1975-1978. No attempt has been made to revise the more ancient records. The present work is mostly intended as a preliminary list of species on which future, more detailed studies can be based. It is hoped that this catalogue will stimulate other workers to carry out more in-depth studies of the Maltese Diptera and to fill some of the obvious gaps highlighted in this report.

Not all the families mentioned have received the same degree of attention. While some groups contain a good representation of a least the commoner species, other families represent insects more or less accidentally encountered during the course of other entomological investigations. The latter are, however, a minority. Of the smaller families (those containing less than 10 species) we consider the Fanniidae, Anthomyiidae, Mycetophilidae, and especially, the Dolicipodidae as poorly covered. Few additions are expected for the rest. This is not the case with the larger families and more species are expected to occur. The exclusion of a family need not necessarily mean its non-occurrence within these islands; rather, this reflects lack of a specialist in the group. Typical examples are several of the smaller families of the Cyclorrhapha and the Nematocera, and of the Asilidae.

Species list

The species are grouped into families following mainly the classification of KLOET & HINCKS (1976) with adaptations from RICHARDS & DAVIES (1979). The name of the specialist responsible for determining the whole family appears oppo-

site the family name. Specialists who determined single species from an otherwise covered family are named in parentheses (after the species name). Each species is followed by local distribution, ecological notes where known, and month of capture in Roman numerals.

NEMATOCERA

BIBIONOIDEA

BIBIONIDAE (det. P. Pecina)

1. *Bibio siculus* Loew
Malta: Fort St. Lucian (Marsaxlokk); Wied Babu; Wied il-Ghasel; Wied Incita (II, III, on *Smyrnum olusatrum*).
2. *Dilophus bispinosus* Lundstroem
Malta: Bingemma; Birkirkara; Tal-Qroqq. Comino: near Tower (I, II, III, X, XI).
3. *Dilophus tenuis* Wiedemann (= *D. ternatus* Loew)
Malta: Wied Babu. Comino: near Tower (II, III, on *Smyrnum olusatrum*).

MYCETOPHILOIDEA

MYCETOPHILIDAE (det. P.J. Chandler)

4. *Leia? bimaculata* (Megen)
Malta: Wied Babu (III, on *Smyrnum olusatrum*)
5. *Leia fasciata* Stord
Malta: Birkirkara; Hamrun (III, IV).
6. *Neoplatyura biumbrata* (Edwards)
Malta: Wied Incita (IV).

BRACHYCERA

TABANOIDEA

TABANIDAE (det. J.E. Chaney)

7. *Atylotus fulvus* (Meigen)
Malta: Ras il-Mignuna (Selmun) (VII).
8. *Atylotus latistriatus* (Brauer)
Malta: St. Paul's Islands (VII).
9. *Atylotus quadriarius* Loew
Malta: Mistra (VIII).

10. *Tabanus autumnalis* Linnaeus (var. *brunnescens* Szil)
Malta: Bahrija; Chadwick Lakes (VII, on vegetation).
11. *Tabanus regularis* Jaen
Malta: Ghadira (II).

STRATIOMYIDAE (det. R. Rozkosny)

12. *Nemotelus anchora* Loew
Malta: Ghadira; Salina (IV).
13. *Stratiomys longicornis* (Scopoli)
Malta: Fiddien; Ghadira; Salina; Wied il-Hemsija; Wied Incita; Wied Qannotta. Gozo: Wied tal-Lunzjata (VII, VIII, IX, all taken from near freshwater pools, either on the banks or on nearby vegetation).

ASILOIDEA

THEREVIDAE (det. L. Lyneborg)

14. *Thereva binotata* Loew
Malta: Marsascala; Wied is-Sewa; Wied Qirda. Comino: Santa Marija (VIII, IX).
15. *Thereva spilopectera* Wiedemann
Malta: Marsascala: Wied is-Sewda; Wied Qannotta. Comino: Santa Marija; San Niklaw (VII, IX).
16. *Thereva tuberculata* Loew
Malta: Salina; Wied il-Ghasel. Comino: Santa Marija (IV).

SCENOPINIDAE (det. R. Rozkosny)

17. *Scenopinus* sp.
Gozo: Qolla is-Safra (VII).

ACRO CERIDAE (det. M. Chvála)

18. *Ogcodes schembrii* Chvála
Malta: Buskett; Chadwick Lakes; Wied is-Sewda. Gozo: Xlendi (VI, VIII, X, mostly on sunny stones; also alights on humans).

BOMBYLIIDAE (det. D.J. Greathead)

19. *Anthrax trifasciata* Meigen

- Malta: Bahar ic-Caghaq; Birkirkara; Buskett. Gozo: Wied l-Infern. Comino: Santa Marija (VI, VII, VIII).
20. *Bombylius canescens* Mikan
Malta: Wied is-Sewda (III).
21. *Bombylius fulvescens* Wiedemann
Malta: Wardija (VI).
22. *Bombylius undatus* Mikan
Malta: Chadwick Lakes; Wied is-Sewda. Comino: Santa Marija (III).
23. *Bombylius medius* Linnaeus
Malta: Mistra; Wied is-Sewda. Gozo: Rabat (III).
24. *Exhyalanthrax afer* Fabricius
Malta: Chadwick Lakes; Gzira; Ghajn Rihana; Wied Incita; Wied Qannotta. Gozo: Qbajar; Qolla s-Safra; Wied l-Infern. Comino: near Tower (III, VI, V, II, VIII, IX).
25. *Exoprosopa jacchus* (Fabricius)
Malta: Bahrija; Buskett; Gebel Ciantar; Mistra; Marsascala; Wardija; Wied is-Sewda. Gozo: Qolla s-Safra; Wied l-Infern (VI, VII, VIII).
26. *Geron* sp. near *gibbosus* (Olivier)
Malta: Salina; Wied Babu. Gozo: Wied l-Infern; Qolla s-Safra (VII, IX, very agile insects alighting momentarily on shrubs such as *Inula crithmoides*).
27. *Heteralonia megerlei* (Meigen)
Malta: Chadwick Lakes; Fiddien; Mistra; Ghajn Rihana; Wied Qannotta (VI, VII, VIII, occasionally on *Mentha pulegium*).
28. *Petrorossia hesperus* Rossi
Malta: Bahar ic-Caghaq; Buskett; Chadwick Lakes; Fiddien; Ghadira; Qawra Point; Wied Qannotta (VI, VII, VIII).
29. *Spogostylum* sp. near *isis* (Meigen)
Malta: Fiddien; Mistra; Ghajn Rihana; Ghadira; Wied Qannotta. Gozo: Qbajar; Ramla (VII, VIII).
30. *Spogostylum tripunctatum* (Wiedemann)
Malta: Wied is-Sewda (IV).
31. *Spogostylum virgo* (Egger)
Malta: Wied Qannotta (VII).

32. *Thyridanthrax elegans* (Wiedemann)
Malta: Buskett; St. Thomas Bay; Wied Qannotta. Gozo: Wied l-Infern (VII, VIII).
33. *Usia forcipata* Brullé
Malta: Chadwick Lakes (III).
34. *Usia versicolor* (Fabricius)
Malta: Buskett; Chadwick Lakes; Ghajn Tuffieha; Ghar il-Kbir (near Girgenti); Girgenti; Wied Babu; Wied is-Sewda (II, III, IV, on *Calendra avensis*).
35. *Villa quinquefasciata* (Wiedemann)
Malta: Bahrija; Buskett; Chadwick Lakes; Mistra; Ghajn Rihana; Wied Qannotta (VI, VII, taken from flowers of *Polygonum salicifolium*, *Mentha pulegium* and *Foeniculum vulgare*. Also from leaves of *Populus alba*).
36. *Villa hottentota* Linnaeus
Malta: Buskett (VI).
- EMPIDOIDEA
HYBOTIDAE (det. M. Chvála)
37. *Platypalpus longiseta* (Zetterstedt)
Malta: Birkirkara; Buskett; Ghajn Rihana; Salina; Wied Qannotta (III, IV).
38. *Platypalpus pallidiventris* (Meigen)
Malta: Birkirkara; Fiddien; Wied Incita.
39. *Platypalpus praecinctus* (Collin)
Malta: Wied Incita; Wied Qannotta (III, IV).
40. *Platypalpus pseudounguiculatus* (Strobl)
Malta: Ghajn Rihana (III, generally under stones in very humid conditions).
41. *Platypalpus spinicercus* Chvála
Malta: Buskett; Chadwick Lakes; Fiddien; Ghajn Rihana; Wied il-Hemsija; Wied Qannotta; Wied il-Ghasel (III, IV, IX, XI).
42. *Tachydromia arrogans* (Linnaeus)
Malta: Birkirkara; Ghajn Rihana; Wied Babu; Wied il-Ghasel; Wied Qannotta (II, III, XII, generally on stones in damp conditions).
43. *Crossopalpus aeneus* (Walker)
Malta: Buskett; Burmarrad; Chadwick Lakes; Gzira; Ghadira; Wied il-Ghasel; Wied is-Sewda; Wied il-Hemsija; Wied Qannotta. Gozo: Wied tal-Lunzjata (VII, VIII, IX, XII).

MICROPHORIDAE (det. M. Chvála)

44. *Microphor rostellatus* Loew
Comino: Central area (III).

DOLICHOPODIDAE (det. L. Rampini)

45. *Argyra argyria* (Meigen)
Malta: Buskett (IV, near water).
46. *Campsicnemus crinitarsis* Stenbl.
Malta: Chadwick Lakes (VI).
47. *Orthochile saccata* Loew
Comino: Wied near Taht il-Mazz (III).
48. *Sciapus eozonus* Loew
Malta: Birkirkara; Buskett (VI, VII, attracted to light).
49. *Syntormon pumilus* (Meigen)
Malta: Wied il-Hemsija (III, on mud near freshwater).
50. *Teuchophorus spinigerellus* (Zetterstedt)
Malta: Wied il-Hemsija (III, on mud near freshwater).

CYCLORRHAPHA

ASCHIZA

SYRPHOIDEA

SIRPHIDAE (det. K.G.V. Smith)

51. *Chrysotoxum intermedium* Meigen
Malta: Buskett; Chadwick Lakes; Wied il-Ghasel; Wied Incita; Wied is-Sewda; Wied Qannotta; Wied Qirda (I, II, III, V, VI, VII, X, on various plants, but especially *Ferula communis*).
52. *Episyrphus balteatus* (Degeer)
Malta: Buskett; Wied il-Ghasel; Wied Incita. Comino: Santa Marija (IV, IX, on *Ferula communis* and *Ranunculus* sp.).
53. *Eristalinus taeniops* (Wiedemann)
Malta: Bahrija; Buskett; Wied Babu; Wied il-Ghasel; Wied il-Hemsija; Wied Qannotta (II, III, IV, VI, VIII, on *Foeniculum vulgare*).

54. *Eristalinus aeneus* (Scopoli)
Malta: Fiddien; Fomm ir-Rib; Ghadira; Wied Babu; Ghajn Rihana; Wied il-Ghasel; Wied is-Sewda; Wied Qannotta. Gozo: Wied l-Infern (II, VII, VIII, IV, IX on various plants, especially *Euphorbia melitensis* and *Foeniculum vulgare*).
55. *Eristalis tenax* (Linnaeus)
Malta: Bahrija; St. Julians; Wied Babu; Wied il-Ghasel; Wied is-Sewda; Wied Qirda. Gozo: Wied l-Infern. Comino: near Village (II, III, V, VI, IV, XII, on *Ferula communis*, *Euphorbia melitensis* and especially *Chrysanthemum coronarium*).
56. *Eumerus amoenus* Loew
Malta: Wied il-Ghasel (III, on *Ferula communis*).
57. *Eumerus obliquus* (Fabricius)
Malta: Wied Qannotta (VIII, on *Foeniculum vulgare*).
58. *Meliscaeva auricollis* (Meigen)
Malta: Wied Babu; Wied il-Ghasel (II, IV, on *Ferula communis*).
59. *Metasyrphus corollae* (Fabricius)
Malta: Fiddien; Fort St. Lucian (Marsaxlokk); Salina; Wied Babu; Wied il-Ghasel; Wied Qannotta. Gozo: Wied tal-Lunzjata (II, III, V, VII, IX, on *Chrysanthemum coronarium*, *Euphorbia melitensis* and *Ferula communis*).
60. *Myanthropa florea* (Linnaeus)
Malta: Buskett; Rabat; Tal-Qroqq; Wied il-Ghasel; Wied Incita; Wied Qirda. Gozo: Wied tal-Lunzjata (III, IX, VII, IV, on various plants, especially *Foeniculum vulgare*).
61. *Platynochaetus rufus* (Macquart) (= *Merodon rufus* Macquart)
Malta: Buskett; Marsascale; Wied il-Ghasel; Wied is-Sewda; Wied Qannotta. Comino: Santa Marija (III, IV, on *Foeniculum vulgare*, *Galictites tomentosa* and others).
62. *Scaeva albomaculata* (Macquart)
Comino: Santa Marija (IV).
63. *Scaeva pyrastris* (Linnaeus)
Malta: Bahrija (V).
64. *Sphaerophoria rueppellii* (Wiedemann)
Malta: Bahrija (V).
65. *Sphaerophoria scripta* (Linnaeus)
Malta: Wied is-Sewda (III, IV, on *Chrysanthemum coronarium*).

66. *Syrirta pipiens* (Linnaeus)

Malta: Fort St. Lucian (Marsaxlokk); Sliema; Wied il-Ghasel; Wied is-Sewda; Wied Qannotta; Wied Qirda. Gozo: Qolla s-Safra (III, IX, V, IV, mostly on *Chrysanthemum coronarium* and *Ferula communis*).

67. *Xanthandrus comtus* (Harris)

Malta: Hamrum (I).

CONOPIDAE (det. K.G.V. Smith)

68. *Melanosoma bicolor* Meigen

Malta: Gwardamangia (V).

69. *Myopa testacea* (Linnaeus)

Malta: Buskett; Wied il-Ghasel (IV).

70. *Physocephala vittata* (Fabricius)

Malta: Mistra; Wied Qannotta; Fort Manoel (VI, VII, on *Senecio* sp.).

71. *Thecophora atra* (Fabricius)

Comino: near Tower (III, on *Leontodon tuberosus*).

72. *Thecophora distincta* Wiedemann

Malta: Wied Qannotta (III, on *Sonchus* sp.).

73. *Cerania vespiformis* Macquart (det. R.A. Hayman)

Malta: Buskett; Fiddien; Mrieħel; Salina; Wied il-Hesri; Wied Qannotta (IV, VI, VII, VIII, IX, on *Foeniculum vulgare*).

SCHIZOPHORA

ANTHOMYZOIDEA

HELEOMYZIDAE (det. B.H. Cogan)

74. *Suillia variegata* (Loew)

Malta: Buskett (XI, under trees on shaded vegetation).

LAUXANIOIDEA

LAUXANIIDAE (det. B.H. Cogan)

75. *Minettia plumicornis* Fallén

Malta: Buskett (VII, on vegetation).

SCIOMYZOIDEA

SEPSIDAE (det. L. Munari)

76. *Sepsis lateralis* Wiedemann

Malta: Buskett; Fiddien; Salina; Wied Qirda (IV, IX, mostly on *Festucia arundinacea*).

77. *Sepsis punctum* (Fabricius)

Malta: Bahrija; Birkirkara; Chadwick Lakes; Salina; Wied Gerzuma; Wied il-Ghasel; Wied Incita (III, IV, VI, VII, IX, occasionally very abundant on vegetation in moist shady situations).

78. *Sepsis fissa* Becker

Malta: Wied Qirda (IX).

AGROMYZOIDEA

TEPHRITIDAE (det. A. Friedberg)

79. *Acanthiophilus helianthi* (Rossi)

Comino: Santa Marija (VII).

80. *Capparimyia savastani* Martelli

Comino: Santa Marija (VIII).

81. *Ceratitis capitata* Wiedemann

Malta: Mgarr (IX, on *Capparis spinosa*).

82. *Euleia heraclei* Linnaeus

Malta: Buskett; Salina (IV, VII, on *Capparis spinosa*).

83. *Herina? lugubris* Meigen

Malta: Fiddien; Ghajn Rihana (VII, IX).

84. *Myopites zernyi* Hering

Malta: Salina (VII).

85. *Paroxyna tessellata* (Loew)

Malta: Wied Incita (IV).

86. *Tephritis formosa* (Loew)

Malta: Marsascalea (VII, to light).

87. *Tephritis poecilura* Loew

Malta: Marsascalea (VII, to light).

88. *Trupanea amoena* Frauenfeld
Malta: Bahrija (V on *Chrysanthemum coronarium*).
89. *Urophora macrura* Loew
Malta: Wied Qirda (V).
90. *Urophora quadrifasciata* Meigen
Malta: Wied Qannotta (III, on grasses).
91. *Orellia steropea* Rondani
Malta: no data.
92. *Euarestella megacephala* Loew
Malta: no data.
- DROSOPHILOIDEA
- EPHYDRIDAE (det. S. Canzoneri & D. Meneghini)
93. *Ochthera schembrii* Rondani (= *O. mantispa* Loew)
Malta: Bahrija; Fiddien; Salina; Wied il-Hemsija; Wied Qannotta. Gozo: Wied tal-Lunzjata (V, VII, VIII, IV, IX, from muddy banks near freshwater).
94. *Ephydra bivittata* Loew
Malta: Marsascala; Salina; St. Paul's Islands (V, VII, IV, from brackish water surface. Also attracted to light).
95. *Ephydra flavipes* Macquart
Malta: Fiddien; Marsaxlokk; Wied il-Hemsija. Gozo: Wied tal-Lunzjata (IX, from water surface).
96. *Ephydra macellaria* Egger
Malta: Fiddien; Wied il-Hemsija; Wied is-Sewda (IX, from near freshwater pools).
97. *Scatella pazudum* Meigen
Malta: Fiddien (IX, on vegetation near freshwater pool).
98. *Scatella stagnalis* (Fallén)
Malta: Fiddien (IX, on mud near freshwater pool).
99. *Hydrellia griseola* (Fallén)
Malta: Fiddien; Wied il-Hemsija (IX, on vegetation near freshwater pools).
100. *Psilopa biskrae* Becker
Malta: Salina (IV, from vegetation near freshwater pool).

101. *Psilopa nigritella* Stenhammar
Gozo: Wied tal-Lunzjata (IX, on mud near freshwater).
102. *Psilopa nitidula* (Fallén)
Malta: Fiddien (IX, on mud near freshwater).
103. *Discocerina duplosetosa* (Becker)
Malta: Fiddien (IX, on mud near freshwater).
104. *Allotrichoma laterale* (Loew)
Malta: Fiddien (IX, on mud near freshwater).

TACHINOIDEA

TACHINIDAE (det. B. Hertig)

105. *Chaetogena acuminata* Rondani
Malta: Ghajn Rihana. Gozo: Qolla s-Safra; Wied tal-Lunzjata (VII, IX).
106. *Nemorilla maculosa* Meigen
Malta: Chadwick Lakes. Comino: near Tower (IV, VI, on *Foeniculum vulgare*).
107. *Drino atropivora* Robineau - Desvoidy
Malta: Birkirkara (adults emerged from *Aceronthia atropos*, IX).
108. *Clemelis* sp. nr. *pullata* Meigen
Malta: Fiddien; Wied Qannotta (VII, VIII).
109. *Prosopea nigricans* Egger
Malta: Wied Qannotta (VII, on *Foeniculum vulgare*).
110. *Gonia bimaculata* Wiedemann
Malta: Birkirkara; Marsascala; Ghajn Rihana; Wied il-Ghasel; Wied Qannotta; Wied Qirda (V, VI, VII, VIII, IX, on *Foeniculum vulgare*. Also from mud near freshwater pools).
111. *Tachina (Echinomyia) magnicornis* Zetterstedt
Malta: Fiddien; Marsaxlokk; Ghajn Rihana; Wied il-Ghasel; Wied is-Sewda; Wied Qannotta (II, V, VI, VII, X, on *Chrysanthemum coronarium*, *Ferula communis*).
112. *Tachina (Echinomyia) praeceps* Meigen
Malta: Marsaxlokk; Ghajn Rihana; Wied Has-Sabtan (VI, VII, IX).
113. *Linnaemya soror* Zimin

- Malta: Bahrija; Mistra; Wied il-Ghasel (III, IV, V, on *Chrysanthemum coronarium*).
114. *Mintha compressa* Fabricius
Malta: Chadwick Lakes; Wied Incita; Wied Qirda (VIII, XII, all specimens taken from shady, damp situations especially shallow crevices on large rocks and at base of cliffs).
115. *Mintha paraeeps* Scopoli (det. K.M. Harris)
Malta: Chadwick Lakes (VII).
116. *Fischeria bicolor* Robineau - Dosvoidy
Malta: Marsascala; Marsaxlokk; Selmun. Gozo: Qolla s-Safra (II, VII, IX).
117. *Siphona confusa* Mesnil
Malta: Marsascala; Wied il-Ghasel; Wied Incita; Wied is-Sewda (III, IV, IX, XII on *Smyrnum olusatrum*. Also attracted to light).
118. *Ectophasia oblongula* Robineau - Desvoidy
Malta: Bahrija; Buskett; Mistra; Marsascala; Ghajn Rihana; Wied il-Hesri; Wied Qannotta. Comino: Santa Marija (V, VI, VII, VIII, IX, numerous on *Chrysanthemum coronarium* and *Foeniculum vulgare*).
119. *Gymnosoma* sp. (? *rotundatum* auct.)
Malta: Buskett; Fiddien; Gebel Ciantar; Marsascala; Ghajn Rihana; Wied Has-Sabtan; Wied Qannotta (VI, VIII, IX, generally on *Foeniculum vulgare*).
120. *Leucostoma crassa* Kugler
Malta: Buskett; Chadwick Lakes; Fiddien; Mistra; Marsaxlokk; Ghajn Rihana; Wied il-Hesri; Wied Qannotta. Comino: Santa Marija (III, VI, VII, VIII, IX, on *Chrysanthemum coronarium* and *Foeniculum vulgare*).
121. *Leucostoma engeddense* Kugler
Malta: Ghajn Rihana. Comino: near Tower (VII, VIII).
122. *Clairvillia pniae* Kugler
Malta: Gzira; Ghajn Rihana; Wied Qannotta; Wied Qirda (V, VI, VII, on *Foeniculum vulgare*).
123. *Cylindromyia auriceps* Meigen
Malta: Fiddien; Ghajn Rihana; Wied Qannotta (VI, VIII, mostly on *Foeniculum vulgare*).
124. *Cylindromyia intermedia* Meigen
Malta: Buskett; Chadwick Lakes; Fiddien; Marsaxlokk; Ghajn Rihana; Wied Has-Sabtan; Wied il-Hemsija; Wied Qannotta; Wied Qirda. Gozo: Wied l-Infern. Comino: Santa Marija (VI, VII, VIII, IX).

125. *Cylindromyia rufifrons* Loew
Malta: Bahrija; Chadwick Lakes (VII).
126. *Cylindromyia rufipes* Meigen
Malta: Ghadira; Marsa; Mistra; Salina; Wied il-Hemsija (VII, VIII, IX).
127. *Besseria zonaria* Loew
Malta: Chadwick Lakes (VI, on *Foeniculum vulgare*).
128. *Chaetora stylata* Becker
Malta: Wied il-Hemsija (VIII).
129. *Euthera manni* Mik (det. K.M. Harris)
Malta: Wied Qannotta (IX).

RHINOPHORIDAE (det. B. Hertig)

130. *Melanophora roralis* (Linnaeus)
Malta: Buskett; Chadwick Lakes; Fiddien; Salina; Wied il-Ghasel; Wied il-Hemsija; Wied Qannotta. Comino: Santa Marija; near Village (IV, VI, VII, VIII, XII, generally on *Foeniculum vulgare*).
131. *Phyto adolescens* Rondani
Malta: Buskett; Gzira; Marsaxlokk; Sliema; Wied il-Ghasel; Wied il-Hemsija; Wied il-Kbir; Wied is-Sewda; Wied Qirda. Comino: near Tower (III, IV, V, VII, VIII, IX, on *Chrysanthemum coronarium* and *Ferula communis*).
132. *Stevenia deceptor* Loew
Malta: Buskett; Fiddien; Ghadira; Ghajn Rihana; Wied il-Ghasel; Wied il-Hemsija; Wied Qannotta; Wied Qirda. Comino: Village (III, IV, VI, VII, VIII, IX).

SARCOPHAGIDAE (det. J.P. Dear)

133. *Crataculina tabaniformis* Fabricius
Gozo: Ramla (VII, from sand dunes near nests of *Bembex oculata*).
134. *Miltogramma rutilans* Meigen
Malta: Wied il-Hesri; Wied il-Ghasel (VI, IX).
135. *Nyctia halterata* (Panzer)
Malta: Wied il-Ghasel; Wied Qannotta. Comino: near Tower (III, IV, VI, IX, on *Inula viscosa*).
136. *Sarcophaga* sp. nr. *bezziana* Böttcher

- Malta: Hal Far; Wied il-Ghasel. Gozo: Qolla s-Safra. Comino: Santa Marija (IV, VI, VII, on *Foeniculum vulgare*).
137. *Sarcophaga* sp. nr. *penicillata* Villeneuve & *maroccana* Rondani
Malta: Wied il-Ghasel. Gozo: Wied l-Infern (X, IX).
138. *Sarcophaga bolivori* Collado
Malta: Wied Has-Sabtan (IX).
139. *Sarcophaga carnaria* Linnaeus
Malta: Chadwick Lakes; Wied il-Ghasel; Wied is-Sewda; Wied Qannotta (III, VII, VIII).
140. *Sarcophaga crassipalpis* Macquart
Malta: Buskett; Ghadira; Ghajn Rihana. Gozo: Wied tal-Lunzjata (VI, VII, VIII).
141. *Sarcophaga crientata* Meigen
Malta: Wied il-Ghasel. Gozo: Qolla s-Safra (III, VII).
142. *Sarcophaga exuberans* Pandellé
Malta: Chadwick Lakes; Salina (VI, VII).
143. *Sarcophaga fertoni* Villeneuve
Malta: Ghadira; Wied Babu; Ghajn Rihana; Wied il-Ghasel; Wied Qannotta; Wied Qirda (VI, VII, VIII).
144. *Sarcophaga filia* Rondani
Malta: Wied il-Ghasel; Wied is-Sewda; Wied Qannotta (VI).
145. *Sarcophaga gracea* Rondani
Malta: Hal Far; Wied il-Ghasel (III, VI).
146. *Sarcophaga haemorrhoides* Böttcher
Malta: Wied il-Ghasel (IV).
147. *Sarcophaga hirticrus* Pandellé
Malta: Mistra; Wied Has-Sabtan; Wied il-Ghasel; Wied is-Sewda; Wied Qannotta; Ghajn Rihana. Gozo: Qolla s-Safra (III, VI, VII, IX).
148. *Sarcophaga melanura* Meigen
Malta: Wied il-Ghasel; Wied is-Sewda (III).
149. *Sarcophaga misera* Walker
Malta: Ghajn Rihana; Wied il-Ghasel; Wied is-Sewda (III).

150. *Sarcophaga monspellensia* Böttcher
Malta: Wied Qirda (VIII).
151. *Sarcophaga noverca* Rondani
Malta: Wied Has-Sabtan; Wied il-Ghasel (VI, IX).
152. *Sarcophaga penicillata* Villeneuve
Malta: Hal Far (VI).
153. *Sarcophaga novercoides* Böttcher
Malta: Ghajn Rihana; Wied il-Ghasel (III).
154. *Sarcophaga portschinskyi* Rondani
Malta: Chadwick Lakes; Hal Far; Wied Has-Sabtan; Wied il-Ghasel. Gozo: Ramla (VI, VII, VIII, IX).
155. *Sarcophaga striata* Fabricius
Malta: Ghajn Rihana (III).
156. *Sarcophaga nigriventris* Meigen
Malta: Mistra. Comino: Santa Marija (IV, VII).
157. *Sarcophaga boettecheriana* Rondani
Comino: Santa Marija (IV).
158. *Sarcophaga teretirostris* Pandellé
Malta: Chadwick Lakes; Wied Has-Sabtan; Wied il-Ghasel; Wied is-Sewda (III, VI, IX).
159. *Sarcophaga tibialis* Macquart
Malta: Fiddien; Wied Has-Sabtan; Wied Qirda; Bahrija (V, IX).
160. *Sarcophaga unicurva* Pandellé
Malta: Ghadira; Wied Has-Sabtan; Wied il-Hesri; Wied Qannotta; Wied Qirda (VI, VII, IX).
161. *Sarcophila latifrons* (Fallén)
Malta: Fiddien; Wied Babu; Ghajn Rihana; Wied il-Ghasel; Wied Qannotta; Wied Qirda (VII, VIII, IX, X).
162. *Setulia* sp.
Malta: Wied il-Ghasel (VI).
163. *Macronychia polydon* (Meigen)

Malta: Wied Qirda (IX).

164. *Amobia signata* (Meigen)

Malta: Wied il-Ghasel; Wied Qannotta (IV, VII, on *Euphorbia* sp.).

CALLIPHORIDAE (det. J.P. Dear)

165. *Calliphora vicina* Robineau - Desvoidy

Malta: Birkirkara; Buskett; Gzira; Selmun; Sliema; Wied il-Ghasel (II, III, V, commonly enters human habitations. Also occurs in the open country).

166. *Chrysomya albiceps* Wiedemann

Malta: Birkirkara; Wied il-Ghasel (VIII, IV, III, on *Euphorbia melitensis*).

167. *Lucilia sericata* (Meigen)

Malta: Buskett; Wied il-Ghasel; Wied is-Sewda. Filfla. Comino: Santa Marija (III, IV, VIII, IX).

168. *Pollenia pallida* Rohdendorf

Malta: Ghadira (IV).

169. *Pollenia rudis* (Fabricius)

Malta: Buskett; Salina; Wied Babu; Wied il-Ghasel; Wied is-Sewda. Comino: near San Niklaw (II, IV, IX, XII, on *Euphorbia* sp. and *Ferula communis*).

170. *Stomorhina lunata* (Fabricius)

Malta: Buskett; Chadwick Lakes; Ghadira; Wied il-Ghasel; Wied Incita; Wied Qirda (III, IV, VI, VII, VIII, IX, mostly on *Ferula communis*).

MUSCOIDEA

SCATOPHAGIDAE (det. J.P. Dear)

171. *Scatophaga stercoraria* (Linnaeus) [& var. *merdaria* Fabricius]

Malta: Bingemma; Marsascala; Wied il-Ghasel; Wied Incita (III, IV, X, XII, on *Chrysanthemum coronarium*. Also attracted to light).

MUSCIDAE (det. A.C. Pont)

172. *Coenosia tigrina* (Fabricius)

Malta: Chadwick Lakes; Wied il-Ghasel; Wied il-Hemsija; Wied Qannotta (VI, VIII, taken near freshwater pools).

173. *Lispa nana* Macquart (det. S. Canzoneri & D. Menghini)

Malta: Chadwick Lakes; Fiddien; Salina; Wied il-Hemsija (VIII, IV, IX, from banks of water pools).

174. *Lispa tentaculata* (Degeer) (det. S. Canzoneri & D. Menghini)

Malta: Bahrija; Buskett; Chadwick Lakes; Fiddien; Ghajn Rihana; Wied il-Hemsija; Wied is-Sewda. Gozo: Wied tal-Lunzjata (VI, VII, VIII, X, IX, on mud near freshwater pools).

175. *Musca domestica* Linnaeus

Malta: Chadwick Lakes; Gzira; Wied il-Ghasel. Gozo: Qbajjar. Comino: Santa Marija; near Village (V, VII, IV, IX).

176. *Musca vitripennis* Meigen

Malta: Buskett; Wied il-Ghasel; Wied Qannotta. Comino: Santa Marija (VII, X, IX, commonly alights on humans).

177. *Muscina stabulans* (Fallén)

Malta: Birkirkara; Buskett; Fiddien; Gzira; Salina; Wied il-Ghasel; Wied is-Sewda; Wied Qirda. Gozo: Wied tal-Lunzjata (II, III, IV, X, XII, IX, on *Ferula communis* and other plants. Also in human habitations).

178. *Myospila mediatubunda* (Fabricius)

Malta: Wied Qirda. Gozo: Wied tal-Lunzjata (IX).

179. *Ophyra aenescens* (Wiedemann)

Malta: Gzira (VII, in human habitations).

180. *Ophyra capensis* (Wiedemann)

Malta: Birkirkara; Wied il-Hemsija (VIII, XI).

181. *Ophyra leucostoma* (Wiedemann)

Malta: Buskett; Chadwick Lakes; Salina; Wied Qirda (IV, VII, IX, all specimens taken on the wing from under trees).

182. *Ortbellia viridis* Wiedemann

Malta: Wied il-Ghasel (III, IV, on dung).

183. *Phaonia variegata* (Meigen)

Malta: Buskett (VII, VIII, IV, XI).

184. *Stomoxys calcitrans* (Linnaeus)

Malta: Buskett; Chadwick Lakes; Fiddien; Wied il-Hemsija; Wied Qannotta; Wied Qirda. Gozo: Qbajjar; Wied tal-Lunzjata (VI, VII, VIII, X, IX).

185. *Graphomya maculata* (Scopoli)

Malta: Buskett; Wied il-Ghasel; Wied Qannotta (III, IV, VII, on *Foeniculum vulgare* and *Ferula communis*).

186. *Helina almeriensis* Strobl
Malta: Bingemma; Buskett; Manoel Island; Tal-Blata (Selmun); Wied Qannotta. Comino: near Village (IV, VII, VIII, X, XI, on *Euphorbia melitensis*).
187. *Helina clara* Meigen
Malta: Bingemma; Birkirkara; Buskett; Chadwick Lakes; Selmun (VI, X, XI, IX, generally in shady crevices).
188. *Helina duplicata* (Meigen)
Malta: Wied il-Ghasel (VI, on *Ferula communis*).
189. *Helina punctata* (Robineau - Desvoidy)
Malta: Buskett; Chadwick Lakes (VI, VII, generally in damp conditions. Also on *Populus alba* trunks).

ANTHOMYIIDAE (det. A.C. Pont)

190. *Delia platura* (Meigen)
Malta: Bingemma; Wied il-Ghasel. Comino: Santa Marija (IV, X, on *Ferula communis*. Also in human habitations).
191. *Fucellia tergina* (Zetterstedt)
Malta: Mistra; Marsaxlokk (X, IX, on rocky beach and near freshwater pools).
192. *Leucophora dissimilis* Villeneuve
Malta: Marsaxlokk; Wied Incita (II, IV, abundant on *Diplotaxis eruroides*).
193. *Leucophora? sponsa* Meigen
Malta: Bingemma (X).
194. *Paregle cinerella* (Fallén)
Malta: Wied il-Ghasel (III, on *Ferula communis*).
195. *Pegomya* sp.
Malta: Bingemma; Buskett (X, XI).

FANNIIDAE (det. A.C. Pont)

196. *Fannia canicularis* (Linnaeus)
Malta: Birkirkara; Buskett; Gzira; Siggiewi; Wied il-Ghasel; Wied Incita; Wied is-Sewda (III, IV, V, VI, VII, X, IX, in various habitats; on *Populus alba* bark, on *Smyrniolus olusatrum* and others. Also in human habitations).
197. *Fannia leucosticta* Meigen
Malta: Birkirkara (VII).

HIPPOBOSCIDAE (det. A.M. Hutson)

198. *Ornithophila metallica* Schiner
Gozo: Wied tal-Lunzjata (XII, from *Motacilla alba*, White Wagtail).
199. *Ornithomya biloba* Dufour
Malta: Rabat (X, from *Hirundo rustica*, European Swallow).
200. *Ornithomya avicularia* (Linnaeus)
Gozo: Wied tal-Lunzjata (X, from *Locustella luscinioides*, Savi's Warbler).
201. *Pseudolynchia canariensis* Macquart
Malta: Birkirkara (V).
202. *Icosta minor* (Bigot)
Malta: Ghadira; Xemxija. Gozo: Ramla Valley (I, IV, IX, XI, from *Passer hispaniolensis*, Spanish Sparrow; *Ficedula hypoleuca*, Pied Flycatcher; *Eritachus rubecula* Robin and *Sylvia melanocephala* Sardinian Warbler).
203. *Hippobosca equina* Linnaeus
Malta: Ghammieri (X, numerous on cattle).

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ABSTRACT

This work summarises current knowledge on the dipterological fauna of the Central Mediterranean Islands of Malta, Gozo and Comino (the Maltese Archipelago). Previously published literature on the Maltese Diptera are briefly reviewed in the introduction. A list of the Diptera taken by the authors, chiefly between the years 1975-1978, is given. This list, totalling 203 species divides into 27 families, is a good representation of at least the commoner species. For each species listed, distribution within the Maltese Islands, ecological data where relevant, and month of capture (in Roman numerals) are given. The following families are included: Bibionidae (3 sp.), Mycetophilidae (3 sp.), Tabanidae (5 sp.), Stratiomyidae (2 sp.), Therevidae (3 sp.), Scenopinidae (1 sp.), Acroceridae (1 sp.), Bombyliidae (18 sp.), Hybotidae (7 sp.), Microphoridae (1 sp.), Dolichopodidae (6 sp.), Syrphidae (17 sp.), Conopidae (6 sp.), Heleomyzidae (1 sp.), Lauxaniidae (1 sp.), Sepsidae (3 sp.), Tephritidae (14 sp.), Ephydriidae (12 sp.), Tachinidae (25 sp.), Rhinophoridae (3 sp.), Sarcophagidae (32 sp.), Calliphoridae (6 sp.), Scatophagidae (1 sp.), Muscidae (18 sp.), Anthomyiidae (6 sp.), Fanniidae (2 sp.), Hippoboscidae (6 sp.).

RIASSUNTO

Segnalazioni recenti di Ditteri dalle Isole Maltesi (Diptera).

Questo lavoro riassume lo stato corrente di conoscenza della fauna ditterologica delle isole di Malta, Gozo e Comino (Arcipelago Maltese) nel Mediterraneo centrale. L'introduzione riassume la letteratura già esistente riguardante i Diptera Maltesi. Sono elencate le specie trovate dagli AA., principalmente tra gli anni 1975-1978. L'elenco, riguardante 203 specie divise in 27 famiglie, dà una discreta idea, almeno, delle specie più comuni. Per ogni specie elencata sono date la distribuzione nelle Isole Maltesi, cenni ecologici se rilevanti e mese di cattura (in numeri romani). Le famiglie rinvenute sono: Bibionidae (3 sp.), Mycetophilidae (3 sp.), Tabanidae (5 sp.), Stratiomyidae (2 sp.), Therevidae (3 sp.), Scenopinidae (1 sp.), Acroceridae (1 sp.), Bombyliidae (18 sp.), Hybotidae (7 sp.), Microphoridae (1 sp.), Dolichopodidae (6 sp.), Syrphidae (17 sp.), Conopidae (6 sp.), Heleomyzidae (1 sp.), Lauxaniidae (1 sp.), Sepsidae (3 sp.), Tephritidae (14 sp.), Ephydriidae (12 sp.), Tachinidae (25 sp.), Rhinophoridae (3 sp.), Sarcophagidae (32 sp.), Calliphoridae (6 sp.), Scatophagidae (1 sp.), Muscidae (18 sp.), Anthomyiidae (6 sp.), Fanniidae (2 sp.), Hippoboscidae (6 sp.).

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