

The families Lonchopteridae, Opetiidae and Pipunculidae of Malta (Diptera, Aschiza)

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ABSTRACT. An account is given of the three Aschiza families of Diptera: one species of Lonchopteridae, one species of Opetiidae and four species of Pipunculidae that occur in Malta and which are all new records for this country.

KEY WORDS. Mediterranean, faunistics, new records.

INTRODUCTION

The Aschiza consists of a small number of families within the Diptera and the following occur in Western Europe: Opetiidae, Platypezidae, Phoridae, Lonchopteridae, Pipunculidae and Syrphidae.

The family Phoridae occurs worldwide and consists of a very large number of species with an immense biological diversity. The species belonging to this family are being studied by Dr Paul Gatt (Essex, UK) and an account may be published later. The Syrphidae have been recently reviewed (EBEJER, 1988, 1995; SSYMANK & EBEJER, 2009) and since that time no more species have been added to the Maltese list. No species of Platypezidae have been found in Malta. This article deals with the remaining three families of which no Maltese records exist in the literature.

The families and species are listed in alphabetical order. The collectors' names are given in initials thus: Martin J. Ebejer (South Glamorgan, UK) - MJE; Charles Farrugia (Malta) - CF; Paul Gatt (Essex, UK) - PG; Colin Plant (Hertfordshire, UK) - CP; James L. Schembri (Malta) - JLS. The depository of specimens not in the author's collection is indicated in parenthesis.

For more detail on the classification and biology of these families, particularly with relevance to the Palaearctic Region, the reader is referred to the relevant chapters in the Manual of Palaearctic Diptera: Lonchopteridae (BARTÁK, 1998), Opetiidae (CHANDLER, 1988) and Pipunculidae (KOZÁNEK *et al.*, 1998).

ANNOTATED SPECIES LIST

LONCHOPTERIDAE

The Lonchopteridae is a small family of just over 30 species that occurs worldwide. Larvae are saprophagous and occur mostly in leaf litter in humid or wet environments. Adults can be found in large numbers in grassy habitats and in open woodland where they can be seen scuttling over leaves in the undergrowth. *Lonchoptera bifurcata* is virtually cosmopolitan and males are rare since it reproduces parthenogenetically over most of its range.

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***Lonchoptera bifurcata* (Fallén, 1810)**

Material examined. MALTA: Salina, 16.iv.1977, 1 ♀, MJE; Chadwick Lakes, 22.vi.1980, 3 ♀♀, JLS (PG coll.); Wied Qannotta, 1.iv.1985, 1 ♀, MJE; Fiddien, 11.v.1992, 1 ♀, MJE, 8 ♀♀ same data but 17.vi.1992. **GOZO:** Wied ir-Ramla, 4.vii.1992, 1 ♀, MJE.

OPETIIDAE

This family contains the sole genus *Opetia* Meigen, 1830 represented by three species in the Palaearctic. However, doubt remains about the validity of two of these species described from the eastern Palaearctic (CHANDLER, 1988), as they are remarkably close to *Opetia nigra*. *Opetia nigra* is widespread in the Palaearctic Region. The biology is unknown.

***Opetia nigra* Meigen, 1830**

Material examined. MALTA: Fawwara, 2.i.1987, 1 ♂, MJE, 5 ♂♂ same data but 18.iii.1992, 1 ♂ same data but 19.iii.1992; Balzan, 2.iii.1991, 1 ♀, MJE, 2 ♂♂ same data but 25.xii.1992; Bahrija, 3.xi.1991, 1 ♂, MJE; Fiddien, 23.i.1993, 1 ♂, PG (PG coll.); Buskett, 27.xi.1994, PG (PG coll.); Wied Qirda, 4.ii.1996, 1 ♂, MJE; Wardija, 25.ii.1996, 1 ♂, MJE.

PIPUNCULIDAE

There are about 1,200 described species in this cosmopolitan family. All genera are exclusively endoparasitic in the Auchenorrhyncha (e.g. leafhoppers) except for *Nephrocerus* Zetterstedt, 1838, which parasitizes adult flies of the genus *Tipula* Linnaeus, 1758 (Tipulidae) (KOENING & YOUNG, 2007). With the Auchenorrhyncha, pipunculid flies may attack the nymphs, the adult or both. Where a species specializes on one host, which in turn specializes (as is often the case with leafhoppers) on a particular host-plant, then the distribution and habitat preference of the pipunculid reflects this, so that the fly can be very restricted in its occurrence. Thus *T. frontata* is found almost exclusively on or very close to *Tamarix* where its host *Opsius stactogalus* Fieber, 1866 (Hemiptera: Cicadellidae) is found (PARKER, 1967).

The four species found in Malta are common around the Mediterranean and are a relatively poor representation of the rich fauna in this family.

***Clistoabdominalis ruralis* (Meigen, 1824)**

Material examined. MALTA: Buskett, 25.viii.1991, 1 ♂, MJE, 3 ♂♂ same data but 9.vii.1993; Bahrija, 3.xi.1991, 1 ♀, MJE, 2 ♂♂ same data but 21.vi.1992; Fiddien, 17.vi.1992, 1 ♀, MJE, 4 ♂♂ same data but 26.v.2011; Salina marsh, 2.v.2001, 1 ♂, MJE.

***Eudorylas mediterraneus* DeMeyer & Ackland, 1997**

Material examined. MALTA: Wied Qirda, 5.iv.1985, 1 ♀, MJE; Bahrija, 6.iv.1985, 2 ♂♂ & 1 ♀, MJE; Wied Incita, 6.iii.1994, 1 ♂, MJE; Wied il-Ghasel, 13.iv.1994, 1 ♀, MJE, 1 ♂ same data but 28.iii.1997; Mgiebah, 26.iii.1995, 1 ♂ & 2 ♀♀, MJE, 1 ♂ same data but 16.iii.1996; Wied il-Mistra, 17.iii.1996, 1 ♂ & 1 ♀, MJE; Fiddien, 14.iv.1996, 1 ♀, MJE; Fomm ir-Rih, 27.iv.1997, 1 ♂ & 1 ♀, MJE, 2 ♂♂ same data but 2.iv.1999; Bidnija, 7.iii.1999, 3 ♀♀, MJE;

Wied Has-Sabtan, 30.iii.1999, 1 ♂, CF. **GOZO:** Ta' Cenc, 1.iv.1994, 5 ♂♂ & 1 ♀, MJE; Ramlá, 15.iv.1994, 1 ♀, CP, 1 ♂ & 1 ♀ same locality but 5.iv.1999, MJE; Dwejra, 5.iv.1999, 1 ♂, MJE.

Tomosvaryella frontata (Becker, 1898)

Material examined. MALTA: Marsaxlokk, 27.ix.1992, 1 ♂, MJE, 2 ♀♀ same data but 26.vii.1992; Salina, 31.v.1992, 2 ♂♂ & 1 ♀, MJE; Ghadira, 4.viii.1993, 1 ♂ & 3 ♀♀, MJE, 2 ♀♀ same data but 24.v.1995; Salina marsh, 11.iv.1994, 1 ♀, MJE. **COMINO:** Santa Marija, 28-30.iii.2002, 1 ♀, MJE. **GOZO:** Ramlá dunes, 23.iv.1992, 3 ♂♂ & 3 ♀♀, MJE, 1 ♂ same data but 5.iv.1999.

Tomosvaryella kuthyi (Aczél, 1944)

Material examined. MALTA: Ghadira, 4.viii.1993, 1 ♂, MJE; Mgiebah, 26.v.1993, 1 ♂, MJE.

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REFERENCES

- BARTÁK, M. (1998) Family 3.1, Lonchopteridae (pp. 13-16). In: PAPP, L. & DARVAS, B. [eds.], *Contributions to a Manual of Palaearctic Diptera*, Volume 3. Science Herald, Budapest. 880 pp.
- CHANDLER, P.J. (1998) Family 3.2, Opetiidae (pp. 17-25). In: PAPP, L. & DARVAS, B. [eds.], *Contributions to a Manual of Palaearctic Diptera*, Volume 3. Science Herald, Budapest. 880 pp.
- EBEJER, M.J. (1988) Some records of hoverflies (Diptera: Syrphidae) from Malta. *Entomologist's Gazette*, **39**: 160-164.
- EBEJER, M.J. (1995) The Hoverflies of Malta (Diptera: Syrphidae), new records and corrections. *The Central Mediterranean Naturalist*, **2**(3): 81-85.
- KOENIG, D.P. & YOUNG, C.W. (2007) First observation of parasitic relations between big-headed flies of the genus *Nephrocerus* Zetterstedt (Diptera: Pipunculidae) and crane flies *Tipula* Linnaeus (Diptera: Tipulidae Tipulinae), with larval and puparial descriptions for the genus *Nephrocerus*. *Proceedings of the Entomological Society of Washington*, **109**(1): 52-65.
- KOZÁNEK, M., De MEYER, M. & ALBRECHT, A. (1998) Family 3.6, Pipunculidae (pp. 141-150). In: PAPP, L. & DARVAS, B. [eds.], *Contributions to a Manual of Palaearctic Diptera*, Volume 3. Science Herald, Budapest. 880 pp.
- PARKER, H.L. (1967) Notes on the biology of *Tomosvaryella frontata* (Diptera: Pipunculidae), a Parasite of the leafhopper *Opsius stactogalus* on *Tamarix*. *Annals of the Entomological Society of America*, **60**(2): 292-295.
- SSYMANK, A. & EBEJER, M.J. (2009) Spring observations on flower visits by hoverflies (Diptera: Syrphidae) in Malta and Sicily with new records for both islands. *Studia dipterologica*, **16**(1): 47-59.

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