

First contribution to the knowledge of the braconid wasps (Hymenoptera, Braconidae) of Malta

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ABSTRACT. A total of 48 species of braconid wasps (excluding 16 Aphidiidae) are here reported as occurring in the Maltese Islands, of which 38 species are reported for the first time from this territory. The braconid species of Malta belong to 13 subfamilies, of which two are the richest in terms of species diversity: Braconinae with 10 and Microgastrinae with 16 species. One Microgastrinae, *Dolichogenidea zerafai* sp. n. is described and distinguished from closely related species. The majority of the known species are widely distributed in Europe or in the Palaearctic. The braconid material is deposited in D. Mifsud's private collection, with a few duplicates in the Hungarian Natural History Museum, Budapest.

KEY WORDS. Mediterranean, *Dolichogenidea zerafai* sp. n.

INTRODUCTION

The braconid wasp fauna of the Maltese Islands is poorly known with very few records scattered in the entomological literature. More work has been done on the Aphidiidae (often treated as a subfamily of Braconidae) of the Maltese Islands with 16 species recorded to-date (RAKHSHANI *et al.*, 2015). For completion, in the present work, all previously recorded species of Braconidae are included. For each species, material examined and notes where appropriate are included. Of the 48 species of braconids included in the present work, 38 are new to the fauna of Malta and are indicated with an asterisk (*). One species, *Dolichogenidea zerafai*, is new to science and is described in the present work. The species belong to 13 subfamilies of Braconidae as follows: Adeliinae (1 species), Agathidinae (5 species), Alysiinae (1 species), Brachistinae (2 species), Braconinae (10 species), Doryctinae (1 species), Euphorinae (2 species), Hormiinae (1 species), Microgastrinae (16 species), Miracinae (1 species), Opiinae (4 species), Rhysalinae (1 species) and Rogadinae (3 species). Almost every braconid species, here discussed, is frequently to commonly found in Europe or in the Palaearctic Region.

MATERIAL AND METHODS

The braconid material studied during the present work was collected from the Maltese Islands by the following people: David Mifsud (DM), Mark Zammit (MZG), Michael Zerafa (MZ) and Thomas Cassar (TC). The bulk of the material is deposited in the private collection of David Mifsud of Zejtun (Malta) with some duplicates deposited in the Department of Zoology, Hungarian Natural History Museum, Budapest (BP). The identification of the braconid species was accomplished using the following works: NIXON (1972), PAPP (1977; 1979; 1984; 1987), TELENGA (1936; 1941), TOBIAS (1986a; 1986b) and WILKINSON (1941). In the annotated faunistic list which follows, both subfamilies and species within are treated in alphabetical order.

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ANNOTATED FAUNISTIC LIST

Subfamily **Adeliinae** Viereck, 1918

****Adelius subfasciatus* Haliday, 1833**

Material examined: Malta, Naxxar Gap, 7–8.iv.2009, 1 ♂, emerged from a nepticulid (Lepidoptera) larva feeding on *Rhamnus lycioides*, MZ.

Notes: A frequent to common species throughout Europe. Nearest to Malta, *A. subfasciatus* is also known from Italy. The most recent phylogenetic works (e.g. QUICKE, 2015) have treated the Adeliinae within Chleloninae but I consider the Adeliinae as a valid subfamily.

Subfamily **Agathidinae** Nees, 1814

****Agathis anglica* Marshall, 1885**

Material examined: Malta, Girgenti, 1.v.2014, 1 ♂, TC.

Notes: A frequent to common species in Europe. Nearest to Malta, this species is also recorded from Italy, Greece and Morocco.

****Agathis syngenesiae* Nees, 1812**

Material examined: Malta, Girgenti, 1.vi.2014, 1 ♀, TC.

Notes: A sporadic to frequent species in the western Palaearctic Region. Nearest to Malta this species is also known from Italy and Greece.

***Agathis umbellatarum* Nees, 1812**

Notes: This species was not found during the present study but was previously reported from Malta by SIMBOLOTTI & VAN ACHTERBERG (1999:126) and based on this record the species was reported again as occurring in Malta in the online database of Fauna Europaea (VAN ACHTERBERG, 2013). *Agathis umbellatarum* is widely distributed and frequently found in the Palaearctic Region. It represents a forest-steppe species. In the Mediterranean area this species is known to occur in several countries, and nearest to Malta it is also recorded from Italy, Greece, Cyprus, Israel, Tunisia and Algeria.

****Bassus dimidiator* (Nees, 1834)**

Material examined: Malta, Zebbug, 26.v.2014, 1 ♀, TC.

Notes: This species is included in the present work on the authority of Dr Gavin Broad of the Natural History Museum in London, UK who identified the above mentioned specimen. This species is widespread in the western Palaearctic Region. Nearest to Malta, it is also known from Italy, France (Corsica), Greece and Turkey.

***Bassus tumidulus* (Nees, 1812)**

Material examined: Malta, Naxxar, 21.i.2007, 1 ♀, MZ; Zebbug, 26.v.2014, 1 ♀, TC.

Notes: This species was previously reported from Malta by SIMBOLOTTI & VAN ACHTERBERG (1992:43) and based on this record the species was reported again as occurring in Malta in the online database of Fauna Europaea (VAN ACHTERBERG, 2013). In the western Palaearctic Region, *B. tumidulus* is widely distributed and it is a frequent to commonly found species. Nearest to Malta, this species is also known to occur in Italy, Greece and Morocco.

Subfamily **Alysiinae** Leach, 1815

****Chorebus (Phaenolexis) larides* (Nixon, 1944)**

Material examined: Malta, Verdala Palace, 12–24.vi.2014, 1 ♀, Malaise trap, DM.

Notes: This species was described from England and is reported from seven other European countries (Sweden, Ireland, Spain, Hungary, Serbia, Macedonia and Ukraine). It is best regarded as a rather sporadic species.

Subfamily **Brachistinae** Förster, 1862

****Triaspis floricola* (Wesmael, 1835)**

Material examined: Malta, Mosta, 20.v.2014, 1 ♀, DM.

Notes: A widely distributed species in the southern half of Europe. Nearest to Malta, *T. floricola* is also known from Italy, Greece and Algeria.

****Triaspis obscurella* (Nees, 1816)**

Material examined: Malta, St. Thomas Bay, Tal-Munxar, 25.v.2002, 1 ♂, DM.

Notes: A Palaearctic species which is frequently to commonly found in Europe. Nearest to Malta, *T. obscurella* is also known from Italy and Greece.

Subfamily **Braconinae** Nees, 1811

****Bracon (Bracon) intercessor var. fallaciosus* (Szépligeti, 1901)**

Material examined: Malta, Għar Lapsi, host collected 23.xii.2002, 1 ♂ and 1 ♀, emerged between 10–13.iii.2003, from larva of *Agapanthia asphodeli* (Latreille) (Coleoptera: Cerambycidae), DM.

Notes: This species is widely distributed in the West Palaearctic Region. Nearest to Malta, this species is also recorded from Morocco, Spain, Italy, Greece, Cyprus and Turkey.

****Bracon (Bracon) kozak* Telenga, 1936**

Material examined: Malta, Gharghur, 15.x.2013, 1 ♂ and 1 ♀, from unidentified larva feeding on *Pistacia lentiscus*, MZG.

Notes: *Bracon kozak* represents a typical forest-steppe species widely distributed in the Palaearctic Region. Nearest to Malta, the species is also known to occur in Turkey.

****Bracon (Bracon) murgabensis* Tobias, 1957**

Material examined: Malta, Had Dingli, 12.iv.2009, 1 ♂ and 1 ♀, emerged from larva of *Coleophora festivella* Toll (Lepidoptera: Coleophoridae) feeding on *Lotus cytoides*, MZ.

Notes: A forest-steppe species found in the Palaearctic Region. Nearest to Malta this species is also recorded from Moldova and Azerbaijan.

****Bracon (Bracon) pectoralis* (Wesmael, 1838)**

Material examined: Malta, Mosta, 15.v.2014, 1 ♂, TC.

Notes: A frequently to commonly found species in the western Palaearctic Region. Nearest to Malta, *B. pectoralis* is also reported from Greece, Italy, Tunisia and Algeria.

****Bracon (Pigeria) piger* (Wesmael, 1838)**

Material examined: Malta, Verdala Palace, 12–24.vi.2014, 1 ♀, Malaise trap, DM.

Notes: A frequently to commonly found species in the western Palaearctic Region. Nearest to Malta, this species is also reported from Greece, Italy, Tunisia and Algeria. *Pigeria* is sometimes given full generic status (VAN ACHTERBERG, 2013), however, I consider it as a subgenus of *Bracon* (PAPP, 2012: 83).

****Bracon (CyanopteroBracon) urinator* (Fabricius, 1793)**

Material examined: Malta, Aħrax tal-Mellieħa, 26.v.2014, 2 ♀♀, TC.

Notes: A widely distributed species and frequently to commonly found in the Palaearctic Region. Nearest to Malta, *B. urinator* is also known to occur in Greece, Italy, Tunisia, Algeria and Egypt.

****Habrobracon hebetor* (Say, 1836)**

Material examined: Malta, Zejtun, 20.viii.2013, 1 ♀ & 1 ♂, associated with stored beeswax, DM (material deposited in the National Museum of Scotland).

Notes: This species is included in the present work on the authority of Dr Mark Shaw of the National Museum of Scotland who identified the above mentioned material. This species was always called *Bracon (Habrobracon) hebetor* (Say), but in the online database of Fauna Europaea (VAN ACHTERBERG, 2013) it is recorded as *B. brevicornis* (Wesmael) because that author considers that *hebetor* is a Nearctic species and that the European *brevicornis* is distinct.

****Habrobracon stabilis* (Say, 1836)**

Material examined: Malta, Naxxar, xi–xii.2006, 3 ♂♂ and 3 ♀♀, reared from larvae of *Plodia interpunctella* (Hübner) (Lepidoptera: Pyralidae), MZ; Zejtun, 23–24.x.2013, 6 ♂♂ and 2 ♀♀, reared from seed pods of *Ceratonia siliqua* infested with unidentified lepidoptera larvae, DM.

Notes: This species is frequently to commonly found in the western Palaearctic Region. Nearest to Malta, *H. stabilis* is also recorded from Italy, Greece, Tunisia and Israel.

****Iphiaulax jacobsoni* Shestakov, 1927**

Material examined: Malta, Naxxar, 9.viii.2005, 1 ♀, MZ.

Notes: This species was described from Uzbekistan and is also recorded from Turkey (BEYARSLAN *et al.*, 2002).

****Iphiaulax tauricus* Shestakov, 1927**

Material examined: Malta, Salina, 11.vii.2002, 1 ♂, DM.

Notes: This species was described from Crimea: Kerch (Ukraine) and was recorded from Armenia, Azerbaijan, Kazakhstan, Turkey and Italy (Sicily). For its taxonomic position see PAPP (2001: 171).

Subfamily **Doryctinae** Förster, 1862

***Ecphylyus (Sactopus) caudatus* Ruschka, 1916**

Notes: This species was previously reported from Malta by MIFSUD *et al.* (2012). The material upon which this species was identified (by Dr S. Belokobylskij) was collected from Buskett (Malta) and was reared from dead branches of *Ficus carica* infested with the scolytine bark beetle, *Hypoborus ficus* Erichson. *Ecphylyus caudatus* is also recorded from Algeria, Austria, Croatia, France, Israel, Italy, Morocco, Romania, Russia (European part) and Tunisia.

Subfamily **Euphorinae** Förster, 1862

***Aridelus rufotestaceus* Tobias, 1986**

Notes: This species was recorded from Malta in the online database of Fauna Europaea (VAN ACHTERBERG, 2013) because of a specimen present in the collection of the Naturalis Biodiversity Center in Leiden (van Achterberg, C., *pers. comm.*). This species shows a disjunct distribution, being recorded from Italy, Georgia (in the western Palaearctic), China (Beijing), and Asiatic Russia (Amur, Krasnodar and Maritime area) (in the eastern Palaearctic).

****Chrysopophthorus hungaricus* (Zilahi-Kiss, 1927)**

Material examined: Malta, Mtahleb, Wied il-Buzbies, 19.vi.2012, 1 ♂, DM.

Notes: A widely distributed species in the southern half of the western Palaearctic Region. Nearest to Malta, this species is also recorded from Italy and Greece.

Subfamily **Hormiinae** Förster, 1862****Hormius moniliatus* (Nees, 1811)**

Material examined: Malta, Mtahleb, Wied il-Buzbies, 19.vi.2012, 1 ♀, DM.

Notes: This species is frequently to commonly found in the Palaearctic Region. Nearest to Malta, *H. moniliatus* is also known from Italy, Greece and Morocco.

Subfamily **Microgastrinae** Förster, 1862****Apanteles carpatus* (Say, 1836)**

Material examined: Malta, Naxxar, 5.vi.2006/26.iii.2010, 3 ♀♀, reared from larvae of *Phyllonorycter messaniella* Zeller (Lepidoptera: Gracillariidae), MZ.

Notes: *Apanteles carpatus* was described from the U.S.A., and is a cosmopolitan species. Nearest to Malta, this species is also recorded from Italy, Greece and France (Corsica). *Apanteles carpatus* is a regular parasitoid of Tineidae but not of Gracillariidae and, in view of this, the above host-parasitoid record needs to be verified (Shaw, M.R., *pers. comm.*, 2015).

****Apanteles galleriae* Wilkinson, 1932**

Material examined: Malta, Zejtun, 20.ix.2013, 1 ♀, reared from larva of *Galleria mellonella* (Linnaeus) (Lepidoptera: Pyralidae), DM (material deposited in the National Museum of Scotland).

Notes: This species is included in the present work on the authority of Dr Mark Shaw of the National Museum of Scotland who identified the above mentioned material. A cosmopolitan species, described from France. In the southern half of Europe, it is frequently to commonly found. Nearest to Malta, this species is also recorded from Italy, Greece, Cyprus and Turkey.

****Choeras dorsalis* (Spinola, 1808)**

Material examined: Malta, Fawwara, 28–29.iii.2006, 1 ♂ and 3 ♀♀, reared from larva of *Avaria hyerana* (Millière) (Lepidoptera: Tortricidae), MZ; Bingemma, 11.v.2014, 1 ♀, reared from larva of *Nothris verbascella* Denis & Schiffermüller (Lepidoptera: Gelechiidae), MZ; Zebbug, 26.v.2014, 1 ♂, TC.

Notes: A sporadic to frequently found species in the southern half of the western Palaearctic Region. Nearest to Malta, this species is also recorded from Italy, Greece and Turkey.

****Choeras semele* (Nixon, 1965)**

Material examined: Malta, Naxxar, 10.iii.2008, 1 ♀, reared from larva of *Cacoecimorpha pronubana* (Hübner) (Lepidoptera: Tortricidae), MZ.

Notes: A Mediterranean species, so far reported from four countries (Morocco (locus typicus), Spain, Italy (Sardinia) and Greece). *Choeras semele* has been recorded as parasitic on the following three lepidoptera: *Archips rosana* (Linnaeus) (Tortricidae), *Plutella xylostella* (Linnaeus) (Plutellidae)

and *Choreutis nemorana* (Hübner) (Choreutidae) (YU *et al.*, 2012). The above mentioned host-parasitoid record from Malta represent a new association.

****Cotesia abjecta* (Marshall, 1885)**

Material examined: Malta, St. Thomas Bay, 30.xi.2013, 1 ♂ and 1 ♀, DM.

Notes: A fairly frequent species in Europe. Nearest to Malta, this species is also known from Italy.

***Cotesia glomerata* (Linnaeus, 1758)**

Notes: This species was recorded from Malta by VALLETTA (1972:19) and MIFSUD (1997:78) and was reared from larvae of *Pieris brassicae*. It is reported as occurring in Malta in the online database of Fauna Europaea (VAN ACHTERBERG, 2013). It is a cosmopolitan species.

****Cotesia jucunda* (Marshall, 1885)**

Material examined: Malta, Naxxar, i.2014, 1 ♂ and 2 ♀♀, reared from larva of *Pieris rapae* (Linnaeus) (Lepidoptera: Pieridae), MZ; Verdala Palace, 12–24.vi.2014, 1 ♀, Malaise trap, DM.

Notes: A frequently to commonly found species in Europe. Nearest to Malta, this species is also known to occur in Greece and France (Corsica). *Cotesia jucunda* is a regular parasitoid of Geometridae and not of Pieridae and, in view of this, the above host-parasitoid records needs to be verified (Shaw, M.R., *pers. comm.*, 2015).

***Cotesia ruficrus* (Haliday, 1834)**

Material examined: Malta, Naxxar, 20.vi.2012, 1 ♂, reared from a larva of a Plusiinae, MZ.

Notes: This species was previously recorded from Malta by Mifsud (1997) and was reared from larvae of *Autographa gamma* (Linnaeus) (Lepidoptera: Noctuidae). It is a cosmopolitan species.

****Cotesia tibialis* (Curtis, 1830)**

Material examined: Malta, Ghajn Znuber, 22.ii.2006, 1 ♀, reared from larva of *Mythimna unipuncta* (Haworth) (Lepidoptera: Noctuidae), MZ.

Notes: This species is frequently to commonly found in the western Palaearctic Region. Nearest to Malta, it is also known to occur in Italy, Greece and Turkey.

****Dolichogenidea litae* (Nixon, 1972)**

Material examined: Malta, Dingli, 15.v.2004, 1 ♀, reared from an unidentified larva feeding on *Inula crithmoides*, MZ.

Notes: This species was described from Germany and Cyprus, and is reported as occurring in several countries in the western Palaearctic Region. Nearest to Malta, *D. litae* is also recorded from Spain, Egypt, Israel, Jordan and Turkey. *Dolichogenidea litae* is considered as a junior synonym of

D. appellator (Telenga, 1949) (SHAW, 2012: 176). However I consider these two taxa as distinct even though they differ in few and subtle morphological differences as well as ecological traits. Thus *D. litae* is mainly distributed in maritime environments.

****Dolichogenidea princeps* (Wilkinson, 1941)**

Material examined: Malta, Birkirkara, 5.vi.2014, 1 ♀, TC.

Notes: This species was described from England, and is reported from several other European countries; furthermore it is also known from Korea, Asiatic Russia (Primorskoye Krai) and Ghana. Nearest to Malta, this species is also reported from Turkey and Spain.

****Dolichogenidea zerafai* sp. n.**

Notes: A new species to science whose description and differential diagnosis from closely related species are provided at the end of the present work.

****Illidops suevus* (Reinhard, 1880)**

Material examined: Malta, Verdala Palace, 12–24.vi.2014, 2 ♂♂, Malaise trap, DM.

Notes: A widely distributed species in the Palaearctic Region, however, with a rather sporadic occurrence. Nearest to Malta, this species is also recorded from Turkey and Spain.

***Microplitis spectabilis* (Haliday, 1834)**

Notes: This species was not found during the present study but was recorded as occurring in Malta by MIFSUD (1997:78) from material reared from larvae of *Noctua pronuba* (Linnaeus) (Lepidoptera: Noctuidae). *Microplitis spectabilis* is a common braconid throughout the Palaearctic Region. Nearest to Malta, the species is also known from France (Corsica), Italy, Greece and Tunisia.

****Microplitis varipes* (Ruthe, 1860)**

Material examined: Malta, Verdala Palace, 12–24.vi.2014, 1 ♀, Malaise trap, DM.

Notes: A frequently to commonly found species in the Palaearctic Region. Nearest to Malta, *M. varipes* is also known to occur in Italy and Turkey.

****Pholetesor bicolor* (Nees, 1834)**

Material examined: Malta, Ghajn Znuber, 8.iv.2009, 1 ♀, reared from larva of *Phyllonorycter trifasciella* (Haworth) (Lepidoptera: Gracillariidae), MZ.

Notes: A frequently to commonly found species in Europe, and widely distributed in the Palaearctic Region. Nearest to Malta, this species is also recorded from Italy and Turkey.

Subfamily **Miracinae** Viereck, 1918****Mirax rufilabris* Haliday, 1833**

Material examined: Malta, Naxxar, 7.vi.2007, 4 ♂♂ and 3 ♀♀, reared from larvae of *Acalyptis minimella* (Rebel) (Lepidoptera: Nepticulidae), MZ; Naxxar, iii.2009, 1 ♂ and 1 ♀, reared from larvae of *Ectoedemia euphorbiella* (Stainton) (Lepidoptera: Nepticulidae), MZ; Naxxar, 5–18.xi.2009, 3 ♂♂, reared from larvae of *Ectoedemia euphorbiella*, MZ; Naxxar, i.2011, 1 ♀, reared from unidentified nepticulid larva feeding on *Rhamnus lycioides*, MZ; Mosta valley, 4–5.iii.2007, 2 ♂♂, reared from larvae of *Stigmella aurella* (Fabricius) (Lepidoptera: Nepticulidae), MZ.

Notes: A frequently to commonly found species in the western Palaearctic Region. Nearest to Malta, *M. rufilabris* is also recorded from Spain, Italy, Greece and Turkey.

Subfamily **Opiinae** Blanchard, 1845***Biosteres haemorrhoeus* (Haliday, 1837)**

Notes: Recorded from Malta in the online database of Fauna Europaea (VAN ACHTERBERG, 2013) because of examined specimens collected from Malta (van Achterberg, C., *pers. comm.*, 2014).

****Opius (Cryptonastes) curvatus* Fischer, 1957**

Material examined: Malta, Pembroke, 31.x.2009, 1 ♀, MZ.

Notes: This species was described from Hungary and is reported from several European countries. Nearest to Malta, *O. curvatus* is also known from Italy and Spain.

***Psytalia carinata* (Thomson, 1895)**

Notes: This species was not found during the present study but was recorded from Malta in the online database of Fauna Europaea (VAN ACHTERBERG, 2013) because of examined specimens collected from Malta (van Achterberg, C., *pers. comm.*). This species is widely distributed in Europe, and nearest to Malta it is also recorded from Italy, France (Corsica), Serbia and Bulgaria.

***Psytalia concolor* (Szépligeti, 1910)**

Material examined: Malta, Msida, 20–30.xi.2013, 2 ♂♂ and 2 ♀♀, emerged from larvae of *Bactrocera oleae* (Gmelin) (Diptera: Tephritidae), DM; Naxxar, 8–15.i.2014, 1 ♂ and 1 ♀, emerged from larvae of *Bactrocera oleae*, MZ.

Notes: This species was previously reported from Malta by HABER & MIFSUD (2007). It is a frequently found species in the Mediterranean. Nearest to Malta, *P. concolor* is also known to occur in Italy, Greece, Tunisia, Libya and Egypt.

Subfamily **Rhyssalinae** Förster, 1862**Acrisis brevicornis* Hellén, 1957

Material examined: Malta, Verdala Palace, 12–24.vi.2014, 2 ♀♀, Malaise trap, DM.

Notes: *Acrisis brevicornis* was described from Finland, and is reported to occur in European Russia, Spain, Hungary and Korea. Its occurrence is rather sporadic.

Subfamily **Rogadinae** Förster, 1862**Aleiodes (Aleiodes) ductor var. reticulator* (Nees, 1834)

Material examined: Malta, Torri l-Abjad, 27.xii.2005, 1 ♀, emerged from unidentified larva feeding on *Lactuca* sp., MZ.

Notes: A frequently to commonly found species in the western Palaearctic Region. Nearest to Malta, it is also recorded from Italy, Greece, Tunisia, Libya and Egypt.

**Aleiodes (Aleiodes) testaceus* Telenga, 1941

Material examined: Malta, Buskett, 20.vi.2012, 2 ♀♀, DM.

Notes: This species was described from European Russia (Astrakhanskaya Oblast) and is reported from a few countries in Europe. Nearest to Malta, this species is also recorded from Italy and Greece.

**Clinocentrus exsertor* (Nees, 1811)

Material examined: Malta, Fawwara, limits of Ghajn Tuffieħa, 29.iv.2006, 2 ♀♀, reared from larva of *Avaria hyperana* (Millière) (Lepidoptera: Tortricidae), MZ.

Notes: A Holarctic species with a rather sporadic occurrence. Nearest to Malta, this species is also known from Italy, Greece and Spain.

DESCRIPTION OF THE NEW MICROGASTRINE SPECIES

Abbreviations used in the description follow VAN ACHTERBERG (1993: 5 Figs H–K). Eye: OOL = ocello-ocular line or shortest distance between hind ocellus and compound eye; POL = postocellar line or shortest distance between hind two ocelli. Fore wing venation: *cu-a* = nervulus; *r* = transverse or first section of the radial vein; *1-R1* = first section of the marginal (or metacarpal) vein; *1-2CU1* = first and second sections of the discoidal vein; *2-SR* = first transverse cubital vein. Structure terminologies follow GAULD & BOLTON (1988: 58–74). Surface sculpture terminologies follow HARRIS (1979).

Dolichogenidea zerafai sp. n.

Material examined: Female holotype and one female and two male paratypes. Malta, Selmun, ex larva *Bedellia somnulentella* Zeller, 25–30.i.2010, leg. M. Zerafa.

Types condition: Holotype is in good condition. It is (i) glued on card point by its mesosternum, (ii) both fore wings apically damaged, and (iii) palpi partly missing; Female paratype is (i) glued like the holotype, (ii) right forewing medially damaged, distal half of left hind wing missing, and (iii) palpi partly missing; Two male paratypes are (i) glued like the holotype, and (ii) apically left flagellum (1 ♂ flagellum with 14 flagellomeres) and apically right flagellum (1 ♂ flagellum with 10 flagellomeres) deficient.

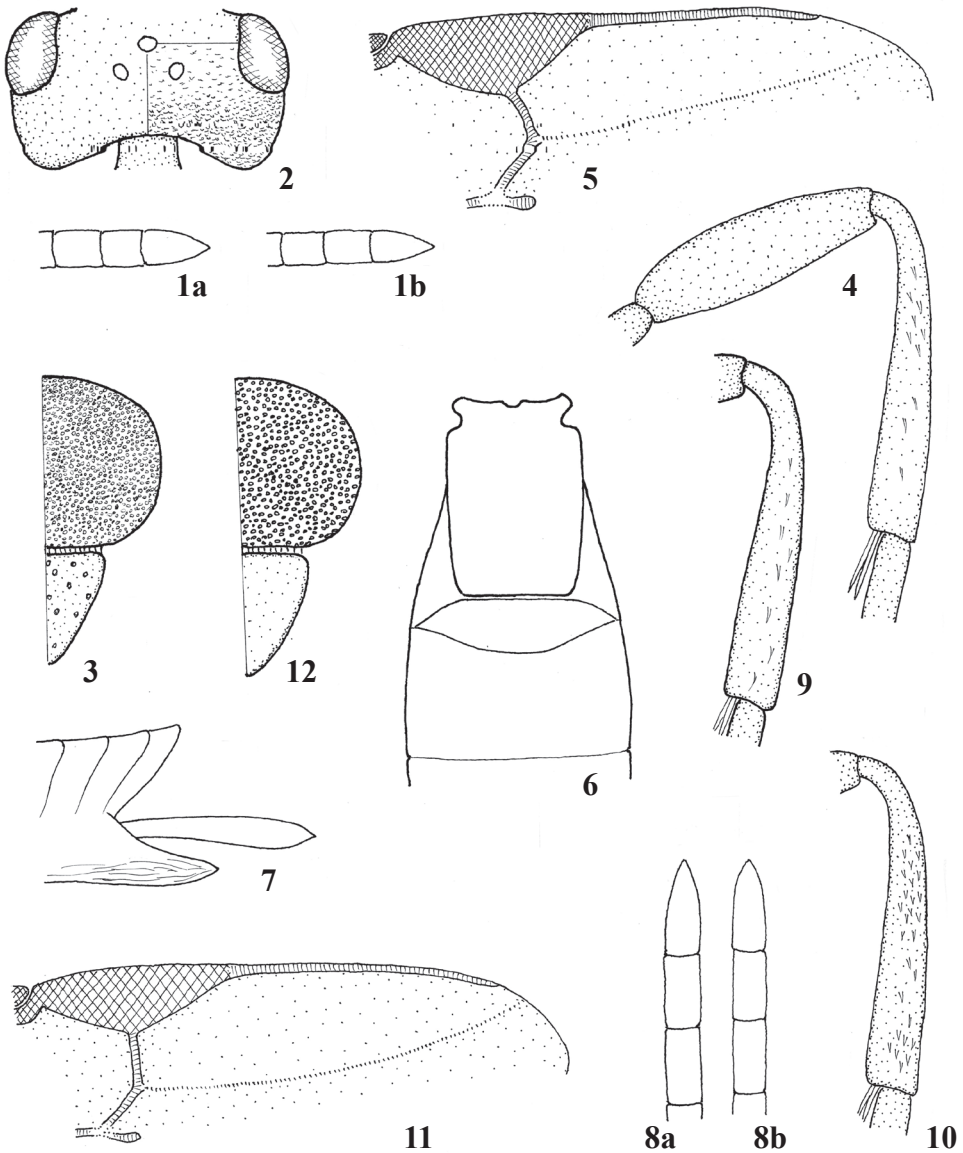
Depositories: The female holotype is deposited in the National Museum of Scotland, one male paratype is deposited in the private collection of Dr David Mifsud, Zejtun (Malta), and one female and one male paratypes in the Hungarian Natural History Museum (Department of Zoology), Budapest (Hym. Typ. Nos 12220 (♀ paratype) and 12221 (♂ paratype)).

Etymology: The new species is dedicated to Mr Michael Zerafa who is an amateur lepidopterist and the collector of the series of the new species as well as an ardent explorer of the insects of Malta.

Description of the female holotype: Body 2 mm long. Antenna as long as body and with 18 antennomeres. Penultimate flagellomere cubic (8:8 left flagellum, Fig 1a) and subcubic (9:7 right flagellum, Fig. 1b). Head in dorsal view transverse, twice as broad as long (60:30), eye slightly longer than temple (16:14), temple rounded; ocelli medium-sized, POL < OOL (8:11, Fig. 2). Inner margin of eyes convergent ventrally. Eye in lateral view twice as high as wide, and somewhat wider than temple (17:15). Head very finely and fairly densely uneven / subuneven, dull to almost smooth, subshiny (Fig. 2). Mesosoma in lateral view 1.7 times as long as high. Mesoscutum with fine and dense punctation, punctures not confluent, interpunctures dull; scutellum polished with a few punctures (Fig. 3). Propodeum polished, around lunule with short rugulae. Mesopleuron subshiny, precoxal suture absent. Hind femur 3.3 times as long as broad somewhat proximally; outer side of hind tibia with dispersed spines (Fig. 4). Pair of spurs of hind tibia subequal, inner spur half as long as basitarsus. Hind tarsus somewhat longer than tibia (35:30). Fore wing slightly longer than body, 2.1 mm long. Pterostigma wide, 2.5 times as long as wide and issuing *r* just distally from its middle; 2-*SR* a bit longer than *r* (10:9), *r* directed outwards, i.e. oblique to fore margin of pterostigma; 1-*R1* one fifth longer than pterostigma (50:40, Fig. 5). First discal cell somewhat wider than high (33:29), *cu-a* issuing from middle of 1-2*CU1*. First tergite (Fig. 6) quadrate, 1.25 times as long as broad posteriorly, its sides feebly converging, apically faintly rounded; hind half of tergite uneven, dull, with a few punctures, otherwise tergite polished. Second tergite transverse, four times wider than long, together with further tergites polished. Hypopygium pointed, ovipositor sheath one-fourth shorter than hind tibia (30:40), wide, straight (Fig. 7). Antenna, body and legs black. Fore leg: femur apically, inner side of tibia yellowish. Middle and hind tibiae basally yellowish. Hind pair of spurs whitish. Wings hyaline, pterostigma opaque brownish, veins proximo-distally colourless to opaque light brownish to brownish.

Description of the female paratype: Similar to the female holotype. Body 2.2 mm long. Both penultimate flagellomeres cubic (8:8). Scutellum with more punctures, polished (cf. Fig. 3). Fore wing: pterostigma slightly less wide, 2.65 times as long as wide. Hind femur 3.1 times as long as broad somewhat proximally. Yellow pattern of legs somewhat more extensive.

Description of the two male paratypes: Similar to the female types. Body 1.85 (1 ♂) and 2 mm (1 ♂) long. Antenna one-sixth longer than body. Penultimate flagellomere 1.75 times (1 ♂) and twice (1 ♂) longer than broad (Fig. 8 a-b). Fore wing: 1-*R1* as long as pterostigma (1 ♂). Hind tibia with spines as in Fig. 9.



Figures 1–9: *Dolichogenidea zerafai* sp. n. (female holotype: 1–7, male paratype: 8–9). **1:** ultimate three flagellomeres. **a:** left; **b:** right; **2:** head in dorsal view with indication of its sculpture; **3:** right half of mesoscutum and scutellum; **4:** hind femur and tibia; **5:** distal part of right fore wing; **6:** tergites 1–3; **7:** hind end of female metasoma; **8a–b:** ultimate three flagellomeres of male paratypes; **9:** hind tibia. **Figures 10–11:** *Dolichogenidea purdus* (Papp) (female holotype). **10:** hind tibia; **11:** distal part of right fore wing. **Figure 12:** *Dolichogenidea princeps* (Wilkinson) (female) right half of mesoscutum and scutellum.

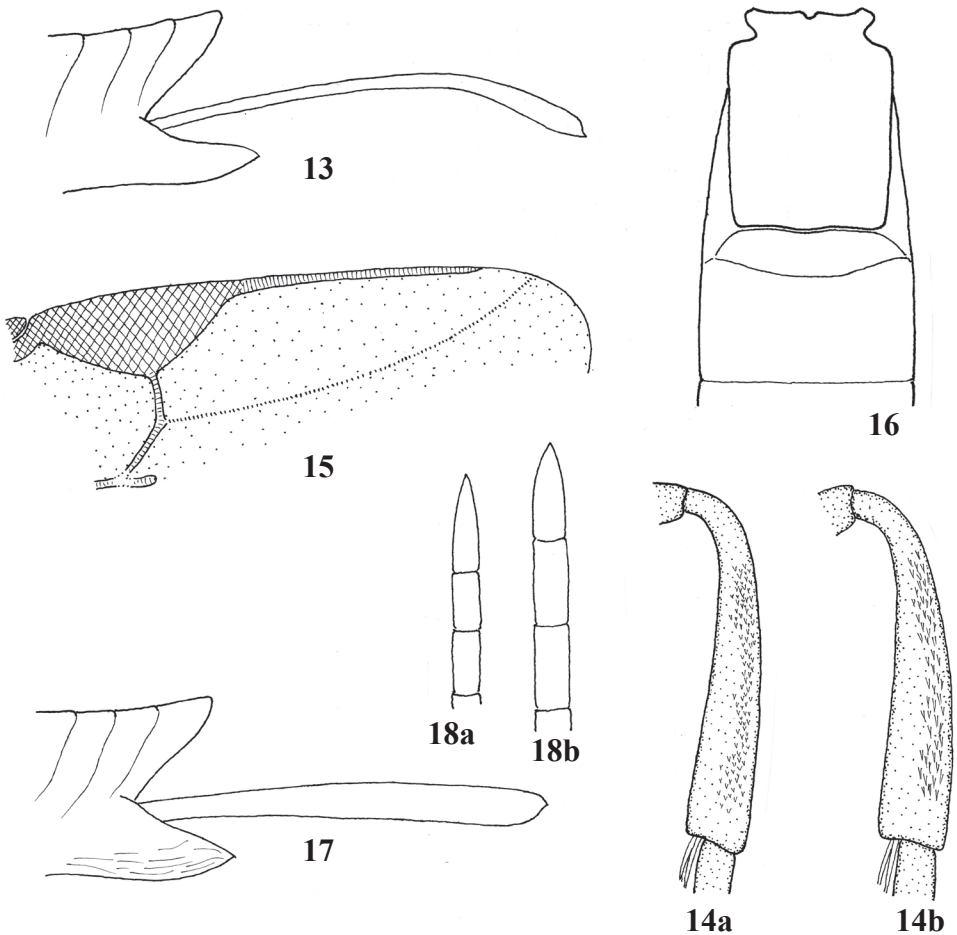


Figure 13: *Dolichogenidea purdus* (Papp) hind end of female metasoma. **Figures 14–18:** *Dolichogenidea princeps* (Wilkinson). **14:** hind tibia. **a:** female; **b:** male; **15:** distal part of right fore wing; **16:** tergites 1–3; **17:** hind end of female metasoma; **18:** ultimate three flagellomeres of male. **a:** penultimate flagellomere 2.2 times; **b:** 2.4 times longer than broad.

Host: *Bedellia somnulentella* Zeller (Lepidoptera: Bedelliidae).

Distribution: Malta.

Taxonomic position: *Dolichogenidea zerafai* sp. n. is nearest to *D. purdus* (Papp) considering their short first tergite (1.2–1.3 times as long as broad, Figs. 6 and 16), venation of fore wing (Figs. 5 and 11) and dark coloured legs; the distinction between the two species is presented hereunder.

1 (2) Spines of outer side of hind tibia dense (Fig. 10). Fore wing: $I-R1$ long, one-third longer than pterostigma (6:4), pterostigma itself 2.8 times as long as wide and issuing r from its middle, r perpendicular to fore margin of pterostigma (Fig. 11). Ovipositor sheath longer than hind tibia (5:4), downcurved and less wide (Fig. 13). Pterostigma opaque brownish, basally pale. ♀: 2.1–2.2 mm..... *Dolichogenidea purdus* (Papp, 1977)

2 (1) Spines of outer side of hind tibia sparse (Fig. 4). Fore wing: $I-R1$ somewhat less long, one-fifth longer than pterostigma (5 : 4), pterostigma itself 2.5 times as long as wide and issuing r somewhat distally from its middle, r directed outwards, i.e. r oblique to fore margin of pterostigma (Fig. 5). Ovipositor sheath somewhat shorter than hind tibia (3:4), straight and wide (Fig. 7). Pterostigma entirely opaque brownish. ♀: 2–2.2 mm..... *Dolichogenidea zerafai* sp. n.

The new species is also closely related to *Dolichogenidea princeps* (Wilkinson) considering their common traits including first tergite feebly converging posteriorly (Figs 6 and 16), pterostigma of fore wing wide (Figs 5 and 15), $I-R1$ long and wings hyaline; the distinction features between these two species is presented hereunder:

Females:

1 (2) Spines of outer side of hind tibia dense (Fig. 14 a). Mesoscutal punctures discrete, fairly strong, scutellum polished (Fig. 12). Fore wing: $2-SR$ somewhat longer than r , latter directed perpendicular to fore margin of pterostigma (Fig. 15). First tergite 1.2–1.3 times as long as broad posteriorly (Fig. 16). Ovipositor sheath somewhat longer than hind tibia (40:35 to 40:30, Fig. 17). Pterostigma basally pale. ♀: 2.4–2.8 mm *Dolichogenidea princeps* (Wilkinson, 1941)

2 (1) Spines of outer side of hind tibia sparse (Fig. 4). Mesoscutal punctures less discrete, fairly fine, scutellum with a few punctures, polished (Fig. 3). Fore wing: $2-SR$ a bit longer than r (10:9), latter directed outwards, i.e. oblique to fore margin of pterostigma (Fig. 5). First tergite 1.6 times as long as broad posteriorly (Fig. 7). Ovipositor sheath somewhat shorter than hind tibia (30:40) (Fig. 7). Pterostigma basally not pale. ♀: 2–2.2 mm *Dolichogenidea zerafai* sp. n.

Males:

1 (2) Penultimate flagellomere slightly longer than: 2.4 times as long as broad (Fig. 18 a–b). Spines of outer side of hind tibia dense (Fig. 14 b). Venation of fore wing: pterostigma, $I-R1$, r , $2-SR$ similar to that of female (Fig. 15). Fore tibia yellow to testaceous. ♂: 2.2–2.8 mm *Dolichogenidea princeps* (Wilkinson, 1941)

2 (1) Penultimate flagellomere slightly less long: 1.85 to 2 times as long as broad (Fig. 8 a–b). Spines of outer side of hind tibia sparse (Fig. 9). Venation of fore wing: pterostigma, $I-R1$, r , $2-SR$ similar to that of the female (Fig. 5). Fore tibia black, basally yellowish. ♂: 2.1–2.3 mm *Dolichogenidea zerafai* sp. n.

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