# A PRELIMINARY LIST OF THE LEUCOSPIDAE OF THE MALTESE ISLANDS (HYMENOPTERA, CHALCIDOIDEA)

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# **ABSTRACT**

Four species of Leucospidae are recorded from the Maltese Islands; three of these, *Leucospis brevicauda* Fabricius, 1804, *L. dorsigera* Fabricius, 1775 and *L. intermedia* Illiger, 1807, are recorded for the first time.

# INTRODUCTION

The Leucospidae comprise a small hymenopteran family with about 120 species worldwide. It includes many of the largest Chalcidoidea and the species are known to develop as parasites of solitary aculeate Hymenoptera. Boucek (1974) recognized four genera, of which only *Leucospis* is present in Malta. *Leucospis* contains more than 100 species distributed in all continents.

I have had the opportunity to collect and identify several specimens of Leucospidae from the Maltese Islands. In addition, I have examined material deposited in Dr. Martin J. Ebejer's (MJE) private collection. Identifications are based on Boucek (1974).

All specimens have been collected by the author except where indicated. Representative specimens have been deposited at the Natural History Museum, London (NHML) and at the National Museum of Wales (NMW) as indicated. Otherwise the material examined is in the author's private collection.

# SPECIES LIST

Leucospis brevicauda Fabricius, 1804

# Material examined

Malta: Ghajn Hadid (on Foeniculum vulgare) 9.viii.1997, 1 $\circ$ . Gozo: Ramla Bay, 12.ix.1997 (on Eryngium maritimum) 3  $\circ$  (NHML), 1 $\circ$  (NMW), 1 $\circ$ .

**Distribution**: Portugal, Spain, Southern France, Italy (including Sardinia and Sicily), Turkey, Morocco, Algeria Tunisia, (Boucek, 1974).

Notes: A new record for the Maltese Islands.

Leucospis dorsigera Fabricius, 1775

# Material examined

Malta: Wied Babu, 14.vi.1997, 1 &; Wied Qannotta,

25.vii.1998, 1 \( \) (NMW); Wied Babu, 24.viii.1996, 1 \( \sigma; \) Wied il-Ghasel, 25.viii.1997 (on Foeniculum vulgare) 1 \( \) (NHML), 1 \( \sigma \) (NHML); Ghajn Tuffieha, 30.viii.1997, 1 \( \sigma, \) (NHML); Buskett, 29.viii.1997, 1 \( \sigma; \) Slugs Bay, 1.ix.1997, 1 \( \sigma . \) Gozo: Ghasri, 27.viii.1995, 1 \( \sigma \) (on Foeniculum vulgare) (NMW); Ramla Bay, 12.ix.1997 (on Eryngium maritimum), 1 \( \sigma \) (NHML), 1 \( \sigma . \)

**Distribution**: France, Germany, Czechoslovakia, Moldavia, Ukraine, Daghestan, Transcaucasia, Kazakhstan, Turkmenia, Uzbekistan, Tadzhikistan, Morocco, Algeria, Tunisia, Libya, Egypt, Turkey, Syria, Lebanon, Israel, Iraq. Iran, Afghanistan, (Boucek, 1974).

Notes: A new record for the Maltese Islands.

Leucospis gigas Fabricius, 1793 (Fig. 1)

### Material examined

Malta: Wied Has-Saptan, 27.iv.1997,  $1\,$ \(\text{?}\); 20.v.1997,  $1\,$ \(\text{?}\); 3.vi.1997 [reared from final instar larvae collected on 17.i.1997 from the mud nest of a *Chalicodoma* sp. (Hymenoptera, Megachilidae)],  $2\,$ \(\text{?}\) (NHML),  $1\,$ \(\text{?}\) (NMW); Marfa Ridge, 10.vii.1987, leg. M.J. Ebejer,  $1\,$ \(\text{?}\) (MJE),  $1\,$ \(\text{?}\) (MJE).

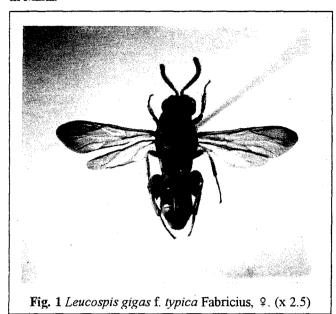
**Distribution**: Southern Europe up to Central France, Vienna, Morocco, Algeria, Tunisia, Libya, Egypt, Israel, Turkey, Iran, Afghanistan, Pakistan, Turkmenia, Uzbekistan, Tadzhikistan, Northen China.

Notes: Leucospis gigas is known to occur in two forms (Boucek, 1974). One form has yellow and the other orange markings, and they are referred to by Bytinski-Saltz (1963) as form typica (yellow) and form rufonotata (orange). All specimens examined in the present work belong to the yellow f. typica. Schembri (1847) first recorded this species from Malta when he described it as Leucospis costae. It is evident that he described the species from male and female specimens of the orange-marked f. rufonotata. This points to the occurrence of both forms in the Maltese Islands. Further evidence is provided by Bytinski-Saltz (1963) who

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stated that he had examined specimens of f. rufonotata from Malta.

Nikolskaya (1960) also refers to the occurrence of L. costae in Malta.



Leucospis intermedia Illiger, 1807

# Material examined

Gozo: Ramla Bay, 15.viii.1998 (on *Eryngium maritimum*), 19 (NMW); Ramla Bay, 12.ix.1997 (on *Eryngium maritimum*), 299 (NHML), 19.

**Distribution**: Southern France, Southern Switzerland, Austria, Southern Czechoslovakia, Moldavia, Southern Ukraine, Algeria, Libya, Egypt, Israel, Lebanon, Turkey, Iran, Transcaucasia, Turkmenia, Uzbekistan, Tadzhikistan, Northern Afghanistan, (Boucek, 1974).

Notes: A new record for the Maltese Islands.

#### DISCUSSION

All four species recorded during the present study have a typical West Palaearctic distribution (Boucek, 1974). I have observed *Leucospis dorsigera*, *L. brevicauda* and *L. intermedia* to be abundant on the sand dunes at Ramla Bay in Gozo. *L. intermedia* appears to be restricted to the latter site only and may therefore be considered a threatened species due to the precarious state of the sand dunes.

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# REFERENCES

**Boucek Z.** (1974). A revision of the Leucospidae (Hymenoptera: Chalcidoidea) of the world. *Bulletin of the British Museum (Natural History) Entomology*, London. Supplement 23, 241pp.

Bytinski-Salz, H. 1963. Geographical variation and sex-ratio in *Leucospis gigas* (Hymenoptera: Chalcidoidea). *Acta Entomologica Musei Nationalis*, Prague. 35: 527-530.

Nikolskaya, M.N. (1960). Chalcids of fam. Chalcididae and Leucospidae [In Russian] Fauna SSSR, 7, 5, 221pp. Moscow & Leningrad.

Schembri, A. (1847). Description d'une nouvelle espece de Leucopsis. (sic) L. costae. Ann. Soc. Ent. Fr. Ser 2. 1847. T. 5. Bull. p87.