

Leucospidae (Hymenoptera: Chalcidoidea) in the collection of the Upper Silesian Museum in Bytom (Poland)

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BOGDAN WIŚNIEWSKI 

University of Rzeszów, Faculty of Biology and Agriculture, Źwiklińskiej 1, 35-601 Rzeszów, Poland,
e-mail: bogdan.w@hotmail.com

ABSTRACT. Leucospidae (Hymenoptera: Chalcidoidea) in the collection of the Upper Silesian Museum in Bytom (Poland).

The paper presents information on eight species of chalcidoid wasps of the family Leucospidae (Hymenoptera: Chalcidoidea) housed in the collection of Department of Natural History of the Upper Silesian Museum in Bytom (Poland). The insects were collected mostly by researchers from Natural History Department of the Museum during their research trips. The collection consists of 76 specimens representing eight species collected in the following countries: *Leucospis africana* CAMERON, 1907 (Botswana, new record for the country), *Leucospis antiqua* WALKER, 1862 (New Caledonia), *Leucospis bifasciata* KLUG, 1812 (Turkey), *Leucospis carinifera* KRIECHBAUMER, 1894 (Namibia), *Leucospis dorsigera* FABRICIUS, 1775 (Bulgaria, Croatia, Greece, Poland, Turkey), *Leucospis gigas* FABRICIUS, 1793 (Montenegro, Greece), *Leucospis intermedia* ILLIGER, 1807 (Turkey) and *Micrapion clavaforme* STEFFAN, 1948 (Namibia, new record for the country).

KEY WORDS: Hymenoptera, Chalcidoidea, Leucospidae, new records, Europe, Anatolia, Africa, New Caledonia.

INTRODUCTION

The family Leucospidae is one of the smallest of the chalcidoid families (Hymenoptera: Chalcidoidea). There are 143 species described in 4 genera in the world fauna: *Leucospis* FABRICIUS, 1775 (with 123 valid species described), *Micrapion* KRIECHBAUMER, 1894 (12 species), *Neleucospis* BOUČEK, 1974 (1 species) and *Polistomorpha* WESTWOOD, 1839 (7 species) (NOYES 2018, LIMA & DIAS 2018). The Bouček's monograph of the world fauna (BOUČEK 1974) was later updated by a few papers describing some fourteen new species in the genus *Leucospis* (compare references cited by NOYES 2018). Leucospidae are mainly tropical and subtropical.

Leucospids develop as primary ectoparasitoids of aculeate Hymenoptera. Their hosts are mainly solitary bees of the family Megachilidae with aerial nests in dead wood, wooden constructions and other plant substrate, e.g. hollow stems of plants; less frequently solitary wasps are reported as leucospid hosts, e.g. Eumeninae and Crabronidae nesting in a similar way to bees (BOUČEK 1974, GIBSON 1993, GAULD & BOLTON 1996, NOYES 2018). As far as body colours, imagines usually mimic various wasps, but not the species they actually parasitize (GIBSON 1993).

MATERIAL AND METHODS

Specimens from the collection were loaned for identification by the Museum. All specimens are dry mounted on insect pins. In the list below the species are in alphabetical order. Localities are taken from the labels and are given either with UTM coordinates (specimens collected by W. Żyła) or with geographical coordinates (collected by R. Dobosz). The sequence of data presented below is alphabetical: after the country of origin, coordinates, locality name. Distribution is given mainly after BOUČEK (1974) and NOYES (2018).

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RESULTS

Leucospis africana CAMERON, 1907

Botswana: [18°44'47"S/22°11'50.9"E] North-West District, Swamp Stop Camp, Okavango River, Sepupa env., altitude 980 m.a.s.l., 01.12.2014, 1♀ collected at light, leg. R. Dobosz & D. Chłond.

Distribution: Reported by BOUČEK (1974) from Subsaharan Africa, but not mentioned from Botswana. New record for the country.

Leucospis antiqua WALKER, 1862 (Fig. 1)

New Caledonia [dependent territory of France]: [21°21'324"S/164°57'297"E] North region, Pindal, 18.03.2008, 1♂, ocean coast, on a beach, leg. R. Dobosz & T. Blaik; [22°15'799"S/166°28'007"E] South region, Noumea (Magenta), 21-23.02.2008, 2♀ & 1♂ in city garden, netting, leg. R. Dobosz & Blaik.

Distribution: Species described by WALKER (1862) after specimens collected on New Caledonia. Reported by BOUČEK (1974) also from Loyalty Islands and Society Islands (NOYES 2018) and generally from French Polynesia (BOUČEK 1988).

Leucospis bifasciata KLUG, 1812

Turkey: [36°45'N/34°08'E] prov. Icel, 1.5 km S of Aydinlar, Goktepe Dagi, altitude 1395 m.a.s.l., 20.07.2004, 1♀ in cedar forest, leg. R. Dobosz; [36°58'50"N/29°28'26"E] Goelhisar, 120 km W Antalya, 7 km SW Altinyayla, 05.08.2009, 1♂ collected in a window trap on old oak *Quercus* sp., leg. N. Jansson & M. Coskun.

Distribution: Known from south-western Europe through Mediterranean region (including Anatolia and Near East), Caucasus, Transcaucasia to Turkmenistan, Uzbekistan and Tadzhikistan (BOUČEK 1974). Reported from Turkey also by BAUR & AMIET (2000), YILDIRIM *et al.* (2002) and NOYES (2018).

Leucospis carinifera KRIECHBAUMER, 1894

Namibia: [17°40'36.6"S/15°17'33.6"E] Ovamboland, Ogongo Campus, altitude 1100 m.a.s.l., 25.01.2012, 1♀ in savanna with mixed vegetation (trees, shrubs, herbaceous veg.), leg. R. Dobosz & G. Kopij.



Fig. 1. Female of *Leucospis antiqua* WALKER, 1862; body length 11 mm. (photo B. Wiśniowski).

Ryc. 1. Samica *Leucospis antiqua* WALKER, 1862; dł. ciała 11 mm. (fot. B. Wiśniowski).



Fig. 2. Female of *Leucospis dorsigera* FABRICIUS, 1775; body length 7 mm. (photo B. Wiśniowski).

Ryc. 2. Samica *Leucospis dorsigera* FABRICIUS, 1775; dł. ciała 7 mm. (fot. B. Wiśniowski).

Distribution: Known from Sudan, Ethiopia, French Territory of the Afars and Issas, Kenya, Malawi, Mozambique, Rhodesia, South West Africa (presently Namibia), South Africa (BOUČEK 1974, NOYES 2018).

***Leucospis dorsigera* FABRICIUS, 1775 (Fig. 2)**

Bulgaria: [NG59] Sozopol, 17.07.2007, 1♀ & 1♂ on flowers of *Evonymus* sp., 18.07.2007, 2♀♀ & 2♂♂ and 21.07.2007, 1♀ on flowers of *Anethum* sp., leg. W. Żyła; [NG76] Carevo, 03.07.2008, 1♀, leg. W. Żyła.

Croatia: [WJ45] Murter Island, Murter 25.08.2009, 1♀ in herbaceous vegetation, leg. Sz. Żyła.

Greece: [37°50'N/21°09'E] Peloponnese, vicinity of Glifa, 13.08.2007, 1♂, 14.08.2007, 2♀♀, leg. R. Dobosz; [37°52'N/21°09'E] Peloponnese, Loutra Kilinis, vicinity of Vartholomlo, 09.08.2007, 7♀♀ & 3♂♂, 10.08.2007, 4♀♀ & 2♂♂, leg. R. Dobosz; [DJ45] Parga, 10.06.2014, 1♀ on herbaceous plants in olive orchard, leg. W. Żyła; [FK32] hills SE of Nei Pori, 20.06.2013, 1♀ in olive orchard, leg. W. Żyła; [FK40] Ossa Mountain, by Kokkino Nero, 26.07.2009, 2♂♂ in dry waterbed of a stream, leg. W. Żyła; [FK42] Kastri, SE of Nei Pori, 17.06.2013, 1♀ on flowers, leg. W. Żyła; [FK51] Kokkino Nero, 05.08.2009, 1♀ on *Mentha* sp., leg. W. Żyła; [LF01] Thassos, Potamias Rock, 03.08.2012, 1♂ in olive orchard, leg. W. Żyła; [PA02] Rhodos, Faliraki vicinity, 13.06.2015, 1♀, leg. W. Żyła.

Poland: Upper Silesia, [CA57] Bytom, 16.08.1996, 1♀, leg. W. Żyła; Western Beskid Mts, [CV59] Wisła-Malinka, 31.07.1996, 4♀♀, leg. W. Żyła; Lower Silesia, [XR99] Moszna, 06.08.2004, 1♀, on *Solidago gigantea*, leg. W. Żyła; [YR08] Głogówek 30.06.1995, 1♂, leg. W. Żyła. The specimens, except the one collected in 2004 were published earlier (WIŚNIEWSKI & ŻYŁA 1996).

Turkey: [36°45'N/34°08'E] prov. Icel, 1.5 km S of Aydinlar, Goktepe Dagi, 1395 m.a.s.l., 20.07.2004, 1♂ in cedar forest, leg. R. Dobosz; [36°48'N/34°10'E] prov. Icel, 25 km NW Erdemli, Aydinlar vicinity, 09-12.06.2000, 1♀ in cedar forest, leg. R. Dobosz; [38°15'N/34°17'E] prov. Aksaray, Ihlara Canyon, 02.08.2004, 1♀, leg. R. Dobosz; [38°38'N/34°52'E] Capadocia, prov. Nevsehir, 3 km N of Ortahisar, altitude 1226 m.a.s.l., 01.08.2004, 1♀, leg. R. Dobosz; [40°20'N/32°45'E] prov. Ankara, Pazar, 20 km SE of Kizilcahamam, 20-21.06.2000, 1♂, leg. R. Dobosz.

Distribution: From Western Palaearctics (except its northern zone) to Tadzhikistan in the East and Afganistan in the south-east, including Mediterranean region and all the countries mentioned above (NIKOLSKAYA 1960, BOUČEK 1974, WIŚNIEWSKI & ŻYŁA 1996, BAUR & AMIET 2000, YILDIRIM *et al.* 2002, MARCZAK *et al.* 2012, NOYES 2018). The only representative of the family in Poland.

***Leucospis gigas* FABRICIUS, 1793 (Fig. 3)**

Greece: [CK90] Corfu, Acharavi vicinity, 04.07.2011, 1♂ in xerothermic grassland, on flowers of *Eryngium* sp., 05.07.2011, 2♀♀ & 2♂♂ in olive orchard, leg. W. Żyła; [FK32] Nei Pori, 15.06.2013, 2♀♀ in olive orchard, leg. W. Żyła; [FK42] Nei Pori, 14.06.2013, 1♀, 18.06.2013, 1♀ – both on a deserted sea beach, leg. W. Żyła; [PA02] Rhodos, Faliraki vicinity, 25.06.2015, 1♀, leg. W. Żyła.

Montenegro: [CM54] Ulcinj 30.06.2010, 3♀♀ on a stone wall, leg. W. Żyła; [CM54] Ulcinj, Totosi, 06.07.2010, 1♀, fallow land, on flowers, leg. W. Żyła.



Fig. 3. Female of *Leucospis gigas* FABRICIUS, 1793; body length 21 mm. (photo B. Wiśniowski).

Ryc. 3. Samica *Leucospis gigas* FABRICIUS, 1793; dł. ciała 21 mm. (fot. B. Wiśniowski).



Fig. 4. Female of *Micrapion clavaforme* STEFFAN, 1948; body length 7 mm. (photo B. Wiśniowski).

Ryc. 4. Samica *Micrapion clavaforme* STEFFAN, 1948; dł. ciała 7 mm. (fot. B. Wiśniowski).

Distribution: From southern part of Western Palearctics (to Vienna in the North) through Mediterranean region, Iran, Afghanistan, Pakistan, Turkmenistan, Uzbekistan, Tadjikistan to N. China (NIKOLSKAYA 1960, BOUČEK 1974, NOYES 2018).

***Leucospis intermedia* ILLIGER, 1807**

Turkey: [36°45'N/34°08'E] prov. Icel, Aydinlar N of Erdemli, 09-11.06.2005, 1 ♀ in cedar forest; [37°58'N/38°44'E] prov. Adiyaman, Nemrut Dagı N.P., 28.07.2004, 1 ♀ by the road to the top of Nemrut Dagı, [37°58'N/38°45'E] prov. Adiyaman, Nemrut Dagı National Park, altitude 1642 m.a.s.l., 18.06.2005, 1 ♂, all leg. R. Dobosz.

Distribution: From southern part of Western Palearctics (to Pannonian Lowland in the North) through Mediterranean region to Tadjikistan (NIKOLSKAYA 1960, BOUČEK 1974, NOYES 2018).

***Micrapion clavaforme* STEFFAN, 1948 (Fig. 4)**

Namibia: [17°40'36.6''S/15°17'33.6''E] Ovamboland Ogongo Campus, altitude 1100 m.a.s.l., 08.02.2012, 1 ♀ in savanna, trees, shrubs, herbaceous veg., leg. R. Dobosz & G. Kopij.

Distribution: Known from Subsaharan Africa (BOUČEK 1974, NOYES 2018), but not mentioned from Namibia. New record for the country.

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STRESZCZENIE

Leucospidae (Hymenoptera: Chalcidoidea) w kolekcji Muzeum Górnośląskiego w Bytomiu

W pracy podano informacje o ośmiu gatunkach błeszkotek z rodziny Leucospidae (Hymenoptera: Chalcidoidea) z kolekcji Działu Przyrody Muzeum Górnośląskiego w Bytomiu. Owady te zostały zebrane w zdecydowanej większości przez pracowników Działu, zarówno w kraju, ale przede wszystkim w czasie wyjazdów zagranicznych. Kolekcja obejmuje następujące taksony zebrane w krajach: *Leucospis africana* CAMERON, 1907 (Botswana, pierwsze stwierdzenie), *Leucospis antiqua* WALKER, 1862 (Nowa Kaledonia), *Leucospis bifasciata* KLUG, 1812 (Turcja), *Leucospis carinifera* KRIECHBAUMER, 1894 (Namibia), *Leucospis dorsigera* FABRICIUS, 1775 (Bułgaria, Chorwacja, Grecja, Polska, Turcja), *Leucospis gigas* FABRICIUS, 1793 (Czarnogóra, Grecja), *Leucospis intermedia* ILLIGER, 1807 (Turcja) oraz *Micrapion clavaforme* STEFFAN, 1948 (Namibia, pierwsze stwierdzenie).

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