

A CONTRIBUTION TO THE BRACONID FAUNA OF ISRAEL (HYMENOPTERA), 2

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ABSTRACT

Fifty eight of Braconidae are recorded from Israel, including a new genus and species (*Argamania aereus*). 45 species are new to the fauna of Israel. The text includes 8 original figures.

INTRODUCTION

The fifty eight species of Braconidae dealt with in this report are divided among the following six subfamilies with respective number of the species given in brackets: Doryctinae (11 species), Braconinae (36 species), Rogadinae (5 species), Exothecinae (3 species), Euphorinae (5 species) and Opiinae (8 species). The new genus and species (*Argamania aereus*) described below belongs to the subfamily Exothecinae (or tribe Exothecini sensu v. Achterberg). From among the 58 species recorded 45 are new to the fauna of Israel and these are indicated in the text with an asterisk*. Collecting data is provided for every species, taxonomic and distributional remarks are added wherever necessary.

Specimens are deposited in the Department of Plant Protection and Inspection, Bet Dagan, Israel; and duplicates in the Hungarian Natural History Museum, Budapest, Hungary.

Remark — My previous contribution to the braconid fauna of Israel appeared without a series number (Papp, 1970), but I wish to consider it as the first part of my faunistic series on the Braconidae of Israel. At least five additional parts are planned in the future.

LIST OF THE SPECIES

DORYCTINAE

Dendrosoter hartigi (Ratzeburg, 1848)

MATERIAL EXAMINED: Hofit, 2-3.V.1981, Q. Argaman (1♀). Mikhmoret, 3.V.1981, Q. Argaman (1♂).

Dendrosoter protuberans (Nees, 1834)

MATERIAL EXAMINED: Netiv haLamedhe, 8.X.1985, 12.X.1985, ex *Scolytus*

kirschi Skalitzky, food plant *Ulmus canescens* (8♀♀). Ilanot, 30.X.1985, ex *Phloeotribus scarabaeoides* (Bernard) (food plant *Olea europaea*) (17♀♀, 8♂♂).

Dendrosotinus titubatus Papp, 1985

MATERIAL EXAMINED: Ilanot, 25.III.1973 (food plant of host *Ulmus pumila*), J. Halperin (5♀♀). Ilanot, 30.X.1985 (food plant of host *Laurus nobilis*), J. Halperin (1♀). Sa'ad, 5.XI.1978, ex *Leptideella brevipennis* (Mulsant), 20.VI.1979 (food plant *Pistacia lentiscus*) (5♂♂).

Ephylus caudatus Ruschka, 1916

MATERIAL EXAMINED: Kabri, 17.VII.1985, ex *Hypoborus ficus* Erichson VIII.1985 (food plant *Ficus carica*), leg. et educ. J. Halperin (37♀♀, 32♂♂).

Ephylus silesiacus (Ratzeburg, 1848)

MATERIAL EXAMINED: Newe Ya'ar, 4.VI.1959, ex *Scolytus* sp. (food plant *Amygdalus communis*), leg. et educ. J. Halperin (12♀♀, 13♂♂).

Euscelinus sarawacus Westwood, 1882

MATERIAL EXAMINED: Herzliyya, 7.VII.1981, ex *Sinoxylon ceratoniae* Linnaeus 7.VII.1981 (food plant *Delonix regia*), leg. et educ. J. Halperin (2♀♀, 1♂).

An indigenous species of the Indo-Australian region (Philippines, Borneo, Hawaii, India). Introduced into Israel. Bred also from *Sinoxylon conigerum* Gerstecker. Further data of its distribution and bionomy in Israel see in Halperin (1986:123).

Heterospilus cephi Rohwer, 1925

(?= *H. testaceus* Telenga, 1941)

MATERIAL EXAMINED: Hofit, 2-3.V.1981, Q. Argaman (1♀). Judean Desert, 3.V.1983, Q. Argaman (2♀♀). Tomer, 31.VIII.1982, leg. Q. Argaman (1♂).

Previously this species was reported by me under the name *H. testaceus* Telenga (Papp, 1970).

Monolexis fuscicornis Foerster, 1862

MATERIAL EXAMINED: 'En Mor (near Sede Boqer, Negev Desert), 5.V.1982, ex *Enneadesmus trispinosus* Olivier, 1.VII.1985 (food plant *Tamarix* sp.), leg. et educ. J. Halperin (1♀). Yavne, taken at light at night, 15-17.VIII.1983, Q. Argaman (2♀♀). Biriyya, 19.V.1985, J. Halperin (1♀). Kefar Hananya (Upper Galilee), 19.V.1985, ex *Chaetoptelius vestitus* (Mulsant et Rey), 10.VIII.1985 (food plant *Pistacia vera*), leg. et educ. J. Halperin (1♂).

**Ontsira igneus* (Ratzeburg, 1852)

MATERIAL EXAMINED: Carmel near Haifa, 15.II.1959 (food plant of host *Ceratonia siliqua*), J. Halperin (1♀).

Rhaconotus aciculatus Ruthe, 1854

MATERIAL EXAMINED: Jerusalem, X.1963, "ex fruit of *Prosopis farcta*", J. Kugler (1♀, 1♂). Yizre'el (40 km SE Haifa), 17.III.1971, D. Gerling (1♀, 1♂). Wadi Far'ia Spill (22 km N Jericho), 17.V.1971, ex *Caryedon* sp. 23.V.1971, leg. et educ. A. Goldstein (1♀). Sede Eliyyahu (7 km S Bet She'an), 17.X.1971, ex *Caryedon* sp., 29.X.1971, leg. et educ. A. Goldstein (1♂). Sede Terumot (7 km S Bet She'an), 17.X.1971, ex *Caryedon* sp., 29.X.1971, leg. et educ. A. Goldstein (1♂). Gat crossroads, 22.II.1972, ex *Caryedon* sp. 25.II.1972, leg. et educ. A. Goldstein (2♀♀). Gonen, 11.IV.1972, ex *Caryedon* sp., 14.IV.1972, leg. et educ. M. Belinsky and A. Goldstein (2♀♀, 2♂♂). Gadot, 19.VII.1972, ex *Caryedon* sp., 24.VII.1972, leg. et educ. A. Goldstein (1♂).

**Rhaconotus flavistigma* Telenga, 1941

MATERIAL EXAMINED: Jerusalem, X.1963, ex fruits of *Prosopis farcta*, leg. et educ. J. Kugler (1♀). 'En Gedi, 2.VIII.1981, Q. Argaman (1♀).
Known from the USSR (pre-Caucasus, Tadzhikistan).

BRACONINAE

**Atanycolus denignator* (Linnaeus, 1758)

MATERIAL EXAMINED: W. Falik, 6.III.1962, D. Rosen (1♀). Baqa el Gharbiya, 24.V.1981, emerged from Cerambycidae larva, 30.V.1981 on *Ficus carica*, leg. et educ. J. Halperin (2♀♀). Ta'oz, 10.V.1982, emerged from Cerambycidae larva on *Ficus carica*, leg. et educ. Z. Mendel (1♀).

**Bracon (Glabrobracon) abbreviator* Nees, 1834

MATERIAL EXAMINED: Bet Guvrin, 5.V.1984, Q. Argaman (1♀).
Reported from several European countries (Shenefelt, 1978:1615) except the USSR (Tobias, 1986:137).

**Bracon (Glabrobracon) atrator* Nees, 1834

MATERIAL EXAMINED: Wadi Qelt, 10.III.1981, Q. Argaman (1♂). Ilanot, 24.IV.1981, Q. Argaman (1♂). Hofit, 2-3.V.1981, Q. Argaman (1♂). Bet Alfa, 3.VI.1981, Q. Argaman (1♀). Elat, 14.VII.1981, Q. Argaman (1♀). Enot Qane, 2.VIII.1981, Q. Argaman (1♂). N. Haroa, 4.VIII.1981, Q. Argaman (1♀). Yavne, 27.VI.1982, Q. Argaman (1♀). Nazareth, 30.IX.1982, Q. Argaman (1♂). Arava Valley, 3.V.1983, Q. Argaman (1♂). Judean Hills, 3.V.1983, Q. Argaman (1♀). Nizzana, 29.V.1984, Q. Argaman (1♀).

The nominate form of this species is entirely (body + legs) black, wings hyaline (at most subhyaline). In Israel a light form was collected with more or less reddish yellow pattern on the face + cheek, mesosoma (pronotum, mesonotum along notaulix, mesopleuron) and metasoma (tergites 2-7 medially with blackish suffusion to almost entirely black; sternites yellowish to yellow), maxillar palp brownish to yellowish. Wings rather subhyaline.

**Bracon (Glabrobracon) chrysostigma* Greese, 1928

MATERIAL EXAMINED: Ma'agan Mikha'el, taken from *Verbascum* sp., 2.I.1960 (7♀♀, 3♂♂). Wadi Falik (Negev Desert), taken from *Verbascum* sp., 6.III.1962, 24.III.1962, J. Kugler (2♀♀, 1♂).

A rather rare species. Described from Ukraine: Kiev (USSR), recorded also from France, Hungary and Romania.

**Bracon (Lucobracon) crocatus* Schmiedeknecht, 1897

MATERIAL EXAMINED: Judean Desert, 3.V.1983, Q. Argaman (5♂♂). Described from Algeria, reported from Italy, Yugoslavia and Hungary.

Bracon (Lucobracon) hedwigae Schmiedeknecht, 1897

Bracon hedwigae Schmiedeknecht, 1897, Illte Z. Ent. 1 (1896): 590 (in key) ♀, type locality: "Fort Santa Cruz bei Oran" (Algeria); syntype in the Zoological Museum, Berlin (the single female specimen seen by me in October 1979 would be the lectotype if designated).

Bracon palaestinensis Szépligeti, 1901, Természetr. Füz. 24: 152 ♀, type locality: "Haifa" (Israel), holotype in the Hungarian Natural History Museum, Budapest; *n. syn.*

The above synonymy is based on the examination and comparison of authenticated specimens of *B. hedwigae* and the holotype of *B. palaestinensis*.

MATERIAL EXAMINED: (holotype of *B. palaestinensis*): Haifa, Reitter. Tel Aviv, 5.V.1960, Bytinski-Salz (1♀).

It seems a rare species. Recorded from a few localities in Algeria, Spain, Greece, Israel and the USSR (Turkmenia).

**Bracon (Glabrobracon) helleni* Telenga, 1936

MATERIAL EXAMINED: Nazareth, 30.IX.1982, Q. Argaman (1♀).

Antenna with 21 joints. Radial vein rather approaching tip of wing. Body reddish yellow. Ocellar field, three spots of mesonotum, antero-median spot of propodeum and tergites 2-6 black, only laterally reddish yellow. Up to now known only from the type locality "Uralsk" in the USSR (Kazakhstan).

**Bracon (Glabrobracon) hemiflavus* Szépligeti, 1901

MATERIAL EXAMINED: Wadi Rut, 4.VI.1970, H. Bytinski-Salz (1♀).

Described from Hungary and listed in the USSR (Ukraine, Caucasus Mts, Kazakhstan, Soviet Middle Asia).

**Bracon (Bracon) intercessor* var. *erythrostickus* (Marshall, 1885)

MATERIAL EXAMINED: Hofit, 2-3.V.1981, Q. Argaman (1♀). Nahal Arugot (near 'En Gedi), 25.V.1981, Q. Argaman (1♀). Tantura (near Dor), 4.VIII.1984, leg. Q. Argaman (1♀).

**Bracon (Bracon) laetus* Wesmael, 1838

MATERIAL EXAMINED: Ze'elim, 30.X.1970, ex gall of *Eryophyes tiliae* on *Tamarix aphylla*, 6.VI.1972, leg. et educ. S. Limon (1♀).

**Bracon (Bracon) luteator* Spinola, 1808
(= *B. nigripedator* Nees, 1834)

MATERIAL EXAMINED: Judean desert, 3.V.1983, Q. Argaman (1♀). Tomer, 31.VIII.1982, Q. Argaman (1♂).

**Bracon (Bracon) mariae* Dalla Torre, 1898
(= *B. semiflavus* Thomson, 1892 nec Brullé, 1846)

MATERIAL EXAMINED: Safed (= Zefat), 17.VII.1970, H. Bytinski-Salz (3♀♀).

**Bracon (Glabrobracon) obscurator* Nees, 1812

MATERIAL EXAMINED: Rehovot, 19.V.1965, J. Erdős (1♂). Aqua Bella, 21.V.1965, J. Erdős (1♂).

**Bracon (Glabrobracon) osculator* Nees, 1812

MATERIAL EXAMINED: Gaza, 13.IV.1981, Q. Argaman (1♀).

**Bracon (Bracon) pectoralis* Wesmael, 1838

MATERIAL EXAMINED: Haifa, 27.VII.??, H. Bytinski-Salz (1♀). Jericho, 8.IV.1981, Q. Argaman (1♂). Judean desert, 3.V.1983, Q. Argaman (1♀).

**Bracon (Glabrobracon) tschitscherini* Kokujev, 1904

MATERIAL EXAMINED: Jerusalem, 20.VI.1943, H. Bytinski-Salz (3♀♀). Bet Guvrin, 5.V.1984, Q. Argaman (1♀).

Known only from the western half of the USSR.

****Bracon (Rostrobracon) urinator* (Fabricius, 1798)**

MATERIAL EXAMINED: Bir Rechme, 8.V.??, H. Bytinski-Salz (1♀). Bat Yam, 3.VI, H. Bytinski-Salz (1♀). Jerusalem, 21.VII.1951, leg. Amitai (1♀) and 12.VIII.1961, H. Bytinski-Salz (1♀). Kinnereth, 13.IV.1954 (1♀). Golan Heights, Wadi Saar, 1.VI.1970, H. Bytinski-Salz (1♀). Biriyya, 1.IV.1981, Q. Argaman (1♀). Hofit, 2-3.V.1981, Q. Argaman (1♂). Bet She'an, 25.VI.1981, Q. Argaman (1♀). Elat, 14.VII.1981, Q. Argaman (1♀). Tel Adashim, 26.VIII.1982, Q. Argaman (1♀). Bet Guvrin, 5.V.1984, Q. Argaman (1♂).

****Bracon (Glabrobracon) variator* Nees, 1812**

MATERIAL EXAMINED: Judean desert, 3.V.1983, Q. Argaman (1♂).

****Glyptomorpha avunculus* (Kohl, 1906)**

MATERIAL EXAMINED: Jerusalem, 12.VIII.1961, H. Bytinski-Salz (1♀).
Known only from Egypt and Saudi Arabia.

****Glyptomorpha pectoralis* (Brullé, 1832)
(= *Vipio algiricus* Lucas, 1846)**

MATERIAL EXAMINED: Revivim, 12.V, H. Bytinski-Salz (1♂). Nahariyya, 7.V, H. Bytinski-Salz (1♂). Yeroham, 22.VII.1962, J. Kugler (1♀). Jericho, 5.V.1970, J. Kugler (1♀, 1♂). Wadi Rut, 4.VI.1970, H. Bytinski-Salz (1♂). 3 km E Arad, 30.VI.1970, H. Bytinski-Salz (1♀, 1♂). Bet Guvrin, 5.V.1984, Q. Argaman (1♀, 1♂).

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

MATERIAL EXAMINED: Summar, ex *Cadra cautella* Walker, 1967, leg. et educ. D. Gerling (1♀, 1♂). Mikhmoret, ex *Spectrobates ceratoniae* Zeller, 2.VII.1968 (1♀, 1♂). Wadi Far'ia Spill, 22 km N Jericho, 25.VII.1971, leg. D. Gerling (1♀). Gadot, football field, 25 km N Tiberias, 27.X.1971, A. Goldstein (1♂). Sedé Eliyyahu, 11.VI.1973, Z. Klein (2♀♀, 2♂♂). Zefat, 1.IV.1981, Q. Argaman (1♀). 'En Gedi, 25.V.1981, Q. Argaman (1♂). Bet Alfa, 3.VI.1981, Q. Argaman (1♂). Nazareth, 30.IX.1982, Q. Argaman (1♀). Judean Hills, 3.V.1983, Q. Argaman (1♀). Yaffo, 1.XII.1983, ex *Pectinophora gossypiella* Saunders, leg. et educ. Q. Argaman (2♀♀, 1♂).

****Habrobracon (Habrobracon) stabilis* (Wesmael, 1838)**

MATERIAL EXAMINED: Jermak (Mt. Meron), 20.V.1959, J. Krystal (1♀). Rosh Haniqra, 13.V.1965, J. Erdős (1♂). Rehovot, 19.V.1965, Erdős (1♀). Aqua Bella, 21.V.1965, Erdős (1♂). Jerusalem, 21.V.1965, Erdős (1♀).

****Habrobracon (Ophthalmobracon) ophthalmicus* (Telenga, 1933)**

MATERIAL EXAMINED: N. Zohar, 2.X.1971, ex *Amblypalpis olivierella* Ragonot,

leg. et educ. A. Lupo (3♀♀, 2♂♂). Holon, 1.X.1971 (4♀♀, 5♂♂) and 14.XII.1971 (2♀♀, 5♂♂), ex *Amblypalpis olivierella* Ragonot, leg. et educ. A. Lupo. Sede Eliyyahu, 11.VI.1973, Z. Klein (2♀♀, 1♂). Netanya, taken from *Tamarix* sp., 30.X.1980, J. Halperin (1♂).

****Habrobracon (Habrobracon) telengai* Mulyarskaya, 1955**

MATERIAL EXAMINED: Wadi Auja, 10 km N Jericho, 12.VII.1970, D. Gerling (1♀).

Known from the USSR (Russia, Caucasus Mts, Kazakhstan, Soviet Middle Asia) (Tobias 1986:115).

****Iphiaulax gracilites* Shenefelt, 1978
(= *I. gracilis* Szépligeti, 1913 nec 1900 seu 1901)**

MATERIAL EXAMINED: Elqosh, 18.V.1981, Q. Argaman (1♂). Described and up to now known from Ethiopia.

****Iphiaulax impostor* var. *rufosignatus* Kokujev, 1898**

MATERIAL EXAMINED: Megiddo, .IX.1960, J. Kugler (1♀). Kabri, N of Haifa, 14.VI.1983, Q. Argaman (7♀♀).

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

MATERIAL EXAMINED: Bet Zera, 13.V.1965, J. Kugler (1♀). Kabri, N of Haifa, 14.VI.1983, Q. Argaman (1♀). Yotvata, 23.XI.1983, Q. Argaman (1♀).

Listed in the USSR (Crimea, Transcaucasus, western Caucasus).

****Liomorpha nigrirostris* Szépligeti, 1914**

MATERIAL EXAMINED: Ein Fashkha, near Dead Sea, 19.III.1963, D. Gerling (1♀). Ma'ale Adummim, Jerusalem-Jericho road, 19.III.1968, D. Gerling (1♀). Yotvata, 23.IX.1983, Q. Argaman (1♀).

Since its description known only from Tunisia.

****Pseudovipio castrator* (Fabricius, 1798)**

MATERIAL EXAMINED: Azor, 16.VIII.1963, J. Kugler (1♂).

****Pseudovipio inSCRIPTOR* (Nees, 1834)**

MATERIAL EXAMINED: Jerusalem, 25.VIII, H. Bytinski-Salz (1♂). Safed (= Zefat), 17.VII.1970, H. Bytinski-Salz (1♀, 1♂).

****Pseudovipio tataricus* (Kokujev, 1898)**

MATERIAL EXAMINED: Bet Guvrin, 5.V.1984, Q. Argaman (1♀).

**Rhytimorpha coccinea* Szépligeti, 1901

MATERIAL EXAMINED: 'En Gedi, 24.VI.1957, I. Guterman (1♀). Haluza, 7.IV.1964, J. Kugler (1♀).

It is rather frequent in tropical Africa (or Ethiopian Region) reaching into the south-western Palaearctic Region as far as Egypt.

**Vipio abdelkader* Schmiedeknecht, 1897

MATERIAL EXAMINED: Mizpe Ramon, 8.IV.1965, J. Kugler (1♀).

Second tergite around median field strio-rugose, i.e. not entirely smooth.

Vipio mlokoszewiczi Kokujev, 1898

MATERIAL EXAMINED: Kfar Yeroham, 6.IV.1965, J. Kugler (1♀). Berekhya, 18.VIII.1981, Q. Argaman (1♂).

**Vipio tentator* (Rossi, 1790)

MATERIAL EXAMINED: Bet Yannay, 23.VII.1980, Q. Argaman (1♀).

Zelomorpha transcaspica (Kokujev, 1902)

MATERIAL EXAMINED: Yotvata, 23.XI.1983, Q. Argaman (1♀).

Known from the USSR (Turkmenia, Uzbekistan) and Iran. It appears to be an inhabitant of the desert-semidesert zone of the Palaearctic Region.

ROGADINAE

**Aleiodes (Neorhogas) aestuosus* (Reinhard, 1863)

MATERIAL EXAMINED: Ulanot, Sharon, central Coastal Plain, taken with light at night, 20.V.1963, J. Halperin (1♀). Bet Alfa, 11.VI.1981, Q. Argaman (1♂).

Distributed in the USSR as far eastwards as Soviet Middle Asia and in the Mediterranean subregion. Reported by Szépligeti (1901) from Syria.

**Aleiodes (Neorhogas) ductor* (Thunberg, 1822)

MATERIAL EXAMINED: Tirat Zevi, 28.V.1981, Q. Argaman (1♂).

**Aleiodes (Aleiodes) pallidator* (Thunberg, 1822)

MATERIAL EXAMINED: Ramat Gan, 9.VII.1985, J. Halperin (1♀).

Distributed in the USSR, Mongolia, Iran and Greece.

**Pseudovipio umbraculator* (Nees, 1834)

MATERIAL EXAMINED: Tiberias, 10.V.1943, H. Bytinski-Salz (1♂). Tel Aviv, 5.V.1960, H. Bytinski-Salz (1♀). Ilanot, 24.IV.1981, Q. Argaman, (1♂).

**Aleiodes (Aleiodes) signatus* (Nees, 1812)

MATERIAL EXAMINED: Kefar Eliyyahu, 18.IV.1982, Q. Argaman (1♀).

**Yelicones delicatus* (Cresson, 1872)

MATERIAL EXAMINED: Kabri, N of Haifa, 14.VI.1983, Q. Argaman (1♀).

Hitherto reported from the U.S.A. Probably introduced into Israel with one of its known lepidopterous hosts: i.e. *Caristanius decoralis* (Walker) (Phycitidae), *Nephoptyx uvinella* (Ragonot) (Phycitidae) and *Psorosina hammondi* (Riley) (Phycitidae), or with a hitherto unknown host. The single female specimen from Israel differs in a few infraspecific features from a female representative of the U.S.A. (housed in the Hungarian Natural History Museum, Budapest) and these differences are listed below.

Female from Israel	Female from USA
1. Antenna with 26 joints.	1. Antenna with 34 joints.
2. Hind tarsus relatively short, basitarsus as long as tarsal joints 2-4, fourth joint somewhat longer than high.	2. Hind tarsus relatively long, basitarsus one-third longer than tarsal joints 2-4, 4th joint somewhat higher than long.
3. Cu_2 relatively small, r_2 about one-third longer than $cuqu_1$ and $cuqu_2$ each.	3. Cu_2 relatively great, $cuqu_1$ about one-fifth and $cuqu_2$ just longer than r_2 .
4. Second tergite almost entirely striated.	4. Second tergite only anteriorly striated.

EXOTHECINAE

**Argamania* n. gen.

Head and mesosoma about as long as metasoma. Head in dorsal view transverse. Ocelli very small. Temporal-occipital carina weak, very weak to almost indistinct (Figs 3-4). Body (head, mesosoma and tergites) reticulo-granulate (Fig. 8) and with metallic shiny. Radial vein issuing distally from pterostigma (Figs. 5-7). Ovipositor sheath longer than metasoma.

Type species: *Argamania aereus* n. sp. — Gender of the name *Argamania* is masculine.

The new genus is dedicated to my friend and specialist of Scolioidea/Bethyloidea, Dr. Qabir Argaman (Bet Dagan, Israel), who has collected the holotype and 1 paratype of the type species.

With the help of Tobias's key (1986:16-28) the new genus, *Argamania* n. gen., runs to the genus *Ayga* Nixon, 1940, considering their generic features as (1) presence of

temporal-occipital carina, (2) mervulus postcurcal, (3) n. par. issuing from brachial cell, (4) prepectal carina absent and (5) head-mesosoma-tergites reticulo-granulate. The distinction between the two genera is given in the tabular form below:

<i>Argamania</i> n. gen.	<i>Avga</i> Nixon
1. Temporal-occipital carina weak to almost indistinct, indicated rather by accompanying sculpture (Figs. 3-4).	1. Temporal-ocipital carina distinctly present in usual form.
2. Radial vein issuing clearly from distal third of pterostigma (Figs. 5-6).	2. Radial vein issuing either before or from middle of pterostigma.
3. Ovipositor sheath longer than metasoma.	3. Ovipositor sheath distinctly shorter than metasoma.
4. Body (head + mesosoma) with metallic lustre.	4. Body without metallic lustre.

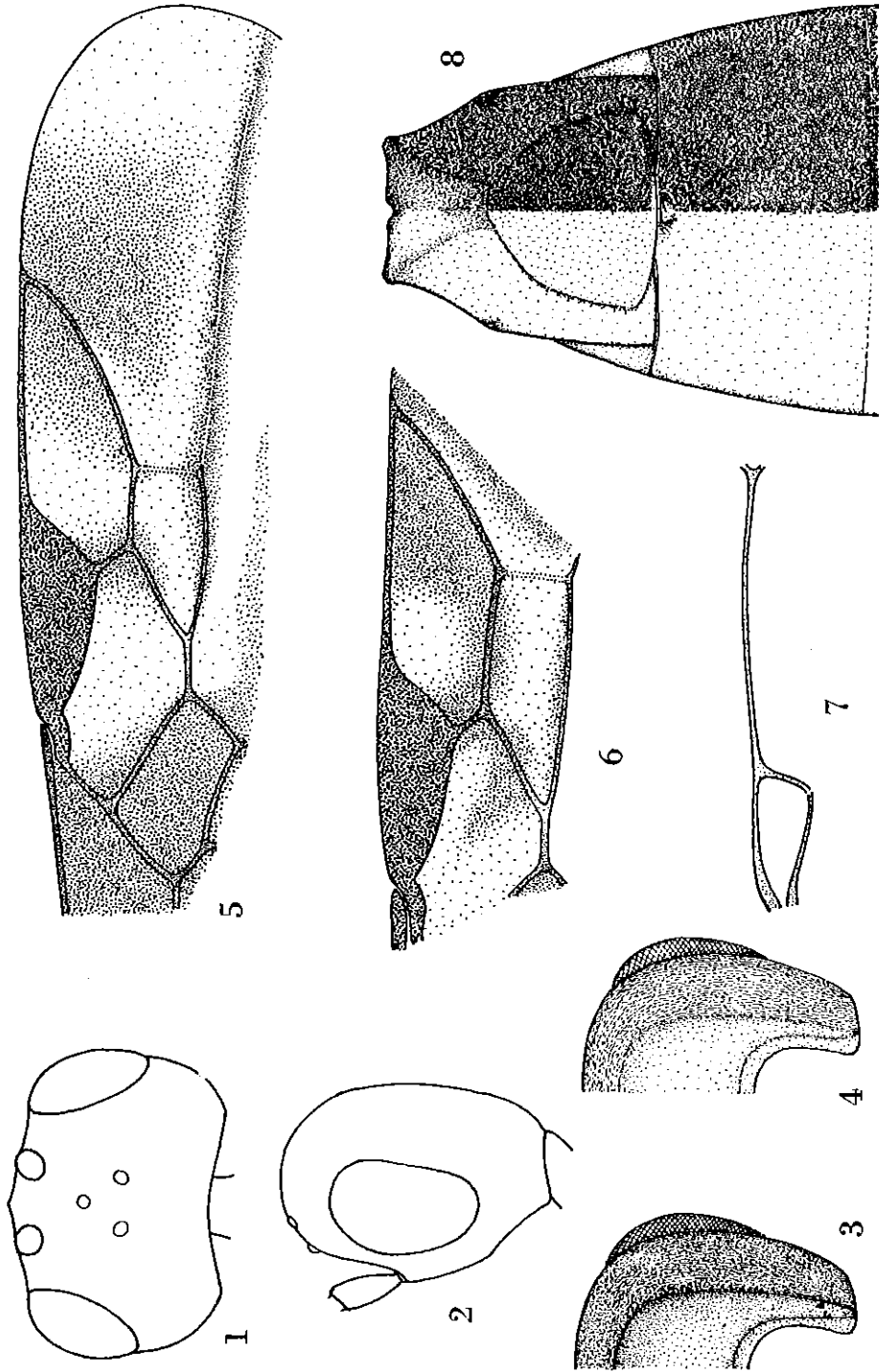
**Argamania aereus* n. sp.
(Figs. 1-8)

Female

Body 2.5-3.5 mm long. Head in dorsal view (Fig.1) moderately transverse, 1.6-1.7 times broader than long, eye about 1.5 times as long as temple, latter rather strongly rounded, occiput weakly excavated. Ocelli small to very small, distance between two ocelli hardly twice (specimens from Algeria) to distinctly twice (specimens from Israel and Tunisia) as long as greatest diameter of hind ocellus, OOL almost twice as long as POL (Fig. 1). Eye in lateral view (Fig. 2) 1.5-1.6 times as high as wide, temple ventrally broadening and its greatest breadth (almost) equal with greatest width of eye. Malar space as long as basal width of mandible. In frontal view face twice as wide as high; circular opening large, its horizontal diameter twice as long as malar space. Head behind or temple and occiput very weakly to almost indistinctly carinated (Figs. 3-4). Hypostomal carina somewhat more distinct than temporal carina, two carinae not meeting. Head reticulo-granulate, this sculpture on face and cheek somewhat denser than elsewhere. Antenna filiform, as long as head, mesosoma and tergite 1 or tergites 1-2, with 16-21 joints (specimens from Tunisia with 16-18, those from Israel with 19-20 and those from Algeria with 21 joints). First flagellar joint thrice as long as broad, further joints gradually shortening so that penultimate joint nearly twice to twice as long as broad.

Mesosoma in lateral view 1.6-1.7 times as long as high, in dorsal view mesonotum between tegulae about one-quarter less broad than head. Notaulix distinct by crowded sculpture. Prescutellar furrow distinct, crenulated. Sternaulix absent. Mesosoma reticulo-granulate similar to that of head; propodeum medially rugo-rugulose and with a weak medio-longitudinal keel. Legs thin. Hind femur 4-4.5 times as long as broad. Hind tibia 1.5 times as long as hind femur, and as long as hind tarsus. Hind basitarsus as long as hind tarsal joints 2-3.

Fore wing somewhat shorter than body. Pterostigma (Figs. 5-6) 2.8-2.9 times as long as wide, issuing radial vein from its distal third; r_1 short to at most half as long as width of



Figs. 1-8. *Argamania aereus* n. gen. et sp.: 1 = head in dorsal view, 2 = head in lateral view, 3-4 = head behind (right half of head), 5 = distal part of right fore wing, 6 = distal median part of right fore wing, 7 = n. med. and nervellus of right hind wing, 8 = tergites 1-2.

pterostigma, r_2 either one-quarter to one-third shorter than cu_{q1} (Fig. 5, specimens from Israel and Tunisia: holotype ♀ + 4♀♀ paratypes) or r_2 just longer than cu_{q1} (Fig. 6, 2♀♀ paratypes from Algeria); r_3 distinctly thrice as long as r_2 (Fig. 5) or only one-fourth longer than r_2 (Fig. 2); radial vein ending far before tip of wing; metacarp a bit longer than pterostigma. D_1 long, d somewhat more than twice as long as $n. rec.$, latter clearly antefurcal, cu_1 and d almost parallel (Fig. 5). d_2 either more or less four times longer than d_1 or nervulus postfurcal (Fig. 5) or almost interstitial. B closed, $n. par.$ emitting below. Hind wing nearly as long as fore wing; nervellus emitting from proximal third of $n. med.$ (Fig. 7).

Metasoma about as long as head and mesosoma together. First tergite (Fig. 8) as long as wide behind, its hind width about 1.7-1.8 times greater than its basal width; from base to spiracle more, beyond spiracle less broadening posteriorly, spiracle before middle of tergite. Second and third tergites equal in length, second tergite twice wider behind than long. Tergites 1-2 reticulo-granulate as face (Fig. 8), tergite 3 somewhat less densely reticulo-granulate, further tergites with conspicuously weakening reticulo-granulation to almost smooth and glistening. Sternites almost smooth and shiny. Ovipositor sheath long, as long as metasoma + propodeum or hind tibia + tarsal joints 1-4.

Body dull bronze coloured, metasoma more or less blackish. Mandible brownish yellow, apically dark; palpi black(ish). Scape blackish brown, pedicel and first 4-5 flagellar joints brownish yellow, further joints blackish to black (specimens from Israel and Tunisia: holotype + 4♀♀ paratypes) or antenna fully black (2♀♀ paratypes from Algeria). Tegula bronze coloured as mesonotum. Legs either brownish yellow with variable dark suffusion on femora 1-2 and distally on femur 3; tarsal joints 2-4 apically darkening, last joints black. Wings spotted brownish or blackish (Figs. 5-6). Pterostigma and veins brownish or blackish pigmented.

Male

Similar to female. Body 2.5-3.1 mm long. Antenna with 16-18 joints. First tergite somewhat more broadening posteriorly.

Host unknown.

MATERIAL EXAMINED: Holotype ♀: Israel, Wadi Qelt, 10.III.1981, Q. Argaman. 1 paratype: Israel, Yavne, 28.VI.1982; Q. Argaman. 1♂ paratype: Israel, Klot, 1.VII.1981, Q. Argaman. 3♀♀, 3♂♂ paratypes: Tunisia, Sfax, 8.III.1903 (time-data below on second label of 1♀, 2♂♂ paratypes), Biró. 1♀ paratype: Algeria, Mastaganem, El-Macta, 20.IV.1986, Rozner. 1♀ paratype: Algeria, Oran, Mts Atlas, Ain el-Turk, 200 m, 24.IV.1986, Rozner.

Holotype (♀) and 9 paratypes (6♀♀, 3♂♂) are deposited in the Hungarian Natural History Museum, Budapest; Hym. Typ. Nos 7140 (holotype) and 7141-7149 (paratypes).

Distribution: Algeria, Israel, Tunisia.

Taxonomic remark — The number of the antennal joints and the colour pattern of the antenna as well as the relative lengths of the sections of the radial (r_1 -3) and discoidal veins (d_1 -2) show considerable variation which is the most striking in the radial vein: the holotype ♀ and 1♀ paratype from Israel together with the 3♀♀ paratypes from Tunisia have a short second cubital cell (Cu_2) owing to the short second section (r_2) of radial vein, i.e. r_3 only one-fourth longer than r_2 and, furthermore, r_2 one-quarter to one-third shorter than first transverse vein (cu_{q1}) on one hand (Fig. 5); and the two females from Algeria is marked with a long cubital cell (Cu_2) owing to the long second section (r_2) of radial vein, i.e. r_3

distinctly twice as long as r_2 and, furthermore, r_2 one-quarter to one-third shorter than first transverse vein (cu_{q1}) on one hand (Fig. 5); and the two females from Algeria is marked with a long cubital cell (Cu_2) owing to the long second section (r_2) of radial vein, i.e. r_3 only one-fourth longer than r_2 and, furthermore, r_2 slightly longer than cu_{q1} (Fig. 6). These features together with the number of antennal joints and colour variation may bear the marks of specific difference. However, I consider that these differences, even though they are striking, are only infraspecific variability. My interpretation is supported by the fact that within the family Braconidae several species and species-groups excel analogous external morphological variability.

Hormisca tatarica Telenga, 1941

MATERIAL EXAMINED: Bene Berit, 24 km SW Tiberias, 16.IX.1971, A. Goldstein et D. Gerling (7♀♀, 1♂).

Widely distributed in the southern middle USSR (Kazakhstan, Soviet Middle Asia), Mongolia, Iran and Morocco.

Hormius moniliatus (Nees, 1812)

MATERIAL EXAMINED: Zefat, 25.III.1981, Q. Argaman (1♀).

METEORINAE

Meteorus gyrator (Thunberg, 1822)

MATERIAL EXAMINED: Arava Valley, 3.V.1983, Q. Argaman (1♂).

Meteorus ictericus (Nees, 1812)

MATERIAL EXAMINED: Abu Kabir, light trap, 3.I.1966, Gasith (1♀).

Meteorus rubens (Nees, 1812)

MATERIAL EXAMINED: Hawwat Hamataim, Sede Nehemya, light trap, 8-13.VIII.1962, K. Shoham (5♀♀). N. Arugot, 25.V.1981, Q. Argaman (1♂). Ze'elim, 13.VII.1983, Q. Argaman (1♂). Yavne, 15-17.VII.1983, Q. Argaman (8♀♀, 1♂). Bet Guvrin, 5.V.1984, Q. Argaman (1♀). Nizzana, 29.V.1984, Q. Argaman (1♀, 1♂). Kefar Masaryk, 25.V.1983, J. Halperin, (2♂♂). Tel Aviv, 7.V.1962 (6♀♀). Yeroham, 8.IV.1964, J. Kugler (1♀). Ramat Aviv, 13.II.1962 (1♀). Kare Deshe, 5.III.1968, Gasith (2♀♀), 14.IV.1965, J. Kugler (1♂).

Meteorus versicolor (Wesmael, 1835)

MATERIAL EXAMINED: Bet Lehem haGelilit (Lower Galilee), 16.IV.1982, ex

Eriogaster philippsi Bartel 10.V.1982 (food plant *Quercus ithaburensis*), leg. et educ. J. Halperin (1♂). Yavne, 11.VII.1983, Q. Argaman (2♀♀).

****Wesmaelia pendula* Foerster, 1862**

MATERIAL EXAMINED: Bet Alfa, 11.VI.1981, Q. Argaman (1♂).

Distributed sporadically in the western Palaearctic Region and in the Nearctic Region.

OPIINAE

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

MATERIAL EXAMINED: Hawwat Hamataim, Sede Nehemya, light trap, 14.XI.1967, K. Shoham (1♀).

****Opius (Opius) diversiformis* Fischer, 1960**

MATERIAL EXAMINED: Nuseirat, 13.IV.1981, Q. Argaman (1♂). Nazareth, 30.IX.-1982, Q. Argaman (1♀).

Described from Austria, reported from Hungary and the USSR (Armenia, Georgia).

****Opius (Phaedrotoma) exiguus* Wesmael, 1835**

MATERIAL EXAMINED: Ilanot, 24.IV.1981, Q. Argaman (1♂). Nazareth, 5.III.1983, Z. Mendel (1♂).

****Opius (Opiothorax) levis* Wesmael, 1835**

MATERIAL EXAMINED: Ramot Menashe, 20.V.1982, Q. Argaman (1♂).

****Opius (Opius) lugens* Haliday, 1837**

MATERIAL EXAMINED: Tel Aviv, 5.VI.1981, Q. Argaman (1♀). Kefar Darom, 18.VIII.1981, Q. Argaman (1♀). Ze'elim, 13.VII.1983, Q. Argaman (1♂). Nahariyya, 2.VIII.1983, Q. Argaman (1♂).

The last three specimens (1♀, 2♂♂) differ from the nominate form with its fully brownish yellowish legs, second and fore half of third tergite also brownish yellow.

****Opius (Psytalia) niloticus* Schmiedeknecht, 1900**

MATERIAL EXAMINED: Bet Alfa, 11.VI.1981, Q. Argaman (2♀♀). W. Mallaha (SE Tomer), 3.V.1983, Q. Argaman (1♀).

Up to now known only from Egypt.

**Opilus (Opiothorax) turcicus* Fischer, 1960

MATERIAL EXAMINED: Nizzana, 29.V.1984, Q. Argaman (1♂).

Described from Turkey, listed in several countries of the Palaearctic Region (France, Netherlands, Germany, Hungary, Algeria, Jordan, Iraq, Mongolia).

**Pokomandya curticornis* Fischer, 1959

MATERIAL EXAMINED: Bet Dagan, 20.VI.1983, Q. Argaman (1♀).

Known sporadically from Turkey, Hungary and Czechoslovakia.

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