

THE SPHECIDAE (HYMEN.) OF EREZ ISRAEL

III. Subfamilies: Astatinae, Larrinae, Trypoxyloninae, Pemphredoninae, Crabroninae, Oxybelinae.

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ABSTRACT

This part completes the treatment of the Sphecidae of Israel, covering the subfamilies enumerated in the title. Altogether 320 species are now known to occur in Israel.

New descriptions: *Astata stecki melanotica* Pulaw, ssp. nov.; *A. tricolor monochroma* Pulaw. ssp. nov.; *Prosopigastra lissipes* Pulaw. sp. nov.; *Gastrocericus sanctus* Pulaw. sp. nov.

INTRODUCTION

After a prolonged interruption we are finally publishing the third and final part of the Sphecidae of Israel. The delay was caused by our decision to await the publication of some revisions on several pertinent genera, contributions which came out only during the last dozen years (1959-71).

In these papers numerous new taxons were described from Israel; consequently the present part of our contribution contains but very few hitherto undescribed species.

In this part we enjoyed the collaboration of Prof. W. Pulawsky, Department of Zoology, University of Wroclaw (Poland), who not only prepared the manuscript on the genera *Astata*, *Tachytes* and *Tachysphex*, but also described a few new species from other genera. Prof. J. Leclercq, Bruxelles (Belgium) kindly determined some of the Crabroninae, and Mr. P.M.F. Verhoeff, Utrecht (The Netherlands) most of the Oxybelinae.

A number of specimens collected in Israel in 1965 by Mr. W. Schlaefle, Basel (Switzerland) and sent to the senior author for determination, are also included in this paper.

The Sphecid fauna of Israel, as published in parts I - III (Part I: Bull. Research Council of Israel VB, 1955; Part II: *ibid.* VIII B, 1959) comprises altogether 320 species; this is more than twice the number of species (120) hitherto known. However, in parts I and II a number of apparently new species were not included, as we did not have sufficient material for their description; furthermore, additional species new to the fauna of Israel have been collected meanwhile, necessitating a supplementary part, which we hope to publish in a few years time. This supplement will also include a general part dealing with the phenology and zoogeographical analysis of the fauna.

SPECIAL PART

Subfamily: *Astatinae*

Astata

(manuscript prepared by W. Pulawski)

Astata boops Schrk.

♂♂♀♀: Beersheba 28.III – 23.V.; Ramat Gan 22.IV – 23.V.; Tel Aviv 14.VII.; Ramlah 24.VI.; Deganya 19.IV.; En Fescha 16.V.; Urim 28.V.; Dorot 15.IV.; Tiberias 6.IV. (leg. By. S.); 9.V. (leg. Verh.), Binyamina 15.V.; Naharyia 6.–8.V (leg. Verh.); Jericho 26.V.

Distribution: the whole of the Palaearctic region.

FE.: Palaearctic.

Astata boops Schrk. ssp. *graeca* Beaum.

♂♀♀: Nablus 30.V. | Wadi Qilt 30.V. Kiryat Gat 23.IV.

Distribution: Balkans, Turkey, Israel.

FE.: Eastmed.

Astata affinis Lind. ssp. *radoszkowskii* Pul.

♂♀: Wadi Qilt 2.VI.; Mezada 17.VI.

This male does not differ from that of *A. affinis jerichoensis* Pul. described by Pulawski (1959) but the two first abdominal segments and the corners of the 3rd are red.

Distribution: Soviet Middle Asia, Turkey, Rhodes; the nominate subspecies occurs in the Iberian Peninsula, Italy and NW Africa.

FE.: Eastmed.

Astata minor Kohl

♂♂: Jerusalem 29.IV – 3.V.

Distribution: Europe NW Africa, Soviet Middle Asia, Israel.

FE.: Palaearctic.

Astata stecki melanotica Pulawski, ssp. n.

♂♂♀♀: Wadi Auja 17.IV. 1942.; Daphne Oaks 17.V. Syria: near Damascus 6.VI. 1953 ♀, 10.X.1952 1 ♀ 1 ♂ (leg. A. Mochi).

This new subspecies is characterized by the abdomen entirely black or with weak traces of red colour only. In the nominate form, the female has at least the two first abdominal segments red, and in the male the red colour occupies the posterior part of the 1st tergite, all the 2nd tergite and the sides of the 3rd.

Holotype: ♀ Damascus 10.X in coll. Mochi. Paratypes in coll. de Beaumont, coll. Bytinski-Salz and in coll. Pulawski.

It should be pointed out that a center of melanotic *Astata* exists at each end of the Mediterranean basin. One of them is in the Iberian Peninsula and Southern France, with a black race of *A. boops* Schrk., *A. rufipes massiliensis* Rich. and *A. miegi miegi* Duf. In the Near East such dark forms are *A. affinis jerichoensis* Pul., *A. stecki melanotica* Pul. ssp. n. and *A. tricolor monochroma* Pul. ssp. n.

Astata cleopatra Pul.

♂♂: Jericho 16. VIII – 14.X.

The two males agree perfectly with the Egyptian type specimens in sculpture, pilosity and coloration.

Distribution: Egypt, Jericho.

FE.: SS

Astata tricolor monochroma Pulawski, ssp. n.

♂♂♀♀: Ramat Gan 9.V.41; 10.V.46; 14.V.46; 23.V.47; 6.VI.44; Tel Aviv (Miqwe Israel) 11.V.46 (leg. Wahrman); Tel Aviv 5.XI.60; Raanana 2.VI.40; 26.X.40; Givat Brenner 19.VIII.45; Syria: Ibn Mefis, Damascus 10.X.52 (leg. A. Mochi).

Compared with the races characterized by Pulawski (1969), the new subspecies may be distinguished as follows.

♀ – Fore margin of the radial cell 1.1-1.3 times as long as its height. Mesonotum a little more, pygidial area distinctly more shagreened, than in the nominal race. The longest bristle of hind femora psammophore equaling 0.55–0.6 of the greatest diameter of a femur. Humeral tubercles and abdomen black. Femora black, 1st tibiae brown, yellowish at the inner side; 2nd and 3rd tibiae black; in the specimen from Damascus the fore tibiae and tarsi red.

♂ – Free margin of clypeus (fig. 1) with 2 small notches at each side of the middle lobe; middle lobe feebly produced triangularly or slightly emarginate, its lateral portions nearly as prominent as lateral lobes; lower face of middle lobe with one sharp median carina. Inferior margin of mandibles (fig. 2) with strongly dilated basal part (reaching nearly the level of apical teeth basis) and narrow apical part, separated by a right or a feebly acute angle; basal part larger than in the nominate subspecies, its most prominent point situated nearly to its middle; inner apical tooth strongly dilated (fig. 3), narrow in a specimen from Ramat Gan (fig. 4); outer face of mandibles flat between inferior margin and the carina running out of the epicondylus, concave near to the end of basal dilated part. Mesonotum posteriorly and scutellum shagreened and mat or more or less shining (less than in the nominate form). Tegulae and praecostal plates dark brown. Mandibles black, their apical teeth somewhat reddish. Abdomen black, without yellow spots. Legs black, fore tibiae yellow or yellowish at their inner side.

Holotype: ♂ Ramat Gan 23.V.47 in coll. Bytinski-Salz. Paratypes in coll. Bytinski-Salz, de Beaumont, Wahrman and Pulawski.

Astata bifasciata Schulth.

♂: Kurnub 28.IV.

Distribution: North Africa, Israel.

FE.: SS.

Diploplectron

Diploplectron palaearticum Pulawski

♀: Sinai: Wadi Mitla 21.IV.38 (Type: U.S. Nat. Mus. ex coll. Alfieri).

Distribution: Egypt, Sinai.

FE.: End. (SS.)

Subfamily: LARRINAE

Tribus: Larrini

Larra

Larra anathema Rossi

♂♂♀♀: Dan 9.V.; Haifa-Carmel 17.VI.; Binyamina 29.V. (Sch.); Binyamina Dunes 15.V.; Rosh HaAyin 26.IX.; Ramat Gan 1.VI.; Tel Aviv 8.V-24.VI.; Jericho 26.V.

f. *melanaria* Kohl: This is the prevalent form distributed throughout the whole country. Both forms are sometimes seen dragging captured *Gryllotalpa gryllotalpa* larvae.

♂♂♀♀: Nahariya 11.VI.; Akko 15.VI (Sch) Haifa 27.V; 20.VI (Sch); Binyamina 2-15.VI.; Netanya 25.VIII.; Herzliya 17.VI.; Ramat HaSharon 19.VII.; Ramat Gan 6.V.; Tel Aviv 22.IV-26.VI.; Wadi Soreq 8.VIII.; Jerusalem 15.VIII-IX.; Wadi Fara 11.V.; Jericho 26.IV.-25.VI.; Yeroham 19.VII.

Distribution: Rare N. of the Alps, whole Mediterranean, Asia minor, Israel.

FE.: Med.

Liris

Liris haemorrhoidalis Fab. (Group *L. aurulenta* F.)

♂♂♀♀: Tiberias 2.IV.; Lake Tiberias 25.VIII (Houska); Oranim (Tivon) 10.V.; Binyamina dunes 16.XI.; Rosh HaAyin 26.IX-3.X.; Jerusalem 11.VI-29.X. (leg. ByS. and Houska); Tel Aviv X.; Kvuzat Schiller 1.XI.; Beersheba 14.VI.

Distribution: Whole of Africa South to Cape, S. Mediterranean, Arabia, Egypt, Israel.

FE.: Eth/Med

Liris braueri Kohl (Group of *L. aurulenta* F.)

♂♂♀♀: Jericho 19.II-22.VI.; Wadi Qilt (Houska); En Gedi 30.III-28.V. 2.VI (Sch.); Mezada 17.VI (Sch.).

Distribution: S. Arabia, Sinai (Type loc.: Tor, Kohl 1883) S. Egypt, Israel (Dead Sea region), Iran.

FE.: SS.

Liris subfasciata Walk. (Group of *L. memnonia* Smith)

♂♂♀♀: Raanana 10.II.; Jericho 24.II.; En Gedi 10.III.; Revivim 10.V. (Sch.).

Distribution: Congo-Ivory Coast, N. African Sahara, Israel.

FE.: SD/SS.

Liris solstitialis Smith ssp. *tibialis* Beaum. (Group of *L. memnonia*)

♀: En Gedi 18.III.

Distribution of the nominate form: Ethiopian and Malgachian region; of ssp. *tibialis*: Sudan, Egypt, Israel (Dead Sea region).

FE.: SD/SS.

Liris atrata Spin. (Group of *L. atrata* Spinola).

♂♂♀♀: Shisaf 15.IV.; Tiberias 2.IV.; Afula VII.; Tel Aviv 7.VI.; Migde 14.III.; Mishmar HaNegev.; Yeroham 5.VII-20.VIII.; Revivim 10.IV-1.VIII.; En Gedi 17.III.-2.VI. (Sch.).

Distribution: Sahelian and S. Mediterranean region, Cyprus, Syria, Israel.

FE.: SD/SS/Med.

Liris cleopatra Beaum. (Group of *L. atrata*).

♂♀: Revivim 16.-9.V. (leg. Verhoeff, v. de Beaumont 1961 p.233).

Distribution: Egypt, Israel (Negev),

FE.: SS.

Liris nigricans Walk. (Group of *L. nigricans*)

♂♀: Dan 17,VIII.; Tiberias 5.X.

Distribution: Oriental and Ethiopian Region, S. Mediterranean, Israel to Iraq.

FE.: Paltrop/Med?

Liris praetermissa Richards (Group of *L. nigricans*)

♂: Kfar Saba.

Distribution: S. Europe, N. Africa, Israel, Asia minor to Iran.

FE.: Med.

Liris nigra v.d. Lind. (Group of *L. nigra* v.d. Linden)

♂♂♀♀: Hanita 14.V.; Kfar Szold XII.; Tiberias 16.IV.; Afula 25.IV.; Jerusalem 18.VIII-15.X.; Ben Shemen 20.XI.; Beeri 1.VI.; Ruhama 17.VIII.; Nir Am 16.VIII.; Dorot 27.IV.; Beersheba 1.IV-23.VI.; En Gedi 2.VI (Sch.)

Distribution: C. Europe (local), whole Mediterranean.

FE.: Med.

Liris agilis Smith (Group of *L. nigra*)

♀: Jericho 21.VII.

Distribution: Sudan, S. Mediterranean to Israel (Dead Sea region).

FE.: SS/Med.

Liris miscophoides Arnold ssp. *aegyptiaca* Beaum. (Group of *L. miscophoides*)

♀♀: Mezada 17.VI. (Sch.); En Netafim 31.VIII.

Distribution of nominate form: South Africa; of ssp. *aegyptiaca*: Egypt, Israel.

FE.: Ethiop.

Liris inopinata Beaum. (Group of *L. odontophora* Kohl)

♂: Hanita 14.V.

Distribution: Samothrace, Cyprus, Israel.

FE.: End. (Eastmed.)

Tribus: T a c h y t i n i

Tachytes

(manuscript prepared by W. Pulawski)

Tachytes europaeus Kohl

♂♂♀: Nahariya 7.V.; Tiberias 15.VI (Sch.); Haifa 27.V, 20.VI (Sch.); Binyamina 7.V.

Distribution: Europe, Siberia, N.W. Africa, West and Middle Asia.

FE.: Palaearctic.

Tachytes obsoletus Rossi

♂♂♀: Ein Gev 5.VI.; Jerusalem 12.V - 1.VI.; Beersheba 28.III.

Distribution: S. Europe, N.W. Africa, West and Middle Asia.

FE.: Med.

Tachytes matronalis Dahlb.

♂♂♀: W. Saar (Golan) 1.III.70.; Beersheba 25.IV-15.V.; Jericho (coll. Morice); Urim 15.V.

Distribution: S. Europe, N.W. Africa, West and Middle Asia.

FE.: Med.

Tachytes sinuatus Pul.

♂: Beersheba 5.V (holotype).

It is the only known specimen of the species.

Distribution: Israel.

FE.: Endemic.

Tachytes archaeophilus Pul.

♂♂♀: Yeroham 17.VII.; Jericho 9.VII.

Distribution: Egypt, Israel.

FE.: SS.

Tachytes serapis Pul.

♂♂: Jericho 11.VI-7.VII.

Distribution: Sudan, Egypt, Jericho.

FE.: SS.

Tachytes niloticus Turn.

♂♀: Jericho 22.VIII.; En Gedi 2.VI. (Sch.).

Distribution: N. Africa, Israel, Tadjikistan.

FE.: SS.

Tachytes sacricola Pul.

♂♂♀♀: Bat Yam 2.VI.-3.VII. (leg. By.S., G.A. Mavromoustakis). Yeroham 19.VII.; Wadi Raman 20.VI.70.; 3 km E. Avdad 30.VI.70.

In some males, the second joint of middle tarsi is only a little dilated at the apex. Such individuals may hardly be distinguished from *T. diversicornis* Turn. according to the key by Pulawski (1962). Both species are very similar to each other, but the males of *sacricola* differ from those of *T. diversicornis* Turner in being distinctly larger and having the tibiae generally more or less marked with red; the apical part of their gonoforceps is emarginated outside and dilated at the top.

Distribution: Israel.

FE.: Endemic.

Tachytes diversicornis Turn.

♂♂: En Gedi 15.V-11.VII.; Elat 9.VI (Sch.).

Distribution: Egypt, Sudan, Israel, Pakistan.

FE.: SS.

Tachytes trichopygus Pul.

♂♂: En Gedi 2.VI.; Mezada 17.VI. (Sch.); En Boqeq 6.VII.70.

Distribution: Israel, Sinai (type: Wadi Feiran).

FE.: Endemic.

Tachytes etruscus Rossi

♂: Binyamina 27.VI.

Distribution: S. Europe, Cyprus, Israel, Lebanon, West Turkmenistan, West Kazakhstan.

FE.: Med.

Tachytes eurous Pul.

♀: Hatzeva 7.IV.

The above female is the only known specimen of this species.

Distribution: Israel.

FE.: Endemic.

Tachytes melanopygus Costa

♂♂♀♀: Jericho 13.VII (leg. J. Wahrman); En Gedi 2.VI (Sch.); Wadi Fuqra 12.VI.

Distribution: N. Africa, West and Middle Asia.

FE.: SS.

Tachytes diodontus Pul.

♂♂♀♀: Mezada 17.VI (Sch.).

Distribution: Egypt (type), Israel.

FE.: SS.

Tachytes cameronianus Morice

♀♀: En Gedi 11.VII.; Mezada 17.VI (Sch.).

The clypeal teeth are separated by a distance about 5 times shorter than that between a tooth and the corresponding eye. This species was formerly known from Lower Egypt only.

Distribution: Lower Egypt, Israel.

FE.: SS.

T a c h y s p h e x

(manuscript prepared by W. Pulawski)

Tachysphex fulvitaris Costa (Group of *T. pompiliformis* Panzer)

♂♂♀♀: Carmel-Khreibe 17.IV.; Bet Lid 1.IV.; Wadi Shellal 25.III.; Beersheba 18.III–15.IV.; Revivim 15.V.; Yeroham 20.IV.

Distribution: C. Europe, Siberia, Circummediterranean, Iran, Transcaspia.

FE.: ES.

Tachysphex stachi Beaumont (Group of *T. pompiliformis*)

♂: Beersheba 28.III.

Distribution: Israel, Transcaucasia, Transcaspia, Kazakhstan.

FE.: Eastmed.

Tachysphex speciosissimus Morice (Group of *T. pompiliformis*)

♂♂: Mamshit 28.IV.

Distribution: N. Africa, W. Asia.

FE.: SS.

Tachysphex laniger Pulawski (Group of *T. pompiliiformis*)

♀: Ruhama 20.VI.; En Gedi 7.VII.70.

Distribution: Egypt, Israel, Arabia, Transcaspia.

FE.: SS.

Tachysphex pusulosus Beaumont (Group of *T. pompiliiformis*)

Pulawski (1971 p.138) mentions a ♀ from Khan Hadrur 26.III.1909 (coll. Morice, Oxford). This locality lies in the Judean Desert and is also known as the "inn of the good Samaritan" today referred to as Ma'ale Ha-Adumim (By.S.).

Distribution: N. Africa, Israel, Syria, S.E. Turkey.

FE.: S. Med.

Tachysphex nitidus Spinola (Group of *T. pompiliiformis*)

♂♂: Jerusalem 29.IV.; Beersheba 31.III, 10.IV.; Yeroham 8.IV.

Distribution: C. Europe, Mediterranean, Transcaucasia, Transcaspia, W. China.

FE.: ES/Med.

Tachysphex nitidus Spin. ssp. *ibericus* Saussure (Group of *T. pompiliiformis*)

♂♂♀♀: Bet Lid 1.IV.; Bat Yam 3.VI.; Tel Aviv 8.IV.

Distribution of the nominate form: Canary Islands, S. Spain, N. Africa, Israel, Syria, Transcaspia.

FE.: S. Med.

Tachysphex agnus Pulawski (Group of *T. pompiliiformis*)

♂♀: Tel Aviv 20.III.; Beersheba 28.III. (Paratypes).

Distribution: Algeria, Tunisia, Turkey, Israel.

FE.: Med.

Tachysphex nitidissimus Beaumont (Group of *T. pompiliiformis*)

♂♀♀: Tiberias 5.X.; Jerusalem 8.VII.; Ramat Gan 10.IV.; Beersheba 15.V.

Sinai: Oasis Feiran (Pulawski 1964).

Distribution: Balkans, N.E. Africa, W. Asia to Transcaspia.

FE.: Eastmed.

Tachysphex tarsinus Lepeletier (Group of *T. pompiliiformis*)

♂♀: Naharyia 20.V.; Neeman river near Akko 22.VII.

Distribution: C. Europe, Mediterranean, W. Asia to Transcaspia and China.

FE.: ES/Med.

Tachysphex nitidior Beaumont (Group of *T. pompiliiformis*)

♂: Tiberias 12.VII.

Distribution: Mediterranean, East to Transcaspia.

FE.: Med.

Tachysphex fugax Radoskowsky (Group of *T. pompiliiformis*)

♂♂: En Gedi.

Distribution: Circummediterranean, W. Asia to Tadjikistan, South Africa.

FE.: C.Med./IJ.

Tachysphex psammobius Kohl (Group of *T. pompiliiformis*)

♂♂♀♀: Tiberias 12.IV.; Alonim 26.IV.; Bet Lid 1.IV.; Maale HaAdumim (Judean desert) 18.IV.

Distribution: C. Europe, Siberia, Circummediterranea, W. Asia to Transcaspia.

FE.: W.Pal.

Tachysphex yarrowi Beaumont (Group of *T. pompiliiformis*)

♀: Bat Yam 15.V.

Distribution: North Africa, Israel.

FE.: SS.

Tachysphex bicolor Brulle ssp. *galileus* Beaum. (Group of *T. bicolor*)

♂♂♀♀: Kfar Nachum 23.IV.; En Gev 23.IV.; Afula 25.IV.

Distribution of nominate form: S. Europe, Turkey, Caucasus, Turkmenia. ssp. *galileus*: Turkey, Israel.

FE.: Eastmed.

Tachysphex latifrons Kohl (Group of *T. bicolor*)

♀: Jerusalem 28.IV.

Distribution: Cyrenaica, Greece, W. Asia, Transcaucasia, Transcaspia.

FE.: Eastmed.

Tachysphex graecus Kohl (Group of *T. bicolor*)

♀♀: Akko 15.VI (Sch.); Binyamina 15.V.; En Gedi 7.VII.

Distribution: Balkans, Turkey, Israel, Lebanon.

FE.: Eastmed.

Tachysphex verhoeffi Pulawski (Group of *T. bicolor*)

♂♀: Raanana 5.VI.; Bat Yam 3.VI.; Nir Am 5.IX. (Paratypes); Wadi Ruth 4.VI.

2 generations: VI, IX.

Distribution: Israel, Syria.

FE.: Eastmed.

Tachysphex rugosus Gussakovskij (Group of *T. brevipennis* Mercet)

♂♂♀♀: Bat Yam 21.IV.-19.V.; Urim 15.V.

Distribution: S.E. Europe, W. Asia to Transcaspia.

FE.: Eastmed.

Tachysphex imperfectus Beaumont (Group of *T. brevipennis*)

♂♂♀♀: Bat Yam 19.V.; Wadi Quilt 13-27.IX. (Houska).

Distribution: N. Africa, Israel, Arabia.

FE.: SS.

Tachysphex sinaiticus Pulawski (Group of *T. brevipennis*)

♀♀: Sinai, Oasis Feiran 7.IV.58 (leg. Pulawski).

Distribution: Sinai.

FE.: End. (SS).

Tachysphex mediterraneus Kohl (Group of *T. mediterraneus*)

♂♂♀♀: Ram at HaSharon 19.VII., Jerusalem 1-17. VIII.

Distribution: Circummediterranean, East to Transcaspia.

FE.: Eastmed.

Tachysphex panzeri Linden (Group of *T. panzeri*)

♂♂♀♀: Naharyiah 7.V.; Binjamina 7.VI.; Jerusalem 9.V-7.VIII.; Ramat HaSharon 19.VII.; Ramat Gan 25.V-8.VI.; Tel Aviv 30.VII.; Bat Yam 19.V-2.VI.; Ashqelon 7.VI-15.X.; Beeri 1.VI.; Ruhama 20.VI., Urim 15-17.V.; Gvulot 21-30.V.; Beersheba 12.VI.; Yeroham 24.VI.

The prevalent form (42 specimens) is *f. oraniensis* Lep. with completely or almost completely red abdominal segments. The nominate form (6 specimens) occurs chiefly in the North, but 1 ♂ also from the Negev. 2 generations? V-VIII, X.

Distribution: C. Europe to Mediterranean, Asia Minor, Transcaspiya; *f. oraniensis*: N. Africa, Israel.

FE.: Med.

Tachysphex pulcher Pulawski (Group of *T. panzeri*)

♂♂♀♀: Raanana 13.VI.; Beersheba 13-14.VI.; Wadi Hasasa 7.VII.

Distribution: W. Asia, Transcaucasia, Transcaspiya.

FE.: IT.

Tachysphex ptah Pulawski (Group of *T. panzeri*)

♂♂♀♀: Bat Yam 10.V.-19.VII.

Distribution: Egypt, Israel (coastal dunes), Aden.

FE.: SS.

Tachysphex cheops Beaumont (Group of *T. panzeri*)

♂♂♀♀: Haifa, Kishon river sand flats 28.VII.; Bat Yam dunes 10.V-29.VII.

Distribution: Mauritania, Lybia, Egypt, Israel (coastal dunes).

FE.: SS.

Tachysphex buyssoni Morice (Group of *T. panzeri*)

♂: Revivim 15.VI.

Distribution: Tibesti, Egypt, Israel (Negev), Iraq.

FE.: SS.

Tachysphex longipalpis Beaumont ssp. *simplex* Pulawski (Group of *T. panzeri*)

♂♂♀♀: En Gedi 22.VII.; 5 km. S. Jericho 16.VI-7.VII. (Paratypes).

Distribution of nominate form: Lybia, Egypt, of ssp. *simplex* Pulawski: Israel, Iran, Turkmenia.

FE.: SS.

Tachysphex gracilicornis Mercet ssp. *baal* Pulawski (Group of *T. panzeri*)

♂♂♀♀: Beersheba 31.III ♀ Holotype; 31.III, 8.V. 2 ♂ Paratypes.

Distribution of nominate form: N. Africa, of ssp. *baal*: Israel.

FE.: End. (SS/Med.).

Tachysphex liviformis Pulawski (Group of *T. panzeri*)

♂: 5 km W. Avdad 30.VI.

Distribution: Israel, Lebanon, Turkey, Transcaspiya.

FE.: Eastmed./IT.

Tachysphex liriformis Pulawski ssp. *tenax* Pulawski (Group of *T. panzeri*)

♂♂♀♀: Jerusalem 23.VI.–21.VII. (♂ Holotype); 26.VIII.–1.X.; Tiberias 16.X.; En Gedi 16.V.; Jiflik 14.VII.; Mezada 17.VI. (Sch.) (Paratypes)

Distribution: Israel, Arabia.

FE.: End. (SS.)

Tachysphex mocsaryi Kohl (Group of *T. panzeri*)

♂♂♀♀: Binyamina 7.V.; Jericho 5.IV.–2.VI.; Wadi Quilt 5.IV.; Beersheba 25.IV.–5.V.

Distribution: Spain, S.E. Europe, W. Asia, Transcaspia.

FE.: Circummed.

Tachysphex chephren Beaumont (Group of *T. panzeri*)

♂♂♀♀: En Boqeç 19.V.; En Gedi 16.IV.; Wadi Raman 20.VI.

Distribution: Egypt, Israel (Dead Sea Region).

FE.: SS.

Tachysphex incertus Radoszkowski (Group of *T. panzeri*) (syn. *T. pygidialis* Kohl)

♂♂♀♀: Tiberias 10.V.; Binyamina 4.VI.; Jerusalem 20.V.–25.VIII. (leg ByS. and Houška); Jericho 16.VI.; 5 km S. Jericho: 16.VI.–7.VII.70.; En Gedi 28.V.; Nir Am 10.VI.–IX.; Ruhama 10.VI.–27.VIII.; Gvulot 21.V.; Beersheba 15.V.–6.VI.; Mamshit 14.VI.; 3 km E. Arad 30.VI.

Distribution: Mediterranean to Slovakia, W. Asia, Transcaspia.

FE.: Med/IT.

Tachysphex persa Gussakovskij (Group of *T. panzeri*)

♂♂♀♀: En Gev 5.IV.; Binyamina 20.IV.; Jerusalem 1.V.; Kiryat Anavim 30.V.; Dorot 15.IV.; Urim 15.V.; Beersheba 28.III–15.IV.; Revivim 16.V–8.VII.; Yeroham 20.IV–15.V.; Mamshit 28.IV.; En Geddi 20.III.

f. *catharinae* Pulawski: ♂ Tel Aviv 20.III. Sinai: Ste. Catharine Monastery (Pulawski, 1964).

Distribution: Egypt to Asia minor, W. Asia, Transcaspia, Iran.

FE.: IT/Med.

Tachysphex palopterus Dahlbom (Group of *T. panzeri*)

♂♂♀♀: Bne Braç 28.VI.; Ramat Gan 22.V.; Bat Yam 15.V–2.VI.; Urim 15.V.; Beersheba 15.V–14.VI.; Revivim 16.V.

Distribution: N. Africa, Arabia, Israel (light soils of the coastal zone and Negev).

FE.: SS.

Tachysphex horus Beaumont (Group of *T. geniculatus* Spinola)

♀: Gvulot 30.V.

Distribution: Lower Egypt, Israel.

FE.: SS.

Tachysphex luxuriosus Morice (Group of *T. geniculatus*)

♂: Jericho 11.VI.

Distribution: Lybia, Sudan, Egypt, Israel.

Tachysphex inextricabilis Pulawski (Group of *T. geniculatus*)

♂♂♀♀: Jericho 11.VI.; Wadi Audja 22.VII. (4 Paratypes).

Distribution: Egypt, Israel.

FE.: SS.

Tachysphex dignus Kohl (Group of *T. julliani* Kohl)
Jerusalem (Wadi Ruaz) (Pulawski 1971 p. 360).
Distribution: Israel, Cyprus, Asia minor to Iran.
FE.: Eastmed.

Tachysphex julliani Kohl (Group of *T. julliani*)
♀♀: Jerusalem 18.VII. 15 km W Avad 30.VI.70.
Distribution: Circummediterranean to Transcaspia.
FE.: Med.

Tachysphex argentatus Gussakovskij (Group of *T. julliani*)
♂♂♀: Beersheba 14.V.; Mamshit 14.VI.; En Gedi 28.V.64.
Distribution: Egypt, W. Asia, Transcaspia.
FE.: IT.

Tachysphex desertorum F. Morawitz (Group of *T. julliani*) (synonym: *T. abjectus* Kohl)
♂♂♀: Beersheba 5.V.; Mamshit 14.VII.; Wadi Ruth 4.VI.70.
Distribution: Algeria to Egypt, Israel, Iraq, Transcaspia, China.
FE.: Med/IT.

Tachysphex vestitus Kohl (Group of *T. julliani*)
♂♂: Yeroham 20. VIII.; Mamshit 14. VII.; Revivim 14. VII.
Distribution: N. Africa, Sudan, Israel (Negev).
FE.: SS.

Tachysphex schmiedeknechti Kohl (Group of *T. schmiedeknechti*)
♂♂♀♀: Haifa, sand flats on Kishon river 28.VII.; Bat Yam 18.V - 2.VI.; Elat 9.VI (Sch.).
Distribution: N. Africa, Greece, Rhodes, Israel, Turkey, Transcaspia, Iran.
FE.: Eastmed.

Tachysphex costai De Stefani (Group of *T. erythropus* Spinola)
♂♂♀♀: nominate form: Beersheba 23.VI.; Yeroham 1.12.VI. Form with completely black abdomen: Jerusalem 1.X.; Beeri 1.VI. among them also ♀♀ ! 2 generations: VI, X.
Distribution: Mediterranean to Transcaspia.
FE.: Med.

Tachysphex erythropus Spinola (Group of *T. erythropus*) (syn.: *T. fluctuatus* sensu Kohl nec Gerstaecker, *mantivorus* Beaumont).
♂♂♀♀: Tiberias 12.VII.; Pardes Hanna 14.VII.; Jerusalem 11.VI-1.X.; Jericho 20.VII.; Wadi Qilt 28.VI.; Dead Sea 7.VI (leg. Houska); En Hazeva 29.IV.70.; Bne Braq 28.VI.; Ramat Gan 12.VI.; Tel Aviv 24.VI.; Ashqelon 15.X.; Ruhama 22.VI.; Nir Am 26.VIII-5.X.; Shibolim 10.VI (Sch.). Beeri 1.VI.; Beersheba 1.VIII.; Yeroham 8.VI-20.VIII. En Gedi 16.IV-12.VI.; Mezada 17.VI (Sch.); Elat 9.VI (Sch.). ? 2 generations: V-VII, VIII-X.
Distribution: Mediterranean to Transcaspia.
FE.: Circummed.

Tachysphex actaeon Beaumont (Group of *T. erythropus*)

♂♂♀: Tiberias 12.VII. – 16.X.; Daganya (Palmoni). Jerusalem 17.VI. – 1.X (Paratypes).

? 2 generations: VI, VIII–X.

Distribution: Rhodes, Turkey, Lebanon, Cyprus, Israel.

FE.: Eastmed.

Tachysphex maidli Beaumont (Group of *T. erythropus*)

♂♂♀♀: Ramat Gan 6.VI.; Yeroham 1.VI. – 19.VII.; Revivim 14.VII.

Distribution: Southern Mediterranean to Egypt, Israel, Transcaspia.

FE.: Med.

Tachysphex sordidus Dahlbom (Group of *T. erythropus*)

♂♂♀♀: Shibolim 10.VI. (Sch.); Beersheba 14.VI. – 13.VII.; Gvulot 30.V.; Revivim 13.VI.; Yeroham 1.VI. – 19.VII.

Distribution: Eastern Mediterranean (not Egypt), Israel (Negev), Transcaucasia, Transcaspia.

FE.: Eastmed./SS.

Tachysphex grandissimus Gussakovskij (Group of *T. erythropus*)

♂♀♀: Wadi Qilt 2.III. (Houška); Revivim 3.VIII.; Elat 23.IX. ? generations: III, VIII.–IX.

Distribution: N. Africa, Israel (Dead Sea region, Arava, Negev), Arabia, Transcaspia, Iran.

FE.: Med./SS./IT.

Tachysphex albocinctus Lucas (Group of *T. albocinctus*) (Syn.: *T. syriacus* Kohl)

♂♂♀♀: Akko 15.VI. (Sch.); Tel Aviv 7.VI.; Bat Yam 20.V. – 20.VI.; En Qilt 16.VI.; Beersheba 3.VI. – 13.VII.; Yeroham 11.VI. – 20.VIII.; Demona 23.VI.; Sde Boqer 20.VI.; 15 km W. Avdad 30.VI.; Revivim 16.V. – 14.VII.; Elat 9.VI. (Sch.).

Distribution: C. Mediterranean to Israel (Coastal dunes and Negev).

FE.: Circummed.

Tachysphex laticauda Gussakovskij (Group of *T. albocinctus*)

♂: Transjordan: Wadi Debba (leg. Theodor).

Distribution: W. Asia, Transcaucasia, Transcaspia, Iran.

FE.: IT.

Holotachysphex

Holotachysphex holognathus Morice

♂: Jericho 26.VIII.

Distribution: Greece, Egypt, Israel.

FE.: SS.

Holotachysphex mochii Beaumont

♂♂: Tiberias 13.VI. – 12.VII.

Distribution: Rhodes, Israel.

FE.: Eastmed.

Larropsis

Larropsis punctulata Kohl

♂♂♀♀: Jerusalem 1.X. — 14.XI.

Distribution: Iberian Peninsula, N. Africa, Israel.

FE.: Med.

Parapiagetia

Parapiagetia genicularis Morawitz

♂♂♀♀: Yeroham 3-20.IV.

Distribution: N. Africa, Israel.

FE.: SS.

Parapiagetia odontostomsa Kohl

♂♂♀♀: Jordan Valley 18.VII. (leg. Houška); En Gedi 14.VI.; En Boqeq 6.VII.

Distribution: N.E. Africa, Israel

FE.: SS.

Prosopigastra

Prosopigastra (s.str.) *orientalis* Beaumont

♂♂♀♀: Daphne Oaks 2.VI.; Hazor 20.VI.; Tiberias 10.V. — 12.VIII.; Binyamina 7.V.; Jerusalem 29.V. — 13.VIII.; Herzlyia 22.VII.; Nir Am 5.IX.; Ruhama 27.VIII.; Nir Yizchaq 14.IV.; Urim 15.V.; Beersheba 23.VI.

All males have a red abdomen.

Distribution: Eastern Mediterranean to Central Asia.

FE.: Eastmed./It.

Prosopigastra (s.str.) *handlirschi* Morice

♂♂♀♀: En Gev 4.IV.; Bat Yam 8.V.; Beeri 1.VI.; Urim 16.III. — 12.V.; Nir Yizchaq 14.IV.; Wadi Shallal 28.III.; Beersheba 15.III. — 15.V.; Yeroham 20.IV. — 11.V.; Demona 28.IV.; Kallia 26.III.

Distribution: S. Spain, N. Africa, Israel (Negev).

FE.: SS.

Prosopigastra (s. str.) *zalinda* Beaumont

♂♀♀: Jericho 19—26.IV. (leg. Enslin. paratypes); Beersheba 23.VI.

Distribution: N. Africa to Egypt, Israel.

FE.: SS.

Prosopigastra (s.str.) *lissipes* Pulawski, sp. n.

(? *P. angustifrons* Schulthess in Balthasar 1952 p. 270): Wadi Qilt 12.VII.42 leg. Houska)

♂♂♀♀: Jericho 9.II. — 26.VIII.; En Qilt 16.VI.; Yeroham 20.VIII.; Revivim 21.V., 3.VIII.; En Gedi 28.V.; Beersheba 14-23.VI.; Sde Boqer 20.VI.; Egypt: 1 ♂ Maadi near Cairo 18.V.1958 leg. W.J. Pulawski.

Front finely and closely punctate, frontal bulk of usual size, shining and impunctate. Vertex flat, densely punctured. Pilosity of thorax appressed, not hiding the sculpture on mesopleura. Dorsal enclosure of propodeum large, covering practically the whole dorsal side. Mesosternum coarsely punctured. Fore coxae sparsely punctured (except anteriorly in some individuals), punctures spaced several diameters apart. Outer face of hind femora with only a few dispersed punctures. Radial cell with dense microscopic hairs, its fore margin longer than pterostigma. Abdomen and legs reddish, fore and middle femora black in some males.

♀ - Lateral parts of clypeal lip invading the clypeal disc at each side of medial lobe and strongly diverging above; small space between each of them and free margin of clypeus concave. Mesonotum coarsely punctured, its medial part with punctures one diameter or less apart in some individuals, one to three diameters in others. Mesopleura densely and somewhat irregularly punctured, interspaces linear, some of them nearly as large as punctures in several specimens. Pygidial area rounded apically. Length 8-9.5 mm.

♂ - Clypeal lip arcuate or widely pointed; clypeal level with short carina at each side, carinae reaching free margin of clypeus, diverging above, sometimes dilated in tooth; small space between each carina and free margin of clypeus concave. Least interocular distance equal to 1.5-2.5 diameters of anterior ocellus. Mesonotum coarsely but unevenly punctured, punctures mostly one to three diameters apart, some of them

nearly contiguous. Mesopleura closely punctured, interspaces linear or nearly so. Volsella: fig. 6. Length 7-8 mm.

The new species is similar to *P. insignis* Saund., but in that species the pilosity of the mesopleura is rather dense, partially hiding the sculpture, and the fore coxae are closely punctured; in the male, the free margin of the medial lobe of clypeus is split in supero-anterior and infero-anterior margin, and the volsella is different. In *P. latifrons* Guss., the dorsal enclosure of propodeum is smaller and the punctuation of mesosternum is fine; female mesopleura with sparse micropunctuation between punctures; volsella different.

Holotype: 1 ♂ from Maadi in coll. W.J. Pulawski. Paratypes: coll. H. Bytinski-Salz, coll. W.J. Pulawski.

Prosopigastra (Homogambrus) cimicivora Ferton ssp. *acanthophora* Gussakovskij

♂: Jericho 6. VII.

Distribution of the nominate subspecies: N.W. Africa, of ssp. *acanthophora*: Cyprus, Israel, Transcaspia.

FE.: Eastmed./IT.

Prosopigastra (Homogambrus) laevior Morice

♂♂♀♀: Jericho 10.VII.; Beersheba 23.VI.; Revivim 3.V.

Distribution: Morocco, Egypt, Israel (Negev and Dead Sea area).

FE.: SS.

Gastrosericus

Gastrosericus waltli Spinola

♂♂♀♀: Tiberias 13.VI. – 12.VII.; Sichron Yaaqov 3.VI.; Jericho 3.VI. – 2.IX.; En Qilt 16.VI.; En Gedi 16.VI. 2.VI. (Sch.); Mezada 17.VI. (Sch.). Herzlyia 22.VII.; Bne Braq 28.VI.; Tel Aviv 7.VI. – 8.VII.; En Avdat 30.VI.; Wadi Ruth near Nizzana 4.VI.

Distribution: N. Africa to Egypt, Israel, Egean Islands, Turkey, Transcaspia, Mongolia.

FE.: Med./IT.

Gastrosericus drewseni Dahl

♂♂♀♀: Beeri 1.VI.; Beersheba 4-23.VI.; Yeroham 20.VIII.; Revivim 15.VI.

Distribution: Lybia, Egypt, Israel (Negev).

FE.: SS.

Gastrosericus moricei Saunders

♀: En Gedi 7.VI.

Distribution: North Africa, Israel (Dead Sea)

FE.: SS.

Gastrosericus apostoli Beaumont

♂ Wadi Raman 7.VI.

Distribution: Asia minor, Israel.

FE.: Eastmed.

Gastrosericus sanctus Pulawski, sp. n.

♂♂♀♀: Jericho 7.VII.42.; En Gedi 16.V.

Very similar to *G. moricei* Saunders in having the head and thorax covered with dense appressed pubescence; mandibles with a notch, radial cell moderately long (its anterior margin as long as pterostigma), clypeus yellow; in the ♀, pygidial area covered with decumbent setae; in the ♂, first coxae with a long apical seta, gastral sternites 3 and 4 with long appressed fimbriae. The two species may be distinguished as follows: in *G. sanctus* sp. n., anterior margin of clypeus sinuate, female clypeus anteriorly with a pair of short and obtuse longitudinal carinae; in the ♂ apical portion of sternite 2 shallowly depressed, sternites 3 and 4 covered with fimbriae on a large median depressed portion only, abdomen and legs reddish or more or less obscure. In *G. moricei* Saund., clypeus is arcuate (particularly in the ♂) and without carinae on the disc; in the ♂, sternites 2-4 not depressed, sternites 3 and 4 equally covered with fimbriae on the whole surface.

Holotype: ♀ Jericho, coll. H. Bytinski-Salz. Paratypes: coll. H. Bytinski-Salz, coll. W.J. Pulawski.

Tribus: Palarini

Palarus

Palarus spinolae Saussure (Group of *P. variegatus* Fabricius)

♂♂♀♀: Gvulot 10.V.; Beersheba 7.VI. (Sch.), 23.VI.; Revivim 16.V. – 15.VI.; Yeroham 21.V. – 5.VII.

Distribution: Tripolitania, Egypt, Israel (Negev) Arabia?

FE.: SS.

Palarus dongalensis Klug (Group of *P. variegatus*)

♂: Elat 9.VI.65 (leg. Sch. in coll. By. S.).

Distribution: Sudan, C. Sahara, Egypt, Israel (Arava).

FE.: SS.

Palarus saundersi Morice (Group of *P. variegatus*)

♂♂♀♀: Urim 15.V.; Gvulot 15–30.V.; Yeroham 23.V.; Mamshit 1.V. (leg. Theodor).

Distribution: whole of N. Africa–Israel (Negev)

FE.: SS.

Palarus histrio Spinola (syn.: *lepidus* Klug) (Group of *P. histrio* Spinola)

♂♂♀♀: Gvulot 30.V. – 23.VI.; Beersheba 7.VI. (Sch.); Dunes 15 km South of Beersheba 30.V.; Revivim 16.V. – 15.VI.; Yeroham 13.V. – 1.VI.

Distribution: Algerian Sahara, Egypt, Israel (Negev)

FE.: SS.

Palarus hastatifrons Turner (Group of *P. histrio*)

♂♂♀♀: Coastal zone of Dunes: Herzlyia 1.X.; Bat Yam 10.V.; Type series in Brit. Mus. Nat. Hist. from Khan Yunis VII.1917.; Dunes 13–14 Km South of Beersheba 22.IV. – 6.VI.

Distribution: N. African Sahara, Israel (Coastal Dunes and Negev)

FE.: SS.

Palarus ambustus Klug (Group of *P. histrio*)

♂♀: Bat Yam 10.V.; Urim 12.V.; Revivim 6.VI. (Sch.).

Distribution: North Africa, Israel (Coastal Dunes and Negev).

FE.: SS.

Palarus laetus Klug (Group of *P. histrio*)

♂♀: Wadi Ruth (5 Km East of Nizzana) 9.VII.70.

Distribution: Algerian Sahara to Egypt, Israel (Negev).

FE.: SS.

Palarus parvulus Beaumont (Group of *P. histrio*)

♂♂♀: Dunes 14 Km South of Beersheba 22.V.66; Sinai: Kadesh Barnea 3.VII.72.

Distribution: Tripolitania to Egypt, Israel (Negev).

FE.: SS.

Laphyragogus

Laphyragogus pictus Kohl

♂♂♀♀: Herzlyia 1.X.; Bat Yam 10.V. – 5.VII.; Gvulot (leg. Verh.); Beersheba 7.VI.; El Arish 23.V.

Distribution: Egypt, Sinai, Israel (Coastal Dunes and Negev)

FE.: SS.

Laphyragogus pectinatus Beaumont

♂♂♀♀: 17 Km S. of Beersheba 24.V.; Revivim 11.V. – 3.V. (Types in coll Beaumont, Paratypes in coll. By S.)

Distribution: North Africa to Egypt, Israel (Negev, loess soil).

FE.: SS.

Tribus: Miscophini

With this tribe begins a series of genera containing very small and slender S p h e c i d s, which have been collected only in small numbers, by the junior author; fortunately Mr. P.M.F. Verhoeff paid special attention to them during his visits to Israel, and, though not all of his material has been determined, new and interesting records are given in the genera *Miscophus* and *Solierella*. Many single specimens however, could not be determined to the specific level.

Miscophus

Miscophus alfieri Honoré (Group of *M. handlirschi* Kohl)

♂♂♀♀: Ramat Gan; Bat Yam 10.IV.; Kallia 16.III.; Revivim 3.IV. – 14.VII.

Distribution: Lybia, Egypt, Israel (Coastal zone, Negev)

FE.: SS.

Miscophus bytinskii Verhoeff (Group of *M. handlirschi*)

♂: Beersheba 18.V.51 (Type in coll. Verhoeff)

Distribution: Israel (Negev)

FE.: End. (?SS).

Miscophus sericeus Radoszkovsky (Group of *M. gallicus* Kohl)

Jerusalem, Bat Yam V. (Andrade 1954).

Distribution: Transcaspia, Israel, Sudan, whole of N. Africa to Mauritania

FE.: Med.

Miscophus ctenopus Kohl (Group of *M. gallicus*)

♂♀♀♀: Sinai, Tor (Types of Kohl) (Andrade, 1954).

Distribution: Arabia, Sudan, N. Africa to Rio d'Oro.

FE.: SD.

Miscophus mochii Arnold (Group of *M. gallicus*)

Kallia XI.; Revivim V. (Andrade 1954).

Distribution: Israel, Sinai, Egypt, Marocco.

FE.: SS.

Miscophus imitans Giner (Group of *M. gallicus*)

Bat Yam V.; Revivim V. (Andrade 1954).

Distribution: Spanish Sahara, Egypt, Sinai, Israel (Coastal Dunes, Negev).

FE.: SS.

Miscophus cypriacus Andrade *ssp. obscurus* Andrade (Group of *M. gallicus*)

♂♂: Ramat Gan V. (Paratypes).

Distribution: Balkan, Aegean Islands, Cyprus, Israel.

FE.: Eastmed.

Miscophus nigripes Honoré (syn: *lotus* Andrade) (Group of *M. gallicus*)

♂: Sinai: Kadesh Barnea 29.V.

Distribution: Egypt, Sinai.

FE.: SS.

Miscophus hebraeus Andrade (Group of *M. gallicus*)

♂♀: Beersheba 18.V.51 (Types in coll. Verhoeff, Andrade 1954)

Distribution: Israel (Negev)

FE.: SS.

Miscophus similis Morawitz (Group of *M. gallicus*)

Sinai: Ste. Catharina 10.IV. ♀ (coll. Pulawski)

Distribution: Sinai

FE.: (?SS).

Solierella

Solierella compedita Piccioni

♂♂♀♀: Tel Aviv 8-10.VII.; Transjordan Djerash (in coll. Beaum.)

Distribution: C. Europe, Circummediterranean (excl. Lybia and Egypt)

FE.: ES/Med.

Solierella pisonoides Saunders

♂: Jerusalem 17.VIII.

Distribution: Spain, Eastern Mediterranean to Crimea and Turkmenia.

FE.: Med./IT.

Solierella verhoeffi Beaumont

♀♀: Naharyia; Ramat Gan V. (coll. Verhoeff)

Distribution: Greece and its Islands, Cyprus, Israel

FE.: Eastmed.

Subfamily: Trypoxylinae

Pison

Pison sericeum Kohl

♂♂: Kiryat Gat 10.VII.; Nir Am 10.VI.

Distribution: Greece, Cyprus, Turkey, Israel.

FE.: Eastmed.

Pison carinatum Turner

Kvuzat Schiller 25.IX – 1.X.

Distribution: Ethiopia, Egypt, Israel, Cyprus.

FE.: Eastmed./Eth.

Trypoxylon

Trypoxylon clavicerum Lepeletier

♀♀: Rehobot XI.; Ghedera 2.IV. 2 generations? IV – XI.

Distribution: Central Europe, Mediterranean, Asia minor to C. Asia

FE.: ES/Med.

Trypoxylon attenuatum Smith

♂♂♀♀: Binyamina 10.VIII.; Ramat Gan 10.VI.; Nahal Soreq 7.III.

Distribution: Central Europe, Mediterranean, Asia minor to C. Asia.

FE.: Pal.

Trypoxylon scutatum Chevr.

♂♂♀♀: Tiberias 10.V. – 13.VI.; Binyamina 10.VIII.; Herzlyia Dunes X.; Jerusalem 7.V. – 23.VIII.; Wadi Qilt 24.IV.; Dorot 6.VII.; Netivot 10.VI.; Beersheba 14.VII. 2 generations? IV – VIII, X.

Distribution: Central Europe, Mediterranean, Asia minor to C. Asia.

FE.: Pal.

Trypoxylon aegyptium Kohl

♂♂♀♀: Jericho 2.VI.–20.VII.; Tiberias 12.VIII.; Tel Aviv 27.VIII.; Dishon 6.VII.; Wadi Kelt 5.IV. 24.IV.; Wadi Faria 14.VII.70.; En Gedi 16.IV. 2.VI. (Sch.); Sinai: Wadi Watir 1.IX.; Sta Katharina 18.V.

Distribution: N. Africa, Israel.

FE.: SS.

Subfamily: *Pemphredoninae*

Tribus: *Psenini*

Psen

Psen (*Psenulus*) near *fuscipennis* Dahlbom

♀: Tel Aviv 27.IV.

Distribution: Central Europe, Mediterranean.

FE.: ES/Med.

Mimesa

Mimesa (*Mimumesa*) *unicolor* v.d. Linden

♂♀♀: Dan 17.VIII.; Jericho 26.V.; En Gedi 22.VI.

Distribution: Central Europe, Mediterranean to Turkey.

FE.: ES/Med.

Mimesa (Mimesa) bicolor Shuckard

♀: Tel Aviv 10.VI.

Distribution: Central Europe, Mediterranean to Israel.

FE.: ES/Med.

Diodontus

Diodontus minutus Fabricius

♂♀♀: Tel Aviv 7.IV.; Jerusalem 25.V.—8.VII.

Distribution: Central Europe, Mediterranean to Asia minor

FE.: ES/Med.

Diodontus moricei Kohl

♂♂♀: En Gev 23.IV.; Jericho 2.II.; Wadi Qilt 15.III (Houška); Rehovot 7.VI.; Beersheba 28.IV.

Distribution: Egypt, Israel.

FE.: SS?

Diodontus temporalis Kohl

♂♂♀♀: Dan 20.III.; Daphne Oaks 13.V.; Jerusalem 11.III.—18.IV. and 3.V. (Houška); Jericho (leg. Schmiedeknecht, Typus).

Distribution: Israel, Syria, Turkey.

FE.: Eastmed.

Tribus: Pemphredonini

Pemphredon

Pemphredon lethifer Shuckard

♂♂♀: Dan 20.III.; Tel Aviv 20.III.; Jerusalem 17.VII.; Kiryat Anavim 17.IX.

? 2 generations: III, VII—IX.

Distribution: East Mediterranean to Asia minor.

FE.: Eastmed.

Subfamily: Crabroninae

Rhopalum

Rhopalum austriacum Kohl (det.J.Leclercq).

♀: Rehovot 15.VII.

Distribution: Switzerland, C.S.R. Austria; this is the first record outside its rather restricted area of distribution.

FE.: Eastmed.?

Lindenius

Lindenius hamilcar Kohl

♀: Jerusalem-Jericho Road km. 18. 13.II.

Distribution: Canaries to Algiers, Israel.

FE.: Southmed.

Lindenius helleri Kohl

♂: Bethlehem 8.IV.1899 (Morice leg.)

Distribution: Israel, Greece, Asia minor.

FE.: Eastmed.

Lindenius albilabris Fabricius

Mentioned by Bodenheimer (1937); its occurrence in Israel is likely, but the quotation may refer also to the following species.

Distribution: Whole of Europe, East to Mongolia, Algeria, Asia minor.

FE.: Pal.

Lindenius ibex Kohl ssp. *syriacus* Kohl

♂♂♀♀: Wadi Ara 15.V.; Jerusalem 23.IV.—6.V.; Gat 24.III.

Distribution of nominate ssp.: Algiers, Corfu, Asia minor; of ssp. *syriacus*: Israel.

FE.: End. (Eastmed.)

Lindenius pygmaeus Rossi ssp. *armatus* v.d.Linden

♂♂♀♀: Tiberias 12.VIII.; Sichron Yaaqov 3.VI.; Jericho 2.VI.; Nahal Soreq 18.VIII.; Tel Aviv 16-26.VI. 3.IX. Two generations ?

Distribution of nominate ssp.: Whole of Europe East to S. Russia; of ssp. *armatus*: same distribution but further East to Israel, Syria, Asia minor.

FE.: Eastmed.

Lindenius crenulifer Kohl

♂♂: Daverat 18.IV.; Jerusalem 22.IV.—1.V.

Distribution: "Syria" (Type), Israel.

FE.: End. (Eastmed.)

Entomognathus

Entomognathus brevis v.d.Linden.

Mentioned by Bodenheimer (1937); its occurrence in Israel is likely.

Distribution: C. Europe to E. Asia; Mediterranean to Egypt, Asia minor, Iran.

FE.: Pal.

Entomognathus libanonis Kohl

Distribution: Lebanon.

FE.: End. (Eastmed.?)

Crossocerus

Crossocerus (s.str.) palmipes Linne'

Mentioned by Bodenheimer (1937); its occurrence in Israel is likely.

Distribution: Whole of Europe to East Asia, Asia minor.

FE.: Pal.

Crossocerus (s.str.) adhaesus Kohl

♂♂♀♀: Binyamina 20.IV.—29.V.; Tel Aviv 10.V. (nest in flower pot); Rehovot 3.V.; Jericho-Wadi Qilt 4.III.—2.VI.; Wadi Sick 2.IV.

Distribution: Cyprus, Israel, Asia minor, Iran.

FE.: Eastmed.

Corssocerus (Coelocrabro) acanthophorus Kohl (det. J. Leclercq)

♀: Wadi Amud near Safed 17.VII.

Distribution: C. and E. Europe, Israel, Asia minor.

FE.: Eur./Eastmed.

Crossocerus (Hoplocrabro) quadrimaculatus Fabricius

Mentioned by Bodenheimer (1937); its occurrence in Israel is likely.

Distribution: Whole of Europe to Siberia; Algeria, Asia minor.

FE.: Pal.

Tracheloides

Tracheloides quinquevotatus Jurine

Mentioned by Bodenheimer (1937); its occurrence in Israel is likely.

Distribution: C. Europe, Mediterranean to Egypt, Rhodes but not mentioned from Asia minor.

FE.: Pal.

Dasyproctus

Dasyproctus arabs Kohl

♂♂♀♀: Yeroham 5.VII.; En Gedi 18.III.—1.V.; Wadi Hasasa 7.VII.; En Boqeç 28.IX.; En Hazeva 18.V.; Elat 9.VI. (Sch.)

Distribution: East Africa, Egypt, Israel, Syria, ?Beluchistan.

FE.: Eth/SS.

Ectemnius

Ectemnius (Hypocrabro) impressus Smith

♂♂♀♀: Elon 25.V.; Akko 15.VI. (Sch.); Haifa 27.V. 20.VI. (Sch.); Wadi Bet Oren 20.IV.; Bet HaShita 8.V.; Tiberias 21.III.—12.V.; Nablus 30.V.; Jerusalem 9.V.—2.VI.; Ramla 24.VI.; Ramat Gan 31.V.; Tel Aviv 10.VI.; Beerot Yizhaç 25.V.; Beersheba 28.IV.—13.VI.; En Gedi 2.VI. (Sch.)

Distribution: Italy, Balkans to S. Russia; N. Africa, Israel to Asia minor, Iran.

FE.: Circummed./IT.

Ectemnius (Hypocrabro) continuus Fabricius

♂♂♀♀: Tiberias 15.VI. (Sch.); Naharyia 11.VI.; Givat Hayim 24.IV.; Tel Aviv 16.VI.

Distribution: N. America, whole Palaearctic region.

FE.: Holarct.

Ectemnius (Hypocrabro) laevigatus De Stefani

♂♂♀♀: Rosh HaNiqra 9.VII.; Gadot 3.VII.; Mt. Meron 1000 m 16.VI.; Tiberias 12.VII.; Jerusalem IX.; Ramat Gan 14.V.; Rehovot 20.X.; Gat 10.VIII.; En Gedi 30.III.

? 2 generations: III—VI; VIII—X.

Distribution: Circummediterranean, Asia minor to C. Asia.

FE.: Med./IT.

Ectemnius (Hypocrabro) hypsae De Stefani

♂♂♀♀: Daphne 3.X.; Jerusalem 20.VIII.

Distribution: Circummediterranean, East to Israel.

FE.: Circ.med.

Ectemnius (s.str.) *dives* Lepeletier et Brullé

♀: Elon 25.V.

Distribution: North America, whole Palaearctic region.

FE.: Holarct.

Ectemnius (*Thyreocerus*) *crassicornis* Spinola

♂♂♀♀: Mt. Hermon 1900 m 27.VII.; Elon 25.V.-9.VII.; Safed 17.VII.; Tiberias 12.VIII.; Haifa 27.V.; 20.VI. (Sch.); Pardess Hanna VIII.; Ramat Gan 9.V.; Tel Aviv 17.IV.; Jerusalem 23.IV.-11.X.; 9km S. of Bet Shean 14.VII.; Wadi Faria 28.IV.; Jericho-Wadi Qilt 16.VI.-26.VIII.; En Gedi 2.VI. (Sch.); Ruhama 27.VIII.; Beersheba 4.VI.

Distribution: Northern Mediterranean to Asia minor, Israel, S. Russia to Siberia.

FE.: ES/Med.

Lestica

Lestica (*Clypeocrabro*) *clypeata* Schreber

♂♂♀♀: Rosh HaNiqra 9.VII.; Elon 25.V.; Baniyas 18.V.; Amir 16.VIII.; Safed 17.VII.; Tiberias 12.VII.; Geva 5.IX.; Alonim 26.IV.; Haifa 27.V.; 20.VI. (Sch.); Haifa-Carmel 18.VI.; Sichron Yaaqov 3.VI.; Binyamina 16.III.-1.VI.; Ramla 24.IV.; Ramat HaSharon 19.VIII.; Ramat Gan 14.V.; Tel Aviv 5-16.VI.; Holon 8.IV.; Jerusalem 24.IV.-24.IX. (also Houška); En Gedi 1.V.

Distribution: Whole Europe to Transbaikal, whole Mediterranean East to Iran.

FE.: ES./Med./IT.

Subfamily: OXYBELINAE

Oxybelus

Mr. P.M.F. Verhoeff, Utrecht, kindly determined all the *Oxybelus* material collected by the junior author up to 1954, and the list given below comprises these specimens. Several hundred additional specimens sent to him later still await determination.

Oxybelus lamellatus Olivier

♂♂♀♀: Haifa Coast 27. VII.; Beisan 4.IX.; Wadi Fara 19.V.; Jordan near Dead Sea 21.V.; Kallia 16.VIII.; Jerusalem 4-17.VIII.; Ruhama 27.VIII.; Beersheba 4.IX.; Sinai: Feiran 7.IV. (Pulawski). ? 2 generations.

Distribution: S. Mediterranean to Asia minor and Iran.

FE.: SS/Med.

Oxybelus victor Lep. ssp. *melancholicus* Chevrolat

♂♂♀♀: Bet Lid 1.IV.; Ramat Gan 13.-23. V.; Bat Yam 15.IV.; Beer Tuvia 3.VI.

Distribution: Wallis, Circummediterranean to Asia minor and Iran.

FE.: Med.

Oxybelus quattuordecimnotatus Jurine

♂♂♀♀: Rosh Haniqra 9.VII.; Bet Lid 1.IV.; Raanana 26.X.; Ramat Gan 9.-14.V.; Tel Aviv 6.V.; Wadi Fara 19.V.; Jerusalem 4.-7.IX.; Beeri 1.VI.; Beersheba 28.VI. ? 2 Generations.

Distribution: Whole Europe and Mediterranean to Central Asia.

FE.: ES/Med.

Oxybelus aurantiacus Mocsary

♂: Jericho 26.VIII.

Distribution: Circummediterranean to Asia minor.

FE.: Med.

Oxybelus bipunctatus Olivier

♂♂♀♀: Ramat Gan 8.-14.V. (ssp. nov. according to de Beaumont, Turkey 1967).

Distribution: C. Europe, Circummediterranean to Asia minor.

FE.: ES/Med.

Oxybelus pugnax Olivier

♂♂♀♀: Bet Lid 1.IV.; Raanana 9.V.-26.X.; Ramat Gan 9.-17.V.; Jerusalem 15.V.-5.X.

? 2 Generations.

Distribution: C. Europe, Circummediterranean

FE.: ES/Med.

Oxybelus dissectus Dahlb. ssp. *elegans* Mocsary or var.

♂♂: En Charod 1.IX.; Beeri 1.VI.

Distribution: E. Europe, E. Mediterranean to Asia minor

FE.: ES/Eastmed.

Oxybelus subspinosus Klug ssp.?

♂♂♀♀: Raanana 26.X.; Ramat Gan 9.V.-26.X.; Jerusalem 25.V.-4.VII. 15 km East of

Gaza 10.VI. ? 2 Generations.

Distribution: Spain, Portugal, Hungary, E. Mediterranean to Asia minor.

FE.: Med.

Oxybelus fischeri Spinola

♂♂♀♀: Raanana 26.X.; Tel Aviv 1.IV.; Bat Yam 15.-21.IV.; Jerusalem 4.IX.; En Gedi

17.III.; Nir Am 21.III.; Revivim 10.X. ? 2 Generations.

Distribution: South Mediterranean

FE.: SS.

Belomicrus

A number of specimens collected by P.M.F. Verhoeff and H. Bytinski-Salz are still with the first author for determination. Kohl 1923: Die Hymenopteren-Gattung *Belomicrus* A. Costa (s.l.) Konowia 2 p. 98 ff.) describes and mentions the following species from Palestine: *B. obscurus*. *B. waterstoni*. *B. moricei*.

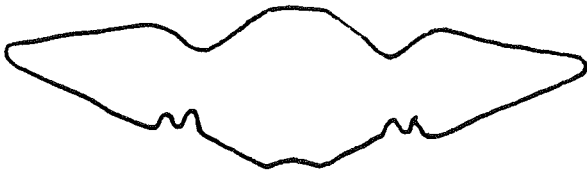


Fig. 1

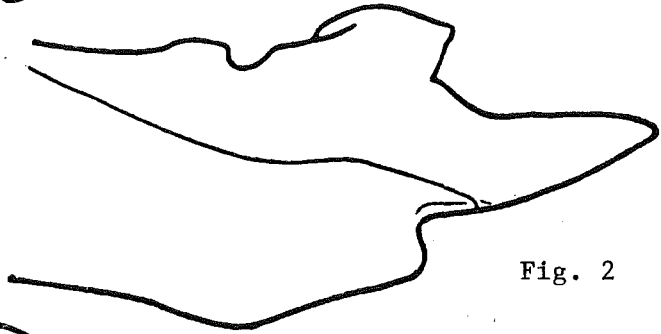


Fig. 2



Fig. 3

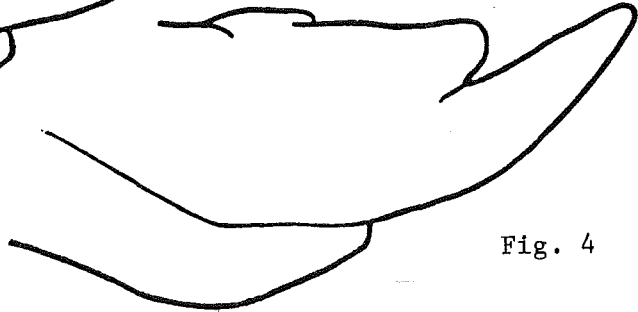


Fig. 4

Fig. 1-4. *Astata tricolor monochroma* Pulawski, ssp. n. ♂; 1 - clypeus, 2 - mandible, outer side, 3 - mandible, dorsal side, 4 - mandible of an aberrant specimen, dorsal side.

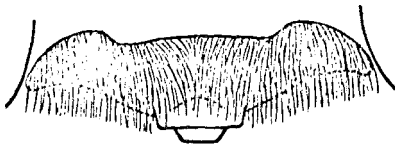


Fig. 5

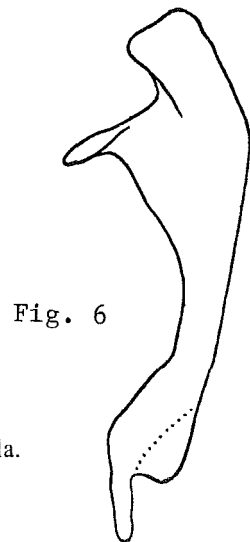


Fig. 6

Fig. 5-6 *Prosopigastra lissipes* Pulawski, sp. n. ♂; 5 - clypeus, volsella.