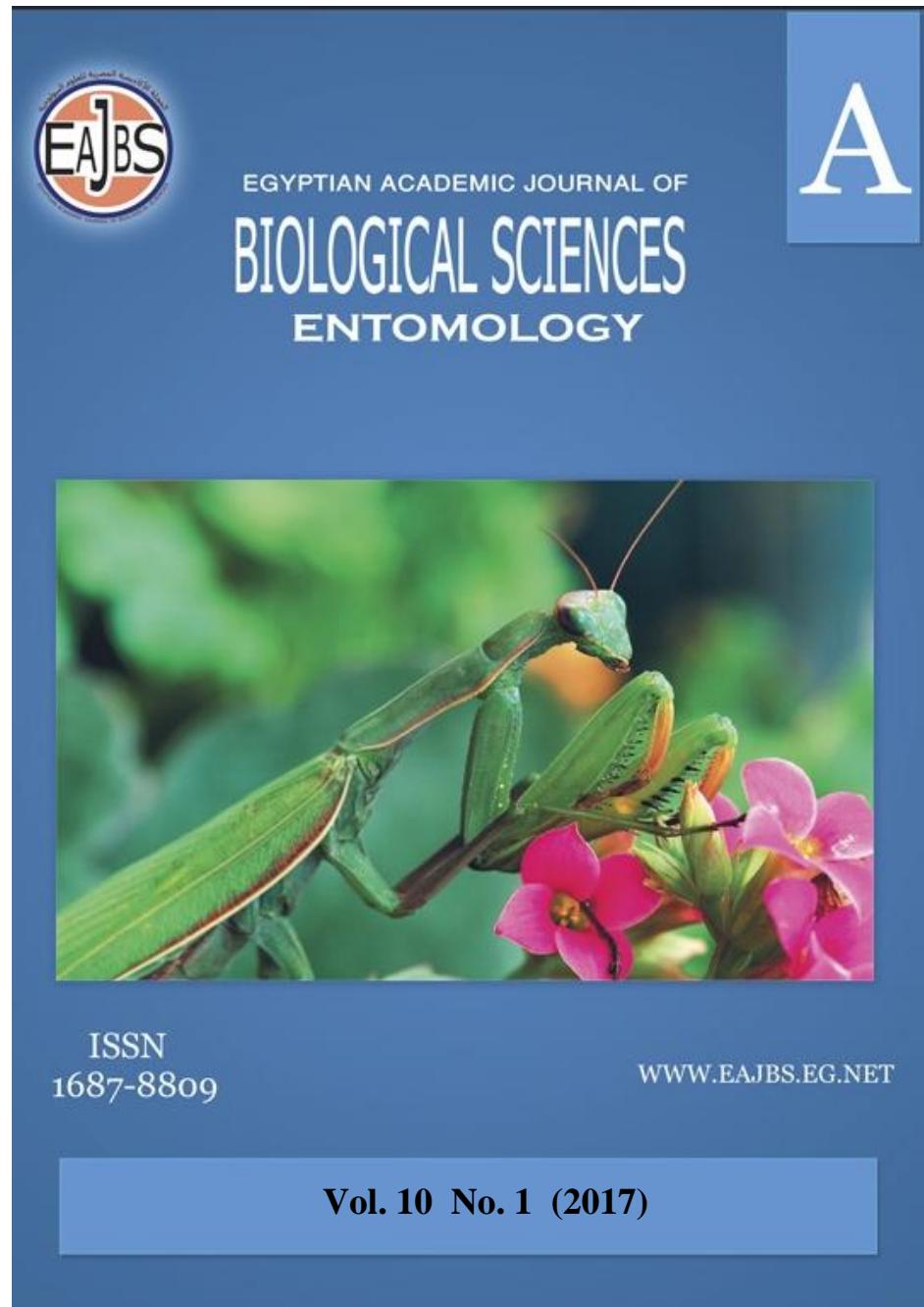


**Provided for non-commercial research and education use.
Not for reproduction, distribution or commercial use.**



Egyptian Academic Journal of Biological Sciences is the official English language journal of the Egyptian Society for Biological Sciences, Department of Entomology, Faculty of Sciences Ain Shams University. Entomology Journal publishes original research papers and reviews from any entomological discipline or from directly allied fields in ecology, behavioral biology, physiology, biochemistry, development, genetics, systematics, morphology, evolution, control of insects, arachnids, and general entomology.

www.eajbs.eg.net



A checklist With Some Taxonomic Notes on the Species of the Family Megachilidae (Hymenoptera:Apoidea) Recorded in Egypt

Salem, M. M. and El-Azab, S. A.

Plant Protection Research Institute, A. R. C., Dokki, Egypt.

ARTICLE INFO

Article History

Received: 7/1/2017

Accepted: 10/2/2017

Keywords:

Hymenoptera

Apoidea

Megachilidae

Egypt

ABSTRACT

A checklist of the family Megachilidae existing in Egypt is given, based on material kept in the main reference insect collections in Egypt and records in the literature. The list includes 102 species and 6 subspecies belonging to 9 genera of 5 tribes (Anthidini, Fidelini, Lithorgini, Megachilini, and Osmini) under two subfamilies (Fidelinae and Megachilinae), of which 84 species of seven genera and the six subspecies are insect pollinators, and 18 species of two genera are cleptoparasites.

Updated scientific names and synonyms are presented together with taxonomic notes on host records and distribution for most species in Egypt. All taxa (subfamilies, tribes, genera and species) are alphabetically arranged.

INTRODUCTION

Wild bees are one of the most attractive insects for their diversity, unique behavior and importance as true pollinators of various plants. The family Megachilidae is a large and cosmopolitan group of these bees with many species distributed in all major zoogeographical regions of the world. Most members are known as leaf-cutting bees due to their habits of cutting leaves of plants to construct and line their nests and some are cleptoparasites. They are long-tongued and stout bodied bees, varied in size from small to moderately large, black or brown with white or silvery hairs, the underside of the female's abdomen has a dense brush of hairs (Scopa). Males are usually smaller.

Various classifications and many taxonomic studies and notes were made by Griswold (1994), Griswold and Michener (1988 and 1997), Michener (1944, 1965, 1883, 1996, 1997 and 2000) and Gupta (1993). Complete phylogenetic analysis for the long tongued bees was published by Roig-Alsina and Michener (1993).

The group had received little taxonomic attention in Egypt, until the work of Farghaly, Doaa (2006) who taxonomically revised the family in Egypt, although, the early taxonomic work was that of Alfken (1932 and 1934) who was the first investigator studied the Egyptian fauna of family Megachilidae, giving full descriptions for some species and keyed the available species of the genera *Anthidium*, *Chalicodoma* and *Megachile*.

The present work provides an updated checklist of the species recorded in Egypt, together with taxonomic notes including host records and distribution.

MATERIALS AND METHODS

The present work is based on all records of the species of the family

Megachilidae recorded from Egypt, whether represented by specimens in the main reference insect collections in Egypt, i.e. Ministry of Agriculture, Plant Protection Research Institute Collection ; Alfieri Collection, Faculty of Agriculture, Al-Azhar University; Egyptian Entomological Society Collection; Cairo University Collection, Department of Entomology, Faculty of Science and Ain Shams University Collection, Department of Entomology, Faculty of Science or reported in the literature. Recent names, recent taxonomic position and senior synonyms are presented. Taxonomic notes including host records, distribution in Egypt and date of collection are provided. The checklist are alphabetically arranged.

RESULTS AND DISCUSSION

Family Megachilidae

Subfamily Fideliinae Cockerell, 1932

Tribe Pararhophitini Popov, 1949

Genus *Pararhophites* Friese, 1898

***Pararhophites quadratus* (Friese, 1898)**

Date of collection: March – April

Subfamily Megachilinae Latreille, 1802

Tribe Anthidiini Ashmead, 1899

Genus *Anthidium* Fabricius, 1804

***Anthidium afrum* Lepeletier, 1841**

(= *Icteranthidium afrum* (Lepeletier, 1841))

Distribution: Giza (Abu Rawash)

Date of collection: July

***Anthidium amabile* Alfken, 1932**

Distribution: Giza (Kafr Hakim), Nile Delta

Date of collection: August

***Anthidium cinctum* Klug, 1832**

Distribution: Cairo (Maadi, Massara, Helwan, Wadi Degla, Wadi Hoff), Behera (Khatatbah), Giza (Pyramids), Qalyobya (Gabal Asfar)

Date of collection: May, July, August, September, October

***Anthidium decoloratum* Alfken, 1932**

(= *Icteranthidium decoloratum* (Alfken, 1932))

Distribution: Giza (Mazghuna, Abu Rawash, Pyramids, Borgash), Nile Delta

Date of collection: May, June, August

***Anthidium denticulatum* Alfken, 1932**

(= *Pachyanthidium denticulatum* (Alfken, 1932))

***Anthidium echinatum* Klug, 1832**

Distribution: Giza (Com Osheim), Western desert, Nile Delta

Date of collection: April

Anthidium eremicum Alfken, 1938
Anthidium ensilini Alfken, 1938

Distribution: Aswan, Giza (Com Osheim), Upper Nile

Date of collection: January, May

Anthidium ferrugineum Fabricius, 1797
Anthidium ferrugineum aegypticolum Alfken, 1932
(= *Anthidium aegypticolum* Alfken, 1932)

Distribution: Cairo (Helwan), Giza (Borgash, Mansouriah)

Date of collection: April and May

Anthidium ferrugineum subhyalium Fabricius, 1775

Host records: Alfalfa, Egyptian clover, Tamarisk, Wild weeds

Distribution: Fayoum, Kharga Oasis, Matrouh (Burg El Arab), Ismailia, Cairo (Helwan), Giza (El Mallah), Alexandria (Sabahya)

Date of collection: May, July, August, October

Anthidium ferrugineum subzonatum Alfken, 1932

Host records: Egyptian clover

Distribution: Cairo (Ezbet El Nakhl, Heliopolis), Alexandria, Giza (El Mansouriah, Kafr Hakim, Pyramids), Red Sea (Gabal Elba), Qalyobyia (Gabal Asfar)

Date of collection: February, April - May, July - September

Anthidium ferrugineum thoracicum Mocsary, 1848

Host records: Sweet melon, Wild Weeds

Distribution: Cairo, Alexandria (Mariout), Giza (Borgash, Kerdassa, Embaba, Com Osheim, Pyramids), Qalyobyia (Gabal Asfar), Matrouh

Date of collection: May – September

Anthidium inornatum Cockerell, 1936

Distribution: Red Sea (Gabal Elba)

Date of collection: February

Anthidium flavipes Morawitz, 1894

Distribution: Red Sea (Gabal Elba)

Date of collection: June

Anthidium limbiferum Morawitz, 1875

Distribution: New Valley (Kharga Oasis), Siuth Sinai (Wadi Hussein), Cairo (Wadi Degla), Qalyobyia (Gabal Asfar, Tura), Ismailia, Giza (Com Osheim, Pyramids), Western desert

Date of collection: May - September

Anthidium lituratum (Panzer, 1801)
Anthidium ochrognathum Alfken, 1932
 (= *Pseudoanthidium ochrognathum* Alfken, 1932)

Distribution: Giza (Abu Rawash, Mansouriah), Wadi Assiout
Date of collection: May - July

Anthidium ornatum Lepeletier, 1841
Anthidium pulchellum Klug, 1832
 (= *Anthidium nitidicolle* Friese, 1897)
 (= *Anthidium asniense* Cockerell, 1931)

Distribution: Wadi Assiout, Cairo (Wadi Degla), Giza (Com Osheim, Pyramids), Upper Nile
Date of collection: April – May, July, October

Anthidium subochraceum Walker, 1871
Anthidium tessellatum Klug, 1832
 (= *Anthidium helvolum* Klug, 1832)
 (= *Anthidium waltlii* Spinola, 1838)
 (= *Anthidium villosulum* Smith, 1854)
 (= *Anthidium signiferum* Walker, 1871)
 (= *Anthidium tessellatum* var. *aegyptiacum* Friese, 1897)

Distribution: Nile Delta

Anthidium tessellatum var. *aegyptiacum* Friese, 1897
 (= *Anthidium aegyptiacum* Friese, 1897)

Distribution: Nile Delta

Tribe Lithurgini Newman, 1834
 Genus *Lithurgus* Latreille, 1825
Lithurgus chrysurus Fonscolombe, 1834
 (= *Lithurgus haemorrhoidalis* Lepeletier, 1841)
 (= *Lithurgus monocerus* Morawitz, 1873)

Distribution: Nile Delta

Lithurgus tibialis Morawitz, 1875
 Tribe Megachilini Latreille, 1802
 Genus *Chalicodoma* Lepeletier, 1841
Chalicodoma aegyptia Lepeletier, 1841
 (= *Megachile aegyptia* Lepeletier, 1841)

Distribution: Alexandria (King Mariout), Cairo (Wadi Hoff), Giza (Mansouriah, Kom Osheim), Dakahlyia (Mansoura), Ismailia, Qena (Mataana), Sharkya (Zagazig), Gharbia (Tanta), Menoufia (Quesna)

Date of collection: March - May

***Chalicodoma albocinctum* Radoszkowski, 1874**
(= *Megachile albocincta* Radoszkowski, 1874)
(= *Megachile picicornis* Morawitz, 1878)

Host records: Egyptian clover

Distribution: Aswan (Com Ombo), Qena (Luxor), Giza (Com Osheim), Matrouh (Borg El Arab, Mersa Matrouh)

Date of collection: January, June

***Chalicodoma atrocastanea* Alfskin, 1932**
(= *Megachile atrocastanea* Alfskin, 1932)

Distribution: Upper Nile

***Chalicodoma brenicki* Radoszkowski, 1876**

Distribution: Upper Nile, Aswan (Com Ombo), Matrouh (Borg El Arab, Mersa Matrouh)

Date of collection: March - May

***Chalicodoma desertorum* Morawitz, 1875**
(= *Megachile desertorum* Morawitz, 1875)

Distribution: Fayoum, Behera (Wadi Rashid)

Date of collection: January, April

***Chalicodoma incertum* Radoszkowski, 1876**
(= *Megachile incerta* Radoszkowski, 1876)

Distribution: Lower Nile, Cairo (Meadi, Wadi Hoff, Helwan), Giza (Kerdassa), Red Sea (Gabal Elba), Suez (Etaka, Suez road), Qualyobya (Gabal Asfar), Alexandria (Dekhila)

Date of collection: January - May

***Chalicodoma muraria* (Retzuis, 1783)**
(= *Apis muraria* Retzuis, 1783)
(= *Apis caementaria* Meinecke, 1784)
(= *Apis parietina* Fouecroy, 1785)
(= *Apis bryorum* Villers, 1789)
(= *Apis varians* Rossi, 1792)
(= *Megachile nestorea* Brulle, 1832)
(= *Chalicodoma hungarica* Mocsary, 1877)
(= *Megachile muraria* Friese, 1899)

Host records: Lotus

Distribution: Costal strip, Alexandria (King Mariout)

Date of collection: March

***Chalicodoma nasidens* Friese, 1898**
***Chalicodoma nigrita* Radoszkowski, 1876**
(= *Megachile nigrita* Radoszkowski, 1876)

Distribution: New Valley (Dakhla and Kharga Oasis), Suez (Suez road)

Date of collection: March

Chalicodoma siculum (Rossi, 1792)(=*Apis sicula* Rossi, 1792)(=*Anthophora sicula* Illiger, 1806)(=*Chalicodoma sicula* Radoszkowski, 1873)(=*Megachile sicula* Latreille, 1809)**Host records:** Raddish, Egyptian clover, Fenugreek, Almond, Kidney bean, Wild weeds, Lupin, Mustard, Safsaf**Distribution:** Western desert, Upper Nile, Lower Nile, Cairo (Meadi, Wadi Halfa), Giza (Kerdassa, Mansouriah, Abu Rawash), Aswan (Edfu), Qualyobyia (Tura), Matrouh (Borg El Arab, Mersa Matrouh)**Date of collection:** January - April, June - August, November - December***Chalicodoma siculum albifacies Alfken*****Distribution:** Upper Nile, Lower Nile**Genus *Megachile* Latreille, 1802*****Megachile arabica* Friese, 1898****Distribution:** Red Sea (Gabal Elba)**Date of collection:** January – February***Megachile argentata* (Fabricius, 1793)**(=*Apis argentata* Fabricius, 1793)(=*Apis albiventris* Panzer, 1898)(=*Megachile argentata* Spinola, 1806)(=*Anthophora albiventris* Panzer, 1806)(=*Trachusa argentata* Lurine, 1807)(=*Megachile leachella* Curtis, 1828)**Distribution:** Western desert, Upper Nile, Lower Nile, Cairo (Meadi), Qena (Naga Hamadi), Alexandria (Mamoura), Giza, Qualyobiya (Tura), Demmiata (Ras El Bar)**Date of collection:** June – September***Megachile cinnamomea* Alfken, 1934****Distribution:** Giza (Abu Rawash, Borgash, Dahshour, Kerdassa), Lower Nile, Cairo (Marg, Helwan), Sohag (Gerga), Qualyobiya (Gabal Asfar), Dakahlyia (Aga)**Date of collection:** February - June***Megachile conficta* Walker, 1871*****Megachile decosa* Gerstaecker, 1869*****Megachile derasa* Gerstaecker, 1869****Distribution:** Cairo, Giza (Kerdassa)**Date of collection:** May

Megachile despecta Walker, 1871

Megachile farinosa Smith, 1853

Megachile flavipes Spinola, 1838

(= *Chalicodoma (Pseudomegachile) flavipes* Spinola, 1838)

Host records: Grasses, Lupin, Potatos, Halfa, Wild weeds

Distribution: Upper Nile, Lower Nile, Cairo (Helwan, Maassara, Meadi, Wadi Malah, Ezbet El Nakhl, Zeiton, Marg), Giza (Embaba, Pyramids, Sakara, Abu Rawash, Kafr Hakim, Mansouriah, Nahia, Kerdassa, Borgash), Suez, Minia, Qualyobiya (Tura), Demmiatta (Faraskour), Red Sea (Gabal Elba), Beni suif, South Saini (Wadi um Reshrash), Alexandria

Date of collection: February - September

Megachile fulvocrinita Alfken, 1934

Distribution: Alexandria (Abu Qir), Matrouh (Salloum)

Date of collection: April - May

Megachile fumosa Alfken, 1934

Distribution: Western desert, Costal strip, Lower Nile, Behera (Edkou), Qena (Dendera), Alexandria (Max, Dekhila)

Date of collection: February, May - June

Megachile impressipuncta Alfken, 1934

Distribution: Sinai

Megachile incana Friese, 1898

Distribution: Matrouh (Burg El Arab, Lower Nile, Cairo (El Malay, wadi Hoff), Giza (Borgash), Minia (Bahnassa)

Date of collection: Febrauary, May, July

Megachile inficta Walker, 1871

Megachile lagopoda Linnaeus, 1761

(= *Apis lagopoda* Linnaeus, 1761)

(= *Apis lagopus* Gmelin, 1790)

(= *Anthophora lagopoda* Fabricius, 1804)

(= *Trachusa legapoda* Jurine, 1807)

(= *Megachile pyrina* Lepeletier, 1841)

Distribution: Cairo (Wadi Degla, Meadi)

Date of collection: May, July

Megachile levistriga Alfken, 1934

Distribution: Qualyobia (Gabal Asfar), Giza (Kom Osheim, Kerdassa), Cairo (Wadi Hoff, Matariah, Zeitoun), Ismailia

Date of collection: March - July

***Megachile minutissima* Radoszkowski, 1876**

Host records: Egyptian clover, Maize

Distribution: Western desert, Cairo (Ain Shams, Shubra, Wadi Hoff, Marg), Giza (Borgash, Pyramids, Com Osheim, Kerdassa), Kafr El Skeikh (Sidi Salem), Fayoum, New Valley (Dakhla Oasis, Kharga Oasis), Ismailia, Matrouh (Borg El Arab), Qena (Mataana), Beni Suef

Date of collection: March - September

***Megachile mucorea* Friese, 1898**

Host records: Raddish, Egyptian clover, Wild weeds, Rocket, Egg plant, Goose foot

Distribution: Giza (Mazghuna, Mansouriah), Assiut, Dakahlyia (Mansourah), Ismailia, Alexandria, Qena (Mataana), Sharkyia (Zagazig), Gharbia (Tanta), Menofyia (Quesna)

Date of collection: March - June

***Megachile nigricans* Alfken, 1905**

***Megachile nigripes* Spinola, 1838**

(= *Megachile nilotica* Pérez, 1897)

(= *Megachile mucorea* Friese, 1898)

(= *Chalicodoma (Pseudomegachile) nigripes* Spinola, 1838)

Distribution: Lower Nile, Cairo (Helwan, Meadi, Ezbet El Nakhl, Marg, Heliopolis), Upper Nile, Giza (Pyramids, Sakara, Mansouriah, Nahia), Behira (Wadi Rashid), Assiut, Qualyoubyia (Qaha), Minia (Skeikh Fadl)

Date of collection: January, March - June

***Megachile patellimana* Spinola, 1838**

Host records: Egyptian clover, Maize, Egg plant

Distribution: Western desert, Lower Nile, Cairo (Marg, Meadi), New Valley (Kharga Oasis, Dakhla Oasis), Giza (Abu Rawash, Mansouriah, Borgash, Pyramids, Com Osheim), Behira (Khatatba), Beni Suif, Ismailia, Alexandria, Qena (Mataana), Sharkyia (Zagazig)

Date of collection: February, May – July, September

***Megachile picicornis* (Morawitz, 1877)**

***Megachile pilidans* Alfken, 1934**

Host records: Egyptian clover

Distribution: Giza (Abu Rawash, Barrage, Pyramids), Suez, Ismailia, Matrouh

Date of collection: July – August, October

***Megachile provincialis* Perez, 1897**

Distribution: Lower Nile, Giza (Abu Rawash), Matrouh (Borg El Arab), Alexandria (King Mariout)

Date of collection: June

Megachile rugipuncta Alfken, 1926
Megachile submucida Alfken, 1934

Host records: Alfalfa, Egyptian clover, Mint, Tomato, Ground nut, Jews mallow, Wild weeds

Distribution: Cairo (Marg, Wadi Hoff), Giza (Embaba, Barrage, Kerdassa, Pyramids, SakaraCom Osheim), Fayoum, Qualyobyia (Gabal Asfar), Behira (Khatatba), Matrouh (Borg El Arab, Mersa Matrouh, Siwa), New Valley (Kharga Oasis, Dakhla Oasis), Qena (Armant), Alexandria, Ismailia, Demmiatta

Date of collection: February – June, July - November

Megachile uniformis Morawitz, 1877

Distribution: Western desert, Lower Nile

Megachile venusta Smith, 1853
Tribe Osmini Newman, 1834
Genus *Heriades* Spinola, 1808
Heriades moricei Friese, 1897
(= *Eriades moricei* Friese, 1897)

Distribution: Cairo (Heliopolis, Zeitoun, Ezbet El Nakhl, Meadi, Helwan), Giza (Pyramids, Embaba), Sharkiya (Zagazig, Abu Kebir)

Date of collection: April – July, September

Genus *Osmia* Panzer, 1806
Osmia balearica Schmiedeknecht, 1885
Osmia bidentata Morawitz, 1876

Date of collection: March, June

Osmia crenulata Morawitz, 1872

Distribution: Western desert, Lower Nile, Alexandria (Dekhila), Giza (Kafr Hakim)

Date of collection: March, June

Osmia cyanoxantha Perez, 1879
Osmia decemsignata Radoszkowski, 1874
(= *Osmia laterefasciata* Costa, 1885)

Distribution: Lower Nile, Cairo (Meadi, Zitoun, Mattariah, Marg), Giza, Matrouh (Borg El Arab)

Date of collection: March – May, July - August

Osmia derasa Perez, 1895
Osmia dimidiata Morawitz, 1871
(= *Osmia cephalotes* Perez, 1879)

Distribution: Lower Nile, Sharkiya (Zagazig), Dakahlyia (Mit Ghamr), Matrouh (Borg El Arab)

Date of collection: April – May, October

***Osmia fasciata* Latrielle, 1811**
 (= *Osmia atroalba* Morawitz, 1875)
 (= *Osmia sita* Nurse, 1904)
 (= *Osmia kuznetzovi* Cockerell, 1930)
 (= *Osmia bucharica* Popov, 1935)

Distribution: Lower Nile

***Osmia ferruginea* Latreille, 1811**

Distribution: Western desert, Alexandria (Dekhila, Max, Abu Qir), Matrouh (Borg El Arab)

Date of collection: February - April

***Osmia fertoni* Perez, 1891**
 (= *Hoplitis fertoni* Perez, 1891)

Distribution: Lower Nile, Cairo (Basateen, Zeitoun), Alexandria (Dekhila)

Date of collection: January, March - April

***Osmia gracilicornis* Perez, 1895**

Distribution: Lower Nile, Giza (Mansouriah), Cairo (Wadi Degla)

Date of collection: February - March

***Osmia helouanensis* Friese, 1899**

Distribution: Costal strip, Western desert, Cairo (Heliopolis, Maasara, Helwan), Giza, Red Sea (Kosseir)

Date of collection: February- April, July

***Osmia indigotea* Morawitz. 1875**
***Osmia laticeps* Thomson, 1872**

Distribution: Lower Nile, Cairo (Wadi Degla, Wadi Hoff)

Date of collection: February - March

***Osmia latreillieri* Spinola, 1806**
 (= *Megachile latreillei* Spinola, 1806)
 (= *Osmia quadricornis* Kriechbaumer, 1869)

Distribution: Costal strip, Cairo (Meadi, Ain Shams), Giza (Borgash, Kerdassa, Abu Rawash, Pyramids, Kom Osheim), Alexandria (Montazah, King Mariout), Sharkyia (Zagazig), Behera (Wadi Natron), New Valley (Kharga Oasis), Matrouh (Borg El Arab, Mersa Matrouh), Qualyobia (Tura), Ismailia, Fayoum, Kafr El Skeikh (Sidi Salem), Dakahlyia (Mansoura), Gharbia (Tanta), Port Said

Date of collection: February – May, November

***Osmia ligulicornis* Friese, 1899**
***Osmia lhotellerii* Perez, 1887**
 (= *Osmia lhotellieriei* Dalla Torre, 1896)

Distribution: Alexandria (King Mariout, Abu Qir, Montazah), Matrouh (Borg El Arab, Mersa Matrouh)

Date of collection: March – April

***Osmia niveocincta* Pérez, 1879**
(= *Osmia violascens* Perez, 1895)

***Osmia notata* (Fabricius, 1804)**

Distribution: Costal strip

Remark: Host records and date of collection not Known

***Osmia ochracea* (Illiger, 1806)**
(= *Anthophora ochracea* Illiger, 1806)

Distribution: Cairo (Ezbet El Nakhl, Wadi Hoff), Assiout

Date of collection: March, May

***Osmia ochraceicornis* Ferton, 1902)**
(= *Hoplitis ochraceicornis* Ferton, 1902)

Distribution: Upper Nile, Lower Nile

***Osmia pallicornis* Friese, 1895**
(= *Hoplitis pallicornis* Friese, 1895)

***Osmia pinguis* Perez, 1895**
(= *Osmia indivisa* Benoist, 1928)

***Osmia princeps* Morawitz, 1872**
(= *Hoplitis princeps* Morawitz, 1873)

***Osmia pulchella* Perez, 1895**
(= *Hoplitis pulchella* Perez, 1895)
(= *Osmia lativentris* Friese, 1899)

Distribution: Lower Nile, Cairo (Ameriah)

Date of collection: April

***Osmia punica* Perez, 1896**
***Osmia rufa* (Linnaeus, 1758)**
(= *Apis rufa* Linnaeus, 1758)
(= *Apis bicornis* Linnaeus, 1761)
(= *Apis globosa* Scopoli, 1763)
(= *Apis cornigera* Rossi, 1790)
(= *Apis moralis bicornis* Chirst, 1791)
(= *Megachile rufa* Latreille, 1802)
(= *Anthophora bicornis* Fabricius, 1804)
(= *Trachusa fronticornis* Jurine, 1807)
(= *Osmia bicornis* Schenck, 1851)

Distribution: Lower Nile, Cairo (Marg)

Date of collection: February - April

Osmia sordida Benoist, 1929
Osmia submicans Morawitz, 1871

Distribution: Lower Nile, Cairo (Ezbet El Nakhl), Giza (Com Osheim), Aswan, Matrouh (Borg El Arab, Mersa Matrouh), Kafr El Skeikh (Sidi Salem)

Date of collection: January, March – April, June

Osmia vidua Gerstaecker, 1869
Osmia signata Erichson, 1835
 Parasitic Megachilidae
 Genus *Coelioxys* Latreille, 1809
Coelioxys aegyptiaca Radoszkowski, 1876

Coelioxys aegypticola Friese, 1925
Coelioxys afra Lepeletier, 1841
 (= *Coelioxys coronata* Förster, 1853)
 (= *Coelioxys pusilla* Gerstäcker, 1857)
 (= *Coelioxys afra vartunensis* Gribodo, 1894)
 (= *Coelioxita afra* Lepeletier, 1841)

Distribution: Giza (Borgash, Com Osheim)

Date of collection: June, September

Coelioxys antica Walker, 1871
Coelioxys caudata Spinola, 1838
Coelioxys coturnix Perez, 1884
Coelioxys decipiens Spinola, 1838

Distribution: Giza (Pyramids, Com Osheim), Cairo (Shubra, Ezbet El Nakhl), Qualyobiya (Gabal Asfar), Dakahlyia (Mansoura)

Date of collection: January, March – June, August - September

Coelioxys elegantula Alfken, 1934

Distribution: Cairo (Mattariah), Giza (Com Oshim)

Date of collection: June, September

Coelioxys elytrura Spinola, 1838
Coelioxys farinosa Smith, 1854

Distribution: Giza (Pyramids)

Date of collection: March

Coelioxys haemorrhoa Forster, 1853

Distribution: Cairo (Marg), Qualyobia (Abu Zaabal)

Date of collection: March, July - August

Coelioxys indica Friese, 1925
Coelioxys octodentata Say, 1824
Coelioxys rhodacantha Cockerell, 1931

Distribution: Dakahlyia (Mansoura), Qualyobia (Gabal Asfr)

Date of collection: April - May

Coelioxys rufispina Walker, 1871

Distribution: Fayoum, Qualyobia (Gabal Asfr), Giza (Pyramids, Com Osheim), Dakahlyia (Mansoura)

Date of collection: April – May, July - September

Coelioxys rufiventris Spinola, 1838

Genus *Stelis* Panzer 1806

Remark: All members of this genus are cleptoparasites

Stelis aegyptiaca (Radoszkowski, 1876)

Stelis murina Perez, 1884

Distribution: Matrouh (Borg El Arab, Mersa Matrouh), Cairo (Marg)

Date of collection: March

REFERENCES

- Abd El-Moneim, A. E. (1974): Studies on the wild bees visiting some crops in the new Valley Governorate (Dakhla Oasis). Proc. 1st Conf. Pl. Prot. Res. Inst., 2: 119-124.
- Alfken, J. D. (1932): Beitragzurkenntnis der Chalicodoma arten von Egypten. Bull. Soc. Royal Ent. d'Egypt, 16: 223 – 230.
- Alfken, J. D. (1932): Beitragzurkenntnis der Megachilearten von Egypten. Bull. Soc. Royal Ent. d'Egypt, 18: 146 – 163.
- El-Hefny, A. M.; Mazeed, M. M.; Abd El-Moneim, A. E.; Abu Zaid, M. I. and Abd El-Salam (1979): Activity of some megachild bees (wild bees) on Egyptian clover in Sharkia and Menofia Governorates. Proc. 1st Conf. Pl. Prot. Res. Inst., 2: 125-132
- El-Nahal, A. K. M. (1975): Studies on the biology of the leafcutting bee, *Megachile submucida* Alfken (Hymenoptera: Megachilidae). Bull. Soc. Ent. Egypt, 49: 169-181.
- Farghaly Doaa, S. (2006): Taxonomic studies on some species of leaf-cutting bees (Family Megachilidae – Order Hymenoptera) in Egypt. M.Sc. Thesis, Fac. of Sci. (girls), Al Azhar Univ. Egypt.
- Griswold, T. L. (1994): Taxonomic notes on some Heriadens, with descriptions of three new species (Hymenoptera: Megachilidae). J. Kansas Ent. Soc., 67(1): 17 – 28.
- Griswold, T. L. and Michener, C. D. (1988): Taxonomic observations on Anthidiini of the western hemisphere (Hymenoptera: Megachilidae). J. Kansas Ent. Soc., 61(1): 22 – 45.
- Griswold, T. L. and Michener, C. D. (1997): The classification of Osmiini of the Eastern hemisphere (Hymenoptera: Megachilidae). J. Kansas Ent. Soc., 70(3):

- 207 –253.
- Gupta, R. K. (1993): Taxonomic studies on the Megachilidae of North Western India (Insecta: Hymenoptera: Apoidea). 294pp.; 13pp. Ref.
- Michener, C. D. (1944): Comparative external morphology, phylogeny and a classification of the bees (Hymenoptera). Bull. Amer. Mus. Nat. Hist., New York, 82: 151- 326.
- Michener, C. D. (1965): A classification of the bees of the Australian and South pacific region. Bull. Nat. Hist., 130: 1 – 362.
- Michener, C. D. (1983): The classification of the Lithurginae (Hymenoptera: Megachilidae). Pan Pacific Ent., 59: 1 – 4; 176 – 187.
- Michener, C. D. (1996):The first South African dioxyine bee (Hymenoptera: Megachilidae). Mem.Ent. Soc. Washington, 17: 142 – 152.
- Michener, C. D. (1997):Genus – group names of bee and supplemental family – group names. Nat. Hist. Mus., Univ. of Kansas, 1: 1 – 81.
- Michener, C. D. (2000):The bees of the world. GohnsHobkins Univ. Press., London, 417 -569.
- Michener, C. D. and Griswold, T. L. (1994):The classification of the old world Anthidium (Hymenoptera: Megachilidae). Univ. Kansas Sci. Bull., 55 (9): 299 – 327.
- Mahmoud, A. H. A. (1963): Habits, life story and control of Chalicodoma siculum Risso (Hymenoptera: Megachilidae). Bull. Soc. Ent. Egypt, 47: 273-276.
- Mazeed, M. M. (1974): Preliminary observations on solitary bees of family Megachilidae in different Governorates of Egypt . Proc. 1st Conf. Pl. Prot. Res. Inst., 2: 89-96.
- Moustafa, M. A. and El-Berry, A.A. (1976): Morphological studies on *Osmia submicans* Mor. Mitt. Zool. Mus. Berlin, 52 (2): 209-225.
- Moustafa, M. A. and Mazeed, M.M. (1976): Morphological studies on *Chalicodoma (Psudomegachile) flavipes* Spinola. Mitt. Zool. Mus. Berlin, 55, Heft.
- RoigAlsina, A. and Michener, C. D. (1993): Studies on the phylogeny and classification of the long-tongued bees (Hymenoptera: Apoidea). Univ. Kansas Sci. Bull., 55: 4 – 5; 124 – 162.
- Wafa, A. K. and Ibrahim, S. H. (1959): Pollinators of the chief sources of nectar and pollen grain plants in Egypt. Bull. Soc. Ent. Egypt, 43: 133-154.

ARABIC SUMMERY

قائمة مرجعية للأنواع التابعة لفصيلة الميجالكيليدى (رتبة غشائية الأجنحة) المسجلة فى مصر مع بعض الملاحظات التقسيمية

مجدى محمد سالم - صلاح الدين انور العزب

يحتوى هذا البحث على قائمه لحشرات فصيلة الميجالكيليدى من رتبة غشائية الأجنحة بناء على العينات المحفوظة بالمجموعات الحشرية المصرية الرئيسية فى مصر وكذلك التسجيلات فى المراجع العلمية الحشرية المحلية والعالمية. وتضم القائمة 102 نوعاً وستة نويعات تتنتمى إلى 9 أنجاس من خمسة قبائل (أنتيدينى، فيديلينى، ليثورجينى، ميجاكيلينى واوزمىنى) تابعة لاثنين تحت فصيلة (فيديلينى وميجاكيلينى)، منهم ٨٤ نوعاً من سبعة أنجاس ملحوظات حشرية و ١٨ نوعاً طفليات . يتضمن هذا البحث الأسماء العلمية الحديثة وكذلك بعض الملاحظات التقسيمية وتشمل العوائل البنائية والتوزيع الجغرافى فى مصر لمعظم الانواع . جميع الوحدات والمراتب التصنيفية مرتبة ترتيباً ابجدياً.