Taxonomy of ant species (Hymenoptera: Formicidae) collected by pitfall traps from Sinai and Delta region, Egypt

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ABSTRACT
The present study includes the identification and the taxonomic status of twenty-seven species belonging to thirteen genera and three subfamilies of Egyptian formicid ants. These species are collected from South Sinai (El-Mafareq, Sahab, Wadi El-Arbacain, and Wadi El-Talaa) and Delta region (Dakahlia governorate, Ebn Salam) using pitfall traps. Illustrated Keys to the subfamilies, genera, and species are presented. In addition, the geographical and local distributions and synonyms are given to genera and species. Tetramorium salwae n. sp. is described as a new species which is collected from Sahab (southern Sinai). Seven species are new records to the Egyptian fauna; 1 from Ebn Salam (Dakahlia) and 6 from Sinai. These species are Cataglyphis minimus Collingwood, Monomorium carbonarium (Smith), Cardiocondyla wroughtonii Forel, Aphaenogaster phillipsi Wheeler, Aphaenogaster syriacum Emery, Tetramorium brevicorne Bondroit and Tetramorium depressecipes Monozzi.

KEYWORDS: key, ants, Formicidae, Hymenoptera, Sinai, Delta, Egypt

INTRODUCTION
Among all the wide variety of insect life on the planet, ants are one of the few forms universally recognized, there are about 15.000 living ant species belonging to 296 genera of which 9.000-10.000 have been described, all of these fall into a single family, Formicidae, which is classified into 16 subfamilies (Bolton 1994). Some comprehensive and intensive survies have be done on neighbouring countries of Egypt, for example:-
• The survey of ants of Saudi Arabia, resulting of 164 species under 30 genera and 6 subfamilies (Collingwood 1985);
• The ants of Arabian Peninsula was reviewed, resulting a list of 265 species, 56 of which are new to science, these species are belonging to 32 genera and 8 subfamilies (Collingwood & Agosti 1996);

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- The ants of Palestine were listed resulting of 72 species, 25 genera and 5 subfamilies (Mennozzi 1931);
- Finzi (1940) listed 11 species with 7 subspecies and 26 varities from Libya;
- Tohme (1970) identified three castes of *Messor semirufus ebininus* (Forel) from Libanone

Few surveys on Egyptian ant fauna have been done mainly of Finzi (1936) who listed 89 species from Sinai during the expedition of Prince Torre Tasso to the area. Donisthorpe (1942) identified two new species from Siwa Oasis during the Armstrong College expedition in 1942. The comprehensive revision of the family Formicidae in Egypt was based on a survey of Egyptian zones excluding Sinai Peninsula and Delta regions by Mohammad 1979 during his PhD and his work never been published. In addition, many names of the genera and species in Egyptian collections are out-of-date. Therefore, the present study was designed to highlight the diversity of ant species in Egypt, focusing on the ground ant species of family Formicidae using pitfall traps in two regions: Sinai (represented by three ecologically different sites) and Delta region (represented by Dakahliya governorate).

MATERIALS AND METHODS

The formicid fauna from the chosen sites in Southern Sinai (W. El-Arbaein, W. El-Talaa, Sahab & El-Mafareq) and Dakahlyia (Ebn Salam) governorates was sampled from March 1998 to February 1999. The mounting technique of specimens adopted by Bolton (1994) was used. The mounted specimens were labeled and arranged in drawers provided with protective material against pest attack. A binocular microscope was used for the examination of specimens. The identification of the species and the taxonomic corrections were carried out according to Mohammad, 1979; Bolton, 1994; Collingwood & Agosti, 1996 and by referring to the main Egyptian insect collections. Specimens are deposited in the main Egyptian collections including Ain Shams collection (Ain Coll.), Cairo collection (Cairo Coll.), and Suez Canal University collection (Prof. Samy Zalat).

RESULTS

Formicid species collected in the present study from Sinai and Dakahliya governorates, have been identified and taxonomically studied. Three subfamilies, 13 genera and 27 species were the result of this study. Keys to subfamilies, diagnosis, illustrations, original references, world and local distribution, keys to all genera and species were given

**Key to subfamilies of the collected species**

1- Peduncle with two distinct segments, petiole and post petiole (Fig.1).................. Myrmicinae

![Diagram](https://via.placeholder.com/150)
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- Peduncle with a single node or scale ........... 2

2- Apex of gaster with a circular orifice; petiole a
distinct node or scale (Fig.2) ............ Formicinae

- Apex of gaster terminating in a transverse slit;
petiole flat and reduced, overhung by the first
gasteral segment (Fig.3) ........... Dolichoderinae

Subfamily: Dolichoderinae
Genus Tapinoma Förster, 1850

Distribution: Palaearctic, Ethiopian, Oriental, Australian, Polynesian, Nearctic & Neotropical regions.

Tapinoma simrothi Krausse, 1911

World distribution: Sardinia & Egypt.
Distribution in Egypt: Lower Nile & Delta.

Subfamily: Formicinae

Key to genera

1- Antennae 11-segmented ...................... 2

Antennae 12-segmented .......................... 3

2- Propodeum armed with a pair of spines,
petiole emarginated (Fig.6) . . . Lepisiota Santschi
- Propodeum unarmed, petiole never
emarginated (Fig.7), in dorsal view metanotum
separated from mesonotum by impressed suture
(Fig.8) .......................... Plagiolepis Mayr

3- Antennal insertion distant from clypeal
margin (Fig.9), metapleural gland orifice absent
................................. Componotus Mayr

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-Antennal insertion close to clypeal margin (Fig.4), metapleural gland orifice present (Fig.10) ........................................ 4

4- Ocelli present and distinct, head with long curved hairs on anteroventral surface; dorsum of propodeum with erect hairs (Fig.11)

........................................ Cataglyphis Förster

- Ocelli vestigial or absent; head with short hairs only on ventral side; dorsum of propodeum with erect bristles ......... Paratrechina Motschulsky

Genus Camponotus Mayr, 1861.

Type-species: Formica ligniperda Latreille, 1802, Fourmis: 88, by designation of Bingham, 1903.
Distribution: Palaeartic, Ethiopian, Oriental, Australian, Polynesian, Nearctic & Neotropical regions.

Key to species

1- First gastral tergite with basal two thirds paler than the rest; petiole dorsum steeply rounded (Fig.12) ... Camponotus oasisum Forel

- Gaster completely dark or with small yellowish batch at base only; petiole dorsum widely rounded to flat (Fig.13)... Camponotus thoracicus (Fabricius)

Camponotus oasisum Forel, 1890
World distribution: Algeria & Egypt.
Distribution in Egypt: Lower Nile and Sinai.
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Note: This species is a new record to Egyptian fauna.

_Camponotus thoracicus_ (Fabricius, 1804)

_Formica thoracica_ Fabricius, 1804: Syst. Picz.: 397.


World distribution: Algeria & Egypt.

Distribution in Egypt: Western desert, Eastern desert, Coastal stripe, Upper Nile and Sinai.


**Genus: Cataglyphis** Förster, 1850


Distribution: Palaearctic, Ethiopian and Oriental regions.

**Key to species**

1- Petiole a truncated node with a flat dorsal surface sloping forward (Fig.14) ............ 2

- Petiole a rounded node or an upright thick scale ......................... 4

2- Body colour uniformly shining black

.............. ............. _C. minimus_ Collingwood.

- Body colour otherwise ..................... 3

3- Body unicolourous yellow, gaster oval (Fig.15); antennal scape shorter than head

......................... ........... _C. lividus_ (André)

- Body bicoloured, head, alitunk, petiole and appendages bright red, gaster dark brown and globular (Fig.16), antennal scape longer than head ...................... _C. ruber_ (Forel)

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4- Petiole an upright scale (Fig.17), body covered with silvery pubescence, reddish brown, gaster dark brown in colour; third maxillary palp with long curved hairs (Fig.18) ......................... *C. sinaitica* Wheeler

- Petiole a rounded node (Fig.19), body not covered with silvery pubescence, black in colour; third maxillary palp without long curved hairs ................... *C. niger* (André)

**Cataglyphis lividus** (André, 1881)


World distribution: Palestine & Egypt.

Distribution in Egypt: Western desert and Sinai.


**Cataglyphis minimus** Colligwood, 1985


World distribution: Saudi Arabia, United Arab Emirates & Egypt.

Distribution in Egypt: Sinai.

Note: This species is a newly recorded from Egypt during the present study.


**Cataglyphis niger** (André, 1881)


World distribution: Palestine & Egypt.

Distribution in Egypt: All over Egypt.

Cataglyphis ruber (Forel, 1903)
World distribution: Algeria & Egypt.
Distribution in Egypt: Sinai.
11.VIII.1998 (4) (Ain Coll.).

Cataglyphis sinaitica Wheeler & Mann, 1916
World distribution: Egypt.
Distribution in Egypt: Sinai.

Genus Lepisiota Santschi, 1926

This genus has been known as Acantholepis Mayr, 1861 for about 130 years but this name is a junior homonym of Acantholepis Krain, 1846. Lepisiota Santschi, 1926 is the first available replacement name (Bolton, 1994). The new combination was then designated by Bolton five years later in the new general catalogue of the ants of the world (Bolton 1995).
Distribution: Palaeartic, Ethiopian & Oriental regions.

Lepisiota nigra (Della Torre, 1893)
Acantholepis frauenfeldi var nigra Della Torre, 1893; Cat. Hym. 7:171.
World distribution: Italy & Egypt.
Distribution in Egypt: Sinai.

Genus Paratrechina Motschulsky, 1863
Distribution: Palaeartic, Ethiopian, Oriental, Australian, Polynesian, Nearctic & Neotropical regions.

Paratrechina jaegerskioeldi (Mayr, 1904)
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World distribution: Egypt.
Distribution in Egypt: Upper Nile, Lower Nile and Western desert.
(Ain Coll.).

Genus Plagiolepis Mayr, 1861.

Plagiolepis Mayr, 1861. Europ. Formicid Wien.: 52
Type-species: Formica pygmaea Latreille, 1798, Fourmis de la France: 45.
Diagnosis: Mandibles with five teeth, palp formula 6,4, antena 11-segmented,
alitrunk short, in dorsal view, metanotum separated from mesonotum by impressed
suture, propodeum unarmed, petiole a reduced scale.
Distribution: Palaeartic, Ethiopian, Oriental, Australian, Polynesian, Nearctic &
Neotropical regions.

Plagiolepis maura Santschi, 1920

Diagnosis: Body 1.8-2 mm in length, provided with sparse pubescence yellowish
brown in colour, antennae with the 3rd funiculus segment quadrate, shorter than 4th
World distribution: Morocco & Egypt.
Distribution in Egypt: Lower Nile and Sinai.

Subfamily: Myrmicinae

Key to genera

1- Postpetiole articulated on dorsal surface of
the first gastral segment, gaster on dorsal view
roughly heart shaped and capable of reflection
over the alitrunk. Petiole dorsoventrally
flattened (Fig.20) …… Crematogaster Lund
- Postpetiole articulated on anterior surface of
the first gastral tergite, gaster on dorsal view
not heart-shaped, not capable of reflection
over the alitrunk (Fig.21), petiole not
dorsoventrally flattened .......................... 2
2- Propodeum unarmed; clypeus longitudinally bicarinate below antennal insertion (Fig.22)

- Propodeum armed with a pair of spines or teeth; clypeus not longitudinally bicarinate below antennal insertion ................. 3

3- Antenna 11- segmented; lateral portions of clypeus raised into a sharp-ridge on each side, in front of the antennal insertions (Fig.23)

- Antenna -12 segmented, lateral portions of clypeus not raised into a sharp-ridge on each side in front of antennal insertions ..........4

4- Mandibles rounded, antennae with and indistinct club (Fig.24), polymorphic species.......................... Messor Forel

- Mandibles triangular, antennae with distinct club, monomorphic or dimorphic species .... 5

5- Postpetiole enlarged, cordiform from above, alitrunk with dorsal hairs (Fig.25) ............

- Postpetiole not enlarged, not cordiform from above, alitrunk without dorsal hairs .......... 6

6- Mandibles powerfully constructed, armed with 3-4 teeth, 2 large apically followed by long diastema, and then with 1 or 2 basal teeth
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(Fig.26), Dimorphic species .................

................................. Pheidole Westwood
- Mandibles not powerfully constructed,
  armed with 5-6 teeth, without a diastema
(Fig.27), monomorphic species .........

................................. Aphaenogaster Mayr

Genus: Aphaenogaster Mayr, 1853
Distribution: Palaeartic, Ethiopian (Madagascar only), Oriental, Australian,
Nearctic & Neotropical regions.

Key to species

1- Head very slender, nearly twice as long as
broad, with faint longitudinal sculptures on
anterior half, propodeum armed with two blunt
tubercles (Fig.28) .........................

... Aphaenogaster phillipsi Wheeler & Mann
- Head normal, nearly as long as broad, with
strong sculptures; propodeum armed with two
acute spines (Fig.29) .........................

............... Aphaenogaster syriacum Emery

Aphaenogaster phillipsi Wheeler & Mann, 1916
World distribution: Palestine & Egypt.
Distribution in Egypt: Sinai.
Note: This species is new record to the Egyptian fauna.

Aphaenogaster syriacum Emery, 1908
Genova 6(46): 244-270.
World distribution: Libanon & Egypt.
Distribution in Egypt: Sinai.
Material examined: W. El-Talaa: 19.II.1999 (1) (Ain Coll.).
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Note: This species is new record to the Egyptian fauna.

**Genus Cardiocondyla** Emery, 1869

Distribution: Palaeartic, Ethiopian, Oriental, Australian, Polynesian, Nearctic & Neotropical regions.

**Key to species**

1- Propodeal spines very short and blunt (Fig.30); head, alitrunk, nodes and appendages reddish brown, gaster black … *C. nuda* (Mayr)

- Propodeal spines long and acute (Fig.31); head, alitrunk, nodes and appendages yellow, gaster dark brown …… *C. wroughtonii* (Forel)

*Cardiocondyla nuda* (Mayr, 1866)
World distribution: Fiji Islands.
Distribution in Egypt: Sinai.

*Cardiocondyla wroughtonii* (Forel, 1890)
World distribution: India & Egypt.
Distribution in Egypt: Lower Nile.
Note: This species is a new record to the Egyptian fauna.

**Genus Crematogaster** Lund, 1831
Distribution: Palaeartic, Ethiopian, Oriental, Australian, Nearctic & Neotropical regions.

*Crematogaster aegyptiaca* Mayr, 1862

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World distribution: Egypt.
Distribution in Egypt: Eastern desert, Western desert and Sinai.

**Genus Messor** Forel, 1890

Type-species: *Formica barbara* L., 1767, Syst. Nat. ed.12, 2:962.
Distribution: Palaearctic, Ethiopian, Oriental, Nearctic & Neotropical regions.

**Key to species**

1- Underside of head with moderately curved and straight hairs (Fig.32); head reddish-yellow

.......................... *M. rufotestaceous* (Föerster)

- Underside of head with at least some long J-shaped hairs (Fig.33), head black ............. 2

2- Propodeum armed with a triangular teeth, body entirely black, dorsum of propodeum completely striated; petiole with 3 pairs of hairs(Fig.34) .............. *M. foreli* Santschi.

-Propodeum unarmed, body entirely black except antenna and pronotum reddish, dorsum of alitrunk completely striated; presence of one pair of hairs on petiole (Fig.35) ...........

.......................... *M. ebininus* Santschi

**Messor ebininus** Santschi, 1910

World distribution: Libanon & Egypt.
Distribution in Egypt: All over Egypt.

**Messor foreli** Santschi, 1923

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World distribution: Tunisia & Egypt.
Distribution in Egypt: Sinai.

*Messor rufotestaceus* (Föerster,1850)

World distribution: Algeria & Egypt.
Distribution in Egypt: Eastern desert, Lower Nile and Sinai.

**Genus Monomorium** Mayr,1855

Distribution: Palaeartic, Ethiopian, Oriental, Australian, Polynesian, Nearctic & Neotropical regions.

**Key to species**

1- Antennae with terminal funiculus segment longer than the two preceeding segments together (Fig.36), unicolourous, body entirely dark black, dorsum of alitrunk without projecting hairs (Fig.37) .........................

......................... *M. carbonarium* (Smith)

- Antennae with terminal funiculus segment shorter than the two preceeding segments together (Fig.38); bicolourous, head, alitrunk, nodes and appendages red, gaster black; dorsum of alitrunk with projecting hairs (Fig.39).......*M. niloticum* Emery

*Monomorium carbonarium* (Smith,1858)

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World distribution: Madeira, Oman, Northen East Atlantic & Egypt.
Distribution in Egypt: Sinai.
Note: This species is new record to the Egyptian fauna.

*Monomorium niloticum* Emery, 1881


World distribution: Egypt
Distribution in Egypt: Gebel Elba and Sinai.

**Genus Phiedole** Westwood, 1840

Type-species: *Atta providens* Sykes, 1835; Trans. Ent. Soc. Lond.1:103.
Distribution: Palaeartic, Ethiopian, Oriental, Australian, Polynesian, Nearctic & Neotropical regions.

**Key to species**

1- Body colour blackish brown, antennae with
3rd-11th funicular segments quadrate

............... *Ph. Pallidula* (Nylander)

- Body colour yellowish brown, antennae with
3rd-11th funicular segments rectangular ... 2

2- Postpetiole longer than broad (Fig.40); funicular segment 2 not longer than wide

............... *Ph. Jordanica* Saulcy

- Postpetiole as long as broad at middle (Fig.41); funicular segment 2 longer than wide

............... *Ph. sinaitica* Mayr

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Pheidole jordanica Saulcy, 1874.
(2) 7:442.
World distribution: Palestine & Egypt.
Distribution in Egypt: Lower Nile, Sinai and Gebel Elba.

Pheidole pallidula (Nylander, 1849)
7: 289.
World distribution: Sicily & Egypt.
Distribution in Egypt: Sinai.
(Ain. Coll.).

Pheidole sinaica Mayr, 1862
World distribution: Egypt.
Distribution in Egypt: Eastern desert, Western desert and Sinai.

Genus Tetramorium Mayr, 1855
Distribution: Palaearctic, Ethiopian, Oriental, Australian, Polynesian, Nearctic &
Neotropical regions.

Key to species

1 Body length 2.5 mm, propodeal spines
relatively longer (Fig.42) ....................... (42)
................. T. brevicorne Brondroit
- Body length 3.5 mm, propodeal spines short

............... 2

2- Dorsum of head with a distinct median
depression, propodeal spines short and acute
(Fig.43)........... T. depressiceps Menozzi

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- Dorsum of head without a median depression, propodeal armature tuberculate and blunt (Fig.44) .............. T. salwae n.sp.

(44)

*Tetramorium brevicorne* Brondoit, 1918
World distribution: Corsica & Egypt.
Distribution in Egypt: Sinai.
Note: This species is a new record to the Egyptian fauna.

*Tetramorium depressiceps* Menozzi, 1933
World distribution: Palestine & Egypt.
Distribution in Egypt: Sinai.
Note: This species is a new record to the Egyptian fauna.

*Tetramorium salwae* n. sp.
Description: Body length 3.2mm, dark brown in colour, alitrunk dorsum dark brown with lateral sides yellowish brown legs yellowish brown; head with slightly concave occiput, sides moderately curved, shining and smooth with many hair pits anterior to occiput, with superficial, longitudinal sculptures anterior and below to eyes; antennae with dense hairs, first funiculus segment longer than the second and third segment together, third, fourth and fifth funiculus segments wider than long, mandibles striated with five blunt teeth and faint pubescence, anterior border of clypeus with about 3 long hairs projecting over mandibles; alitrunk shining with longitudinal sculptures in lateral and dorsal sides except mesonotum which is smooth, pronotum with several pairs of hairs, propodeum without any projecting hairs, propodeal spines reduced to short and blunt tubercles; legs with fine pubescence; petiole dorsum weakly sculptured with 2 pairs of hairs; postpetiole dorsum smooth and shining with 4 pairs of hairs, broader than long; gaster shining with numerous hairs.
Note: This species is very close to *T. juba* Collingwood (1985), but distinguished from it by sculptured alitrunk which is smooth in *T. juba* Collingwood.
World distribution: Egypt.
Distribution in Egypt: Sinai.
Type locality: Sinai, Southern Sinai, Sahab, N: 28°43'.02. & E: 33°46'.79., 18.II.1999 Number of individuals: 5 (Ain Coll.).
Etymology: This species was named after Dr. Salwa Kamal Mohamed, Professor of Taxonomy, Ain Shams University, Egypt.

DISCUSSION

The Egyptian Formicidae was revised by Mohammad (1979) who stated that the family was represented in Egypt by 80 species, 43 subspecies and 47 varieties belonging to 22 genera and classified under 5 subfamilies: Dolichoderinae, Dorylinae, Formicinae, Myrmicinae, and Ponerinae. He based his revision on studying the material preserved in the insect collections of Egypt and on specimens collected from different parts in Egypt. He focused his survey on two regions only, the Western desert oasis and the Red Sea region. He did not carry out any survey in Sinai Peninsula and Delta region. So, it was important to carry out a survey in these two regions. Furthermore, several taxonomic emendations to the taxa of the family Formicidae have been made on generic and species levels. Although 5 subfamilies were recorded from Egypt, this survey included only 3 subfamilies, which are:

**Subfamily Dolichoderinae:** Two genera only of this subfamily were recorded in Egypt, Dolichoderus Lund and Tapinoma Foerster. Only one species Tapinoma somrothi Krauss was collected from Ebn Salam, this species was listed from Wadi El-Tarfa by Finzi (1936).

**Subfamily Formicinae:** Seven genera of this subfamily were previously recorded from Egypt (Mohammed 1979), five genera were collected during this work. Camponotus Mayr, Cataglyphis Foerster, Lepisiota Santschi, Paratrechina Motschulsky and Plagiolepis Mayr. The genus Acantholepis Mayr was considered as a synonym of the genus Lepisiota Santschi according to Bolton (1994). One species only of this genus was collected Lepisiota nigra (Emery) from W. El-Arbaein. It was previously recorded from Wadi El-Tarfa (Finzi 1936).

Genus Camponotus Mayr was represented in Egypt by 9 species, 2 subspecies, and 5 varieties, many of these subspecies and varieties have been raised to the species level. Two species only were collected during the present study, Camponotus oasium Forel, was collected from El-Mafareq, Sahab, Wadi El-Arbaein, Wadi El-Talaal, and Ebn Salam, and was listed in Wheeler & Mann (1914) from Wadi Feiran, and Camponotus thoracicus Fabricius which was listed later in the literature as Camponotus compressus thoracicus Fabricius. This species was raised to species level by Arnoldi (1964).

The genus Cataglyphis Foerster was represented in Egypt by 6 species, 8 subspecies and 9 varieties. Four of the six recorded species were changed to the species group, most of the varieties and subspecies were raised to the species rank. During the present work, 5 species were collected, 4 of them were listed by Mohammad (1979), namely: Cataglyphis minimus Collingwood, 1985, which is a new record to the Egyptian fauna, and it was previously described from Saudi Arabia; 3 subspecies of C. albicans group were recorded from Egypt (Mohammad 1979). These subspecies are classified as separate species as follows:
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- Messor foreli Santschi was Messor aegyptiacus var. foreli Santschi (Bernard, 1981). This species was collected from El-Mafareq and Sahab. Menozzi (1929) collected this species from West Qâa (Sinai).
- Messor rufotestaceus (Forel) was collected from El-Kosauima (Northern Sinai) and Wadi El-Arbæin. Wheeler and Mann (1914) collected this species from Wadi Gazelle (Sinai), while Finzi (1936) collected it from Wadi Isla (Southern Sinai).
- The genus Monomorium Mayr is represented in Egypt by 11 species, 7 subspecies and 5 varieties. Only two species were collected during the present study, the first is M. niloticum Emery which was M. venustum nilotica Emery (Santschi, 1936). Finzi (1936) recorded this species from El-Tor and Wadi Isla (Southern Sinai), while Wheeler & Mann (1914) recorded it from Wadi Gazelle (Southern Sinai). The second one is M. carbonarium (Smith) which is a new record, previously recorded from the Arabian Peninsula. This species was not so far known from Africa (Collingwood 1985).
- The genus Pheidole Westwood was represented in Egypt by 4 species, 3 species of them were collected during the present study.
  - Ph. jordanica Sauley, this species is a fairly common species in the Middle East region, North Africa and Saudi Arabia (Collingwood 1985), it was recorded from Wadi Fieran and Wadi El-Tarfa (Southern Sinai) (Menozzi 1929), (Alfieri 1931), (Finzi 1936).
  - Ph. Pallidula Nylander was recorded from Wadi Fieran and Wadi Gazelle (Southern Sinai) (Wheeler & Mann 1914).
  - Ph. Sinaiitica Mayr was recorded from Cairo (Wheeler & Mann, 1914) (Santschi, 1937) and Sinai (Finzi 1936).

The genus Tetramorium Mayr was represented in Egypt by 6 species, only 3 species were collected here, two of them are new records to the Egyptian fauna, T. brevicorne Bondroit collected from Sahab and T. depresecipes Menozzi was collected from Wadi El-Arbæin and Wadi El-Tala during the present survey.

The Egyptian new species Tetramorium salwae comes close to T. juba Colligwood, 1985, from which it can be distinguished by the clearly sculptured alitrunk. Colligwood examined our specimens and confirmed its status as a new species to the Egyptian fauna. It is a rare species, only four specimens were collected from Sahab (South Sinai) during the present study.

**Up-to-date checklist of the collected ant species** (* = new records to Egypt).

1) Subfamily: Dolichoderinae
   Tapinoma simrothi Krausse, 1911

2) Subfamily: Formicinae
   Genus: Camponotus Mayr, 1861
   Camponotus osation Forel, 1890
   Camponotus thoracicus (Fabricius, 1804)
   Genus: Cataglyphis Förster, 1850
   Cataglyphis luidus (André, 1881)
   Cataglyphis minimus Colligwood, 1985 *
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Cataglyphis niger (André, 1881)
Cataglyphis dubber (Forel, 1903)
Cataglyphis sinattica Wheeler & Mann, 1916
Genus: Lepisiota Santschi, 1926
Lepisiota nigra (Della Torre, 1893)
Genus: Paratrechina Motschulsky, 1863
Paratrechina jaegerskioeldi (Mayr, 1904)
Genus: Plagiolepis Mayr, 1861
Plagiolepis maura Santschi, 1920
3) Subfamily: Myrmicinae
Genus: Aphaenogaster Mayr, 1853
Aphaenogaster phillipsi Wheeler & Mann, 1916 *
Aphaenogaster syriacum Emery, 1908 *
Genus: Cardiocondyla Emery, 1869
Cardiocondyla nuda (Mayr, 1866)
Cardiocondyla wroughtonii (Forel, 1890) *
Genus: Crematogaster Lund, 1831
Crematogaster aegyptiaca Mayr, 1862
Genus: Messor Forel, 1890
Messor ebininus Santschi, 1910
Messor foreli Santschi, 1923
Messor rufotestaceus (Förster, 1850)
Genus: Monomorium Mayr, 1855
Monomorium carbonarium (Smith, 1858) *
Monomorium niloticum Emery, 1881
Genus: Phiedole Westwood, 1840
Phiedole jordanica Sauley, 1874.
Phiedole pallidula (Nylander, 1849)
Phiedole sinaitica Mayr, 1862
Genus: Tetramorium Mayr, 1855
Tetramorium brevicorne Brondroit, 1918 *
Tetramorium deprssiceps Menozzi, 1933 *
Tetramorium salwae n.sp.

REFERENCES


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الملخص العربي

تصنيف أنواع النمل (رتبة غشائيات الأجنحة - فصيلة فورمسيدي) المجموعة باستخدام المصادر الإرشادية من سيناء ومنطقة الدلتا - مصر سلوك كمال - سامي زلط - حسن فضل - سهير جادالله - مصطفى شرف

1- قسم علم الحشرات - كلية العلوم - جامعة عين شمس - ال=$((عباية - مصر
2- قسم علم الحيوان - كلية العلوم - جامعة قناة السويس - الإسماعيلية - مصر

تتناول هذه الدراسة تعرف وتوزيع 27 نوعاً تتمنى إلى 13 حسناً ضمن 3 تحت فصائل من النمل من فصيلة فورمسيدي والمنتشر في جمهورية مصر العربية. تم جمع النمل من محافظة جنوب سيناء من عدة أماكن ذات تباين بيئي كبير من حيث الارتفاع عن مستوى سطح البحر وكمية الأمطار ونوعية الأرض. منطقة السهوب - منطقة وادي الأربعين ووادي إطلاع بالإضافة إلى مسمى النمل الموجود في منطقة إين سلام بمحافظة الدقهلية وذلك باستخدام طريقة المصادر الإرشادية على مدار عام كامل في الفترة من مارس 1998 حتى فبراير 1999. تم وضع المفاتيح التصنيفية الكاملة لتعريف تحت الفصائل والأجناس والأنواع المختلفة بالإضافة إلى بيان التوزيع العالمي والمحللي لكل نوع وكذلك مرادفات الأسم. تم تسجيل نوع جديد إلى الفئا الحشرية العالمية من فصيلة فورمسيدي وهو النوع تيرامورف سلوي والذي تم جمعه من منطقة سهوب بجنوب سيناء ويعتبر من الأنواع النادرة حيث تم جمع عدد أربع أفراد فقط خلال هذه الدراسة. أيضاً يتم إضافة سبعة أنواع من النمل كأنواع جديدة تسجيل لأول مرة من مصر (نوع تم تسجيله في محافظة الدقهلية ونسط أنواع من محافظة جنوب سيناء) وهذه الأنواع هي: كاتالات gistos بهينويس كولينوود - مورغومور ماربورامير (سميث) - كاردينوكوندريلا وروفتوني فورنيل - أفانيجاسستر فيليبسي - ويلر - أفانيجاسستر سوروريكيم إيمري - تيرامورف موريكي - بونتر - تيراموريف موريكي.