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THE MYRMECOFAUNA OF THE MALTESE ISLANDS. REMARKS AND ADDITIONS

(Hymenoptera Formicidae)

Introduction

In their revisory work on the Myrmecological fauna of the Maltese Islands, SCHEMBRI & COLLINGWOOD (1981) reviewed the works of EMERY (1924) and BARONI URBANI (1968a & b) and reported new records, listing a total of 44 species for the local fauna. Subsequent fieldwork has revealed a further six species new to the Maltese Islands. These are reported in the present paper, together with descriptive notes and additional records for other, little known species.

Species new to the Maltese Islands

Ponerinae

= Pachycondyla
1. *Trachymesopus darwini* (Emery, 1900)

Gozo: Ramla sand dunes X.85, 2 ♀♀.

This species is known only from the brownish-yellow alate queens (BROWN, 1963). The same author also discusses its taxonomy and geographical distribution. *Trachymesopus darwini* has been recorded from North Australia, Indonesia, Philippines, India and tropical Africa. The present record is the first for the Central Mediterranean and for the Italian fauna. The two females collected from Gozo were observed under small stones firmly embedded in open sandy ground.

Myrmecinae

2. *Oxyopomyrmex santschii* Forel, 1904

Malta: Bahar ic-Caghaq. V.83. Gozo: Xlendi. V.90 (♂♀).

This species was first described from Tunisia and has been recorded from several localities in Sicily and Spain. The workers are small, black and densely sculptured and have the large, down-pointed oval eyes and 11-segmented antennae characteristic of the genus. In the Maltese Islands, *Oxyopomyrmex santschii* nests in exposed sandy soil and has small, crater-like nest openings. On Gozo, workers were seen foraging during late afternoon and were found singly under very small stones.

3. *Leptothorax kraussei* Emery, 1916

Malta: Birkirkara VIII.78; Buskett IV.84. Gozo: Xlendi V.90; Dwejra V.90 (♂♂).

This species was originally described as a variety of the similar *Leptothorax angustulus* Nylander, but is distinguished from the latter by the pale alitrunk, giving it a distinctive bicoloured appearance. *Leptothorax kraussei* is known from Sicily, Sardinia, Corsica and Spain. It generally nests in old wood or under bark. Single workers were found foraging in shaded situations on Malta, those from Gozo were found singly under small bushes growing on very steep valley sides.

4. *Leptothorax unifasciatus* (Latreille, 1798)

Gozo: Ramla sand dunes V.90; Xlendi V.90 (♂♀).

Leptothorax unifasciatus is widely distributed and common throughout Central and South Europe. It nests among rocks, under stones and often also under bark. The workers from Ramla were taken from under stones shaded by Tamarisk trees in a small sand dune habitat. Those from Xlendi were foraging in late evening under small bushes overhanging the steep valley sides.

5. *Strumigenys lewisi* Cameron, 1887

Malta: Il-Maqluba X.84 (♂♀).

Strumigenys lewisi is a tramp species, recorded from many localities from Japan to America. The present record is the first for the Central Mediterranean and for the Italian fauna. The workers from Malta were taken from leaf litter from a small wooded area.

6. *Trichoscapa membranifera* (Emery, 1869)

Malta: Birkirkara X.75; Wied il-Glasel IX.75 (♂♂).

Another widely distributed tramp species recorded from East Asia, India, the Middle East, the United States and also from its typical locality at Portici, Naples in Italy. In Malta, *Trichoscapa membranifera* workers were observed issuing from their small, slightly raised nest entrance in late evening.

*New local distribution records and notes on uncommon Maltese species**Cardiocondyla nigra* Forel, 1905

Malta: (see Schembri & Collingwood, 1981). Gozo: Ramla and dunes V.90 (♂♀ ♀♀).

Workers and queens from the Ramla sand dunes on Gozo differ from mainland Maltese populations in being paler and less sculptured but are otherwise similar. A small colony at Ramla was found under a stone partly embedded in damp sand under the thick low branches of a Tamarisk tree.

Messor caducus Victor, 1869

Messor caducus Arnoldi, 1977

This species was first described by V. MOTSCHULSKY who only gave his first name, Victor, as the authority. This was pointed out by BARONI URBANI et al (1989) who questioned the use of this name for the Maltese species. The original description of

Messor caducus is incomplete but ARNOLDI (1977) has redescribed the species from Armenia and the Caucasus. It occurs on Rhodes Island, Turkey and the Maltese Islands, and is close to *Messor sublaeviceps* Santschi, 1927, from Tunisia.

In the Maltese Islands this species was originally only known from Comino (BARONI URBANI, 1968a; SCHEMBRI & COLLINGWOOD, 1981), but it has subsequently been found on Malta at Ghajn Tuffieha, Manoel Island, Bajja tal-Fekruna, Ras Hanzir, Migrah Ferha, Imgiebah, Hal Tartani, Wied Gerzuna and San Martin; and on Gozo at Hondoq ir-Rummnen, Ta' Cenc, Wied il-Mielah; and also from several localities on Comino. Newly established colonies are nearly always coastal. Nests are constructed in hard packed soil or under stones in exposed situations.

Strongylognatus insularis Baroni Urbani, 1968

Malta: Zebbtig VIII.88, ♀.

A single dealate queen assigned to this species was taken in a garden at Zebbug (Malta) in an area apparently free from its host species, *Tetramorium caespitum* (Linnaeus). The head and body dorsum are completely dark.

Tetramorium lanuginosum (Mayr, 1807)

Malta: Birkirkara VIII.79, ♂ ♀; Ghadira sand dunes VIII.89, ♂ ♀. Ramla sand dune V.90, ♀ ♀ ♂♂ (additional records in SCHEMBRI & COLLINGWOOD, 1981).

The species was formerly known as *Triglyphotrix lanuginosurn*, but BOLTON (1985) merged the genus with *Tetramorium*. This is a common tramp species widely distributed throughout the tropics and subtropics. The single colony from Ramla was found under a deeply embedded stone in damp sand in the permanent shade of low growing Tamarisk branches. Several alate and dealate queens were present.

Smithistruma baudueri Emery, 1875

Malta: Wied il-Glasel IV.74, ♀; Il-Maqluba XI.82, ♂♂; Imgiebah II.85, ♀ (additional records in SCHEMBRI & COLLINGWOOD, 1981).

Smithistruma baudueri is a cryptic hypogeal species widely reported from Tunisia, Turkey, the Balkans, Corsica, Sardinia, Spain as well as Italy (BARONI URBANI, 1971). On Malta all workers were found singly in damp soil under stones or in leaf litter.

Leptothorax angustulatus (Nylander, 1856)

Malta: Buskett IV.83, ((additional records in SCHEMBRI & COLLINGWOOD, 1981).

Leptothorax angustulatus is a widely distributed South European species known from Portugal to the Adriatic. This species is generally associated with trees as a bark inhabitant. On Malta, workers were taken on the ground under trees.

Leptothorax rabaudi Bondroit, 1918

Malta: Imgiebah IV.84, ♂ ♀; Tal-Qroqq VI.87, (Gozo: Wied il-Ghasri V.90, ((additional records in SCHEMBRI & COLLINGWOOD, 1981).

Leptothorax rabaudi is a South European species. On Malta it inhabits damp lichen clumps on stones or trees in wooded areas, but it also occurs under shrubs.

Leptothorax recedens (Nylander, 1856)

Malta: Imgiebah IV.84 (additional records in SCHEMBRI & COLLINGWOOD, 1981).

The single worker from Malta was taken on lichen in an oak grove. The species is common throughout Southern Europe.

Leptothorax splendidiceps Baroni Urbani, 1968

This species has been found to be widespread throughout Malta and in several places on Gozo, it is also known from Santa Marija on Comino. *Leptothorax splendidiceps* was given specific status by AGOSTINI & COLLINGWOOD (1987). Locally, the species nests in rock crevices and under stones. Foraging occurs mainly during the evening.

Seen all these samples. *Proceratium melinum* (Roger, 1860)

Malta: Chadwick Lakes II.89, ♀; Imgiebah XI.85 ♀; Ballut tal-Wardija IV.84, ♀.

This species was originally tentatively identified from two males taken separately (SCHEMBRI & COLLINGWOOD, 1981). The single alate queen reported here was climbing small plants; the single worker was taken from leaf litter under oaks. *Proceratium melinum* is sparsely diffused through South Europe from Spain to the Ukraine.

Paratrechina longicornis (Latreille, 1802)

Malta, Gwardamangia X.83, ♂ ♀; Msida XI.85, ♀♀.

This common cosmopolitan species occurs throughout the Old World tropics, Japan and the Middle East. In Europe, including Italy, it establishes colonies in heated premises. In the Maltese Islands, *Paratrechina longicornis* nests in the open in rock fissures and forages during the hottest part of the day.

Lasius lasioides Emery, 1903

This species was listed and described by Schembri & Collingwood (1981) as *Lasius alienus* (Foerster). Recent studies by Dr B. SEIFERT (in litt.) indicate that *Lasius lasioides*, synonymised by WILSON (1955) as an infraspecific form of *Lasius alienus*, is in fact a good species based on type material from Naples and other named Emery specimens from the Balearic Islands.

All Maltese specimens examined conform to this species and not to *Lasius alienus* as previously recorded. The queen is distinguished by its relatively large head and narrow alitrunk and both workers and queens have well marked frontal furrows and frontal triangles, in contrast to *Lasius alienus* where these features are obscured or indistinct. Alate males and queens have dusky wings as in *Lasius brunneus* (Latreille). *Lasius lasioides* occurs in many localities on Malta and has been found on Gozo at Ramla (V.90) and other places.

Lasius "niger"

All samples taken on Malta are not in fact *Lasius niger* and apart from the much more abundant appendage pilosity, are nearer to *Lasius emarginatus* (Olivier) and have been so recorded by BARONI URBANI (1968a). The correct name for this quite common Maltese species has yet to be ascertained.

An updated checklist of the Myrmecofauna of the Maltese Islands

Ponerinae

1. *Trachymesopus darwini* Emery, 1900
2. *Hypoponera edwardi* (Forel, 1894)
3. *Proceratium melinum* (Roger, 1860)
4. *Amblyopone denticulatum* (Roger, 1859)

Dolichoderinae

5. *Iridomyrmex humilis* (May, 1868)
6. *Tapinoma nigerrimum* (Nylander, 1856)
7. *Tapinoma simrothi* Krausse, 1909

Myrmecinae

8. *Stenamma petiolatum* Emery, 1897
9. *Aphaenogaster campana* Emery, 1778
10. *Aphaenogaster inermis* Emery, 1908
11. *Aphaenogaster ionia* Emery, 1915
12. *Aphaenogaster sicula* Emery, 1908
13. *Aphaenogaster splendida* (Roger, 1859)
14. *Messor bouvieri* Bondroit, 1918
15. *Messor caducus* (Victor, 1839)
emend Arnoldi, 1977
16. *Messor capitatus* (Latreille, 1798)
17. *Messor structor* (Latreille, 1798)
18. *Oxyopomyrmex santschii* Forel, 1904
19. *Pheidole pallidula* (Nylander, 1848)
20. *Pheidole teneriffana* Forel, 1893
21. *Cardiocondyla nigra* Forel, 1905
22. *Crematogaster scutellaris* (Olivier, 1791)
23. *Solenopsis orbula* Emery, 1875
24. *Solenopsis santschii* Forel, 1905

25. *Monomorium subopacum* (Smith, 1858)
26. *Myrmecina graminicola* (Latreille, 1802)
27. *Leptothorax angustulus* (Nylander, 1856)
28. *Leptothorax kraussei* Emery, 1915
29. *Leptothorax rabaudi* Bondroit, 1918
30. *Leptothorax recedens* (Nylander, 1856)
31. *Leptothorax splendideiceps* Baroni Urbani, 1968
32. *Leptothorax unifasciatus* (Latreille, 1898)
33. *Leptothorax* sp. near *rogeri* Emery
34. *Strumigenys lewisi* Cameron, 1887
35. *Smithistruma baudueri* (Emery, 1875)
36. *Trichoscapa membranifera* (Emery, 1869)
37. *Tetramorium caespitum* (Linnaeus, 1758)
38. *Tetramorium diomedaeum* Emery, 1908
39. *Tetramorium lanuginosum* (Mayr, 1870)
40. *Tetramorium semilaeve* Andre, 1881
41. *Strongylognathus insularis* Baroni Urbani, 1968

Formicidae

42. *Plagiolepis pygmaea* (Latreille, 1798)
43. *Acantbolepis velox* Santschi, 191744.
Camponotus barbaricus Emery, 1904
45. *Camponotus lateralis* (Olivier, 1791)
46. *Camponotus truncantus* (Spinola, 1808)
47. *Paratrechina longicornis* (Latreille, 1802)
48. *Lasius lasioides* Emery, 1903
49. *Lasius* sp. near *emarginatus* (Olivier, 1802) & *niger* Linnaeus auctt.

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ABSTRACT

This work updates the revision of the myrmecofauna of the Maltese Islands published by the same authors in 1981. Nine species are recorded as new for the Maltese fauna: *Trachymesophus darwini* (Emery), *Oxyopomyrmex santschii* Forel, *Leptothorax kraussei* Emery, *L. unifasciatus* (Latreille), *Strumigenys lewisi* Cameron, and *Trichoscapa membranifera* (Emery). Additional distribution records within the Maltese Islands and notes on uncommon Maltese species are given. Some species are shown to be more widespread than previously thought (*Messor caducus* Victor, *Leptothorax splendidiceps* Baroni Urbani). Some previous tentative identifications are confirmed or corrected and nomenclature is updated (*Tetramorium lanuginosum* (May) = *Triglyphotrix lanuginosum*; *Lasius lasioides* Emery = *Lasius alienus* (Foerster)). An updated checklist of all 49 species of ants currently known from the Maltese Islands is provided.

RIASSUNTO

La myrmecofauna delle Isole Maltese. Commenti e aggiunte (Hymenoptera Formicidae).

Questo lavoro aggiorna la revisione della myrmecofauna delle Isole Maltesi pubblicata dagli stessi autori nel 1981. Sono aggiunte nove specie nuove per la fauna maltese: *Trachymesophus darwini* (Emery), *Oxyopomyrmex santschii* Forel, *Leptothorax kraussei* Emery, *L. unifasciatus* (Latreille), *Strumigenys lewisi* Cameron e *Trichoscapa membranifera* (Emery). Sono riportate nuove segnalazioni e note su alcune specie poco frequenti. Alcune specie sono molto più diffuse di quanto ritenuto (*Messor caducus* Victor, *Leptothorax splendidiceps* Baroni Urbani). Viene riportato anche una lista aggiornata con la conferma o la correzione delle determinazioni riportate precedentemente (*Tetramorium lanuginosum* (May) = *Triglyphotrix lanuginosum*; *Lasius lasioides* Emery = *Lasius alienus* (Foerster)).

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W. H. 10 years ago!