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Ants of the Balearic Islands.

(Contributions from the Entomological Laboratory of the Bussey Institution, Harvard University, No. 263)

By

William Morton Wheeler.

Our knowledge of the Formicidae of the Balearic Islands consisted of a few scattered references in the literature till 1925 when Lomnicki (Une Contribution à la Connaissance de la Faune des Fourmis des Iles Baléares. Polsk. Pismo Ent. (Bull. Ent. Pologne) 4, 1925 p. 1—3) recorded 16 forms taken by Tenenbaum in 1913 on Majorca, Iviza and Cabrera. During the current year Menozzi (Zur Kenntnis der Ameisenfauna der Balearen. Zool. Anzeig. 66, 1926 p. 180—182) has followed this paper with a list of 23 forms collected by Dr. H. Eidmann in Majorca between August 29 and September 18, 1925. Just before Eidmann's visit to the islands I was able, as the guest of Mr. Allison V. Armour on his yacht, the „Utowana“, to visit Iviza, Majorca and Minorca and to collect ants in several localities not visited by Tenenbaum and Eidmann. During the period of my visit the islands were very dry and dusty and the ants, at no time abundant in species and colonies, were inactive or aestivating even in the more mountainous portions of Majorca.

In connection with the ants two interesting insects, not hitherto recorded from the Balearics, are worthy of mention. One of these is the small myrme-

cophilous cricket, *Myrmecophila ochracea* Fischer. It was common in the nests of *Lasius niger* in the forest of *Quercus ilex* and *Pinus maritima* near Esporlas, Majorca, but nearly all the individuals taken were very small and immature. Schimmer (Beitrag zu einer Monographie der Gryllodeengattung *Myrmecophila* Latr. Zeitschr. wiss. Zool. 93, 1909 p. 409—534, 3 pls., 26 figs.) cites this cricket from a number of other Mediterranean localities: Sicily, Naples, Pisa, Trieste, Dalmatia, Korfu, Syra, Greece, Euboea, Crete, Smyrna and Tunis. It has been taken in the nests of *Messor barbarus* and its var. *minor*, *M. structor*, *Pheidole pallidula* and *Liometopum microcephalum*, but there is no previous record of its occurring with *Lasius niger*, though this ant is a common host of the Central European *M. acervorum* Panzer.

The other insect is the Leptid Dipteron *Vermileo vermileo* De Geer, known from Algiers, Southern France, Spain, Italy and the Tyrol. The larvæ make funnel-shaped pits in the dust or fine sand and capture ants and other small insects by suddenly coiling around them. I found these larvæ abundant along the highways (carreteras) in the mountains of Majorca and in the canyons, or barrancos of Minorca. Like the larval ant-lions, they prefer situations in which a quantity of dust has accumulated under some overhanging ledge of rock or the projecting stones of walls, and where their pits are protected from the rain and wind. Some weeks earlier in the summer of 1925 I had found the larvæ of a species of an allied genus, *Lampromyia canariensis* Macquart, in very similar situations on the island of Teneriffe. Many young and nearly mature larvæ of both species were brought to Boston alive during September and were fed for some weeks with termites and ants. During the winter they were kept in a mixture of sand and kaolin at a temperature of about 40° to 50° F. In April 1926, after feeding with termites had been resumed, many of the larvæ pupated and during May the flies emerged. An extensive account of these insects will be published later in connection with a study of the Californian species, *Vermileo comstocki* Wheeler.

The following is the list of ants which I collected:

Myrmicinae

Aphaenogaster testaceopilosa Lucas var. *gemella* Roger.

Majorca: ♀ Monastero de San Francisco, Palma, in the cloister, Aug. 23; ♀ Loma de la Galga, Aug. 22.

Minorca: ♀ Port Mahon, Aug. 24.

Iviza: ♀ Puerto de Iviza, Aug. 13.

This is evidently the same as the form cited by Lomnicki as *A. testaceopilosa* simply, from Palma and Son Sardina, Majorca.

Menzio records it from Porto Pi and Palma. The worker and male *gemella* were originally described from Majorca (1862). The male described by Roger from Algiers probably belongs to some other form of *testaceopilosa*.

Messor structor Latreille var. *tyrrhenus* Emery.

Majorca: ♀ Esporlas to Bañalbufar, Aug. 20; ♀ La Albufera, Aug. 19; ♀ Loma de la Galga, Aug. 22.

Minorca: ♀ Cala Parté, Aug. 25, in the finca of the Marquis de Menas-Albas.

Iviza: ♀ San Antonio, Aug. 11; ♀ Puerto de Iviza, Aug. 13.

Recorded by Lomnicki from Majorca (Genova, Bunola, Son Sardina, Palma, Marratxi, Deyá) and by Menozzi from the same island (Palma, Soller, Felanitz).

Messor barbarus instabilis F. Smith var. *bouvieri* Bondroit.

Majorca: ♀ Esporlas to Bañalbufar, harvesting grass-seeds, Aug. 30.

Minorca: ♀ Tiliti, Aug. 24; ♀ Barrancos de San Juan and Simon, Aug. 24; ♀ Cala Parté, Aug. 25.

Iviza: ♀ San Antonio, Aug. 11; ♀ San Jose, Aug. 15.

Recorded by Menozzi from Soller, Porto Pi and Palma, Majorca and from the islet of Cabrera; also by Lomnicki, under the name of *Messor capitatus* Latr. from Iviza, Majorca (Marratxi, Palma, La Porasa) and from Cabrera.

Crematogaster scutellaris Olivier.

Majorca: ♀ Coll de Soller, Aug. 18; ♀ Esporlas to Bañalbufar, Aug. 30.

Minorca: ♀ Tiliti, Aug. 24.

Iviza: ♀ San Antonio, Aug. 11; ♀ San Jose, Aug. 15.

Recorded by Lomnicki from Majorca (Marratxi, Bunola, La Puebla, Son Sardina, Deyá) and Cabrera, and by Menozzi from Majorca (El Terreno, Soller, Palma and La Porasa swamps).

Pheidole pallidula Nylander.

Majorca: ♀ La Albufera, Aug. 19; ♀ Monastery of Lluch, Aug. 19.

Minorca: ♀ Barranco Simon, Aug. 24.

Iviza: ♀ San Antonio, Aug. 11.

Recorded by Menozzi from Majorca (Porto Pi, Soller, Palma, Felanitz and the La Porasa swamps) and by Lomnicki from Cabrera, Iviza (Santa Eulalia and Puerto) and Majorca (Porto Pi, Palma, Marratxi).

Monomorium (Xeromxrmex) salomonis L. var. *obscuratum* Stitz.

Majorca: ♀ Monastery of Lluch, Aug. 19; ♀ Esporlas to Bañalbufar, Aug. 20.

Iviza: ♀ San Jose, Aug. 15.

Recorded by Menozzi from Majorca (Porto Pi, Palma, Algaida, Montuiri, Felanitz and Soller.) This variety was originally described from Algiers.

Monomorium (Xeromyrmex) salomonis subopacum Emery.

Iviza: ♀ San Antonio, Aug. 11; ♀ Puerto de Iviza, Aug. 13.

Recorded by Lomnicki from Majorca (Bunola, Palma, Son Sardina, Marratxi) and Iviza (Santa Eugenia). Menozzi records it only from Cabrera. Emery gives its distribution as Madeira, Canaries, Morocco, Algiers, Southern Spain, Sardinia, Sicily and Naxos.

Solenopsis latro fairchildi subsp. nov.

Worker. Length 1.75–2 mm.

Most closely related to the subsp. *lusitanica* Emery of Portugal. Head very distinctly longer than broad, subrectangular, with distinctly concave

posterior border and nearly straight sides which converge very slightly anteriorly. Eyes very small, consisting of only two facets and situated a little in front of the median third of the sides of the head. Median clypeal teeth stout and rather blunt, somewhat incurved. Structure of thorax and pedicel much as in *S. fugax* Latr. The color of the body is a peculiar orange yellow, the gaster paler, with traces of a broad fuscous band on the posterior portion of the first segment. The head of the larger workers is somewhat infuscated posteriorly.

Female. Length 4 mm.

Much smaller than the female of *fugax*, which measures 6.3–6.5 mm. Posterior border of head feebly convex. Antennæ and legs yellowish, cheeks, clypeus and mandibles yellowish red, remainder of head and thorax black; gaster above reddish brown; the borders of the segments broadly yellowish, the venter yellowish red. Wings grayish, with pale brown veins and pterostigma.

Male. Length 2.8 mm.

Also smaller than the male *fugax*. Structure of head, thorax, abdomen and antennæ similar; but scape shorter, less than twice as long as broad, the first funicular joint globular, the second and third joints distinctly narrower than the succeeding joints. Head behind the eyes with the sides converging posteriorly and feebly convex. Ocelli large and projecting. Shining black; mandibles and genitalia dull yellow; legs and antennæ brown, the femora darker than the tibiæ. Wings as in the female.

Described from numerous workers, two females and a male taken from two colonies nesting under large stones in lestobiosis with colonies of *Lasius niger*, near Esporlas, Majorca, Aug. 30.

This form, which is dedicated to my friend Dr. David Fairchild, my genial companion on my voyage to Morocco, the Canaries, Balearics and Southern Spain, is evidently quite distinct from any of the forms of *latro* previously described and adds to the doubts in regard to its specific status. Emery (Ann. Mus. Civ. Stor. Nat. (3) 6, 1915, p. 17) noticed that the subsp. *lusitanica* is intermediate between *fugax* and *latro* and admits that it may be regarded as a subspecies of the former. In the small eyes and shape of the head *fairchildi* approaches the subsp. *sicula* Emery from Sicily, *S. orbula* Emery from Corsica and *wolffi* Emery from Dalmatia.

Tetramorium cæspitum L. var. *ruginodis* Stitz.

•Majorca: ♀ La Albufera, in rice plantation, Aug. 19.

Recorded by Menozzi from Palma and Porto Pi on the same island. The locality of the type is Spain. Lomnicki cites the typical *cæspitum* from Palma.

Tetramorium cæspitum semilæve Ern. André.

Minorea: ♀ Tiliti, at the neolithic monuments, Aug. 24.

Menozzi records this form from Majorca (Porto Pi and Soller).

Dolichoderinæ

Tapinoma erraticum Latreille

Majorca: ♀ Monastery of Lluch, Aug. 19; ♀ La Albufera, in rice plantation, Aug. 19.

Iviza: ♀ San Antonio, Aug. 11; ♀ San Jose, Aug. 15

Recorded by Lomnicki from Iviza (Santa Eulalia) and Majorca (La Puebla).

Tapinoma erraticum nigerrimum Nylander.

Minorca: ♀ Barranco de Cala Parté, Aug. 25.

Iviza: ♀ San Antonio, Aug. 11; ♀ San Jose, Aug. 15.

Not previously recorded from the islands.

Formicinae

Lasius niger L.

Majorca; ♀ Coll de Soller, Aug. 18; ♀ ♀ ♂ Esporlas ta Bañalbufar, Aug. 20; numerous colonies, most of which contained *Myrmecophila ochracea* (vide supra).

Minorca: ♀ Barranco Simon, Aug. 24.

Recorded by Lomnicki from Iviza (Puerto de Iviza and Santa Eulalia) and Majorca (Palma, Marratxi, Son Sardina, Bunola). Menozzi records it from Palma and Soller, Majorca.

Camponatus (*Myrmentona*) *lateralis* Olivier.

Of the typical form of this species I possess three major workers, which were taken many years ago by Will on Majorca and given me by Professor Forel.

Camponotus (*Myrmentoma*) *lateralis armouri* subsp. nov.

Worker. Length 2,8—4 mm.

Both the major and minor phases much smaller than those of the typical *lateralis*, which measure 3,2—6,5 mm. Mesoëpinal impression distinctly deeper, the base of the epinotum strongly and evenly convex and rising posteriorly. Erect hairs on the head and thorax less numerous and more delicate. Color darker; the thorax usually black like the gaster; the legs and funiculi, except their basal joints, black or dark brown, with the trochanters, tips and bases of femora and tibiae reddish. The red of the head is also of a deeper shade than in typical *lateralis*.

Female (deälated). Length 9 mm.

Black, except the head, which is dark red, with a large black cloud on the vertex. Legs and antennæ uniformly black. Pilosity less developed than in the typical *lateralis*, which averages somewhat larger. (8. 5—10 mm)

Male. Length 3,8—4 mm.

Also smaller than the male of the typical *lateralis*, which measures 5—6, 5 mm. Head distinctly reddish, with blackish ocellar triangle. .

Described from a number of workers, four males and a single female, constituting a single colony which was found nesting in the ground in the Barranco de San Juan, Minorca, Aug. 24. This obviously depauperate race is probably peculiar to the island.

The species recorded by Lomnicki but not taken by me are the following:

Crematogaster auberti laestrygon var. *submaura* Lomnicki (Majorca).

Myrmica rolandi Bondroit (= *albuferensis* Lomnicki) (Majorca).

Tetramorium caespitum L. (typical?) (Majorca)

Plagiolepis pygmaea Latreille (Majorca).

Lasius alienus Foerster (Majorca)

Camponotus (*Myrmentoma*) *sicheli* Mayr (Majorca and Iviza).

Menozzi's list contains the following, all from Majorca, not recorded in Lomnicki's and my list:

Ponera eduardi Forel.

Ponera coarctata Latreille subsp. *lucida* Emery.

Solenopsis fugax Latreille.

Tetramarium caespitum meridionale Emery.

Acantholepis frauenfeldi Mayr var. *nigra* Emery.

Camponotus (*Colobopsis*) *truncatus* Spinola.

The number of forms now known from the Balearic Islands is therefore 26. They show clearly, as Menozzi has remarked, that the fauna is Iberian („Ein kleines Bruchstück der reicheren und mannigfaltigeren des benachbarten Spaniens“). It is certainly depauperate, comprising no endemic species, though there are the following endemic subspecies and variety:

Aphaenogaster testaceopilosa gemella.

Crematogaster auberti laestrygon var. *submaura*.

Solenopsis latro fairchildi.

Camponotus lateralis armouri.

Deux nouvelles fourmis parasites de l'Argentine

par le Dr. Santschi (Kairouan, Tunisie).

(1 figure dans le texte.)

Genus: *Oxyepoecus* n. gen.

♀ Tête rectangulaire un peu allongé. Yeux moyens sur les côtés. Epistome bicaréné et bidenté à lobe antérieur saillant. Mandibules triangulaires de 4 dents. Antennes de 11 articles, massue de 3 articles, le dernier d'un tiers plus long que l'ensemble des deux précédents, les 2 à 7 du funicule transversaux. Crêtes frontales assez courtes, rapprochées vers leur partie lobée, Thorax assez robuste, Pronotum aussi large que la tête, épaulé, sa face antérieure verticale, non recouverte par le mésonotum. Epinotum armé de deux fortes épines, à base comprimée. Noeud du pétiole, aussi haut que large et que la longueur de son pédicule. Postpétiole en ovale transversal, plus bas que le pétiole. Gastre court, échancré à la base. Pattes de longueur moyenne. Ailes à cellule médiane complète, les cellules radiales et cubitales seulement ébauchées.

Oxyepoecus bruchi n. sp.

♀ Long; 2,2 à 2,4 mm. D'un brun rougeâtre moyen, le gastre noirâtre, le devant de la tête plus roussâtre, antennes et pattes ocre clair. Lisse. Luisante. Tête striée ponctuée des lobes frontaux au vertex avec une bande lisse médiane. Face postérieure du postpétiole finement rugueuse. Dessus du pronotum et face déclive de l'épinotum faiblement ridée en travers. Partout des points pilifères épars. Une pilosité fine, assez régulière et abondante mais plus courte et plus oblique sur la tête et les appendices.

Tête environ un sixième plus longue que large, à côtés parallèles, ou faiblement convergent en avant, le bord postérieur convexe ainsi que les angles.