

# Notes on the ant fauna of Eritrea (Insecta: Hymenoptera: Formicidae): type specimens deposited in the Natural History Museum Vienna (Austria) and a preliminary checklist

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## Abstract

The ant collection of the Natural History Museum Vienna (Austria) contains syntypes of nine species described from Eritrea: *Aphaenogaster clavata* EMERY, 1877 (= *Pheidole clavata* (EMERY, 1877)), *Camponotus carbo* EMERY, 1877, *Melissotarsus beccarii* EMERY, 1877, *Monomorium bicolor* EMERY, 1877, *Pheidole rugaticeps* EMERY, 1877, *Pheidole speculifera* EMERY, 1877, *Polyrhachis antinorii* EMERY, 1877 (= *Polyrhachis viscosa* SMITH, 1858) and *Tetramorium doriae* EMERY, 1881. All syntypes were collected in Eritrea except the syntype of *Monomorium luteum* EMERY, 1881, which was collected in Yemen. A preliminary checklist of the ants of Eritrea comprises 114 species and subspecies of seven subfamilies.

## Zusammenfassung

In der Ameisensammlung des Naturhistorischen Museums Wien (Österreich) werden Syntypen von neun Arten aufbewahrt, die aus Eritrea beschrieben worden sind: *Aphaenogaster clavata* EMERY, 1877 [= *Pheidole clavata* (EMERY, 1877)], *Camponotus carbo* EMERY, 1877, *Melissotarsus beccarii* EMERY, 1877, *Monomorium bicolor* EMERY, 1877, *Pheidole rugaticeps* EMERY, 1877, *Pheidole speculifera* EMERY, 1877, *Polyrhachis antinorii* EMERY, 1877 (= *Polyrhachis viscosa* SMITH, 1858) und *Tetramorium doriae* EMERY, 1881. Alle Syntypen stammen aus Eritrea ausgenommen der Syntypus von *Monomorium luteum* EMERY, 1881, der in Jemen gesammelt wurde. Eine vorläufige Artenliste der Ameisen Eritreas umfasst 114 Arten und Unterarten aus sieben Unterfamilien.

**Key words:** Formicidae, types, *Camponotus*, *Melissotarsus*, *Monomorium*, *Pheidole*, *Polyrhachis*, *Tetramorium*, checklist, Eritrea, Yemen.

## Introduction

The study of the ant fauna of Eritrea has been neglected for several decades. Until now 114 species and subspecies have been recorded from Eritrea (Madl, unpublished catalogue).

During the compilation of a catalogue of the Formicidae of Eritrea, I also searched for type specimens of species described from Eritrea because the Natural History Museum Vienna houses the collection of Gustav Mayr (1830–1908). Mayr exchanged type material with Carlo Emery (1848–1925) and Auguste Forel (1848–1931), who described many ant species from the Afrotropical Region and the Horn of Africa. This fact is often unknown to scientists revising the Afrotropical ant fauna. I found type specimens of nine species described by Emery from Eritrea belonging to the subfamilies Formicinae and Myrmicinae.

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## I. Type specimens

The type locality Sciotel is situated ca. 15°35'N, 38°20'E, 21–26 km SW Keren (WEWALKA & JÄCH 2017: 21), near the mountain Zad Amba (Zadamba) (ISSEL 1876: map between p. 64 and 65).

### Subfamily Formicinae

#### 1. *Camponotus carbo* EMERY, 1877 (Fig. 1)

*Camponotus carbo* EMERY, 1877: 364 (description worker, figure, Sciotel).

**Material:** Eritrea: Bogos, Sciotel, 1 worker, 1870 leg. O. Beccari (Box 67). Distribution: Sciotel.

*Camponotus carbo* is only known from the original description.

#### 2. *Polyrhachis antinorii* EMERY, 1877 (Fig. 2)

*Polyrhachis viscosa* SMITH, 1858: 71; –RIGATO, 2016: 6 (catalogue Afrotropical Region), 8 (key worker), 42 (taxonomy, Eritrea: Keren, Sciotel), 43 (figure 14 A-C).

*Polyrhachis Antinorii* EMERY 1877: 365 (description worker, Eritrea: Keren, Sciotel), 366 (figure).

**Material:** Eritrea: Bogos, Sciotel, 1 worker, 1870 leg. O. Beccari (Box 99).

RIGATO (2016) examined only the type material deposited in the Museo Civico di Storia Naturale Giacomo Doria, Genova (Italy).

### Subfamily Myrmicinae

#### 3. *Melissotarsus beccarii* EMERY, 1877 (Fig. 3)

*Melissotarsus Beccarii* EMERY, 1877: 379 (typus generis by monotypy, description worker, soldier, Keren), 380 (figures).

*Melissotarsus beccarii*; –BOLTON, 1982: 335 (catalogue Afrotropical Region, key), 336 (taxonomy, description worker, Eritrea: Keren).

**Material:** Eritrea: Bogos, Keren, 1 worker, 1870 leg. O. Beccari (Box 372).

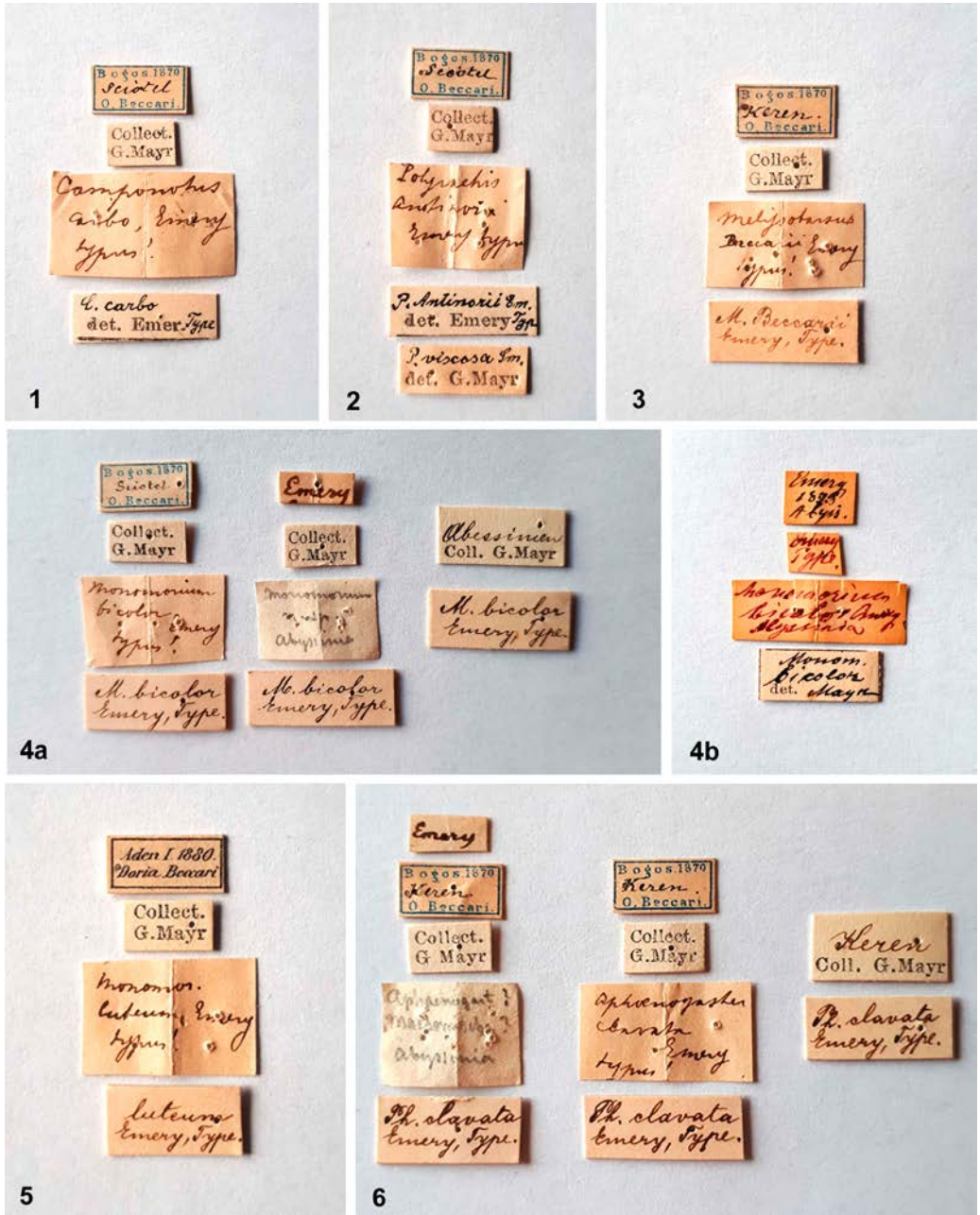
BOLTON (1982) examined syntypes deposited in the Museo Civico di Storia Naturale Giacomo Doria in Genova (Italy) and in the Museum d’Histoire Naturelle in Geneva (Switzerland).

#### 4. *Monomorium bicolor* EMERY, 1877 (Fig. 4)

*Monomorium bicolor* EMERY, 1877: 368 (description worker, Sciotel); –BOLTON 1987: 303 (catalogue Afrotropical Region), 311 (key), 329 (taxonomy), 330 (taxonomy), 331 (taxonomy), 338 (taxonomy, description worker, Eritrea: Ailet, Sciotel).

**Material:** Eritrea: Bogos: Sciotel, 14 workers on seven pins, 1870 leg. O. Beccari (Box 238).

The pins have different labels (Fig. 4a, b). Four pins are labelled as in Fig. 4a. I am not quite sure about the type status of the specimens labelled as in Fig. 4b. BOLTON (1987) examined syntypes deposited in the Museo Civico di Storia Naturale Giacomo Doria in Genova (Italy) and in the Musée Royal de l’Afrique Centrale Tervuren (Belgium).

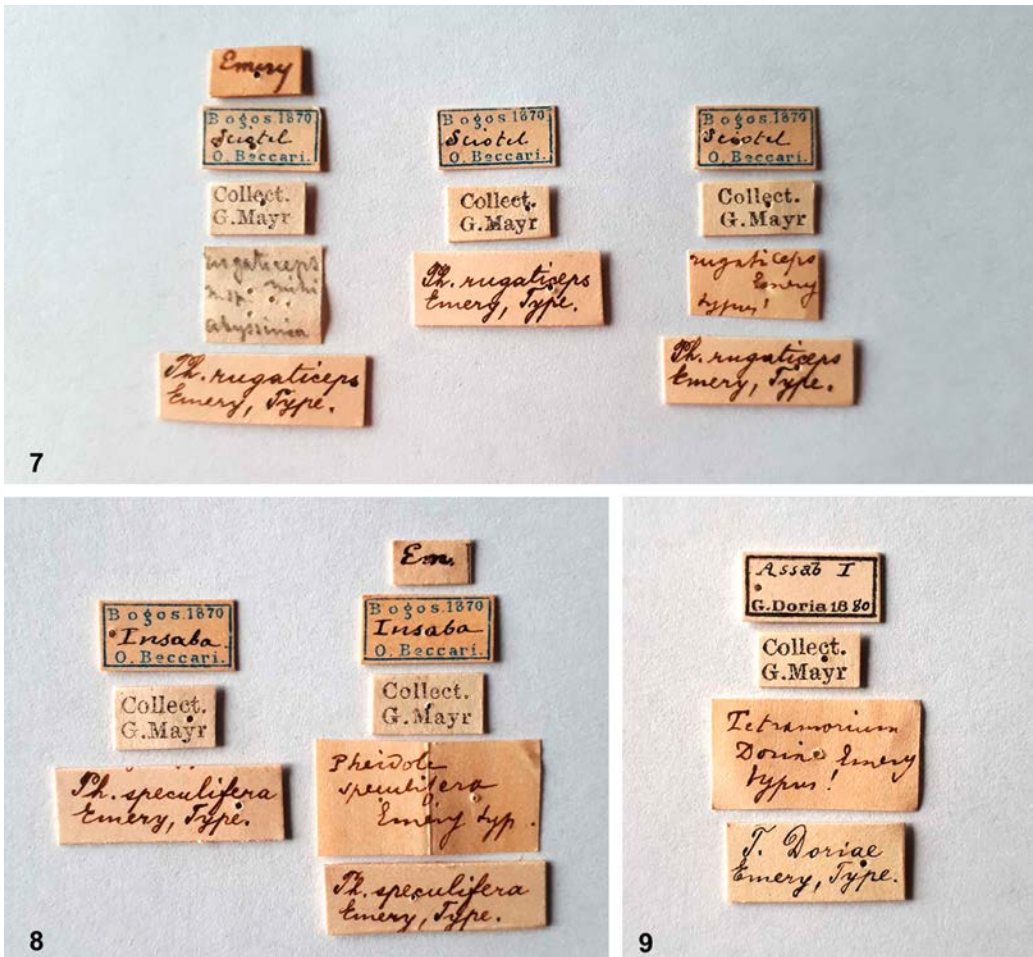


Figs. 1–6: Labels of the type specimens described by C. Emery.

**5. *Monomorium luteum* EMERY, 1881 (Fig. 5)**

*Monomorium luteum* EMERY, 1881: 532 (key), 533 [description worker, Eritrea (Ras Doumeira), Yemen (Aden)].

**Material:** Yemen: Aden, 1 worker, I. (= January) 1880 leg. G. Doria & O. Beccari (Box 241).



Figs. 7–9: Labels of the type specimens described by C. Emery.

*Monomorium luteum*, which was described from Eritrea and Yemen, is not included in the revision of BOLTON (1987). Therefore, the record from Eritrea is not mentioned in BOLTON (1995: 264) and the species is missing in FISHER & BOLTON (2016: 326).

### 6. *Aphaenogaster clavata* EMERY, 1877 (Fig. 6)

*Aphaenogaster clavata* EMERY, 1877: 372 (description worker, Keren).

*Pheidole clavata*; –MAYR, 1895: 134 (Keren).

**Material:** Eritrea: Bogos, Keren, 4 workers, 1870 leg. Beccari (Box 294).

Two specimens are pinned with the original locality labels (Fig. 6: left, middle) and two are without them (Fig. 6: right). MAYR (1895) published the type specimens without indicating their number.

### 7. *Pheidole rugaticeps* EMERY, 1877 (Fig. 7)

*Pheidole rugaticeps* EMERY, 1877: 375 (description female, worker, soldier, Sciotel).



**Material:** Eritrea: Bogos, Sciotel, 1 worker, 2 workers (one pin), 2 soldiers, 1870 leg. O. Beccari (Box 296). All specimens are pinned with the original locality labels (Fig. 7) except one soldier.

**8. *Pheidole speculifera* EMERY, 1877 (Fig. 8)**

*Pheidole speculifera* EMERY, 1877: 373 (description worker, soldier, Ainsaba (= Anseba)).

**Material:** Eritrea: Bogos, Ainsaba, 1 worker, 1 soldier, 1870 leg. O. Beccari (Box 296).

**9. *Tetramorium doriae* EMERY, 1881 (Fig. 9)**

*Tetramorium Doriae* EMERY, 1881: 530 (description worker, Assab).

*Tetramorium doriae*; –BOLTON, 1980: 201 (taxonomy, catalogue Afrotropical Region), 215 (key), 219 (key), 277 (taxonomy, description worker, Assab).

**Material:** Eritrea: Assab, 1 worker, I. 1880 leg. G. Doria (Box 281).

BOLTON (1980) examined only syntypes deposited in the Museum d'Histoire Naturelle de Genève (Switzerland).

## II. Preliminary checklist

The compilation of a catalogue of Eritrean Formicidae is still in progress, and the validity of the proposed names being verified. The most important papers on the Eritrean ant fauna have been published by EMERY (1877, 1881, 1901, 1915), FOREL (1910), MENOZZI (1931) and FINZI (1939). Only one reference per species is listed.

### Subfamily Amblyoponinae

*Stigmatomma* sp. (EMERY 1901: 61)

### Subfamily Dolichoderinae

*Tapinoma* sp. (EMERY 1915a: 4)

### Subfamily Dorylinae

*Aenictus anceps* FOREL, 1910 (FOREL 1910: 249)

*Aenictus eugenii caroli* FOREL, 1910 (FOREL 1910: 248)

*Aenictus fuscovarius laetior* FOREL, 1910 (FOREL 1910: 249)

*Aenictus fuscovarius magretti* EMERY, 1892 (MAGRETTI 1884: 539 as *A. inconspicuus* WESTWOOD, 1845)

*Aenictus hamifer* EMERY, 1896 (MAGRETTI 1906: 15)

*Dorylus aethiopicus* EMERY, 1895 (EMERY 1895: 741)

*Dorylus affinis aegyptiacus* MAYR, 1865 (MAGRETTI 1884: 538)

*Dorylus affinis loewyi* FOREL, 1907 (FOREL 1911b: 254)

*Dorylus fulvus eurous* EMERY, 1915 (EMERY 1915: 3)

### Subfamily Formicinae

*Acropyga silvestrii* EMERY, 1915 (EMERY 1915: 4)

*Camponotus acvapimensis* MAYR, 1862 (EMERY 1877: 365)

- Camponotus aegyptiacus* EMERY, 1915 (EMERY 1915: 4)  
*Camponotus carbo* EMERY, 1877 (see above)  
*Camponotus cinctellus* (GERSTÄCKER, 1858) (FINZI 1939: 160)  
*Camponotus diplopunctatus* EMERY, 1915 (EMERY 1915: 4)  
*Camponotus flavomarginatus* MAYR, 1862 (EMERY 1877: 364)  
*Camponotus galla* FOREL, 1894 (EMERY 1896: 775)  
*Camponotus maculatus* (FABRICIUS, 1781) (EMERY 1877: 364)  
*Camponotus puberulus* EMERY, 1897 (EMERY 1901: 63)  
*Camponotus robecchii* EMERY, 1892 (EMERY 1901: 63)  
*Camponotus sericeus* (FABRICIUS, 1798) (EMERY 1877: 364)  
*Camponotus somalinus* ANDRÉ, 1887 (EMERY 1901: 63)  
*Camponotus thraso assabensis* EMERY, 1925 (EMERY 1893: 258)  
*Camponotus thraso nefasitensis* MENOZZI, 1931 (FOREL 1910: 266)  
*Camponotus vestitus intuens* SANTSCHI, 1926 (FOREL 1910: 271)  
*Cataglyphis abyssinica* (FOREL, 1904) (MENOZZI 1931: 155)  
*Cataglyphis bicolor* (FABRICIUS, 1793) (EMERY 1915: 4, 22)  
*Lepisiota canescens* (EMERY, 1897) (EMERY 1877: 366 as *Acantholepis capensis* MAYR, 1862)  
*Lepisiota capensis* (MAYR, 1862) (MAGRETTI 1884: 537)  
*Lepisiota curta* (EMERY, 1897) (EMERY 1897: 603)  
*Lepisiota erythraea* (FOREL, 1910) (FOREL 1910: 265)  
*Lepisiota gracilicornis* (FOREL, 1892) (EMERY 1901: 63)  
*Lepisiota obtusa* (EMERY, 1901) (EMERY 1901: 63)  
*Paratrechina longicornis* (LATREILLE, 1802) (FOREL 1910: 266)  
*Plagiolepis abyssinica* (FOREL, 1894) (FOREL 1910: 266)  
*Plagiolepis brunni nilotica* FOREL, 1907 (EMERY 1915: 4)  
*Polyrhachis viscosa* SMITH, 1858 (EMERY 1877: 365 as *P. antinorii* EMERY, 1877)  
*Tapinolepis tumidula* (EMERY, 1915) (EMERY 1915: 4)

### Subfamily Myrmicinae

- Calyptomyrmex foreli* EMERY, 1915 (FOREL 1910: 262 as *Dicroaspis emeryi* FOREL, 1910)  
*Carebara erythraea* (EMERY, 1915) (EMERY 1915: 4)  
*Carebara jeanneli* (SANTSCHI, 1913) (EMERY 1915: 4)  
*Carebara vidua* SMITH, 1858 (EMERY 1877: 377)

- Crematogaster aegyptiaca robusta* EMERY, 1877 (EMERY 1877: 379)  
*Crematogaster alulai* EMERY, 1901 (EMERY 1901: 61)  
*Crematogaster alulai scrutans* FOREL, 1910 (FOREL 1910: 258)  
*Crematogaster castanea ferruginea* FOREL, 1892 (FOREL 1910: 258)  
*Crematogaster castanea hararica* FOREL, 1894 (EMERY 1915: 4)  
*Crematogaster chiarinii taediosa* FOREL, 1894 (EMERY 1901: 61 as *C. chiarinii* FOREL, 1894)  
*Crematogaster luctans* FOREL, 1907 (EMERY 1915: 12)  
*Crematogaster pseudinermis muellerianus* FINZI, 1939 (FINZI 1939: 157)  
*Crematogaster schmidti* MAYR, 1853 (EMERY 1915: 10)  
*Melissotarsus beccarii* EMERY, 1877 (see above)  
*Meranoplus inermis* EMERY, 1895 (EMERY 1915: 4)  
*Messor galla* MAYR, 1904 (FOREL 1910: 250)  
*Monomorium afrum* ANDRÉ, 1884 (FOREL 1910: 250 as *M. afrum* var. *asmarense* FOREL, 1910)  
*Monomorium bicolor* EMERY, 1877 (see above)  
*Monomorium carbo* FOREL, 1910 (see above)  
*Monomorium hirsutum* FOREL, 1910 (FOREL 1910: 251)  
*Monomorium luteum* EMERY, 1881 (see above)  
*Monomorium mictile* FOREL, 1910 (FOREL 1910: 252)  
*Monomorium pallidipes* FOREL, 1910 (FOREL 1910: 252)  
*Monomorium pharaonis* (LINNAEUS, 1758) (EMERY 1877: 368)  
*Monomorium salomonis* (LINNAEUS, 1758) (EMERY 1901: 61)  
*Nesomyrmex angulatus* (MAYR, 1862) (EMERY 1915: 4 as *Leptothorax (Goniothorax) angulatus* subsp. *concolor* SANTSCHI, 1914)  
*Pheidole aeberlii erythraea* EMERY, 1901 (EMERY 1901: 61)  
*Pheidole caffra abyssinica* FOREL, 1910 (FOREL 1910: 254)  
*Pheidole caffra amoena* FOREL, 1911 (FOREL 1911a: 365)  
*Pheidole clavata* (EMERY, 1877) (see above)  
*Pheidole escherichii* FOREL, 1910 (FOREL 1910: 254)  
*Pheidole indica* MAYR, 1879 (EMERY 1901: 61 as *P. tenerifana* (!) FOREL, 1893)  
*Pheidole megacephala impressifrons* WASMANN, 1905 (EMERY 1915: 3)  
*Pheidole philippi* EMERY, 1915 (EMERY 1915: 3)  
*Pheidole punctulata* MAYR, 1866 (EMERY 1901: 62)  
*Pheidole rugaticeps* EMERY, 1877 (see above)

- Pheidole rugaticeps arabs* EMERY, 1881 (FOREL 1910: 253)  
*Pheidole speculifera* EMERY, 1877 (see above)  
*Pheidole speculifera ascarus* EMERY, 1901 (EMERY 1901: 62)  
*Pheidole strator* FOREL, 1910 (FOREL 1910: 256)  
*Pheidole variolosa* EMERY, 1892 (FINZI 1939: 156)  
*Strumigenys simoni* (EMERY, 1895) (FOREL 1910: 261 as *S. escherichi* FOREL, 1910)  
*Solenopsis gnomula* EMERY, 1915 (EMERY 1915: 4)  
*Solenopsis punctaticeps erythraea* EMERY, 1915 (EMERY 1915: 4)  
*Strumigenys tragaordhi* SANTSCHI, 1913 (EMERY 1915: 4)  
*Tetramorium bicarinatum* (NYLANDER, 1846) (EMERY 1915: 4 as *T. guineense* (FABRICIUS, 1793))  
*Tetramorium doriae* EMERY, 1881 (see above)  
*Tetramorium ghindanum* FOREL, 1910 (FOREL 1910: 260)  
*Tetramorium imbelle* EMERY, 1915 (EMERY 1915: 4)  
*Tetramorium nefassitense* FOREL, 1910 (FOREL 1910: 260)  
*Tetramorium sericeiventre* EMERY, 1877 (EMERY 1877: 370)  
*Tetramorium simillimum* (SMITH, 1851) (EMERY 1877: 371 as *T. pygmaeum* EMERY, 1877)  
*Tetramorium subcoecum* FOREL, 1907 (EMERY 1915: 4 as *T. subcoecum inscia* (!) FOREL, 1913)  
*Tetramorium surrogatum* BOLTON, 1985 (EMERY 1915: 4 as *Triglyphotrix silvestrii* EMERY, 1915)  
*Tetramorium weitzeckeri* EMERY, 1895 (FOREL 1910: 259 as *T. escherichi* FOREL, 1910)  
*Trichomyrmex abyssinicum* (FOREL, 1894) (FOREL 1910: 250)  
*Trichomyrmex oscaris* (FOREL, 1894) (EMERY 1901: 61)  
*Trichomyrmex robustior* (FOREL, 1892) (FINZI 1939: 158)

### **Subfamily Ponerinae**

- Anochetus levaillanti* EMERY, 1895 (FOREL 1910: 248)  
*Anochetus sedilloti* EMERY, 1884 (BROWN 1978: 594)  
*Anochetus traegaordhi* MAYR, 1903 (BROWN 1978: 598)  
*Bothroponera crassa* (EMERY, 1877) (EMERY 1877: 366)  
*Bothroponera crassior* SANTSCHI, 1930 (FINZI 1939: 154 as *B. crassa* (EMERY, 1877))  
*Brachyponera sennaarensis* (MAYR, 1862) (EMERY 1877: 366)  
*Hypoconera dulcis* (FOREL, 1907) (FOREL 1910: 245)  
*Hypoconera orba* (EMERY, 1915) (EMERY 1915: 3)



*Leptogenys bellii* EMERY, 1901 (EMERY 1901: 59)

*Leptogenys erythraea* EMERY, 1902 (EMERY 1901: 60 as *L. stuhlmanni* MAYR, 1893)

*Leptogenys piroskae* FOREL, 1910 (FOREL 1910: 247)

*Megaponera analis* (LATREILLE, 1802) (EMERY 1877: 368 as *Megaloponera foetens* (FABRICIUS, 1793) and *M. crassicornis* GERSTÄCKER, 1858)

*Mesoponera elisae divaricata* (EMERY, 1915) (EMERY 1915: 368)

*Mesoponera escherichi* (FOREL, 1910) (FOREL 1910: 244)

*Odontomachus troglodytes* SANTSCHI, 1914 (MAGRETTI 1884: 538 as *O. haematodes* (LINNAEUS, 1758))

### Subfamily Proceratiinae

*Probolomyrmex brevisrostris* (FOREL, 1910) (FOREL 1910: 246)

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