

A NEW SPECIES OF ANT-LOVING CRICKET FROM MALLORCA, BALEARIC ISLANDS, SPAIN (ORTHOPTERA, MYRMECOPHILIDAE)

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ABSTRACT

T. Stalling. 2013. A new species of ant-loving cricket from Mallorca, Balearic Islands, Spain (Orthoptera, Myrmecophilidae). *Graellsia*, 69(2): 153-156.

A new species of ant-loving cricket, *Myrmecophilus fuscus* **sp. n.**, is described and illustrated, based on individuals collected on the Balearic island of Mallorca, Spain. *Lasius lasioides* (Emery, 1869) was the host ant species. The habitat was evergreen oak forest. The holotype specimen was deposited in the collection of the Muséum d'Histoire Naturelle de Genève. The species is closely related to *Myrmecophilus acervorum* (Panzer, [1799]) and belongs to the subgenus *Myrmecophilus* Berthold, 1827.

Key words: Taxonomy; new species; *Myrmecophilus fuscus*; ant guest; Mallorca; Balearic Islands; Spain.

RESUMEN

T. Stalling. 2013. Nueva especie de grillo mirmecófilo de Mallorca, islas Baleares, España (Orthoptera, Myrmecophilidae). *Graellsia*, 69(2): 153-156 (en inglés).

Se describe e ilustra una nueva especie de grillo mirmecófilo, *Myrmecophilus fuscus* **sp. n.**, procedente de la isla de Mallorca (islas Baleares, España). *Lasius lasioides* (Emery, 1869) es la especie hospedadora y su hábitat es el bosque perenne de roble. El holotipo se ha depositado en la colección del Muséum d'Histoire Naturelle de Ginebra. La nueva especie está estrechamente relacionada con *Myrmecophilus acervorum* (Panzer, [1799]) y pertenece al subgénero *Myrmecophilus* Berthold, 1827.

Key words: Taxonomía; especie nueva; *Myrmecophilus fuscus*; huésped de hormigas; Mallorca; islas Baleares; España.

Introduction

Ant-loving crickets (genus *Myrmecophilus* Berthold, 1827) are small insects, which are known to live as guests in the ant-nests. After Eades *et al.* (2013), 57 valid species have been described

worldwide to date. The genus has an almost cosmopolitan distribution. The situation of *Myrmecophilus* species in the Balearics has been described as dubious (Espadaler & Olmo-Vidal 2011). Wheeler (1926) and Gorochov & Llorente (2001) both mention *Myrmecophilus ochraceus*

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Fischer, 1853 from Mallorca. One specimen from Mallorca, deposited in the collection of Kurt Harz in the Muséum d'Histoire Naturelle de Genève (MHNG), was labelled as *M. ochraceus*, but in fact belongs to the new species described below. Espadaler & Olmo-Vidal (2011) identified one specimen from Mallorca as *M. acervorum* (Panzer, [1799]), but this specimen may also be misidentified, and possibly belongs to the new species described below.

In April, 2011, a series of *Myrmecophilus* was found in ant nests in the Serra de Tramuntana mountain range, Mallorca, Spain. A new species of *Myrmecophilus* from Mallorca, Spain is described herein.

Material and Methods

Ant nests were checked for *Myrmecophilus* in Mallorca, Spain, in April, 2011. The ant nests were found by turning stones. At Escorca, in the Serra de Tramuntana mountain range, a series of *Myrmecophilus* was found in ant nests. All *Myrmecophilus* specimens were caught and preserved in 70% ethanol, and subsequently pinned and dried. One additional specimen of this species was found in the collection of Kurt Harz in the Muséum d'Histoire Naturelle de Genève (MHNG). The nomenclature of male genitalia follows Desutter-Grandcolas (1997).

Myrmecophilus fuscus sp. n. (Figs. 1-7)

MATERIAL. Holotype female, adult, 12.04.2011, Spain, Mallorca, Escorca, N 39°49'31.2" / E 2°50'55.6", 620 m, leg. & det. T. Stalling. The holotype is deposited in the Muséum d'Histoire Naturelle Genève (MHNG). Paratypes: adult female, 25-29.5.1978, Spain, Mallorca, N Sóller, the southern

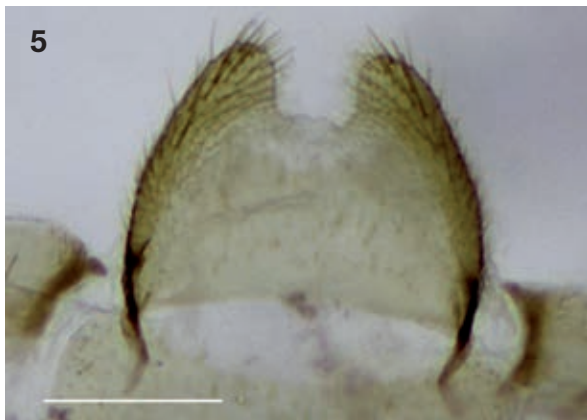
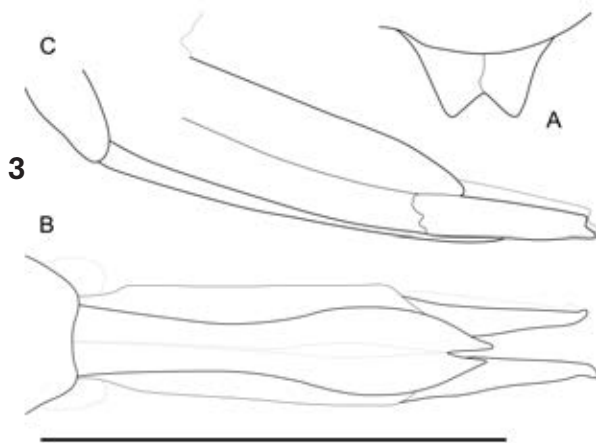
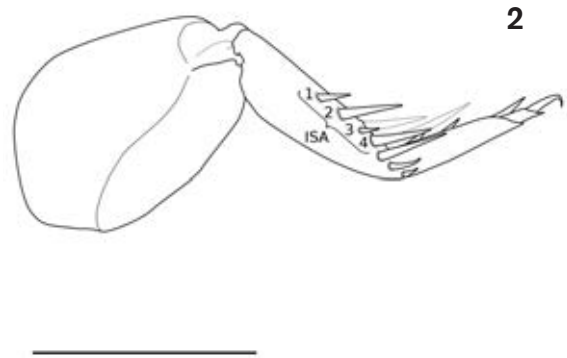
slopes of Puig Mayor, leg. H. Malicky, det. T. Stalling, coll. K. Harz in the Muséum d'Histoire Naturelle de Genève (MHNG); 8 adult males, 30 adult females, 27 larvae male, 17 larvae female, and 3 larvae of unknown sex; date and place as holotype, coll. T. Stalling.

DESCRIPTION. Adult female (Fig 1). Measurements: body length, 2.3 mm; pronotum, 0.7 mm long and 1.2 mm wide; hind femur, 1.3 mm; hind tibia, 0.9 mm; and cerci, 1.0 mm. Complanate body, weakly curved, 1.3 times as long as wide; pronotum curved, narrowed distally, turned in posterior half; colour, dark ochreous, except the posterior margins of pronotum, mesonotum, and tergites 1–3, which are contrasting pale ochreous. The whole surface of body and legs covered with dense hair-like scales. Antennae are almost as long as body and dark ochreous, and the first three segments are pale ochreous. Palpi, ochreous. Eyes are black. Hind legs (Fig. 2): hind femur, 1.4 times as long as wide; hind tibia with four inner subapical spurs, the first and third shorter than the second and the fourth, the third spine as long as the first spine on its left leg and about 5 times shorter than the first spine on its right leg; hind tibia with three inner apical spurs. Outer side of tibia with two subapical and two short apical spurs; first segment of basitarsus slender, with two spines (one short spine in the distal and one in the medial third) and with two apical spurs. Cerci are rotund, pointed distally, densely covered with fitting hairs and, in between, long, robust distant hairs. Tenth abdominal tergite with bilobate extension, with deep, rounded emargination (Fig. 3A). Epiproct is small and unmodified. Subgenital plate, emarginated (Fig. 3B); outer valvae seen from lateral as double-pointed (Fig. 3C).

VARIABILITY. Male (Fig. 4): as female, subgenital plate short and recessed, densely covered with short, golden-yellow hairs (Fig. 5). Phallic complex consists of two main sclerites: epiphallus and ectophallus. Epiphallus U-shaped, attached to the

Figs. 1-7.— *Myrmecophilus fuscus* sp. n. Holotype and paratypes from Spain, Mallorca, Escorca 12.04.2011. 1) Holotype (female), lateral view. 2) Paratype male, inner view of hind leg, ISA= inner subapical spurs. 3) Paratype female, shape of 10th abdominal tergite with bilobate extension (A), ventral (B) and lateral (C) view of ovipositor. 4) Paratype male (photo by T. Stalling). 5) Paratype male, subgenital plate of male, ventral view. 6) Paratype male, dorsal view of epiphallus. 7) Paratype male, ventral view of ectophallus. Scale bar figs. 1-3, 1 mm; figs. 5-7, 0.5 mm.

Figs. 1-7.— *Myrmecophilus fuscus* sp. n. Holotipo y paratipos de España, Mallorca, Escorca 12.04.2011. 1) Holotipo (hembra), vista lateral. 2) Paratipo macho, vista interna de la pata trasera, ISA= espuelas subapicales internas. 3) Paratipo hembra, aspecto del 10º terguito abdominal con extensión bilobulada (A) y vista ventral (B) y lateral (C) del ovipositor. 4) Paratipo macho (fotografía de T. Stalling). 5) Paratipo macho, placa subgenital en vista ventral. 6) Paratipo macho, vista dorsal del epifalo. 7) Paratipo macho, vista ventral del ectofalo. Escala de las figs. 1-3, 1 mm; figs. 5-7, 0.5 mm.



lateral sclerites (Fig. 6). Ectophallus at basal half transparent, with a ventral keel; apical half on dorsal side with a pair of band-shaped sclerites, on ventral side with a flexible semi-membranous structure (Fig. 7).

Paratypes vary in size and number of spines on the first segment of basitarsus only. Body length is 1.5-3.5 mm in females and 2.0-2.7 mm in males. Basitarsus with two (distal and medial) or sometimes three (distal, medial, and proximal) subapical spines.

DIAGNOSIS. *Myrmecophilus fuscus* sp. n. differs from other *Myrmecophilus* species from the Western Mediterranean by the following characteristics: valvae of female (laterally seen), double-pointed (rounded in *M. ochraceus*); hairs of front and antennae, short and inconspicuous (long, distant and bushy in *M. ochraceus*); and first segment of basitarsus with two or sometimes three subapical spines (only one spine in *M. ochraceus*). Subgenital plate of female clearly emarginated (rounded in *M. myrmecophilus* and most specimens of *M. aequispina* Chopard, 1923). *Myrmecophilus fuscus* sp. n. has only one type of inclined, distant, relatively long hair-like scales, whereas *M. aequispina* has two different types of hair-like scales on pro- and mesonotum and tergites (relatively few distant scales and, moreover, many short, closely-fitting scales). The colouration is dark ochreous with pale ochreous posterior margins of pronotum, mesonotum and tergites 1-3 (pale ochreous with no or inconspicuous pale posterior margins of pronotum, mesonotum, and tergites in *M. myrmecophilus* and *M. aequispina*; dark reddish-brown colouration with pale ochreous posterior margins of pronotum and mesonotum in *M. acervorum*). The extension of the tenth abdominal tergite has a deep, rounded emargination (slight, angular emargination in *M. acervorum*).

ETYMOLOGY. The epithet refers to the dark ochreous appearance of the species.

TAXONOMY. *Myrmecophilus fuscus* sp. n. belongs to the subgenus *Myrmecophilus* Berthold, 1827.

HABITAT. The species was found in the hills of the Serra de Tramuntana mountain range, covered by evergreen oak forest (*Quercus* sp.). All specimens were found in ant nests of *Lasius lasioides* (Emery, 1869), under stones in the oak forest along the roadside.

DISTRIBUTION. So far only known from Mallorca, Spain.

LIFE HISTORY. Mostly unknown. Both adults and larvae were found together in April.

Acknowledgments

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