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

A new species of ant-loving cricket, *Myrmecophilus fuscus* sp. n., is described and illus-
trated, 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

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 Museum 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 cos-
mopolitan 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.


**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
Myrmecophilus fuscus n. sp. from Mallorca

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lateral sclerites (Fig. 6). Ectophallus at basal half transparent, with a ventral keel; apical half on dor-
sal 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 some-
times three (distal, medial, and proximal) subapical
spines.

**Diagnosis.** *Myrmecophilus fuscus* sp. n. differs
from other *Myrmecophilus* species from the
Western Mediterranean by the following character-
istics: valvae of female (laterally seen), double-
pointed (rounded in *M. ochraceus*); hairs of front
and antennae, short and inconspicuous (long, dis-
tant 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 speci-
mens 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 red-
dish-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 speci-
mens 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.

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to Peter Schwendinger (MHNG) for providing specimens for
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