

FORMICA DUSMETI EMERY, 1909, AN IBERIAN ENDEMIC ANT SPECIES: DESCRIPTION OF THE MALE AND DISTRIBUTION (HYMENOPTERA: FORMICIDAE)

XAVIER ESPADALER¹ and CRISANTO GÓMEZ²

¹C.R.E.A.F. Universitat Autònoma de Barcelona. 08193 Bellaterra, Spain; e-mail: ibec5@cc.uab.es

²Departament de Ciències Ambientals, Universitat de Girona. 17071 Girona, Spain

Abstract.— The male of the iberian endemic ant *Formica dusmeti* Emery, 1909 is described. The shorter scape and hairless appendices differentiate those males from those of the closest species *F. frontalis* Santschi and *F. truncorum* Fabricius. The distribution of *F. dusmeti* is updated.



Key words.— Hymenoptera, Formicidae, *Formica dusmeti*, Iberian, male, morphology.

INTRODUCTION

F. dusmeti is a wood ant, constructing dome nests with plant debris or pine needles. Nests may be found under stones though sometimes they use old stumps, always with plant remains accumulated near the nest entrance or covering more or less the stump. Its biology is probably similar to the well known "rufa-group". "Le mâle diffère peu de celui de *truncorum*" (Santschi 1932). This is the short and uninformative description of the male of *Formica dusmeti* Emery, 1909. Santschi was right. This species, whose biology is virtually unknown, has had a rather confusing history: Tinaut and Martínez (1998) when describing the male of *F. frontalis* Santschi, 1919, also an Iberian species, have correctly disentangled the puzzling of those two Iberian endemics. *F. frontalis* had never been before formally recognised as a good species. Both taxa have been variously related to *F. truncorum* Fabricius, 1804. The three species *F. truncorum* Fabricius, *F. dusmeti* Emery and *F. frontalis* Santschi have a similar coloration because of the reddish head with a dark spot of the workers and queens and are probably a monophyletic group. The history of taxonomical changes concerning both species has been summarised by Tinaut and Martínez (1998).

The finding of a huge population of *F. dusmeti* in the Pyrenees allowed us to find sufficient males, that eclosed from cocoons belonging to two nests from two localities. Here we describe those males and offer the distribution for the species, as is presently known. Cephalic measures on 20 males, mm (minimum–mean–maximum); other measurements based on 10 males. The morphology (25 males studied) follows Francoeur (1973):

HL – head length; maximum head length, from occiput to apex of clypeus

HW – head width; maximum head width

SL – scape length

CI – cephalic index (HW*100/HL)

SI – scape index (SL*100/HW)

ED – maximum eye diameter

EI – eye index (ED*100/HW)

AW – alitrunk width; maximum trunk width, at the level of tegulae

AL – alitrunk length

AI – alitrunk index (AW*100/TL)

PH – petiole height; maximum petiole height in side view.

Formica dusmeti Emery, 1909

Material examined. Description based on material from Bescaràn, Lleida, 1750 m, 4 July 1991, leg. X. Espadaler, and Arànsér, Lleida, 1800 m, 12 July 1997, leg. X. Espadaler.

Description. Male (Figs. 1, 2). HL 1.40–1.52–1.64; HW 1.72–1.88–2.08; SL 1.44–1.58–1.68; CI 116.2–123.6–129.7; SI 79.1–83.9–88.8; ED 0.72–0.75–0.80; EI 37.5–40.3–41.6; AL 3.20–3.57–3.72; AW 2.00–2.17–2.240; AI 53.7–60.9–66.2. PH 0.92–1.02–1.24.

Body entirely black. Tip of mandibles and legs, except for the blackened coxae, reddish yellow. In a few males one or two terminal tarsomeres are darkened. External genitalia yellowish. Wings infuscated.

Head broader than long. Occipital margin variable, from slightly convex to slightly concave. Ocelli 0.16. Frontal furrow as a very fine shining line, sometimes nearly obsolete, not reaching the median ocellus. Clypeus with or without a carina; if present it runs from the middle to the anterior margin. In a half of the males there is a transverse depression, visible in profile, running near the anterior margin. Mandibles usually with a single apical tooth; in a few males the basal margin is not rounded but produced in a sharp corner as a second poorly developed tooth. Palp formula 6:4. Head surface with subdued shine. Frontal triangle shining.