

## DESCRIPTION OF THE UNKNOWN FEMALE OF *DRASSODES DIFFICILIS* (SIMON, 1878) FROM SPAIN WITH ILLUSTRATIONS OF THE MALE AND SOME ZOOGEOGRAPHICAL NOTES (ARANEAE: GNAPHOSIDAE)

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**Abstract:** During a collecting trip to the Sierra Nevada in Andalucía (southern Spain) the unknown female of *Drassodes difficilis* (Simon, 1878) was collected. The female is illustrated and described, together with illustrations of the male and some zoogeographical notes.

**Key words:** Araneae, Gnaphosidae, *Drassodes difficilis*, description of female, Spain, Andalucía, Sierra Nevada.

**Descripción de la hembra de *Drassodes difficilis* (Simon, 1878) de España, con ilustraciones del macho y algunas notas zoogeográficas (Araneae : Gnaphosidae)**

**Resumen:** Durante un viaje de recolección a Sierra Nevada, en Andalucía (sur de España) se colectó la hembra de *Drassodes difficilis* (Simon, 1878). Se describe por primera vez la hembra, se ilustra el macho y se aportan algunas notas zoogeográficas.

**Palabras clave:** Araneae, Gnaphosidae, *Drassodes difficilis*, descripción de la hembra, España, Andalucía, Sierra Nevada.

**Taxonomy / Taxonomía:** ♀ description *Drassodes difficilis* (Simon, 1878).

### Introduction

The gnaphosid genus *Drassodes* Westring, 1851 remains a taxonomically difficult group not the least due to many older and badly documented descriptions, misplacements, misidentifications or the mismatching of sexes in the past (Hervé & Rollard, 2009; Platnick & Shadab, 1976). The genus is common and speciose in the western Palearctic with about 59 species listed (Canard, 2005).

From Spain, 12 species have been reported (Cardoso & Morano, 2010; Morano *et al.*, 2014). The rarest amongst these seems to be *Drassodes difficilis* described by Simon in his remarkable *Arachnides de France* published in 1878 (Simon, 1878). In Spain, this species seems to be known only from the Sierra Nevada in Andalucía, southern Spain, and only known from male specimens.

Hervé & Rollard (2009) discussed the mismatching of males and females in the past of *Drassodes difficilis* and other species, based on the original Simon material present in the Musée d'Histoire naturelle in Paris. They proved herein that the female of *D. difficilis* remains to be discovered. Their argumentation has been accepted in the World spider catalogue (2016).

During May 2015, a collecting trip to Andalucía was undertaken by the authors. *Drassodes difficilis* was rediscovered in one specific locality in the southern Sierra Nevada and moreover, two females were collected together with several males. As no other *Drassodes* species have been found in this locality and the females were collected at the same time as and in the close vicinity of the males, both sexes can be matched with certainty.

As a consequence the unknown female of this apparently very rare species has been discovered and is described in this contribution.

### Description

#### *Drassodes difficilis* (Simon, 1878)

*Drassus difficilis* Simon, 1878: 110.

*Drassodes difficilis* Simon, 1914: 124, 130, 206, fig. 211.

*Drassodes difficilis* Hervé & Rollard, 2009: 637, 640, fig. 27-29.

**MATERIAL EXAMINED:** SPAIN, Andalucía, eastern Alpujaras, Puerto de la Ragna, 2200 m, 12 males, 2 females, 03 May 2015, M. Alderweireldt & C. De Boever leg., private collection M. Alderweireldt (AR1927 and AR1928).

#### DESCRIPTION FEMALE (Fig. 1-5).

An inconspicuously colored species, in shades of grey and white, without clear patterns or conspicuous colors.

Measurements (n=2): carapace width 2.30-2.70 mm, carapace length 3.05-3.75 mm, total length 7.80-9.55 mm.

Carapace: dull pale greyish yellow, covered with depressed black hairs in a pattern oriented towards the frontal eye region.

Sternum: uniform pale grey.

Chelicerae: uniform grey; outer margin with three conspicuous teeth, the most basal one being the smallest; inner margin with two very small inconspicuous teeth.

Abdomen: patchy grey and white on the dorsal side, covered with long black hairs; ventrally grey, spinnerets as well.

Legs and pedipalp: greyish but with conspicuous striped pattern mainly formed by lines of hairs contrasting to hairless parts; the leg formula is 4-1-2-3; femur I with one, femur II with two prolateral spines; femora I and II with two dorsal spines; tibiae and metatarsi I and II with one ventral spine only, without pro- nor retrolateral spines in contrast to tibiae III and IV possessing stout prolateral, retrolateral, dorsal and ventral spines; all tarsi scopulated over their total length.

Epigyne (Fig. 2, 4): lateral sides of central plate converging, resulting in a triangular shape (in contrast to the related *Drassodes pubescens* which has a more parallel sided central plate); edges of the central plate heavily sclerotized and dark; lateral spermathecae visible through the tegumentum.

Vulva (Fig. 3, 5): clearly different from other related *Drassodes* species in having large, wide, elongated and rounded central spermathecae which are directly interconnected by a short ductus to doubled and smaller lateral spermathecae.

**MALE.** Additional pictures of the male palp are given in Fig. 6-7. The shapes of the median and terminal apophyses are unmistakable as illustrated in Fig. 27-29 in Hervé & Rollard (2009, p. 640).

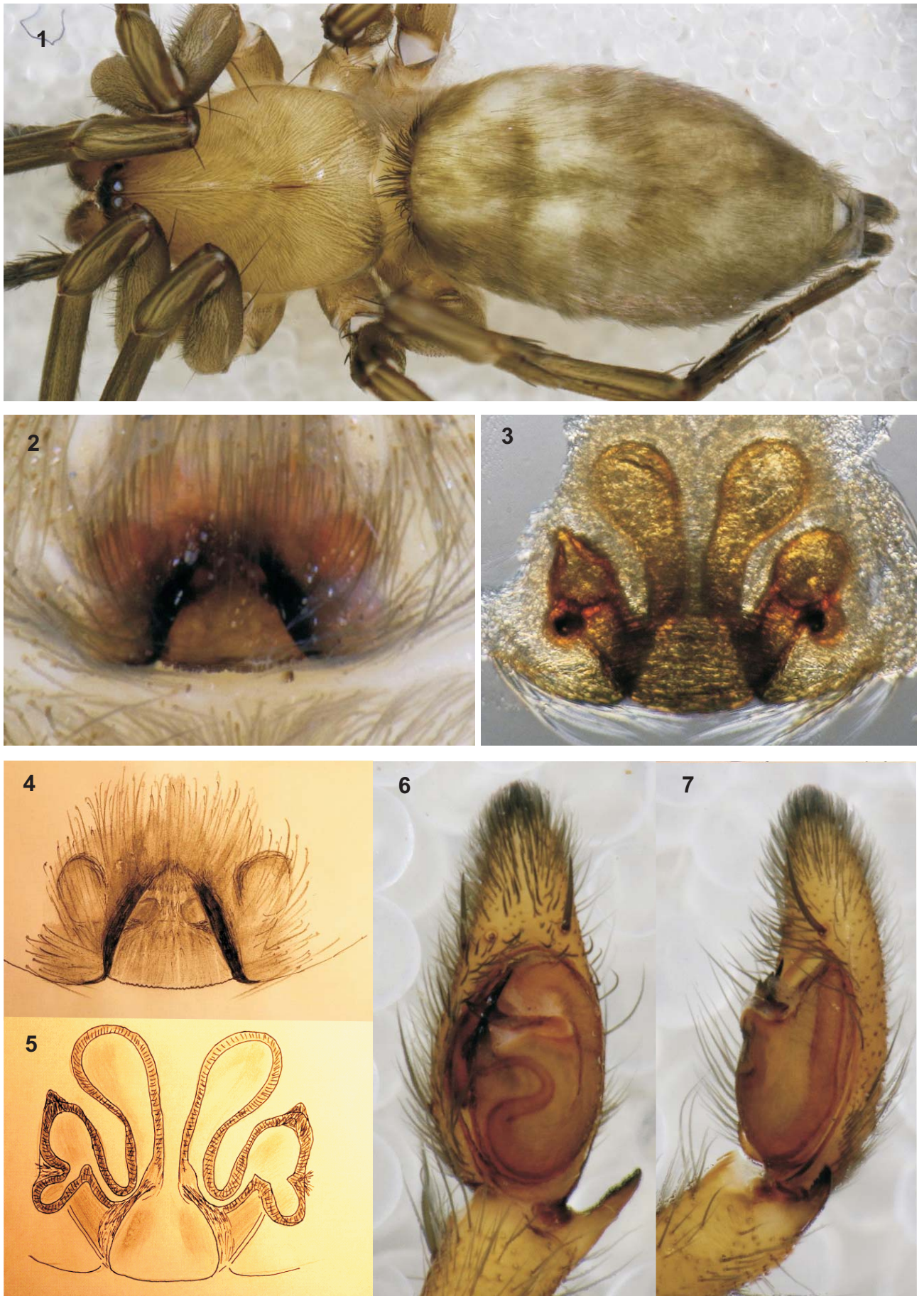
**ZOOGEOGRAPHICAL COMMENTS:** *Drassodes difficilis* is known from very few localities in the western Mediterranean. Records are from France (Hervé & Rollard, 2009; Simon, 1878, 1914), Spain (Morano *et al.*, 2014; Schenkel, 1938) and Italy (Isaia, 2001; Pantini & Isaia, 2015).

A remarkable disjunct record is from Turkey. The species is retained on the check-list of the spiders of Turkey (Bayram *et al.*, 2016).

The species is clearly restricted to high mountainous grasslands with rocks (under which it hides during the day) above the tree line at heights of about 2000-2200 m in the French and Italian Alps and in the Sierra Nevada in Spain. This species once again illustrates the zoogeographical relationships between the Alps and the southern Spanish high mountains of the Sierra Nevada documented for instance by Nagi *et al.* (2003) and others.

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**Fig. 1-7.** *Drassodes difficilis*. 1. Habitus female dorsal view; 2. and 4. Epigyne, ventral view; 3. and 5. Vulva cleared, ventral view; 6. Male palp, ventral view; 7. Male palp, lateral view.