

## ***Prodidomus amaranthinus* (Lucas, 1846) (Araneae Gnaphosidae) new for the Italian Araneofauna**

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**ABSTRACT** The spider *Prodidomus amaranthinus* (Lucas, 1846) (Araneae Gnaphosidae), species never reported before for Italy, was found, sampled and identified in Ribera province of Agrigento, in Sicily (Italy). This is the first record of the genus and species for Sicily and Italy. Additional notes on taxonomy, distribution and biology are provided.

**KEY WORDS** Araneae; Spider; Araneofauna; Gnaphosidae; Sicily.

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### **INTRODUCTION**

The genus *Prodidomus* Hentz, 1874 belong to family Gnaphosidae (Prodidominae), transferred from the Prodidomidae to the Gnaphosidae (Prodidominae) by Azevedo et al. (2018).

Of the 54 species belonging to genus *Prodidomus* (WSC, 2021), only 7 are known in the Mediterranean area (Netwing et al., 2021): *P. amaranthinus* (Lucas, 1846), *P. flavidus* (Simon, 1844), *P. geniculatus* Dalmás, 1919, *P. hispanicus* Dalmás, 1919, *P. redikorzevi* Spassky, 1940, *P. rollasoni* Cooke, 1964 and *P. rufus* Hentz, 1847 (although this species, reported for Spain, is identified in “cfr.” (Ferrández & Carrillo, 2018).

Among these, *P. amaranthinus*, reported for Algeria (Lucas, 1846; Walckenaer, 1847; Pickard-Cambridge, 1872; Dalmás, 1919), Egypt (Simon, 1880; Simon, 1907), Libya (Cooke, 1964), Morocco (Simon, 1870; Dalmás, 1919), Tunisia (Dalmás, 1919; Cooke, 1964), and more recently for Cyprus (Bosman et al., 2019), Greece/Crete (Bosman et al., 2013), Portogallo (Pérez & Blasco, 1986; Branco et al., 2019), Spagna (Pérez & Blasco,

1986; Branco et al., 2019) and Turkey (Asia) (Topçu & Türkeş, 2010), is the species with the widest Mediterranean distribution.

Cooke (1964) writes “*is the most widespread species of the family, and occurs along the whole length of the North African coast from Morocco to Syria*”. This distribution contrasts strongly with the isolated occurrence of most other species, and is presumably due to its tolerance of a “*wider range of environments than other members of the family*”.

### **MATERIAL AND METHODS**

On February 2, 2021, the spiders (1 male, 1 female and 2 juveniles) were collected in an area, with low vegetation and sporadic trees, located in Ribera (37°25'18.0" N 13°16'49.2" E), Agrigento, (Sicily, Italy). Three other females specimens were collected on 21 March 2021, in Ribera.

They were photographed with a Canon EOS 7D Mark II with a EF 100 mm Macro with 20 mm extension rings and 1.4 canon multiplier (F.C. Amata).

All the specimens were sampled and preserved in centrifuge tube, fixed in 75% ethanol (Levi, 1977). Observation with a stereomicroscope allowed a correct determination, which follow Pérez & Blasco (1986). They are currently stored in the collection of one of the authors (A. Dentici, Palermo, Italy).

## RESULTS

### *Systematics*

Ordo ARANEAE Clerck, 1757

Familia GNAPHOSIDAE Pocock. 1898

Genus *Prodidomus* Hentz, 1847



Figures 1, 2. *Prodidomus amaranthinus* from Sicily: male (Fig. 1) and female (Fig. 2).

### *Prodidomus amaranthinus* (Lucas, 1846)

**DESCRIPTION.** The specimens found in Sicily, belonging to group 1 of Dalmas (1919), coincide with the descriptions of Cooke (1964) and Perez & Blasco (1986). In particular, they show a wine-red coloration of the opisthosoma, with sparse hair, and of the opisthosoma, darker in the female specimens, greyish brown thickly covered with hair. The length of the body ranges from 6 to 9 mm, with the females being larger than the males. Peculiar are the ocular distribution, with dark anterior median eyes in contrast with the remaining pearly ones, of which the anterior line slightly curved and the posterior one extremely procured, to create as a whole an almost triangular shape and the spinnerets, of cylindrical shape truncated with those posterior, clearly larger than the anterior, squat, compactly arranged and thickly covered with bristles.

**DISTRIBUTION AND BIOLOGY.** Mediterranean. As reported by Cooke (1964), although the species is associated with desert or very arid environments, it has been observed in very different contexts, such as *Quercus* woods “a habitat which, during the winter months at least, must be very damp”, or for example “At Tabarka, the stone beneath which *P. amaranthinus* was found was lying on damp mud covered with long grass, and being a steep north-facing slope, conditions were such that I doubt whether the site would ever be entirely dry at any time of year”. These observations suggest a strong adaptability of the species to different environmental conditions, which explains the wide distribution of the species.

In Sicily, *P. amaranthinus* specimens were found under the bark of *Eucalyptus* sp. stone wick they clung to when it was picked up and in a reforested area in *Eucalyptus* sp., under the bark of one of these trees.

In both samples, *P. amaranthinus* were found near specimens of *Palpimanus gibbulus* Dufour, 1820 (Araneae Palpimanidae), and observing them it was noted that the way of moving of the two species was very similar. These observations linked to the similar coloring of the two species suggest some deeper co-evolutionary significance than simple causality, but this requires more careful observations and studies.

REMARKS. This record represents a new genus and a new species for Sicily and Italy.

The great adaptability of the species (Cooke, 1964) explains its wide distribution, and although it is currently present only in central southern Sicily, we are sure that future investigations will show a greater diffusion on the island.

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