

## A new species of *Pseudomogrus* Simon, 1937 (Araneae: Salticidae) from the Canary Islands

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### Abstract

A new species of jumping spider, *Pseudomogrus dumosus* n. sp. (♂♀), from Fuerteventura (Canary Islands) is diagnosed, illustrated, and described. Comparative illustrations of the holotype of *Pseudomogrus algarvensis* (Logunov & Marusik, 2003) are also provided.

**Keywords:** Aranei • description • diagnosis • Fuerteventura • jumping spiders • Spain

### Introduction

The monotypic genus *Pseudomogrus* Simon, 1937 was originally erected by Simon (1937) for *Attus uni-vittatus* Simon, 1871. Later, the genus was synonymized with *Yllenus* Simon, 1868 by Prószyński (1968). Recently, Prószyński (2016) established a new genus *Logunyllus* Prószyński, 2016 (the type species *Attus albo-cinctus* Kroneberg, 1875) to accommodate all the congeners (33 in total) of the *albo-cinctus* species group of *Yllenus* (*sensu* Logunov & Marusik 2003), including *Y. univittatus* which was the generotype of *Pseudomogrus*. Hence, Marusik & Blick (2019) were indeed correct to treat *Logunyllus* as a subjective junior synonym of *Pseudomogrus* and to synonymize both generic names. The genus *Pseudomogrus* (*sensu* Marusik & Blick 2019) currently includes 33 valid species (World Spider Catalog 2019).

The aim of the present paper is to diagnose and describe a new *Pseudomogrus* species recently collected by one of us (MS) from Fuerteventura, the second largest of Canary Islands.

### Material and methods

The studied specimens have been deposited in or borrowed from the following museums and a private collection: AMNH = American Museum of Natural History, New York (curator: Lorenzo Prendini); MMUE = The Manchester Museum, University of Manchester, Manchester (curator: Dmitri V. Logunov), PCMS = personal collection of M. Schäfer (Berlin), and ZMB = Museum für Naturkunde, Berlin (curator: Jason A. Dunlop).

Digital photographs of live specimens were made by the second author by means of a Canon MP-E 65 mm lens mounted on a Canon 5D Mark IV Camera. Digital

photographs of preserved specimens were made by the first author at the World Museum of Liverpool (UK) by means of a Canon 6D Mark II Camera with a Canon MP-E 65 mm lens with Helicon Remote ver. 3.9.7W software to control the StackShot 3× macro rail and camera settings, and Helicon Focus 6.8.0 as a processing software.

The format of species description and terminology follow Logunov & Marusik (2003). For the leg spination the system adopted is that used by Ono (1988). Abbreviation used in the text: AME = anterior median eye, ALE = anterior lateral eye, PME = posterior median eye, PLE = posterior lateral eye; Fm = femur, Pt = patella, Tb = tibia, Mt = metatarsus, Tr = tarsus; position of leg spines: d = dorsal, pr = prolateral, rt = retrolateral, v = ventral. In the following descriptions, the term cheeks is used to describe the areas of carapace situated below the ALE-PLE line, on both sides of the clypeus. The sequence of leg segments in measurement data is as follows: femur + patella + tibia + metatarsus + tarsus (total). All measurements are in mm.

### *Pseudomogrus dumosus* n. sp. (Figs 1–13, 18–20, 24–29)

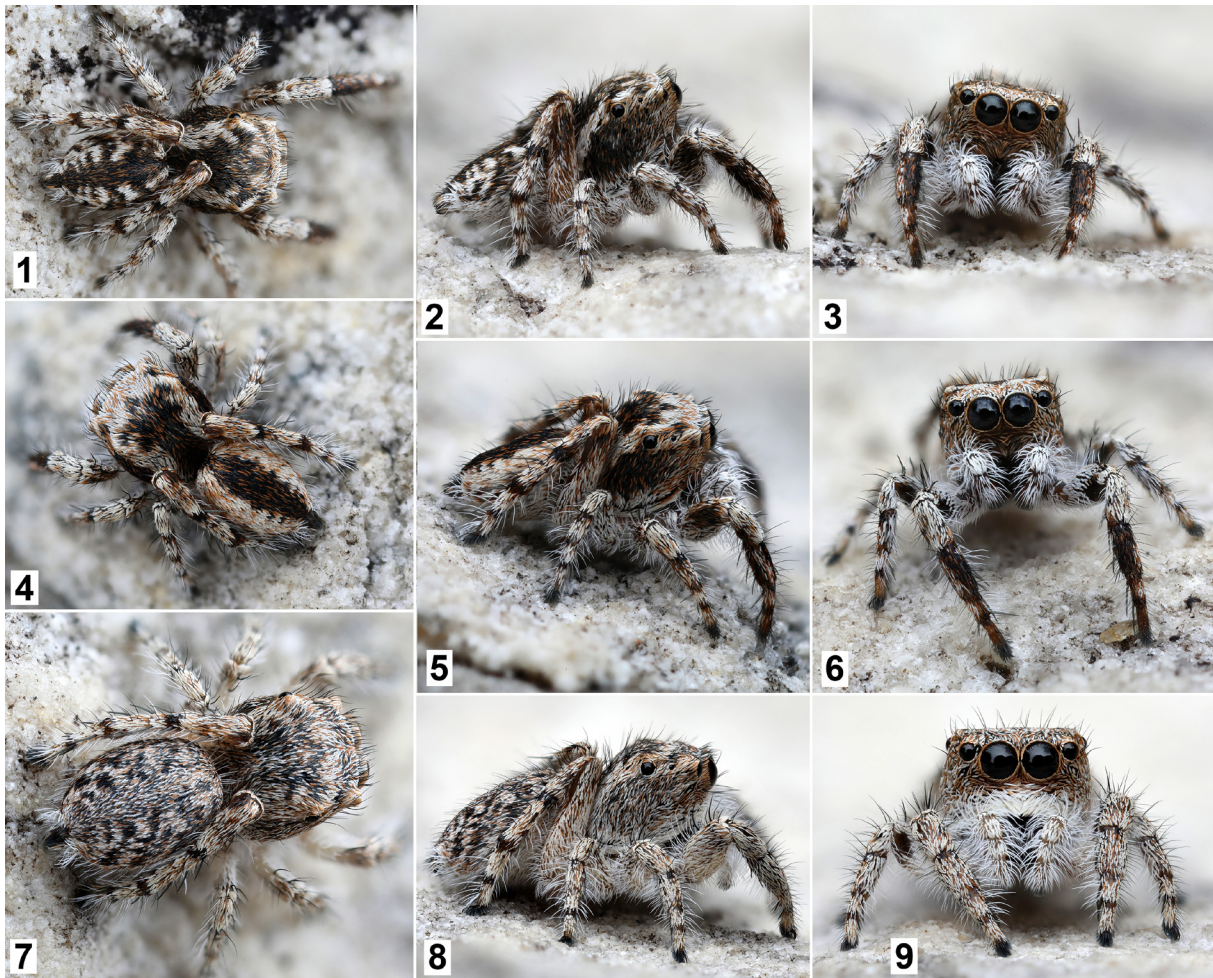
**Types:** Holotype ♂, ZMB, Arach 49124, Figs. 10–13, 18–20) from SPAIN: Fuerteventura, Playa de la Barca, 28.13752°N 14.24295°W, 15 m, coastal sandy and stony area (on the ground), 22 November 2017, M. Schäfer. Paratypes: 1 ♂, PCMS, together with the holotype; 1♂1♀, MMUE, G7623.1, Figs. 24–29, 1♀, ZMB, Arach 49125, SPAIN: Fuerteventura, Risco del Paso, 28.1104°N 14.26663°W, 8 m, coastal sandy area, beating off *Arthrocnemum macrostachyum*, 24 November 2017, M. Schäfer; 1♂2♀, PCMS, same locality, 1 December 2017, M. Schäfer.

**Comparative material:** Holotype ♂ of *Yllenus algarvensis* Logunov & Marusik, 2003, AMNH, Figs. 14–17, 21–23, PORTUGAL: Algarve, Monte Gordo, dunes, 9–12 April 1982, F. J. Murphy.

**Etymology:** The species epithet originates from the Latin word *dumosus*, meaning bushy, and reflecting the fact that the species occurs on shrubs.

**Diagnosis:** The male of *P. dumosus* is most similar to that of *P. algarvensis* known from southern Portugal, but can easily be distinguished from it by the visibly longer embolus, the wider separated embolus and compound terminal apophysis, the shape of the functional tegulum, the smaller radix (as seen in the median view), and the less bent tibial apophysis (compare Figs. 18–20 and 21–23). Although the body coloration of both males is similar, including that of legs I (compare Figs. 13 and 14), the clypeus of *P. algarvensis* bears a well-marked fringe of long white hairs, which is absent from the male of *P. dumosus*. The female of *P. algarvensis* is yet unknown. Of the *Pseudomogrus* species known from both sexes, the female of *P. dumosus* is most similar to those of *P. saliens* (O. Pickard-Cambridge, 1876) from north-east Africa and *P. squamifer* (Simon, 1881) from the Iberian Peninsula, but can be distinguished from both by the narrow, elongate receptacles (round in both related species) (compare Figs. 28–29 with figs. 234, 252 in Logunov & Marusik 2003).

**Distribution:** The type locality only, the island of Fuerteventura (near Sotavento) in the Canaries.



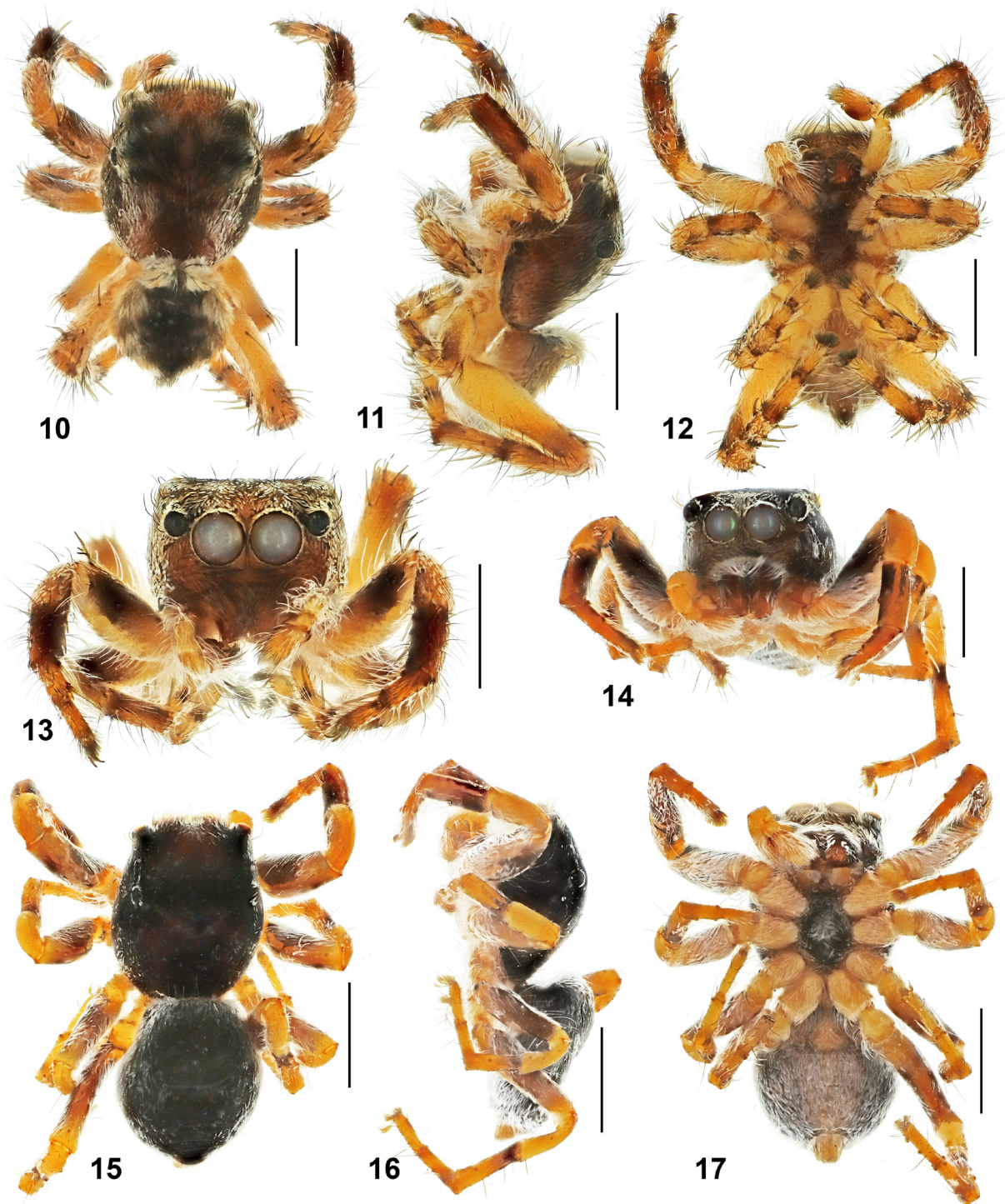
Figs. 1–9: General appearance of *Pseudomogrus dumosus* n. sp. specimens from Playa de la Barca (4–6) and Risco del Paso (1–3, 7–9), males (1–6) and female (7–9). 1, 4, 7 dorsal views; 2, 5, 8 lateral views; 3, 6, 9 frontal views.

**Habitat:** All the studied specimens of *P. dumosus* were collected from the southeastern coast of Fuerteventura, near Sotavento. The first site, near Risco del Paso (Figs. 31–32) is a coastal sandy area, 50–150 m from the coastline, with lots of salt-tolerant shrubs, of which the most common is *Arthrocnemum macrostachyum*. The specimens were collected by beating off bushes at the height of about 1 m above the ground. Two other salticid species were collected together with *P. dumosus*: *Heliophanus fuerteventuræ* Schmidt & Krause, 1996 and *Macaroeris* cf. *albosignata* Schmidt & Krause, 1996. The second site, near Playa de la Barca (Fig. 30), which became the type locality, is also a coastal sandy area, partly with ruderal vegetation, some 300 m from the coastline, more stony and with much sparser and drier vegetation compared to that of the first site; two males were collected from the open sand.

**Description of male holotype:** Carapace 1.80 long, 1.53 wide, 1.08 high at PLE.; ocular area 0.83 long, 1.20 wide anteriorly and 1.48 wide posteriorly; diameter of AME 0.40. Abdomen 1.25 long, 1.00 wide. Cheliceral length 0.43. Clypeal height 0.13. Length of leg segments: I 0.95 + 0.63 + 0.60 + 0.40 + 0.33 (2.91); II 0.80 + 0.40 + 0.45 + 0.30 + 0.35 (2.30); III 0.70 + 0.38 + 0.40 + 0.35 + 0.30 (2.13); IV 1.53 + 0.75 + 0.73 + 0.48 + 0.33 (3.82). Leg formula IV,I,II,III. Leg spination: I: Fm d 0-1-1-1; Pt pr 0-1-0; Tb pr 0-1, v 2-2-2ap; Mt v 2-2ap. II: Fm d 0-1-1-2; Pt pr 0-1-0; Tb pr 0-1, v 1-1-2ap; Mt v 2-2ap. III: Fm d 2ap; Pt pr and rt 0-1-0;

Tb pr and rt 1-1; Mt pr and rt 1-2ap. IV: Fm d 1-0-1-3; Pt pr and rt 0-1-; Tb pr and rt 1-1-1; Mt pr 2-2ap, rt 1-2ap. Coloration in live specimens (Figs 1–6): carapace brown, with eye field densely covered with white and reddish recumbent scales, also forming two wide longitudinal bands running towards the thorax. Clypeus dark brown, covered with white and reddish recumbent scales and brown hairs. Dorsum and sides densely covered white and reddish recumbent scales, with a wide longitudinal band of dark brown scales along the middle line of the dorsum (Fig. 1). Some males also have three–four pairs of transverse brown line running on both sides of the dorsum (Fig. 4). All legs densely covered with white and brown recumbent scales forming brownish patched and rings, but the frontal-median sides of Tb I are completely dark brown. Palps brownish, densely covered with white recumbent scales and white protruding hairs. Coloration in alcohol (Figs 10–13): carapace brown, densely covered with brown and reddish recumbent scales; black around eyes. Clypeus orange, densely covered with long brown hairs. Sternum brown, covered with white hairs. Endites and labium light brown, with white apices. Chelicera dark brown. Abdomen: dorsum grey, with a wide longitudinal brown stripe; sides grey; venter yellowish greyish. Book-lung covers yellow. Spinnerets dark brown. All legs yellow, but brown anteriorly on Fm and Tb of leg I (Fig. 13). Palps yellow. Palpal structure as in Figs. 18–20; tibial apophysis directed anteriad with its tip slightly bent ventrad;



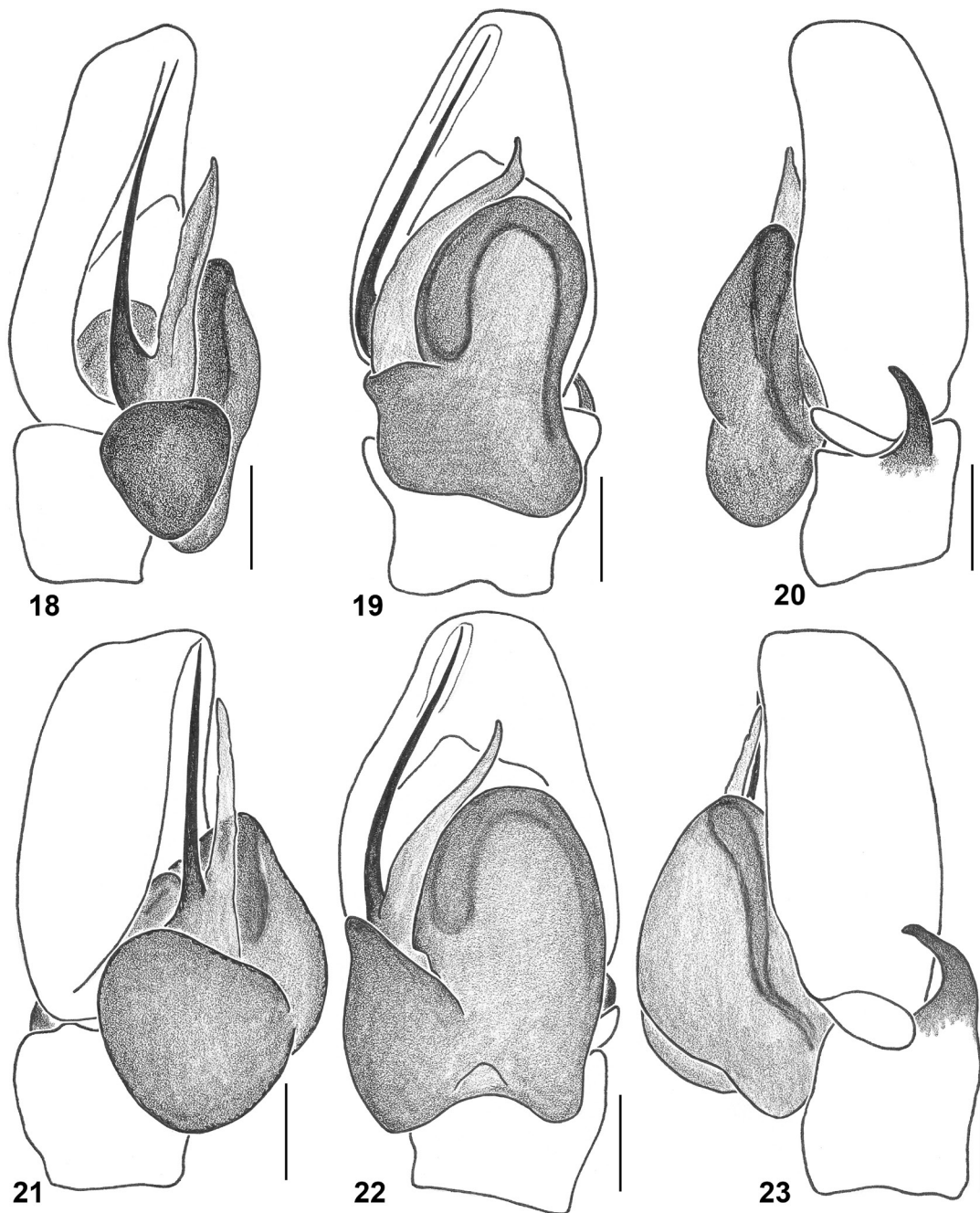


Figs. 10–17: General appearance of the holotype males of *Pseudomogrus dumosus* n. sp. (10–13) and *P. algarvensis* (Logunov & Marusik, 2003) (14–17). 10, 15 dorsal views; 11, 16 lateral views; 12, 17 ventral views; 13, 14 frontal views. Scale bars = 1 mm.

cymbium of common shape; cymbial process narrow, crescent-shaped; tegulum with a wide and blunt proximo-lateral extension; radix medium-sized, triangle (as seen from the median view); compound terminal apophysis narrow and slightly shorter than embolus, with the narrower tip directed apicad; embolus stiletto-like.

*Description of female paratype* (MMUE, G7623.1): Carapace 1.98 long, 1.78 wide, 1.13 high at PLE; ocular area 1.00 long, 1.40 wide anteriorly and 1.65 wide posteriorly; diameter of AME 0.45. Abdomen 1.75 long, 1.35 wide. Cheliceral length 0.40. Clypeal height 0.15. Length of leg segments: I 0.98 + 0.63 + 0.53 + 0.40 + 0.38 (2.92); II 0.83 + 0.55 + 0.45 + 0.33 + 0.33 (2.49); III 0.78 + 0.44

+ 0.40 + 0.38 + 0.38 (2.38); IV 1.70 + 0.88 + 0.85 + 0.53 + 0.40 (4.36). Leg formula IV,I,II,III. Leg spination: I: Fm d 0-0-2; Tb v 2-2-2ap; Mt v 2-2ap. II: Fm d 1ap; Pt pr 0-1-0; Tb v 1-1ap; Mt v 2-2ap. III: Fm d 1ap; Pt pr and rt 0-1-0; Tb pr 1-1; Mt pr 2-2ap, rt 2ap. IV: Fm d 4ap; Pt pr and rt 0-1-0; Tb pr and rt 1-1-1; Mt pr 2-2-ap, rt 1-2ap. Coloration (live specimens; Figs 7–9). Carapace and abdomen (dorsum and sides) densely covered with a mixture of white, reddish and brown recumbent scales forming a motley colour pattern. Clypeus brown, densely covered with white scales and hairs forming a dense white fringe on the frontal edge of the clypeus. All legs brownish, densely covered with white and reddish recumbent scales. Palps brownish, densely



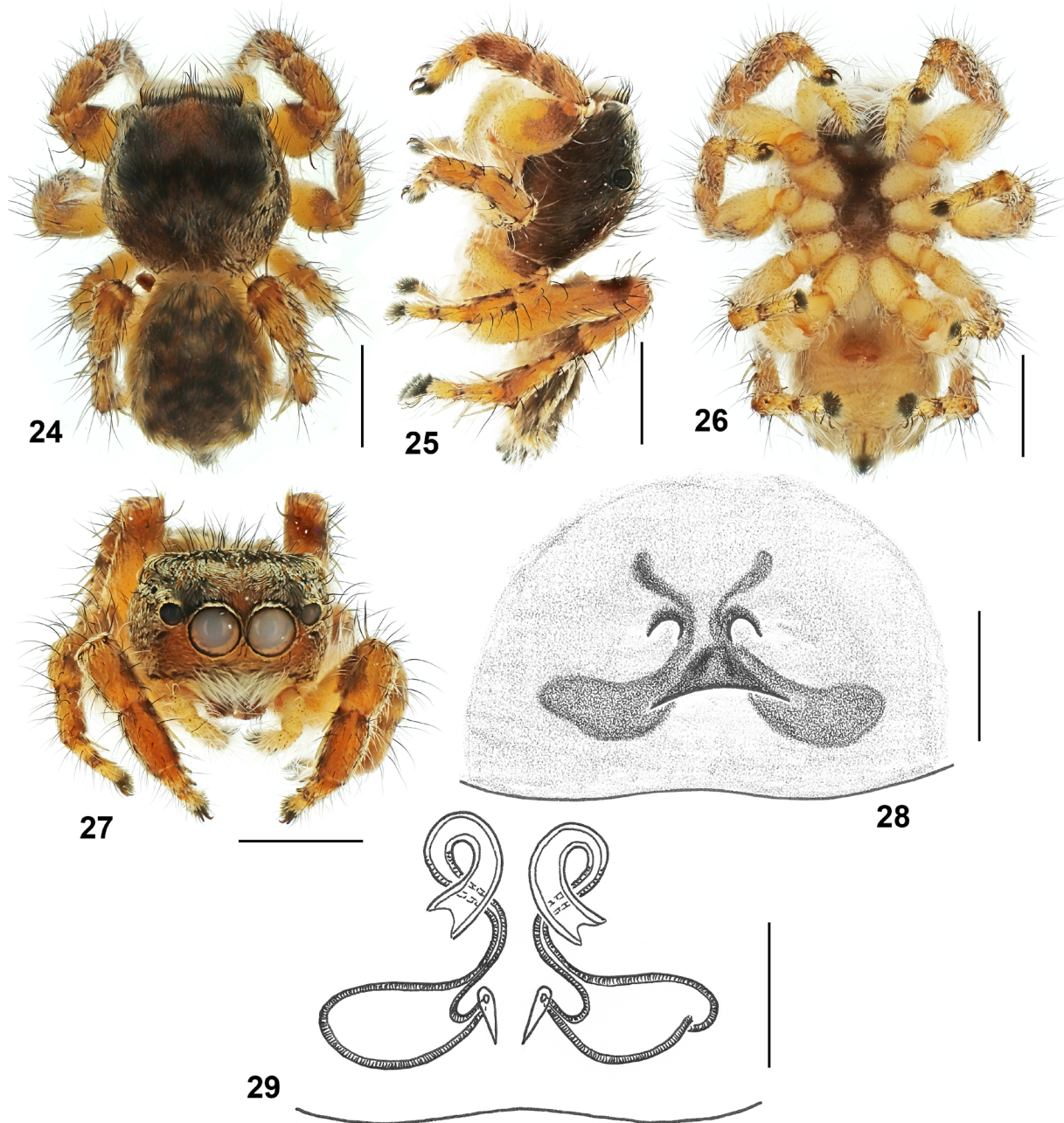
Figs. 18–23: Male palps of the holotypes of *Pseudomogrus dumosus* n. sp. (18–20) and *P. algarvensis* (Logunov & Marusik, 2003) (21–23). **18, 21** median views; **19, 22** ventral views; **20, 23** retro-lateral views. Scale bars = 0.1 mm.

covered with white recumbent scales and white protruding hairs. Coloration in alcohol (Figs. 24–27): carapace brown, densely covered with white and reddish recumbent scales; black around eyes. Clypeus and cheeks yellow, with long white hairs along clypeal edge. Endites and labium brown, with white apices. Chelicera yellowish brown. Abdomen: dorsum and sides yellowish dark grey; venter light yellow. Book-lung covers yellow. Spinnerets: dorsal pair dark grey, ventral pair light yellow. All legs yellow, with brow patches and rings, but Fm IV almost complete yellow. Palps light yellow. Epigyne and spermathecae as in Figs. 28–29; copulatory openings small, ovoid; epigynal pocket present, bell-shaped; insemination ducts rather short, making one revolution at their entrances; receptacles transverse-ovoid; glandular ducts invisible.

## Discussion

*Pseudomogrus dumosus* is the thirteenth species of Salticidae collected from Fuerteventura, compared to 22 salticid species known from Tenerife (Arechavaleta *et al.* 2010). This suggests that the salticid fauna of Fuerteventura is not fully inventoried yet. To date, the following Salticidae species have been described/reported from Fuerteventura: *Aelurillus balearus* Azarkina, 2006 (Azarkina 2006); *A. lucasi* Roewer, 1951 (Schmidt 1976: *sub Aelurillus fuerteventurae*; Wunderlich 1987: *sub Phlegra l.*); *Bianor wunderlichi* Logunov, 2001 (Wunderlich 1992: *sub B. albobimaculatus*; Logunov 2001); *Cyrbia algerina* (Lucas, 1846) (Wanless 1984); *Hasarius adansonii* (Audouin, 1826) (Schmidt 2002); *Heliophanus fuerteventurae* Schmidt & Krause, 1996 (Schmidt & Krause 1996; Logunov 2015);





Figs. 24–29: General appearance and copulatory organs of the paratype female of *Pseudomogrus dumosus* n. sp. (MMUE, G7623.1). **24** body, dorsal view; **25** same, lateral view; **26** same, ventral view; **27** same, frontal view; **28** epigyne, ventral view; **29** spermathecae, dorsal view. Scale bars = 0.1 mm (28, 29), 1 mm (24–27).

*Macaroeris albosignata* Schmidt & Krause, 1996 (Schmidt & Krause 1996; present data); *M. cata* (Blackwall, 1867) (Schmidt 1976: *sub Dendryphantes c.*); *M. huberi* (Schmidt, 1981) (Logunov, unpublished data); *M. moebi* (Bösenberg, 1895) (Wunderlich 1992); *Menemerus dimidius* (Schmidt, 1976) (Schmidt 1976: *sub Salticus d.*; Wunderlich 1987); *M. semilimbatus* (Hahn, 1829) (Schmidt 2002); *Pseudomogrus dumosus* n. sp. (present data).

Of these species, the records of *Macaroeris* species are in need of verification by reference to the pertinent material, as some of them could represent misidentifications: e.g., the record of *M. moebi* seems to actually belong to *M. huberi* (Logunov, unpublished data). The presence of two closely related *Aelurillus* species (*balearus* and *lucasi*) on the same island is also doubtful.

Yet, *P. dumosus* is already the fourth representative of the genus *Pseudomogrus* reported from the Canary Islands. The first species found there is *P. gavidos* (Logunov & Marusik, 2003), recorded from Tenerife (Wunderlich 1992: *sub Yllenus salsicola*; Logunov & Marusik 2003). The second species is *P. albifrons* (Lucas, 1846) that was mentioned by Macías *et al.* (2004) and Arechavaleta *et al.* (2010) as occurring in Lanzarote. However, according to Logunov & Marusik (2003), *P. albifrons* is known from a few localities from northern Africa (north-east Algeria) to the Near East (Israel). The third *Pseudomogrus* species is an undetermined and apparently new species from the island of Alegranza. The female of the latter species was illustrated by Wunderlich (1992: fig. 860, *sub Yllenus salsicola*) and its exact species assignment is yet uncertain (see Logunov & Marusik 2003: 43). This female clearly differs from that





Figs. 30–32: Views of the habitats of *Pseudomogrus dumosus* n. sp. **30** the type locality, Fuerteventura, Playa de la Barca; **31, 32** Fuerteventura, Risco del Paso.

of *P. dumosus* in having much deeper epigynal pocket and round receptacles. The taxonomic status of this species and its description will be determined when more specimens of both sexes are collected; this problem is outside the scope of the present paper.

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