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Notes on some *Palliduphantes* Saaristo & Tanasevitch, 2001, with the description of a new species from the Iberian Peninsula (Araneae: Linyphiidae)

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Abstract: A revised diagnosis of the genus *Palliduphantes* Saaristo & Tanasevitch, 2001 is given and a new species, *Palliduphantes curvus* sp. nov., is described from Spain and Portugal. Eight new combinations are proposed: *Palliduphantes bigerrensis* (Simon, 1929), *P. constantinescui* (Georgescu, 1989), *P. corfuensis* (Wunderlich, 1995), *P. eleonorae* (Wunderlich, 1995), *P. fagei* (Machado, 1939), *P. garganicus* (Caporiacco, 1951), *P. ligulifer* (Denis, 1952) and *P. zaragozai* (Ribera, 1981), all comb. nov. ex *Lepthyphantes* Menge, 1866. New male and female specimens of *P. corfuensis* comb. nov. are described and illustrated.

Keywords: Taxonomy - spiders - Micronetinae - *Lepthyphantes* - new combinations - Spain - Portugal.

INTRODUCTION

The genus *Palliduphantes* Saaristo & Tanasevitch, 2001 was established by Saaristo & Tanasevitch (2001) during their re-organization of the extremely large and heterogeneous genus *Lepthyphantes* Menge, 1866 (see Saaristo & Tanasevitch, 1996, 1999, 2000, 2001, 2003a, b, 2004; Tanasevitch, 2001; Tanasevitch & Saaristo, 2006; etc.), and this work is still unfinished. At first, Saaristo and Tanasevitch (2001) placed into *Palliduphantes* 48 species mainly from the *pallidus*-species group *sensu* Saaristo & Tanasevitch (1993). An additional 11 species were described under *Palliduphantes* or transferred from other genera by 2019 (see World Spider Catalog, 2019). Recently, *P. corsicos* (Wunderlich, 1980) and *P. gladiola* (Simon, 1884) were added, transferred from *Lepthyphantes* and *Mansuphantes* Saaristo & Tanasevitch, 1996, respectively (Tanasevitch, 2019). Ten new *Palliduphantes* were described from Morocco (Barrientos *et al*., 2019). Today the genus is thus known to contain 71 species. Another new *Palliduphantes* from Spain and Portugal is described below; eight species are here additionally transferred from *Lepthyphantes* on the basis of a revised diagnosis of the genus *Palliduphantes*.

MATERIAL AND METHODS

This paper is based on spider material kept at the Muséum d'histoire naturelle de Genève, Switzerland (MHNG). Senglet's sample numbers are given in square brackets. Specimens preserved in 70% ethanol were studied using a MBS-9 stereomicroscope. The terminology of copulatory organs mainly follows that of Merrett (1963) and Saaristo & Tanasevitch (1996). The chaetotaxy is given in a formula, e.g., Ti I: 2-1-1-0, which means that tibia I has two dorsal spines, one pro-, one retrolateral spine, and no ventral spines (the apical spines are disregarded). The sequence of leg segment measurements is as follows: femur+patella+tibia+metatarsus+tarsus. All measurements are given in mm. All scale bars in the figures correspond to 0.1 mm.

Abbreviations

BS	bald swelling
EP	embolus proper *sensu* Saaristo (1971)
DPS	distal part of scape *sensu* Saaristo & Tanasevitch (1996)
FG	Fickert's gland
L	lamella characteristica
LL	lateral lobes
LW	lateral wall *sensu* Saaristo & Tanasevitch (1996)
Mt	metatarsus
PMP	posterior median plate *sensu* Helsdingen *et al*. (1977)
PS	proscape *sensu* Saaristo & Tanasevitch (1996)
R	radix
Re	receptacle
St	stretcher

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TA terminal apophysis
Ti tibia
Th thumb *sensu* Saaristo & Tanasevitch (1996)
TmI position of trichobothrium on metatarsus I

RESULTS

Order Araneae Clerck, 1757
Family Linyphiidae Blackwall, 1859
Subfamily Micronetinae Hull, 1920

Palliduphantes Saaristo & Tanasevitch, 2001

Type species: *Linyphia pallida* O. Pickard-Cambridge, 1871, by original designation.

Diagnosis: The diagnosis given below is a slightly corrected and supplemented version of the genus diagnosis provided by Saaristo & Tanasevitch (2001).

1) Medium sized, pale, often cavernicolous micronetine spiders, total length 1.3-2.5, seldom up to 3.0 mm.
2) Abdomen of one color, grey, very seldom with an indistinct dorsal pattern of pale transverse stripes in dark-colored specimens.
3) General pattern of chaetotaxy as follows: Ti I: 2-1-1-0, II: 2-0(1)-1-0, III: 2-0-0(1)-0, IV: 2-0-0-0; Mt I-III(IV): 1-0-0-0. Tm I: 0.16-0.26, no trichobothrium on Tm IV.
4) Palpal tibia of male usually short, conspicuously swollen, bearing one strong dorsal spine on patella and tibia.
5) Paracymbium large, its posterior and anterior pockets (*sensu* Saaristo & Tanasevitch, 1996: 167) transformed to two teeth or tooth-like outgrowths.
6) Pit hook (= distal suprategular apophysis in male palp of Erigoninae; not illustrated in this paper) relatively long, curved, blunt or sharply pointed.
7) Radix oblong, Fickert's gland present.
8) Main trunk of lamella characteristica long and narrow, slightly bent or S-shaped.
9) Terminal apophysis usually bipartite, seldom fan- or broom-shaped.
10) Embolus with a trunk-like main body, relatively long, weak, embolus proper bifid.
11) Epigyne protruded, its side walls drawn into plate-like extensions between which lies the scapus.
12) Proscapus long and narrow, its median part short or reduced. Distal part of scape often lacking distinct lateral lobes, stretcher present or reduced.
13) Posterior median plate present.

Taxonomic remarks: An examination of the *Lepthyphantes* (*sensu lato*) fauna of southern Europe revealed that, on the basis of the diagnosis given above, at least eight species actually belong to *Palliduphantes,* i.e. *Palliduphantes bigerrensis* (Simon, 1929), *P. constantinescui* (Georgescu, 1989), *P. corfuensis* (Wunderlich, 1995), *P. eleonorae* (Wunderlich, 1995), *P. fagei* (Machado, 1939), *P. garganicus* (Caporiacco, 1951), *P. ligulifer* (Denis, 1952) and *P. zaragozai* (Ribera, 1981), all comb. nov. ex *Lepthyphantes*.

Species included: The genus currently includes 80 species (including the new species and new combinations), distributed mainly in the Mediterranean.

Palliduphantes curvus sp. nov.

Figs 1-7

Holotype: Male [7135]; SPAIN, Valencia, La Albufera; 16.VI.1971; leg. A. Senglet.

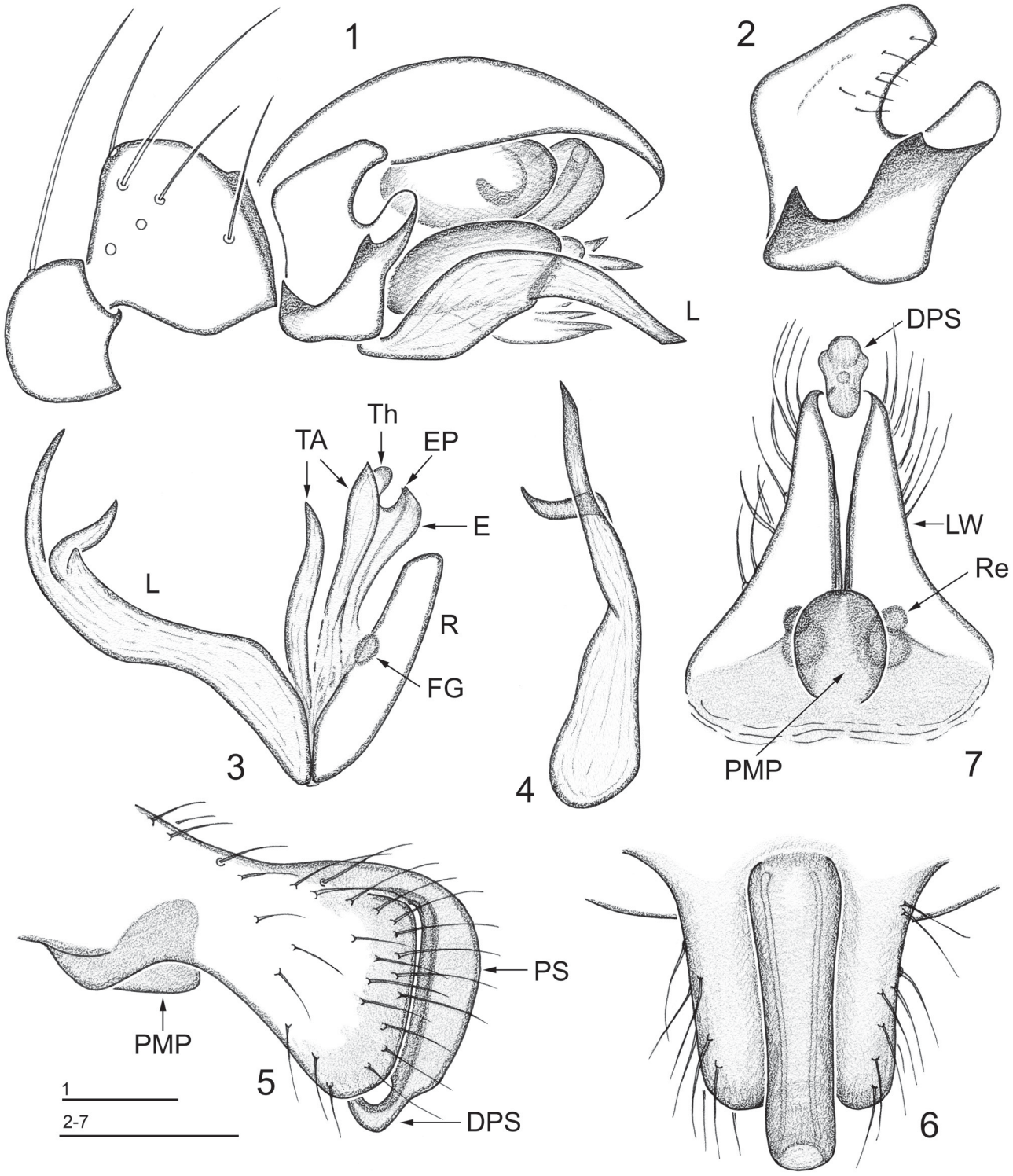
Paratype: 3 males, 1 female; collected together with the holotype. – 1 male [7141]; Valencia, Montroy (= Montroi), 22.VI.1971; leg. A. Senglet. – 1 male [7142]; Requena-Chera, 23.VI.1971; leg. A. Senglet. – 1 male, 1 female [7137]; Alicante, Elda; 19.VI.1971; leg. A. Senglet. – 1 male [6978]; PORTUGAL, Vila Real, Cortico, Montalegre; 30.VIII.1969; leg. A. Senglet.

Diagnosis: The new species clearly differs from all known congeners by the distinctive shape of the lamella characteristica which has a specifically bent lower branch (Figs 1, 3-4). The epigyne resembles that of many congeners, particularly *P. cadiziensis* (Wunderlich, 1980), *P. kalaensis* (Bosmans, 1985) and *P. yakourensis* Bosmans, 2006, but it can be distinguished by the very short distal part of the scape and by the oval posterior median plate (Figs 5, 7). The epigyne is also similar to that of *P. corfuensis* comb. nov. (see below), but is clearly distinguished by the absence of a bald swelling on the lateral walls, as well as by the reduced median and distal parts of the scape (Figs 5-7 cf. Figs 13-16).

Etymology: The specific epithet is a Latin adjective referring to the bent lower branch of the lamella characteristica.

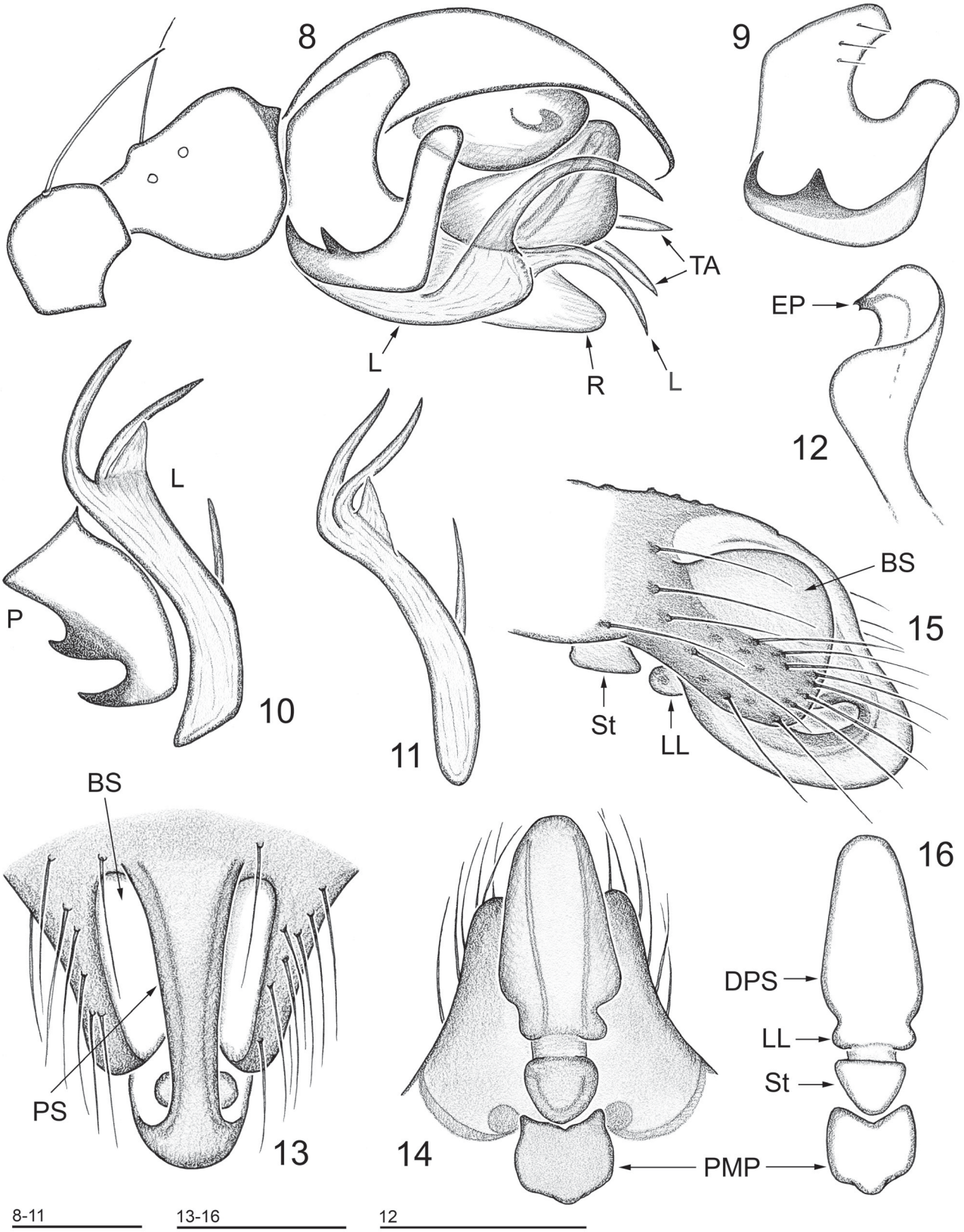
Description: *Male holotype*. Total length 2.00. Carapace unmodified, 0.93 long, 0.75 wide, yellow. Chelicerae 0.38 long. Legs yellow. Leg I 4.56 long (1.20+0.28+1.23+1.10+0.75), IV 4.29 long (1.13+0.28+1.15+1.10+0.63). Chaetotaxy. FeI: 0-1-0-0, II-IV: 0-0-0-0; TiI: 2-1-1-0, TiII: 2-0-1-0, TiIII-IV: 2-0-0-0; MtI-III: 1-0-0-0, MtIV spineless. Length of tibial spines 3-4 diameters of corresponding leg segment. TmI 0.18. Metatarsus IV without trichobothrium. Palp (Figs 1-4): Patella small, rounded, with a long, strong spine dorsally. Tibia slightly widened dorso-ventrally. Paracymbium relatively large, its posterior and anterior pockets (*sensu* Saaristo & Tanasevitch, 1996: 167) tooth-shaped, dark. Lamella characteristica large, gently curved, distally tapering, its apex obliquely truncate, its short and pointed branch mesally bent by 90°. Embolus small, with elongated main body; embolus proper bifid, thumb present. Terminal apophysis composed of two long, slender, almost transparent branches. Abdomen 1.13 long, 0.65 wide, pale grey.

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Figs 1-7. *Palliduphantes curvus* sp. nov., details of palp and epigyne structure; male (1-4) and female (5-7) paratypes from Elda. (1) Right palp, retrolateral view. (2) Paracymbium, retrolateral view. (3) Embolic division, ventral view. (4) Lamella characteristica, dorsal view. (5-7) Epigyne, lateral, ventral and dorsal view, respectively.

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Figs 8-16. *Palliduphantes corfuensis* (Wunderlich, 1995) comb. nov., details of palp and epigyne structure; male (8-12) and female (13-16). (8) Right palp, retrolateral view. (9) Paracymbium, retrolateral view. (10) Paracymbium and lamella characteristica, ventral view. (11) Lamella characteristica, ventral view. (12) Embolus, ventro-retrolateral view. (13-15) Epigyne, ventral, dorsal and lateral view, respectively. (16) Distal part of scape and posterior median plate, ventral view.

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Female paratype from La Albufera. Total length 2.38. Carapace 1.00 long, 0.80 wide. Chelicerae 0.40 long. Leg I 4.78 long (1.28+0.30+1.25+1.25+0.70), IV 4.63 long (1.25+0.28+1.20+1.20+0.70). TmI 0.18. Abdomen 1.50 long, 1.03 wide. Epigyne (Figs 5-7) distinctly protruded, proscape long and thin. Distal part of scape very small, stretcher and lateral lobes reduced. Posterior median plate oval. Receptacles small, beanlike. Body coloration and chaetotaxy as in male.

Variability: The total length in male specimens examined ranges from 1.95 to 2.03, in female specimens from 2.25 to 2.28. Dark-colored specimens have an indistinct dorsal abdominal pattern composed of narrow, pale transverse stripes on a grey background. No noteworthy variation in the genitalia of both sexes was found.

Distribution: Known only from four localities in Spain and from one locality in Portugal.

Palliduphantes corfuensis (Wunderlich, 1995) comb. nov.

Figs 8-16

Remarks: This species was described from Corfu, Greece by Wunderlich (1995), and, apart from a record from the same island by Lecigne (2013), not reported since the original description. A few specimens of this species, collected by Antoine Senglet in 1972 from Corfu, were recently found in the MHNG and are described below.

Material examined: 4 males, 6 females [7281]; GREECE, Corfu, Loutses; 20.IX.1972; leg. A. Senglet.

Description: *Male*. Total length 2.05. Carapace unmodified, 0.88 long, 0.70 wide, yellow. Chelicerae 0.33 long. Legs pale yellow. Leg I 4.78 long (1.20+0.28+1.30+1.20+0.80), IV 4.70 long (1.15+0.30+1.25+1.25+0.75). Chaetotaxy. FeI: 0-1-0-0, II-IV: 0-0-0-0; TiI: 2-1-1-0, TiII: 2-0-1-0, TiIII-IV: 2-0-0-0; MtI-III: 1-0-0-0, MtIV spineless. Length of spines 3-3.5 diameters of corresponding leg segment. TmI 0.16. Metatarsus IV without trichobothrium. Palp (Figs 8-12): Patella with a stout dorsal spine. Tibia short, unmodified. Paracymbium relatively large, its posterior and anterior pockets (*sensu* Saaristo & Tanasevitch, 1996) tooth-shaped, dark. Lamella characteristica deeply bifurcate distally, its main trunk with a flat triangular outgrowth at bifurcation and with a long, sable-shaped branch in the middle. Embolus small, weakly sclerotized, embolus proper bifid. Terminal apophysis bipartite. Abdomen 1.18 long, 0.70, pale grey. *Female*. Total length 2.00. Carapace 0.80 long, 0.65 wide, yellow, with a narrow grey margin and indistinct, grey, radial stripes. Chelicerae 0.35 long. Leg I 4.34 long (1.13+0.30+1.13+1.03+0.75), IV 4.07 long (1.08+0.28+1.03+1.00+0.68). TmI 0.19. Abdomen 1.35 long, 0.90 wide, dark grey, with pale herring-bone pattern dorsally. Epigyne (Figs 13-16): Distinctly protruded, surface of lateral walls adjacent to proscape slightly swollen and lacking spines ("bald swelling"). Proscape thin, long, somewhat narrowing distally. Distal part of scape gradually widening, lateral lobes very small, rounded. Stretcher short and wide. Posterior median plate small, with a notch in distal margin. Receptacles small, rounded. Body coloration and chaetotaxy as in male.

Variability: Dark-colored specimens have a dorsal abdominal pattern composed of pale transverse stripes on a grey background. The shape of the posterior median plate in females is also slightly variable: Fig. 14 cf. Fig. 16.

Taxonomic remarks: This species is similar to *P. khobarum* (Charitonov, 1947) and *P. istrianus* (Kulczyński, 1914), distributed in the Eastern Mediterranean. The male of *P. corfuensis* comb. nov. differs by the much more deeply divided lamella characteristica, and by the bipartite terminal apophysis (vs. fan-shaped). The female of *P. corfuensis* comb. nov. is distinguished by the distinctly longer distal part of the scape, and by the shape of the posterior median plate, namely by the presence of a notch in its distal margin. This notch is absent in the oval posterior median plate of *P. khobarum* and *P. istrianus*.

Distribution: So far this species is known only from the island of Corfu, Greece.

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