

Two new species of the genus *Peristenus* Foerster (Hymenoptera: Braconidae: Euphorinae) from the Canary Islands

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Two new species of the genus *Peristenus* Foerster (Hymenoptera: Braconidae: Euphorinae) from the Canary Islands are described and illustrated: *Peristenus angifemoralis* spec. nov. from Tenerife, and *P. gloriae* spec. nov. from Gran Canaria and Tenerife.

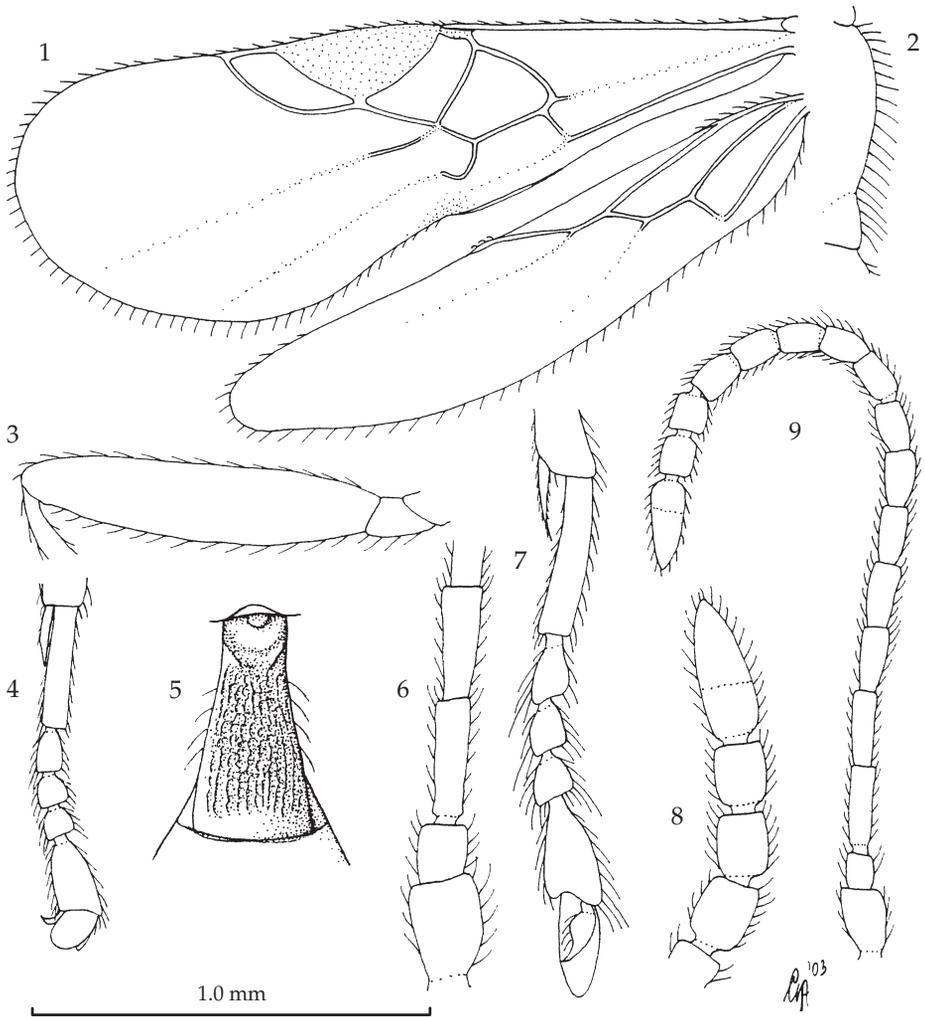
Introduction

The West Palaearctic species of the genus *Peristenus* Foerster, 1862 (Hymenoptera: Braconidae: Euphorinae) are under revision by the first author (the data are needed for the Fauna Europaea project). The genus *Peristenus* belongs to the tribe Euphorini Foerster, 1862, which is characterized by the reduction of vein M+CU1 of the fore wing, the short marginal cell of the fore wing, the short and more or less curved ovipositor, and a comparatively small size. Members of the Euphorini are koinobiont endoparasitoids of nymphs and adults of Miridae and Lygaeidae (as are species of the genus *Peristenus*) or of Psocoptera. The genus *Peristenus* has vein cu-a of the hind wing present and at least 0.9 times as long as vein 1r-m of the hind wing, and the frons with a longitudinal median carina or rugae, sometimes only narrowly developed anteriorly.

Three species of *Peristenus* are known from the Macaronesian Islands according to Graham (1986) and Guerrero & Koponen (2000): *Peristenus maderae* (Graham, 1986) **comb. nov.** from Madeira, *P. pallipes* (Curtis, 1833) and *P. cf. relictus* (Ruthe, 1856) from the Canary Islands. The latter species most likely concerns one of the two species described in this paper as new.

Only what currently is understood as *P. pallipes* (Curtis, 1833) is a widely distributed species and in West Europe it is the most commonly collected “species”; however, it is an aggregate of several closely related species which will be treated by the first author in a forthcoming revision.

For the identification of the subfamily Euphorinae, see van Achterberg (1990, 1993, 1997) and for the terminology used in this paper, see van Achterberg (1988, 1993).



Figs 1-9, *Peristenus angifemoralis* spec. nov., holotype, ♀. 1, wings; 2, face and clypeus, lateral aspect; 3, hind femur; 4, fore tarsus, dorsal aspect; 5, first metasomal tergite, dorsal aspect; 6, base of antenna; 7, fore tarsus, lateral aspect; 8, apex of antenna; 9, antenna. 1: 1.0 × scale-line; 2, 6-8: 2.3 ×; 3-5, 9: 1.5 ×.

Peristenus angifemoralis spec. nov.
(figs 1-9, 15)

Material.— Holotype, ♀ (TFMC), “[Canary Islands], Tenerife, Cabezo del Tejo, 21.ii.1997, E.R. Guerrero”. Paratypes (2 ♀♀ + 12 ♂♂): 1 ♀ + 9 ♂♂ (TFMC, RMNH), same data as holotype; 1 ♀ + 3 ♂♂ (RMNH), “Can. Isl.: Tenerife, Anaga, El Bailadero, 23-27.xii.1981, [in] Laurisilva [forest], [L.] Huggert, RMNH”. One male (TFMC) with same label data as holotype is excluded because it is largely brownish, it has 19 antennal segments and the third antennal segment is comparatively robust.

Holotype, ♀, length of body 1.9 mm, of fore wing 2.0 mm.

Head.— Antenna with 17 segments, length of third segment 1.2 times fourth segment, third, fourth and penultimate segments 3.5, 2.5 and 1.5 times their maximum width (figs 8, 9); face 0.9 times higher than its minimum width, with whitish setosity not obscuring its somewhat punctulate but mainly smooth surface; face in lateral view evenly convex (fig. 2); clypeus smooth, rather flat and wide; frons smooth and glabrous (except for a few setae laterally), without a distinctly developed median carina or anterior rugosity, with some rugosity only antero-medially; vertex smooth; length of maxillary palp 0.6 times height of head, fifth (= apical) segment slightly longer than fourth segment; length of posterior side of stemmaticum 1.6 times its lateral side; OOL:diameter of posterior ocellus:POL = 5:2:8; in dorsal view length of eye equal to length of temple; temples parallel-sided behind eyes and somewhat narrowed posteriorly (fig. 15); occipital carina largely present dorsally (up to level of stemmaticum) but weakly developed, and ventrally joining hypostomal carina; length of eye in lateral view 4.3 times length of malar suture.

Mesosoma.— Length of mesosoma 1.5 times its height; side of pronotum largely coarsely vermiculate-rugose; precoxal sulcus coarsely punctate and connected to scrobe by a crenulate and curved groove; remainder of mesopleuron smooth but punctate dorsally and crenulate anteriorly; pleural sulcus moderately crenulate; mesosternal sulcus distinct, smooth; notauli distinctly impressed, finely crenulate; mesoscutum with some coarse punctures on middle lobe anteriorly and near notauli, only these parts setose, remainder smooth and rather shiny; scutellar sulcus with one strong carina; scutellum smooth and with a distinct semicircular medio-posterior depression; propodeum nearly completely reticulate-rugose.

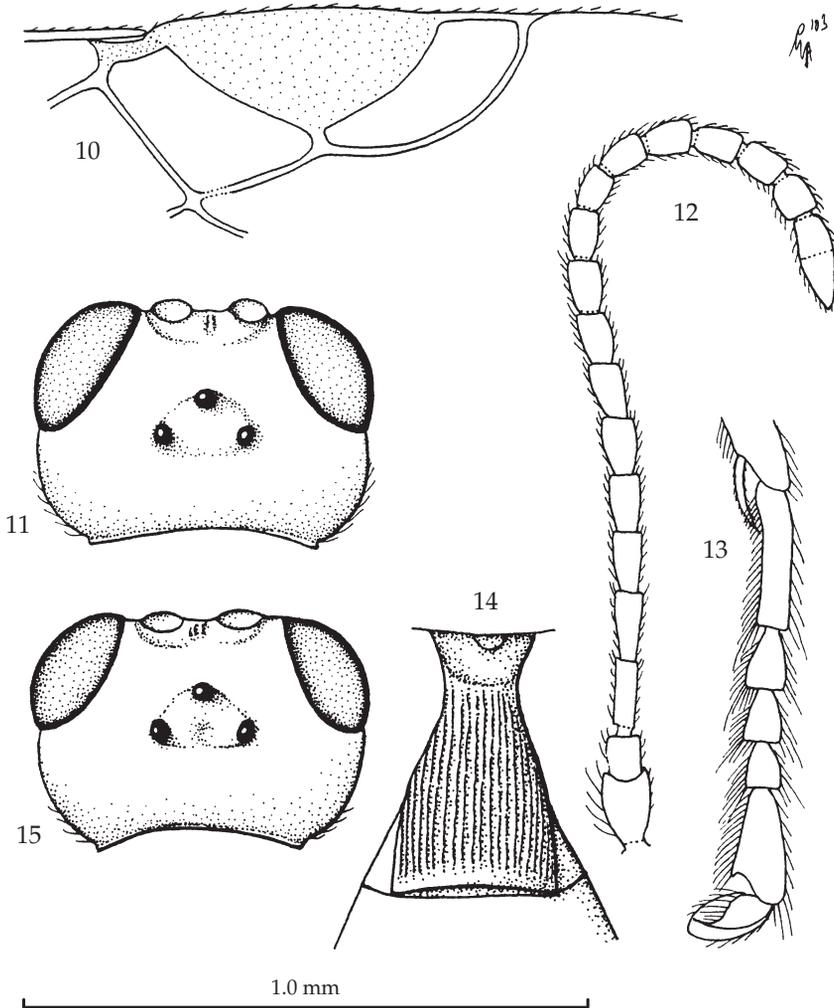
Wings.— Fore wing: basal and subbasal cells regularly but much sparser setose than apical cells; first discal cell of fore wing much wider basally than distally (fig.1); vein 1-R1 complete, 0.3 times as long as pterostigma and 0.7 times width of pterostigma (fig. 1); vein r short and wide and just behind middle of pterostigma (fig. 1); r:SR1+3-SR:2-SR = 1:21:11; vein m-cu slightly antefurcal; 1-CU1:2-CU1 = 1:7; 1-CU1 distinctly widened. Hind wing: 1-M:1r-m:2-SC+R = 9:7:6.

Legs.— Hind coxa smooth; length of femur, tibia and basitarsus of hind leg 4.4, 9.6 and 7.3 times their maximum width; hind tibia distinctly narrowed ventrally; outer and inner hind tibial spurs 0.3 and 0.4 times as long as hind basitarsus, respectively; second-fourth segments of fore and middle tarsi comparatively robust and telotarsus distinctly enlarged (figs 4, 7); fore femur rather slender.

Metasoma.— First tergite robust (fig. 5), gradually widened posteriorly, its length 1.6 times its apical width, its surface moderately finely longitudinally irregularly rugose; spiracle of first tergite near middle of tergite; ovipositor sheath just visible, pointed apically, hardly protruding.

Colour.— Black; antenna (except yellowish scapus) and metasoma after first tergite dark brown; clypeus brown; hind tibia, middle and hind tarsi rather darkened; remainder of legs, tegulae and palpi pale yellowish; veins and pterostigma pale brown, pterostigma with pale spot basally.

Variation.— Antenna of ♀ with 17 (2) or 18 (1) segments, and of ♂ 21 (7), 22 (3) or 23 (1) segments (thus no overlap between number of antennal segments of male and female!); length of third antennal segment of ♀ 3.4-3.5 times its width (of ♂ about 2.7



Figs 10-14, *Peristenus maderae* (Graham), holotype (but 14 and 13 of paratype), ♀; fig. 15, *P. angifemoralis* spec. nov., holotype, ♀. 10, detail of pterostigma and marginal cell of fore wing; 11, 15, head, dorsal aspect; 12, antenna; 13, fore tarsus, lateral aspect; 14, first metasomal tergite, dorsal aspect. 10, 11: 1.0 × scale-line; 12, 13, 15: 1.1 ×; 14: 1.3 ×.

times its width); vein 1-R1 0.6-0.7 times width of pterostigma; length of eye of ♀ 4.3-5.0 times length of malar suture (of ♂ about 3 times); hind coxa and femur brown, yellowish-brown or infuscate; first tergite moderately to finely rugose; pterostigma of ♂ somewhat darker brown than that of ♀.

Note.— Very closely related to *P. maderae* (Graham) from Madeira (figs 10-14) from which it differs mainly by the shape of the first metasomal tergite (figs 5, 14).

Peristenus gloriae spec. nov.
(figs 16-24)

Material.— Holotype, ♀ (TFMC), “[Canary Islands], Tenerife, Güimar, 18.x.1998, E.[R.] Guerrero”. Paratypes (3 ♀♀ + 1 ♂): 2 ♀♀ (TFMC, RMNH), same data, but 14.v.1998 or 6.ix.1998; 1 ♀ (ZMA), “Islas Canarias, Gran Canaria, A.C. & W.N. Ellis & A.M.J. & R.T. Simon Thomas”, “2 km N Puerto Rico, 7.iv.1987”; 1 ♂ (ZMA), “Islas Canarias, Gran Canaria, A.C. & W.N. Ellis & A.M.J. & R.T. Simon Thomas”, “Maspalomas, 23.iii-3.iv.1987”.

Holotype, ♀, length of body 1.9 mm, of fore wing 1.6 mm.

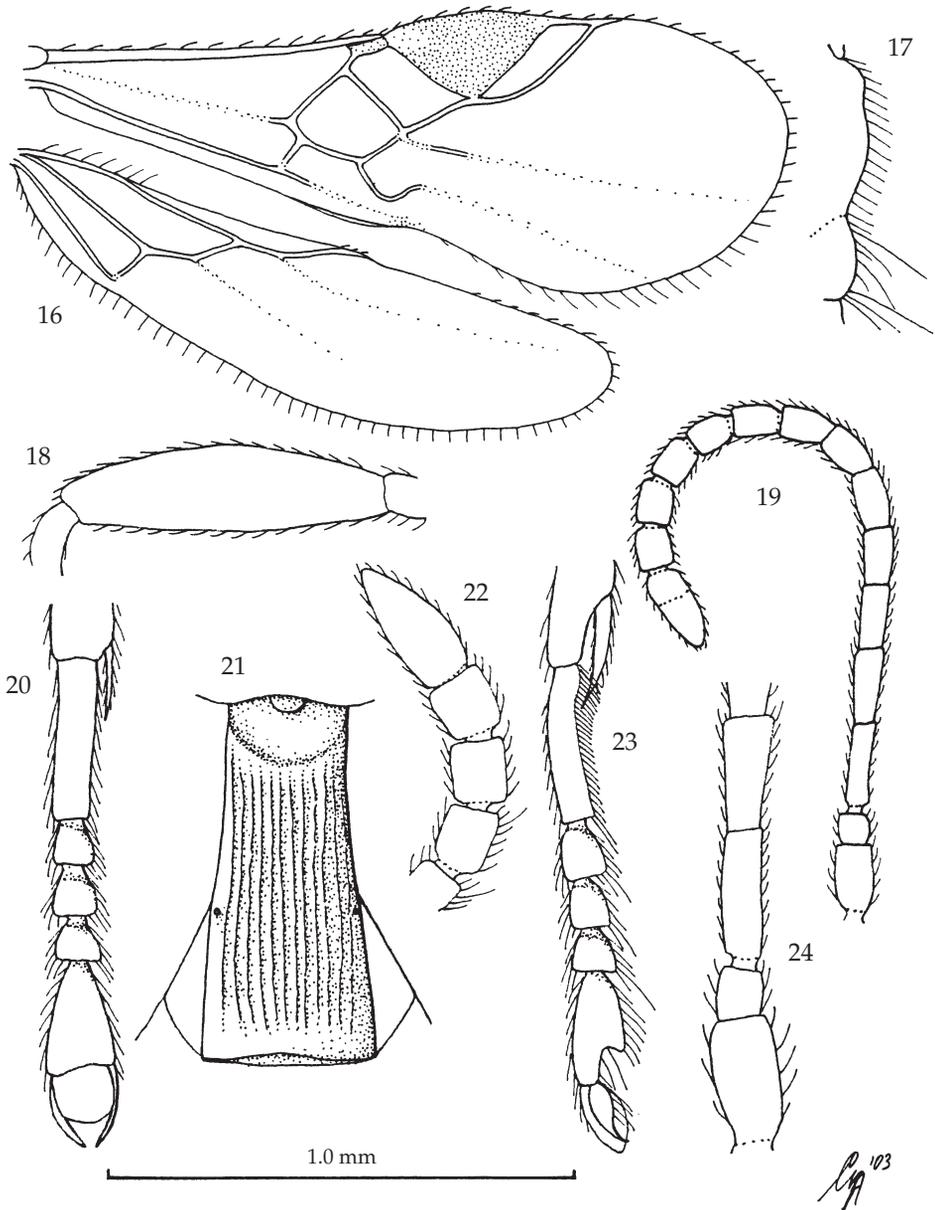
Head.— Antenna with 15 segments, only apically moniliform, length of third segment 1.1 times fourth segment, third, fourth and penultimate segments 3.0, 2.7 and 1.3 times their maximum width (figs 19, 24); face 0.9 times higher than its minimum width, mainly smooth and shiny, with whitish setosity not obscuring somewhat punctulate surface; face in lateral view evenly convex (fig. 17); clypeus smooth, rather flat medially and wide; frons smooth and glabrous (except for some setae laterally), without a median carina or anterior rugosity; vertex smooth; length of maxillary palp 0.7 times height of head, fifth (= apical) segment 1.3 times longer than fourth segment; length of posterior side of stemmaticum 1.4 times lateral side; OOL:diameter of posterior ocellus:POL = 5:2:9; in dorsal view length of eye 1.5 times length of temple; temples weakly narrowed behind eyes and somewhat narrowed posteriorly; occipital carina largely absent dorsally, weakly developed laterally and ventrally joining hypostomal carina; length of eye in lateral view 5.0 times length of malar suture.

Mesosoma.— Length of mesosoma 1.3 times its height; side of pronotum smooth and strongly shiny dorsally and ventrally, medially distinctly rugose and anteriorly crenulate-rugose; precoxal sulcus only medially impressed, narrowly crenulate and not connected to scrobe by a crenulate groove; pleural sulcus moderately crenulate, especially ventrally; prepectal carina distinct; mesosternal sulcus largely absent; notauli distinctly impressed, narrow and finely crenulate; mesoscutum smooth and strongly shiny, without punctures, with some setae only anteriorly and near notauli; scutellar sulcus with one strong carina and some fine crenulae; scutellum smooth and with a narrow transverse medio-posterior depression; propodeum nearly completely reticulate-rugose.

Wings.— Fore wing: basal and subbasal cells glabrous except for a few setae, and apical cells normally setose; first discal cell of fore wing basally hardly wider than distally, squarish (fig. 16); vein 1-R1 complete, 0.3 times as long as pterostigma and 0.6 times width of pterostigma (fig. 16); vein r nearly absent and near middle of pterostigma (fig. 16); r:SR1+3-SR:2-SR = 0:18:8; vein m-cu interstitial; 1-CU1:2-CU1 = 1:5; 1-CU1 distinctly widened. Hind wing: 1-M:1r-m:2-SC+R = 8:7:8; vein cu-a 0.9 times as long as 1-M.

Legs.— Hind coxa smooth; length of femur, tibia and basitarsus of hind leg 3.5, 8.6 and 5.7 times their maximum width; hind tibia distinctly narrowed ventrally; outer and inner hind tibial spurs 0.3 and 0.4 times as long as hind basitarsus, respectively; second-fourth segments of fore and middle tarsi comparatively robust and telotarsus distinctly enlarged (figs 20, 23); fore femur rather robust.

Metasoma.— First tergite robust (fig. 21), parallel-sided posteriorly, its length twice its apical width, its surface weakly longitudinally striate; spiracle of first tergite just



Figs 16-24, *Peristenus gloriae* spec. nov., holotype, ♀. 16, wings; 17, face and clypeus, lateral aspect; 18, hind femur; 19, antenna; 20, fore tarsus, dorsal aspect; 21, first metasomal tergite, dorsal aspect; 22, apex of antenna; 23, fore tarsus, lateral aspect; 24, base of antenna. 16: 1.0 × scale-line; 17, 20-24: 2.3 ×; 18, 19: 1.5 ×.

behind middle of tergite; ovipositor sheath just visible, truncate apically, hardly protruding.

Colour.— Black; face blackish-brown; antenna (but four basal segments yellowish), hind leg (but trochanter, trochantellus and basal 0.4 of tibia yellowish) and pterostigma (except small pale spot basally) dark brown; clypeus brown; middle femur, tibia (except basally) and tarsus rather darkened; remainder of legs, tegulae and palpi pale yellowish; veins hardly pigmented.

Variation.— Antenna of ♀ with 15 (2) or 16 (2) segments, and of ♂ 18 (1) segments; length of third antennal segment of ♀ 2.9-3.3 times its width; vein 1-R1 0.4-0.6 times width of pterostigma; mesopleuron sometimes with a few punctures medially; hind leg of male only infuscate.

Note.— It is a pleasure to us to name this species after Dr Gloria Ortega Muñoz (Tenerife; TFMC) for her encouragement of the study of Ichneumonidae and Braconidae from the Canary Islands over many years.

Key to species of the genus *Peristenus* Foerster from the Macaronesian Isles

1. Frons densely setose and distinctly finely punctate and with a distinct median carina; antenna of ♀ with (20-)21-25 segments (up to 26 in ♂); occipital carina distinctly developed medio-dorsally; vein 1-R1 of fore wing about as long as width of pterostigma, resulting in a medium-sized marginal cell of fore wing; length of eye of ♀ in lateral view 2.8-3.5 (rarely up to 4.0) times length of malar suture; vein 1-CU1 of fore wing robust or dark brown; antennal segments of ♀ comparatively robust *P. pallipes* (Curtis, 1833)
- Frons glabrous, smooth and only medio-anteriorly with short carina or rugosity; antenna of ♀ with 15-18 segments (18-23 in ♂); occipital carina absent or weakly developed medio-dorsally (figs 11, 15); vein 1-R1 of fore wing distinctly shorter than width of pterostigma, resulting in a narrow marginal cell of fore wing (figs 1, 10, 16); length of eye of ♀ in lateral view 4.3-5.0 times length of malar suture; vein 1-CU1 of fore wing pale yellowish or almost unpigmented; antennal segments of ♀ comparatively slender (figs 9, 12, 19) 2
2. Hind femur comparatively robust and dark brown (fig. 18); first discal cell of fore wing squarish (fig. 16); no crenulate groove between precoxal sulcus and episternal scrobe; occipital carina widely absent dorsally; hind coxa and pterostigma of ♀ dark brown; third and fourth antennal segments of ♀ yellowish-brown *P. gloriae* spec. nov.
- Hind femur comparatively slender and usually yellowish-brown (fig. 3); first discal cell of fore wing more transverse, much wider basally than distally (fig. 1); with a crenulate groove between precoxal sulcus and episternal scrobe; occipital carina less widely reduced dorsally, carina reaching level of stemmaticum (figs 11, 15); hind coxa and pterostigma of ♀ yellowish-brown; fourth, and usually third, antennal segment of ♀ dark brown or infuscate 3
3. First metasomal tergite slightly widened apically (fig. 5); length of temple about equal to eye in dorsal view (fig. 15); basal half of antenna of ♀ slightly more slender (fig. 9); fore tarsus of ♀ moderately bristly setose (fig. 7); length of vein 1-M of fore wing 1.8-1.9 times vein m-cu (fig. 1); mesopleuron rather extensively rugose and punctate; Canary Islands *P. angifemoralis* spec. nov.

- First tergite distinctly widened apically (fig. 14); length of temple 1.2-1.5 times eye in dorsal view (fig. 11); basal half of antenna of ♀ slightly less slender (fig. 12); fore tarsus of ♀ densely setose (fig. 13); length of vein 1-M of fore wing 2.0-2.1 times vein m-cu; mesopleuron largely smooth; Madeira *P. maderae* (Graham, 1986)

Acknowledgements and abbreviations of depositories

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