

***Pholcus knoeseli* Wunderlich, 1992**

Wunderlich, J. 1992. Die Spinnen-Fauna der Makaronesischen Inseln. Taxonomie, Ökologie, Biogeographie und Evolution. Beitr. Araneol. 1: 1-619.

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82. *Pholcus knoeseli* n.sp. (Abb. 156-164)

Material: E-Teneriffa, l. Mercedes-Wald, in künstlichen Höhlen und Halbhöhlen, 3♂ 3♀ 5juv. M. KNÖSEL leg. in II, Holotypus (♂) SMF, 2juv. SMF, 1♀ 1juv. SMF, 1♂ 1juv. MNHN, 1♂ 2♀ 1juv. SJW; 2. Taganana, 200m, in einer Halbhöhle, 1♀ JW & M. BAEZ leg. in VI, SJW.

Diagnose: ♂-Pedipalpus (Abb.156-161): Procursus mit 2 kurzen, dicken Börstchen schräg hintereinander (Pfeil in Abb.157), distal mit mehreren Zähnchen in typischer Position etwa in einer Reihe. Epigyne (Abb.162-163) nicht hoch, hinten stärker breit sklerotisiert, mit kleinem, langovalem "Knöpfchen". Vulva Abb.164.

Beschreibung:

Maße (in mm): Gesamt-Länge 5.5-7.0 (so das eiertragende ♀), Prosoma: Länge 1.7-2.0, ♂-Tibia I 11.8-12.5.

Färbung wie bei *P. tenerifensis* WUNDERLICH 1987 und *ornatus* BÖSENBERG 1894, vgl. WUNDERLICH (1987: Abb.701); dunkle Flecken des Körpers von variabler Ausdehnung, ♀-Pedipalpus dunkelgrau. Körper und Beine wie bei *tenerifensis*, ♂-Cheliceren wie Abb.84 bei WUNDERLICH (1987).

Genital-Strukturen. ♂-Pedipalpus (Abb.156-161): Trochanter mit langem, schlankem Sporn, Femur ventral mit nicht verbreitertem Auswuchs, Appendix breit, Procursus mit 2 kurzen und dicken Börstchen schräg hintereinander (Pfeil in Abb.157), das distale kleiner, Lamella meist mit 8 Zähnchen, die äußeren am größten. Geschlechtsfeld und Vulva: Siehe die Diagnose.

Beziehungen: Es bestehen sehr enge Beziehungen zu *P. malpaisensis*

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n.sp. (Teneriffa, Malpais), siehe dort und enge Beziehungen zu *P. tenerifensis*; bei *tenerifensis* ist aber der ventrale Auswuchs des Femur des ♂-Pedipalpus distal verbreitert, der Uncus hat eine andere Form, die krallenförmigen Fortsätze des Appendix sind weniger stark gebogen, die lateralen Zähne der Lamella sind länger, die Börstchen des Procursus sind dünner und stehen nebeneinander und das Geschlechtsfeld ist höher.

Verbreitung: E-Teneriffa (Anaga-Region).

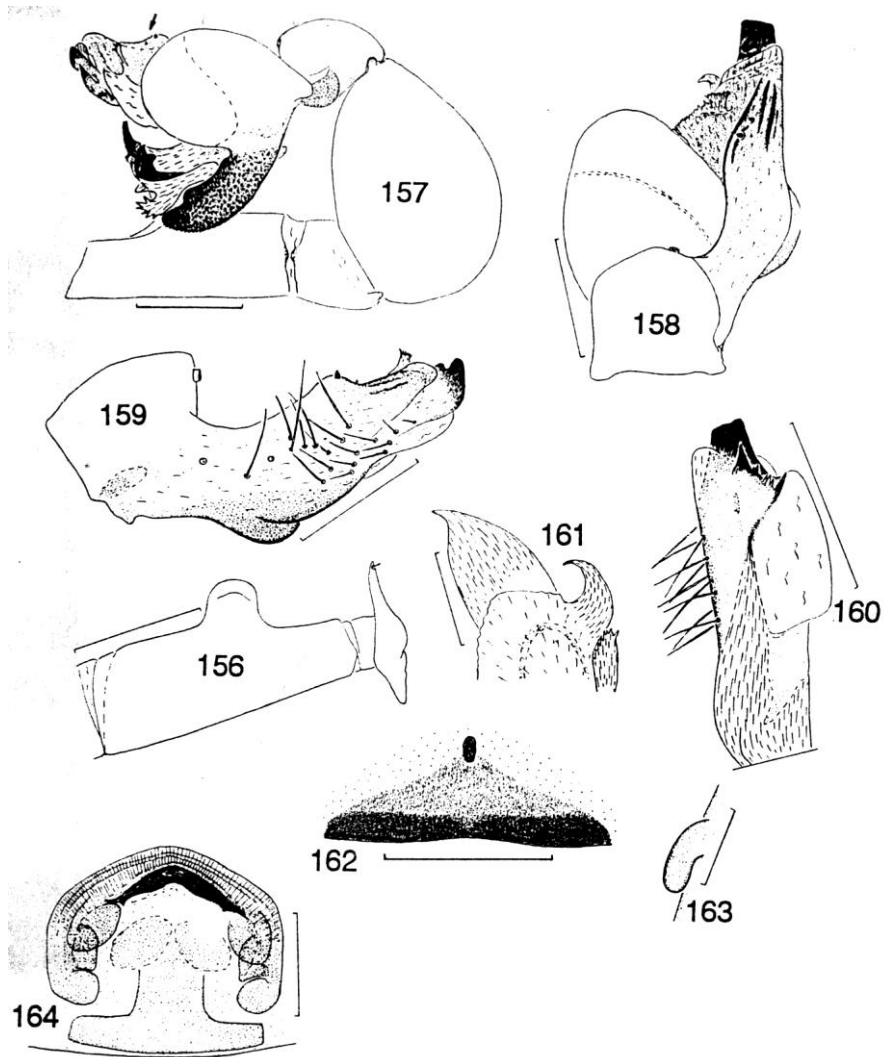


Fig.156-164: *Pholcus knoeseli* n.sp., 156-161) r. ♂-pedipalpus, 156) trochanter and femur prolat., 157-158) pedipalpus dorsal and prolat., 159-160) procursus retrolat. and ventral, 161) appendix apical, 162-164) ♀, genital area and its "knob" lat., 164) vulva dorsal; M in fig. 161) 0.2, 163) 0.1, 164) 0.4, the others 0.5.

Dimitrov, D., Ribera, C. 2007. The genus *Pholcus* (Araneae, Pholcidae) in the Canary Islands. Zool. J. Linn. Soc. 151: 59-114.

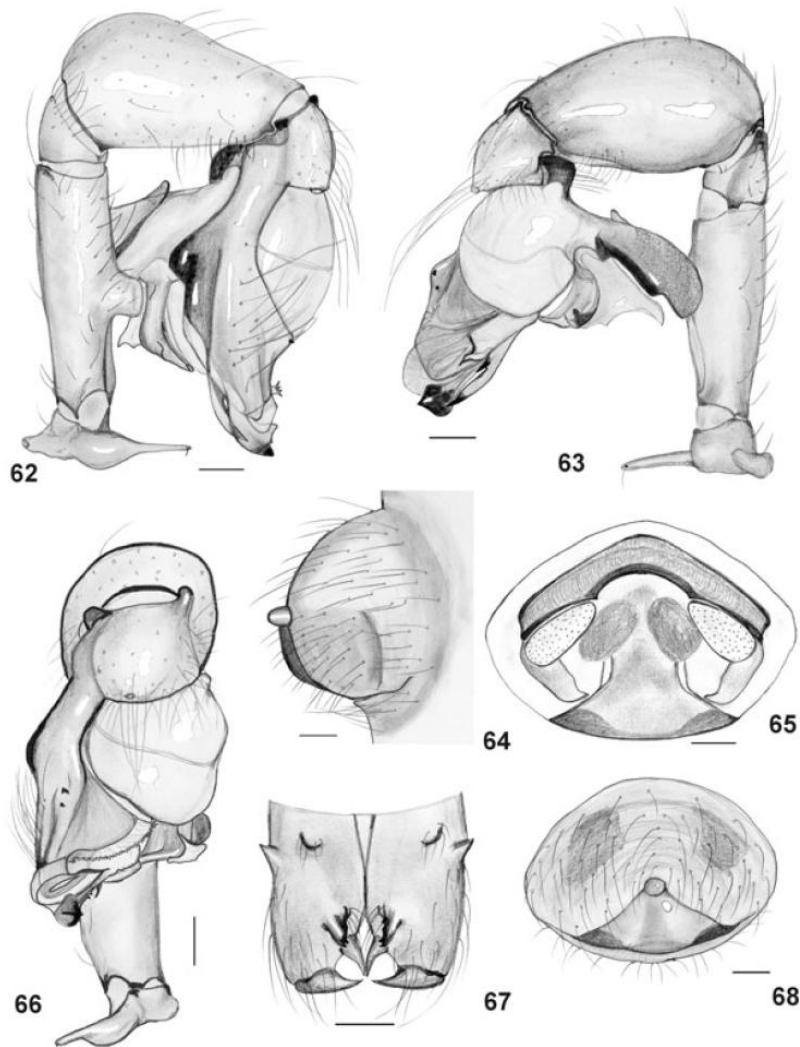
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PHOLCUS KNOESEL WUNDERLICH, 1992 (FIGS 62–79)

Pholcus knoeseli Wunderlich, 1992: 320, figs 156–164.

Material examined: 1 m, paratype, from Las Mercedes, Tenerife, Canary Islands, Spain, Knosel (in

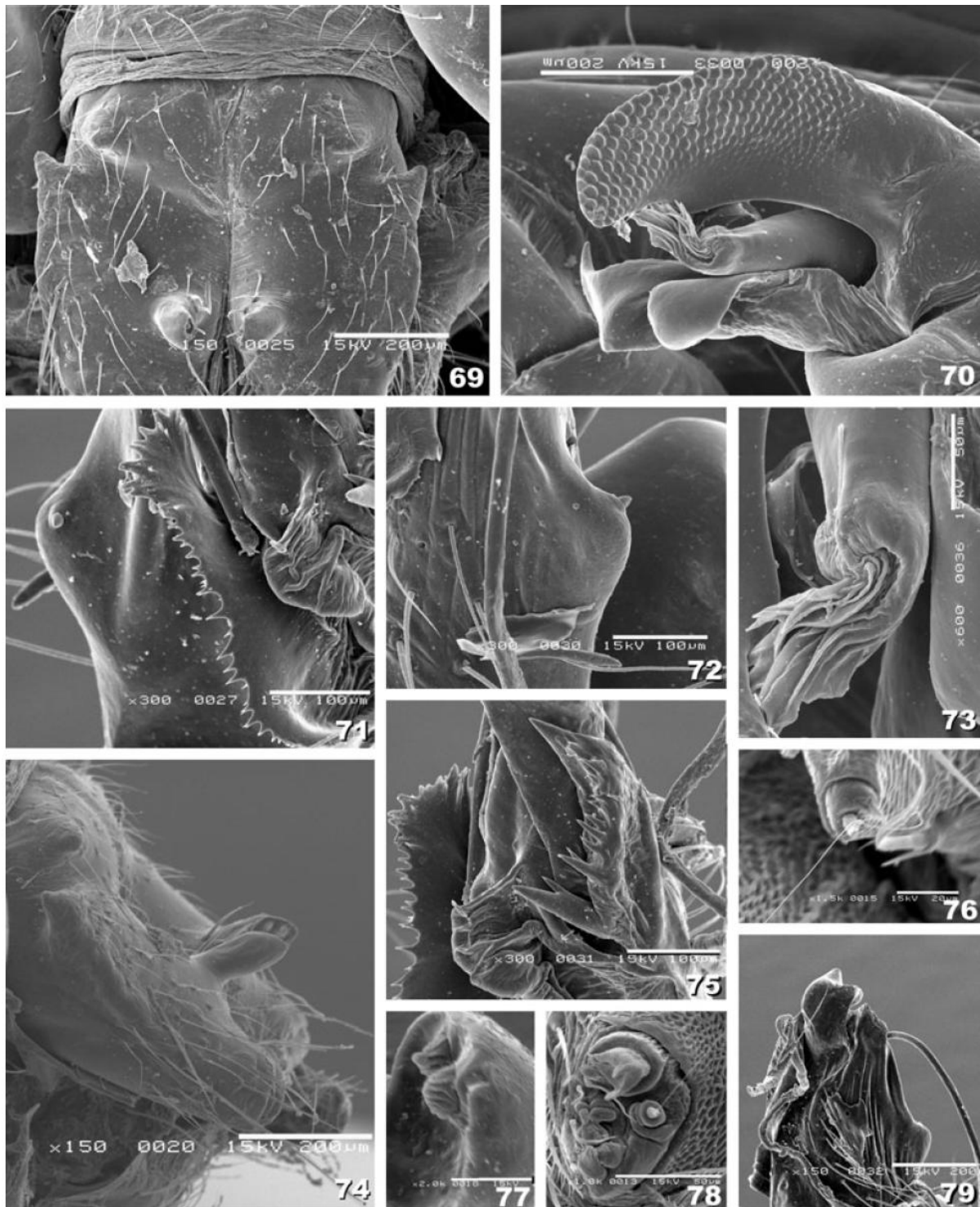
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Figures 62–68. *Pholcus knoeseli*: 62, male palp, prolateral; 63, male palp, retrolateral; 64, epigynum, lateral; 65, vulva, dorsal; 66, male palp, frontal; 67, male chelicerae, frontal; 68, epigynum, ventral. Scale bars 0.2 mm.

MNHN F08iNr3); 4 mm, 1 f, 6 juv., El Bailadero, Tenerife, 22.ii.2002, Dimitrov, De Mas & Ribera (CCRUB 4565-171, 4566-171, 4567-172, 4568-171); 1 m, 1 juv., El Bailadero, Tenerife, 22.ii.2002, Dimitrov & Ribera (CCRUB 4643-173, 4644-173); 1 juv., Pico del Inglés, Tenerife, 21.viii.2003, Dimitrov & Antón (CCRUB 4605-173); 1 f, Pico del Inglés, Tenerife, 21.viii.2003, Dimitrov & Antón (ULL AÑ-2152).

Diagnosis: Distinguished from similar congeners (*P. roquensis* and *P. malpaisensis*) by the shape of the procurus, the width of its base and apical area considerably greater as compared with *P. roquensis*; the small spine's dorsal position on the procurus over its wider part (Figs 71, 72); the shape of the uncus (much wider in *P. malpaisensis*) as well as the appendix of the genital bulb (Figs 63, 70). The shape of the membrane at the embolus' apex (Fig. 73) is also a very



Figures 69–79. *Pholcus knoeseli*: 69, male chelicerae, frontal; 70, projections of the bulb, retrolateral; 71, short spines of the procursus, retrolateral; 72, short spines of the procursus, prolateral; 73, embolus; 74, male chelicerae, lateral; 75, apical apophysis of the procursus, ventral; 76, posterior median spinnerets; 77, distal apophysis of male chelicerae; 78, anterior lateral spinnerets; 79, procursus, prolateral. Scale bars: 69, 70, 74, 79, 200 μm ; 71, 72, 75, 100 μm ; 78, 50 μm ; 76, 77, 20 μm .

useful tool for distinguishing this species from its similar congeners.

Description: Male: prosoma yellowish with dorsal marking, which in this species is divided in two large parts by the fovea, each part again subdivided in two. The marking has smooth and well-marked margins. Elevated ocular area with darker pigmentation surrounding the eyes. AME less than the half the diameter of ALE. Distance between AME and ALE equal to half the diameter of ALE. The area between the lateral triads and the dorsal part of the ocular area is covered by long hairs. Yellowish sternum with darker colouring in both its central part and borders. Chelicerae (Figs 67, 69, 74) brownish-yellow; distal chelicerapophyses dark brown, with three bristles at their base and two modified hairs at the tip (Fig. 77). Proximolateral apophyses overpass with their upper margins the base of the frontal prominences. Yellowish legs, slightly darker than prosoma. Palps yellowish with darker pigmentation across the heavily sclerotized areas. Palps as in Figures 62, 63, 66. Procursus with large terminal apophysis featuring well-developed conical outgrowths (Fig. 79). Apical apophysis of the procurus with two longer outgrowths at the two extremes, with numerous sharpened and shorter outgrowths between them (Fig. 75). Cylindrical yellowish-grey opisthosoma with two lines of spots on its dorsal side. Each line has four spots with brown colouring and tear-like shape. The last spot in each line is much smaller, lighter and oval in shape. Ventrally, a darker coloured transverse line is visible in the genital area. Spinnerets (Figs 76, 78) exhibit darker pigmentation at the base.

Female: prosoma as in male but with a less elevated ocular area and shorter hairs on its dorsal area. The dark marking on sternum much smaller and reduced to one longitudinal line. Chelicerae without apophyses. Opisthosoma more yellowish than in the male. The two lines of dorsal spots placed closer to each other, with the first pair joined in the middle resembling an inverted V. Epigynum and vulva as in Figures 64, 65, 68.

Measurements: Male: Prosoma 1.8 long, 1.9 wide; opisthosoma 4.0 long, 2.0 wide. Total body length 5.9. Leg I, femur 13.8, patella 0.9, tibia 13.7, metatarsus 21.8, tarsus 2.9, total 53.1. Palp, femur 0.8, patella 0.2, tibia 1.1, procurus 1.2. Female: Prosoma 1.9 long, 2.0 wide; opisthosoma 5.1 long, 3.2 wide. Total body length 7.0. Leg I, femur 11.7, patella 0.7, tibia 10.7, metatarsus 17.8, tarsus 1.5, total 42.5.

Distribution: *P. knoeseli* is known to inhabit numerous localities in the Anaga zone on Tenerife Island (Fig. 276).

Natural history: *P. knoeseli* lives under large rocks or in the cavities on the hillsides in the remnants of the humid laurisilva forest over the higher limits of the Anaga massif. The webs are built on the ceilings. As in *P. gomerae* the populations are often so dense that it is difficult to delimit individual webs.

Dimitrov, D., Arnedo, M.A., Ribera, C. 2008. Colonization and diversification of the spider genus *Pholcus* Walckenaer, 1805 (Araneae, Pholcidae) in the Macaronesian archipelagos: Evidence for long-term occupancy yet rapid speciation. *Mol. Phyl. Evol.* 48: 596-614.

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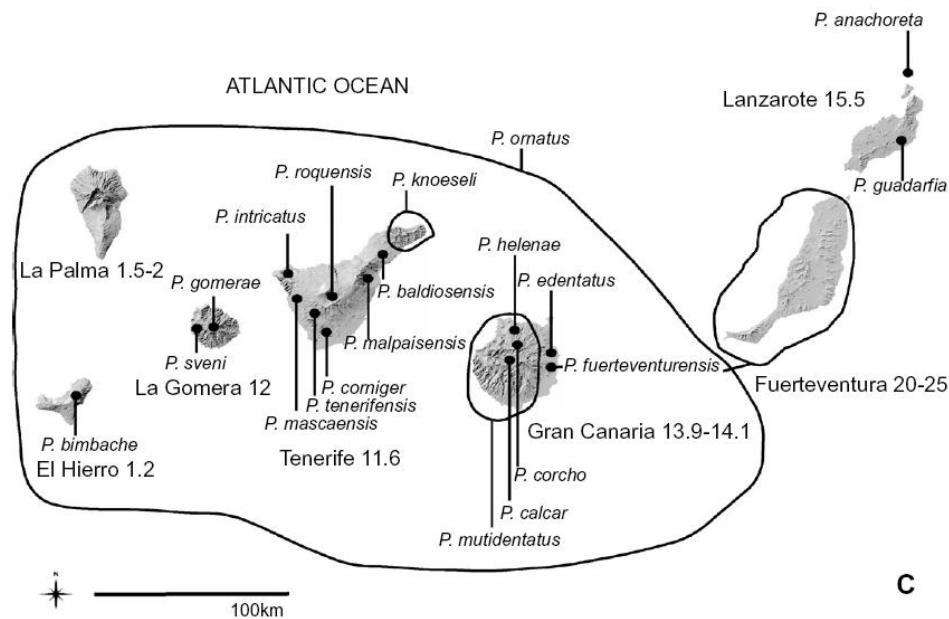


Fig. 1. (A) Map of the Macaronesian biogeographical region. (B) Known distribution of the Madeiran and north-west African *Pholcus* species. (C) Known distribution of the Canarian *Pholcus* species. Numbers following island names denote their estimated maximum age in Mya.

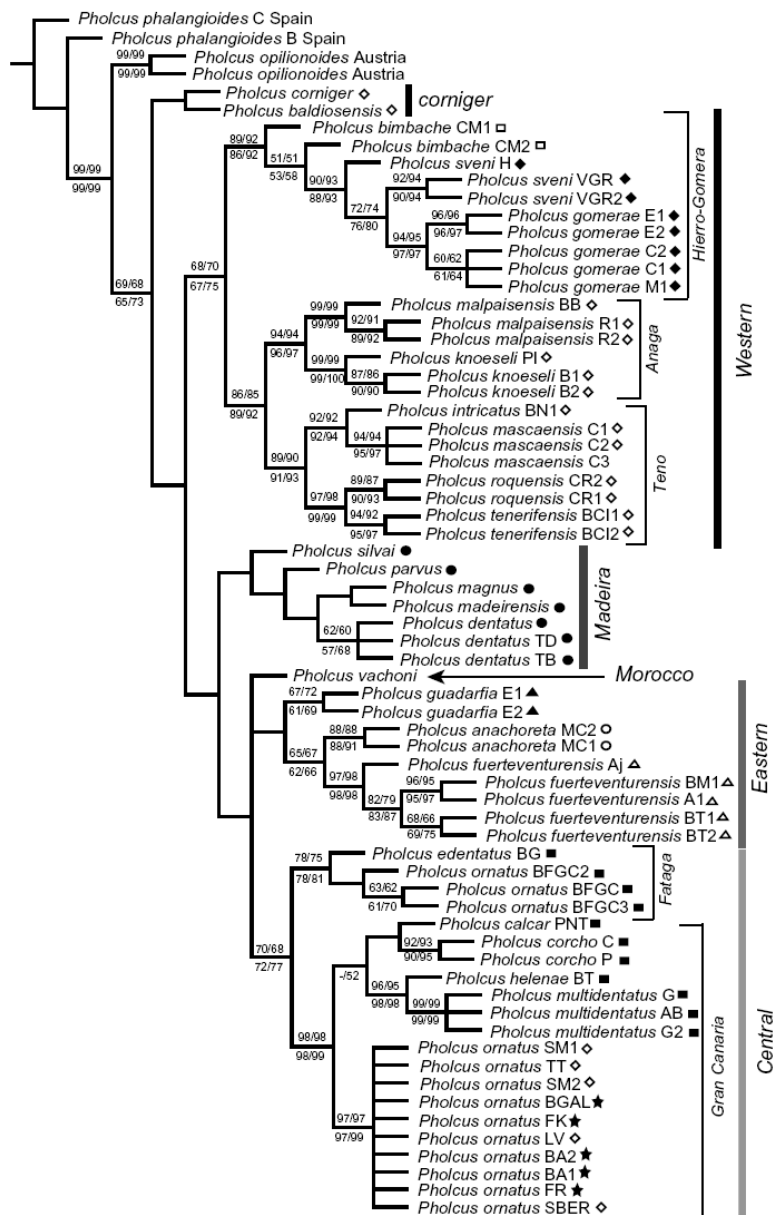


Fig. 5. Strict consensus of the 4 most parsimonious trees ($L = 2442$, $CI = 0.534$, $RI = 0.881$) found by MP analysis of the combined *macaronesia* data set. Support values higher than 50 are given as follows, bootstrap/Poisson bootstrap above branches and jackknife/symmetric resampling below branches. Geographic localities of the Macaronesian species are labeled as follows, Tenerife, rhomb; La Gomera, filled rhomb; El Hierro, square; Gran Canaria, filled square; Fuerteventura, triangle; Lanzarote, filled triangle; Montaña Clara, circle; Madeira, filled circle; La Palma, star.