Pholcus helenae Wunderlich, 1987

Wunderlich, J. 1987. Die Spinnen der Kanarischen Inseln und Madeiras. Triops Verlag. Pp. 1-435.

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Pholcus helenae n.sp. (Abb.165-173)

Material: Gran Canaria, Nordteil: Barranco Suage, 5km WSW Arucas, in einer Halbhöhle an einem kleinen Bach, 3♂ 4w JW leg. in VIII; Holotypus (♂) SJW; 2♂ 4♀ (Paratypoide) SMF; Barranco Suage, 5km WSW Arucas, in einem Schuppen, 4♂ 3♀ JW leg. in VIII; SMF; Lorbeerwald wenige km W Moya, unter einem großen Stein, 1♂ 1♀ JW leg. in VIII; SMF; Zentrum (?) (ohne genauen Fundort), 1♂ 1♀ JW leg. in VIII; SMF.

Diagnose: ♂ -Pedipalpus (Abb.165-170): Sporn des Trochanter mäßig lang und deutlich gebogen. Bulbus in Lateral-Ansicht wie bei P. calcar n.sp. (Abb.159).Procursus mit 2 deutlich getrennten Börstchen in etwas variabler Position, meist deutlich divergierend, selten fast parallel. Lamella prolateral fast immer in ein Zähnchen verlängert. ♀ : Epigyne (Abb.171-172) fast gleichmäßig sklerotisiert oder hinterer Rand stärker sklerotisiert; mit langem, schmalem Mittelstück und sehr kleinem "Knöpfchen". Verhältnis von Breite zu Länge 1.3 bis 1.55.
Färbung wie bei P. ornatus Bösenberg 1895.
♂ -Cheliceren wie bei P. corcho n.sp.
♂ -Pedipalpus und Epigyne: Siehe die Diagnose. Vulva: Abb.173.

Beziehungen: Sie bestehen zu P. ornatus Bösenberg 1895 und den endemischen Arten von Gran Canaria, insbesondere zu P. calcar n.sp., siehe dort.

Verbreitung: Gran Canaria.

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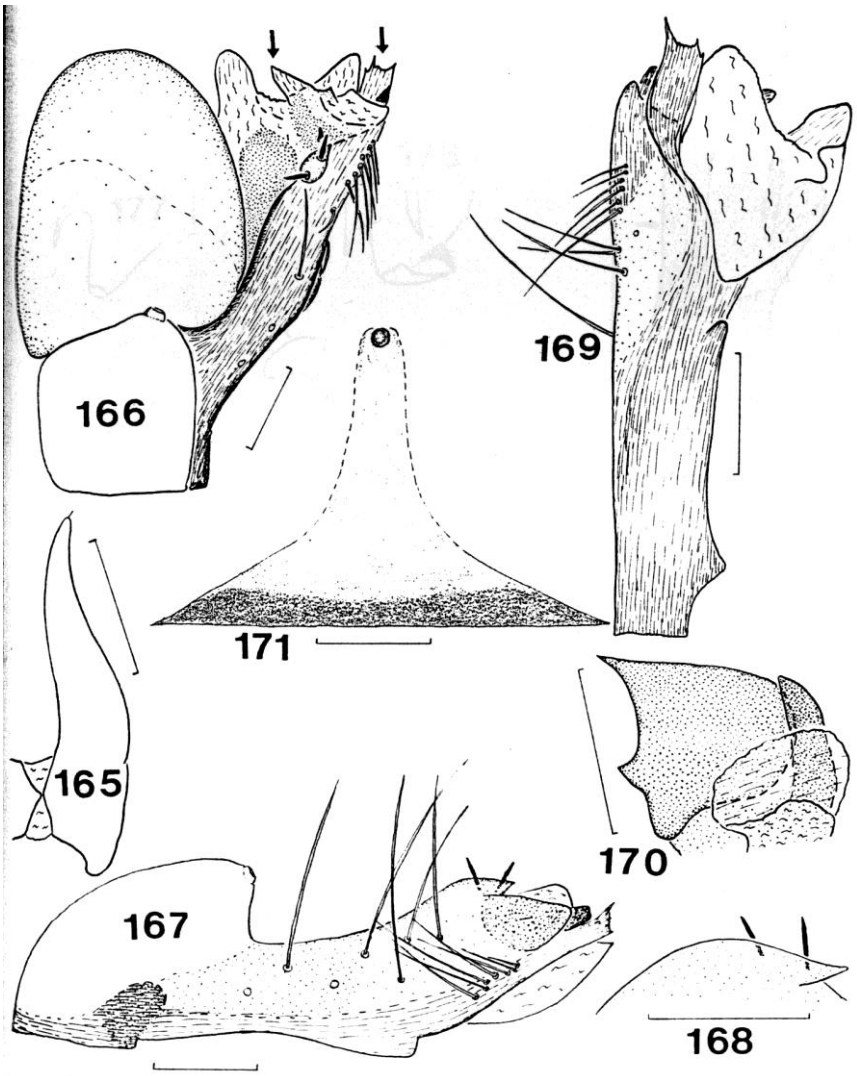

Fig.165-173) Pholcus helenae n.sp.: 165-170) right ♂ -pedipalpus; 165) trochanter retrolateral; 166) pedipalpus dorsal; 167,169) procursus retrolateral, ♂ from the Barranco Suage, 168) small bristles ("Börstchen") of the procursus retrolateral, ♂ from the center of Gran Canaria; 170) appendix apical; 171-172) ♀ , epigynum, 171) ♀ from the center of Gran Canaria and the Barranco Suage, 172) ♀ from the Barranco Suage; 173) ♀ , vulva.- M: Fig.173) 0.5mm, the others 0.2mm.

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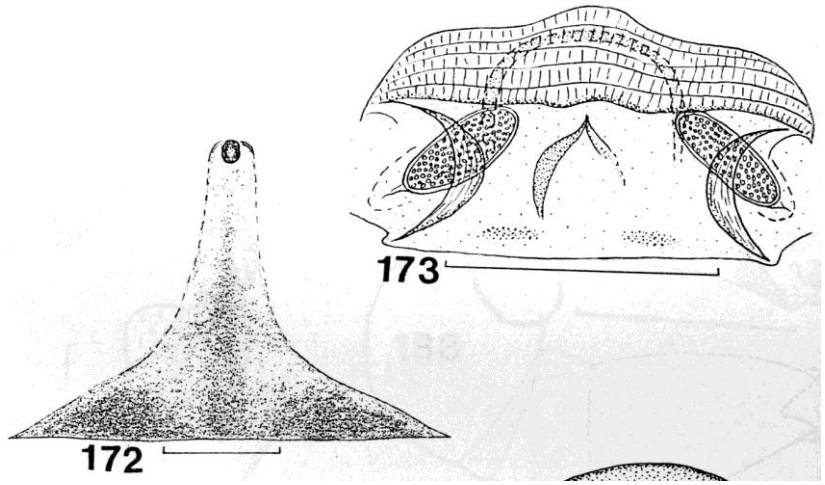

Wunderlich, J. 1992. Die Spinnen-Fauna der Makaronesischen Inseln. Taxonomie, Ökologie, Biogeographie und Evolution. Beitr. Araneol. 1: 1-619.

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81. Pholcus helenae WUNDERLICH 1987

Material: Gran Canaria, 1. Bei Valeseco, in einer künstlichen Höhle, 2♀ BAEZ & ENGHOFF leg. in VII, ZMK; 2. Tamadaba, 1300m, an Felsen in einer Halbhöhle im Kiefernwald an einem ausgetrockneten Bach, 2♀ JW leg. in VI.

Anmerkung: Die Determination der beiden ♀ von Tamadaba erscheint mir ohne Kenntnis des ♂ von demselben Fundort etwas unsicher.

Verbreitung: Gran Canaria.

Wunderlich, J. 1995. Zu Ökologie, Biogeographie, Evolution und Taxonomie einiger Spinnen der Makaronesischen Inseln (Arachnida: Araneae). Beitr. Araneol. 4: 385-441.

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Pholcus helenae WUNDERLICH 1987 (fig. 35-36)

Material: Gran Canaria, ♂♀ C. G. CAMPOS leg., 1. Punta de la Arena o de Gongora, 1♂ 1♀ SJW; 2. Bco. de los Dolores, ULT; 3. Bco. de Azuaje, ULT.

Anmerkung: Typisch für das ♂ ist der lange und deutlich gebogene Sporn des Trochanter des ♂-Pedipalpus (Abb. 35). Bulbus-Strukturen: Abb.36. Die Vulva eines ♀ von den Casas de Job, Punta de la Arena o de Gongora weicht von derjenigen eines der Paratypen ab (vgl. Abb. 173 bei WUNDERLICH (1987)); ich vermute als Ursache eine etwas abweichende Position des Präparats und/oder eine innerartliche Variabilität des Grades der Sklerotisierung.

Verbreitung: Gran Canaria.

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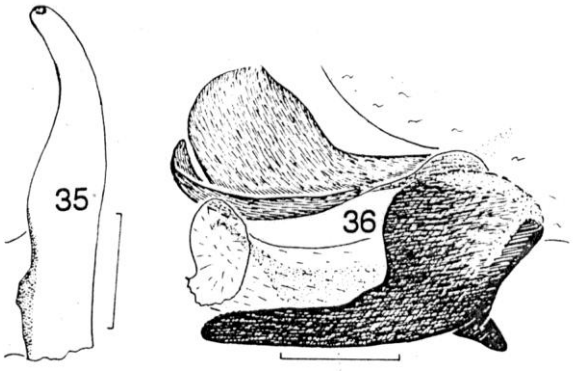


Fig.35-36: Pholcus helenae WUNDERLICH 1987, ♂ from Gran Canaria, Punta de la Arena; 35) r. trochanter prolaterally; 36) distal part of the r. uncus & appendix prolaterally; M = 0.2mm.

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

PHOLCUS HELENAE WUNDERLICH, 1987 (FIGS 177–194)

Pholcus helenae Wunderlich, 1987: 85, figs 165–173; Wunderlich (1995): 419, figs 35, 36.

Material examined: 1 m, holotype, from Barranco Suage, Gran Canaria, Canary Islands, Spain (SMF 35536); 2 mm, 9 ff, 2 juv., from Barranco de los Tilos, Gran Canaria, 10.viii.2002, De Mas & Delgado (CCRUB 4515-170, 4516-170, 4518-170, 4623-173, 4657-173); 1 m, 4 ff, from Barranco Oscuro, Gran Canaria, 14.xii.2003, H. Lopez (ULL AÑ-1600); 1f and 1juv., from Barranco Oscuro, Gran Canaria, 14.xii.2003, H. Lopez (ULL AÑ-2148); 1 m, 1 f, 1 juv., from Embalse Perez and 2 ff from Fontanales, Gran Canaria (CCRUB 4519-170, 4624-173, 4517-170).

Diagnosis: Distinguished from similar congeners (*P. corcho* and *P. multidentatus*) by the following characteristics: the more chitinized apical apophyses of the procursus featuring only two very short outgrowths (Fig. 194); the shape of the appendix of the male bulb (Figs 178, 192); the procursus' smaller dorsal apophysis and the positioning of its dorsal spines (Figs 177, 189, 191); the general morphology of the procursus (Figs 177, 179, 191) and the longer and more curved trochanteral apophysis. The female is easily distinguished from the rest of the Canarian *Pholcus* species by the high triangular plate of the epigynum (Fig. 181) and the morphology of the vulva.

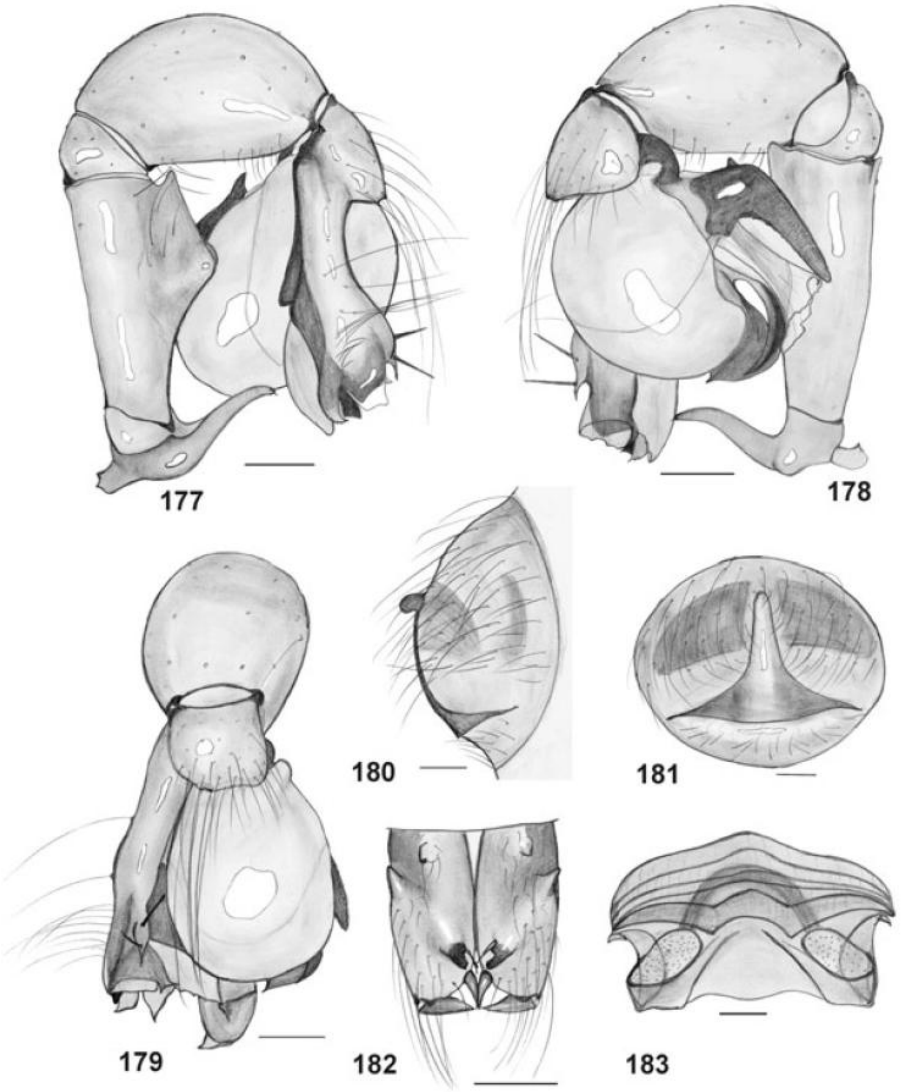
Description: Male: prosoma oval with a pale, yellowish colour. Dorsally, a brownish marking visible over the thorax. Ocular area elevated, the eyes surrounded by a zone of brownish pigmentation. In the AME zone, this pigmentation has the shape of a transversal band. ALE diameter three-fold greater than that of AME. Distance between AME slightly larger than their diameter, and the distance to ALE nearly twice the diameter of ALE. Sternum yellowish with brownish margins. A lighter area is visible directly in front of each coxal joint. Chelicerae (Figs 182, 184, 185) brownish, featuring darker distal apophyses with bristles at their base. Distal apophyses possess two modified hairs (Fig. 186). Upper margin of proximolateral apophyses extends to the base of the frontal prominences, which are marked by short darker outgrowths. Palps as in Figures 177–179. Procursus (Figs 189, 191) two dorsal spines. Dorsal apophysis of the procursus with numerous small spines (Fig. 187), and the apical apophysis with two very short outgrowths (Figs 190, 194). Embolus features a wider apical area with small teeth (Fig. 193). Opisthosoma cylindrical with brownish-yellow colouring. Dorsally with eight darker spots divided in two longitudinal parallel rows of four spots each. Ventrally, opisthosoma appears lighter in colour. Genital zone darker. Spinnerets with brownish spots.

Female: prosoma as in male but with a less elevated ocular area. AME closer to the lateral triads, with the distance between them and ALE equal to the ALE diameter. Sternum lighter than in male. Shape and colouring of opisthosoma as in male. Ventrally, the triangular plate of the epigynum appears very high and the genital area elevated. Epigynum and vulva as in Figures 180, 181, 183. Chelicerae without sexual modifications.

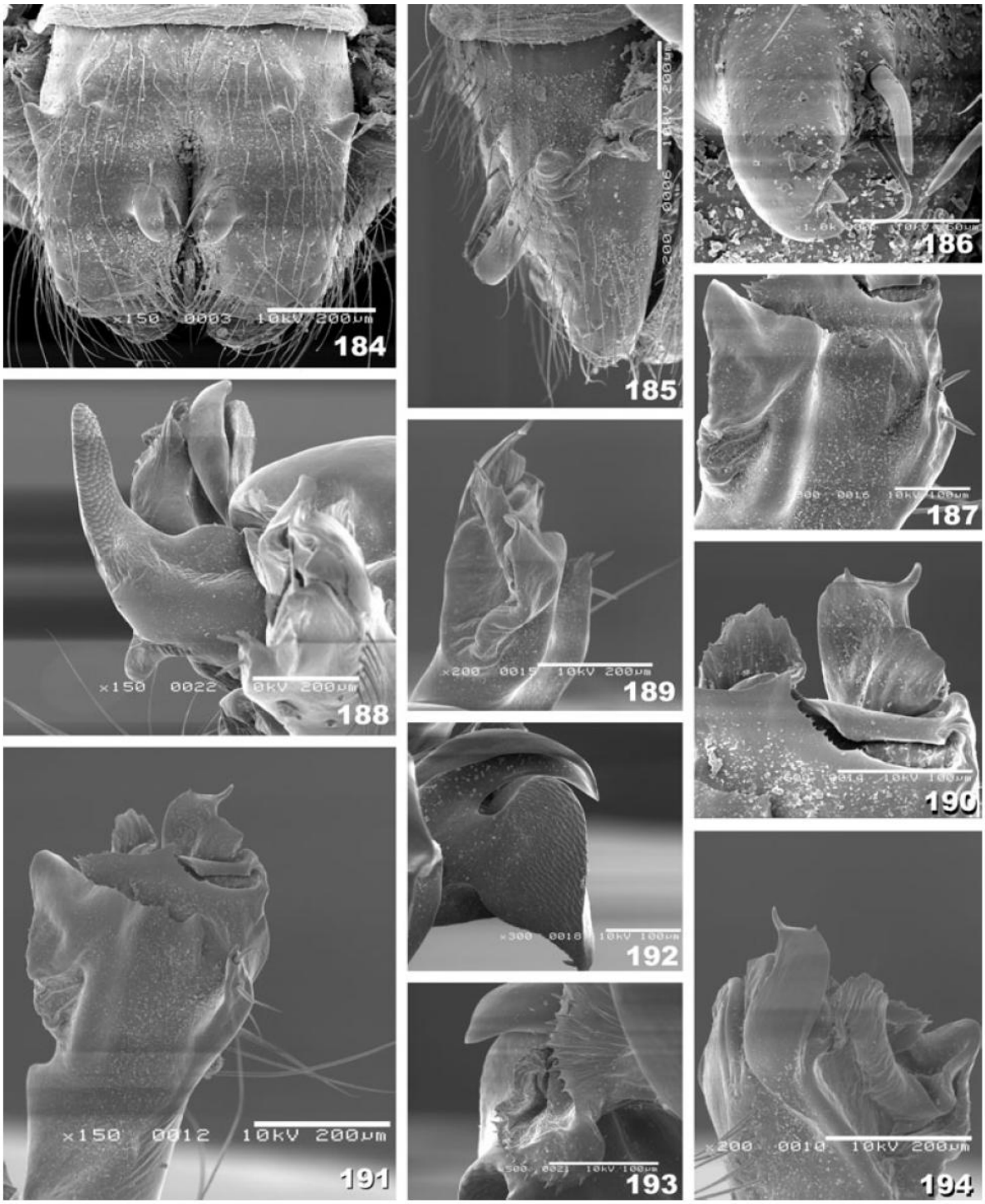
Measurements: Male: Prosoma 1.5 long, 1.7 wide. Opisthosoma 4.2 long, 1.9 wide. Total body length 5.7. Leg I femur 12.2, patella 0.8, tibia 12.7, metatarsus 21.5, tarsus 2.4, total 49.6. Palp femur 0.7, patella 0.2, tibia 1.0, procursus 0.9. Female: Prosoma 1.5 long, 1.9 wide. Opisthosoma 4.8 long, 1.7 wide. Total body length 6.3. Leg I femur 10.2, patella 0.7, tibia 11.2, metatarsus 21.0, tarsus 2.5, total 45.6.

Distribution: This species is endemic to Gran Canaria where it is known to inhabit such localities as Barranco de los Tilos, Embalse Perez and Fontanales (Fig. 276).

Natural history: *P. helenae* lives in the last remnants of laurisilva forest on the island of Gran Canaria where it is found in natural cavities in humid places with limited sunlight.



Figures 177–183. *Pholcus helenae*: 177, male palp, prolateral; 178, male palp, retrolateral; 179, male palp, frontal; 180, epigynum, lateral; 181, epigynum, ventral; 182, male chelicerae, frontal; 183, vulva, dorsal. Scale bars 0.2 mm.



Figures 184–194. *Pholcus helenae*: 184, male chelicerae, frontal; 185, male chelicerae, lateral; 186, distal apophysis of male chelicerae, frontal; 187, dorsal apophysis of procursus, dorso-retrolateral; 188, projections of the bulb, retrolateral; 189, procursus, retrolateral; 190, apex of the procursus, retrolateral; 191, procursus, retrolateral; 192, appendix of the male bulb, prolateral; 193, apex of the embolus, retrolateral; 194, apical apophysis of the procursus, ventral. Scale bars: 184, 189, 191, 194, 200 μm; 187, 190, 192, 193, 100 μm; 186, 50 μm.

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.

p. 597

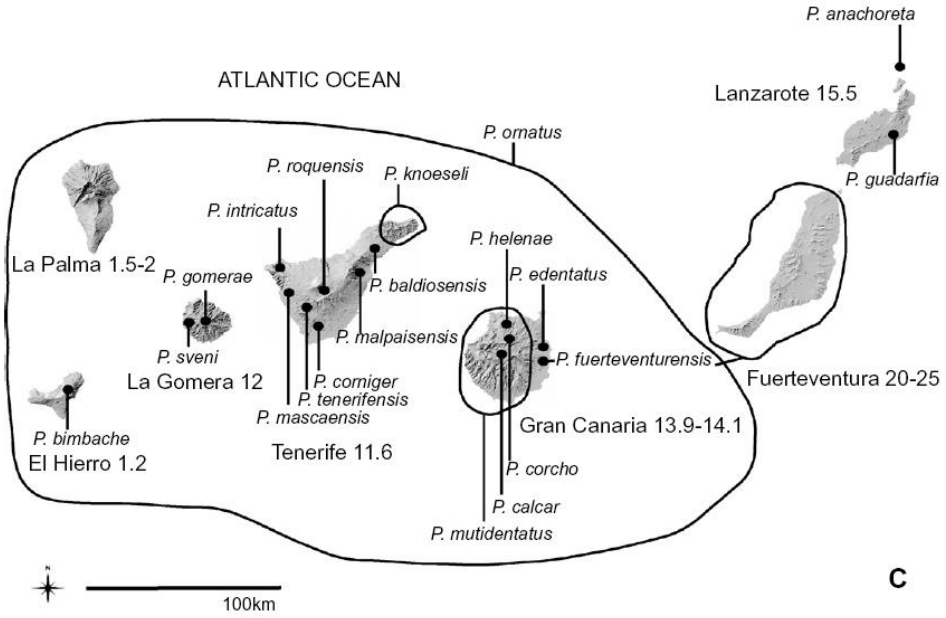


Fig. 1. (A) Map of the Macaronesian biogeographical region. (B) Known distribution of the Madeiran and north-west African *Pholcus* species. (C) Known distribution of the Canarian *Pholcus* species. Numbers following island names denote their estimated maximum age in Mya.

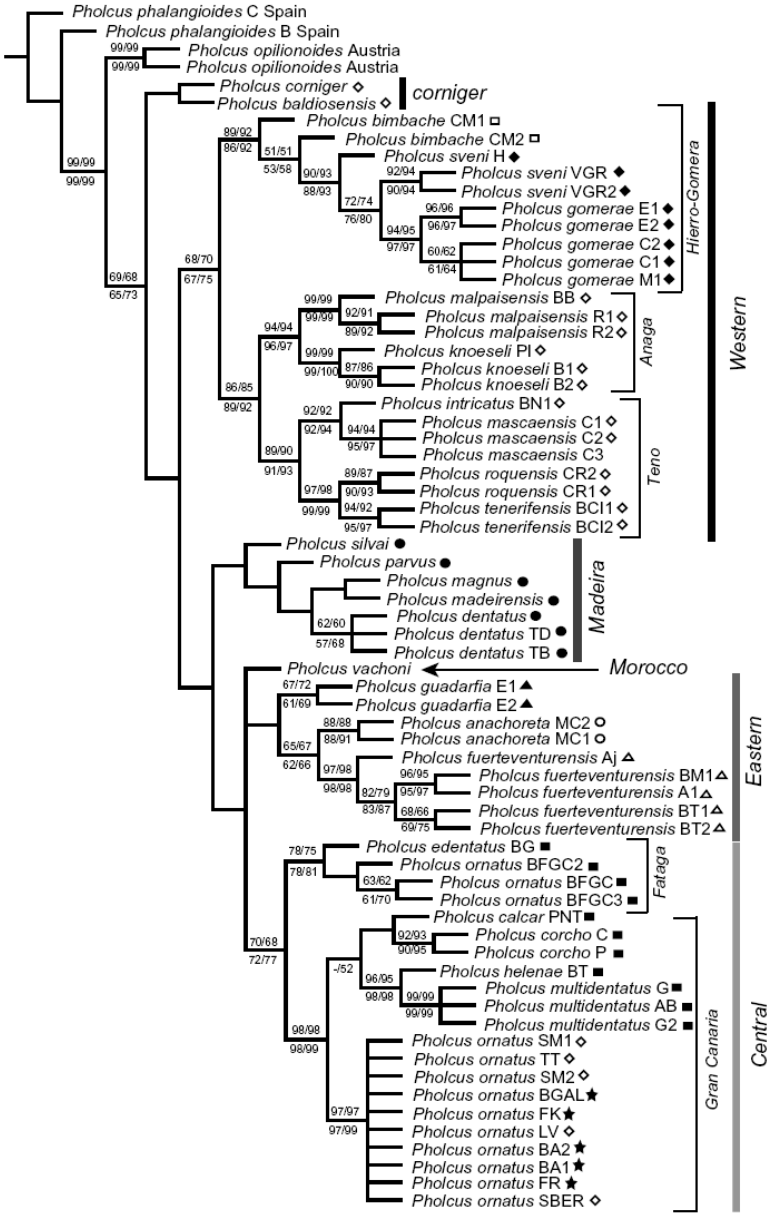


Fig. 5. Strict consensus of the 4 most parsimonious trees (L = 2442, CI = 0.534, RI = 0.881) found by MP analysis of the combined *macaronesia* data set. Support values higher than 50 are given as follows, bootstrap/Poisson bootstrap above branches and jackknife/symmetric resampling below branches. Geographic 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.