

## ***Pholcus malpaisensis* Wunderlich, 1992**

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

p. 321

**85. *Pholcus malpaisensis* n.sp.** (Abb. 165-166)

**Material:** SE-Teneriffa, Malpais, Guimar, 1♀ (Holotypus) J. ESQUIVEL leg. 31.I. 1981, ULT no. 03958 P.

**Diagnose** (♀; ♂ unbekannt): Geschlechtsfeld (Abb.165-166) breit, hinten stärker sklerotisiert, mit kleinem, kreisförmigem "Knöpfchen".

**Beschreibung:**

**Maße** (♀ in mm): Gesamt-Länge 6.3, Prosoma: Länge 1.6, Breite 1.5, Bein I: Femur 10.0, Patella 0.7, Tibia 10.1, metatarsus 16.5, Tarsus 3.0, Tibia II 7.0, Tibia III 4.6, Tibia IV 6.4.  
**Färbung, Körper und Beine** wie bei *P. tenerifensis* WUNDERLICH 1987 und *P. knoeseli* n.sp., siehe dort.

**Beziehungen:** Es bestehen sehr enge Beziehungen zu *P. knoeseli* (E-Teneriffa); bei *knoeseli* ist das "Knöpfchen" des Geschlechtsfeldes aber langoval. Bei *P. tenerifensis* ist das Geschlechtsfeld länger und anders pigmentiert.

**Verbreitung:** SE-Teneriffa (Malpais).

p. 544

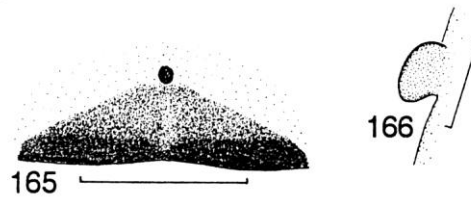


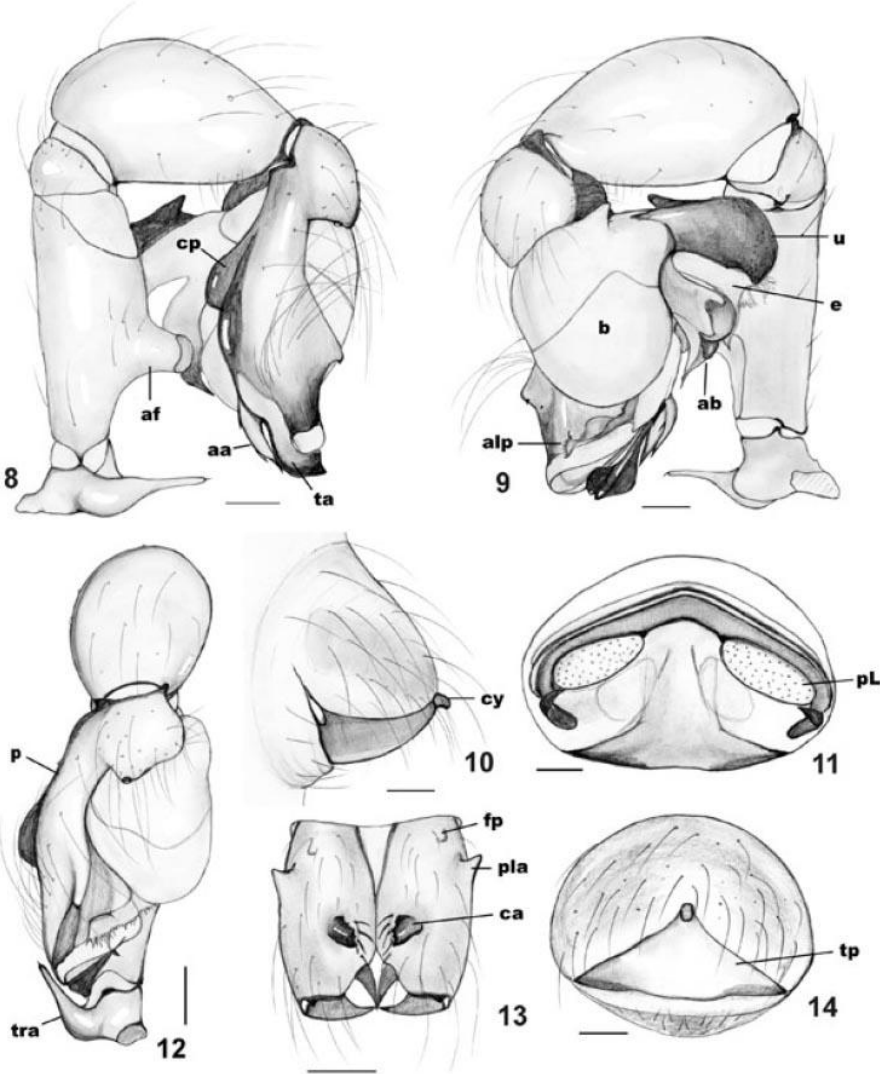
Fig.165-166: *Pholcus malpaisensis* n.sp., ♀, genital area and its "knob" lateral; M = 0.5 and 0.1.

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

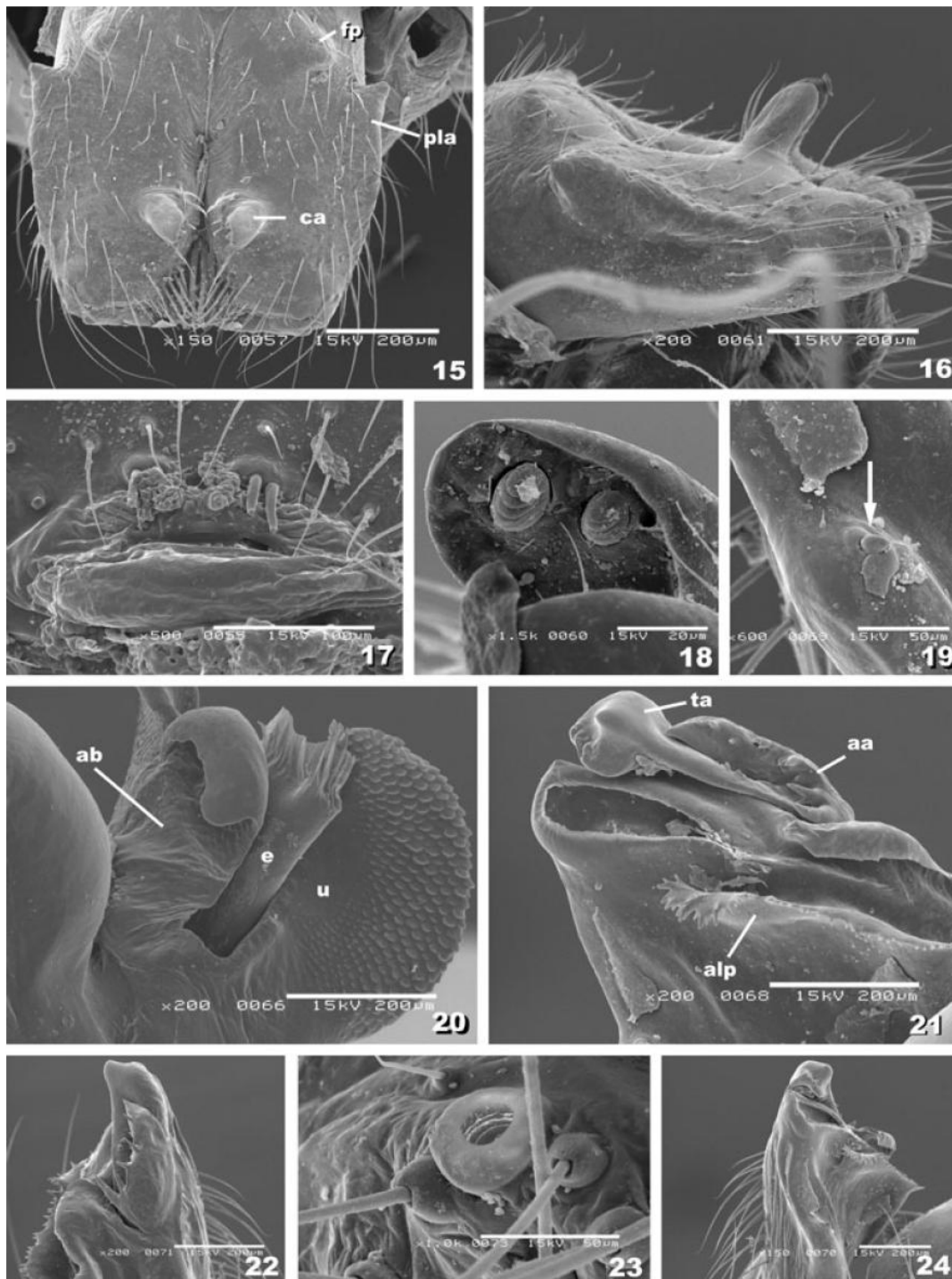
p. 64

*PHOLCUS MALPAISENSIS* WUNDERLICH, 1992  
(FIGS 8–24)

*Pholcus malpaisensis* Wunderlich, 1992: 321, figs 165, 166.



Figures 8–14. *Pholcus malpaisensis*: 8, male palp, prolateral; 9, male palp, retrolateral; 10, epigynum, lateral; 11, vulva, dorsal; 12, male palp, frontal; 13, male chelicerae, frontal; 14, epigynum, ventral. Scale bars 0.2 mm.



**Figures 15–24.** *Pholcus malpaisensis*: 15, male chelicerae, frontal; 16, male chelicerae, lateral; 17, male gonopore, ventral; 18, tips of the distal apophysis of male chelicerae, retrolateral; 19, small dorsal tooth of the procurus, dorsal (arrow points to the tooth); 20, projections of the male bulb, retrolateral; 21, apex of the procurus, retrolateral; 22, apex of the procurus, ventral; 23, male tarsal organ, 24, procurus, dorso-retrolateral. Scale bars: 15, 16, 20, 21, 22, 24, 200  $\mu\text{m}$ ; 17, 100  $\mu\text{m}$ ; 18, 20  $\mu\text{m}$ ;

*Neotype*: By present designation, m, SPAIN, Canary Islands, Tenerife, Barranco de Badajoz, 12.viii.2003, Dimitrov & Txasko (CCRUB 4535-171).

*Other material*: Same data as for neotype, 3 mm, 3 ff (CCRUB 4638-173, 4621-173, 4530-170); Tenerife, Barranco de Las Raíces, 2 mm, 1 f, 12.viii.2003, Dimitrov & Txasko (CCRUB 4529-170); 1 f, 1 m, 12.viii.2003, Dimitrov & Txasko (ULL AÑ-2159); Barranco de Las Raíces, 1 juv., 1f, 3.iii.2002, Dimitrov, De Mas & Ribera (CCRUB 4534-170).

*Diagnosis*: Distinguished from its similar relatives (*P. roquensis* and *P. knoeseli*) by the shape of the uncus, which in *P. malpaisensis* is both much thicker over its last third and more curved. The shape of the male bulb's appendix is also different across the three species and a very useful tool for proper identification (Figs 9, 20). The apical apophysis of the procurus does not have the long curved outgrowth observed in *P. roquensis*, and has longer spines than *P. knoeseli*. Other important characteristics are the morphology of the procurus (Figs 8, 9, 12, 21, 22, 24) and the shape of the cheliceral apophyses (Figs 13, 16, 18). Distinctive female characteristics include the more regular colouring of the triangular plate of the epigynum (in *P. knoeseli* and *P. roquensis* two of the apexes have darker zones, with the rest much lighter in colour), and the shape of the valve (Fig. 11).

*Description*: Male (Neotype): Oval prosoma with brownish-yellow colouring. Dorsally, a brownish marking, with smooth borders over the thorax. The marking divided into two parts by the fovea, which is well marked. Elevated ocular area with dark brown pigmentation surrounding the eyes. Dorsally, the ocular area carries a group of long hairs. Frontally, the ocular elevation with darker pigmentation. Diameter of AME half the diameter of ALE. Distance between AME equal to their diameter; distance between them and ALE equal to ALE diameter. Yellowish sternum with brownish margins, and a light-brownish marking covering its last two-thirds. Chelicerae brownish with dark brown distal cheliceral apophyses (Fig. 18), the latter with two modified hairs at the tip. Near the base of the distal cheliceral apophyses groups of modified hairs (bristles) are visible. Apex of proximolateral apophyses does not extend to the base of frontal prominences. Chelicerae as in Figures 13, 15 and 16. Palp as in Figs 8, 9 and 12. Procurus has two small dorsal spines (Figs 9, 19), one smaller and placed dorso-retrolaterally. Procurus' apical apophysis as in Figure 22, its terminal apophysis well developed with small conical elevation (Fig. 21). Tarsal organ as in Figure 23. Opisthosoma cylindrical with yellow-grey colouring. Dorsally, two longitudinal lines of darker spots are visible, each line with four spots. The first

three spots are tear-shaped, the last smaller and rounded. Ventrally, genital zone slightly elevated and darker in colour. Gonopore as in Figure 17. Spinnerets with brownish markings.

Female: Prosoma as in male but with smaller darker markings over the thorax. Ocular area less elevated with eyes closer together. Distance between AME and ALE half the diameter of ALE. Sternum with smaller marking and lighter colouring. Chelicerae without apophyses. Opisthosoma as in male but lighter in tone. Epigynum and vulva as in Figures 10, 11 and 14.

*Measurements*: Male: Prosoma 1.7 long, 1.8 wide. Opisthosoma 4.8 long, 2.2 wide. Total body length 6.5. Leg I, femur 12.7, patella 0.7, tibia 13.7, metatarsus 22.0, tarsus 1.6, total 50.7. Palp: femur 1.0, patella 0.3, tibia 1.1, procurus 1.4. Female: Prosoma 1.5 long, 1.9 wide. Opisthosoma 5.3 long, 2.4 wide. Total body length 6.8. Leg I femur 12.7, patella 0.8, tibia 14.1, metatarsus 24.9, tarsus 2.9, total 55.4.

*Distribution*: This species is native to Tenerife where it is found in the Guimar zone, in concrete in Barranco de Badajoz and Malpais de Guimar (Fig. 276). This species has also been collected in the Los Raices area. Although *P. malpaisensis* was collected by Wunderlich (1992) in Malpais de Guimar, we were unable to locate it. Nevertheless, Malpais of Guimar should be included as part of its distribution.

*Discussion*: The first description of this species was based solely on female specimens from Malpais de Guimar in south-east Tenerife (Wunderlich, 1992). Together with the rest of the specimens, they were deposited in the ULL. Unfortunately, no other specimens were subsequently collected, and both type material and paratypes formerly deposited at the ULL have been lost. Moreover, the information and very few illustrations provided in the original description are applicable to at least two other species native to Tenerife – *P. knoeseli* and *P. mascaensis*. This could easily lead to considerable taxonomic confusion, as an objective identification of *P. malpaisensis* remains virtually impossible. To resolve this taxonomic confusion, and in accordance with Article 75 of the ICZN (4th edition), a neotype was designated. As there are no known specimens of this species, a neotype was chosen from material collected by us from a locality just 3 km distant from the original type locality. This neotype is based on a male specimen and has been deposited in the CCRUB.

Although several trips were undertaken to Malpais de Guimar to collect material from the original type locality, none was found. Numerous factors may explain its absence, given the considerable changes this region has undergone during the last decade. For

example, all agricultural activities have been banned and the area is now a protected natural reserve.

Taking into account the dubious taxonomic classification of *P. malpaisensis*, the discovery of an apparently new *Pholcus* so close to the type locality presented two options regarding its own taxonomical placement: (1) we could claim it as a new species and risk creating an unnecessary synonymy; or (2) we could classify it as *P. malpaisensis* based on its proximity to the type locality and the absence of any discrepancies from the original diagnosis. As explained above, we opted to designate a neotype to better clarify a muddled situation.

*P. malpaisensis* shares similar morphologies with the rest of the endemic Tenerifean *Pholcus* species, the most remarkable characteristics being the shape of the apical apophyses of the procurus and the shape of the uncus.

*Natural history:* Typical locality where we could find *P. malpaisensis* was located at about 1 km after the entrance of the Barranco de Badajoz. This part of the gorge is narrow with very high and almost vertical walls. The whole area is very humid and has abundant vegetation in places with enough sunlight. There are several artificial galleries which were built to collect water for a small pumping station. All specimens were collected in entrances of galleries and around the pumping station. Most of the spiders were collected from ceilings but also some were found on different levels on the walls and even close to the ground. In all cases if the web was not directly on the ceiling it was built under protruding parts or small cavities on the walls, or under fallen rocks and cement blocks.

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

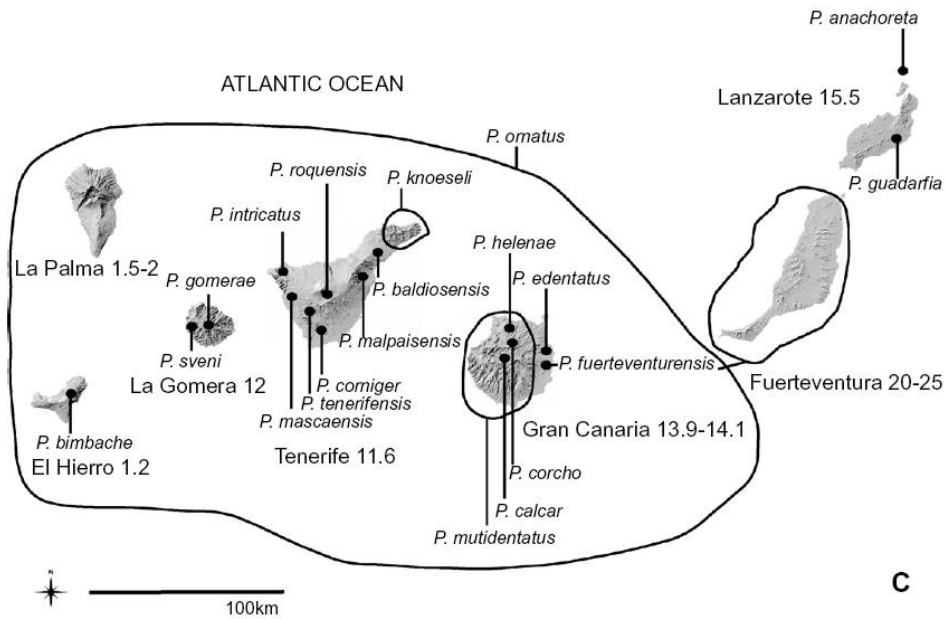


Fig. 1. (A) Map of the Macaronesian biogeographical region. (B) Known distribution of the Madeiran and north-west African *Pholcus* species. (C) Known distribution of the Canarian *Pholcus* species. Numbers following island names denote their estimated maximum age in Mya.

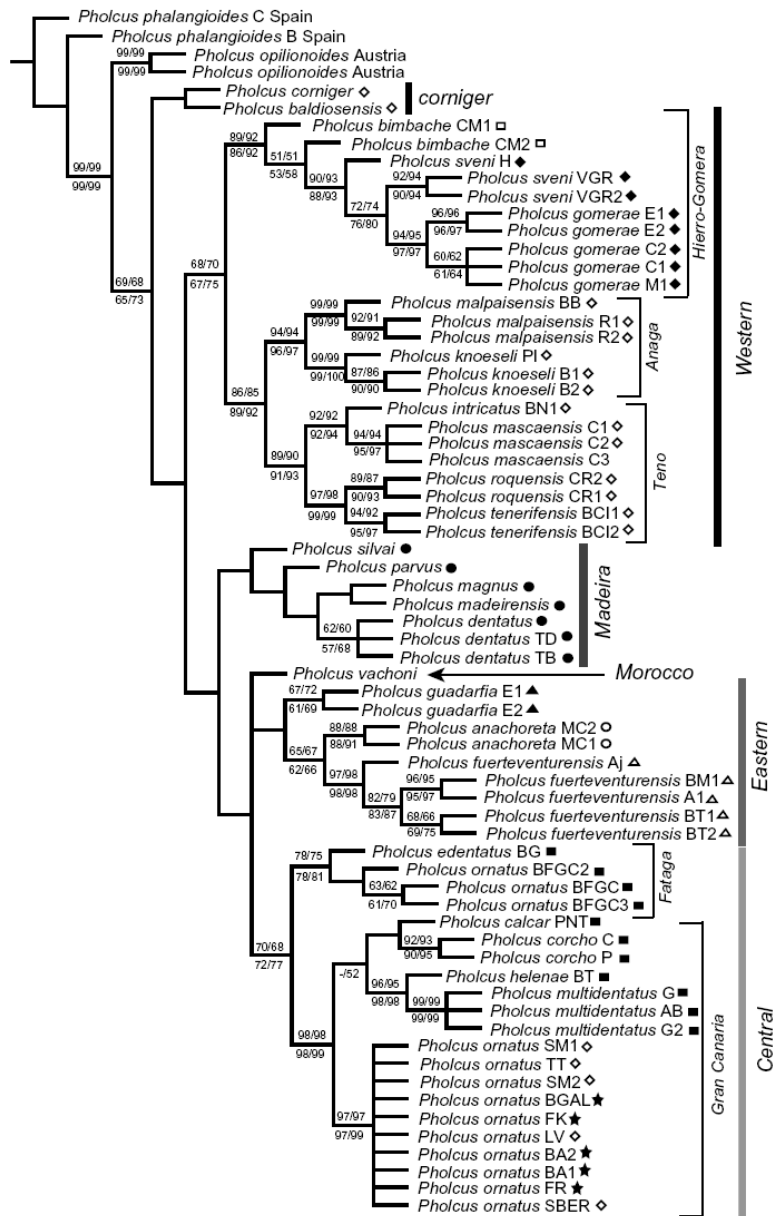


Fig. 5. Strict consensus of the 4 most parsimonious trees (L = 2442, CI = 0.534, RI = 0.881) found by MP analysis of the combined macaronesia data set. Support values higher than 50 are given as follows, bootstrap/Poisson bootstrap above branches and jackknife/symmetric resampling below branches. Geographic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