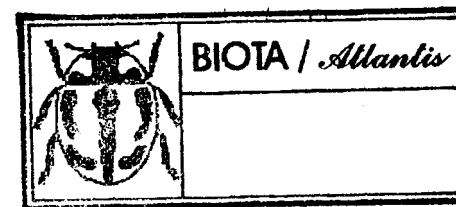


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THE DISTRIBUTION OF THE SPECIES OF THE GENUS PHOLCUS WALCKENAER
ON GRAN CANARIA - A FIRST NOTE, WITH THE DESCRIPTION OF A NEW
SPECIES

(Arachnida: Araneae: Pholcidae)

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Abstract: The distribution of the endemic Pholcus species (Pholcidae) on Gran Canaria is shown in a map and shortly discussed. Pholcus edentatus n.sp. is described. Taxonomic notes are given on P. corcho WUNDERLICH 1987 and P. fuerteventurensis WUNDERLICH 1991.

The Canarian members of the genus Pholcus are of special interest: there are more endemic species known here than anywhere else in the world. Besides of the cosmopolitan P. phalangioides (FÜESS-LIN 1775) we know from Gran Canaria 7 species of the genus Pholcus:

calcar WUNDERLICH 1987,
corcho WUNDERLICH 1987,
edentatus CAMPOS & WUNDERLICH 1993 (n.sp.),
fuerteventurensis WUNDERLICH 1991,
helenae WUNDERLICH 1987,
multidentatus WUNDERLICH 1987,
ornatus BOESENBERG 1895.

Hcmark: *P. multidentatus* is not known from Tenerife as written erroneously by WUNDERLICH (1991: 83), but from Gran Canaria.

These species - members of the *P. orniatus*-group - are strongly related to each other and evolved on Gran Canaria. Two species are known also from other islands to which they were probably transported by man: *fuerteventurensis* from Fuerteventura and *orniatus* from Tenerife, La Gomera, La Palma and El Hierro. The origin of the *ornatus*-group is most probably Gran Canaria - all species of this group are living on this island. The origin of *fuerteventurensis* is more likely the result of the infrainsular speciation on Gran Canaria than the evolution on Fuerteventura: the most related species - *edentatus* - is also living on Gran Canaria.

Most of the species seem to have a parapatric distribution, comp. map 1. Most species occur on the more humid north half of Gran Canaria (6 species), only *multidentatus* and *edentatus* are known from the southern half. This finding could well be connected with the former distribution of the laurel forest, comp. map 2. *P. multidentatus* has by far the largest range, 3 species (*corcho*, *edentatus* and *fuerteventurensis*) are known only from a single locality on Gran Canaria.

More material and further studies are needed to answer the following questions:

1. Which are the exact limits of the areas of the species?
2. Where are contact zones to be found?
3. Are there mixed populations of different species and hybrids?
4. Do subspecies exist or exclusively "good" species?
5. What are the reasons for the parapatric (but not mosaic-like) distribution?

Pholcus ?corcho WUNDERLICH 1987 (Abb. 1)

Material: Gran Canaria, Cave between Los Pechos and Cazadores, ± 1600m, 1♂ 3♀ C. G. CAMPOS leg. 23. V. 1992, ULT No. 02594 P.

Taxonomy: ♂♀ are similar to *P. ornatus* BOESENBERG 1895 and *corcho*. ♂-Pedipalpus: the tiny spines of the procurus (fig. 1) are close together as in *corcho* (fig. 2), but the basal one is directed backward as in *ornatus* (fig. 3). The distal margin of the apical lamella of the procurus is slightly convex. Epigynum and vulva seems to be more similar to *ornatus*. This population of *?corcho* is perhaps a cross of *corcho* and *ornatus*. Further studies (and more material) are needed.

Distribution: Gran Canaria.

Pholcus edeittatus n.sp. (Abb. 4-9)

Material: E-Gran Canaria, Uco. de Guayadeque, 500m, 1. artificial caves, 3♂ 4♀ C.G. CAMPOS leg. 4. IX. 1992, holotype ULT no. 02618 a) P, 1♂ 1♀ (paratypes) ULT no. 02618 P, 1♀ (paratype) ULT no. 02620 P, 1♀ (paratype) ULT no. 02621 P, 1♂ 1♀ (paratypes) SJW; 2. small artificial cave, 1♂ 1♀ (paratype) C.G. CAMPOS leg. 23. VI. 1992, ULT no. 02669 P; 3. small cave, 1♀ (paratype) C. G. CAMPOS leg. 13. V. 1992, ULT no. 02528 P.

Diagnosis: ♂: Outgrowth of the trochanter of the pedipalpus (fig. 4) bent and thick, procurus without tiny teeth, lamella of the procurus apically with numerous teeth, median part of the divided appendix large and longer than the retrolateral part, uncus broad (fig. 7). ♀: epigynum (fig. 8) with the small "knob" near the posterior margin, vulva (fig. 9) broadly sclerotized.

Description:

Measurements (in mm): length of the body 5-6.5, length of the prosoma ± 1.5, tibia I ♂ 11, ♀ 9.5, tibia IV ♂ 6.5, ♀ 6.2.

Colour of body and legs as in *ornatus*, comp. WUNDERLICH (1987: 82-83) and *fuerteventurensis* WUNDERLICH 1991.

Relationships: *P. edeittatus* is strongly related to *fuerteventurensis* (Gran Canaria, Fuerteventura); both are the only known members of the *Pholcus fuerteventuriensis*-group. This group is characterized by the bent dorso-apical sclerite of the procurus in the male (arrow in fig. 150 of WUNDERLICH (1991: 543)) and the position of the "knob" of the epigynum near the posterior margin. In *fuerteventurensis* the outgrowth of the trochanter of the ♂-pedipalpus is longer, straight and more slender, there are 2 tiny teeth at the dorsal margin of the procurus, the uncus is smaller, the median part of the divided appendix is smaller and more pointed, the distal structures of the procurus are different; in the female epigynum and vulva are different, in *fuerteventurensis* the vulva is not broadly sclerotized.

Pholcus fuerteventurensis WUNDERLICH 1991 (Abb. 10)

Material: Gran Canaria, between Uco. Honda and San Isidro, 2♂ 2♀ C. G. CAMPOS leg. 10. IX. 1992. ULT no. 02625 P.

Remarks: 1. In one of the males the prolateral part of the appendix is claw-shaped as normally - comp. WUNDERLICH (1991: fig. 148) - in the second one this part is short and blunt at both sides. - 2. The material collected by G. SCHMIDT - comp. WUNDERLICH (1991: 196-197, 319) - originate not from Fuerteventura but perhaps from Gran Canaria (see above).

Relationships: *P. edentatus* n.sp. (also from Gran Canaria) is next related, see above. We assume that both species did evolve on Gran Canaria and *fuerteventurensis* has been introduced to Fuerteventura by man.

Distribution: Canary Islands Fuerteventura and Gran Canaria (first record for Gran Canaria).

LITERATURE

WUNDERLICH, J. (1987): Die Spinnen der Kanarischen Inseln und Madeiras. Taxonomie, Ökologie, Biogeographie und Evolution.-- Taxon. & Ecol., 1. 435 p.

WUNDEKLICH, J. (1991): Die Spinnen-Fauna der Makaronesischen Inseln. Taxonomie, Ökologie, Biogeographie und Evolution.-- Beitr. Araneol., 1. 619 p.

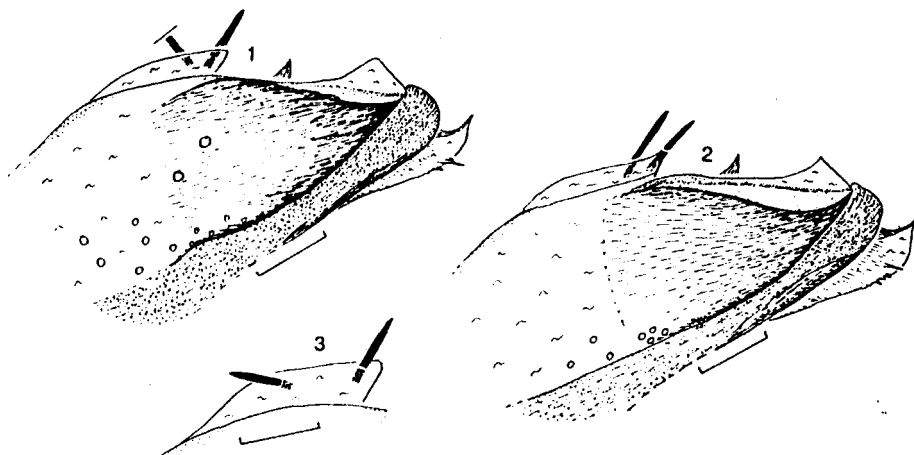


Fig.1: *Pholcus corcho* WUNDERLICH 1987, distal part of the procurus of the r. ♂-pedipalpus retrolaterally;
 fig.2: *Pholcus corcho* WUNDERLICH 1987, distal part of the procurus of the r. ♂-pedipalpus retrolaterally;
 fig.3: *Pholcus ornatus* BOESENBERG 1895, tiny bristles of the r. procurus retrolaterally;

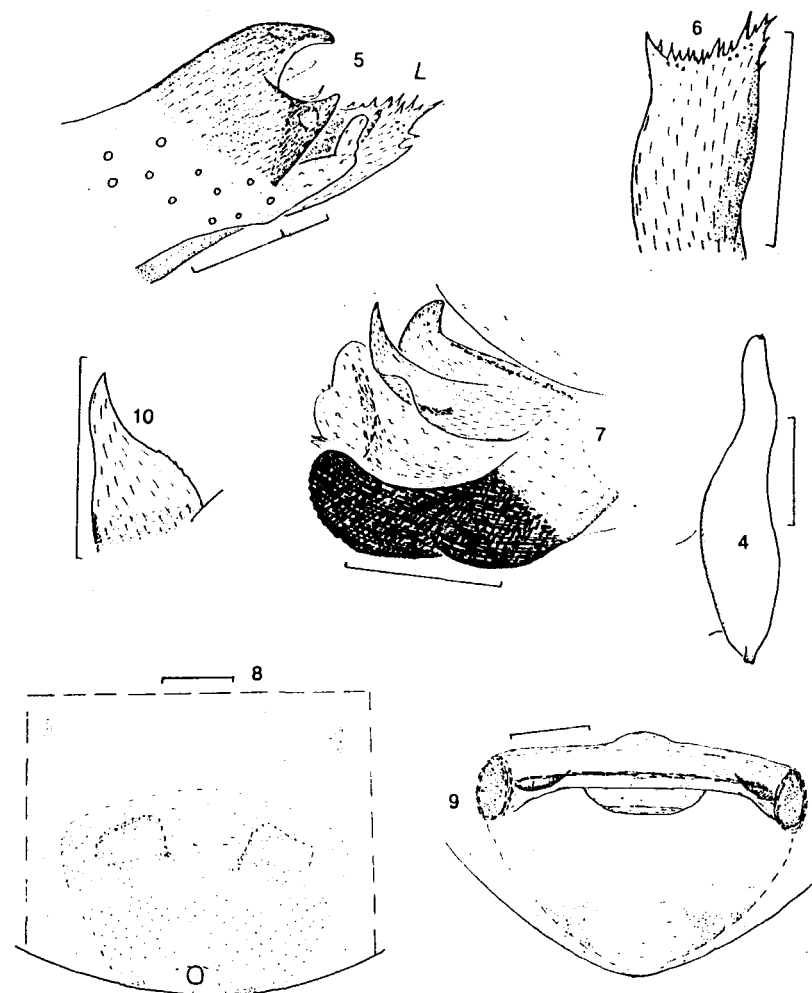
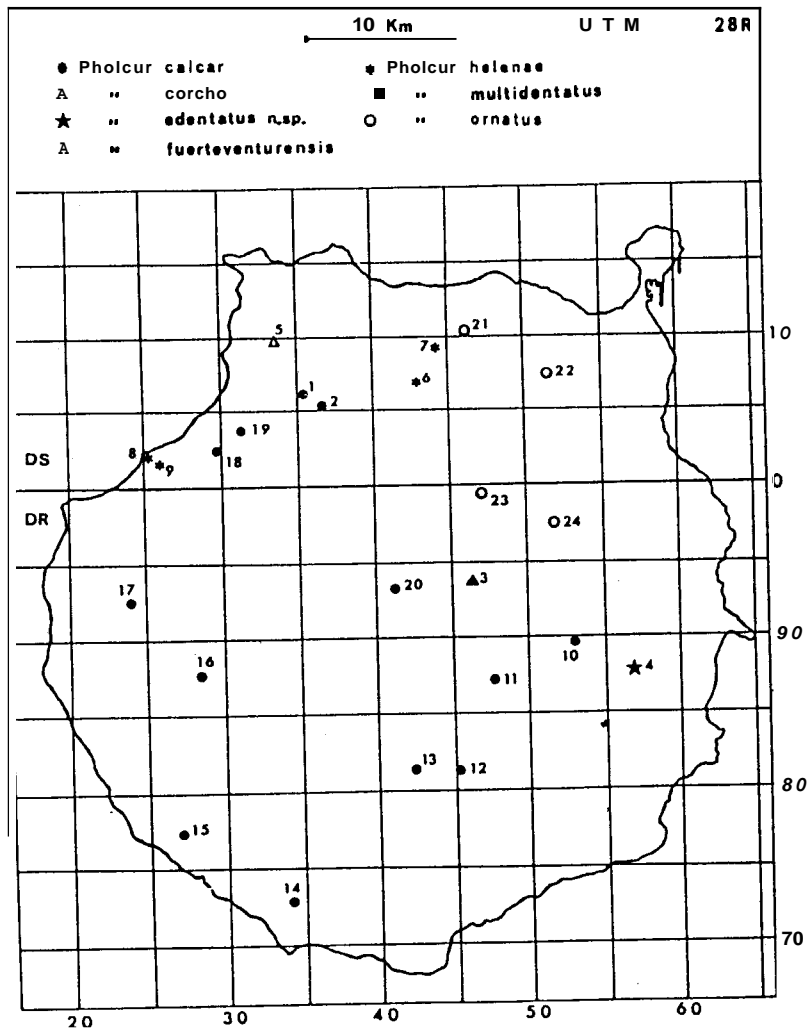


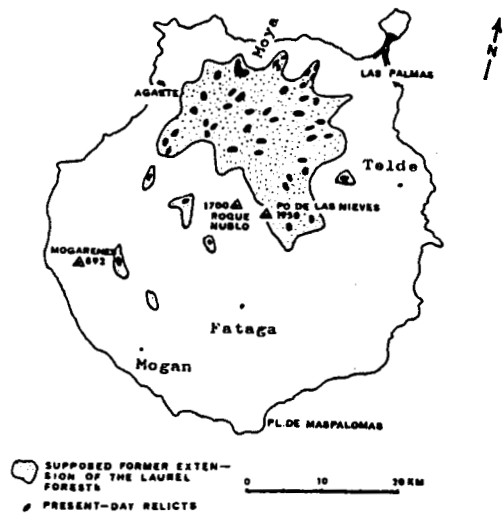
fig.4-9: *Pholcus edentatus* n.sp., 4) trochantler of the r. ♂-pedipalpus prolaterally; 5) distal part of the r. procurus retrolaterally (L = lamella); 6) lamella of the r. procurus ventrally; 7) uncus and appendix of the r. ♂-pedipalpus prolaterally; 8-9) O, epigynum ventrally and vulva dorsally; 10) *Pholcus fuerteventurensis* WUNDEKLICH 1991: lamella of the r. procurus ventrally. -- M in fig.1-3 = 0.1mm, in fig.4-10 = 0.2mm.



Map 1. Distribution of the endemic *Pholcus* species on Gran Canaria after findings of C. G. CAMPOS (comp. tab.1)

SPECIES	PLACES	masl	♂	♀	JU
<u><i>Pholcus calcar</i></u>	Los Berrazales	500	1	1	0
		750	3	3	1
<u><i>Pholcus</i> cf. <i>corcho</i></u>	Los Pechos → Cazadores	1600	1	3	0
<u><i>Pholcus edentatus</i> n.sp.</u>	Bco. de Guayadeque	500	1	1	0
	" " "	500	0	1	0
	" " "	500	0	1	0
	" " "	500	0	2	0
	" " "	500			
<u><i>Pholcus fuerteventurensis</i></u>	Bco. Hondo ↔ Can Isidro	200	1	1	0
	" ↔ "	200	2	2	0
<u><i>Pholcus helenae</i></u>	Bco. de los Tilos	700	2	2	1
	Bco. de Azuaje	350			
	Punta de la Arena o de Góngora	100	3	1	0
	Casas de Job	456	1	0	0
	" " "	450	1	1	0
<u><i>Pholcus multidentatus</i></u>	Bco. de Guayadeque	1100	1	1	0
	" "	1100	0	1	0
	" "	1150	1	1	1
	Canta Lucia	850	3	4	0
	Los Caserones Bco. de Fataga	400	4	2	0
	Ayagaures	500	3	2	0
	Bco. de Arguineguin	200	3	3	2
	Bco. de Tiritaña	300	2	2	0
	Casas de Venegueras	500	5	5	0
	Bco. de Tocodomon	600	3	2	2
	Bco. de El Risco	300			
	" " " "	300	2	3	0
	Pinar de Tamadaba	1400			
	Roque Nublo	1800	1	1	0
<u><i>Pholcus ornatus</i></u>	Bco. de los Dolores	400	2	3	0
	Tararaceite	450	5	5	0
	Bco. de Corralete	1000	2	2	0
	Mirador de El Helechal	800	2	2	0

Tab. 1. Localities of the Gran Canarian *Pholcus* species collected by C. G. CAMPOS (comp. map 1). - m.a.s.l. = meters above sea level



Map 2. The original laurel forest areas of Gran Canaria (reconstruction) and the present days relicts; after MACHADO in KUNKEL (1976: fig. 29), modified