

***Pholcus opilionoides* Schrank, 1781**

Schrank, F. von P. 1781. Enumeratio insectorum Austriae indigenorum. Augustae Vindelicorum, 552 pp.

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1103. OPILIONOIDES, Weberknechtartige Spinne.

Aranea pedibus longissimis exilibus, subgregaria.

Aranea Pluchii. Scop. carn. n. 1120.

Geoffr. Paris. part. 2. p. 651. n. 17.

Mensuras non do, nisi unius speciminis, proportionis ostendendae causa; variant enim mire per aetatem.

Longit. a cap. ad an.	3 lin.
pedis 1. paris	19 $\frac{1}{2}$ —
2. paris	14 $\frac{1}{2}$ —
3. paris	10 $\frac{1}{2}$ —
4. paris	13 $\frac{2}{3}$ —

Haec, cujus mensuras dedi, adulta fuit: ovorum enim fuorum curam gessit; ea tenui serico involuta de loco in locum transfert. Non caret haec species reti; sed illud laxissimum est, & irregulare.

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lare. decussantibus sese in omnem partem filis. Habitant plures saepe in eodem reti, minus, ac congeneres, feroces. Color griseus, seu pulverulentus.

Nunquam mihi visa Species, praeterquam Viennae in cubiculo humido, nec aurae pervio, at ibi copiosa. Hinc forte infalubritatis cubiculorum signum, & suo modo effectus.

Simon, E. 1866. Monographie des espèces européennes du genre *Pholcus*. Ann. Soc. ent. France (4)6: 117-124; pl. 2.

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3. PHOLCUS CROSSIPALPUS E. S.

(Pl. 2^e, fig. 10.)

J'ai pris en grand nombre à Bar-sur-Seine, dans la campagne, sous les pierres, de jeunes Pholques, en tout identiques à l'Opilionoïde, si ce n'est dans leurs mœurs champêtres et dans la figure hétéroclite de leurs pattes-mâchoires.

Le céphalothorax du mâle se prolonge en avant par deux palpes d'un volume énorme, égal presque à celui de la totalité du corselet et plus

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opaques que les autres membres; les articles en sont à peine distincts, les articulations n'en étant pas accentuées et étranglées, mais placées bout à bout.

Le dernier article est plus gros, mais imparfaitement formé, comme celui de toutes les jeunes Araignées mâles (1).

Confronté avec des Opilionoides de même âge et de même taille, outre la patte-mâchoire, il est impossible de découvrir un point de différence; aussi ai-je hésité longtemps avant de l'en séparer; les entomologistes jugeront si cet unique caractère a une valeur spécifique.

Pl. 2, Fig. 10

Thorell, T. 1871. Remarks on synonyms of European spiders. Part II. Uppsala, pp. 97-228.

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(Pag. 296.) VIII. PHOLCUS [= ***Pholcus*** WALCK. 1805.]

Vid. THOR., On Eur. Spid., p. 101.

(Pag. 296) **Ph. opilionoides** [= ***Pholcus phalangioides*** (FUESSL.) 1775].

Syn.: ?1775. ARANEA PHALANGIOIDES [PHALANGIOIDES] FUESSL., Verzeichn. Schweitz.
Ins., p. 61.

1785. „ METICULOSA FOURCR., Entom. Par., p. 537 (*sec. SIMON, loc. infra cit.*).

1790. „ PLUCHII ROSSI, Fauna Etrusca, II, p. 134 (*salt. ad part.*).

1802. „ PHALANGIOIDES WALCK., Faune Par., II, p. 213.

1805. PHOLCUS PHALANGIOIDES WALCK., Tabl. d. Aran., p. 80.
 1836. „ „ DUGÈS, in CUV., Règne Anim., VII, Arachn.,
 p. 49, Pl. 9, fig. 6.
 1838. „ NEMASTOMOIDES C. KOCH, Die Arachn., IV, p. 97, Taf.
 CXXXVI, fig. 312.
 1853. „ PLUCHII LUCAS, Anim. artic. de l'Île de Crète, in Rev. et
 Mag. de Zool., 2 Ser., V, p. 27.
 1864. „ PHALANGIOIDES BLACKW., Spid. of Gr. Brit., II, p. 208,
 Pl. XV, fig. 137.
 1866. „ OPILIONOIDES SIM., Monogr. des espèces europ. du genre
 Pholcus, in Ann. de la Soc. Ent. de France,
 4 Sér., VI, p. 120, Pl. 2, figg. 1—7.
 1869. „ NEMASTOMOIDES CAN. et PAV., Aran. Ital., p. 65¹⁾.

FUESSLIN has left no description whatever of his *Aran. phalangoides*: he only says, that "it is not uncommon at Geneva in wine-cellars and closed vaults". I have not yet been able to get specimens of *Pholcus* from Geneva to compare; but as FUESSLIN refers to GEOFFROY'S Hist. abrégée des Insectes qui se trouvent aux environs de Paris, II, p. 651, N^o 17, where a spider is described (without specific name), which French writers generally consider as identical with *Pholcus phalangoides* WALCK. or *Ph. opilionoides* SIMON, I think we may preserve to this species the well known specific name *phalangoides*, with FUESSLIN as authority. (Also HAHN erroneously writes the name "*phalangoides*" instead of *phalangoides*). — *Ar. phalangoides* GEOFFR. (Hist. abrégée d. Ins., 2^e Éd., p. 734), under which *Ar. phalangoides* FOURCR. is cited, is unknown to me: *Ar. phalangoides* FOURCR. is, according to SIMON (loc. cit.), not a *Pholcus* at all, whereas he cites *Ar. meticulosa* FOURCR. as synonymous with his

deorsum sub-curvata; pars tibialis extus secundum bulbi latus exterius producta ibique paullo longior et latior quam pars patellaris, lobo sub-triungulo, deorsum directo, ad basin; lamina lateri interiori partis tibialis, prope basin ejus, affixa, æque circiter longa atque pars femoralis, duplo longior quam latior, quadrilatera fere, versus apicem sub-dilatata, margine exteriori (superiore) late emarginato, apice late et oblique truncato, angulo apicis interiori (inferiore) in uncum magnum, acuminatum, curvatum, inferiora versus et tum deorsum (foras) directum productum, et dente acuto prope hunc uncum armato. Pedes solito longiores, femoribus et metatarsis præsertim elongatis; 1^o mi paris longissimi, cæ 6½ millim. (patella hujus paris vix ¼ tibiæ æquat, tarsus ⅓ metatarsi); patellæ supra 1, tibiæ supra 1, 1 setas sub-erectas habent, reliqua internodia talibus setis carent; præterea pilis fortibus rarioribus vestiti sunt pedes.

Unicum specimen masculum, siccatum, cephalothorace et abdomine valde corrugatis, vidi, in Ostrogothia a Cel. D^{re} E. HAGLUND inventum.

1) According to specimens kindly presented to me by Prof. CANESTRINI.

Ph. opilionoides. I have unfortunately not been able to obtain access to FOURCROY'S "Entomologia Parisiensis".

AS BLACKWALL under his *Ph. phalangioides*, and SIMON under his *Ph. opilionoides*, WESTRING has under the spider before us erroneously cited *Ph. opilionoides* (SCHRANCK), C. KOCH. Many other authors also have either united or confounded this last mentioned species with *Ph. nemastomoides* C. KOCH, which is identical with the *Ph. phalangioides* of BLACKWALL and most French writers, or *Ph. opilionoides* WESTR. and SIM. I have above given the most important synonyms for this last species; it may perhaps not be out of place to do the same for the real *Ph. opilionoides* (SCHRANCK), which I look upon as identical with *Aranea Pluchii* Scop., and to mention some of the marks, whereby they may be distinguished. As regards my description of the male's palpal clava, the following should be observed. In *both* species the tarsal joint in ♂ is short and thick; the almost globular *bulbus* is articulated to its *extremity*, and from its outer side projects a coarse process ("*procursus*") directed forwards or parallel to the *bulbus*, dilated and truncated at its extremity; the *bulbus* displays on the under side a strong, compressed, forwards-curved claw ("*uncus*"), and immediately before it two smaller "*appendices*", the anterior usually of a dark, the posterior of a pale colour.

Ph. phalangioides (FUESSL.) 1775 cephalothorace testaceo-albicanti, *macula magna sub-postica fusca, lineâ albicanti plerumque geminata*; sterno plerumque testaceo-albicanti, interdum fuscior et maculis clarioribus circumdato; maxillis testaceis; palporum partis tarsalis procursu in ♂ apice levissime tantum et inæqualiter impresso vel sub-emarginato, *non fisso*, unco bulbi minus compresso, versus apicem æqualiter angustato, margine ejus brevior sive acie æqualiter (concavo-) curvata, appendice bulbi anteriore angusta, apice in angulum sub-rectum flexa, fere [- formi ¹]. — Long. corporis 6—7, cephalothoracis c:a 2 millim.

Syn.: 1861. PHOLCUS OPILIONOIDES WESTR., Aran. Suec., p. 296.

Cetera vid. supra.

Ph. opilionoides (SCHRANCK) 1783 cephalothorace testaceo-albicanti, *lineis duabus mediis sub-sinuatis maculisque binis utrinque fuscis*, sterno fusco, macula media aliisque ad marginem utrinque 4 albicantibus; maxillis fuscis, extus testaceo-marginatis; ♂ palporum partis tarsalis procursu *apice fisso*, lacinia anteriore minore, unco bulbi valde compresso et lato, acie ejus anteriore (brevior) in medio dente lato prædita, appendice bulbi anteriore a latere anteriore visa fere T-formi. — Long. corporis c:a 5, cephalothoracis 1—¹/₄ millim.

¹) Conf. BLACKWALL'S and SIMON'S figures of the male's palpi, locis cit.!

- Syn.: ?1763. ARANEA PLUCHII Scop., Entom. Carniol., p. 404.
 1783. „ OPILIONOIDES SCHRANCK, Enum. Ins. Austr., p. 530.
 ?1834. PHOLCUS PHALANGIOIDES [PHALANGOIDES] HAHN, Die Arachn., II,
 p. 34, Taf. L, fig. 119 (*ad part.*).
 1838. „ OPILIONOIDES C. KOCH, *ibid.*, IV, p. 95, Tab. CXXXV,
 fig. 311.

Scopoli says (*loc. cit.*) of his *Aranea Pluchii*: "Maxillæ apice nigræ; abdomen maculis nigris". From these words Simon has concluded, that *Ar. Pluchii* is identical with *Ar. rivulata* Forsk. ¹⁾ or *Pholcus rivulatus* Sav. et Aud. ²⁾. How the expression "abdomen maculis nigris" can furnish any ground for this opinion, or be reconciled with the very good description extracted by Simon from Savigny or Walckenaer of the abdomen in *Ph. rivulatus*, in which description nothing is said about black spots, I cannot imagine: the pattern is in fact formed by *whitish* points on a darker bottom, whereas both in *Ph. phalangioides* and in *Ph. opilionoides* C. Koch the abdomen is of a pale colour with blackish spots or streaks. And as for "maxillæ apice nigræ", this phrase proves nothing, for Scopoli by the word "maxillæ", in the case of spiders, means the *mandibles*, as may be seen by his description of *Phalangium opilio* ³⁾ immediately following that of *Ar. Pluchii*. The *maxillæ* of *Ph. opilionoides* C. Koch are *blackish with a pale external border*, and might accordingly with about as much or as little reason be said to be *apice nigræ* as the *maxillæ* of *Ph. rivulatus*, which according to Simon are *white with black borders* (in my specimens they are *entirely black or brown*). Simon states, that *Ph. rivulatus* is as common as *Ph. phalangioides* (*Ph. opilionoides* Sim.) in Carinthia, where Scopoli had captured his *Aran. Pluchii*; but he does not mention the grounds on which he bases this assumption. I for my part, until the contrary be proved, assume as most probable, that the *Pholcus*-species which is the commonest, perhaps the only one met with, in the rest of south-eastern Germany ⁴⁾, is so also in Carinthia — and that species is *Ph. opilionoides* (Schränck), C. Koch (*non* Sim.). But as I have not

1) Forskål, Descript. Anim., p. 86; Icones rer. natur., p. 7, Tab. XXIV, fig. F.

2) Descr. de l'Égypte (Éd. 2), XXII, p. 358; Atlas: Arachn., Pl. III, fig. 12.

3) "Maxillæ ut in Araneis, sed binis dentibus terminatæ *instar chelæ*". (Scop., *loc. cit.*)

4) The limits of what may be called Germany are at the present moment non very clearly defined, and I therefore ought perhaps to inform may readers, that I here include under that name all the countries which belonged to the late German Confederation, together with Prussia proper: I therefore reckon as belonging

seen any *Pholcus*-specimens from Carinthia, and cannot prove my opinion, I dare not now give this spider the name of *Pholcus Pluchii* (Scop.), but call it *Ph. opilionoides* (SCHRANCK).

The measures given by SCHRANCK of his *Ar. opilionoides*, show in fact that C. KOCH has rightly identified that species. HAHN's synonym, on the contrary, is very uncertain; his figure and description are certainly not taken from living specimens of the German *Ph. opilionoides*, but from an old and badly preserved specimen of some foreign *Pholcus* (perhaps *Ph. phalangoides*), which he confounds with the former.

Pholcus impressus C. KOCH ¹⁾ is in my opinion the male of *Ph. rivulatus* (FORSK.). The two forms are recognized, according to SIMON's description of the former and C. KOCH's of the latter, by the sternum being black (as is also stated by SAVIGNY) and the belly having a broad black central band. It appears to me also probable, that *Ph. barbarus* LUCAS ²⁾ from Algeria is identical with *Ph. rivulatus*: in the female also of this latter form the sternum has a strong conical protuberance behind — a feature which LUCAS supposed to belong only to the ♀ of *Ph. barbarus*. The male, or "*Ph. impressus*", which C. KOCH has described, is unknown to me; the female, of which I have, through the kindness of Prof. CANESTRINI, received specimens from Venice (under the name of *Ph. impressus*), and which I have also myself met with in northern Italy, is distinguished not only by the above-mentioned protuberance on the sternum, but also by the peculiar form of the palpi, which are thickened towards the extremity, with the last joint almost pear-formed and pointed (just as in *Ph. barbarus*, according to LUCAS!). — SIMON has (loc. cit., p. 121, Pl. 2, fig. 10) mentioned imperfectly developed specimens of a *Pholcus* from France, which he calls *Ph. grossipalpus*, and the palpi of which appear greatly to resemble those of *Ph. rivulatus* or *impressus* ♀.

A few words on the geographical distribution of *Ph. opilionoides* and *Ph. phalangoides* may here be not out of place ³⁾. Of *Ph. opilionoides* (SCHRANCK) NOB. I have many specimens, which I have collected partly in northwest Germany (Pyrmont), partly in Bavaria, to Germany the Austrian German provinces, but not those which by Prussia and its allies have lately been torn from their northern and western neighbours.

1) Die Arachn., IV, p. 99, Taf. CXXXVII, fig. 313.

2) Explor. de l'Algérie, Arachn., p. 237, Pl. XV, fig. 1.

3) Compare VAN HASSELL's interesting memoir: Studiën over den *Pholcus opilionoides*, in Tijdschr. voor Entom., 2 Ser., V, p. 14—16; Études sur le *Pholcus opilionoides*, in Archives Néerlandaises, V (1870), p. 14—17.

where C. Koch also met with the species; I have found them sometimes in houses, sometimes at a considerable distance from human dwellings (e. g. in a heap of stones in a wood near Kissingen). From *Austria*, where the species was first met with by SCHRANCK, I have specimens kindly given me by Mr L. v. KEMPELEN of Vienna, who had found them under stones far from houses. It is this species, that according to ZIMMERMANN ¹⁾ is common at Niesky in *Silesia*. The species is then spread over almost the whole of Germany ²⁾, at least at far as 52° north latitude; it is also found in *Poland* ³⁾, and although rarely, south of the Alps, in the Canton *Tessin* in *Switzerland*, and in *Lombardy* ⁴⁾. — *Ph. phalangioides* (FUESSL.) NOB. on the contrary has not, as far as I am aware, been met with in Germany north of the Alps (in southern *Tyrol* it is already met with at Meran and Villanders, according to AUSSERER ⁵⁾). It appears to have its home chiefly in the lands around the Mediterranean, just as *Ph. rivulatus* FORSK.; in our part of the world it is spread over its more southerly and westerly countries. In the whole of southern Europe (southern Russia, Greece, Italy, Spain) it seems to be common: I have myself taken it at Rome and in northern Italy, as also at Nice. In *France* it appears to be the commonest, but probably not the only species occurring, and it is also found in the southern (and western?) parts of *Switzerland*. It is also this species, that has been found by VAN HASSELT (loc. cit.) to belong to the Fauna of the *Netherlands* ⁶⁾.

1) Die Spinnen d. Umgeg. v. Niesky, in Abhandl. d. Nat.-forsch. Gesellsch. zu Görlitz, Bd XIV, p. 32. — Dr ZIMMERMANN has had the kindness to send me specimens of both sexes of his *Pholcus opilionoides*.

2) In the extreme north of Germany it seems to be absent. I have not met with it at Travemünde, nor is it mentioned by OHLERT as found in Königsberg, nor by MENGE as inhabiting Danzig. — In a list of Spiders from the neighbourhood of Münster in *Westphalia*, communicated to me by Mr F. KARSCH, no *Pholcus* is mentioned as found in that locality.

3) L. KOCH, Beitr. z. Kenntn. d. Arachn.-fauna Galiziens, p. 6.

4) Vide PAVESI, in Notizie chim.-agron. della provincia di Pavia, p. 109; CANESTRINI e PAVESI, Aran. Ital., p. 65, 97.

5) Die Arachn. Tirols, I, p. 151.

6) I have sent specimens of both *Ph. opilionoides* and *Ph. phalangioides* to Dr VAN HASSELT, who writes me that the latter is identical with his *Ph. opilionoides*, and that he has not yet observed the former species in the Netherlands. A male palpus of *Ph. opilionoides* v. HASS., which Dr VAN HASSELT also sent me, showed at once that it had belonged to the true *Ph. phalangioides*.

I make use of this opportunity to express to Dr VAN HASSELT my deep thankfulness for the friendly communications, with which he has several times honoured me.

According to BLACKWALL, it is met with in southern and western England: LEACH ¹⁾ even says that "it is very common in the west of England". The only instances of its appearance in Scandinavia are the specimens taken by WESTRING in Göteborg, but which have doubtless been brought thither from warmer countries; the same must be the case with that, which SIEMASCHKO ²⁾ captured ad St Petersburg — provided it belongs to this species. VAN HASSELT even considers, and on good grounds, that *some* of the specimens he has obtained in the great maritime towns of Holland, were importations from abroad. — The species is found in Egypt and Algeria, in the Island of St Helena ³⁾, and even in the East Indies (as in Java and Amboyna, where DOLESCHALL ⁴⁾ says it is common), and, according to BLACKWALL ⁵⁾, in Canada. VON FRAUENFELD ⁶⁾ found the "*Ph. nemastomoides* C. KOCH" on board the Novara Frigate during her voyage from Rio Janeiro to Canton. — Several other "habitats" are indeed mentioned by different authors for "*Ph. phalangioides*" or "*opilionoides*"; but it is not possible to know which species they speak of .

1) The Edinburg Cyclopedia, conducted by BREWSTER, VII, p. 424 (Art. Crustaceology).

2) Verzeichn. der in der Umgeg. von St. Petersburg gefund. Spinnen, in Horæ Soc. Entom. Ross., Fasc. I, p. 129.

3) CAMBRIDGE, Notes on some Spiders and Scorpions from St. Helena etc., in Proceed. of the Zool. Soc. of London, 1869, p. 533.

4) Tweede Bijdrage tot de Kenn. d. Arachn. van d. Indischen Archipel, in Acta Soc. Scient. Indo-Neerland., V, p. 47.

5) Notice of Spid. captured by POTTER in Canada, in Ann. of Nat. Hist., XVII, p. 77.

6) Zool. Miscellen, XI, 1: Das Insektenleben zur See, in Verhandl. d. Zool.-bot. Gesellsch. in Wien, XVII (1867), p. 461 (37).

1° PHOLCUS OPILIONOIDES Schrank 1783 (sub : *Aranea*)

(?) (*) *Aranea Pluchi* Sol. 1763 (ad part.). | *Pholcus opilionoides* C. K. 1838.
— *opilionoides* Schr. 1783. — *grossipalpus* E. S. 1866.
Pholcus phalangoides H. 1834.

♂) Céph.th., long. 1,5; larg. 1,5. — Pattes 1, 2, 4, 3. = 28,2. 19,6. 19,2. 14.

Céphalothorax blanc-testacé, avec une bande médiane noirâtre sur la région thoracique, un peu élargie d'avant en arrière et coupée d'une ligne claire médiane; quelquefois aussi des taches grises sur les bords; des poils noirs isolés, ne formant pas touffe sur la partie céphalique; celle-ci assez convexe, arrondie en arrière et plus large que longue. — Yeux médians antérieurs assez petits, séparés par un intervalle moindre que leur diamètre et placés sur une tachette noire prolongée en pointe fine sur le bandeau. Yeux latéraux antérieurs très-gros, arrondis, un peu obliques, formant par leurs sommets une ligne presque droite avec les médians, dont ils sont séparés par un espace visiblement moindre que leur diamètre; les internes et les latéraux supérieurs égaux, et un peu plus petits (à peine) que les antérieurs: les internes un peu ovales et droits, les externes presque arrondis et verticaux. — Chelicères courtes,

fauve-rouge, le tubercule interne situé près de l'extrémité et très-petit. — Plastron d'un gris noirâtre, avec une bande médiane et de chaque côté quatre taches arrondies d'un fauve-testacé. — Pattes entièrement testacé clair, avec les patellas et souvent l'extrémité des fémurs un peu rebrunies; garnies de poils soyeux, très-courts sur les fémurs, assez longs sur les tibias et les métatarses. — Patte-mâchoire testacée, avec les apophyses terminales noires; fémur assez court, robuste, droit et parallèle; patella très-courte; tibia plus long que le fémur et presque aussi large que long, rétréci à ses deux extrémités, très-lisse et claviforme; tarse petit et globuleux; apophyse externe au moins deux fois plus longue que lui et aussi large, un peu sinueuse, présentant vers le milieu, sur son bord externe, un fort tubercule arrondi; élargie et un peu infléchie en dedans, divisée en dessus en deux lobes obtus dont l'externe large et arrondi, l'interne plus long et divergent; en dessous, la troncature présentant deux petits lobes membraneux; bulbe blanc et lisse, ovale un peu allongé, divisé vers le milieu par une fine strie circulaire, présentant deux apophyses du côté externe: la première noire, très-développée, carrée, avec l'angle postérieur un peu prolongé; la seconde plus courte, grêle et dirigée en avant, terminée par deux petites dilatations latérales et divergentes.

♀) Céph.th., long. 1,5; larg. 1,5. — Abd., long. 4; larg. 2. — Pattes 24,2. 18,5. 17,1. 13,7.

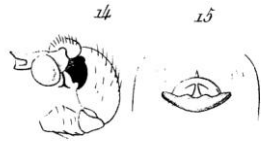
Bandeau à peine plus long que les chelicères et fort incliné en avant. — Plastron noirâtre, avec des taches testacées, comme chez le mâle. — Abdomen étroit, allongé, faiblement élargi et arrondi en arrière; d'un gris-testacé un peu plus foncé en dessus; présentant en avant une ligne longitudinale noirâtre ramifiée, et en arrière, au-dessus des filières, une tache d'un jaunâtre mat. — Pattes testacées, avec les patellas brunes, les fémurs et les tibias teintés de brun de la base à l'extrémité, se terminant néanmoins par un large anneau blanc. — Epigyne en saillie transverse, son bord postérieur coupé en ligne droite et pourvu d'un épais bourrelet cylindrique, rougeâtre, arrondi à ses deux extrémités; au milieu, ce bourrelet projetant en avant une petite tige grêle et perpendiculaire.

Aube: Bar-sur-Seine! Mussy! Gyé-sur-Seine! — Alpes: Digne! Briançon! Bourg-d'Oisans! — Corse!

Se trouve sous les pierres, dans les endroits découverts, quelquefois aussi dans les trous des vieux murs; à la fin de l'automne, il se réfugie souvent dans les hangars, les cabanes de jardin, etc.

Simon, E. 1875. Les arachnides de France, 2. Paris: 1-350.

Pl. 4



14. *Pholcus opilionoides* Schr. : patte-mâchoire du mâle.
15. *id.* épigyne de la femelle.

Chyzer, C. & W. Kulczynski. 1891. Araneae Hungariae. Budapest, 1: 1-170.

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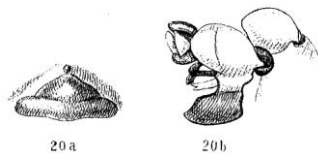
Species 1. Pholcus opilionoides (Schränk) 1783. „Aranea“.

Tab. VI. fig. 20. *a* : epigyne, *b* : palpi maris pars tarsalis a latere interiore visa.

Aranea Pluchi Scop. ? 1763. — *Pholcus phalangioides* Hahn 1834. Arachn. — *Ph. opilionides* C. L. Koch 1838. Arachn. — Thor. 1871. Rem. — Sim. 1874. Ar. Fr. — *Ph. Pluchii* O. Herm. 1879.

I. S.-a.-Ujhely, Sáropatak, Tokaj, Szerencs, Szőlőské, A.-Bereczki, Nagy-Mihály, Varannó, Barkó, Munkács, Zboró, Torna, Körtvélyes, Krasznahorka, Felfalu, Nagy-Rőcze, Szenicz. II. Tallós, Almádi, Csákvár, Tüske, Abaliget. III. Budapest, Vacs, Hadház, Vencsellő, Rakamaz. IV. Baziás, Orsova. V. Zilah, Nagyvárad, Kolozsvár. VI. Fiume. VII. Martinscizza, Costrena, St.-Lucia, Crkvenica.

Pl. 6



Bösenberg, W. 1903. Die Spinnen Deutschlands. II-IV. Zoologica (Stuttgart) 14: 97-384.

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Feminae:

- A. Der Zahn am Ende der Klauenfurche ist verhältnismässig klein und nach unten gebogen. Grösse des ganzen Tieres 7—8 mm.
- B. Die Epigyne ist kaum halb so hoch, als der Spalt breit ist. *phalangioides*.
- A. Der Zahn am Ende der Klauenfurche ist gross und nach aussen gebogen. Grösse des ganzen Tieres 5—6 mm.
- B. Die Epigyne ist eben so hoch, als der Spalt breit ist. *opilionoides*.

Mares:

- Der weisse Samenbehälter an der inneren Seite der Geschlechtsteile ist in der Mitte eingeschnürt, der Teil × ist tiefschwarz und hat die Form eines Schuhes *phalangioides*.
- Der weisse Samenbehälter an der inneren Seite der Geschlechtsteile ist in der Mitte nicht eingeschnürt, der Teil × ist dunkelbraun und hat die Form eines gewölbten Ambosses *opilionoides*.

Pholeus opilionoides Schr.

Taf. XIX, Fig. 310. A ♀ von oben $\frac{4}{1}$, B und C Epigyne, D rechter ♂ Taster von aussen, E von innen, F ♂ von oben $\frac{2}{1}$.
 Ganze Länge ♀ 5—6, ♂ $4\frac{1}{2}$ —5 mm.

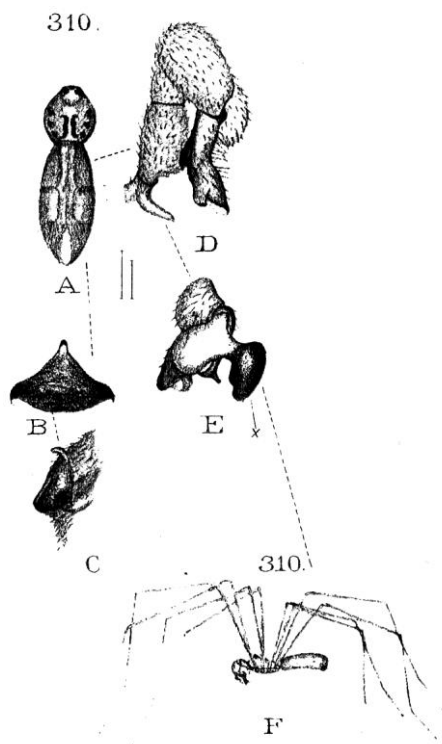
♀ Vorderleib oben: gelb, die Rückenzeichnung braun A. Das Brustschild ist braun mit gelbem Mittelstreif und ebensolchen rundlichen Seitenflecken über den Einlenkungen der Füsse, die kleinen Mandibeln sind trübgelb und haben am Ende der Klauenfurche einen verhältnismässig grossen, etwas nach aussen gerichteten Zahn, die schmalen Maxillen und die grosse Lippe sind hellbraun, die sehr zarten, kurzen Taster gelb, die sehr langen, dünnen Füsse gelb bis auf die Kniee, das Ende der Schenkel und die Einlenkung der Schienen, welche braun sind.

Der Hinterleib ist überall grau, nur hie und da ist auf dem Rücken eine schwache Zeichnung A bemerkbar; die wulstige Epigyne ist rotbraun und ähnelt, von der Seite gesehen, der Form einer Birne mit gebogenem Stiele C.

♂ ist gefärbt und gezeichnet, wie das ♀. Von der vorigen Art unterscheidet sich diese leicht durch den ganz anders gestalteten Teil E ×, der wie ein gewölbter Amboss aussieht, ferner auch schon durch die erheblich geringere Grösse.

Fundorte: Diese Art ist über den grössten Teil Deutschlands verbreitet, Zimmermann fand sie in der Lausitz, Koch bei Nürnberg (selten), Dahl in Holstein, Bertkau bei Bonn (häufig), ich selbst in Nassau (Ems) und bei Pforzheim, sie ist viel häufiger, als die vorige Art und bei Pforzheim fast in jedem Weinberge, wo grössere Steine auf Haufen liegen, ferner trifft man sie in verlassenen Steinbrüchen, aber auch in Häusern und an Gartenmauern, und zwar von April an geschlechtsreif,

Pl. 19



Lessert, R. de. 1910. Catalogue des invertébrés de la Suisse. Fasc. 3, Araignées. Musée d'histoire naturelle de Genève, pp. 1-635.

p. 87

1. *Pholcus opilionides* (Schrank).

P. opilionides. SIMON, *Les Arachnides de France*, vol. 1, p. 259-260, vol. 2, pl. 4, fig. 14 et 15 (1874-84). 1874. — CHYZER et KULCZYNSKI, *Araneæ Hungariæ*, vol. 1, p. 149, pl. 6, fig. 20 (1891-97). 1891.

♀ : Céphalothorax blanc testacé, avec une bande médiane noirâtre sur la région thoracique, élargie d'avant en arrière, coupée d'une ligne claire médiane; 2 taches noirâtres sur les bords. Chélicères noirâtres. Sternum noirâtre, présentant une tache médiane et de chaque côté 3 taches arrondies, fauve testacé. Pattes testacé clair, avec l'extrémité des fémurs et les patellas rembrunies. Abdomen étroit allongé, d'un gris testacé plus foncé en dessus, présentant en avant une ligne longitudinale noirâtre ramifiée et au-dessus des filières une tache jaunâtre. Epigyne en saillie transverse, subtriangulaire, rougeâtre, deux fois plus large que longue, présentant à son extrémité antérieure un petit tubercule. Longueur totale, 5^{mm}; céphalothorax, 1^{mm},2.

♂ : Coloration comme chez la ♀. Patte-mâchoire testacée, avec les apophyses apicales noires; fémur court, droit et parallèle, présentant un renflement subconique près de la base, du côté antérieur; patella très courte; tibia plus long que le fémur et presque aussi large que long, rétréci à ses deux extrémités et claviforme; tarse petit et globuleux; son apophyse externe sinueuse, brun-noir, présentant vers le milieu, sur son bord postérieur, un fort tubercule arrondi, divisée en dessus, à l'extrémité, en 2 lobes obtus. Bulbe blanc et lisse, présentant 2 apophyses cornées du côté postérieur: la plus grande (style) brun-noir, en lamelle subquadrangulaire, avec l'angle supérieur arrondi, l'inférieur un peu prolongé; la plus petite brun-noir, divisée en 2 courts rameaux divergeant en forme de T; entre ces 2 apophyses une apophyse grêle et membraneuse. Longueur totale, 4^{mm},2; céphalothorax, 1^{mm},2.

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Bibliogr. *P. opilionides*. CANESTRINI et PAVESI 1868, p. 802; 1870, p. 81; PAVESI 1873, p. 92; 1875, p. 268; LEBERT 1877, p. 198, 199; de LESSERT 1904, p. 295; 1905^a, p. 626; 1907, p. 94.

Habitat. H^{te}-Savoie: Pied du Salève, Petit Salève (♂ ♀ V, XII) (de LESSERT 1904). Genève. Vaud: Bex. Valais: Bords du Rhône, Brigue (LEBERT 1877). St-Gall: Ragatz (♂ ♀ VI, VII). Tessin: Val Muggio, Tremona, Monte S. Giorgio, Rovio, Monte S. Salvatore, Monte Brè, Monte S. Bernardo di Comano, Monte Boglia, Val d'Isonne, Faido (PAVESI 1873), Olivone (♀ VIII) (J. CARL leg.). Grisons: Schuls (♀ VIII) (de LESSERT 1905^a), Mesocco (♂ VIII) (J. CARL leg.).

Biologie. Sous les pierres et sur les rochers. ♂ ♀ adultes de mai à août. Cocon en juillet¹.

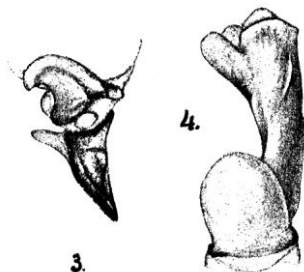
¹ Cette espèce, comme *Z. gallicum* (Simon) paraît faire défaut dans la Suisse septentrionale.

Kulczyński, M. V. 1913. Arachnoidea. In Velitchkovsky, V. (ed.), Faune du district de Walouyki du gouvernement de Woronège (Russie). Cracovie, 10: 1-30.

p. 29

3, 4. *Pholcus opilionoides*, mas. 3: processus stemmatis dextri; 4: pars tarsalis palpi dextri stemmate omisso.

Pl. 1



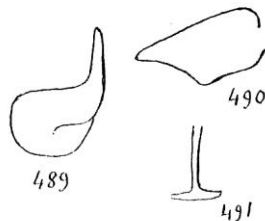
Simon, E. 1914. Les Arachnides de France. Roret, Paris. Pp. 1-308.

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— ♂ Trochanter de la patte-mâchoire pourvu d'une apophyse brièvement dirigée en dehors à la base, puis longuement et obliquement coudée en avant, sans denticule interne (f. 489).

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Apophyse principale du bulbe chitinisé rougeâtre, très comprimée, brièvement pédiculée, un peu plus longue que large, son bord supérieur convexe à la base, l'inférieur anguleux, saillant vers le milieu, puis graduellement atténué **obtus** (f. 490), précédée d'une apophyse très grêle presque droite, pourvue de chaque côté à l'extrémité d'une petite branche divergente aiguë, en forme de T (f. 491). — ♀ Pièce chitinisée de l'épigyne triangulaire transverse, environ deux fois plus large que longue. — ♂ ♀ Sternum brun olivâtre avec une bande longitudinale et de chaque côté trois taches marginales blanc testacé. Taille assez petite. — Sous les pierres et dans les trous de rochers et de murs. . **P. opilionoides**.



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489 *P. opilionoides* ♂ trochanter
P.M. — **490** apophyse principale du bulbe. — **491** apophyse grêle.

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2. **P. opilionoides** (Schrank). *Aranea o.* Schrank, Enum. Ins. Austr., 1783, p. 530. — *Pholcus o.* C. Koch, Ar. IV, p. 93, f. 311. — *P. grossipalpus* E. Simon, in Ann. Soc. ent. Fr., 1866, p. 121 (pullus). — *P. opilionoides* auct. recent.

Presque toute la France. — Europe tempérée ou méridionale; indiqué de Chine.

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1. *Pholcus opilionoides* (SCHRANCK). CHYZ.-KULCZ.: 1891 (I), Taf. VI, Fig. 20a, b; BÖSENBERG: 1901/03, p. 219, Taf. 19, Fig. 310; DE LESSERT: 1910, p. 87; SIMON: 1914, VI, 1, p. 236/37.

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♀: Gesamtlänge 5 mm, Cth.: 1,2 mm.

♂: Gesamtlänge: 4,5 mm, Cth.: 1,2 mm.

♂, ♀: Cth. grau mit einem schwärzlichen Fleck, der durch ein helleres Längsband in zwei Teile zerlegt wird und sich nach hinten verbreitert. Meistens am Rande des Cth. jederseits 2 dunkle Flecke. Chelizeren schwärzlich. Beine graugelb. Ende der Schenkel und die Kniegelenke bräunlich. Die Oberseite des grauen Hinterleibs dunkler als die Unterseite. Über den Spinnwarzen ein gelblicher Fleck.



Fig. 93. *Pholcus opilionoides*. ♂, Augenstellung. 66:1.

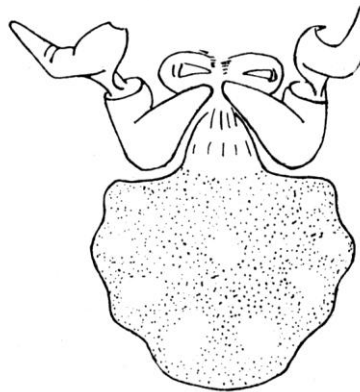


Fig. 94. *Pholcus opilionoides*. ♂, Sternum und Mundwerkzeuge. 33:1.

♀: Die Epigyne hebt sich rotbraun von der hellbraunen Unterseite des Abdomens ab. Vor der Epigyne jederseits eine stark chitinierte Stelle.

♂: Die beiden Taster übertreffen an Masse den Cth. (Fig. 95). Der Protarsus ist dunkelbraun bis schwarz, ebenso dunkel gefärbt und chitiniert sind Uncus und Appendix. Der Appendix ist T-förmig gestaltet. Zwischen Uncus und Appendix liegt eine häutige Röhre, die von GERHARDT als Embolus erkannt wurde.

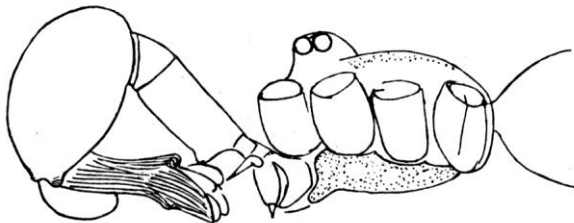


Fig. 95. *Pholcus opilionoides*. ♂, Cth. und Taster, Größenverhältnis. 18:1.

Die Art lebt bei uns in Mitteldeutschland in Ställen und Gebäudeteilen, die zu ebener Erde liegen (Waschhäuser, Schuppen). Im Sommer findet man die Tiere auch außen an den Gebäuden. Im Rhein- und Moseltal und in Süddeutschland findet sich die Art außerdem in Steinbrüchen und an Felsen. Reife Männchen wurden von Mai bis August beobachtet, die ersten Eierkokons im Juli. Die Spinne hängt mit der Unterseite nach oben im Netz. Wird sie gestört, so versetzt sie den Körper in hin- und herschwingende oder kreisende Bewegungen. Die Umrisse des Körpers

verschwinden dadurch für das Auge. Man hat diese Bewegung, auch bei *Ph. phalangoides*, als „Zittern“ bezeichnet und unsere *Pholcus*-Arten danach auch Zitterspinnen genannt. Die Beine sind dabei gestreckt, und da auch die Aufhängefäden mitschwingen, so entsteht tatsächlich eine recht verworrene Bewegung, die wohl Feinde ablenken könnte.

Begattung und Spermaaufnahme sind von GERHARDT beschrieben worden. Das Männchen wirbt um das Weibchen, wobei es lebhaft zittert und die Tibien der Taster so nach außen dreht, daß die beiden Taster eine T-förmige Figur bilden. Es kommt steil von oben auf das Weibchen

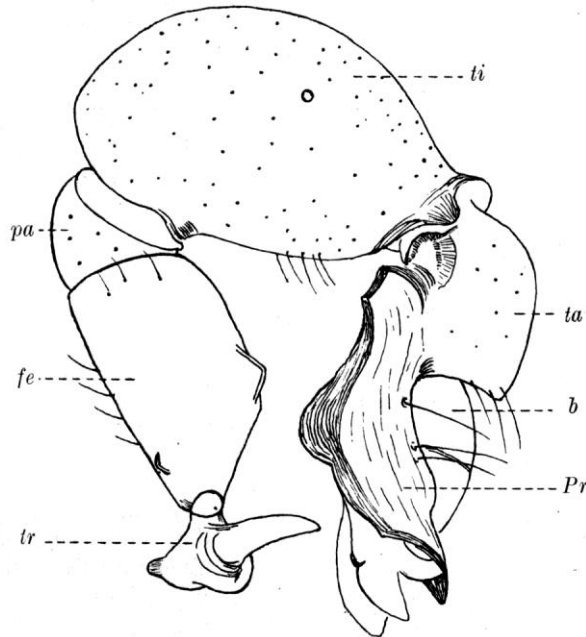


Fig. 96. *Pholcus opilionoides*. ♂, rechter Taster von außen. 43:1. tr Trochanter, fe Femur, pa Patella, ti Tibia, ta Tarsus, b Bulbus, Pr Procursus des Tarsus.

zu und nun werden die Taster im Coxalgelenk um 180° gedreht. Das hat schon BERKAU 1883 berichtet, GERHARDT konnte es bestätigen. Beide Taster werden gleichzeitig eingeführt. Es ist natürlich schwer zu beobachten, welcher Teil des Kopulationsorgans in die Geschlechtsöffnung eindringt. Nach GERHARDT (29) wird der Procursus gegen die hintere mittlere Chitinleiste der Epigyne gestemmt, der Uncus wird in den lateralen Winkel der weiblichen Samentasche eingeschoben. Der Appendix dringt in ähnlicher Weise in den medialen Winkel, und der angeschwollene Embolus wird in die Samentasche eingeführt und kann das Sperma entlassen. So dient also der Procursus lediglich zur Befestigung an der weiblichen Epigyne, während Appendix und Uncus als „Wegbahner“ fungieren. Dabei ist der Appendix der eigentliche Konduktor, während im Uncus von GERHARDT eine Spreizvorrichtung erblickt wird. Am Procursus sowohl als am Embolus kann man Anschwellungen bemerken, die beweisen, daß hier wie bei den Tastern mit Haematodocha während der Kopulation eine erhöhte Blutzufuhr stattfindet. Man macht diese erhöhte Blutzufuhr für die Austreibung des Spermas verantwortlich. Die Gelenkhaut zwischen Tarsus und Bulbus

stülpt sich während der Kopulation blasenartig aus, ähnelt also in ihrer Funktion der Haematodocha. Außerdem tritt auch an den feinen häutigen Gebilden, welche sich am Ende des Procursus finden, ein Schwellen und Abschwellen ein.

Die Spermaaufnahme bringt biologisch etwas Besonderes. Dabei ergreift das Männchen den mittleren Teil eines Fadenseiles von etwa $\frac{1}{2}$ cm Länge. Dieses Fadenseil wird von dem 3. Beinpaar über der Geschlechtsöffnung hin- und hergezogen, bis der kleine weiße Spermatropfen austritt und am Faden hängenbleibt. Dann wird der Tropfen am Faden vorn bis zur Höhe der Mundöffnung geführt, und die Chelizeren nehmen den Spermatropfen ab. Abwechselnd werden die Taster über die Mundöffnung gelegt, so daß der Embolus in den Spermatropfen kommt. In etwa 2 Minuten ist der Tropfen aufgesogen. Die Ablage der Eier ist noch nicht beobachtet worden. Sie scheint (in der Gefangenschaft) nachts besorgt zu werden. Die grauen Eier werden mit wenigen Fäden zu einer kugeligen Masse zusammengehalten und vom Weibchen mit den Chelizeren getragen (Fig. 101).

Die jungen Tiere lassen sich leicht aufziehen; wie die

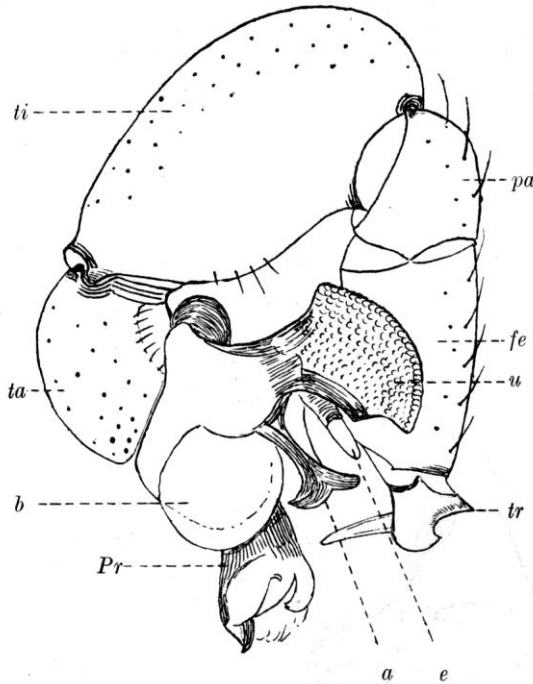


Fig. 97. *Pholcus opilionoides*. ♂, rechter Taster, Innenseite. 43:1. a Appendix, u Uncus, e Embolus.

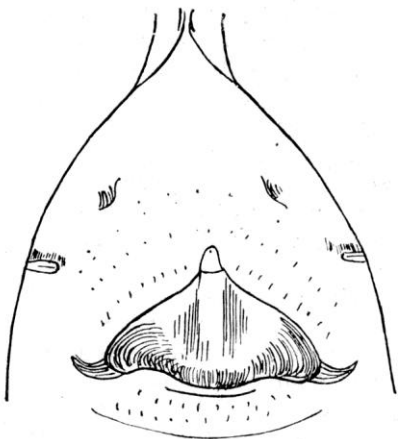


Fig. 98. *Pholcus opilionoides*. ♂, Epigyne. 33:1.

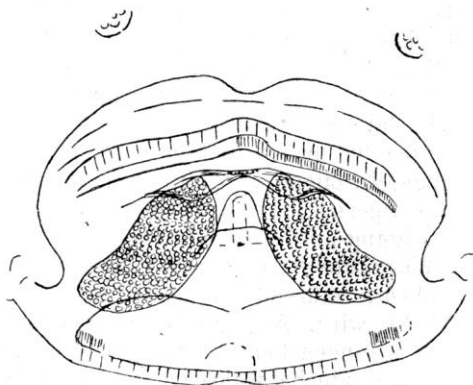


Fig. 99. *Pholcus opilionoides*. ♀, Vulva. 66:1.

alten wickeln sie mit den im Femurpatellagelenk stark gebeugten Hinterbeinen Fliegen ein.

Pholcus opilionoides ist in unserem Gebiete ziemlich gleichmäßig verbreitet. Als allgemeines Wohngebiet wird Mittel- und Südeuropa angegeben (die Art fehlt in England), der Südteil der Sowjetunion (Turkestan) und China.

Brignoli, P. M. 1971. Un nuovo *Pholcus* Europeo (Araneae, Pholcidae). Mem. Mus. Civ. Sto. Nat. Verona 19: 35-38.

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Pholcus osellai n. sp.

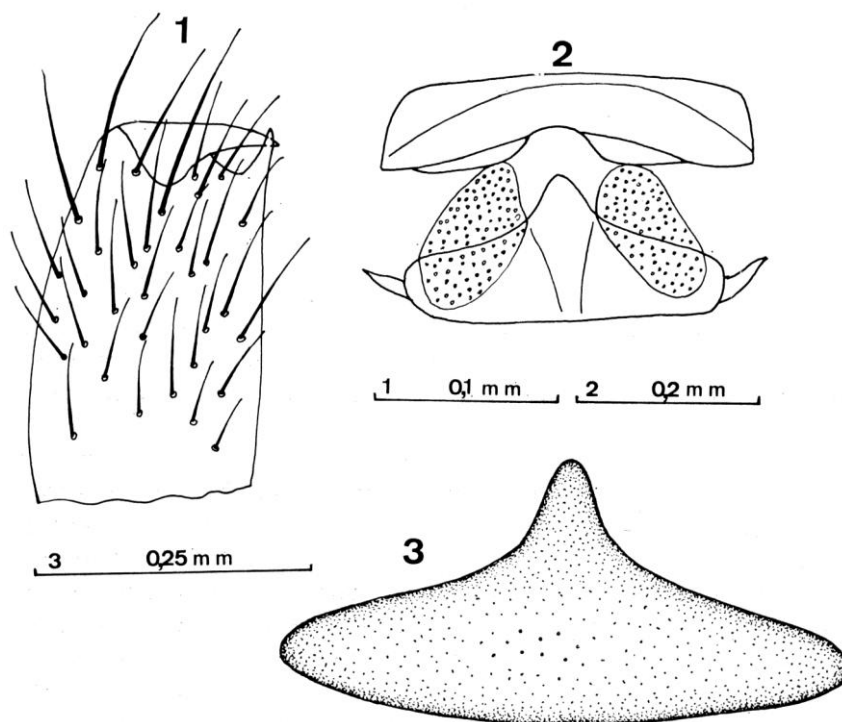
Spagna – Valencia, Lago di Albufera, 5.v.67, B. Osella leg., 1 ♀ (holotypus).

DIAGNOSI: un nuovo *Pholcus* prossimo a *Ph. opilionoides* (SCHRANCK) e a *Ph. ornatus* BÖSENBERG, distinguibile da queste specie per la morfologia dei genitali della ♀ (♂ ignoto).

DESCRIZIONE – ♀: prosoma normale, regione oculare moderatamente

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elevata, colore di fondo bianchiccio, al centro della parte toracica due bande brune separate da una sottile zona chiara, tracce di una bordatura sfrangiata; occhi nella tipica disposizione, ma molto più piccoli degli altri (uguali), linea anteriore diritta, posteriore a debole concavità posteriore, MP separati tra loro di $\frac{3}{2}$ del loro diametro; clipeo normale. Sterno bruno, con disegno simile a quello di *Ph. opilionoides*,



Pholcus osellai n. sp. – ♀: fig. 1 chelicero sinistro; fig. 2 vulva; fig. 3 epigino.

tre macchie chiare da ogni lato ed una centro-anteriore, non confluenti; sterno ampiamente troncato, separante le iv coxae all'incirca del loro diametro; labium largo due volte la sua lunghezza; gnathocoxae ampiamente convergenti davanti al labium. Cheliceri tipici, v. fig. 1. Zampe giallo-brune, con netto anello chiaro apico-distale su femori e tibie; molto depilate, senza spine evidenti, solo con alcune rade setole spiniformi miste a molte deboli setole. Opistosoma allungato, tipico, grigio-rosato; colulo assente (non ho dissezionato la zona

delle filiere, quindi mi possono essere sfuggite le setole a volte omologhe del colulo); epigino (v. fig. 3) rosso vivo, di forma intermedia tra *Ph. phalangioides* e *Ph. opilionoides*, vulva, v. fig. 2.

Misure (in mm, leggermente approssimate):

Prosoma lungo 1,17 (0,25 clipeo), largo 0,92; opistosoma lungo 2,62.

Lunghezza totale: 3,79 mm.

Zampe	Femore	Patella	Tibia	Metatarso	Tarso	Totale
I	4,50	0,33	4,30	6,00	1,50	16,63
II	2,70	0,33	2,30	2,90	0,80	9,03
III	assenti da ambo i lati					
IV	3,70	0,33	3,20	4,00	1,00	12,23

DERIVATIO NOMINIS: ho il piacere di dedicare questa specie al caro amico dott. Beppe Osella, uno dei non molti entomologi il cui interesse nella raccolta degli aracnidi è pari a quello nella raccolta degli insetti.

AFFINITÀ: per il momento, come accennato nella diagnosi, mi limito a supporre rapporti tra questa specie con il comune *Ph. opilionoides* ed il pressoché dimenticato *Ph. ornatus* BÖSENBERG 1895 descritto delle Canarie (Teneriffa). Da ambedue queste specie *Ph. osellai* si distingue agevolmente per l'epigino, in queste nettamente a triangolo isoscele. Dall'esame della letteratura risulta chiaro che questo tipo di epigino è forse il più tipico del genere e con sottili varianti si ripresenta in molte specie geograficamente anche assai lontane (v. per es. *Ph. leruthi* de LESSERT 1935 del Congo già belga). Per creare dei validi gruppi di specie bisognerà fare affidamento, ove possibile, sui genitali del ♂ (sfortunatamente ignoto, oltre che in *Ph. osellai*, anche in *Ph. ornatus*). Un altro carattere, più tenue, è quello rappresentato dalla colorazione, assente in molti *Pholcus*, debolmente presente, in forma abbastanza simile, in *Ph. opilionoides*, *Ph. ornatus* e *Ph. osellai*. L'habitus di *Ph. osellai* (e, presumo, di *Ph. ornatus*) è quello di *Ph. opilionoides*, quest'ultima specie è però nettamente più grande ed ha zampe assai più lunghe di *Ph. osellai*. *Ph. opilionoides* è stato già citato di Spagna, tenendo però conto della notevole somiglianza d'insieme con *Ph. osellai* (e probabile apparente identità degli immaturi) e dell'assenza, fino ad epoca assai recente di buone illustrazioni di *Ph. opilionoides*, è lecito il dubbio che

alcuni (o forse tutti) i reperti iberici di questa specie siano da attribuire a *Ph. osellai*. Sfortunatamente la penisola iberica è dal punto di vista aracnologico la meno (e peggio) studiata di tutte le parti d'Europa.

Heimer, S., Nentwig, W. 1991. Spinnen Mitteleuropas. Paul Parey.

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KL 4–5 mm, gelblich, ProS.muster wie Abb. 82.5, OpS. meist einfarbig, ♂ Pdp. wie Abb. 82.1, Epg. wie Abb. 82.3, im Freien unt. Steinblöcken, in Steinbrüchen u. in hohlen Bäumen, im Wald in der Bodenschicht, auch in Kellern, hängt an der Unt.seite unregelmäßig gebauter Netze, MEu u. OEu (in GB, NL u. Belgien fehlend)
opilionoides (SCHRANK)

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Huber, B. A. 1995. Copulatory mechanism in *Holocnemus pluchei* and *Pholcus opilionoides*, with notes on male cheliceral apophyses and stridulatory organs in Pholcidae (Araneae). Acta Zool. (Stockholm) 76(4): 291-300.

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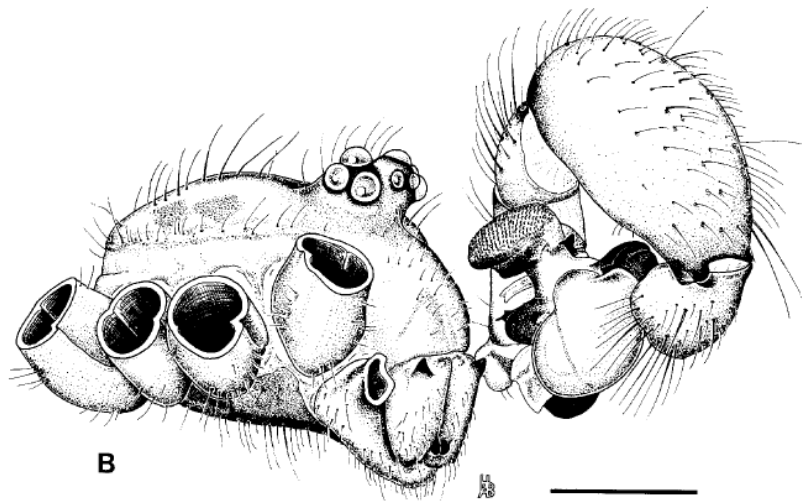


Fig. 1. Males of *Holocnemus pluchei* (A) and *Pholcus opilionoides* (B). Opisthosoma and extremities removed except of left pedipalps. Scale lines = 0.5 mm.

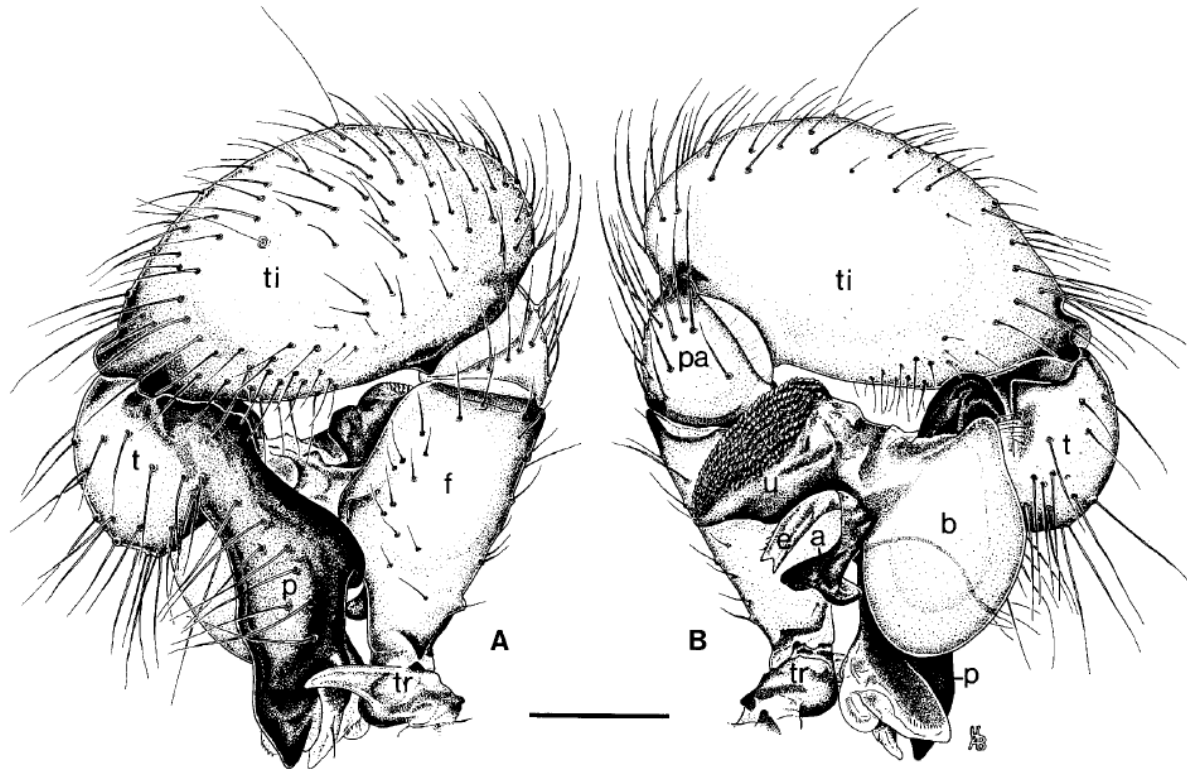


Fig. 3. Left male pedipalp of *Pholcus opilionoides*, retrolateral (A) and prolateral (B) view. Scale line = 0.3 mm.

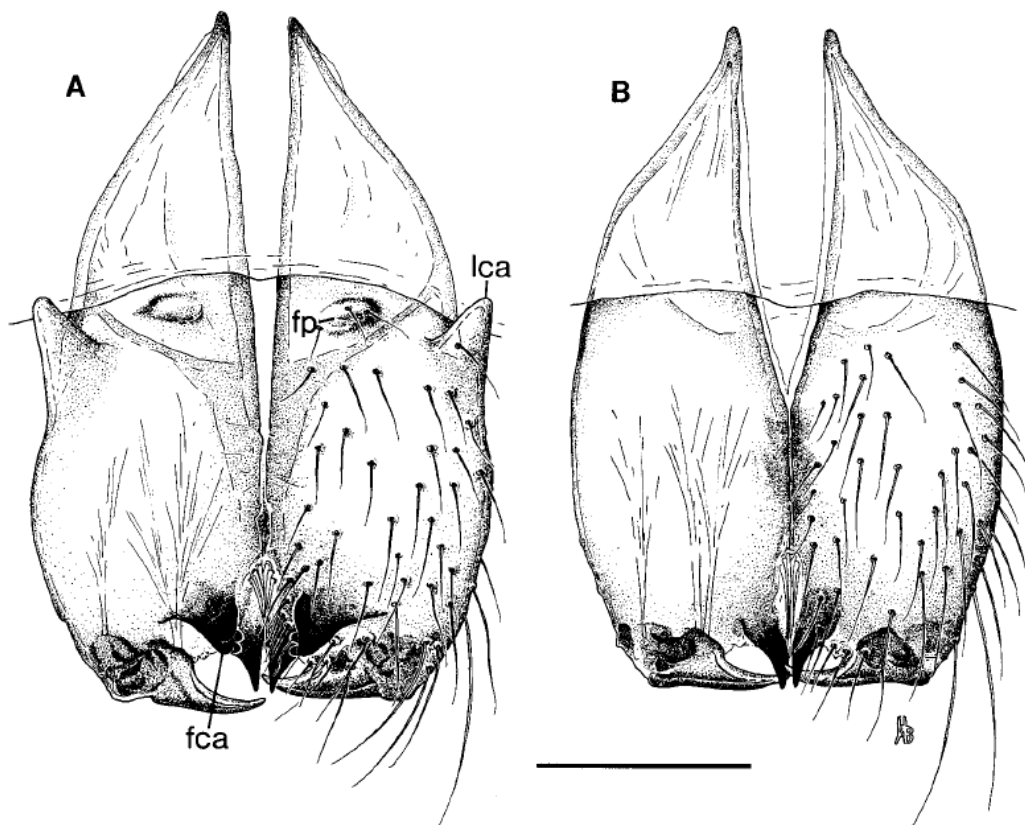


Fig. 5. Chelicerae of male (A) and female (B) *Pholcus opilionoides*, frontal view, hairs of left side not illustrated. Scale line = 0.2 mm.

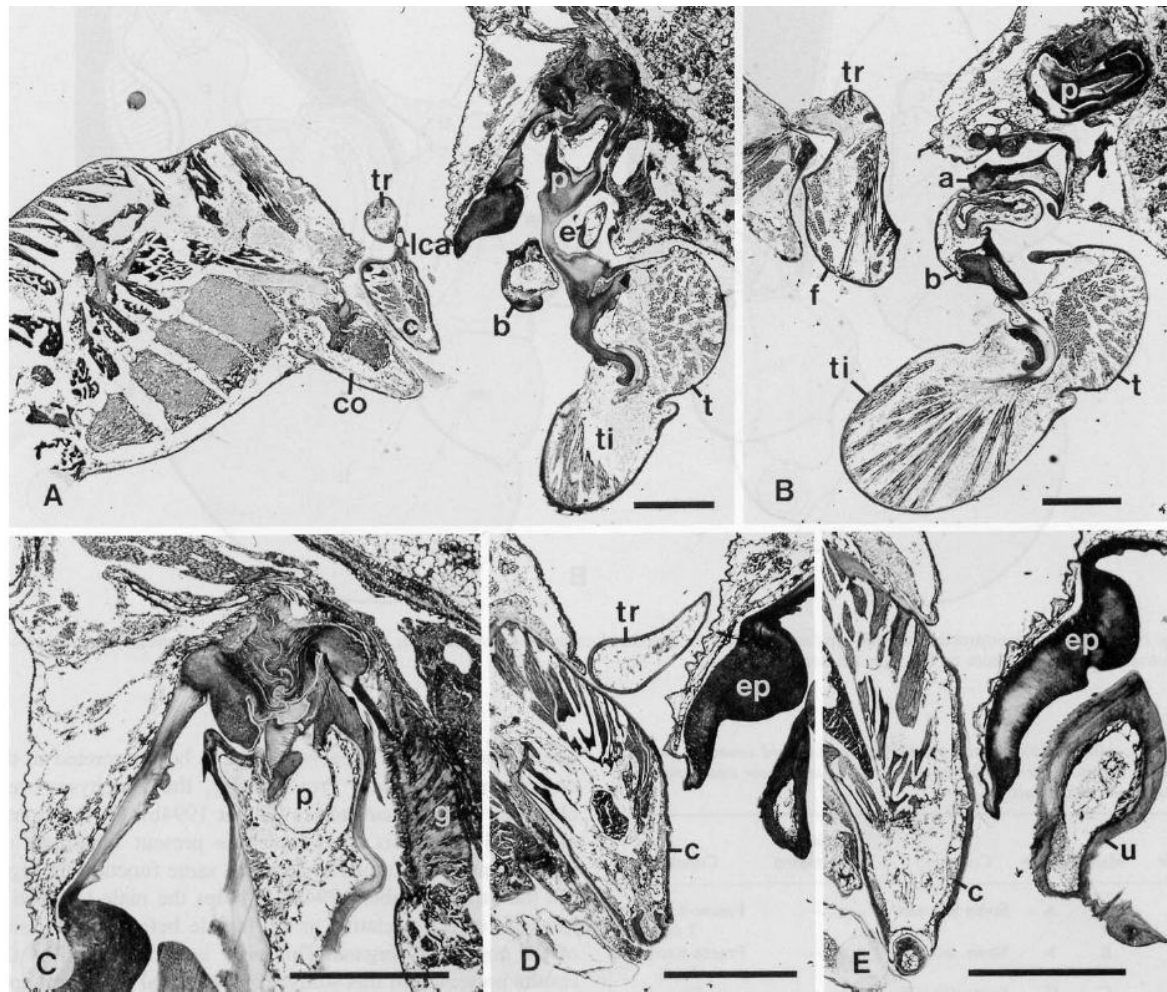


Fig. 9. *Pholcus opilionoides*. Sagittal semithin sections through the copulatory organs in functional contact, for an overview see Fig. 10. —A. Trochanter-apophysis hooked into lateral cheliceral apophysis, procursus inserted into uterus externus, embolus points towards dorsal pore plate. —B. Appendix hooked into a dorsal rim at the entrance into uterus externus. —C. Tip of procursus exactly matches uterus externus. —D. Tip of trochanter-apophysis contacts female. —E. Uncus pressed against epigynal plate, thus opposing trochanter-apophyses. All scale lines = 200 μ m.

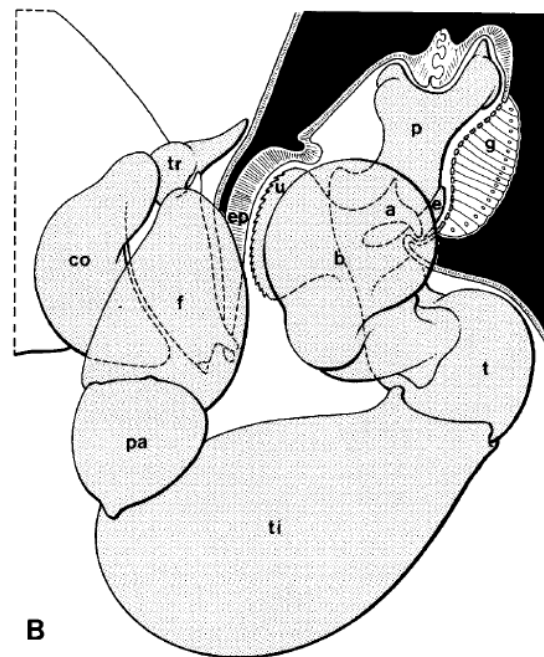


Fig. 10. Schematic reconstruction of the copulatory organs in functional contact as derived from the serial sections.
Pholcus opilionoides. Males on left side, oriented as in Fig. 1.

—B.

Senglet, A. 2001. Copulatory mechanisms in *Hoplopholcus*, *Stygopholcus* (revalidated), *Pholcus*, *Spermophora* and *Spermophorides* (Araneae, Pholcidae), with additional faunistic and taxonomic data. Mitt. schweiz. Ent. Ges. 74: 43-67.

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Pholcus opilionoides (SCHRANK, 1781)

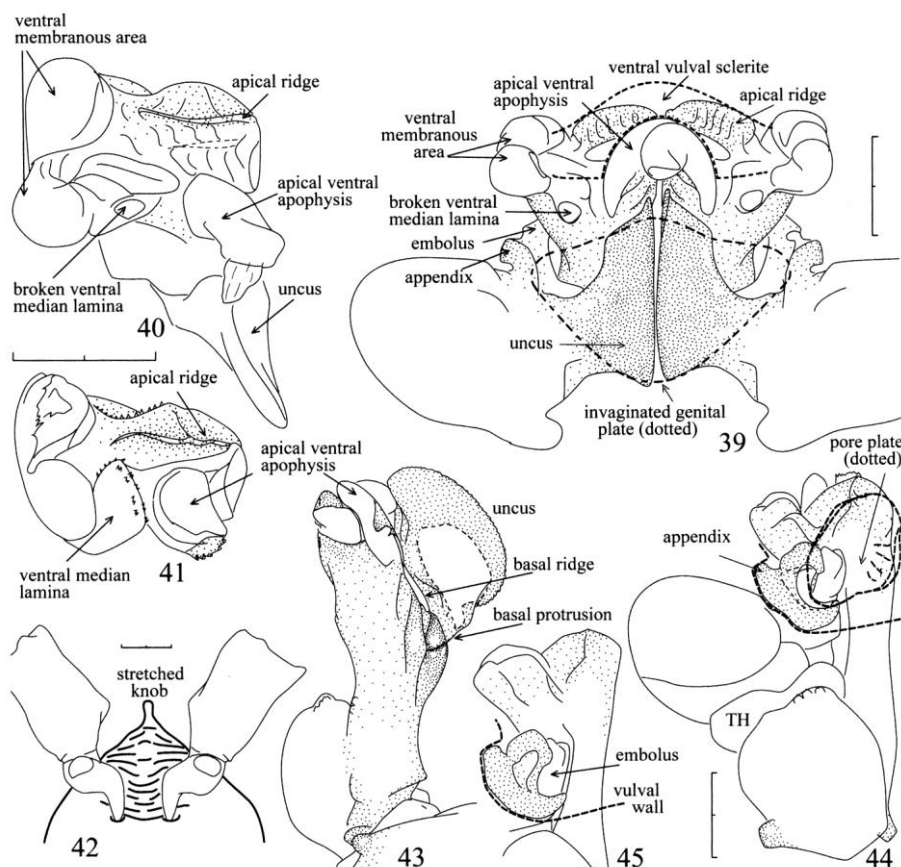
Courtship

In all 6 pairs observed, the male almost entirely destroys the dome of the female web before mating. As soon as the male is placed in the box of the female, he begins to unfasten the web from the wall. Once the web is free from the walls, he continues the reduction from the sides until there remains less than a diameter of 2 cm. The mating takes place suspended from those web remains. The destruction of the web can last up to half an hour, as the male often pauses.

The male rubbed the female vigorously with his fore legs and, as usual, rotated his palps and attempted the cheliceral fixation. This was effective from 17 to 35 min. after introduction into the box. A male cutting some threads before coupling was observed (UHL et al. 1995: 5) in *P. phalangioides*, but this cannot be compared with the systematic web destruction in *P. opilionoides*.

I have also been able to observe a complete destruction of a female web by a male of *Holocnemus hispanicus* WIEHLE, but this happened after mating. After separation of the pair, the male was sitting near the female and cleaning his pedipalps for 13 minutes. Then suddenly he began to destroy the web at some distance from the female, which remained motionless. He did not stop until only a fragment of the web remained around the female.

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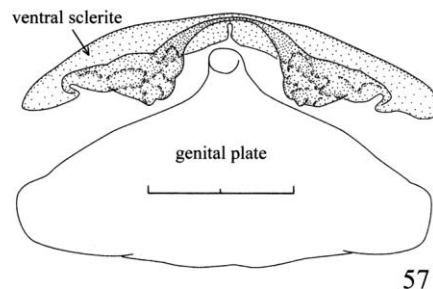
Figs 39-45: *P. opilionoides*, in copula; 39: Procursi *in situ*, ventral view; 40: Left procursus, apical view; 41: Id., partially extracted, apical view; 42: Trochanter apophyses on genital plate, anterior view; 43: Left procursus partially extracted, retrolateral view; 44: Id., dorsal view; 45: Id., deep insertion dorsal view. RSL = retrolateral sclerotized lamina; TH = tarsal "haematodocha". Female body parts in bold lines. Scale, 0.2 mm.

Copulatory mechanisms in Pholcus

In addition to the stabilization of the rotated pedipalp, the large trochanter apophyses, coupled to the chelicera (Fig. 42), are pressing on the anterior part of the vulva to stabilize the traction on the knob of female genital plate. By doing this, they reach well in front of the invaginated genital plate, down the slope created by the unci (see below: Erectile vulva in *Pholcus*).

Figure 39 gives a ventral view of the procurus in deep insertion, with the vulva removed. The flexed genital plate (interior concavity) and the ventral sclerite are figured in dotted lines. The apical ventral apophyses, highly developed and carrying a fine lamella, are protruding ventrally through the semicircular opening of the ventral sclerite. The ventral membranous area (Figs 39, 40), situated on the prolateral lobe, is divided into two diverging branches; at the base of its ventral root there is a large ventral median lamina broken at the dissection. Figure 40 shows an apical view of the left procurus of Fig. 39. Figure 41 shows the tip of another procurus in a half extracted position, with the ventral median lamina present. Figure 44 (dorsal rim of the vulva and pore plate figured in dotted lines) gives a dorsal view of the same and displays the appendix covering half of the embolus. In the deeply inserted procurus (Fig. 45), the posterior tip of the appendix encloses the embolus in a groove of the procurus stem. The embolus is sclerotized in its basal half and, coupled to the appendix, may be used as a secondary guiding device for the longitudinal and twisting motion of the procurus.

The primary guiding is done by the margin of the basal protrusion of the uncus extended as a ridge along its base, sliding in a longitudinal groove on the ventral part of the procurus in *P. opilionoides* (Fig. 43, in shallow insertion). In *P. phalangoides* this is done by the back side of the slightly arched basal protrusion, on a ridge of the procurus (UHL et al. 1995: 5, 8, Fig. 10).

Fig. 57: *P. opilionoides*, vulval ven-

tral sclerite.

Scale, 0.2 mm.

Pholcus opilionoides (Schrank, 1781) (Fig. 57)

Pholcus osellai BRIGNOLI 1971a, **syn. n.** Described from a single female on the base of a variation of the genital plate. Abundant material from the type locality (La Albufera, Valencia) leaves no doubt that *P. osellai* is conspecific with *P. opilionoides*, which is widespread on the Iberian peninsula and is variable in its size and the shape of its genital plate.

Material: BULGARIA: Plovdiv: Backovo, 21/7/72, 6♂, 7♀; Varna, Varna, 9/7/72, 1♂, 9♀; Slatni Pjasaci, 11/7/72, 1♂, 5♀; Pazardzik: Pestera, 23/7/72, 1♂, 1♀; Blagoevgrad, Sandanski refuge, 1224 m, 28/7/72, 1♂, 1♀. FRANCE: North Corsica, Ponte Leccia, 2/6/71, 6♂, 3♀; South Corsica, Sainte Trinité /Porto Vecchio, 25/5/71, 1♂, 1♀; Propriano, 29/5/71, 1♂; Alpes-Maritimes, Villeneuve-Loubet, 7/6/71, 2♂, 4♀; Peymeinade, 7/6/71, 4♂; Var: Montauroux, 7/6/71, 1♂, 3♀; Herault, Colombier /Béziers, 11/6/71, 4♂, 6♀. PORTUGAL: Vila Real, Vilarandelo - S. Lourenço /Chaves, 29/8/69, 1♂, 2♀; Guarda, Maceira /Fornos de Algodres, 9/8/71, 1♂, 8♀; Setubal, Marateca /Setúbal, 8/9/69, 1♂, 8♀. ROMANIA: Constanta, Adamclisi, 31/5/72, 2♂, 2♀; Rasova, 1/6/72, 16♂, 15♀; Vilcea, Calimanesti, 28/6/72, 8♂, 8♀. SPAIN: Barcelona, Alto de los Bruch, 13/6/71, 3♂, 3♀; Valencia, La Albufera, 16/6/71, 12♂, 6♀; Road Requena-Chera, 23/6/71, 1♂, 1♀; Alicante, Elda, 19/6/71, 2♂, 6♀; Murcia, Caravaca, 5/7/71, 2♂, 6♀; Albacete, La Gineta (rio Júcar), 28/6/71, 12♂, 2♀; Ciudad Real, Ojos del Guadiana /Daimiel, 13/8/69, 7♂, 21♀; Granada, Puebla de Don Fadrique, 1000-1200 m, 6/7/71, 1♂, 2♀. SWITZERLAND: Vaud, Onnens, 15/4/78, under stones, 5♂, 6♀.

Typical Mediterranean biotopes for this species are small shelters under low vegetation. Further north or in higher altitude, the shelter is either under stones or in holes of tree trunks (e. g. in Romania).

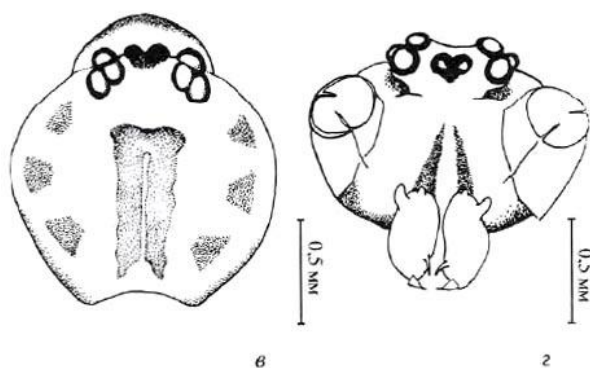


Рис. 1. *Zaitunia inderensis* sp. n.: а) вид сверху; б) вид снизу; *Pholcus donensis* sp. n.: в) карапакс самца, вид сверху; г) головогрудь самца фронтально

Семейство Pholcidae

Pholcus donensis sp. n.

Pholcus sp. [4, с. 170].

М а т е р и а л. Голотип: ♂ (ЗММГУ), Россия, Ростовская обл., Усть-Донецкий район, ст. Раздорская, урочище Семениха, байрачный лес, 14.06.2001, А.П. Паратипы: 2 ♂, 2 ♀ (К.П.: 35.10.4/5), вместе с голотипом; 2 ♂, 2 ♀ (ЗММГУ), Россия, Ростовская обл., Усть-Донецкий район, ст. Раздорская, 14.05–22.06.2001, А.П.; 2 ♂, 2 ♀, (К.П.: 35.10.4/4, 7, 11, 12) там же, 19.05–20.08.2001, А.П.; 2 ♂, 1 ♀ (35.10.4/8–10), там же, 3.05, 25.05, 1.09. 2002, А.П.; 1 ♀ (К.П.:

35.10.4/13), там же, Пухляковские склоны, 13.04.2004, А.П.; 1 ♂, 2 ♀ (К.П.: 35.10.4/14), Россия, Ростовская обл., Усть-Донецкий район, х. Крымский, Саватеевская балка, байрачный лес, 13.04.2004, А.П.; 1 ♂, 2 ♀ (К.П.: 35.10.4/15–17), там же, 30.05–5.07.2005, А.П.

Э т и м о л о г и я. Вид назван по месту находки типовой серии нового вида в долине р. Дон.

О п и с а н и е. Самец (голотип). Длина тела 4,75 мм; длина головогруды 1,4 мм, ширина головогруды 1,2 мм. Всё тело бледно-жёлтого цвета. На карапаксе имеется тёмно-серое продольное медиальное пятно и 3 пары латеральных пятен того же цвета (рис. 1в). Область медиальных глаз зачернена. Стернум с хорошо выраженными жёлтыми пятнами на тёмно-сером фоне: 3 пары крупных латеральных пятен; пара маленьких пятен в дистальной части стернума; одно продольное медиальное пятно, идущее от лабиума до середины стернума. Ноги желтые, колени, дистальные концы бёдер и проксимальные голени слегка затемнены. На верхнем крае хелицер с наружной стороны имеются крупный латеральный зубовидный отросток и маленький медиальный зубчик (рис. 1г). Копулятивный аппарат – рис. 2а, б, в.

Самка. Длина тела 5,0–5,5 мм; длина головогруды 1,4–1,45 мм, ширина головогруды 1,3–1,35 мм. Окраска тела как у самца. У некоторых особей дорсально заметно серо-жёлтое медиальное ланцетовидное пятно в передней половине живота. Эпигина – рис. 2г, д.

Д и а г н о з. По строению эпигины и копулятивного органа самца, размерами и окраской новый вид близок к *Ph. crassipalpis* Spassky, однако чётко отличается формой эпигинальной пластинки, ункуса, аппендикса, трохантера.

З а м е ч а н и я. Новый вид обычен в правобережье Нижнего Дона в окрестностях ст. Раздорская. Обитает в байрачных и пойменных лесах под стволами погибших деревьев, в трухлявых пнях. Может встречаться на склонах степных балок, располагая ловчие сети под корнями растений на отвесных участках.

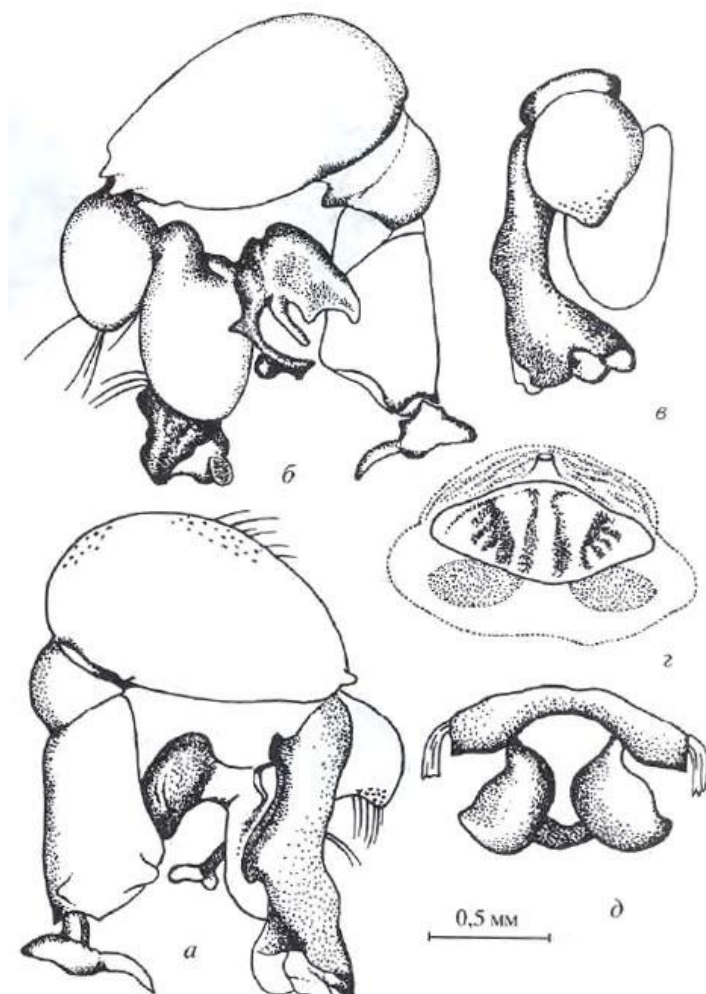


Рис. 2. *Pholcus donensis* sp. n.: а) правый палец самца, ретролатерально; б) правый палец самца, пролатерально; в) парацимбиум фронтально; г) эпигина, вентрально; д) эпигина, дорсально

Cutler, B. 2007. The identity of the small, widespread, synanthropic *Pholcus* (Araneae, Pholcidae) species in the northeastern United States. Trans. Kansas Acad. Sci. 110: 129-131.

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Pholcus manuei and not *P. opilionoides* is the smaller of the two synanthropic *Pholcus* of the northeastern and midwestern United States. Figures are provided for distinguishing *P. manuei* from *P. opilionoides*, a Eurasian species sometimes confused with *P. manuei*.

"All the citations of *P. opilionoides* Schrank from eastern USA examined to date are misidentifications of *P. manuei*" - Baptista (1998)

Pholcus is a genus of pale, elongate spiders with thin, extremely elongated legs. There are two common *Pholcus* species associated with manmade structures in the northeastern quadrant of the 48 conterminous United States. One of these is the large *Pholcus phalangioides* (Fuesslin 1775) with a body length greater than 6 mm. The other is smaller with a body length less than 5 mm. This latter species is being determined as *P. opilionoides* (Schrank 1781), as conveyed to me informally by colleagues. None of the small synanthropic *Pholcus* I examined belong to this species. Instead all specimens examined belong to *P. manuei* Gertsch 1934, as Baptista recognized in the above quote from a meeting abstract concerning his observations. While there are descriptions and illustrations of the two species, the best are in foreign publications (Huber 1995, Senglet 2001, Wiehle 1953) and may not be readily available to those working on faunal lists. Kaston (1977) contributed to the confusion by synonymizing *P. manuei* with *P. opilionoides*, and noting its occurrence (as *P. opilionoides*) on Long Island, New York. Senglet (2001) formally removed *P. manuei* from the synonymy of *P. opilionoides*. It should be noted that Huber (2005) mentions *P. manuei* from the United States, but not *P.*

opilionoides. The purpose of this note is to provide figures of a couple of characters that allow for easy differentiation between the two species, and can be seen at relatively low magnification, such as a triplet hand lens of 10-15X power. These are the structure of the procurus which is the sclerotized retrolateral paracymbium of the male palpus, and of the triangular plate of the female epigynum (see Figure 1). Note that the callosity on the ventral edge of the procurus is relatively closer to the base of the procurus in *P. manuei* than is the callosity in *P. opilionoides*, (arrows); and the procurus is more slender and straighter in *P. manuei*. In females of both species the triangular plate forms a broad, anteriorly pointing isosceles triangle, however in *P. manuei* the lateral sides are deeply excavated and the base is broader, while in *P. opilionoides* the sides are only slightly excavated, (arrows).

For this note, I examined material of *P. manuei* from the following locations: U.S.A.: ILLINOIS: Cook County, KANSAS: Douglas and Wyandotte Counties, MAINE: Penobscot County, MINNESOTA: Ramsey County, and OHIO: Summit County.

B. Huber contributed the following records: PENNSYLVANIA: Lackawanna and Pike Counties. The *P. opilionoides* from AUSTRIA: Upper Austria: Lichtenberg, were provided by B. Huber.

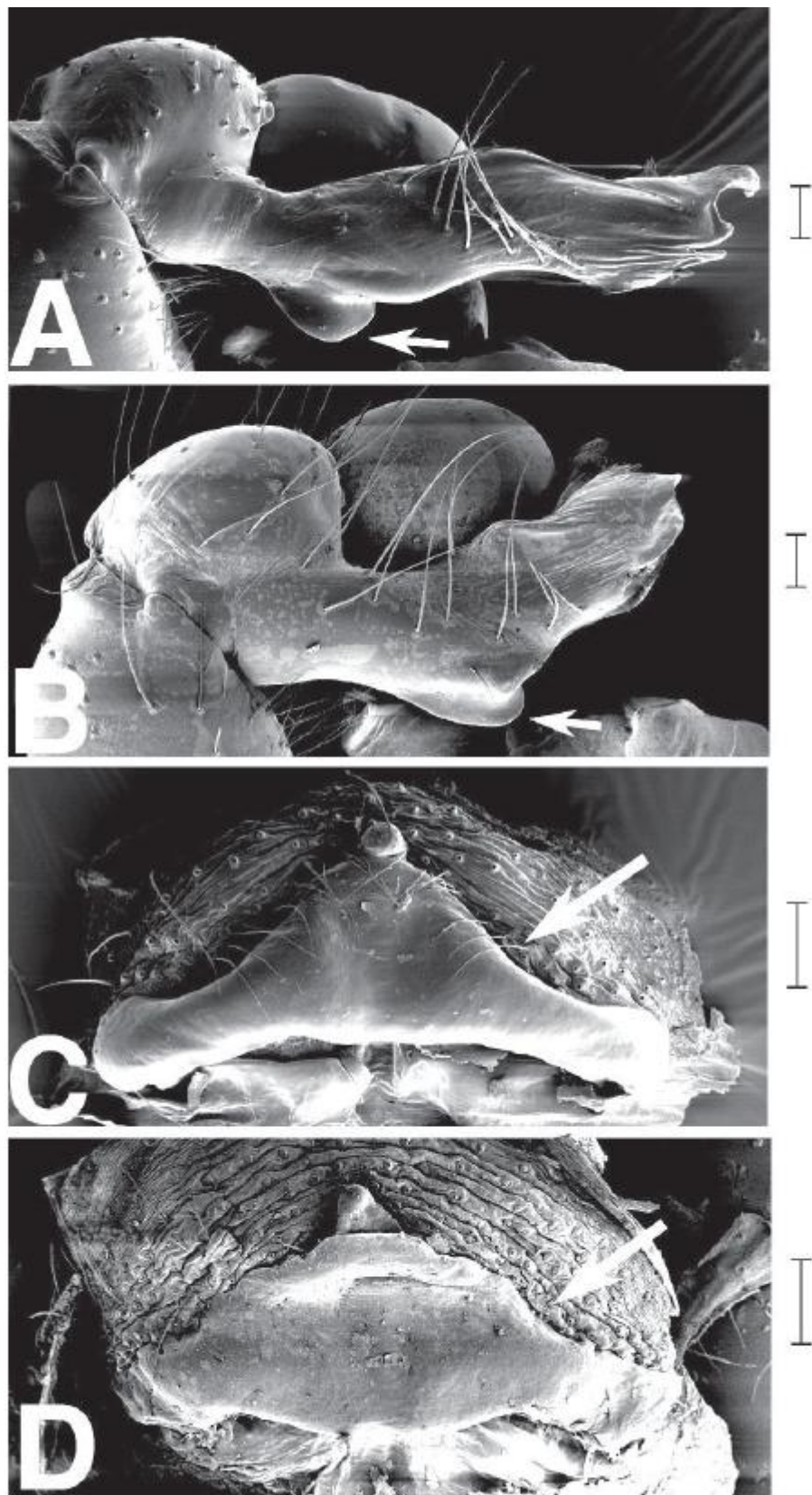


Figure 1. Images A (*P. manueli*) and B (*P. opilionoides*) show the procursus of the retrolateral side of the right male palpus (morphologically dorsal is at the top); Images C (*P. manueli*) and D (*P. opilionoides*) show the epigynum of the females. Scale bars = 100 μ m.

Zhang, F., Zhu, M.S. 2009. A review of the genus *Pholcus* (Araneae: Pholcidae) from China. *Zootaxa* 2037: 1-114.

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***Pholcus opilionoides* (Schrank, 1781)**

(Fig. 31)

Aranea opilionoides Schrank 1781: 530.

Pholcus opilionoides Simon 1866: 120, pl. 2, f. 1-6. Paik 1978: 225, f. 96.1-12. Huber 1995: 291, f. 1B, 3A-B, 5A-B, 10B. Senglet 2001: 63, f. 39-45, 57. Namkung 2003: 44, f. 5.1a-b. Lee & Kim, 2003: 112, f. 57-69.

"*Pholcus opilionoides*" Zhu & Wang 1963: 463, f. 1-3, 5-6, 9-10. Hu 1984: 78, f. 71.1-5. Chen & Zhang 1991: 74, f. 64.1-5. (misidentification)

Pholcus grossipalpus Simon 1866: 121, pl. 2, f. 10.

Pholcus osellai Brignoli 1971: 35, f. 1-3.

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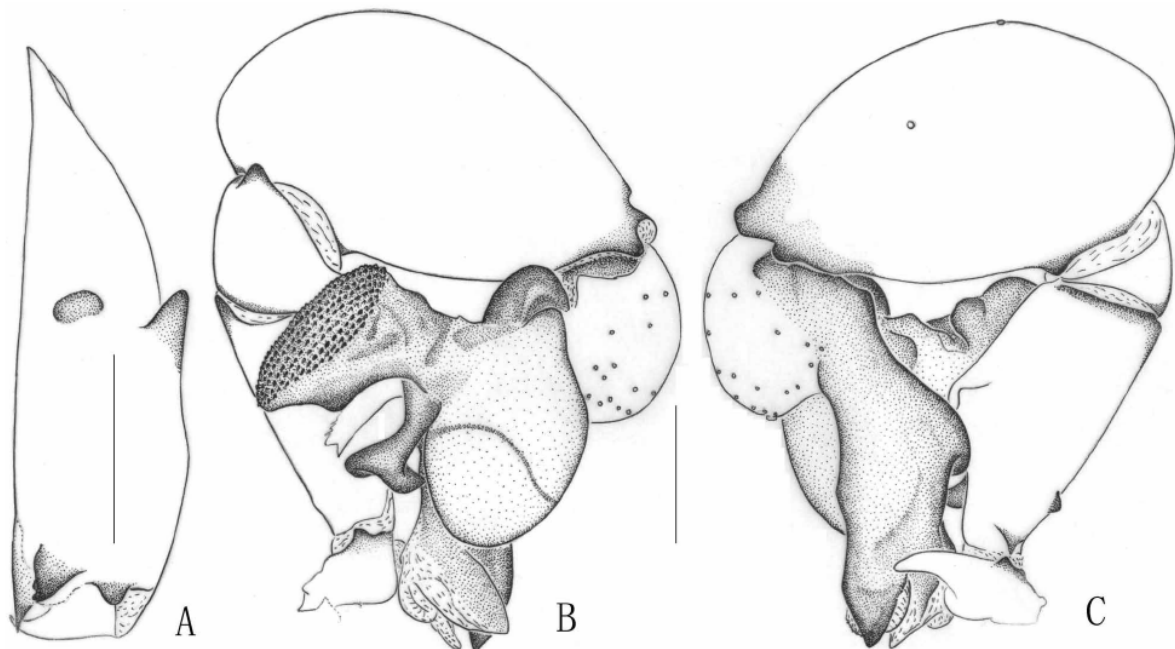


FIGURE 31. *Pholcus opilionoides* (Schrank, 1781). A. male left chelicera, frontal view. B. left palp, prolateral view. C. same, retrolateral view. Scale lines: 1.0mm (A), 0.5mm (B, C).

Description. See Huber 1995 (the illustrations of palpal organ and chelicera copied from Uhl *et al.*, 1995, slightly modified).

Distribution. Holarctic

Types material. Unknown.

Material examined. None.

Remark. Zhu & Wang (1963) recorded *P. opilionoides* for the first time from China. Zhu (1983), however, re-examined the specimens that Zhu & Wang (1963) recorded as *P. opilionoides*, recognized them as misidentified, and then re-listed them under the name of *P. affinis* Schenkel, 1953 (= *P. manuei* Gertsch, 1937). Hu (1984) also misidentified the specimens of *P. affinis* as *P. opilionoides*. Chen & Zhang (1991) continued this misidentification because they did not know the morphological characters of *P. opilionoides*. This species has not been yet recorded in China. It is a synanthropic species, so we believe it may be present in China.

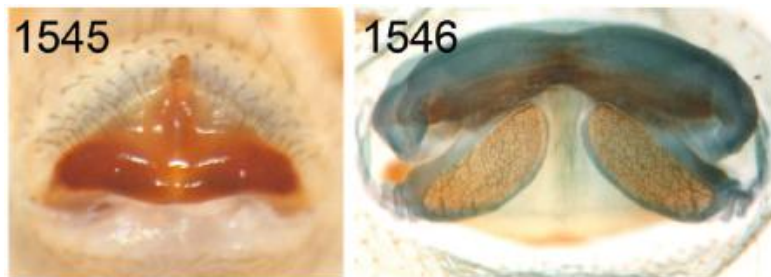
Huber, B. A. 2011. Revision and cladistic analysis of *Pholcus* and closely related taxa (Araneae, Pholcidae). Bonner zool. Monographien 58: 1-510.

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views; specimens from Pagbilao (1516-1519) and Negros (1520, 1521). 1522, 1523. *Ph. opilionoides*, male, dorsal and lateral views. 1524, 1525. *Ph. genuiformis*, male, dorsal and lateral views. 1526, 1527. *Ph. crassi-*

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1545, 1546. *Ph. opilionoides*.

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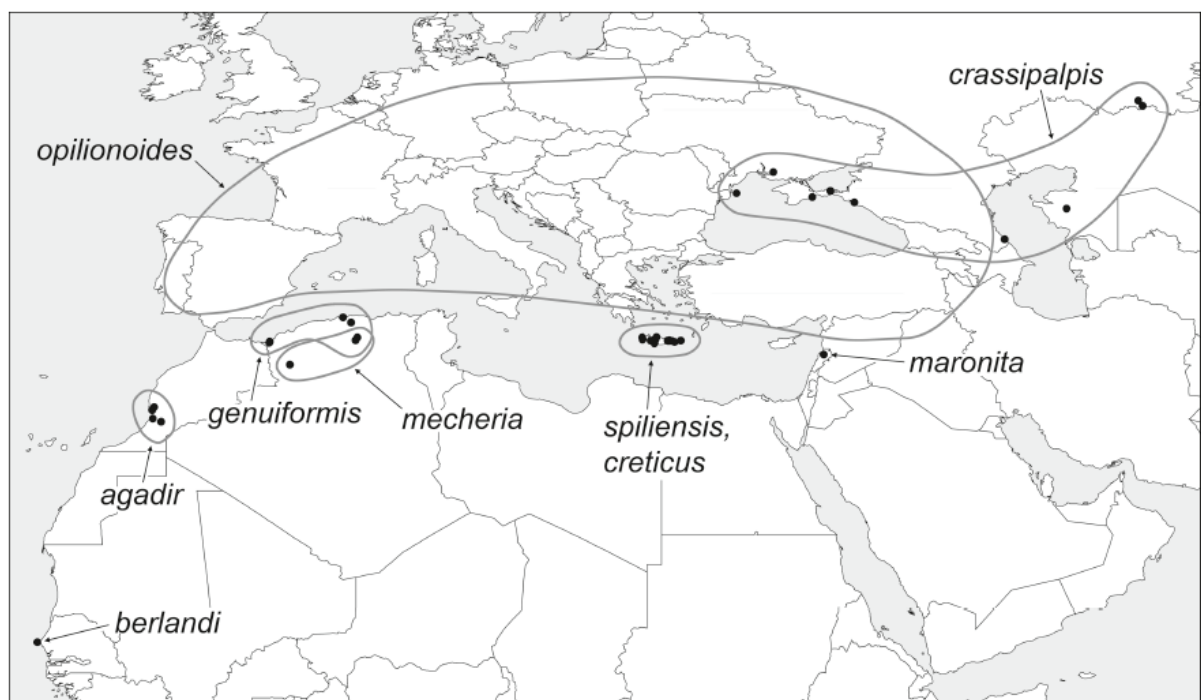


FIG. 1585. Known distribution of the *Pholcus opilionoides* species group; for *Ph. opilionoides*, only a rough estimate of its geographic range is shown.

Pholcus opilionoides (Schrank, 1781)

Figs. 1522, 1523, 1545, 1546, 1586-1589, 2189-2191

Aranea opilionoides Schrank 1781: 530-531.

Pholcus opilionoides [selection of relevant references]: Thorell 1871: 145-151. Simon 1874: 259-260. Simon 1875: pl. 4, figs. 14, 15. Chyzer & Kulczyński 1891: 149, pl. 6, figs. 20a, b. Bösenberg 1902: 218-219, fig. 310a-f. Lessert 1910: 87-88. Kulczyński 1913: 29, pl. 1, figs. 3, 4. Simon 1914: 236, 237, 240, figs. 489-491. Wiehle 1953: 39-43, figs. 93-99. Loksa 1969: 71, figs. 47a, 48c-d. Brignoli 1971b: 261. Huber 1995: figs. 1b, 3a, b, 5a, b, 9a-e, 10b. Senglet 2001: 53-55, 63, figs. 39-45, 57. Cutler 2007: 129, figs. 1b, d. Zhang & Zhu 2009a: 59, 61, figs. 31a-c (copied from Huber 1995, not from Uhl *et al.* 1995).

Pholcus grossipalpus Simon 1866: 121-122, pl. 2, fig. 10; synonymized by Simon 1874.

Pholcus osellai Brignoli 1971a: 35-38, figs. 1-3; synonymized by Senglet 2001.

Pholcus donensis Ponomarev 2005: 44, figs. 1c, d, 2a-e. New synonymy.

"*Pholcus opilionoides*" (misidentifications, see Notes below). Simon 1901: 49. Chamberlin 1924: 4. Roewer 1960: 39-40. Yaginuma 1960: 48, pl. 15, fig. 97. Zhu & Wang 1963: 463-464, pl. 1, figs. 1-3, 5, 6, 9, 10. Yaginuma 1970: 646. Kaston 1977: 6. Paik 1978a: 225, figs. 96.1-12. Paik 1978b: 2-4. Hu 1984: 78, figs. 71.1-5. Yaginuma 1986: 29-30, pl. 6, fig. 12, figs. 3e, 3p. Chikuni 1989: p. 29, fig. 6. Chen & Zhang 1991: 74-75, figs. 64.1-5 (copied from Hu 1984). Song *et al.* 1999: 58. Lee & Kim 2003: figs. 57-69 (copied from Paik 1978a). Namkung 2003: 42, figs. ♂, ♀, a, b.

Types. *Pholcus opilionoides*: the type material originated from Austria, Vienna [48°10'N, 16°20'E], but is most probably lost.

Pholcus grossipalpus: numerous juvenile syntypes from France, Champagne-Ardenne, Bar-sur-Seine [48°07'N, 4°23'E], date unknown (E. Simon), not examined (not found in MNHN).

Pholcus osellai: female holotype from Spain, Valencia, Lago de Albufera [39°20'N, 0°22'E], 5.v.1967 (B. Osella), in Museo Civico di Storia Naturale di Verona, not examined.

Pholcus donensis: male holotype from Russia, Rostov Area, Ust-Donetsk Distr., Rasdorskaya Station [Razdorskaya: 47°32'N, 40°39'E], Semenikha Village, Beiratschnj forest, 14.vi.2001 (A. Ponomarev) in ZMMU (not examined); 10♂12♀ paratypes from type locality and nearby localities (see Ponomarev 2005), 3♂3♀ examined (see below).

Justification of synonymy. Paratypes of *Ph. donensis* were compared directly with specimens from Austria and were found to be identical in all details of genital structure and color patterns.

Notes. In the 19th century there was considerable confusion as to the distinction between *Ph. opilionoides* and *Ph. phalangioides*. This has been largely resolved by Thorell (1871), and his solution, whether correct or not (none of the types were available to him), has been adopted by subsequent workers. As a consequence, the two species have posed no major problems for more than a century, at least in Europe.

What has remained controversial, however, is the distribution of *Ph. opilionoides*. Simon (1901) was the first to report it from Asia (Malaysia, China),

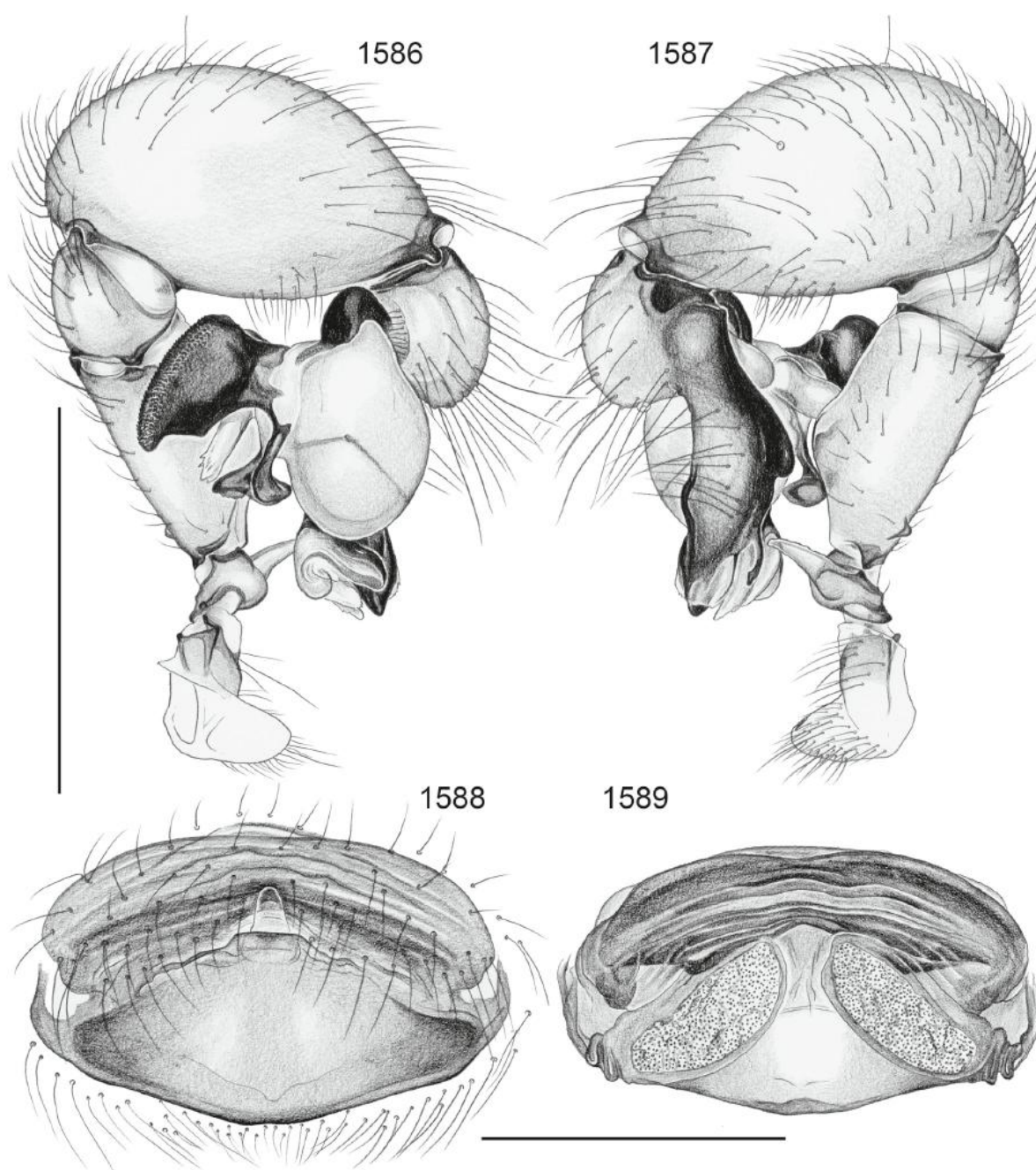


FIG. 1586-1589. *Pholcus opilionoides*. 1586, 1587. Left male palp, prolateral and retrolateral views. 1588, 1589. Cleared female genitalia, ventral and dorsal views. Scale lines: 1.0 (1586, 1587), 0.5 (1588, 1589).

and Chamberlin (1924) reported another specimen from China, both without further comments or illustrations. Their specimens seem to be lost. Numerous recent papers on East Asian spiders cite *Ph. opilionoides*, but the figures clearly show that the species is *Ph. manuli*: Zhu & Wang (1963), Paik (1978), Hu (1984), Yaginuma (1986), Chikuni

(1989), Chen & Zhang (1991), Lee & Kim (2003), Namkung (2003). In their recent revision of Chinese *Pholcus*, Zhang & Zhu (2009a) report this misidentification for Chinese papers and emphasize that they had no Chinese material of *Ph. opilionoides* available for study, but they still include two Korean references (Namkung 2003, Lee & Kim 2003). I

suggest that all East Asian (east of the Caspian Sea) records of *Ph. opilionoides* result from misidentifications.

A similar history of misidentification has also occurred in the USA, where all available evidence suggests that *Ph. opilionoides* does not occur but has repeatedly been confused with the widespread and common (introduced) *Ph. manuli* (see Cutler 2007). In sum, *Ph. opilionoides* seems to have a much narrower distribution than previously thought, ranging from western Europe to the Caucasus (see below).

Diagnosis. Easily distinguished from *Ph. manuli* and *Ph. phalangoides* (the two species with which it has most often been confused) by lateral marks on carapace (Fig. 1522); also by male palpal morphology (Figs. 1586, 1587; shapes on procurus and uncus, T-shaped appendix) and epigynum shape (Fig. 1545).

Male (Austria, near Molln). Total body length 3.9, carapace width 1.2. Leg 1: 25.4 (6.7 + 0.5 + 6.8 + 9.5 + 1.9), tibia 2: 4.6, tibia 3: 3.2, tibia 4: 4.6; tibia 1 L/d: 57. Habitus as in Figs. 1522 and 1523. Carapace pale ochre-yellow with distinct brown band divided medially and less distinct lateral marks, ocular area and clypeus not darkened, sternum light brown with light spots medially and near coxae, legs ochre-yellow, tips of femora and tibiae lighter, abdomen monochromatic ochre-gray, genital area light brown. Distance PME-PME 170 μ m, diameter PME 95 μ m, distance PME-ALE 25 μ m, distance AME-AME 30 μ m, diameter AME 60 μ m. Ocular area slightly elevated, few rather normal hairs (~7 per side). No thoracic furrow; clypeus unmodified. Chelicerae with distal frontal apophyses with two modified hairs each (Fig. 2189) and proximal frontal and lateral apophyses (cf. fig. 5a in Huber 1995). Sternum wider than long (0.85/0.65), unmodified. Palps as in Figs. 1586 and 1587, coxa unmodified, trochanter with retrolateral apophysis curved towards ventrally, femur with small retrolatero-dorsal apophysis proximally, ventrally widened with indistinct apophysis, large tibia, procurus distally complex, with sclerotized and membranous elements, distally bifid in dorsal view, without dorsal spines, bulb with large uncus, weakly sclerotized embolus, appendix complex, T-shaped in lateral view. Legs without spines and curved hairs, few vertical hairs; retrolateral trichobothrium on tibia 1 at 6%; prolateral trichobothrium absent on tibia 1, present on other tibiae; tarsal pseudosegments very indistinct, only distally a few visible in dissecting microscope. Gono-

pore with four epiandrous spigots (Fig. 2190). ALS with eight spigots each (Fig. 2191).

Variation. Tibia 1 in 24 other males: 5.5–7.3 (mean 6.4). In some males femora with slightly darker subdistal rings.

Female. In general very similar to male, even distance between PME very similar (160 μ m). Tibia 1 in 21 females: 5.1–6.5 (mean 5.8). Epigynum with triangular plate, small anterior ‘knob’ (Figs. 1545, 1588); internal genitalia as in Figs. 1546 and 1589.

Distribution. Widely distributed in Europe, east to Azerbaijan (Fig. 1585). I have not made an effort to borrow European *Ph. opilionoides* and can therefore not comment on its fine scale distribution. However, thousands of American, African, and East Asian *Pholcus* specimens studied did not include a single unambiguous *Ph. opilionoides*.

Material examined. AUSTRIA: Vienna: terrace of Institute of Zoology [48°13.8'N, 16°21.5'E], v.2001 (B.A. Huber), 1♂1♀ in ZFMK. Lower Austria: Leopoldsdorf [48°13'N, 16°41'E], v.2001 (A. Pernstich), 1♂ in ZFMK. Upper Austria: near Molln between Ramsau and Frauenstein (47°50.8'N, 14°14.3'E), at house, vii.2006 (B.A. Huber), 16♂11♀ in ZFMK. Lichtenberg (near Linz), “Reitpoidl” (48°22.8'N, 14°16.6'E), near house, vii.2000 (B.A. Huber), several males and females in ZFMK. Near Goldwörth [~48°18'N, 14°06'E], in pile of bricks, 18.viii.2004 (B.A. Huber), 1♀ in ZFMK. Pesenbachtal [~48°21'N, 14°04'E], among rocks, 17.viii.2004 (B.A. Huber), 4♂1♀ in ZFMK. Gr. Rodlta [~48°20'N, 14°09'E], at bridge, 12.viii.2004 (B.A. Huber), 2♂ in ZFMK. GERMANY: Nordrhein-Westfalen: Bonn, Museum Koenig (50°43.3'N, 7°06.8'E), in building, 8.vi.2010 (B.A. Huber), 1♂ in ZFMK. Köln/Bonn airport [50°52.9'N, 7°07.0'E], 60 m a.s.l., 23.xi.2003 (A.V. Gromov), 3♀ in ZMMU.

FRANCE: Corsica, Corse-du-Sud, 3 km SE Aullène [~41°45'N, 9°06'E], 770 m a.s.l., 9.vi.1982 (J. Martens), 1♂ in SME.

SPAIN: Huesca: between Hecho and Selva de Oza [~42°49'N, 0°43'W], roadsides, 8.x.1986 (J. Codrington), 1♀ in USNM.

PORTUGAL: Charneca de Caparica [38°37'N, 9°11'W], 5.vii.1980 (A. Matos), 1♀ in ZMUC.

ITALY: Vittorio Veneto [45°59'N, 12°18'E], garden, 24.vii.1987 (H. Enghoff), 1♀ in ZMUC.

SLOVENIA: Postojna [45°46'N, 14°13'E], 8.vi.1964 (J.T. Skorgaard), 1♂ in ZMUC.

SERBIA: Central Serbia: Zlatibor Mountain, S Zlatibor village (43°35.3'N, 19°43.8'E), 325 m a.s.l.,

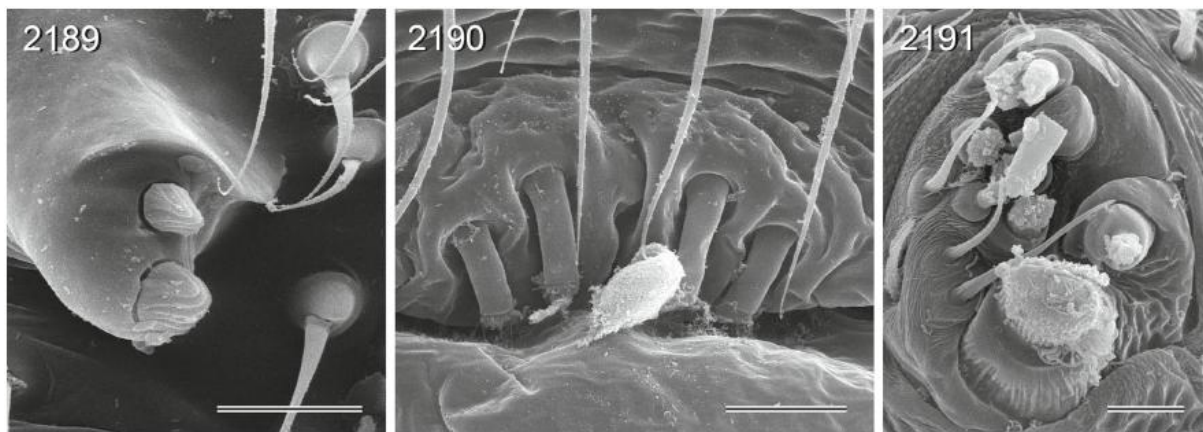
valley with conifer woods, under stones, 7.v.2006 (A. Schönhofen), 1♂ in SMF. *Vojvodina*: Palanka [Bačka Palanka, 45°15'N, 19°23'E], no date (Hermann), 2♀ in NHMW (374 part).

BULGARIA: Dobrich Distr., Krushari Municipality, Dunay (=Danube) River valley, Kapitan Dimitrovo (43°57.2'N, 27°41.5'E), 120 m a.s.l., buildings, 20.viii.2005 (A.V. Gromov), 1♀ in ZMMU. Blagoevgrad Distr., Razlog Municipality, S env. of Banya (41°52.6'N, 23°31.6'E), 850 m a.s.l., hill, *Pinus* forest, 8.viii.2005 (A.V. Gromov), 1♂3♀ in ZMMU. Blagoevgrad Distr., Simitli Municipality, N foothills of Krupnishna Planina Mt. Range, ca. 0.2 km NNE Krupnik (40°51.1'N, 23°07.6'E), 370 m a.s.l., hill, under stones and building, 12.viii.2005 (A.V. Gromov), 4♀ in ZMMU.

UKRAINE: Chernivtsi (48°16'N, 26°07'E), in greenhouse, 26.vi.2007 (M. Fedoriak), 2♂4♀ (2 vials) in ZFMK; Chernivtsi Town (48°16'N, 25°56'E), 8.x.2005 (S.V. Ovchinnikov), 1♀ in ZMMU. Vil. Kobzarivka, Zborivski d-t, Ternopil reg. [49°44'N, 25°26'E], in pantry, 9.i./30.vi.2007 (M. Fedoriak), 5♂4♀ (2 vials) in ZFMK. Vil Seliatin, Putilski d-t, Chernivtsi reg. [47°52'N, 25°12'E], outside walls of house, 24.v.2002 (M. Fedoriak), 1♂2♀ in ZFMK.

RUSSIA: *Samarskaya Region*: near Samara [~53°12'N, 50°12'E], viii.1972 (A.Y. Berezantsev), 1♂ in ZMMU. *Rostov Region*: same data as holotype of *Ph. donensis* (see above), 2♂2♀ paratypes of *Ph. donensis* (collection A. Ponomarev 35.10.4/5, in ZFMK). Rasdorskaya Station, Majak Vill., grassland and steppe, hill, 3.v.2002 (A. Ponomarev), 1♂ paratype of *Ph. donensis* (collection A. Ponomarev, 35.10.4/8, in ZFMK); Rasdorskaya Station, wet grassland near bank of Don river, 1.ix.2002 (A. Ponomarev), 1♀ paratype of *Ph. donensis* (collection A. Ponomarev, 35.10.4/10, in ZFMK).

TURKEY: *Ankara Prov.*: Kızılcahamam Dist., Çamlıdere Town (40°32.7'N, 32°30.5'E), 960 m a.s.l., 28.v.2009 (Yu.M. Marusik), 6♂6♀ in ZFMK. AZERBAIJAN: Zagatala Dist., Zagatala Res. [~41°43'N, 46°36'E], 24.vi.2003 (N. Snegovaya, H. Aliev), 1♂ in ZMMU. Nagorno-Karabakh: Shusha [39°45.5'N, 46°44.9'E], 1200 m a.s.l., 1.viii.1986 (P.M. Dunin), 2♀ in ZMMU. Naxçıvan (=Naxçıvan') Autonomous Republic: Şahbuz Distr., W slope of Zangezur Mt. Range, Gemyur env. [~39°27.7'N, 45°45.3'E], 1500 m a.s.l., 9.vii.1988 (P.M. Dunin), 1♂3♀ in ZMMU.



Pholcus opilionoides (2189-2191),

2189, 2195, 2199. Distal male cheliceral apophyses. 2190, 2198. Male gonopores. 2191, 2196. Male ALS. 2192. Female ALS. 2193. Epigynum. 2194. Left procursus, prolateral view. 2197. Left procursus tip, distal view. Scale lines: 200 μm (2193), 100 μm (2194, 2197), 50 μm (2198), 20 μm (2189, 2190, 2192, 2195, 2196), 10 μm (2191, 2199).