

***Pehrforsskalia conopyga* Deeleman-Reinhold & van Harten, 2001**

Deeleman-Reinhold, C. L. & van Harten, A. 2001. Description of some interesting, new or little known Pholcidae (Araneae) from Yemen. Pp. 193-207 in: Ishwar Prakash (ed.) Ecology of Desert Environments. Scientific Publishers, India, Jodhpur.

p. 204

Pehrforsskalia conopyga n.sp.
(fig.30-37)

Type locality. Yemen, Hamman 'Ali.

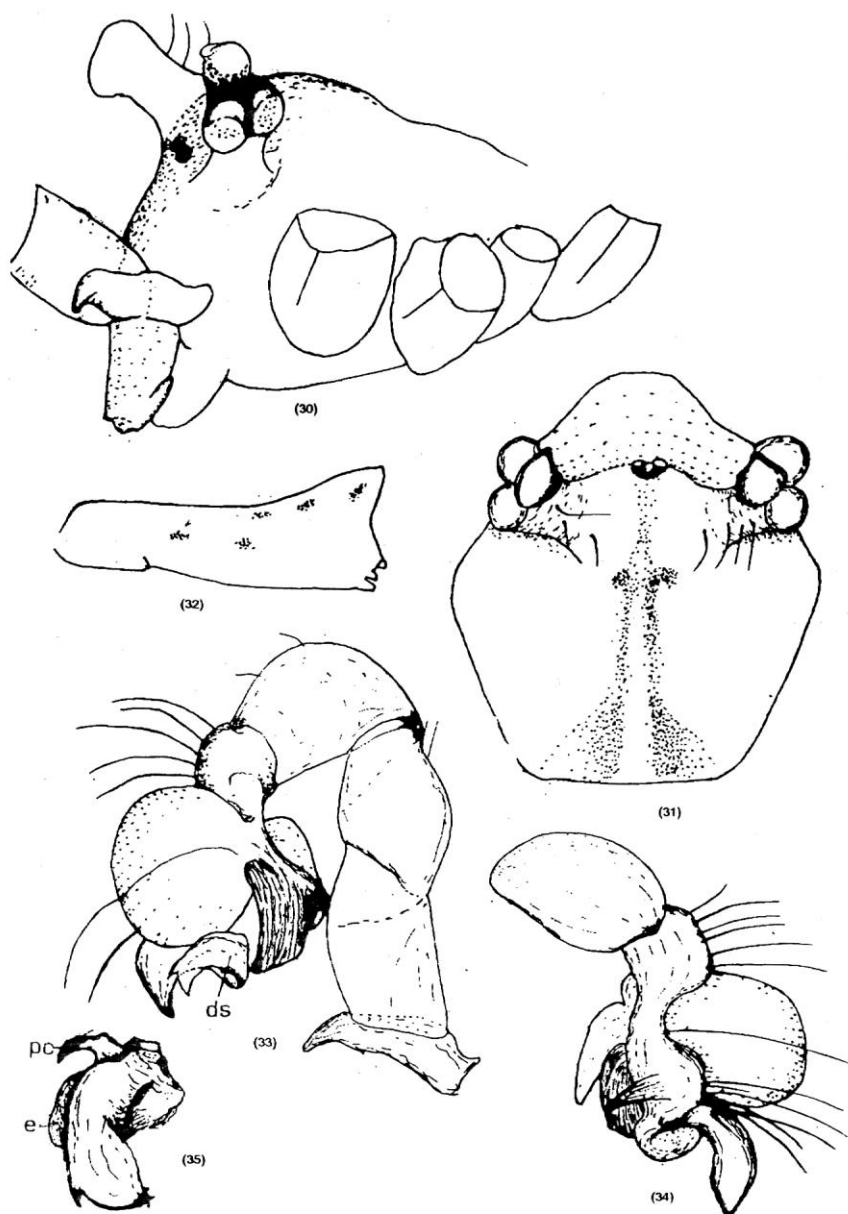
Type material. 1 male holotype with 1 female paratype, Hammam 'Ali (14°41'N, 44°08'E, 1600 m), vegetation bordering citrus plantation, 19.viii.98; other paratypes: 3 females, as holotype, 23.xi.1999; 4 females as holotype, 29.v.00.

Other material. Yemen, 1 male, Wadi Warazan (13°25'N, 44°15'E, 1200 m), 17.xii.98; 4 males, 1 female, Ta'izz (13°35'N, 44°02'E, 1400 m), in experimental field, 28.xii.97. Cape Verde Islands, São Jorge dos Orgãos (15°03'N, 23°37'W, 500 m), 3 males, 7 females, in garden vegetation, 15-29.xii.99. Same locality, 1 female, 28.i.84 and 1 male, gone through 2 moults in captivity, in grass in irrigation ditch, 31.i.84, leg. J. Prinsen. Nigeria, 1 male (BMNH), leg. A. Russell-Smith.

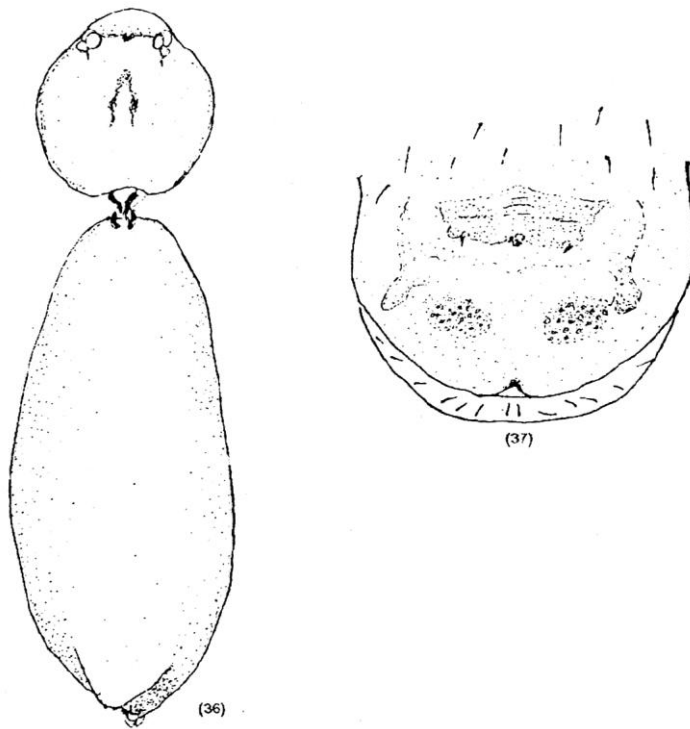
Diagnosis. Small species. Abdomen with characteristic triangular projection (fig. 32) and specific pattern on the carapace (fig. 31,36). Males bear a lateral apophysis distally on the chelicerae.

Description. MALE, holotype. Total length 2.30 mm (largest specimen 2.80 mm, smallest 2.00 mm). Carapace length 0.60 mm, width 0.65 mm, abdomen length 1.75 mm, height behind 0.75 mm. Leg length: leg I 21.40 mm (5.30-5.75-9.50-0.85), leg II 14.00 mm (3.90-3.75-5.50-0.85), leg III 8.15 mm (2.50-2.15-2.90-0.60), leg IV 12.35 mm (3.90-3.10-4.75-0.60). Palp femur 0.25 mm, patella 0.25 mm, tibia 0.25 mm, paracymbium 0.40 mm long, bulb 0.30 mm long. Pale, cream-coloured spiders, with a dark grey reverse V-shaped spot on the carapace (fig. 31,36); legs with narrow dark rings around the patellae and the tibia-metatarsal joint. Eye triads on turrets (fig. 30,31). Chelicerae with subdistal lateral apophysis (fig. 30). Male palp fig. 33-35. The paracymbium is aberrant: in retrolateral view (fig. 34) only the proximal section is apparent with distally two strong apophyses at right angles to each other; the proximalmost apophysis, on the outer margin, corresponds in resting position with the tip of the trochanteral apophysis. Distal section (fig. 33ds) not hinged, bending off in mesal direction alongside the distal surface of the bulb. Conductor unbranched, consisting of a rounded flattish plate ("uncus"); the claw-like or "appendix" part is absent.

FEMALE. Total length 3.10 mm (largest specimen 3.50 mm, smallest 2.90 mm). Carapace length 0.75 mm, width 0.75 mm, width eye group 0.37 mm, abdomen 2.25



Figures 30-35. Figs. 30-34. *Pehrforsskalia conopyga* n.sp., male. 30- Head, chelicerae and coxae, side view; 31- carapace, dorsal; 32- abdomen, side view; 33- right palp, prolateral view; 34- retrolateral view; 35- distal view. ds = distal section of paracymbium; e = embolus; pc = paracymbium.



Figures 36-37. *Pehrforsskalia conopyga* n.sp., female. 36- dorsal view; 37- epigyne, made transparent in clove oil.

mm long, height in front 0.75 mm, height behind 1.45 mm. Leg length: leg I 19.80 mm (5.00-5.15-8.25-1.40), leg II 11.75 mm (3.35-3.15-4.50-0.75), leg III 7.80 mm (2.35-2.10-2.75-0.60), leg IV 11.50 mm (3.75-2.75-4.30-0.70). Palp 0.15-0.07-0.10-0.12 mm. Eyes not raised. Epigyne (fig. 37) 0.90 mm wide, 0.65 mm long, rather pale and featureless. Inside the atrium, there is a transverse membrane in front of the sclerotized arch (valve), and at either extremity a slightly sclerotized knob. The ligula, characteristic of *Pholcus*, is absent.

Distribution. Known at present from Yemen, Nigeria and the Cape Verde Islands.

Habitat. Shaken from dry plant debris in secondary vegetation.

Etymology. From Latin, conus = cone and Greek, pyge = upperside of tail.

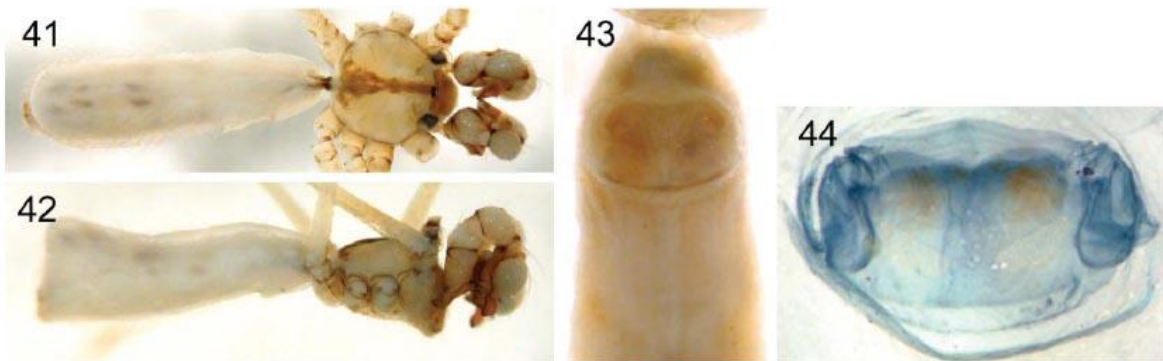
Huber, B. A. 2009. Life on leaves: leaf-dwelling pholcids of Guinea, with emphasis on *Crossopriza cylindrogaster*, a spider with inverted resting position, pseudo-eyes, lampshade web, and tetrahedral egg-sac (Araneae: Pholcidae). J. Nat. Hist. 43: 2491-2523.

p. 2496



(13) *Pehrforsskalia conopyga*, male;

p. 2498



Figures 32–44.

(41–42) *Pehrforsskalia conopyga*, male in dorsal and lateral views; (43, 44) *P. conopyga*, epigynum in ventral and cleared dorsal views.

Pehrforsskalia conopyga Deeleman-Reinhold and van Harten, 2001
(Figures 13, 41–44, 128–147, 151)

Pehrforsskalia conopyga Deeleman-Reinhold and van Harten 2001, p. 204–206, figs 30–37.

Types

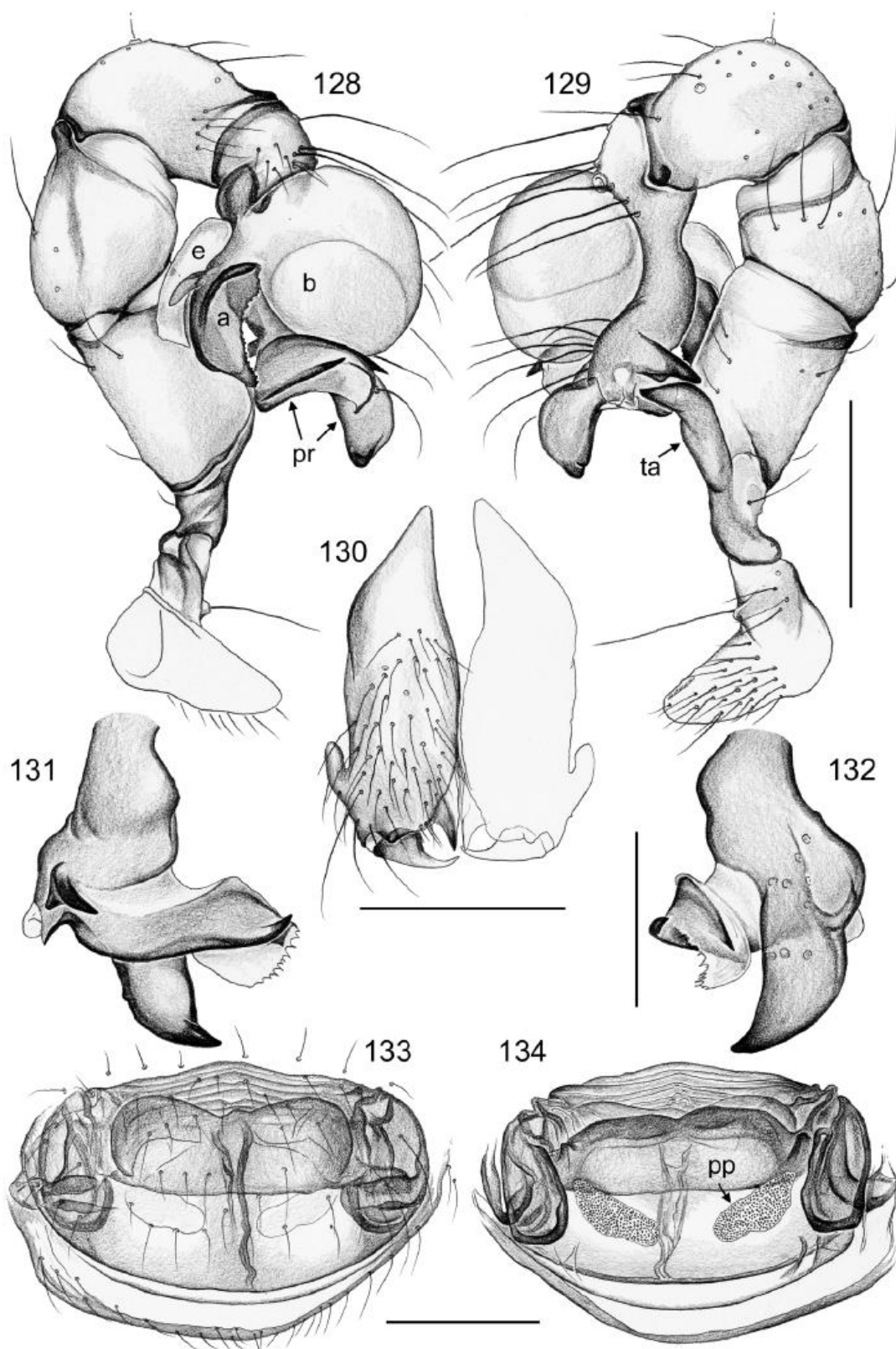
Male holotype and 8 female paratypes from Hamam ‘Ali (14°41’N, 44°08’E), Yemen; 1600 m a.s.l., vegetation bordering citrus plantation, 19.viii.1998 (A. van Harten), in RMNH, not examined.

Diagnosis

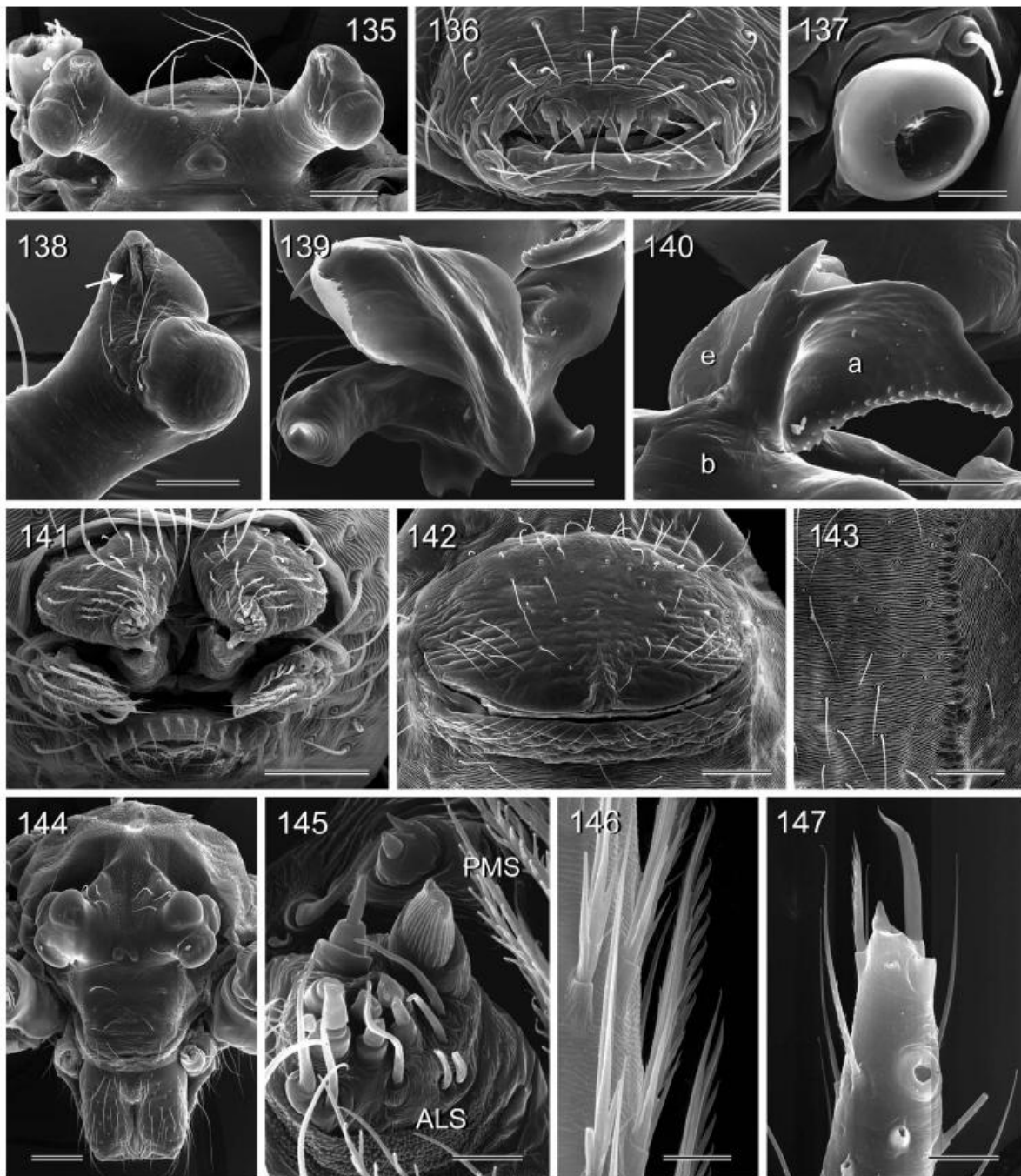
Easily distinguished from other pholcines by the unique palpal morphology (trochanter apophysis, procursus, bulbal apophysis; Figures 128, 129). Two closely related undescribed species occur in Mozambique and Tanzania (B.A. Huber, unpublished data); they differ by the shape of the procursi.

Male (Okavango)

Total body length 2.5, carapace width 0.7. Leg 1: 21.9 (5.7 + 0.3 + 5.5 + 8.9 + 1.5), tibia 2 missing, tibia 3: 1.9, tibia 4: 2.7, tibia 1 L/d: 89. Habitus as in Figures 41 and 42; carapace pale ochre-yellow with brown median band widening posteriorly, ocular

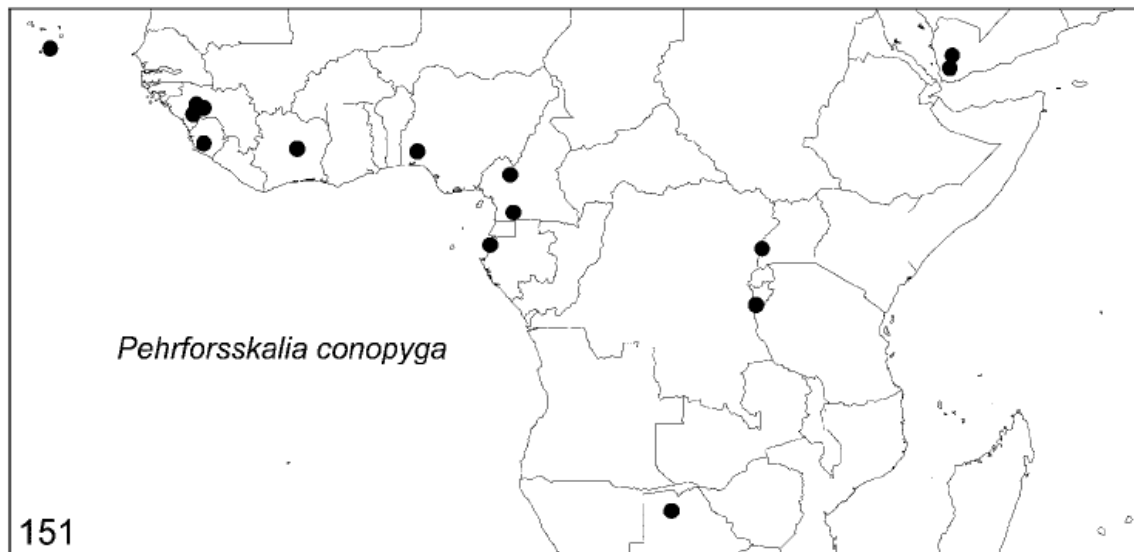


Figures 128–134. *Pehrforsskalia conopyga*. (128, 129) Left palp, prolateral and retrolateral views; (130) male chelicerae, frontal view; (131, 132) left procursus, ventral (131) and protero-dorsal (132) views; (133, 134) cleared female genitalia, ventral and dorsal views. Notes: a, appendix; b, bulb; e, embolus; pp, pore plate; pr, procursus; ta, trochanter apophysis. Scale lines: 0.2 mm (130–134), 0.3 mm (128, 129).



Figures 135–147. *Pehrforsskalia conopyga*. (135) Male ocular area, frontal view; (136) male gonopore with epianthrous spigots; (137) left male palpal tarsal organ; (138) left male eye stalk, frontal view (arrow points to possibly extensible area); (139) right procursus, distal view; (140) right appendix, prolateral view; (141) male spinnerets; (142) epigynum; (143) cuticular sculpturing on female abdomen, showing difference in ventral (left) and lateral (right) pattern (frontal side on top); (144) female prosoma, frontal (slightly dorsal) view; (145) female ALS and PMS; (146) comb hair on female left tarsus 4, prolateral view; (147) female palpal tarsus. Notes: a, appendix; b, bulb; e, embolus. Scale lines: 10 μm (137, 145, 146), 20 μm (147), 60 μm (136, 138–141), 100 μm (135, 142–144).

area and clypeus not darkened, sternum whitish, legs monochromous pale ochre-yellow, abdomen grey with some poorly visible marks dorsally and laterally. Distance PME–PME 400 μm , diameter PME 80 μm , distance PME–ALE 25 μm , distance AME–AME 35 μm ; diameter AME ~ 20 μm (lenses apparently present). Ocular area elevated, each triad on distinct stalk with cone-shaped projection medially of PME (with possibly expansible cuticle; Figures 135, 138), few stronger hairs posteriorly on ocular area. No thoracic furrow, clypeus unmodified. Chelicerae as in Figure 130, with unsclerotized lateral apophyses distally. Sternum wider than long (0.52/0.48), unmodified. Palps as in Figures 128 and 129, coxa with indistinct retrolateral projection, trochanter with distinctive apophysis that appears fused to femur, femur otherwise not modified, tarsal organ capsulate (Figure 137), procursus complex, distally with two main branches (one of them provided with two spine-like processes) and a black apophysis at their basis (Figures 131, 132, 139), bulb with simple, weakly sclerotized embolus, only one sclerotized projection with dorsal branch (Figures 128, 140; Deeleman-Reinhold and van Harten 2001 considered this to be homologous with the *Pholcus* uncus, but the position rather agrees with the appendix). Legs without spines and curved hairs, few vertical hairs; retrolateral trichobothrium on



Figures 150–151. Known distributions of *Spermophora dieke*, *Pholcus kakum*, and *Pehrforsskalia conopyga*. For *Nyikoa limbe*, see Huber (2007).

tibia 1 at 5%; prolateral trichobothrium missing on tibia 1, seen on tibiae 3 and 4; tarsal pseudosegments not visible in dissecting microscope. Spinnerets as in Figure 141; ALS with one widened, one pointed, and six cylindrically-shaped spigots; PMS with two small spigots. Gonopore with four epiandrous spigots (Figure 136).

Variation

In some males, median band on carapace extends to ocular area (Figure 41); patellae and tibia–metatarsus joints usually light brown; marks on abdomen variably distinct, sometimes missing. Tibia 1 in seven other males: 4.9–6.3 (mean 5.4).

Female

In general similar to male but triads closer together (distance PME–PME 170 μ m) and not on stalks, ocular area only slightly elevated (Figure 144). Tibia 1 in 16 females: 3.8–5.1 (mean 4.5). Epigynum simple oval plate externally (Figures 43, 142), with distinctive internal structures visible through cuticle (Figure 133); internal genitalia as in Figures 44 and 134. Tip of palpal tarsus ending in sclerotized cone accompanied by several strong bristles (Figure 147). Spinnerets and spigots as in male (Figure 145). Tarsus 4 with ventral row of comb-hairs (Figure 146).

Distribution

Widely distributed in Africa and Yemen (Figure 151). It is here newly recorded from Guinea, Sierra Leone, Côte d'Ivoire, Cameroon, Gabon, Uganda, Burundi, and Botswana.

Material examined

CAPE VERDE: S Tiago, São Jorge dos Orgaos [15°03'N, 23°37'W, 500 m a.s.l.], in grass in irrigation ditch, 31.i.1984 (J. Prinsen), 1 ♂ in RMNH; São Jorge dos Orgaos, xii.1999 (A. van Harten), 1 ♂ 5 ♀ in RMNH.

GUINEA: *Moyenne-Guinée*: near Sêbori, forest outside of cave (10°46.6'N, 12°17.4'W), 1010 m a.s.l., 22.xi.2008 (B.A. Huber), 1 ♂ in ZFMK; same data, 5 ♀ in pure ethanol, in ZFMK; near Doucki (10°59.0'N, 12°37.9'W), gallery forest, 990 m a.s.l., 23.xi.2008 (B.A. Huber), 1 ♂ in pure ethanol, in ZFMK. *Basse-Guinée*: near Koumbaya (10°09.9'N, 12°53.2'W), forest, 230 m a.s.l., 19.xi.2008 (B.A. Huber), 4 ♂ 2 ♀ in pure ethanol, in ZFMK.

SIERRA LEONE: "Mcy", E. Simon collection no. 15371, no further data, 1 ♀ in MNHN.

CÔTE D'IVOIRE: Bouaké [~7°41'N, 5°02'W], Expt. Warda, 29.vii.1994 (A. Russell-Smith), 1 ♂ in ZFMK; same locality, viii.1994 (A. Russell-Smith), 1 ♂ 7 ♀ in ZFMK.

NIGERIA: north of Ibadan, IITA (International Institute for Tropical Agriculture) [7°29.6'N, 3°53.4'E], fallow bush, 22.iv.1994 (A. Russell-Smith), 3 ♂ 2 ♀ in ZFMK; same locality, "RD verges", 15.v.1974 (A. Russell-Smith), 1 ♂ in BMNH.

CAMEROON: *South Region*: near Ebolowa (2°54.9'N, 11°08.3'E), 620 m a.s.l., underside of banana leaf, 12.iv.2009 (B.A. Huber), 1 ♂ in ZFMK. *Northwest Region*: near Bamenda, under trash and logs at roadside (6°00.5'N, 10°18.1'E), 1750 m a.s.l., 16./18.iv.2009 (B.A. Huber), 2 ♀ in pure ethanol, in ZFMK. Near Oku (6°14.2'N, 10°31.5'E), ~2200 m a.s.l., in pile of dead leaves on ground, 17.iv.2009 (B.A. and J.C. Huber), 2 ♀ in pure ethanol, in ZFMK.

GABON: Cap Santa Clara [0°31.6'N, 9°19.2'E], forest, 29.ix.1985 (A. Pauly), 1 ♂ in MRAC (172943).

UGANDA: Ruwenzori [~0.2°N, 30°E], 1952 (G.O. Evans), 3 ♂ 4 ♀ in BMNH.

BURUNDI: Cabara [4°06.8'S, 29°31.7'E], Miombo woodland, with *Brachystegia*, by hand, 850 m a.s.l., 23.iv.2002 (B. Nzigidahera), 1 ♂ (with one teratological palp) in MRAC (213920).

BOTSWANA: Okavango Delta, grassland on Boro River [~19°34'S, 23°03'E], "at KB 347", 23.xii.1977 (A. Russell-Smith), 1 ♂ in ZFMK.

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

p. 9



2. *Pebrforsskalia conopyga*, female with egg sac, Bamenda, Cameroon.

p. 22

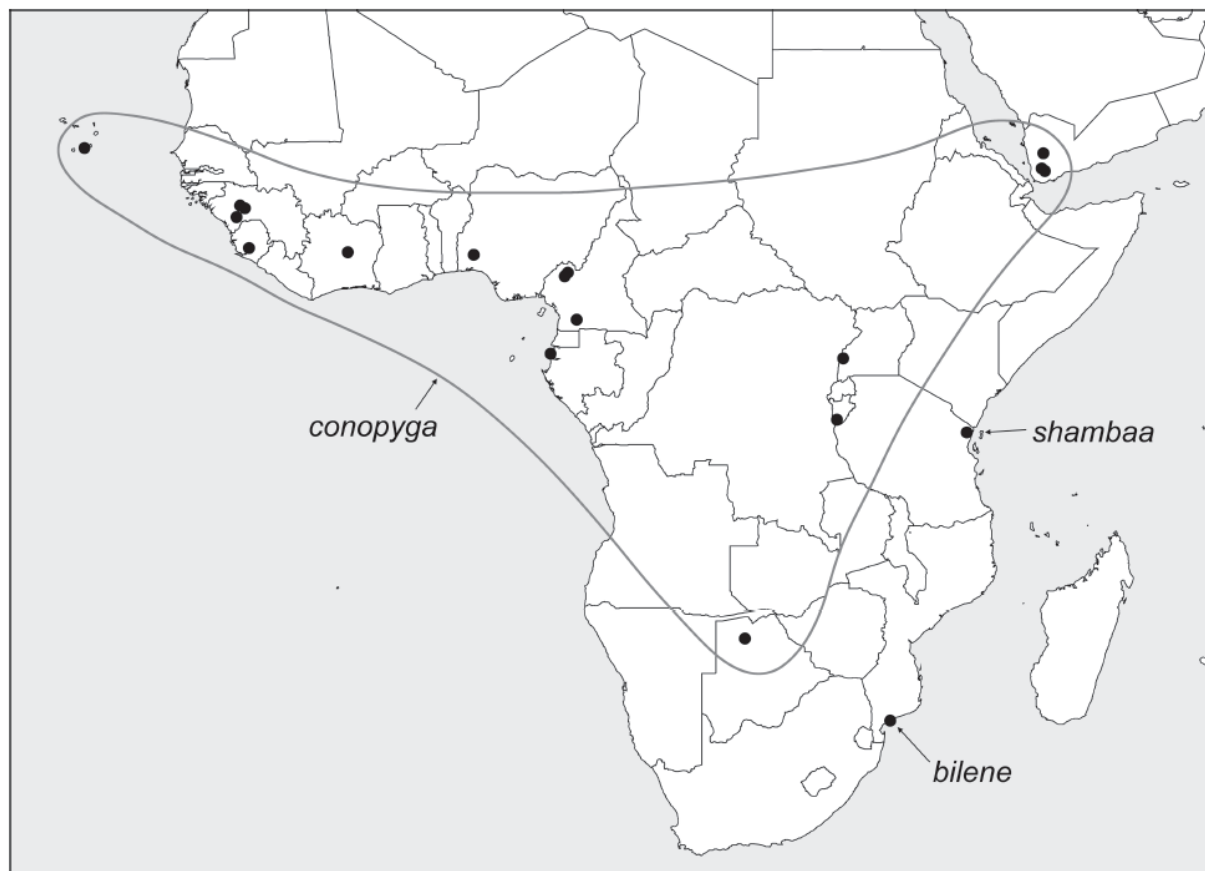


FIG. 75. Known distribution of *Pebrforsskalia*. Data for *Pe. conopyga* are from Huber (2009b).