

Revision of the genus *Pachomius* (Araneae, Salticidae)

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Summary

The genus *Pachomius* Peckham & Peckham, 1896 is removed from synonymy with *Phiale* C. L. Koch, 1846 and revalidated. *Pachomius dybowskii* (Taczanowski, 1871), type species of the genus, is redescribed and illustrated; *Tutelina albonotata* Caporiacco, 1947 is newly synonymised with it. Three new species are described: *Pachomius peckhamorum* from Panama, *P. sextus* from Brazil and Venezuela, and *P. villeta* from Colombia and Venezuela. *Pachomius maculosus* n. comb. is established for *Phiale maculosa* Chickering, 1946. *Pachomius niger* Banks, 1898 is considered a *species inquirenda*.

Introduction

The neotropical genus *Pachomius* Peckham & Peckham, 1896 comprises five species, three of which are new.

For ninety years *Pachomius* has been considered a synonym of *Phiale* C. L. Koch, 1846, as established by Simon (1903). Study of the type species *Attus dybowskii* Taczanowski, 1871 and several related species, has demonstrated that *Pachomius* has characteristics that justify the revalidation of the genus.

These spiders are rather generalised unidentate salticids and they have no somatic features unique to them. However, both male and female sexual organs possess particular structures for diagnosis.

Taczanowski had one immature male and several adult females of *Attus dybowskii* from Cayenne, French Guiana, that according to Prószyński (1971) are kept at the Instytut Zoologiczny, Warsaw. At least one of these females was sent to the Peckhams and is still well preserved at the Museum of Comparative Zoology, Harvard. When redescribing the species, the Peckhams (1896) added a description of the male. They wrote that they had numerous specimens from Guatemala, New Grenada and French Guiana. Only two males from New Grenada (Spanish colony of Colombia and Panama) are now at the Museum of Comparative Zoology with the label "Gen. type". I assume that these were the males described in the paper; the specimens are not in good condition and have the palpal bulb expanded; they look like *P. dybowskii* but the apical division of the tegulum is very different (Figs. 9, 12, 16, cf. Figs. 7, 14); they belong to another species, here described as *Pachomius peckhamorum* new species. Two other new species, *Pachomius villeta* from Colombia and Venezuela, and *P. sextus* from Brazil and Venezuela, are described.

Phiale maculosa Chickering, 1946 is here transferred to *Pachomius* and redescribed. *Pachomius flavescens* Peckham & Peckham, 1896, *P. similis* Peckham & Peckham, 1896 and *P. niger* Banks, 1898 were transferred to *Phiale* by Petrunkevitch (1911). The first two species are misplaced in *Phiale* and they do not belong in

Pachomius; they will be included in a new genus that will be named in a future paper. *Pachomius niger* Banks, 1898 is considered a *species inquirenda* because the species is unrecognisable from the original description, and the type specimen was not examined.

The format of the descriptions follows Galiano (1963a); leg spination is described as in Platnick & Shadab (1975) with small changes. All measurements are in millimetres.

Abbreviations used: AME = anterior median eyes, ALE = anterior lateral eyes, PME = posterior median eyes, PLE = posterior lateral eyes, v = ventral, p = prolateral, r = retrolateral, d = dorsal, MACN = Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", IZW = Instytut Zoologiczny, Warsaw, ad = apical division, cf = corrugated field, co = openings of copulatory ducts, cp = central pocket, d = denticles, dl = distal lobe, e = embolus, f = furrow, pl = prolateral lobe, rl = retrolateral lobe, tp = tegular projection.

The specimens used for this revision belong to the following collections: Museum of Comparative Zoology, Harvard, USA (MCZ, Dr H. W. Levi), Museu de Zoologia de la Universidade, São Paulo, Brazil (MZSP, Dr J. L. Leme), Museo Zoologico, Università, Florence, Italy (MZUF, Dr S. Mascherini). I would like to thank the above mentioned curators for making the specimens available.

Genus *Pachomius* Peckham & Peckham, 1896

Pachomius Peckham & Peckham, 1896: 80; Banks, 1929: 72.

Cyrene (part) F.O.P.-Cambridge, 1901: 226, 239.

Phiale (part) Simon, 1903: 695, 702, 707; Petrunkevitch, 1911: 690; 1928: 237; Chamberlin & Ivie, 1936: 27; Chickering, 1946: 202, 203, 215, 219; Roewer, 1954: 1059, 1061–1063, 1612; Bonnet, 1958: 3274, 3506, 3508.

Freya (part) Chamberlin & Ivie, 1936: 24; Bonnet, 1956: 1920.

Tutelina (part) Caporiacco, 1947: 33; 1948: 722.

Type species: Attus dybowskii Taczanowski, 1871.

Diagnosis: *Pachomius* belongs to the Hylleae group (*sensu* Simon, 1903) and is close to *Phiale* C. L. Koch, 1846 but differs in having a short, conical embolus with denticles and wrinkles at the base or tegular projections adjacent to the embolic base; there is no clear separation between the embolus and the tegulum. On the other hand, the embolus of *Phiale* is long, slender and smooth, clearly limited and with no denticles or tegular projections. The epigynum of *Pachomius* is rather simple, the copulatory openings are slit-like and situated in shallow atria, while in *Phiale* they are circular and placed in deeper depressions.

Description: Medium size (4.5–6.5 mm). Carapace longer than wide (width/length 0.67–0.72) with almost parallel sides, rather low (height/length 0.38–0.48), with dorsal surface gently convex, posterior declivity beginning gradually in posterior half of thoracic region (Figs. 2, 3). Apex of thoracic groove at same level as or a little behind posterior margins of PLE. Ocular quadrangle wider than long (length/width 0.68–0.75), occupying 43–49% length of carapace. Third row a little wider than first in females, generally equal in males. PME generally

closer to ALE than to PLE or equidistant. Clypeus low, about 13–34% diameter of AME in males, 15–20% in females, generally with white scales in males. Chelicerae in both sexes small, parallel, vertical, with two pro-marginal and one retromarginal teeth. Maxillae with outer border smoothly rounded (Fig. 13), exceptionally with a small hook (Fig. 11). Legs I-IV-III-II in males, IV-III-I-II in females. Leg spination (variation in parentheses), males: Femora I d 1-1-1, p 2; II d 1-1-1, p 2 (r 1, r 1-2); III d 1-1-1, p 1-2, r 1 (p 2, p 1-2, r 1-2); IV d 1-1-1, p 2, r 2 (p 1-2, r 1). Patellae I, II p 1; III, IV p 1, r 1. Tibiae I v 2-2-2, p 1-1; II v 1r-2-2, p 1-1; III d 1, v 1p-2 (v 2-2), p 1-1-1, r 1-1-1; IV d 1, v 1p-2 (v 2-2), p 1-1-1, r 1-1-1. Metatarsi I v 2-2 (p 1); II v 2-2, p 1 (r 1); III v 2-2, p 1-2, r 1-1-2; IV v 2-2, p 1-1-2, r 1-1-2. Females: similar to males except as follows: Femora II (r 1-1); IV p 1, r 1. Patellae I, II (p 0). Tibiae I (p 1); IV v 1p-2. Metatarsi I (p 0). Palp: femur stout (width/length 0.42–0.45) with white hairs on dorsal distal half; a ventral distal corrugated field (Figs. 4: cf, 18, 19) with nodules and wrinkles whose conformation is species-specific though not unique to *Pachomius* because it is also present in *Phiale gratiosa*. In normal position, the retrolateral lobe of the tegulum touches the corrugated area. The function of this structure is unknown. Patella short, with a notch on external basal border, which is deeper in species with a stout femur. Tibia short with a retrolateral apophysis, slightly bent ventrally. The middle division of the genital bulb is formed by the ovoid, sclerotised tegulum, which has a long basal retrolateral lobe (Fig. 10: rl). In *P. sextus* and *P. peckhamorum* there is also a short basal prolateral lobe (Figs. 8, 10; pl). The distal half of the tegulum is divided into two parts by an oblique furrow

(Fig. 10: f): a retrolateral distal lobe (Fig. 7: dl) which the sperm duct enters from the subtegulum, and a prolateral section that is continued as the apical division of the tegulum (Fig. 8: ad). These two parts of the middle tegulum could move apart a few microns by the inflation of a membranous area placed inside the furrow. The sperm duct runs peripherally, narrows at the apical division and enters the embolus (Figs. 10: e, 12: e) where it becomes the ejaculatory duct. The apical division of the bulb is not clearly separated from the middle division, nor is there a clear basal limit of the embolus, which is short and conical. In *P. dybowskii* and *P. sextus* there are small denticles at the base of the embolus (Figs. 8: d, 14, 17), while in *P. peckhamorum* and *P. villeta* there is a tegular projection prolateral to the base of the embolus (Figs. 10: tp, 12: tp, 15, 16). Epigynum: rather simple, with a shallow notch at the posterior border that corresponds to an internal central pocket (Fig. 25: cp); the openings of the copulatory ducts (Fig. 25: co) are more or less curved grooves according to the species; the copulatory ducts are short; the spermathecae are near the posterior border.

***Pachomius dybowskii* (Taczanowski, 1871)** (Figs. 1–3, 7, 13, 14, 18, 20, 24, 25)

Attus dybowskii Taczanowski, 1871: 96 (1 immature male, several adult female syntypes, from Cayenne, French Guiana, at IZW, not examined; 1 female lectotype, here designated, same locality, at MCZ, examined).

Pachomius dybowskii: Peckham & Peckham, 1896: 81, pl. vi, fig. 7–7c; Banks: 1929: 72 (*dybowskii*).

Cyrene dybowskii: F.O.P.–Cambridge, 1901: 226, 229, 239, pl. xx, figs. 16, 17, 17a.

Phiale dybowskii: Simon, 1903: 695, 702, 707; Petrunkevitch, 1911: 690; 1928: 237 (*dybowskii*); Chickering, 1946: 200, 202, 215, figs. 181–183 (= *Freya nannispina* = *Phiale lineola*); Roewer, 1954: 1059; Bonnet, 1956: 3506; Galiano, 1963b: 2, 6 (*dybowskii*) (= *Menemerus acostae*).

Freya nannispina Chamberlin & Ivie, 1936: 24, pl. vii, figs. 51, 52.

Phiale lineola Chamberlin & Ivie, 1936: 27, pl. viii, fig. 66.

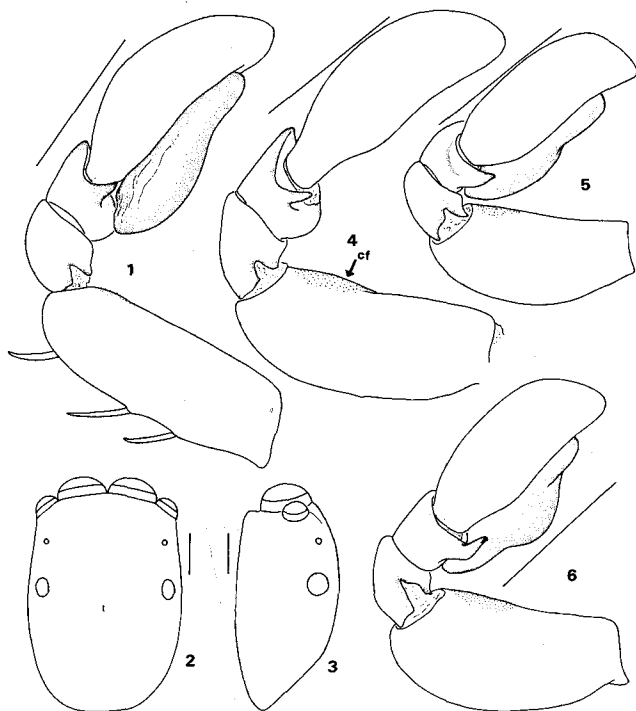
Tutelina albonotata Caporiacco, 1947: 33; 1948: 722, fig. 156 (1 male lectotype, here designated, from Conwarook and 1 immature paralectotype from Two Mouths, British Guiana, at MZUF, examined). NEW SYNONYMY.

Menemerus acostae Schenkel, 1953: 50, fig. 44.

Diagnosis: Males can be distinguished from those of the other species by the conical sclerotised embolus with irregular wrinkles and few denticles at the base (Fig. 14), bulb with only a retrolateral basal lobe, epigynum with almost horizontal grooves, copulatory ducts lateral to the body of the spermathecae which are close together.

Description: Female lectotype: Total length 5.73. Carapace length 2.50, width 1.77, height 1.13. Clypeus height 0.10. Ocular quadrangle length 1.20, first row width 1.60, third row width 1.63. Distances ALE-PME 0.30, PME-PLE 0.33. AME diameter 0.57. Epigynum: Figs. 20, 24, 25.

Male (No. 9209 MACN): Total length 5.70. Carapace (Figs. 2, 3) length 2.83, width 2.02, height 1.13. Clypeus height 0.13. Ocular quadrangle length 1.27, first row width 1.73, third row width 1.77. Distances ALE-PME 0.30, PME-PLE 0.40. AME diameter 0.63. Palp: Figs. 1, 7, 14, 18.



Figs. 1–6: 1, 4–6 Male palps. 1 *Pachomius dybowskii* (Tacz.); 4 *P. peckhamorum* n. sp. (cf = corrugated field); 5 *P. villeta* n. sp.; 6 *P. sextus* n. sp. 2, 3 *P. dybowskii*, male, carapace. 2 Dorsal view; 3 Lateral view. Scale lines = 0.5 mm.

Colour: See Chickering (1946) for both sexes.

Distribution: Mexico, Guatemala, Panama, Guyana, French Guiana, Colombia, Venezuela, Ecuador, Brazil.

Material examined: FRENCH GUIANA: Cayenne, 1 ♀ lectotype, here designated (sent to Peckham by Taczanowski) (MCZ). ECUADOR: *Provincia de los Rios*: Quevedo, April 1976 (M. Fritz), 1 ♂, 1 ♀, No. 9207 (MACN); Rio Palenque 50 km S. of Santo Domingo de los Colorados, August 1978 (A. Roig), 1 ♂, No. 9208 (MACN). BRAZIL: *Amazonas*: Reserva Ducke (30 km from Manaus), August 1971 (M. E. Galiano), 10 ♂, 7 ♀, No. 9209 (MACN); Manaus, September 1962 (K. Lenko), 1 ♀ (MZSP); *Pará*: Belém, August 1971 (M. E. Galiano), 1 ♀, No. 9210 (MACN). PANAMA: *Canal Zone*: Barro Colorado Is. (A. Chickering), 1 ♂ (MCZ). COLOMBIA: *Magdalena*: Río Frío, April 1916 (P. Darlington), 1 ♀ (MCZ); Aracata, June 1928 (P. Darlington), 1 ♀ (MCZ). MEXICO: *Miranda*: Curupas, 450 m elev., November 1986 (Bordon), 2 ♂, No. 9211 (MACN).

Remarks: Males and females of *P. dybowskii* were collected in the preserved forest of the Reserva Ducke and brought alive to Buenos Aires where copulation and maturation of the spiderlings were observed. The comparison of these females with the only type female available, demonstrated that they belong to the same species. Therefore the males from New Grenada

(Panama) described as belonging to this species by the Peckhams are here considered a new taxon (see *P. peckhamorum* n. sp., below).

***Pachomius peckhamorum*, new species** (Figs. 4, 9, 12, 16)

Pachomius dybowskii: Peckham & Peckham, 1896: 81 (males, not females).

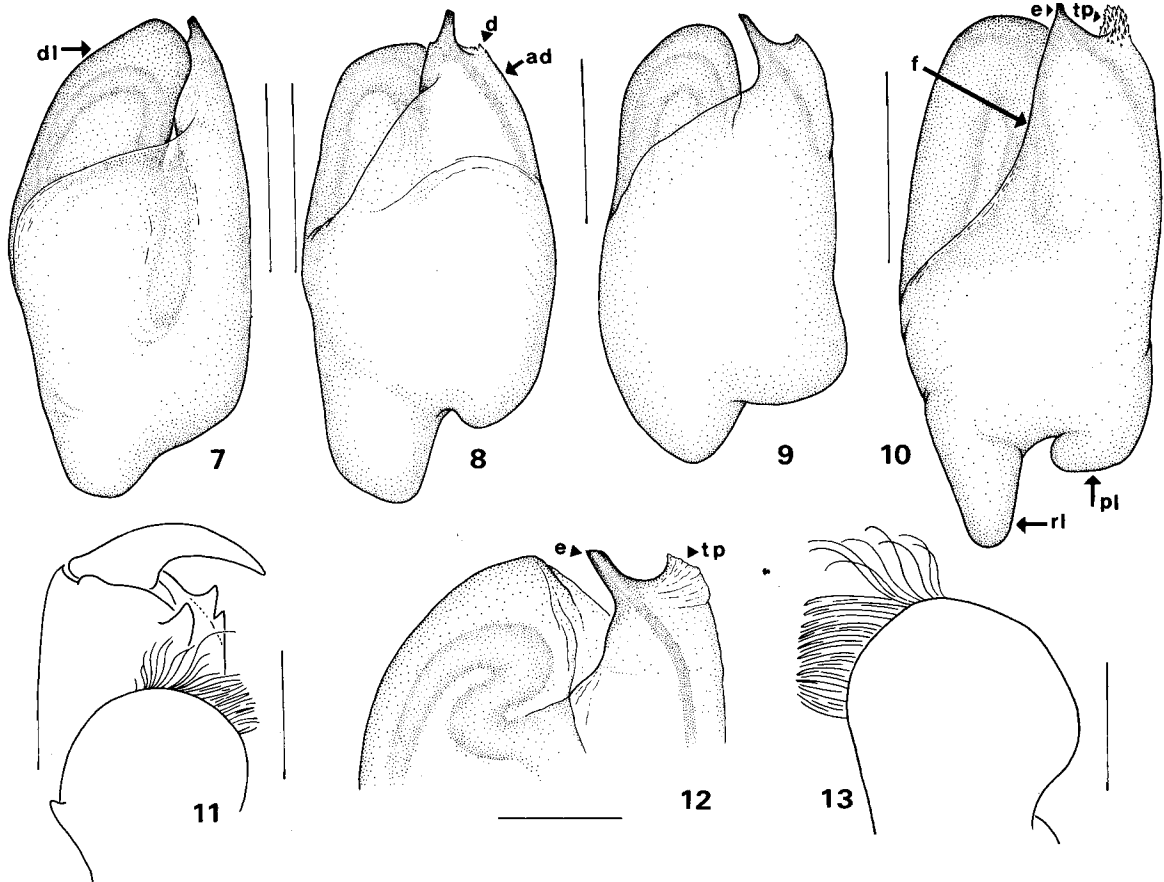
Etymology: The specific name is given in honour of G. W. and E. G. Peckham.

Diagnosis: *P. peckhamorum* can be distinguished from the other species by the membranous tegular projection adjacent to the prolateral side of the embolar base.

Description: Male holotype: Total length 5.18. Carapace length 2.50, width 1.80, height 1.17. Clypeus height 0.13. Ocular quadrangle length 1.13, first and third row width 1.50. Distances ALE-PME 0.33, PME-PLE 0.38. AME diameter 0.53. Palp (Figs. 4, 9, 12, 16): Middle division of tegulum with a prolateral and a retrolateral basal lobe. Tegular projection near prolateral base of embolus is membranous, cup-like and without denticles. Colour: The specimens are discoloured, but it seems that they had the general pattern of *P. dybowskii*.

Female: Unknown.

Material examined: PANAMA (original label: New Grenada, Keyserling coll.): male holotype and one male



Figs. 7-13: 7-10, 12 Right palpal bulbs. 7 *P. dybowskii*; 8 *P. sextus* n. sp.; 9 *P. peckhamorum* n. sp.; 10 *P. villeta* n. sp.; 12 *P. peckhamorum* n. sp., apical division and distal lobe of tegulum. 11 *P. villeta*, chelicera and maxilla; 13 *P. dybowskii*, maxilla. Abbreviations: ad = apical division, d = denticles, dl = distal lobe, e = embolus, f = furrow, pl = prolateral lobe, rl = retrolateral lobe, tp = tegular projection. Scale lines = 0.25 mm (7-10, 11, 13), 0.1 mm (12).

paratype, No. 769 in Peckham & Peckham coll., MCZ (New Grenada was a Spanish colony of Colombia and Panama).

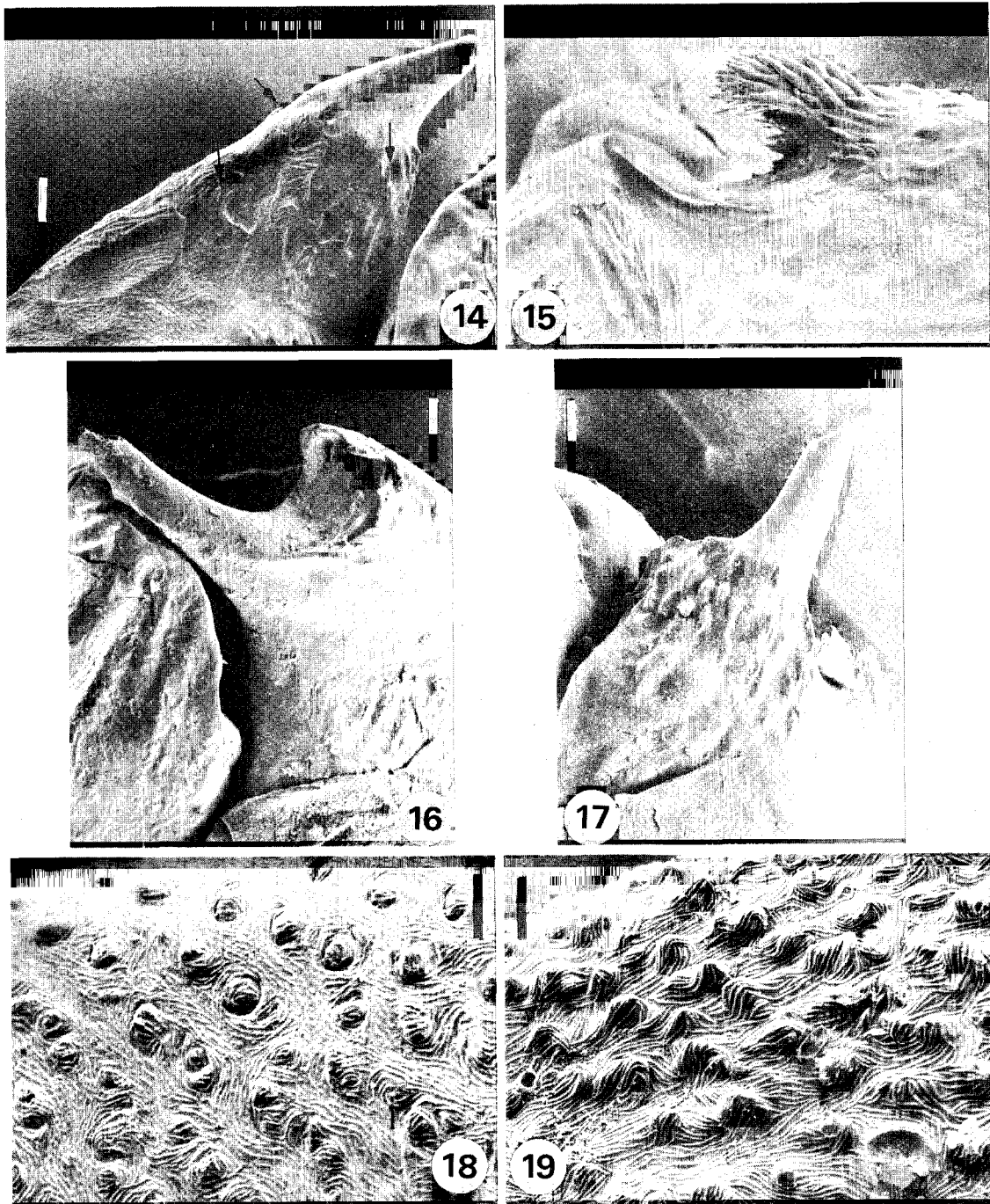
Remarks: The two males studied have the palps with distended bulbs. The illustration given by the Peckhams (1896: fig. 7d) did not show the membranous tegular projection near the embolic base; the drawing might have been taken from a true *dybowskii* specimen.

***Pachomius sextus*, new species** (Figs. 6, 8, 17, 23, 26, 27)

Etymology: The specific name is an arbitrary number given to the species.

Diagnosis: General appearance similar to that of *P. dybowskii*, but it differs by the denticles at the base of the embolus being more numerous and larger than in *dybowskii*, and by having a prolateral basal lobe on the tegulum. The epigynum differs in that the copulatory openings are almost vertical.

Description: Male holotype: Total length 5.05. Carapace length 2.67, width 1.97, height 1.23. Clypeus height 0.18. Ocular quadrangle length 1.20, first row width 1.62, third row width 1.60. Distances ALE-PME 0.30, PME-PLE 0.38. AME diameter 0.53. Palp (Figs. 6, 8, 17): Middle division of tegulum with two basal lobes, retrolateral larger than prolateral. Base of embolus



Figs. 14–19: Male palps. **14** *P. dybowskii*, left bulb, apical division (denticles arrowed). **15–17** Right bulbs, apical division. **15** *P. villeta* n. sp.; **16** *P. peckhamorum* n. sp.; **17** *P. sextus* n. sp. **18, 19** Corrugated field of femora. **18** *P. dybowskii*; **19** *P. villeta* n. sp. Scale lines = 0.01 mm.

surrounded by pointed denticles. Colour: Carapace dark brown; a broad marginal band on each side, a band on lower half of clypeus and a rhombic spot in thoracic region densely covered with bright yellow hairs, remaining parts of carapace with black hairs. Abdomen dark brown with yellowish hairs, somewhat translucent, a narrow basal stripe of bright yellow hairs and two dorsal transverse bands: one near the middle with yellow hairs on yellow integument and the other, shorter, near posterior end, with yellow hairs on brown integument. Legs I and II brown with white hairs as follows: a basal dorsal stripe on femora, a patch on both basal sides of patellae, a sub-basal transverse band on tibiae and basal rings on metatarsi and tarsi. Legs III and IV as I, but with two dorsal bands on femora. Palps with dense white hairs on distal half of femora and dorsally on patellae.

Female paratype: Total length 5.05. Carapace length 2.40, width 1.67, height 1.07. Clypeus height 0.10. Ocular quadrangle length 1.12, first row width 1.47, third row width 1.48. Distances ALE-PME 0.28, PME-PLE 0.37. AME diameter 0.50. Epigynum (Figs. 23, 26, 27): Epigynal grooves almost vertical and widely separated; posterior notch deeper than in *P. dybowskii*. Colour: Carapace blackish brown, cephalic region covered by honey-brown translucent hairs, sides and thoracic region with black hairs. Area below ALE and clypeus light brown, with few hairs. Abdomen dark brown covered by honey-brown hairs, a basal stripe of yellow hairs which continues laterally as far as middle, a central transverse

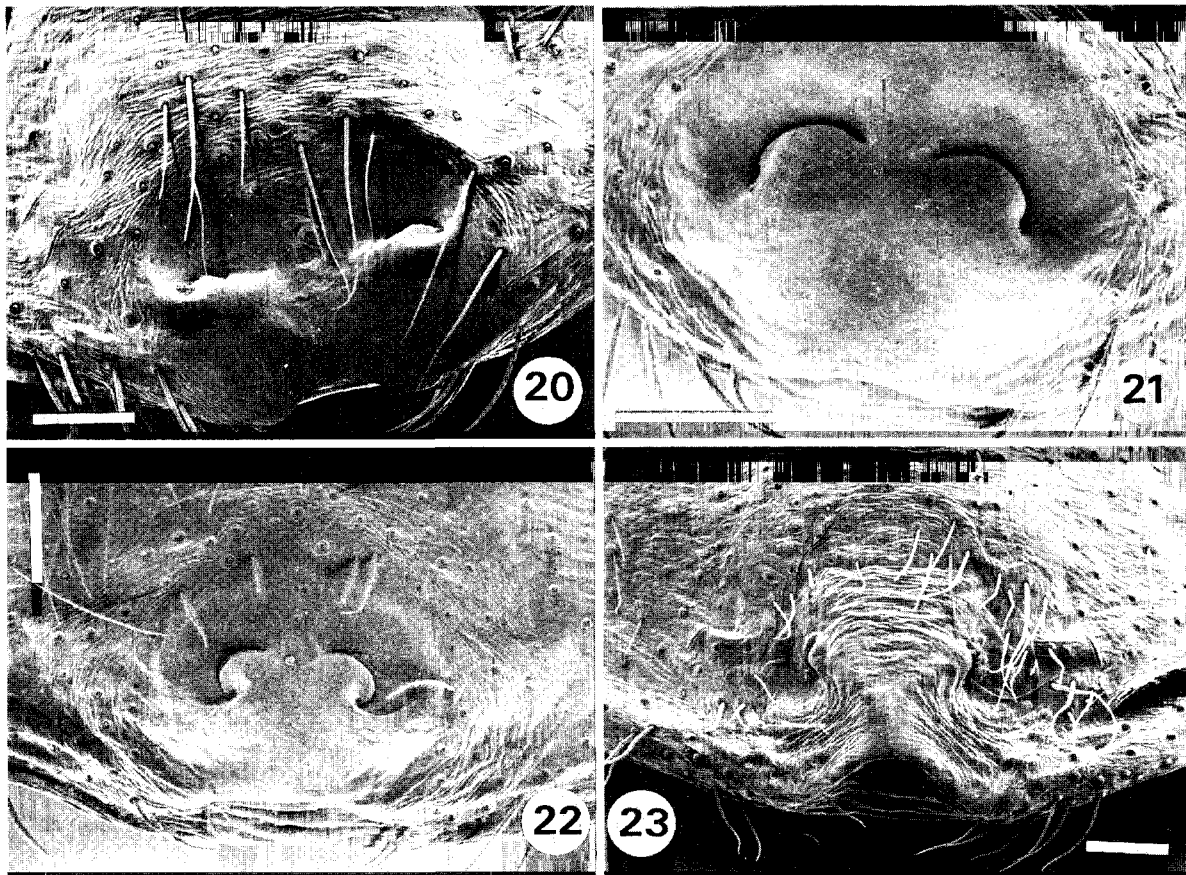
band of yellow integument with yellow hairs, limited at anterior and posterior borders by narrow stripes of black hairs. Apical region of abdomen black, almost bald. Venter blackish with a yellow postepigastric patch. Legs I and II brown, femora with a yellow dorsal stripe with white hairs, rest yellow with black prolateral stripes from patellae to metatarsi. Legs III and IV brown, femora and tibiae with two dorsal yellow bands with white hairs, patellae yellow with distal dorsal half brown, metatarsi brown, tarsi yellow. Palps light brown.

Variation: In some dark males the median transverse band of the abdomen is missing and the apical band is inconspicuous. The bands and spots of some males may be covered by white hairs instead of yellow.

Distribution: Brazil, Venezuela.

Material examined: BRAZIL: Amazonas: Reserva Ducke (30 km from Manaus), August 1971 (M. E. Galiano), male holotype and 1 ♀ paratype (MZSP); 5 ♂, 1 ♀ paratypes, No. 9214 (MACN); Ponta Negra (near Manaus), August 1971 (M. E. Galiano), 2 ♀ paratypes, No. 9215 (MACN). VENEZUELA: Territorio de Amazonas: Caño Paso, August 1979 (A. Martinez), 1 ♂, No. 9216 (MACN).

Remarks: Males and females were collected in the preserved forest of Reserva Ducke together with other specimens of related groups. The general appearance and coloration of both sexes is very similar, but it remains to be seen if the match is correct.



Figs. 20–23: Epigynes, ventral view. **20** *P. dybowskii*; **21** *P. villeta* n. sp.; **22** *P. maculosus* (Chickering); **23** *P. sextus* n. sp. Scale lines = 0.1 mm.

Pachomius villeta, new species (Figs. 5, 10, 11, 15, 19, 21, 28, 29)

Etymology: The specific name is a noun in apposition taken from the type locality.

Diagnosis: Males can be easily recognised by the tegular projection adjacent to the prolateral side of the embolus which is totally covered by sharp pointed denticles (Figs. 10, 15). The epigynal copulatory grooves are closer together and more curved than in *P. dybowskii* (Figs. 21, 28, cf. Figs. 20, 25),

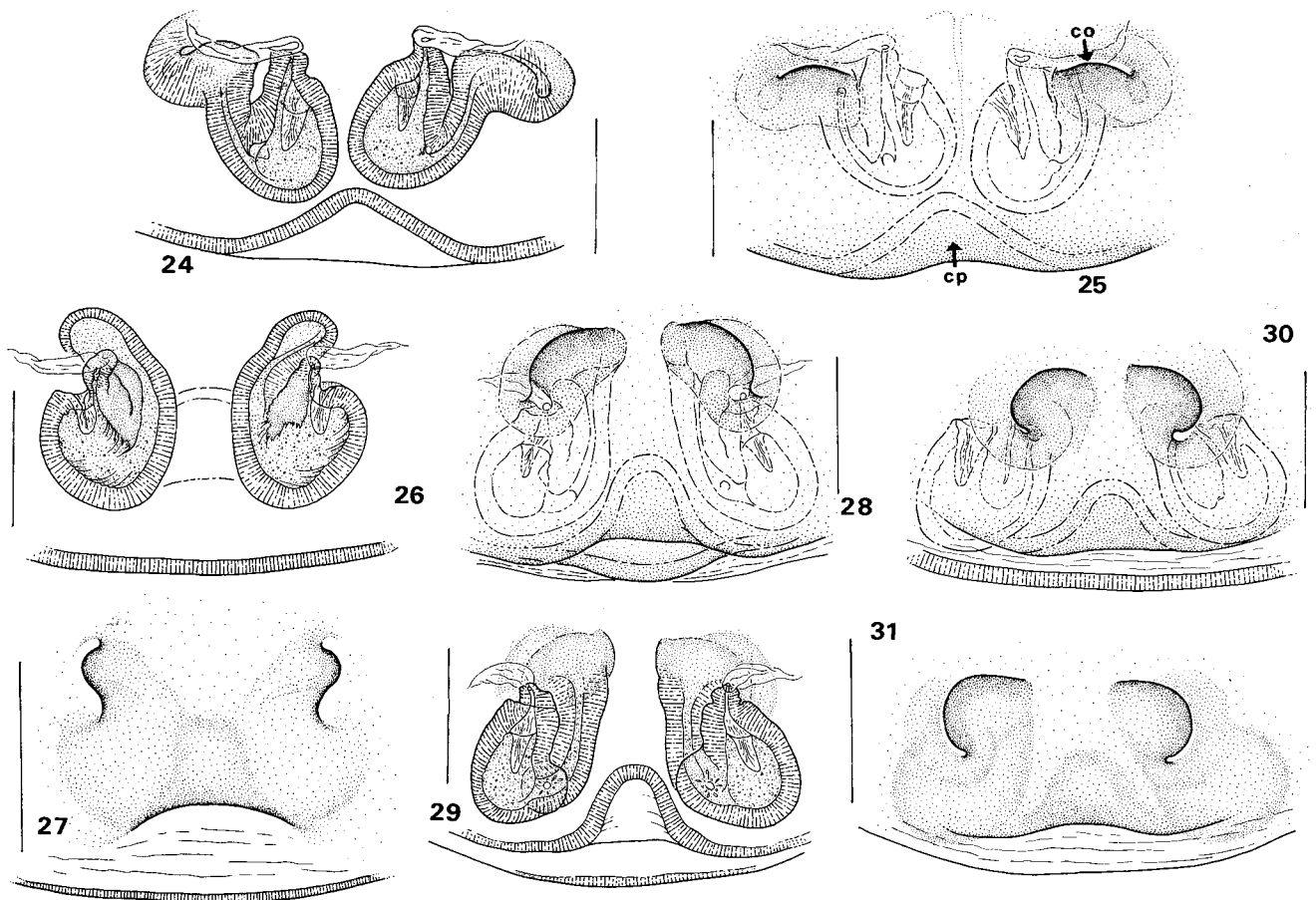
Description: Male holotype: Total length 5.05. Carapace length 2.40, width 1.73, height 1.07. Clypeus height 0.07. Ocular quadrangle length 1.05, first row width 1.40, third row width 1.42. Distances ALE-PME 0.25, PME-PLE 0.30. AME diameter 0.50. Maxillae (Fig. 11): Outer distal border gradually rounded, with a small hook. Palp (Figs. 5, 10, 15, 19): Middle division of tegulum with two basal lobes, retrolateral larger than prolateral. Apical division bears a small conical projection, totally covered by sharp denticles. Colour: Carapace dark brown; on anterior half of thoracic region, a broad crescent-shaped band of light brown integument covered with white hairs, the lateral branches of which run on each side of cephalic region where they become narrow; clypeus and area below ALE with few hairs. Abdomen dark brown with golden brown hairs; an inconspicuous basal stripe with yellowish white hairs extends laterally as far as

middle. Venter dark brown. Legs dark brown, tarsi lighter. Palps blackish brown with a dense patch of white hairs on distal dorsal half of femur.

Female paratype: Total length 5.33. Carapace length 2.17, width 1.53, height 1.00. Clypeus height 0.07. Ocular quadrangle length 1.00, first row width 1.32, third row width 1.35. Distances ALE-PME 0.25, PME-PLE 0.28. AME diameter 0.48. Epigynum (Figs. 21, 28, 29): Copulatory ducts mesal to spermathecae and almost parallel. Colour: Carapace yellow with cephalic region brown; two light brown longitudinal bands on thoracic slope. Cephalic region and anterior half of thoracic region with white hairs regularly distributed. Clypeus yellow, with a few long bristles. Thoracic region with sparse brown hairs. Abdomen yellow with black spots and stripes, apex black with a pair of clearly visible white spots. Legs, palps and mouth parts yellow. Sternum yellow with a brown marginal band.

Variation: Abdominal pattern: some males have two pairs of lateral spots of white hairs, one at the end of the lateral stripes and the other near the apex; the dorsal hairs may be reddish brown.

Material examined: COLOMBIA: *Cundinamarca*: Villeta, 17 June 1973 (P. B. Schneble), male holotype, 2 ♂ and 1 ♀ paratypes (MCZ); 1 ♂, 1 ♀ paratypes, same locality and collector, No. 9217 (MACN); *Antioquia*: Fredonia, 1100 m elev., February 1964 (P. B. Schneble), 1 ♂ paratype, No. 9218 (MACN); Medellin, January



Figs. 24-31: Epigynes. **24** *P. dybowskii*, dorsal view; **25** Ditto, ventral view (co = copulatory opening, cp = central pocket); **26** *P. sextus* n. sp., dorsal view; **27** Ditto, ventral view; **28** *P. villeta* n. sp., ventral view; **29** Ditto, dorsal view; **30** *P. maculosus* (Chickering), specimen No. 9212 (MACN), ventral view; **31** *P. maculosus* holotype, ventral view. Figs. 24-26, 28-30, after clearing; Figs. 27 and 31 without clearing. Scale lines = 0.1 mm.

1963 (P. B. Schneble), 1 ♂ paratype (MCZ); *Calif.*: Valle, 1000 m elev., April 1964 (P. B. Schneble), 1 ♀ paratype (MCZ); January 1977 (H. W. Levi, hillside, sweeping), 1 ♂ paratype (MCZ). VENEZUELA: *Carabobo*: San Esteban, December 1939 (Onduzo), 1 ♂ paratype (MCZ).

***Pachomius maculosus* (Chickering, 1946), new combination** (Figs. 22, 30, 31)

Phiale maculosa Chickering, 1946: 223, fig. 187 (female holotype from Panama, Canal Zone, Biological Area, July 1939, Chickering coll., in MCZ, examined); Roewer, 1954: 1061.

Diagnosis: The species is close to *P. villeta* but the females are larger and the abdominal pattern is different. The grooves (copulatory openings) of the epigynum are more curved and placed in deeper atria than in *P. dybowskii*.

Description: Female holotype: Total length 5.85. Carapace length 2.40, width 1.67, height 0.93. Clypeus height 0.08. Ocular quadrangle length 1.02, first row width 1.38, third row width 1.42. PME equidistant from ALE and PLE. AME diameter 0.50. Epigynum (Fig. 31): Copulatory ducts mesal to body of spermathecae which are widely separated. Colour: See Chickering (1946).

Distribution: Panama, Venezuela.

Material examined: VENEZUELA: *Carabobo*: San Esteban, Río Patanemo, September 1975 (Cesari), 2 ♀, No. 9212 (MACN); San Esteban, August 1975 (A. Martinez), 1 ♀, No. 9213 (MACN). PANAMA: *Canal Zone*: Red Tank, July 1924 (N. Banks), 2 ♀ (MCZ).

Remarks: The specimens from Red Tank have the abdomen brown with two narrow yellow stripes extending dorsolaterally and a central longitudinal yellow band from the basal third to the proximity of the apex, which is black. It is possible that this species may be polymorphic, as has been described for the *Phiale gratiosa* and *Phiale mimica* species groups (Galiano, 1981a, 1981b). Figures 22 and 30 correspond to the specimens from Venezuela, No. 9212 (MACN).

References

- BANKS, N. 1898: Arachnida from Baja California and other parts of Mexico. *Proc. Calif. Acad. Sci.* (Ser. 3, Zool.) **1**(7): 203–296.

- BANKS, N. 1929: Spiders from Panama. *Bull. Mus. comp. Zool. Harv.* **69**(3): 51–96.
- BONNET, P. 1956: *Bibliographia Araneorum* **2**(2): 919–1925; 1958, **2**(4): 3027–4230. Toulouse.
- CAMBRIDGE, F. O. P.- 1901: Arachnida. Araneida. *Biologia cent.-am.* (Zool.) **2**: 193–312.
- CAPORIACCO, L. 1947: Diagnosi preliminari di specie nuove di aracnidi della Guiana Britannica, raccolte dai professori Beccari e Romiti. *Monitore zool. ital.* **56**(1–6): 20–34.
- CAPORIACCO, L. 1948: Arachnida of British Guiana collected in 1931 and 1936 by Professors Beccari and Romiti. *Proc. zool. Soc. Lond.* **118**(3): 607–747.
- CHAMBERLIN, R. V. & IVIE, W. 1936: New spiders from Mexico and Panama. *Bull. Univ. Utah biol. Ser.* **27**(5): 1–103.
- CHICKERING, A. 1946: The Salticidae (spiders) from Panama. *Bull. Mus. comp. Zool. Harv.* **97**: 1–474.
- GALIANO, M. E. 1963a: Las especies americanas de arañas de la familia Salticidae descritas por Eugène Simon. Redescripciones basadas en los ejemplares típicos. *Physis, B. Aires* **23**(66): 273–470.
- GALIANO, M. E. 1963b: Nota sobre arañas del grupo Marpisseae (Araneae, Salticidae). *Revta Soc. ent. argent.* **24**: 1–8.
- GALIANO, M. E. 1981a: Revisión del género *Phiale* C. L. Koch, 1846 (Araneae, Salticidae). III. Las especies polimórficas del grupo *mimica*. *J. Arachnol.* **9**(1): 61–85.
- GALIANO, M. E. 1981b: Revision of the genus *Phiale* C. L. Koch, 1846. IV. The polymorphic species of the *gratiosa* group. *Bull. Br. arachnol. Soc.* **5**(5): 205–216.
- PECKHAM, G. W. & PECKHAM, E. G. 1896: Spiders of the family Attidae from Central America and Mexico. *Occ. Pap. Wis. nat. Hist. Soc.* **3**: 1–101.
- PETRUNKEVITCH, A. 1911: A synonymic index-catalogue of spiders of North, Central and South America with all adjacent islands, Greenland, West Indies, Terra del Fuego, Galapagos, etc. *Bull. Am. Mus. nat. Hist.* **29**: 1–790.
- PETRUNKEVITCH, A. 1928: Systema Araneorum. *Trans. Conn. Acad. Arts Sci.* **29**: 1–270.
- PLATNICK, N. I. & SHADAB, M. U. 1975: A revision of the spider genus *Gnaphosa* (Araneae, Gnaphosidae) in America. *Bull. Am. Mus. nat. Hist.* **155**(1): 1–66.
- PRÓSZYŃSKI, J. 1971: Catalogue of Salticidae (Aranei) specimens kept in major collections of the world. *Annls zool. Warsz.* **28**(17): 367–519.
- ROEWER, C. F. 1954: *Katalog der Araneae von 1758 bis 1940, bzw. 1954* **2b**: 925–1751. Brussels.
- SCHENKEL, E. 1953: Bericht über einige Spinnentiere aus Venezuela. *Verh. naturf. Ges. Basel* **64**(1): 1–57.
- SIMON, E. 1903: *Histoire naturelle des araignées* **2**(4): 669–1080. Paris.
- TACZANOWSKI, L. 1871: Les aranéides de la Guyane Française. *Trudy russk. ent. Obsch.* (= *Horae Soc. ent. ross.*) **8**: 32–132.