

**THE IDENTITY OF *PACHYLOIDES TUCUMANUS* N. COMB.
(EX *BOSQIA*), WITH A PROPOSAL OF GENERIC SYNONYMY
AND THE NEW NAME *PACHYLOIDES YUNGARUM*
(OPILIONES, GONYLEPTIDAE, PACHYLINAE)**

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ABSTRACT. The nominal genus *Bosqia* Canals 1933 is determined to be junior subjective synonym of *Pachyloides* Holmberg 1878. This results in the new combination *Pachyloides tucumanus* (Canals 1933) for the only species hitherto assigned to *Bosqia*, and in a secondary homonymy with *Pachyloides tucumanus* Canals 1943. For the latter, the new name *Pachyloides yungarum* is proposed. The article provides a redescription of *Pachyloides tucumanus* (Canals 1933) new combination, including the male external and genital morphology (previously unknown). New records of the species are also reported.

RESUMEN. Se determina la sinonimia del género nominal *Bosqia* Canals 1933 bajo *Pachyloides* Holmberg 1878. Este cambio resulta en la nueva combinación *Pachyloides tucumanus* (Canals 1933) para la única especie hasta ahora incluida en *Bosqia*, así como en la homonimia secundaria con *Pachyloides tucumanus* Canals 1943; para esta última especie se propone el nombre nuevo *Pachyloides yungarum*. El artículo presenta una redescrición de *Pachyloides tucumanus* (Canals 1933), comb. n., incluyendo la morfología externa y genital del macho, hasta ahora desconocido. Se proporcionan nuevos registros de la especie.

This paper deals with the identity of one of the poorest known gonyleptids of Argentina, which is the type and sole species of an equally neglected nominal genus. *Bosqia tucumana* was described by Canals (1933) on the basis of a single female, likely a subadult. For more than 60 years, this was the only material known to belong to the species. All further citations just refer to the original description.

In the scope of an ongoing systematic survey of the harvestmen of the Argentinian “yungas” (montane rainforests in the northwest of the country), I was able to gather some specimens which fit well in *Pachyloides* Holmberg 1878, but not to any species included in this genus. Those specimens seem to belong to a quite rare species, and appear at a first glance to be slightly more slender and long-legged than its congeners. As stated elsewhere, *Pachyloides* evidences a remarkable diversity in the yungas, especially on the eastern slopes of the Nevados del Aconquija and adjacent chains (province of Tucumán): to date, I have found in the whole area not less than 17 species and/or subspecies, among named and unnamed entities (Acosta 1996;

Acosta & Maury 1998). The genus now contains 15 nominate species, which, aside from the yungas elements, comprise the type species *Pachyloides thorellii* Holmberg 1878 and six south Brazilian species (in the future these six species may be excluded from the genus, see Acosta 1999).

Pachyloides was until recently defined by the tarsal formula 6:n [= “more than six”]: 7:7, but its diagnosis and scope were slightly modified, by adding to it species with 6 tarsomeres in legs III and IV (Acosta 1996). The character, number of tarsal segments has been—following the Roewerian thinking—somewhat misused before, and often just a difference of one tarsomere in one pair of legs was enough for the erection of a new generic entity (actually, except leg II, whose variability was deemed not to be relevant). It is now clear that such minimal difference, taken alone, is not only trivial but also useless at this level. Moreover, some *Pachyloides* species bear some degree of intraspecific variability in the involved pairs of legs (Acosta 1992, 1996).

All these considerations concern the defi-

dition of the nominal genus *Bosqia*. Seemingly, Canals (1933) decided to assign *tucumana* to a new genus (instead of relating it to an already named one) because of the “unique” tarsal formula 6:n:6:7. This feature and the supposedly unarmed ocular mound are the only two characters mentioned in the generic diagnosis that are different from *Pachyloides* (according to its traditional diagnosis, the latter has paired armature on the ocular mound). The study of the above mentioned “long-legged” *Pachyloides* revealed to me that this material and Canals’ *Bosqia tucumana* are conspecific. The tarsal formula, alleged to be a generic character, is likely just an individual variant: only one specimen was known to Canals (right tarsus III actually lost!). Further, in some of the specimens I examined legs IV have 8 tarsomeres ($5/24 = 20.8\%$ of studied tarsi). Thus, even though the available material is still scarce, this species show unusual variation in this feature.

These observations lead to the following taxonomic and nomenclatural conclusions: (1) *Bosqia* is to be regarded as junior synonym of *Pachyloides*, confirming what I suspected in a previous paper (Acosta 1992); (2) This implies the new combination *Pachyloides tucumanus* for Canals’ (1933) species; (3) Since there is another species *Pachyloides tucumanus* Canals 1943, a secondary homonymy arises: for the latter (junior homonym) I propose here the new name *Pachyloides yungarum*; (4) A further slight modification of the generic diagnosis of *Pachyloides* is needed: Tarsal formula will be now 6:n:6-7:6-8 (*cf.* diagnosis by Acosta 1996). The present article provides a redescription of *P. tucumanus* new combination (males are here described and illustrated for the first time), together with the formal proposal of the mentioned nomenclatural changes at generic and specific levels.

The following collections have been studied: BMNH = British Museum (Natural History); IML = Instituto Miguel Lillo, San Miguel de Tucumán; LEA = Collection of the author, Córdoba; MACN = Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires.

Pachyloides Holmberg

Pachyloides Holmberg 1878:72 [Type species: *Pachyloides thorellii* Holmberg 1878, by monotypy].

Pachyloides: Ringuelet 1959:351 [synonymy].

Acosta 1996:4 [= *Daguerreia*]

Daguerreia Canals 1933:5. Mello-Leitão 1939:619, 1935:98 [*“Daguerrera”*]. Soares & Soares 1954: 244 (in part). Ringuelet 1959:288 (in part). Acosta 1992:170 (in part).

Bosqia Canals 1933:8. Mello-Leitão 1935:98, 1939: 620. Soares & Soares 1954:238. Ringuelet 1959: 286. Acosta 1992:170. NEW SYNONYMY.

Pachyloides tucumanus (Canals) new combination

Figs. 1–7

Bosqia tucumana Canals 1933:8, fig. 3. Mello-Leitão 1939:620. Soares & Soares 1954:238. Ringuelet 1959:286. Galiano & Maury 1979:318.

NEC: *Pachyloides tucumanus* Canals 1943 (invalid by secondary homonymy; see new name below).

Type material.—Holotype female (MACN 4589): Anfama (Tucumán), June 1933, J.M. Bosq coll.; examined.

Type locality.—Anfama (1600 m), province of Tucumán, Argentina (26°45’S, 65°34’W).

Diagnosis.—Habitus more slender than congeners, with comparatively longer legs and pedipalps (*cf.* fig. 9); tarsal formula 6:n:6-7:6-8; ocular mound very low, with two small tubercles or unarmed; granulation on dorsal scutum inconspicuous; trochanter IV (male) with a lobulate prolateral apophysis, without a dorsoapical, finger-like apophysis; femur IV (male) with a retrolateral row of 8–10 apophyses. Excluding *Pachyloides maculatus* (Canals 1933), *P. tucumanus* new combination is the only *Pachyloides* in its range area lacking the mentioned finger-shaped apophysis on trochanter IV (*P. hades* Acosta 1989, *P. cochuna* Acosta 1996 and *P. yungarum* new name, all have this feature). *Pachyloides maculatus* is more robust and granulous, with very dark coloration; males bear a more complicated armature on the trochanter IV, though not the above cited apophysis (Canals 1933). There are two other species devoid of this apophysis, *P. sicarius* (Roewer 1925) and *P. borellii* (Roewer 1925), both having 6:n:6:6 tarsomeres and a higher ocular mound; additionally, the apophyses on males’ femur IV are not equally-sized as in *P. tucumanus* new combination (Acosta 1992). *Pachyloides tucumanus* new combination shows the closest overall similarity to *P. sicarius*.

Distribution and habitat.—*Pachyloides tucumanus* new combination seems to be a

Table 1.—Measurements (mm) of female holotype and the illustrated male of *Pachyloides tucumanus* new combination.

	Holotype female	Male
Scutum length/maximal width	5.04/4.12	6.99/5.72
Prosoma length/width	1.95/2.60	2.48/3.09
Leg I, total/femur length	10.88/2.67	16.05/3.89
Leg II, total/femur length	16.30/3.98	26.25/6.31
Leg III, total/femur length	13.30/3.48	20.33/5.45
Leg IV, total length	17.70	27.70
trochanter	0.92	1.98
femur	4.34	6.44
patella	1.64	2.54
tibia	3.55	5.82
metatarsus	4.86	7.61
tarsus	2.39	3.31
Pedipalp, total/femur length	8.24/2.09	11.01/2.80
Chelicera, distal piece length/width	1.94/0.70	2.62/0.91
Ocular tubercle, width/height	0.83/0.23	1.01/0.34

rare species. The holotype and some material were collected in the “aliso” (*Alnus acuminata* H.B.K.) belt of the phytogeographic province of the Yungas (Brown 1995). Other specimens come from the subtropical rainforests belt (lower altitude) in the same phytogeographic unit. Known localities are restricted to the Argentinian province of Tucumán, on the eastern slopes of the Nevados del Aconquija chain; elevation of records ranges from about 800–1750 m. In its southernmost locality (La Banderita) I captured the species together with a form allied to *P. maculatus* (likely an unnamed subspecies) and a yet undescribed gonyleptid, belonging to the subfamily Metasarcinae Kury 1994 (Maury pers. comm.). Material from the Río Los Sosa valley was found with *Pachyloides maculatus* s.s., *Pachyloides yungarum* new name, and again the above cited Metasarcinae. *Pachyloides tucumanus* new combination share the type locality with *P. maculatus* (Canals 1933).

Description.—General coloration in most preserved specimens uniform pale hazel, only a single male dark hazel. Faint pigment covers the scutum, forming a reticulate pattern on the prosoma, on ventral and anterolateral part of coxa IV. Measurements of the holotype and illustrated male are given in Table 1. Dorsal scutum length: males from 6.9–7.3 mm (\bar{x} = 7.1 mm, n = 5), females from 5.0–6.3 mm (\bar{x} = 5.8 mm, n = 7). Prosoma almost without granules. Eye mound very low, bearing a pair of minute tubercles, sometimes lacking (e.g.,

the holotype). Scutum granulation in general less conspicuous, especially on the anterior areas, whilst granules become more pearl-like on area V and free tergites. Area I either undivided (6 of 12 individuals, among them the holotype), divided (4 of 12 individuals), or with longitudinal division incipient (2 of 12). Areas I–V and free tergites with one row of granules; and additional, sparse granulation on the anterior half of areas I–IV. Lateral areas with a row of granules. All appendages long and slender. Mesal-subapical spine of pedipalp femur strong. Legs I–III unarmed. Tarsal formula: 6:7-11:6-7:6-8 (6:7:6/lost:7 in the holotype). Variability of number of tarsomeres on legs II–IV is given in Table 2.

Male: Leg IV. Coxa smooth, with a strong, curved apophysis, slightly pointing sideways on dorsal view. Trochanter with a prolateral, lobulate apophysis on the anterior half; two small, acute apophyses on the posterior border: one dorsoapical, the other retroapical. Femur straight, with a slight dorsal thickening on its base; dorsal and prodorsal surfaces with rows of pearl-like granules; retrolateral row of about 8–10 acute apophyses, normally smaller proximally; proventral row of smaller apophyses, which ends in a larger, apical one; retroventral row—parallel to the former—of conic tubercles, ending in a retroapical apophysis (of equal size or larger than the proventral one); posterior border with two further, somewhat blunt apophyses (mediodorsal and retrodorsal). Patella and tibia covered by tiny,

Table 2.—Variation in number of tarsomeres on legs II, III and IV of *Pachyloides tucumanus* (Canals 1933) new combination.

Number of tarsomeres	6	7	8	9	10	11	<i>n</i>
Males							
Leg II	—	—	1	4	3	2	10
Leg III	—	10	—	—	—	—	10
Leg IV	1	5	4	—	—	—	10
Females							
Leg II	—	2	1	8	3	—	14
Leg III	1	12	—	—	—	—	13
Leg IV	—	13	1	—	—	—	14

acute granules, the latter segment bear three rows of taller ones: proventral, retroventral and retrolateral; in some specimens, the two former end in small apophyses (retroventral larger). Penis is illustrated in Figs. 4–6.

Female: Scutum granulation much less conspicuous than male. Leg IV armed only with a short, acute apophysis on the prolateral side of coxa.

Discussion.—Since *Bosqia tucumana* was described from a female (this sex usually provides very few, if any, diagnostic characters in Pachylinae), I realize that assuming the holotype and the studied material to be conspecific may not be completely uncontroversial; nevertheless, several lines of evidence strongly support that view. Placed side by side, the females of that material and the holotype of *Bosqia tucumana* are indistinguishable with regard to, among other features, the eye mound (of about equal size as the median mound on the front border, cf. Figs. 7, 8), the relative length of legs, and the general granulation and shape of body. My survey in the yungas in the neighborhood of the type locality has so far detected two additional *Pachyloides* species: *P. maculatus* and *P. yungarum* new name. Females of the former are readily separated from *P. tucumanus* new combination by characters stated in the diagnosis (scutum coloration and granulation). For *P. yungarum* new name, its ocular mound is higher and armed with two conic apophyses or tubercles (cf. Figs. 7, 8); and, in addition, legs and pedipalps are comparatively shorter (Fig. 9).

The affinity of *P. tucumanus* new combination and *P. sicarius* may reveal a phylogenetic and biogeographic meaning. As I re-

ported before (Acosta 1992, 1995), *P. sicarius* is known from the northern part of the Argentinian yungas and southern Bolivia, but an apparently isolated population was discovered 380 km south of the main range. Interestingly, localities of *P. tucumanus* new combination are placed between the two portions of *P. sicarius* range. The small dorsoapical apophysis on trochanter IV of male *P. tucumanus* new combination may have some kind of homology with a similar apophysis in *P. maculatus*, especially the unnamed subspecies, and even with that of *P. hades* (cf. Acosta 1989: figs. 1, 3). This structure is not present in *P. sicarius*.

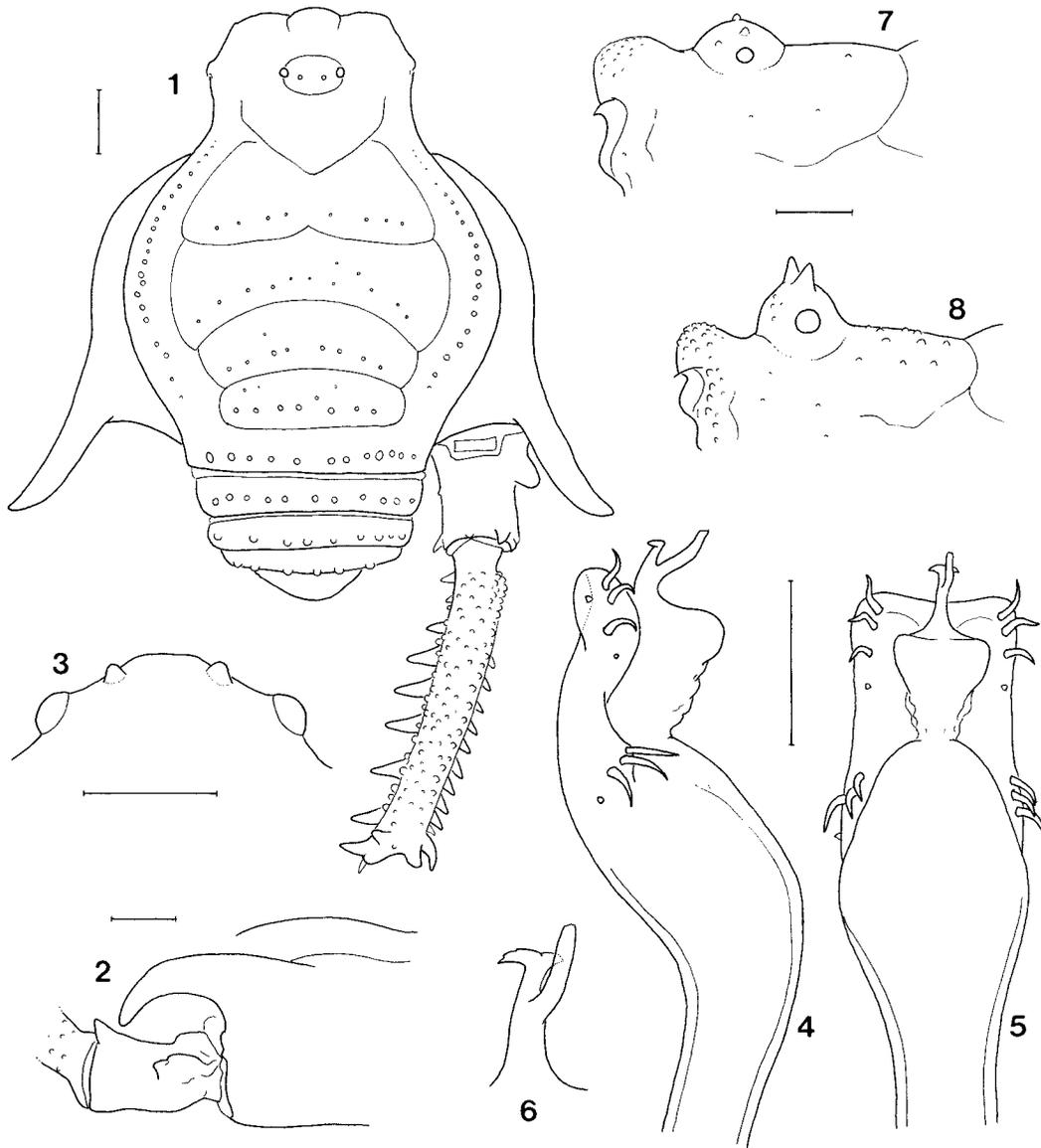
New records.—**ARGENTINA**: Province of Tucumán. 2 km E from El Indio (845 m), 1♀, 11 February 1995 (L. Acosta, A. Peretti, M. Acosta, LEA); El Indio (940 m), 1♂, 17 January 1981 (A. Roig, MACN); Río Los Sosa (800–1000 m), 1♂1♀, November 1963 (W. Weyrauch, IML); La Banderita (1700–1750 m), 3♂4♀, 2 juv., 12 January 1993 (L. Acosta, D. Hauser, LEA).

Pachyloides yungarum new name

Pachyloides tucumanus Canals 1943:14, figs. 6, 7a, b. Soares & Soares 1954:283. Ringuet 1957:19. Galiano & Maury 1979:321. Acosta 1989:137, figs. 9, 10, 1992:168, 170, 1996:2, 6, 9. NEC *Pachyloides tucumanus* (Canals 1933) new combination

Pachyloides thorelli tucumanus: Ringuet 1959: 359.

Etymology.—The specific name *yungarum* (genitive plural) refers to the biogeographic unit called the “yungas,” whose southern one-third in Argentina (provinces of Salta, Tucumán and Catamarca) constitutes the habitat of this species.



Figures 1-8.—*Pachyloides tucumanus* (Canals 1933), new combination, and *Pachyloides yungarum* new name. 1-6, Male *Pachyloides tucumanus* from Río Los Sosa (IML). 1, Scutum, free tergites, coxae IV, right trochanter and femur IV, dorsal view; 2, Lateral view of right coxal apophysis IV and trochanter; 3, Eye mound, posterior view; 4-6, Penis glans. 4, Lateral view; 5, Dorsal view; 6, Detail of stylus; 7, Female *P. tucumanus* from 2 km E of El Indio (LEA), lateral view of eye mound and frontal border of prosoma; 8, Female *P. yungarum* from 10 km to El Siambón (LEA), lateral view of eye mound and frontal border of prosoma. Scale lines: Figs. 1, 2 = 1 mm; Figs. 3, 7, 8 = 0.5 mm; Figs. 4, 5 = 0.2 mm.

Type material.—Holotype male and allotype female (MACN 7151), 8 paratypes (MACN 7146), 1♂ 1♀ paratypes (BMNH 1955.2.22.76-77): Siambón (Tucumán), June 1933, J.M. Bosq coll., examined.

Type locality.—El Siambón (1000 m),

province of Tucumán, Argentina (26°45'S, 65°27'W).

Diagnosis.—Tarsal formula 6:n:6-7:6-7; ocular mound with a pair of conic apophyses; trochanter IV of male with a finger-shaped, dorsoapical apophysis, and a lobulate, prola-

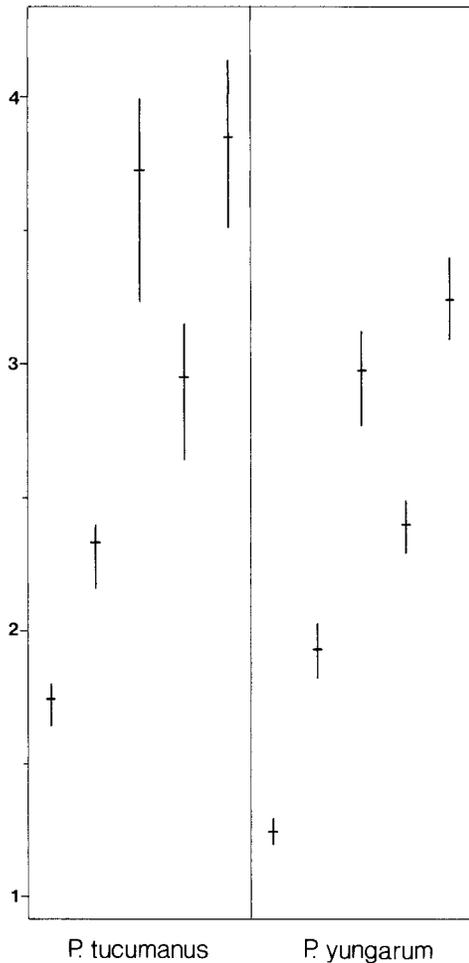


Figure 9.—Relative length of appendages [“total appendix length/scutum length” ratios] in female *Pachyloides tucumanus* (Canals 1933) new combination. ($n = 7$) and *Pachyloides yungarum* new name ($n = 5$; 10 km from El Siambón, province of Tucumán, Argentina; LEA). Vertical bars (range and mean) are from left to right: pedipalps and legs I–IV.

teral apophysis; femur IV of male with a regular row of small retrolateral apophyses. Nearest relative: *Pachyloides thorellii* Holmberg 1878 (Argentina: provinces of Buenos Aires, Córdoba, Entre Ríos; Uruguay); it can be separated from *P. yungarum* new name by the prolateral apophysis of trochanter IV (male), reduced in *thorellii* to a sclerotized ridge. Other similar species are *P. cochuna*, which has a distinctive tubercle under the normal apophysis on coxa IV (Acosta 1996), and *P. hades*,

with ocular tubercle lower and dorsoapical apophysis on trochanter IV more acute (Acosta 1989).

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