

THE GENUS *PSEUDOSCHONGASTIA* LIPOVSKY, 1951 WITH THE
DESCRIPTION OF TWO NEW SPECIES AND A KEY TO THE
WORLD SPECIES, ALSO *NEOSCHONGASTIA PAENITENS*, NEW
NAME FOR *NEOSCHONGASTIA KOHLI* BRENNAN, 1951,
PREOCCUPIED

(ACARINA, TROMBICULIDAE)

BY JAMES M. BRENNAN, *National Microbiological Institute, Public
Health Service, Rocky Mountain Laboratory, Hamilton, Mont.*

Lipovsky (1951) erected the genus *Pseudoschöngastia* within the sub-family Walchiinae for the reception of his two species, *hungerfordi* and *farneri*, and included *Ascoschöngastia diazi* Hoffmann, 1948. Two more species described below, *P. occidentalis*, n.sp. from California and *P. guatemalensis*, n.sp. from Guatemala, are now added to this group.

A key to the 5 species recognized is given as an aid in establishing systematic relationships.

As Lipovsky has shown, *Pseudoschöngastia* can be confused with *Ascoschöngastia* Ewing, 1946, hence by inference, the confusion of their respective subfamilies, the Walchiinae and the Trombiculinae, a lamentable situation, but withal, a needless complication.

According to the subfamilial concepts of Wharton (1947) based on leg segmentation in the larva and further endorsed by Wharton *et al.* (1951), the Walchiinae are characterized by leg I having 7 segments and legs II and III each having but 6 segments while in the Trombiculinae all legs have 7 segments. The critical segment is the femur which is articulatesly divided into basifemur and telofemur in the Trombiculinae (*Ascoschöngastia*) and fused in legs II and III in the Walchiinae (*Pseudoschöngastia*).

In some specimens of *Pseudoschöngastia* may be detected either the vestige of or possibly the anlage of division, especially in femur II and occasionally in femur III, hence the opportunity for confusion with *Ascoschöngastia*. However, through experience and careful observation it becomes clear that in no case are femur II and III segmentally divided in any species of *Pseudoschöngastia*, while in the three species only of *Ascoschöngastia*, the femoral division is distinct and articulate. Furthermore, *Ascoschöngastia* does not occur in the Western Hemisphere, and conversely *Pseudoschöngastia* does not occur outside the Western Hemisphere.

It would appear that *Pseudoschöngastia* is a genus of considerable taxonomic interest and phylogenetic importance since obviously it represents a transitional group between the Trombiculinae and the Walchiinae.

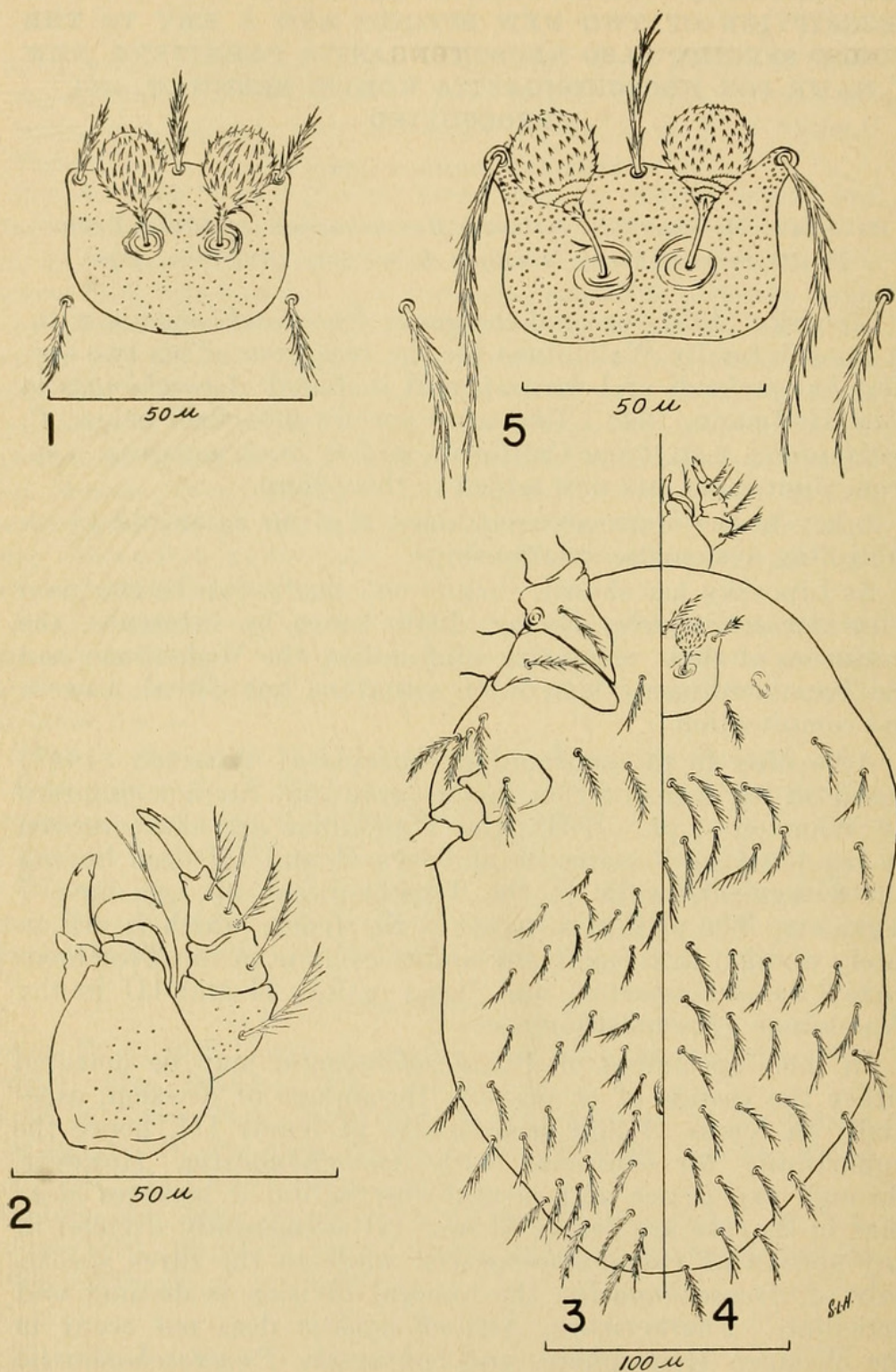


Fig. 1, scutum of *Pseudoschöngastia occidentalis*, n. sp. showing displaced posterolateral setae; fig. 2, dorsal view of right half of gnathosoma of *occidentalis*, palpal tarsus omitted; figs. 3 and 4, venter and dorsum respectively of *occidentalis*; fig. 5, scutum and displaced posterolateral setae of *P. guatemalensis*, n. sp.

***Pseudoschöngastia occidentalis*, new species**

Figs. 1-4.

Body.—Striae moderate. Length and width of holotype, slightly engorged, 280 by 157 microns. Eyes small, 2/2, on obscure ocular plate. Anus located at the level of the sixth row of ventral setae.

Gnathosoma.—Base of chelicera with few punctae, not quite twice as long as broad. Blade of chelicera with small tricuspid cap. All palpal setae branched except the nude lateral tibial seta. Palpal claw trifurcate. Palpal tarsus with 5 branched setae and a strong spur, subterminala not detected. Galeal seta with few branches.

Scutum.—Very small, with scattered punctae, broadly rounded posteriorly with no posterolateral angles. Sensillae capitate, the setules continuing slightly more than halfway down the stem. The anterolateral setae not longer than and frequently shorter than the anteromedian seta. Scutal measurements of holotype: AW-39, PW-45, SB-15, ASB-17, PSB-17, AP-23, AM-19, AL-16, PL-24, S-25.

Legs.—All segments of all legs punctate. Setae distributed as follows: Leg I coxa, trochanter, and basifemur each with one branched seta; telofemur with 5 branched setae; genu with 4 branched setae, 2 genualae and a microgenuala; tibia with 8 branched setae, 2 tibialae and a microtibiala; tarsus with about 18 branched setae, a spur, a microspur, a parasubterminala, a subterminala and a pretarsala. Leg II coxa and trochanter each with a branched seta; femur with 6 branched setae; genu with 3 branched setae and a genuala; tibia with 6 branched setae and 2 tibialae; tarsus with about 15 branched setae, a spur, a microspur and a pretarsala. Leg III coxa and trochanter each with a branched seta; femur with 5 branched setae; genu with 3 branched setae and a genuala; tibia with 6 branched setae and a tibiala; tarsus with about 12 branched setae. All tarsi terminated by 2 lateral claws with a slender claw-like empodium between them.

Setae.—Dorsal setae in irregular rows especially the first two or three rows and the posterior rows. Apparently 2 pairs of humerals plus about 62. Excluding the humerals, the setae of the posterior rows are slightly longer than those of the anterior rows. Ventral setae 2-4 (sternals) plus about 64 and in addition, 2 or more setae between coxae II and III. The setae posterior to the anus are longer than those in the anterior rows and similar in form to the dorsal setae.

Type data.—Holotype and four paratypes, RML No. 28942, from *Peromyscus boylii*, Plumas County, California, 29 July 1950, E. W. Jameson, Jr., collector. One paratype, RML No. 27927, from *Peromyscus californicus*, the Hastings Natural History Reservation, Monterey County, California, 20 December 1938, Robert Holdenried, collector; one paratype, RML No. 27911, same host and locality, 24 May 1938, C. E. North, collector; one paratype, RML No. 28083, from *Peromyscus boylii*, Plumas County, California, E. W. Jameson, Jr., collector. Holotype and 3 paratypes deposited in the collection of

the Rocky Mountain Laboratory. One paratype each to the United States National Museum, the British Museum (Natural History), the South Australian Museum, Adelaide, and the University of Kansas.

***Pseudoschöngastia guatemalensis*, new species**

Fig. 5

Body.—Striae moderate. Length and width of holotype, partly engorged, 330 by 185 microns. Eyes $2/2$, on an ocular plate. Anus located at about the level of the fifth row of ventral setae.

Gnathosoma.—Base of chelicera somewhat longer than broad and with large sparsely scattered punctae. Blade of chelicera with tricuspid cap. Palpal setae as follows: Femoral with several branches, genual with few branches, dorsal tibial nude or with a branch, lateral tibial with about 3 branches, ventral tibial with several branches. Palpal claw trifurcate. Palpal tarsus with 5 branched setae and a spur. Galeal seta nude.

Scutum.—Broadly rounded posteriorly. Punctae large, conspicuous, sparsely distributed. Sensillae capitate, the setules continuing downward not beyond the basal two-thirds of the stem. Head of sensilla encircled at base by a girdle composed of three rows of very minute almost contiguous setules. Setae strong, with fairly long and moderately appressed barbs, the anterolaterals much longer than the anteromedian.

Legs.—As described for *P. occidentalis*, q.v., but with this exception: The ratio of the lengths of spurs I and II in *occidentalis* is 1/1, in *guatemalensis* 1/1.3.

Setae.—Dorsal setae like the scutal setae in form, in rather irregular rows, 2 pairs of humerals plus about 58, the setae of the posterior rows longer than those of the anterior rows. Ventral setae 2-2 (sternals) plus about 52 and also 2 setae between coxae II and III. As usual the setae posterior to the anus are the longer and similar in form to the dorsal setae.

Type data.—Holotype and 5 paratypes, RML No. 29908, from *Sylvilagus floridanus chiapensis*, Finca Armenia, Acatenango, Chimaltenango, Guatemala, 27 February 1951, Herbert T. Dalmat, collector. Holotype and 2 paratypes deposited in the collection of the Rocky Mountain Laboratory. A paratype each to the United States National Museum, the British Museum (Natural History), and the University of Kansas.

KEY TO SPECIES

- | | |
|--|---------------------------------|
| 1. Sternal setae 2-4 | <i>P. occidentalis</i> , n. sp. |
| Sternal setae 2-2 | 2 |
| 2. Sensillae clavate, galeal seta branched | <i>P. diazi</i> (Hoffmann) |
| Sensillae capitate, galeal seta nude | 3 |

3. Palpal genual seta nude, AL not longer than AM.....
.....*P. farneri* Lipovsky
Palpal genual seta branched, AL much longer than AM..... 4
4. With 3 genualae I; palpal lateral tibial seta nude.....
.....*P. hungerfordi* Lipovsky
With 2 genualae I; palpal lateral tibial seta branched.....
.....*P. guatemalensis*, n. sp.

Neoschöngastia paenitens, new name

Neoschöngastia kohlsi Brennan, 1951 (not Philip and Woodward, 1946).

Dr. Charles D. Radford has advised the writer that *Neoschöngastia kohlsi* Brennan, 1951 is preoccupied by *Neoschöngastia kohlsi* Philip and Woodward, 1946. The homonymy is evident in spite of the fact that the latter species was, on the basis of information available at the time of its description, misplaced generically. While it was described as a *Neoschöngastia*, the type slides assign it to *Ascoschöngastia* but, according to the generic concepts of Wharton *et al.* (1951) it more properly is a *Euschöngastia*. The new combination *Euschöngastia kohlsi* (Philip and Woodward), 1946 is therefore proposed, and for *Neoschöngastia kohlsi* Brennan, 1951, which requires a new name, *Neoschöngastia paenitens* is proposed.

REFERENCES

- Brennan, James M., 1951. Two new species of *Neoschöngastia* with a key to the species of the world (Acarina: Trombiculidae). Jour. Parasitol. 37 (6): 577-582.
- Ewing, H. E., 1946. Notes on the taxonomy of three genera of trombiculid mites (chigger mites) together with the description of a new genus. Proc. Biol. Soc. Wash. 59: 69-72.
- Hoffmann, Anita, 1948. Dos especies nuevas de trombiculidos mexicanos. Rev. Inst. Salub. y Enferm. Trop. 9 (3): 177-189.
- Lipovsky, L. J., 1951. A new genus of Walchiinae (Acarina, Trombiculidae). Jour. Kans. Ent. Soc. 24 (3): 95-102.
- Philip, Cornelius B. and T. E. Woodward, 1946. Two new species of rat mites (*Neoschöngastia* spp.) from a focus of scrub typhus on Mindoro, Philippine Islands. Amer. Jour. Trop. Med. 26 (2): 157-163.
- Wharton, G. W., 1947. Studies on North American chiggers. 2. The subfamilies and *Womersia strandtmani* n.g., n. sp. Jour. Parasitol. 33 (4): 380-384.
- Wharton, G. W., Dale W. Jenkins, James M. Brennan, Henry S. Fuller, Glen M. Kohls, and C. B. Philip, 1951. The terminology and classification of trombiculid mites (Acarina: Trombiculidae). Jour. Parasitol. 37 (1): 13-31.



1952. "The genus *Pseudoschongastia* Lipovsky, 1951 with the description of two new species and a key to the world species, also *Neoschongastia paenitens*, new name for *Neoschongastia kohlsi* Brennan 1951 preoccupied (Acarina, Trombiculidae)." *Proceedings of the Entomological Society of Washington* 54, 133–137.

View This Item Online: <https://www.biodiversitylibrary.org/item/54979>

Permalink: <https://www.biodiversitylibrary.org/partpdf/56213>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Entomological Society of Washington

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.