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A NEW SPECIES OF *PACHYCHERNES* (PSEUDOSCORPIONES, CHERNETIDAE) FROM MÉXICO ASSOCIATED WITH NESTS OF *NEOTOMA MICROPUS* (RODENTIA, MURIDAE)

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ABSTRACT. The new species *Pachychernes tamaulipensis* is described from all free-living stages collected in nests of the packrat, *Neotoma micropus*, in Tamaulipas, México. This species is related to *P. shelfordi*, *P. zehorum*, *P. attenuatus* and *P. baileyi*; all of them form a coherent group. The distribution of the pseudoscorpions in the different components of the nests is analyzed.

Resumen. Se describe la nueva especie *Pachychernes tamaulipensis* considerando todos sus estadios de desarrollo, los cuales fueron colectados en nidos de *Neotoma micropus* en Tamaulipas, México. Esta especie está relacionada *P. shelfordi*, *P. zehorum*, *P. attenuatus* y *P. baileyi*, los cuales forman un grupo coherente. Se analiza la distribución de los pseudoescorpiones en los diferentes componentes del nido.

Keywords: Taxonomy, morphology, Central America, ontogenetic series, packrat

Mammal and bird nests are microhabitats that provide favorable conditions for the development of a wide variety of arthropods (Beier 1948; Muchmore 1971). These include pseudoscorpions, which often occupy the nests of small mammals, especially of the order Rodentia, including various rats and mice in North and Central America (*Rattus norvegicus*, *Microtus* spp., *Dipodomys spectabilis*, *D. ordii*, *Mus musculus*, *Neotoma* spp., and *Perognathus flavus*), squirrels (*Spermophilus beecheyi*), gophers (*Thomomys monticola*), porcupines (*Erethizon dorsatum*) and beavers (*Castor canadensis*) (Chamberlin 1952; Hoff 1948, 1956; Hoff & Clawson 1952; Muchmore 1971). Twenty-one species of pseudoscorpions, belonging to 14 genera and eight different families are known to be associated with nests packrats (or wood rat) of the genus *Neotoma* (Villegas-Guzman 2003; Francke & Villegas-Guzman 2006).

The nests generally consist of four components. These are: the cover, formed by all those materials that protect the nests, like sticks of different sizes, prickly pear pads and other plant remains; the feeding chamber, where the pack rat stores its food, the nest proper, made of fine straw and where the rodent spends its periods of inactivity; and the passage-ways, which it uses to move between the nest components and the exterior (Álvarez et al. 1988).

Nine pseudoscorpion species belonging to the genus *Pachychernes* Beier 1932 are known (Harvey 1991; Muchmore 1990a, 1997); four of these form a coherent group (Muchmore 1997), and three have been found in Mexico: *P. shelfordi* Hoff 1946 from Mexico (without precise locality) and also found in Florida (Muchmore 1990b); *P. attenuatus* Muchmore 1990a from Yucatan and Quintana Roo and *P. zehorum* Muchmore 1997 from Chiapas. This group is characterized by the distinctive spermathecae of the females and the highly modified setae on the first legs of males, the latter representing an undoubtedly synapormorphic feature. The objective of this contribution is to describe another Mexican

member of this group, which was found in the nests of *Neotoma micropus* Baird in Tamaulipas.

METHODS

Five nests were dismantled carefully, with each component being placed separately in a plastic bag, labeled, and then transported to the laboratory, where they were processed using Berlese funnels and preserved in 70% alcohol. The pseudoscorpions were then prepared using Hoff's (1949) technique, modified following Wirth & Marston (1968).

We found 23 specimens: three females, one male, eleven tritonymphs, five deutonymphs and three protonymphs. These differ from the previously known species and are therefore described here as new.

Measurements are given in millimeters and were obtained using Chamberlin's (1931) method, as modified by Benedict & Malcolm (1977). They are reported in the text as means ± standard deviation; minimum and maximum values are given in parenthesis (only one measurement is given where no variation was observed). Abbreviations used in the description are: L = length, W = width, L/W = ratio length/width. Size comparisons with other species are based on the original descriptions.

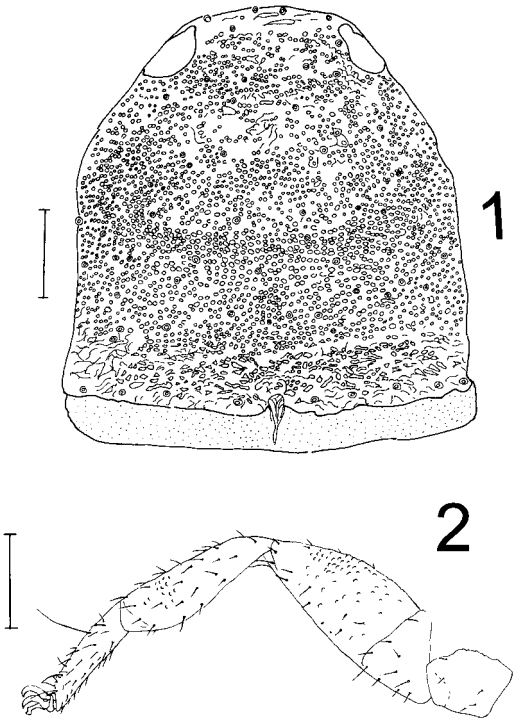
The types and other material examined are deposited in the Colección Nacional de Arácnidos (CNAN) of the Instituto de Biología, Universidad Nacional Autónoma de México and Colección de Artrópodos Asociados a Mamíferos Silvestres de México (CAAMSM), of the Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional.

TAXONOMY

Family Chernetidae Menge 1855
Genus *Pachychernes* Beier 1932

Type species.—*Chelifer* (? *Atemnus*) *subrobustus* Balzan 1892 by original designation.

Remarks.—The genus *Pachychernes* currently contains nine species: *P. subrobustus* (Balzan 1892), *P. baileyi* Feio 1945, *P. gracilis* (Ellingsen 1902), *P. robustus* (Balzan 1888), *P. subgracilis* (With 1908) and *P. subrobustus* (Balzan 1892) from South America; and *P. attenuatus* Muchmore 1991, *P. shelfordi* Hoff 1946 and *P. zehorum* Muchmore 1997 from Central America. A further species, *P. effossus* Schawaller 1980, was named from Oligocene Amber deposits from the Dominican Republic (Schawaller 1980).



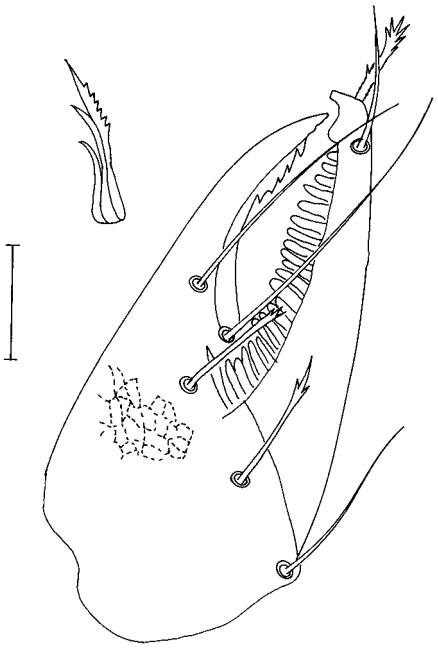
Figures 1–2.—*Pachychernes tamaulipensis*. 1. Female carapace; 2. Male leg IV. Scale lines: 1 = 0.2 mm; 2 = 0.3 mm.

Pachychernes tamaulipensis new species
(Figs. 1–10)

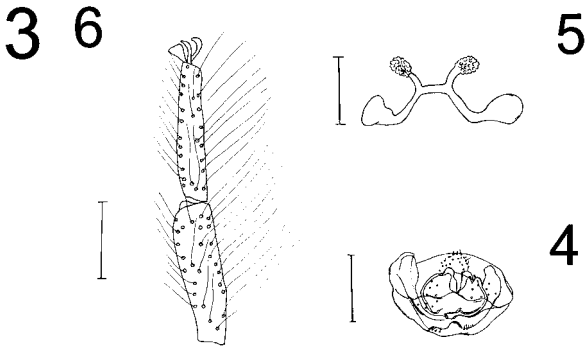
Type material.—MÉXICO: *Tamaulipas:* Female holotype (CNANT-0185) collected in nest of *Neotoma micropus* at 28.9 km N, 26.6 km E. of Soto La Marina (24°02′13.2″N, 99°56′49.2″W), 5 November 2001, G.A. Villegas-Guzman (CNAN). Paratypes: 1 male (CNANT-0186), 1 female (CNANT-0187) deposited in CNAN, 1 female (CAAMS-PS001), 7 tritonymph, 2 deutonymph, and 1 protonymph, with same data as holotype (CNAN).

Etymology.—The specific epithet refers to the place where the nests were collected, the state of Tamaulipas, and the fact that this is the first species of *Pachychernes* described for that state.

Diagnosis.—Carapace rectangular with 2 elongate eye-spots, with 1 poorly defined transverse furrow. Posterior margin very pale,



Figures 3–6.—*Pachychernes tamaulipensis*. 3. Female chelicera and flagellum; 4. Male genitalia; 5. Female spermatheca; 6. Male leg I. Scale lines: 3 = 0.05 mm; 4, 5 and 6 = 0.2 mm.



Figures 3–6.—Continued.

weakly sclerotized and with minute triangular scale-like markings. Chelicera: hand with 5 setae, *sb* and *b* denticulate, flagellum with three blades and serrula exterior with 24 plates. Spermatheca H-shaped with 4 lobes. Tarsi III/IV with an elongate tactile seta. Male: tibia and tarsus of leg I with a series of long thin hairs. The pedipalpal femur and carapace length of *Pachychernes tamaulipensis* are shorter than in *P. baileyi*, *P. attenuatus* and *P. zehorum*, but are slightly longer than in *P. shelfordi*.

Description.—*Female (n = 3):* Body robust and elongate, L/W = 3.1. Abdomen with tergites moderately sclerotized and with net-or scale-like ornamentation, pleural membrane between each tergite longitudinally striate. Tergal chaetotaxy: 11: 11: 10: 11: 13: 12: 12: 13: 12: 12: 10: 2, setae subclavate.

Sternites IV–XI moderately sclerotized; all divided except sternite XI; each sternite with small microlyrifissures anteriorly. Anterior genital operculum with 26 small and slender setae; grouped in a triangle; posterior operculum with 9 basal setae. Chaetotaxy of sternites IV–XII 8: 15: 14: 14: 15: 15: 13: 12: 2; setae long and slender.

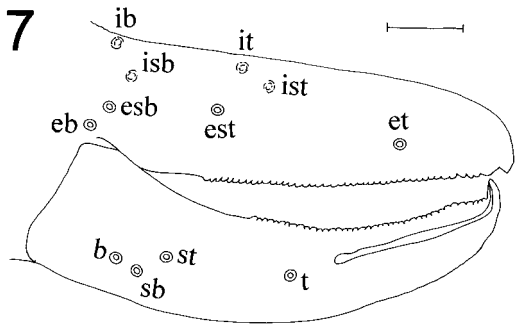
Carapace rectangular, narrowed anteriorly, L/W = 1.02, moderately sclerotized and strongly granulated, with 2 eyespots; distal margin with 6 subclavate setae; proximal margin with 10 setae; and the remainder with 46 similar setae (Fig. 1).

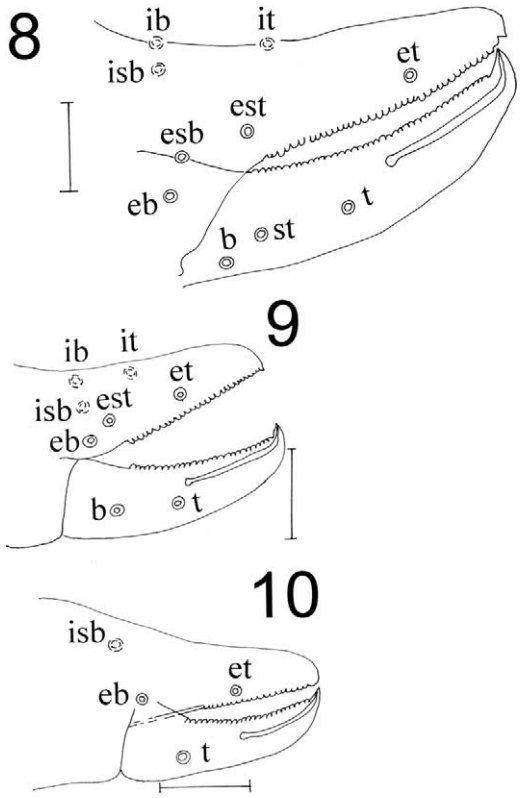
Chelicera slender, L/W = 2.1. Flagellum with 3 blades, largest blade with 4 spines, other blades smooth. Serrula exterior with 24 plates. Galea large, with 6 terminal branches. Hand with 5 setae; *sb* and *b* denticulate (Fig. 3).

Genitalia with H-shaped spermatheca, with 4 lobes: 2 are small and oval, the other 2 spherical and larger (Fig. 5).

Palp robust and reddish brown; trochanter elongate, L/W = 1.15. Femur robust and slender, L/W = 2.3. Patella thin, L/W = 2.1. Chela robust, L/W = 3.15: movable finger elongate and curved, with 54 contiguous marginal teeth and 5 internal accessory teeth, without external accessory in both fingers; trichobothria *b, sb* and *st* at base of finger; *t* near distal end (Fig. 7). Movable finger with terminal venedens (distal venom tooth) and venom duct. Fixed finger with 46 contiguous marginal teeth and 6 internal accessory teeth; all trichobothria situated in basal half of fingers, except for *et* which is situated sub-distally (Fig. 7).

Legs yellowish. Leg I: trochanter wider than long, L/W = 0.9; femur wider than long, L/W = 0.45; patella medium and robust, L/W = 2.7; tibia elongate and thin, L/W = 3.57; tarsus elongate, L/W = 4.5. Leg IV: trochanter L/W = 1.0; femur + patella long and robust, L/W = 2.5; tibia robust, L/W = 4.0;





Figures 7–10.—*Pachychernes tamaulipensis* palps. 7. Adult (male); 8. Tritonymph; 9. Deutonymph; 10. Protonymph. Scale lines: 7, 8, 9 and 10 = 0.2 mm. Trichobothrial abbreviations follow Chamberlin (1931) and Harvey (1992).

tarsus robust and short, L/W = 3.8. Tarsi III and IV with a long, prominent tactile seta one fourth length of segment (0.22–0.28) from proximal end, the seta is 0.36 long (Fig. 2).

Measurements of female holotype: Body L 3.403, W 1.071. Carapace L 0.999, W 0.904. Chelicera L 0.384, W 0.184. Palp: trochanter L 0.357, W 0.309; femur L 0.785, W 0.333; patella L 0.809, W 0.38; chela L 1.499, W 0.476; hand L 0.69; movable finger L 0.618. Leg I: trochanter L 0.144, W 0.16; femur L 0.08, W 0.176; patella L 0.476, W 0.176; tibia L 0.4, W 0.112; tarsus L 0.36, W 0.08. Leg IV: trochanter L 0.24, W 0.24; femur + patella L 0.737, W 0.28; tibia L 0.618, W 0.152; tarsus L 0.304, W 0.08.

Measurements of female paratypes (n = 2): Body L 3.4–4.26, W 1.07–1.43. Carapace L 0.97–0.99, W 0.90–0.97. Chelicera L 0.38–0.4, W 0.18–0.20. Palp: trochanter L 0.36–0.38, W 0.28–0.33; femur L 0.78–0.83, W 0.33–0.35; patella L 0.81–0.85, W 0.38–0.40; chela (without pedicel) L 1.43–1.59, W 0.47–0.54, hand L 0.69–0.83; movable finger 0.62–0.71. Leg I: trochanter L 0.14–0.16, B 0.16–0.18; femur L 0.05–0.10, W 0.17–0.21; patella L 0.48–0.50, W 0.17–0.19; tibia L 0.4–0.45, W 0.11–0.12; tarsus L 0.31–0.36, W 0.08. Leg IV: trochanter L 0.24–0.31, W 0.24–0.26; femur + patella L 0.73–0.9, W 0.28–0.35; tibia L 0.59–0.66, W 0.15–0.21; tarsus L 0.30–0.38, W 0.08–0.12.

Male (n = 1): Body elongate. Tergites I–X divided; chaetotaxy 11: 13: 11: 12: 13: 11: 14: 13: 12: 13: 10: 2; setae semiclavate. Sternites moderately sclerotized; IV–X divided; posterior margin of each with many microlyrifissures; chaetotaxy 10: 16: 14: 15: 16: 17: 17: 12: 2. Carapace subtriangular, narrowed anteriorly, strongly sclerotized and granulated. Setae semiclavate, formula 6–12 (58).

Genitalia, anterior operculum with 43 setae, without particular order (Fig. 4). Posterior genital operculum with 12 setae; atrium bearing nine short acuminate glandular setae.

Chelicera similar to that of female; with 3 blades in the flagellum; serrula exterior with 24 plates, and 5 setae on the hand, 2 of them (*sb* and *b*) are denticulate.

Palp robust and strongly granulated, reddish-brown in color. Trochanter robust with single protuberance on external face, L/W =1.08. Femur long and robust, L/W = 2.37. Patella robust, L/W = 2.21. Chela very heavily sclerotized, with very long, terminally denticulate setae. Movable finger curved with trichobothria *b, sb* and *st* situated in basal half of finger, trichobothrium *t* slightly distal of middle of finger; with 52 contiguous marginal teeth and 7 internal accessory teeth; only this

finger with venedens and venom duct. Fixed finger with 47 contiguous marginal teeth and nine internal accessory teeth. Without external accessory teeth in both fingers as in female.

Legs robust and yellowish. Leg I: trochanter wider than long, L/W = 0.91; femur short and robust, L/W = 0.26; patella robust and long; L/W = 2.7; tibia and tarsus thin and long, L/W = 3.8 and L/W = 4.3 respectively, both segments with numerous long and acuminate setae (Fig. 6). Leg IV: trochanter rectangular, L/W = 0.93; femur + patella robust, L/W = 2, surface scale-like; tibia robust and long L/W = 3.1; tarsus robust and long, L/W = 3.12. Tarsi III and IV with 1 long, prominent tactile seta near the middle, 0.34–0.35 length of segment from proximal end (TS), seta measured 0.38.

Measurements of male paratype: Body L 3.02, W 0.99. Carapace L 0.88, W 0.72. Chelicera L 0.34, W 0.16. Palp: trochanter L 0.31, W 0.28; femur L 0.76, W 0.32; patella L 0.83, W 0.38; chela (without pedicel) L 1.43, W 0.48, hand L 0.67; movable finger L 0.62. Leg I: trochanter L 0.17, W 0.18; femur L 0.10, W 0.18; patella L 0.48, W 0.18; tibia L 0.38, W 0.12; tarsus L 0.38, W 0.08. Leg IV: trochanter L 0.20, W 0.21; femur + patella L 0.67, W 0.33; tibia L 0.55, W 0.18; tarsus L 0.33, W 0.10.

Tritonymph (n = 7): Similar to adults, particularly females; differing mainly in being smaller and having only 3 trichobothria on the movable finger and 7 on the fixed finger (Fig. 8).

Body long and narrow, L/W = 3.4. Tergites weakly sclerotized, with scale-like ornamentation. Each tergite divided except the last; pleural membranes between them longitudinally striate. Tergal chaetotaxy 10: 9: 9: 10: 12: 9: 9: 12: 11: 9: 10: 2, setae of tergite XI very long. Sternites IV–X divided and lightly sclerotized. Sternites with microlyrifissures between each seta. Sternal chaetotaxy II–XI: 7: 7: 7: 13: 12: 13: 11: 11: 13: 10: 2; XI with ten long setae.

Carapace rectangular, L/W = 1.12, light yellow, strongly granulated, with eye-spots. Setae short and clavate, formula 4–6(40). Chelicera elongate, L/W = 1.85, with 5 setae on hand; flagellum with 3 blades; serrula exterior with 20 plates. Galea robust and long with 5 distal branches. Palp: trochanter short and subquadrate, L/W = 1.04, strongly granulate. Femur long and broad, L/W = 2.1. Patella robust, L/W = 1.92. Chela short and robust, L/W = 2.84, fingers short and slightly curved. All segments with short, clavate setae. Movable finger with 3 trichobothria, lacking trichobothrium *sb*; with 40–44 contiguous marginal teeth and 5 internal accessory teeth; only this finger with venedens and venom duct. Fixed finger has 36 contiguous marginal teeth and 6 internal accessory teeth; with 7 trichobothria, lacking trichobothrium *ist* (Fig. 8). Legs similar to adults, robust and long, surface scale-like, especially on legs III and IV. Tarsi III and IV with 1 long, prominent tactile seta.

Measurements: Body L 2.77 ± 0.15 (2.52–2.97), W 0.81 ± 0.12 (0.59–0.95). Carapace L 0.73 ± 0.05 (0.69–0.83), W 0.65 ± 0.05 (0.59–0.71). Chelicera L 0.27 ± 0.019 (0.25–0.31), W 0.14 ± 0.018 (0.12–0.16). Palp: trochanter L 0.24 ± 0.017 (0.24–0.28), W 0.23 ± 0.027 (0.19–0.28); femur L 0.56 ± 0.043 (0.499–0.595), W 0.26 ± 0.034 (0.24–0.33); patella L 0.56 ± 0.055 (0.50–0.59), W 0.29 ± 0.037 (0.24–0.33); chela L 1.15 0.04 (1.10–1.19), W 0.40 ± 0.032 (0.36–0.45), hand L 0.55 ± 0.049 (0.47–0.59); movable finger L 0.46 ± 0.035 (0.40–0.49). Leg I: trochanter L 0.11 ± 0.009 (0.10–0.13), W 0.13 ± 0.012 (0.12–0.15); femur L 0.08 ± 0.006 (0.06–0.08), W 0.148 ± 0.007 (0.14–0.16); patella L 0.32 ± 0.016 (0.30–0.34), W 0.14 ± 0.035 (0.12–0.22); tibia L 0.26 ± 0.034 (0.22–0.32), W 0.09 ± 0.011 (0.08–0.10); tarsus L 0.25 ± 0.008 (0.24–0.26), W 0. 074 ± 0.003 (0.07–0.08). Leg IV: trochanter L 0.16 ± 0.010 (0.14–0.18), W 0.19 ± 0.022 (0.15–0.22); femur + patella L 0.57 ± 0.037 (0.50–0.59), W 0.26 ± 0.029 (0.22–0.31); tibia L 0.43 ± 0.036 (0.4–0.48), W 0.14 ± 0.023 (0.12–0.18); tarsus L 0.26 ± 0.017 (0.24–0.28), W 0.09 ± 0.012 (0.08–0.11).

Deutonymph (n = 2): Similar to adult but smaller, with 2 trichobothria on movable finger and 6 on fixed finger. Cheliceral hand with 4 setae, lacking seta *sb*.

Body long and narrow, L/W = 3.02. Tergites I–X divided, chaetotaxy: 7: 6: 6: 7: 6: 7: 7: 6: 6: 6: 6: 2, last tergite with long setae. Sternites lightly sclerotized and divided except the last; chaetotaxy: 4: 6: 8: 9: 8: 8: 8: 8: 7: 2. Carapace subrectangular, L/W = 0.98, lightly sclerotized and strongly granulated; with 2 eye-spots near anterior margin and 6

setae; chaetotaxy 6–6 (41). Chelicera long and robust, L/W = 1.75; hand with 4 setae, seta *sb* absent; serrula exterior with 17 blades. Galea elongate, distally bifid. Palp robust, lightly sclerotized and strongly granulated. Chela reddish-brown, L/W = 2.9. Fingers gently curved, movable finger with 2 trichobothria, lacking *sb* and *st* (Fig. 9); with 29 contiguous marginal teeth and 1 internal accessory tooth; only this finger with venedens and venom duct. Fixed finger with 6 trichobothria, lacking *esb* and *ist* (Fig. 9), with 29 contiguous marginal teeth and 3 external accessory teeth. Legs robust and long, similar to those of adults, lightly sclerotized and yellowish. Tarsi III and IV with 1 long, prominent tactile seta.

Measurements: Body L 1.83–2.04, W 0.595–0.69. Carapace L 0.45–0.52, W 0.404–0.476. Chelicera L 0.17–0.22, W 0.10–0.12). Palp: trochanter L 0.16–0.17; W 0.16; femur L 0.29–0.36, W 0.176; patella L 0.32–0.34, W 0.22–0.24; chela L 0.71–0.81, W 0.24–0.28), hand L 0.33–0.36; movable finger L 0.31. Leg I: trochanter L 0.08–0.09, W 0.09–0.10; femur L 0.04–0.05, W 0.09–0.10; patella L 0.17–0.22, W 0.09–0.10; tibia L 0.17–0.18, W 0.06; tarsus L 0.17–0.18, W 0.05. Leg IV: trochanter L 0.08–0.10, W 0.12; femur + patella L 0.352, W 0.168; tibia L 0.24, W 0.088; tarsus L 0.18, W 0.06.

Protonymph (n = 1): Similar to deutonymph in most characters, but smaller, with 1 trichobothrium on movable finger and 3 on fixed finger; cheliceral hand with 4 setae, but galeal seta absent.

Body long and narrow, L/W = 3.4. Carapace rectangular, lightly sclerotized and strongly granulated; anterior margin with 2 eye-spots; anterior and posterior margins with 6 setae each, and 19 on remaining surface. Tergites I–X divided; chaetotaxy, I–X 6, XI 5, XII 2. Sternites, divided except the last; chaetotaxy as for tergites. Chelicera long and broad, L/W = 1.6; hand with 4 setae, lacking seta *sb,* with 3 blades in flagellum, serrula exterior with 13 blades; galea robust and long, with 3 terminal branches. Palp short and robust, yellowish, lightly sclerotized and strongly granulated. Trochanter rectangular, L/W = 1.2, femur short and robust, L/W = 1.5, patella robust, short, widening anteriorly, L/W = 1.36. Chela reddish-brown, movable finger curved with venedens and venom duct, 27 contiguous marginal teeth and with only 1 trichobothrium (*t*) (Fig. 10). Fixed finger with 25 contiguous marginal teeth and 3 trichobothria, *eb, isb* and *et* (Fig. 10). Legs are robust and short, lightly sclerotized and yellowish, similar to later stadia; tarsi III and IV with a long and prominent tactile setae.

Measurements of deuteronymphs: Body L 1.47, W 0.43. Carapace L 0.38, W 0.48. Chelicera L 0.16, W 0.10. Palp: trochanter L 0.14, W 0.11; femur L 0.24, W 0.16; patella L 24, W 18; chela L 0.57, W 0.24, hand L 0.27; movable finger L 0.24. Leg I: trochanter L 0.08, W 0.07; femur L 0.05, W 0.08; patella L 0.14, W 0.08; tibia L 0.12, W 0.05; tarsus L 0.13, W 0.04. Leg IV: trochanter L 0.09, W 0.08; femur + patella L 0.25, W 0.12; tibia L 0.17, W 0.08; tarsus L 0.15, W 0.06.

Remarks.—*Pachychernes tamaulipensis* can be distinguished from *P. baileyi*, *P. attenuatus* and *P. zehorum* due to its smaller size (Feio 1945; Hoff 1946; Muchmore 1990a); it has a single faint transverse furrow on the carapace, instead of two distinct furrows; and it lacks external accessory teeth on the chelal fingers. The pedipalpal femur and carapace length of *P. tamaulipensis* (♀ 0.78–0.83, 0.97–0.99; ♂ 0.76, 0.88) are smaller than in *P. baileyi* (♀ 1.10, not stated; ♂ 1.02, not stated), *P. attenuatus* (♀ 1.33–1.37, not stated; ♂ 1.38–1.51, 1.21–1.26), and *P. zehorum* (♀ 1.04–1.12, 1.21–1.35; ♂ 1.04–1.10, 1.12–1.23); but are slightly bigger than in *P. shelfordi* (♀ 0.72, 0.89; ♂ not stated, not stated). *Pachychernes tamaulipensis* has 24 blades on the serrula externa, *P. baileyi* has 26–28 blades, *P. attenuatus* with 22–24 blades and *P. shelfordi* has 19–21 blades, *P. zehorum* no reported. Like other members of the genus, the spermatheca are H-shaped with 4 lobes, as in *P. baileyi* (Mahnert 1979: fig 118), *P. shelfordi* (Muchmore 1975: fig 9) and *P. attenuatus* (Muchmore 1990a: fig 6). In *P. tamaulipensis* the posterior margin of the carapace is weakly sclerotized, posterior margin very pale, like the genus *Parachernes* (Muchmore & Alteri 1974, see figs. 4, 8) but without a median keel, and with minute triangular scale-like markings.

ECOLOGY

Pseudoscorpions usually live in places with high humidity and moderate temperatures to avoid dehydration (Weygoldt 1969). Rodent nests provide adequate conditions of temper-

ature and humidity (Furman 1968) to sustain populations of pseudoscorpions. Pseudoscorpions associated with nests are found in the nest components more protected from desiccation, like the feeding chamber and nest proper (Montiel-Parra et al. 2001). Nevertheless, *Pachychernes tamaulipensis* was found almost exclusively in the cover, probably because the nests are built in very thick thorny brush where sunlight does not reach the base of the trees; thus, the cover materials remain very moist and provide a suitable habitat.

All specimens of *P. tamaulipensis* were found on the cover of four of the five nests sampled, except for one specimen in the feeding chamber. We found all life stages of *P. tamaulipensis* and for this reason we consider this species to be a permanent inhabitant of these nests. Together with *P. tamaulipensis*, we also found two deutonymphs of the cosmopolitan species *Chelifer cancroides* (Linnaeus 1758) sharing the same habitat. The presence of these nymphs is considered accidental, presumably having arrived at the nests in the material carried by the wood rat to build the cover.

These are the first records of pseudoscorpions in nests of *Neotoma micropus* from México. There are three such records from the United States, the species concerned being *Levichelifer fulvopalpus* (Hoff 1950), *Hesperochernes molestus* (Hoff 1956) and *Dinocheirus texanus* (Hoff & Clawson 1952).

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