

***Leptopholcus dalei* Petrunkevitch, 1929**

Petrunkevitch, A. 1929. The spiders of Porto Rico. Trans. Connect. Acad. Arts Sci. 30: 1-158.

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***Micromerys dalei** sp. nov.** (Figures 144 to 148).

This is a fairly common species living in webs on the under side of large leaves in dense woods. The Am. Mus. Nat. Hist. has specimens from the following localities:

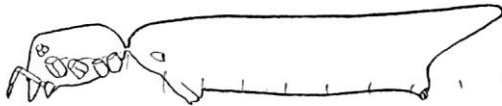


FIGURE 144. *Micromerys dalei* sp. nov. Type. Sideview of female.

- 1) Aibonito, June 1, 1915, 1 female with eggs, 1 mature female and 2 males.
- 2) Arecibo, March 1, 1914, 2 females.
- 3) Adjuntas, June 8, 1915, 1 female.
- 4) Mayaguez, 1 female.

I have captured the following specimens:

- 5) Rio Piedras, November 14, 1925, 1 female in a thicket of bushes on the road to the lagoon.
- 6) Jayuya, December 29, 1925, 1 female under the leaf of a banana plant on the road to Ciales.

* Named in honor of Prof. E. E. Dale, at that time of the University of Porto Rico.

7) Bayamon, December 7, 1925, 4 females, 1 male and 1 immature male in dense young woods on limestone hill at Kilometer 21.

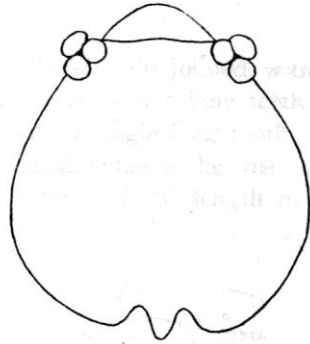


FIGURE 145. *Micromerys dalei* sp. nov. Type. Carapace of female.

8) Coamo Springs Hotel, January 8, 1926, 2 females on plant near the springs.

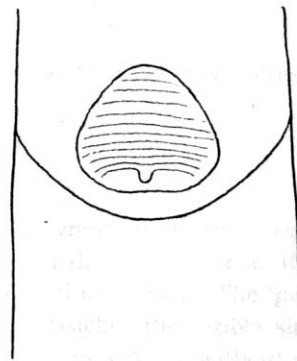


FIGURE 146. *Micromerys dalei* sp. nov. Type. Epigynum. The lateral lines represent the visible edge of the abdomen.

9) Limestone hills between Toa Alta and Vega Alta, January 16, 1925, 1 male and 4 females in dense woods.

10) La Gloria in the Luquillo Mountains, January 30, 1926, 1 female in dense woods.

a) *Female*. Type from Rio Piedras. Total length 4.0 mm. Carapace 0.71 mm. long, 0.67 mm. wide, quite flat (Figure 144), without a trace of a thoracic groove, and with fairly steep posterior declivity. Posterior edge with two deep notches (Figure 145). Eyes 6, subequal in size, arranged in two triads. AME wanting. The triads are wide apart, being separated by a distance of 0.238 mm., or about 4 diameters of an eye, each triad forming a distinct elevation. Between the triads the carapace is more or less straight, from here on it is bent downward, forming the clypeus the height of which is equal to $\frac{8}{10}$ of the distance between the triads. The carapace is devoid of all pubescence. *Chelicerae* without boss, soldered to each other in basal half, paral-

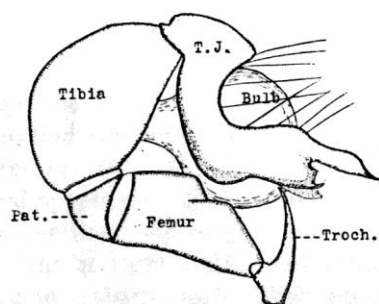


FIGURE 147. *Micromerys dalei* sp. nov. Type. Retrolateral view of right palp of male.

lel, with the usual sharp tooth at the juncture of the short, transverse margins. The tooth is black. Fang short and stout. *Chelicerae* sparsely clothed with brown hair. *Maxillae* inclined over lip and meeting in median line in front of it. Serrula small, brown. *Lip* wider than long, immobile, fused with sternum without suture. *Sternum* as wide as long, truncated behind. First coxae wide apart, fourth coxae separated from each other by their width and almost twice as long as third coxae. *Legs* 1243, fine and brittle.

	Femur	Pat. + Tib.	Metatarsus	Tarsus	Total
I	4.75	4.56	7.80	1.15	18.26
II	3.32	3.32	4.46	0.50	11.60
III	2.18	2.00	2.55	0.45	7.18
IV	3.60	2.85	4.25	0.65	11.35

Width of first patella at the "knee" 0.1190 mm. Tibial Index 3.

Width of fourth patella at the "knee" 0.1190 mm. Tibial Index 4.

No spines on legs. Tarsi multi-jointed, with onychium. Claws 3. Upper claws with a series of 7 long teeth, all of about equal length. Third claw with a single long tooth. Legs clothed with spinose hair having a small spine at the base. *Abdomen* cylindrical, with caudal projection. Total length of abdomen 3.1 mm.

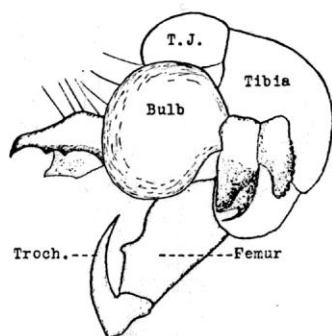


FIGURE 148. *Micromerys dalei* sp. nov. Type. Prolateral view of the same palp.

Diameter 0.5 mm. Epigynum prominent, but owing to the transparency of the chitin and the same color as the abdominal wall it is difficult to see in surface view. The genital fold is semi-circular, procurved and reaches the visible sides of the abdomen (Figure 146). Abdomen practically without pubescence, except a sparse one on ventral surface near spinnerets. *Color in life and in alcohol*: a pale yellow, almost white.

b) *Male*. Type from the Limestone hills between Toa Alta and Vega Alta. Total length 3.8 mm. Carapace 0.71 mm. long, 0.71 mm. wide, of the same type as in the female, though slightly wider. The ridge between the triads is more pronounced, slightly procurved and the triads more elevated. The arrangement of the eyes as in female. *Chelicerae* with a little brown tooth in front,

not far from distal end, directed forward and downward, with inner edge black. The usual tooth at the juncture of the short, transverse margins is sharp and also black. *Maxillae, lip, sternum* and *coxae* as in female. *Legs* 1243.

	Femur	Pat. + Tib.	Metatarsus	Tarsus	Total
I	7.30	7.50	13.50	1.40	29.70
II	5.22	4.94	7.60	0.85	18.61
III	3.42	3.04	4.08	0.60	11.14
IV	5.22	4.55	6.65	0.66	17.08

Width of first patella at the "knee" 0.1190 mm. Tibial Index 1.

Width of fourth patella at the "knee" 0.1190 mm. Tibial Index 3.

Abdomen 3.09 mm. long, of the same shape as in female, but the caudal projection somewhat shorter and less pointed. Palp shown in Figures 147 and 148. Trochanter with a long, almost sickle-like ventral apophysis. Femur with two small ventral projections, one nearer base, the other more distal. Tibia inflated. Terminal joint bent at right angles and forming a complicated apophysis ending in a sharp point. Bulb with embolus and conductor, the latter with a bluntly serrated edge. *Color* as in female, but with a few darker spots on abdomen.

Deeleman-Reinhold, C. L. 1986. Leaf-dwelling Pholcidae in Indo-Australian rain forests. Int. Congr. Arachn. 9 (Panama, 1983): 45-48.

and *M. debilis* Thorell is uncertain; *Micromerys tipula* and *M. dalei* Petrunkevitch belong to the genus *Leptopholcus*. *Micromerys delicata*

Huber, B. A. 1997. On American '*Micromerys*' and *Metagonia* (Araneae, Pholcidae), with notes on natural history and genital mechanics. Zool. Scripta 25(4): 341-363.

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***Leptopholcus dalei* (Petrunkevitch, 1929) (Figs 22–24, 26A)**

Micromerys dalei Petrunkevitch, 1929: 150–154, figs 144–148; Bryant 1940: 296–297; *Leptopholcus dalei* Deeleman-Reinhold 1986b: 47.

Material examined. One male, 1 juv. from Aibonito, Puerto Rico (AMNH, 3708), no collection data; 1 female from Mayagüez, Puerto Rico (AMNH, 3725), no collection data; 1 female (? genital area removed) from Arecibo, Puerto Rico (AMNH, 3522), March 1–4, 1914; 1 male, 1 female from N of Las Marias, Montañas de Uroyan, Puerto Rico (AMNH, 1958), July 30, 1959 (A. F. Archer); 1 female, 1 juv. from Collazu Falls, W of San Sebastian, Puerto Rico (AMNH), July 30, 1958 (A. F. Archer); 1 male, 2 females, 2 juv. from Estacion Experimental (botanical garden) Mayagüez, Puerto Rico (AMNH), June–Aug. 1958 (A. F. Archer).

Distribution and habitat. The species is reported from Puerto Rico (Petrunkevitch 1929) and Cuba (Bryant 1940). Bryant's material from Cuba may not be conspecific with the specimens from Puerto Rico (see below), but her material cannot be found in the MCZ. According to the

many localities listed in Petrunkevitch (1929) the species is not synanthropic but lives under leaves in 'dense woods'.

Diagnosis. Large (about 4 mm) pale yellow pholcid with 6 eyes in two triads (Fig. 22), long cylindrical opisthosoma (Fig. 22A–B), with distal and basal apophyses on the male chelicerae (Fig. 24), long apophyses on the male pedipalpal trochanters (Fig. 23), and distinctive male bulbal apophyses (Fig. 23).

Redescription. The original description of Petrunkevitch (1929) is extensive and accurate. Only two characters that have not been noted previously but are essential for the systematic position of this species are given here: female internal genitalia with complex valve (Fig. 26A). Male

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chelicerae with a proximal pair of apophyses in addition to the distal pair (Fig. 24).

Taxonomic notes. The female valve proves the species to be a representative of the 'Old World group' of pholcids (Huber submitted a). The male proximal cheliceral apophyses together with the apophyses on the palpal

trochanter are the key characters of the Old World *Pholcus* group (Huber 1995). Thus, although it is beyond the scope of this paper to prove the generic position of the present species (I have not seen the type species of *Leptopholcus*), it is evident that there is no close relationship with American '*Micromerys*' or *Metagonia*. Instead, the species is part of a genus group that has almost

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exclusively an Old World distribution and contains, among 10 other named genera, also *Leptopholcus* and 'true' *Micromerys* (Huber 1995).

Bryant (1940) synonymized two *Leptopholcus* species described by Franganillo (*L. delicatulus* F., 1930, and *L. conicus* F., 1931) with the present species (without seeing Franganillo's types). These were poorly described, and have never been redescribed. Thus, it cannot be ruled out that there is another species of *Leptopholcus* in Cuba (A. Pérez González pers. comm.).

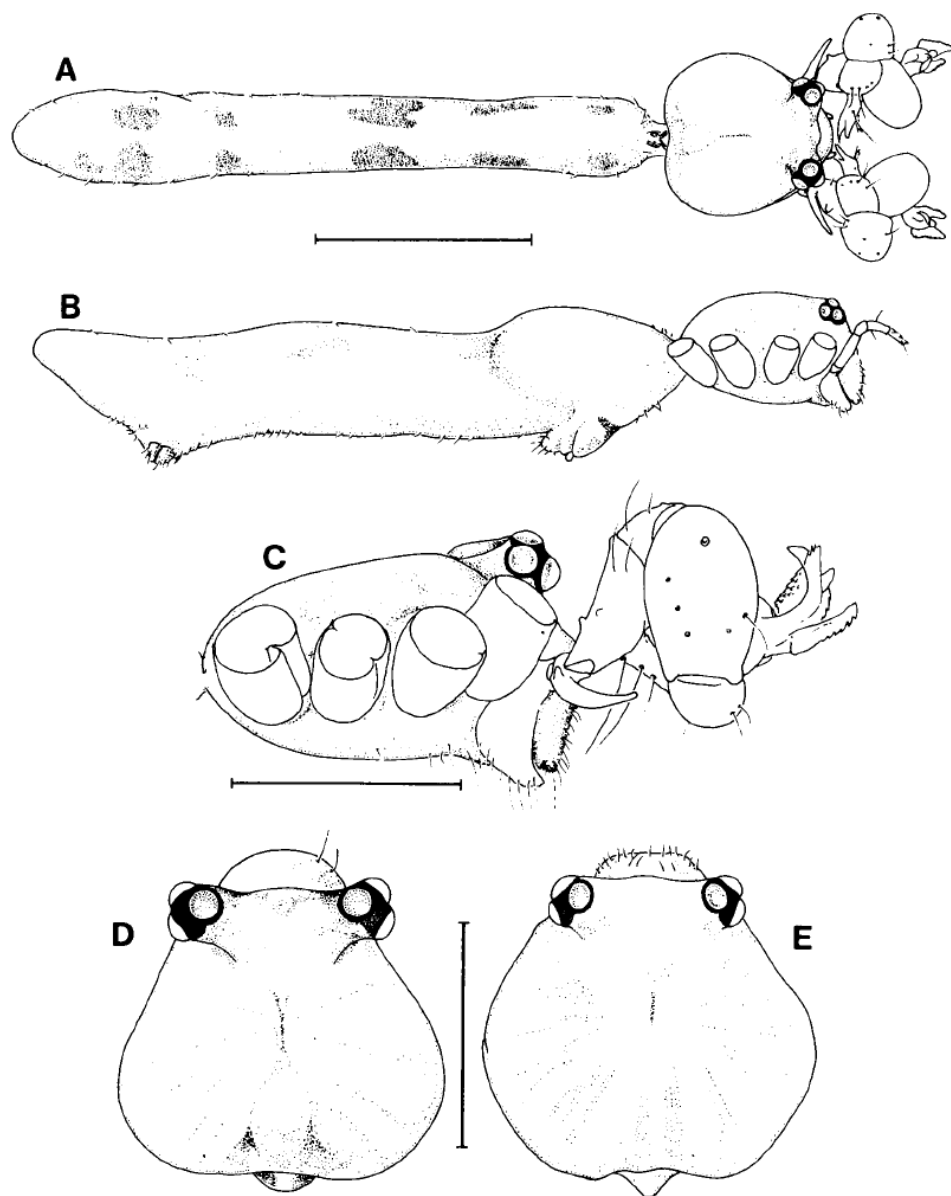


Fig. 22. *Leptopholcus dalei* (Petrunkévitch).—A. Male, dorsal view.—B. Female, lateral view.—C. Male prosoma, lateral view.—D. Male prosoma, dorsal view.—E. Female prosoma, dorsal view. Scale lines: (A–B) 1 mm; (C–E) 0.5 mm.

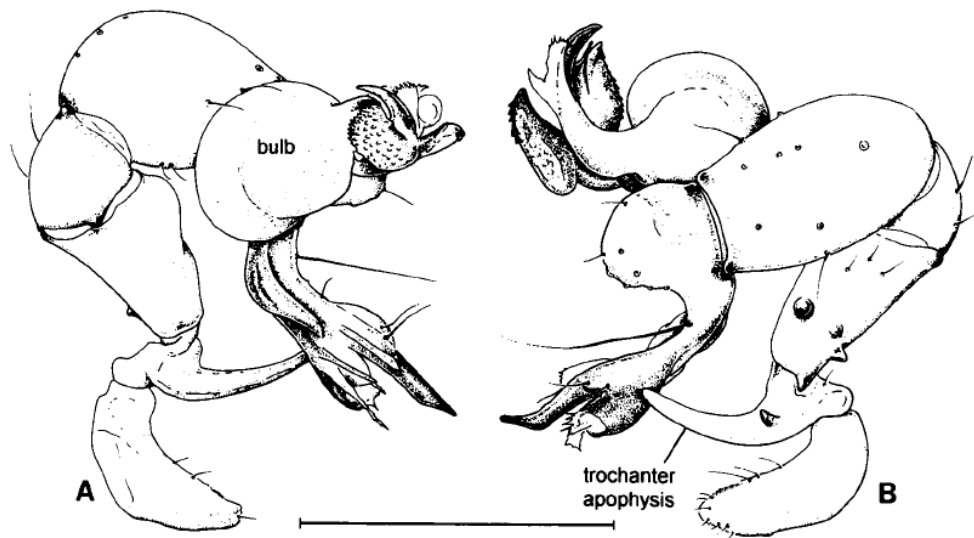


Fig. 23. *Leptopholcus dalei* (Petr.), left male pedipalp.—A. Prolateral view.—B. Retrolateral view. Scale line: 0.5 mm.

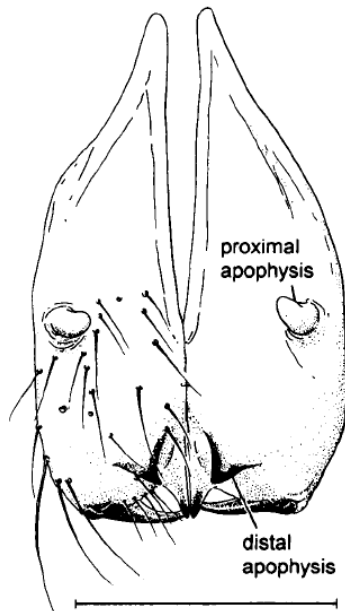


Fig. 24. *Leptopholcus dalei* (Petr.), male chelicerae, frontal view. Scale line: 0.2 mm.

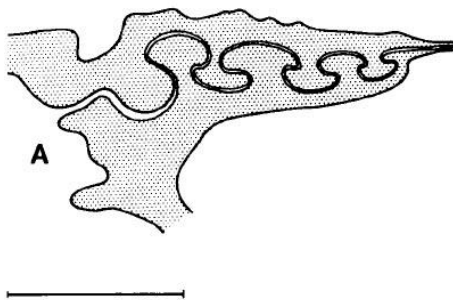
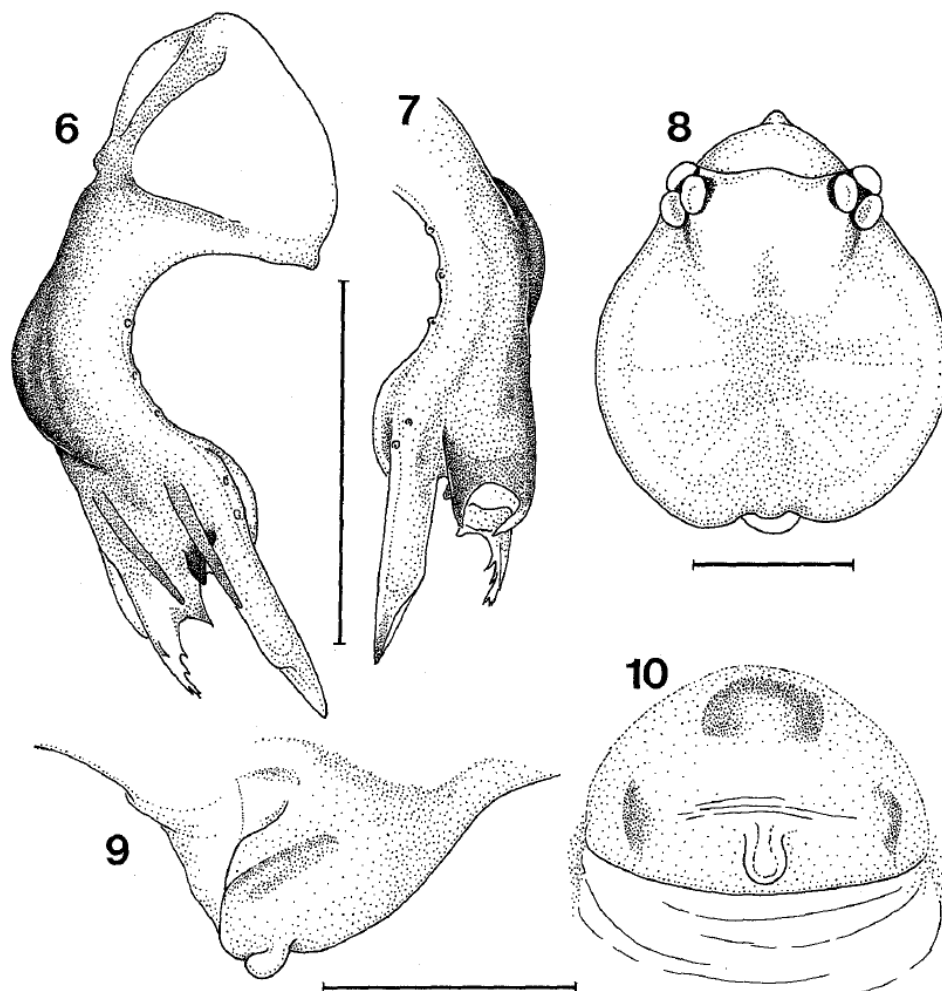


Fig. 26. Sagittal sections of the 'valves' in the internal female genitalia, separating the uterus externus (on left side) from the uterus internus (right side). See Fig. 28B for general position of this structure in the female. Those sections from each series were drawn which showed the most complex design.—A. *Leptopholcus dalei*.—Scale line: 0.05mm.

Huber, B. A., Pérez G., A. 1998. *Leptopholcus delicatulus* (Araneae, Pholcidae) is a valid name. J. Arachnol. 26: 251-256.

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Figures 6–10.—*Leptopholcus dalei* (Petrunkévitch 1929), diagnostic characters. 6, Left cymbium with procurus, prolateral view; 7, Left procurus, retrolateral view; 8, Female prosoma, dorsal view; 9, Epigynum, lateral view; 10, Epigynum, ventral view. Scale bars = 0.3 mm.

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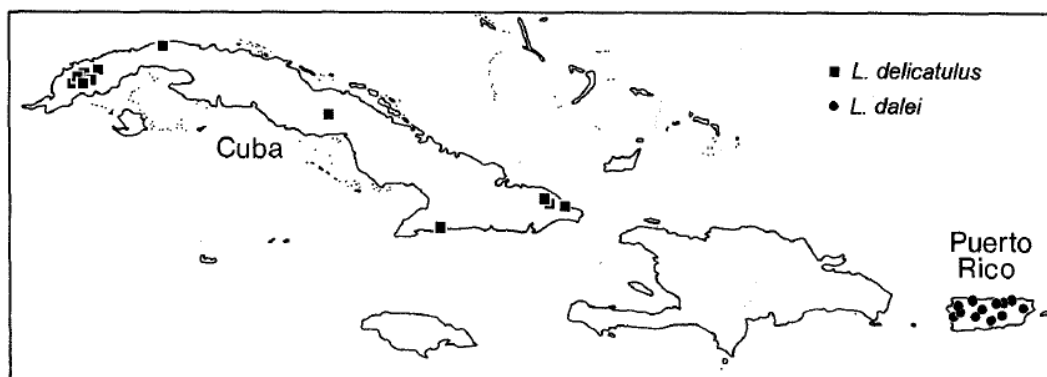


Figure 21.—Geographic distribution of the two known American *Leptopholcus* species. The localities included are those from the present paper, Franganillo (1930, 1931), and Bryant (1940) for *L. delicatulus*, and those from Petrunkévitch (1929) and Huber (1997) for *L. dalei*.

Huber, B. A. 1998. Genital mechanics in some neotropical pholcid spiders (Araneae: Pholcidae), with implications for systematics. *J. Zool. London* 244: 587-599.

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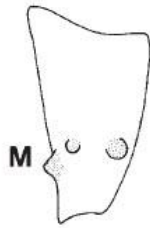


Fig. 8. Different morphologies of male pedipalpal femora in pholcids; apophyses shaded.

(M)

Leptopholcus dalei;

Huber, B. A. 2000. New World pholcid spiders (Araneae: Pholcidae): a revision at generic level. *Bull. Amer. Mus. Nat. Hist.* 254: 1-348.

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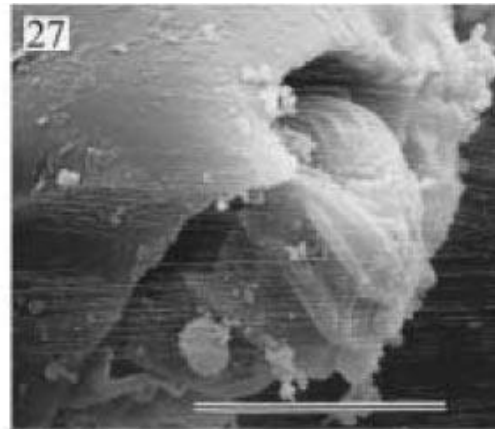
Leptopholcus dalei (Petrunkévitch, 1929)

Figures 27, 105, 302–305, 309

Micromerys dalei Petrunkévitch, 1929: 150–154, figs. 144–148.

Leptopholcus dalei: Deeleman-Reinhold, 1986a: 47. – Huber, 1997a: 356–358, figs. 22a–e, 23a–b, 24, 26a. – Huber and Pérez González, 1998: 251, figs. 6–10, 21.

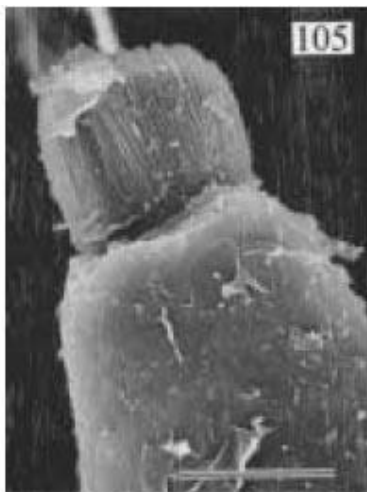
NEW RECORDS: PUERTO RICO: Maricao, Hacienda Juanita, old coffee plantation, 600 m elev., Apr. 3 and Apr. 6, 1989 (2 vials) (H. & L. Levi), 2 ♀ in MCZ. Jayuya, old coffee plantation, gardens, ~ 1000 m elev., Mar. 20–26, 1986 (H. & L. Levi), 1 ♂ 1 ♀ in MCZ. Mayagüez: University farm (8 vials), Jan. 15–Feb. 21, 1964 (A. M. Chickering), 18 ♂ 19 ♀ and several juveniles in MCZ. Mayagüez, woods near nuclear center, Jan. 27, 1964 (A. M. Chickering), 2 ♂ 2 ♀ 2 juveniles in MCZ. 5 km E Mayagüez “on Rt. 106,” Jan. 30, 1964 (A. M. Chickering), 1 ♂ 2 juveniles in MCZ. “Cidra, Treasure Island,” Feb. 26–27, 1955 (A. M. Nadler), 1 ♂ 1 juvenile in AMNH. Rio Piedras, Mar. 2, 1953, Jan. 21–23, 1955, Mar. 14, 1959 (3 vials, A. M. Nadler), 2 ♀ 2 juveniles in AMNH. VIRGIN ISLANDS: *St. John*: above Cinnamon Bay, Mar. 17, 1970 (H., L. & F. Levi), 2 ♀ in MCZ. *St. Thomas*: “woods and grass,” Dec. 11–13, 1965 (Levins & Cintron), 1 ♂ in AMNH.



Figs. 24–29. Sexual modifications on male chelicerae: modified hairs.

27. *Leptopholcus dalei* (Petrunkevitch), modified hair on cheliceral apophysis.

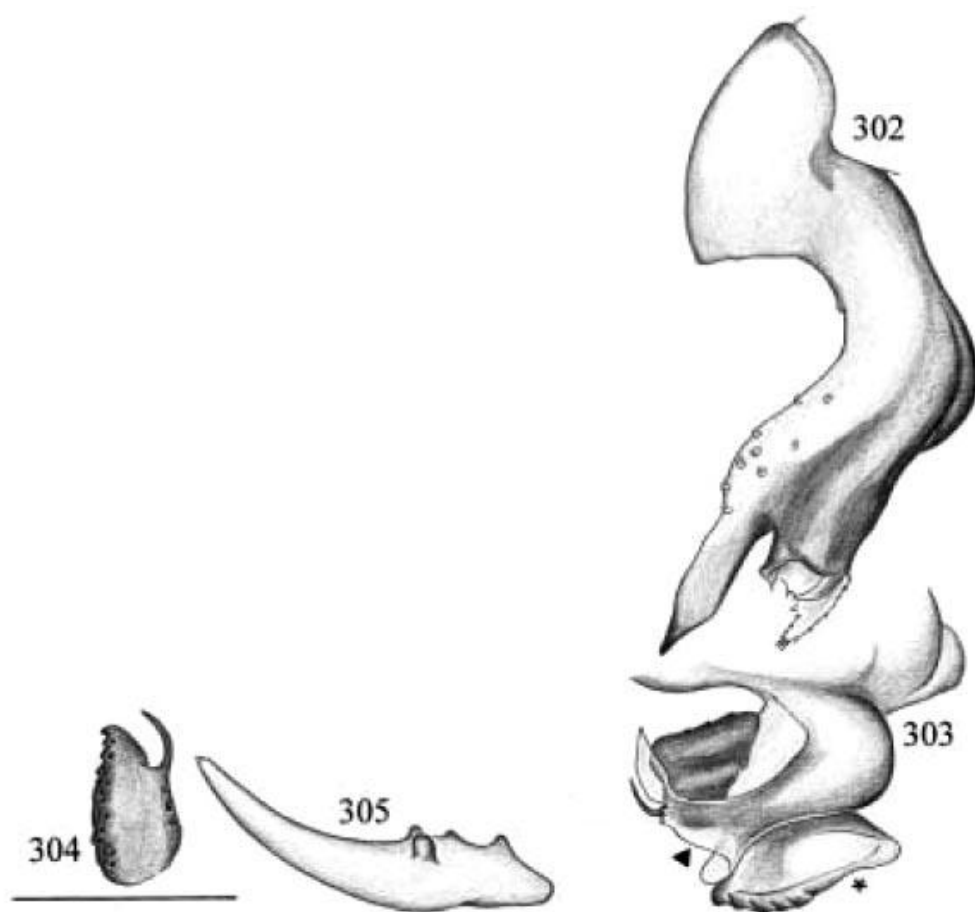
Scale lines: 4 μm (24, 27–29),



Figs. 105–112. Miscellaneous structures. 105. *Leptopholcus dalei* (Petrunkevitch), modified hair at tip of male palpal trochanter apophysis.

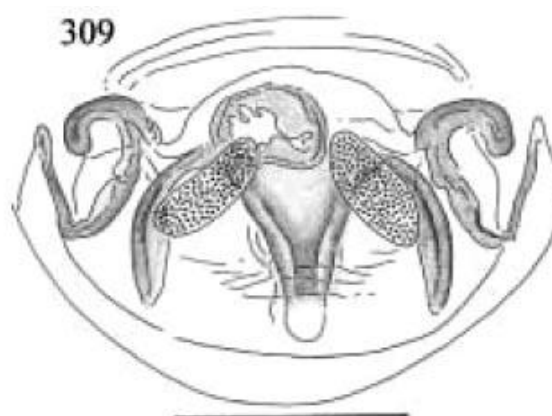
Scale lines:

5 μm (105–106, 111–112).



Figs. 291–305. *Leptopholcus* spp. from the Antilles, male diagnostic characters.

302–305. *L. dalei* (Petrunkévitch). 302. Left procursus, retrolateral view. 303. Bulbal projections (left bulb). 304. Bulbal “appendix.” 305. Palpal trochanter. Arrows point to emboli; asterisks mark “unci.” Scale line for all drawings: 0.2 mm.



Figs. 306–309. *Leptopholcus* spp. from the Antilles, female internal genitalia, dorsal views.

309. *L. dalei* (Petrunkévitch).

Scale lines: 0.2 mm.