

Leptopholcus tanikawai Irie, 1999

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A New Species of the Genus *Leptopholcus* (Araneae: Pholcidae) from the Yaeyama Islands, Japan

Teruo Irie¹⁾

入江照雄¹⁾: 八重山諸島産マシラユウレイグモ属
(クモ目: ユウレイグモ科) の1新種

Abstract A new species of the spider family Pholcidae is described from the Yaeyama Islands, Japan, under the name, of *Leptopholcus tanikawai* sp. nov. The genus *Leptopholcus* is newly added to the Japanese fauna.

The genus *Leptopholcus* (Pholcidae) was established by Simon (1893) based on the type species *L. signifer* Simon, 1893 described from Congo.

Up to the present, the members of the genus *Leptopholcus* have been recorded from Africa, Madagascar, Borneo and Brazil. In this paper, I describe a new species of the genus *Leptopholcus* from Ishigakijima Island and Iriomotejima Island, the Yaeyama Islands.

All the type specimens are deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

The abbreviations used in this paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; Cp, length of clypeus; OA, ocular area; PLE, posterior lateral eye; PME, posterior median eye.

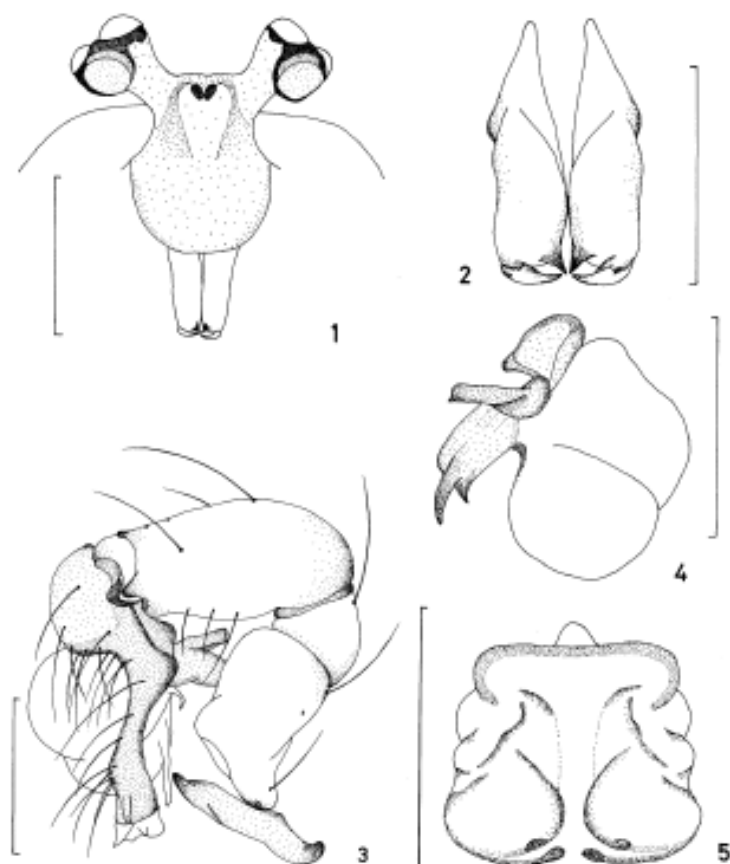
I wish to express my sincere thanks to Mr. Akio Tanikawa, Kanagawa, for offering many invaluable specimens.

Leptopholcus tanikawai sp. nov. (Figs. 1-5)

Measurements of holotype and allotype ($\sigma^7/\frac{7}{2}$; in mm). Body length 5.62/6.15. Carapace length 1.19/1.29, width 1.20/1.30. Abdomen length 4.43/4.58, width 1.25/1.57. Length of legs as shown in Table 1. Eye sizes: AME 0.02/0.03, ALE 0.17/0.16, PME 0.15/0.17, PLE 0.15/0.16. Distances between eyes: AME-AME 0.02/0.02, PME-PME 0.45/0.25, ALE-ALE 0.60/0.32. OA length 0.30/0.17, width 0.86/0.63. Cp 0.36/0.50.

Male (holotype): Carapace pale yellow, with length nearly equal to width. Eight eyes arranged in three groups as in the genus *Pholcus*, anterior median eyes dark and smallest, and eyes of two triads situated on each protruding turrets. Row of anterior eyes procurved. Chelicerae pale brownish yellow, with a short fang and a lamella. Sternum, maxillae and labium pale yellow. Legs very long, pale yellow except patellae

1) 19-11, Ikeda 2 Chome, Kumamoto-shi, Kumamoto Prefecture, 860 Japan
〒 860-0082 熊本県池田2丁目19-11
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Figs. 1-5. *Leptopholcus tanikawai* sp. nov. — 1, Male head and chelicerae, anterior view; 2, male chelicerae, ventral view; 3, left male palp, exo-lateral view; 4, same, apical part of the bulb, ventral view; 5, epigynum, ventral view. (Scales: 0.5 mm.)

yellowish brown, and with yellowish brown annulations tips of tibiae and bases of metatarsi. Leg formula 1, 2, 4, 3. Abdomen cylindrical, pale yellow with pale gray patterns.

Male palp: Male palpal organ as in the genus *Pholcus*, the structure as shown in Fig.

Table 1. Measurements of legs of *Leptopholcus tanikawai* sp. nov. (♂/♀; in mm).

Leg	Femur	Patella+Tibia	Metatarsus	Tarsus	Total
I	10.62/9.63	10.62/10.12	20.25/16.50	1.50/1.06	42.99/37.31
II	7.87/7.00	7.50/6.87	12.00/10.75	1.12/1.12	28.49/25.74
III	5.25/4.75	4.62/4.50	6.75/6.12	0.75/0.75	17.37/16.12
IV	7.62/7.25	6.37/6.50	10.81/10.12	0.81/0.93	25.61/24.80

3. Prokursus brown, curved, very similar to the genus *Pholcus*. Trochanter pale brown, slender horizontally, like a flat shoe. Bulb pale, rounded, and with small brownish membranous embolus as shown in Fig. 4.

Female (allotype): Body slightly larger than the male. Legs shorter than those of the male. Eyes in two triads not protruding. Epigynum as shown in Fig. 5.

Type series. Holotype: ♂, Komi, Iriomotejima Island, Taketomi-chô, Okinawa Prefecture, Japan, 27-III-1987, A. Tanikawa leg. (NSMT-Ar 3847); allotype: ♀, Ohara, Iriomotejima Island, 12-VIII-1985, A. Tanikawa leg. (NSMT-Ar 3848).

Other specimens examined. Iriomotejima Island: 1 ♀, Ohara, 12-VIII-1985, A. Tanikawa leg.; 2 ♀, Otomi, 30-XII-1986, A. Tanikawa leg.; 4 ♀ 5 ♂, 27-III-1987; 1 ♀ 2 ♂, 18-VIII-1988; 1 ♀, 31-XII-1988, Komi, A. Tanikawa leg.; 1 ♀, Funaura, 22-VIII-1987, A. Tanikawa leg.; 1 ♀, Urauchi, 25-VIII-1990, T. Irie leg. Ishigakijima Island: 2 juv., Mt. Banna-dake, Ishigaki-shi, 3-XI-1994, T. Irie leg.

Variation (in mm). Body length. ♂ 4.75–5.62, ♀ 5.22–6.32.

Distribution. Ishigakijima Island and Iriomotejima Island, Japan.

Remarks. This new species is similar to *L. sakalavensis* Millot, 1946 known from Madagascar, in the shapes of prokursus and trochanter of male palp, but is easily distinguishable from the latter by the other structure of male palpal organ. This new species is leaf-dwelling pholcid spider.

Etymology. The species is dedicated to Mr. Akio Tanikawa, Kanagawa Prefecture, Japan.

摘 要

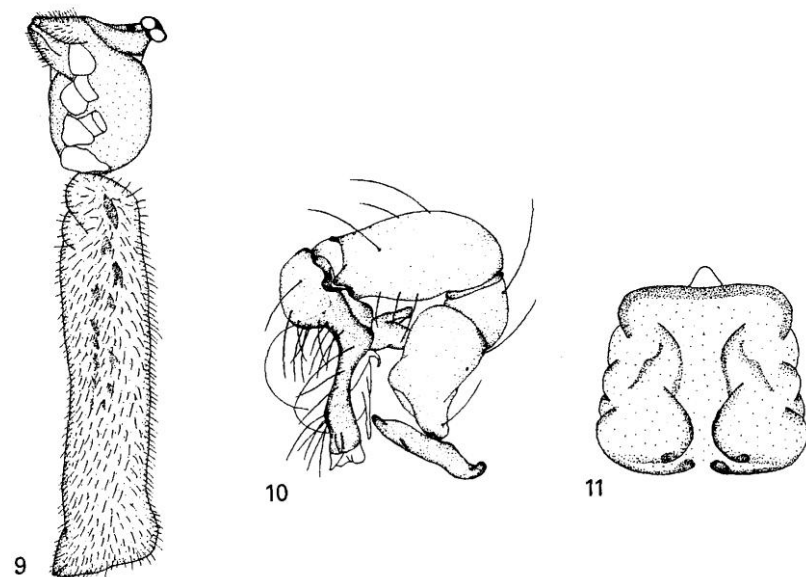
石垣島、西表島に産する *Leptopholcus* マシラユウレイグモ属(新称)の1新種を *Leptopholcus tanikawai* sp. nov. ヤエヤマユウレイグモ(新称)として命名して記載した。*Leptopholcus* は現在まで、アフリカやマダガスカル、ボルネオ、ブラジルで記録されていたユウレイグモ類で、日本新記録属となる。

References

- Brignoli, P. M., 1980. III. Sur le genre *Leptopholcus* Simon, 1903 (Araneae, Pholcidae). *Revue Zool. afr.* **94**: 649–655.
 Millot, J., 1946. Les Pholcides de Madagascar. *Mém. Mus. nat. Hist. nat. Paris* (N.S.), **22**: 127–158.
 Simon, E., 1893. Histoire naturelle des araignées. **1**(2): 257–488. Paris.

Irie, T. 2009. Pholcidae. In: Ono, H. (ed.) *The Spiders of Japan, with Keys to the Families and Genera and Illustrations of the Species*. Tokai Univ. Press, Kanagawa, pp. 106-111, pl. 4-5.

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9～11, ヤエヤマユウレイグモ *Leptopholcus tanikawai* ;

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ヤエヤマユウレイグモ (図 2-2-13-9～11, Plate 4-5)
Leptopholcus tanikawai Irie, 1999

体長雌 5～6.5 mm, 雄 4.5～5.5 mm. 背甲は円形で淡黄色. 眼の前端線は前曲. 腹部は淡黄色, 円筒形で後部がわずかに膨らむ. 雄触肢跗節の鉤状突起は褐色で, 形はユウレイグモ属に似ている. 触肢転節は淡褐色で, 長く平らな靴の形である. 歩脚は淡黄色. 野外性のクモ. 南西諸島の石垣島, 西表島に分布する.

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5, ヤエヤマユウレイグモ *Leptopholcus tanikawai* 雌雄

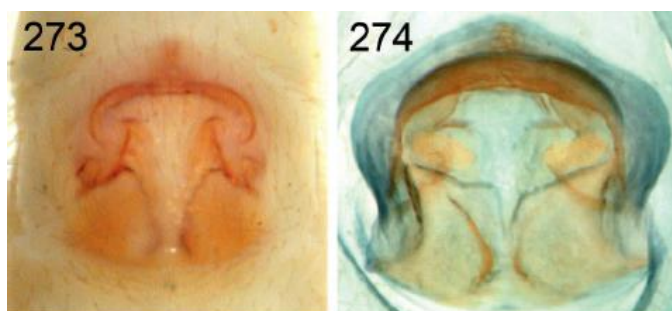
Huber, B. A. 2011. Revision and cladistic analysis of *Pholcus* and closely related taxa (Araneae, Pholcidae). Bonner zool. Monographien 58: 1-510.

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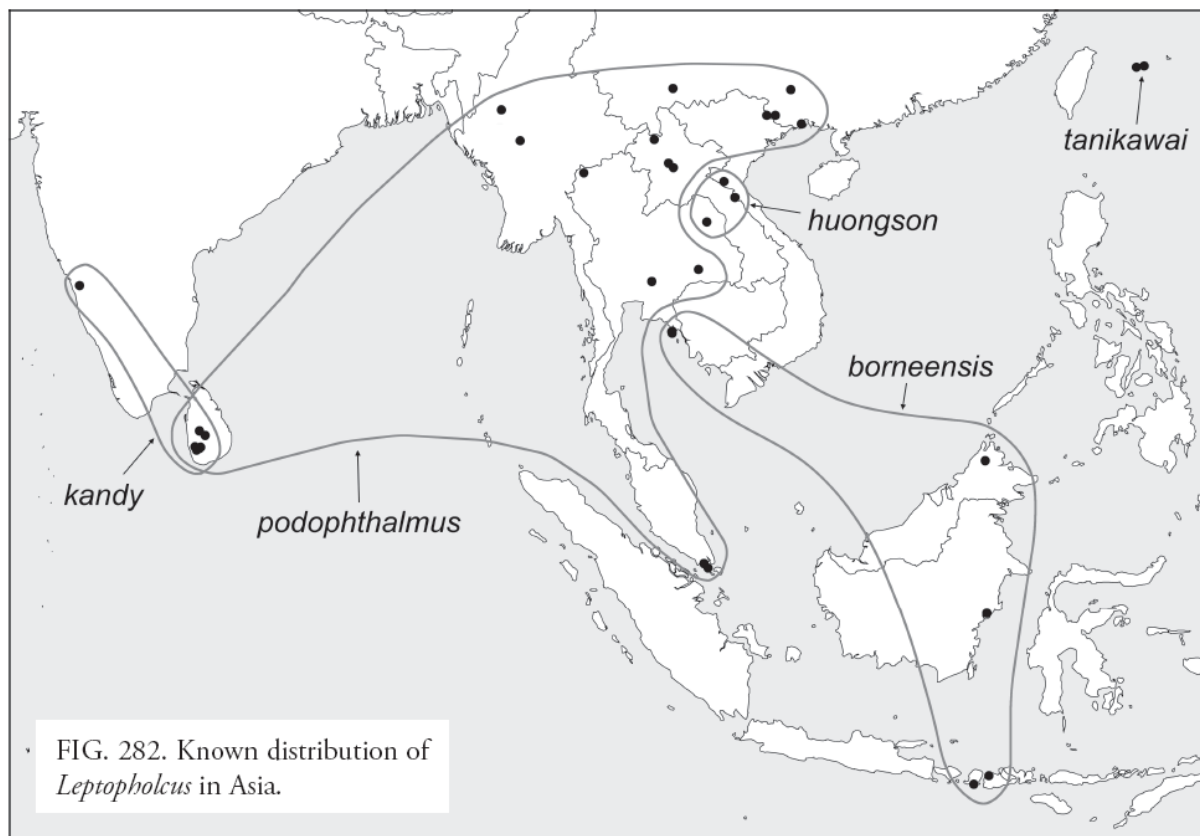


228-231. *L. tanikawai*, male
dorsal and lateral views; female abdomen, ventral view; male prosoma with palps, frontal view.

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273, 274. *L. tanikawai*.



Leptopholcus tanikawai Irie, 1999

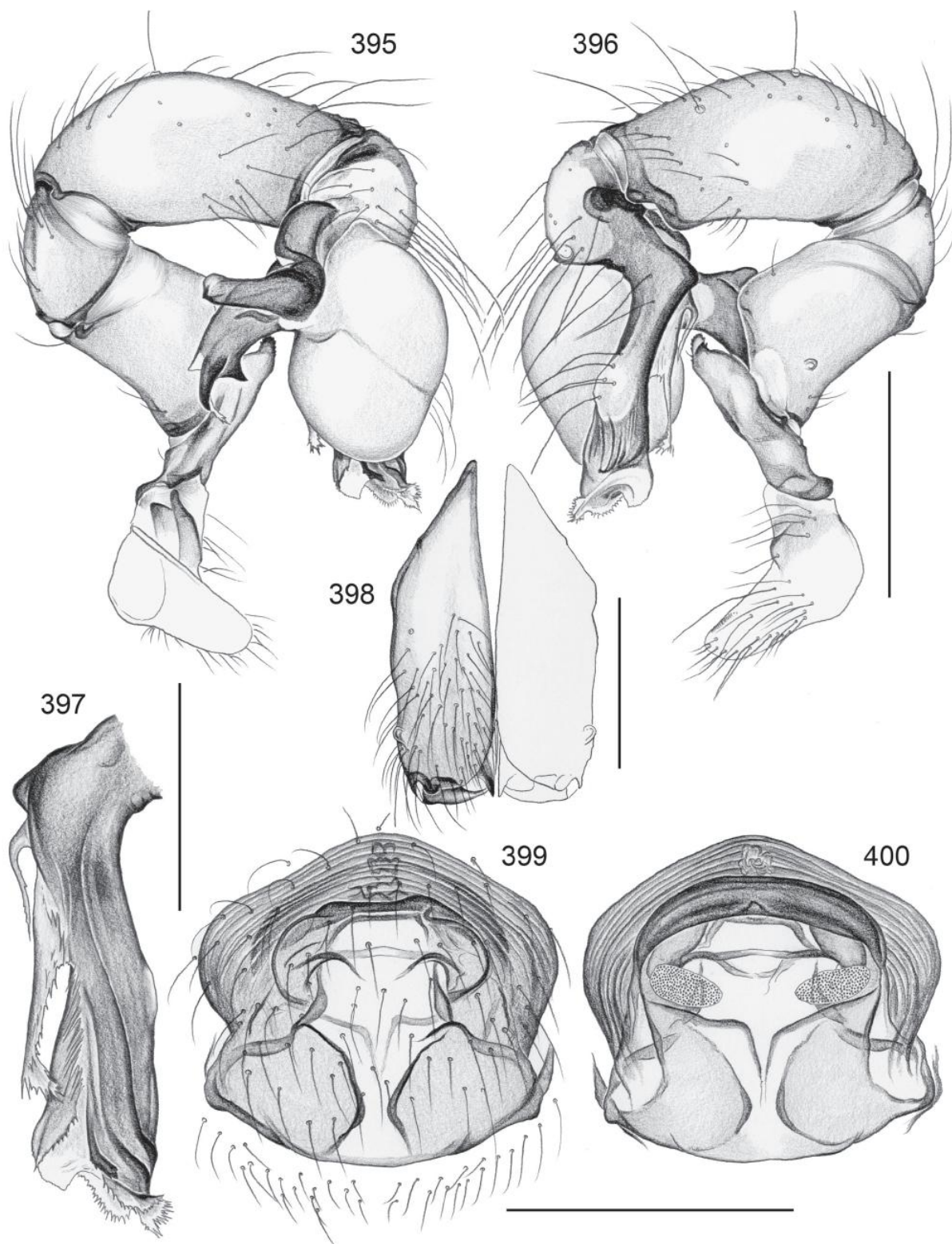
Figs. 228-231, 273, 274, 395-401, 426, 427

Leptopholcus tanikawai Irie 1999: 37-39, figs. 1-5.
Irie 2009: 108, figs. (2-2-13) 9-11 (10 and 11 copied from Irie 1999), pl. 4, fig. 5.

Types. Male holotype from Japan, Okinawa, Iriomotejima Island [-24°20'N, 123°50'E], Furumi (Irie 1999: Komi!), 27.iii.1987 (A. Tanikawa), in NSMT (Ar 3847), examined. Female "allotype" from Iriomotejima Island, Ohara, 12.viii.1985 (A. Tanikawa), in NSMT (Ar 3848), examined.

Diagnosis. Distinguished from most congeners by relatively short abdomen (Figs. 228, 229), male eyes on stalks (Fig. 231), and procursus shape (Fig. 396); from very similar *L. podophthalmus* only by morphology of bulbal processes (compare Figs. 401 and 402), and by female genitalia (Figs. 273, 399). Up to three further similar species seem to exist on New Guinea (Madang: Baiteta; in IRSB), Borneo (Sabah: Poring Hot Springs; in RMNH), and Sumatra (Gunung Leuser, Bohorok and Kerinci N.P.; in RMNH), but the available specimens are either poorly preserved or no males are available.

Male (Otomi). Total body length 5.0, carapace width 1.3. Leg 1: 45.3 (10.9 + 0.6 + 10.9 + 20.9 + 2.0), tibia 2: 7.4, tibia 3: 4.3, tibia 4: 6.4; tibia 1 L/d: 103. Habitus as in Figs. 228 and 229. Carapace pale ochre-yellow, ocular area light brown, clypeus also slightly darker, sternum pale whitish, legs pale ochre-yellow, patellae and tibia-metatarsus joints dark, abdomen ochre-gray with some darker spots dorsally, ventrally monochromous (cf. female, Fig. 230). Distance PME-PME 445 µm, diameter PME 140 µm, distance PME-ALE 35 µm, distance AME-AME 35 µm, diameter AME 20 µm. Ocular area elevated, triads on additional stalks (-0.34 long; Fig. 231), some longer hairs posteriorly on ocular area. No thoracic furrow; clypeus unmodified. Chelicerae as in Fig. 398, with small lateral apophyses distally (missing in original drawing; Irie 1999: fig. 2). Sternum wider than long (0.75/0.60), unmodified. Palps as in Figs. 395 and 396, very similar to *L. podophthalmus*, coxa with low retrolateral hump, trochanter with long ventral apophysis with two tips, one serrated, one pointed, femur short and wide, with retrolateral apophysis proximally (missing in original



Figures 395-400. *Leptopholcus tanikawai*. 395, 396. Left male palp, prolateral and retrolateral views. 397. Left procursus, prolateral view. 398. Male chelicerae, frontal view. 399, 400. Cleared female genitalia, ventral and dorsal views. Scale lines: 0.5 (395, 396, 399, 400), 0.3 (397, 398).

drawing; Irie 1999: fig. 3), ventrally widened, pro-cursus strongly bent proximally, distally complex with mostly membranous processes (Fig. 397; in the original drawings these processes erroneously originate from the bulb; Irie 1999: fig. 3), bulb with rather small uncus(?) (“embolus” of Irie 1999), embolus partly sclerotized (or fused to appendix?), with distinctive pointed projection (Fig. 401). Legs without spines and curved hairs, few vertical hairs; retrolateral trichobothrium on tibia 1 at 3%; prolateral trichobothrium absent on tibia 1, present on other tibiae. Tarsal pseudosegments indistinct, only distally a few visible in dissecting microscope. Gonopore with four epiandrous spigots (Fig. 427); ALS with only two spigots each (Fig. 426).

Variation. Marks on abdomen variably distinct. Tibia 1 in 6 other males: 9.6-10.7 (mean 10.3). The holotype is very pale (probably bleached) but otherwise in fair condition; tibia 1: 10.7.

Female. In general similar to male, triads not on stalks, closer together (PME-PME distance 230 μ m), ocular area not darkened, pair of small marks on carapace, abdomen mostly monochromous. Tibia 1 in 8 females: 8.1-9.5 (mean 8.5). Epigynum simple plate, distinctive internal structures visible through cuticle (Figs. 273, 399); internal genitalia as in Figs. 274 and 400.

Distribution. Only known from Iriomotejima Island (Fig. 282); Irie (1999) lists 2 juvenile specimens from nearby Ishigakijima Island [$\sim 24^{\circ}24'N$, $124^{\circ}12'E$].

Material examined (all collected by A. Tanikawa). JAPAN: *Okinawa*: Iriomotejima Island, Furumi, ♂ holotype above; Ohara, 1 ♀ “allotype” above; same data but 30.iv.1990, 12.viii.1992, 1 ♂ 1 ♀ (2 vials) in ZFMK; Otomi, 24.vii.1991, 1 ♂ 2 ♀ in ZFMK, same data but 25.vii.1988, 2.i.1989, 16.viii.1992, 3 ♂ 2 ♀ (3 vials) in ZFMK; Sonai, 30.iii.1988, 1 ♀ in ZFMK; Funaura, 29.xii.1988, 1 ♂ 1 ♀ (2 vials) in ZFMK; Shirahama, 31.xii.1986, 1 ♀ in ZFMK; Mouth of Geda river, 29.xii.1991, 1 ♂ in ZFMK; Urauchi, 31.xii.1988, 1 ♂ in ZFMK.

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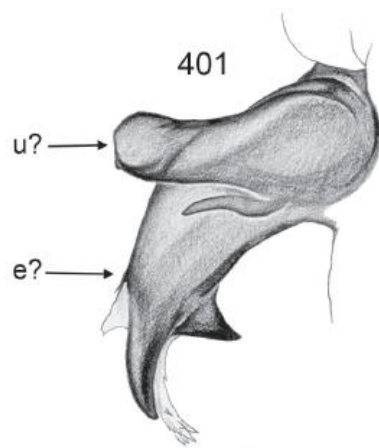


FIG. 401-404. *Leptopholcus tanikawai* (401)
bulbs, prolateral views.

401, 402. Processes of left

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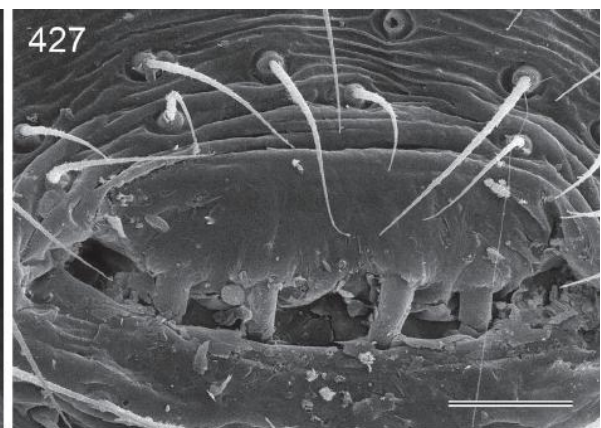
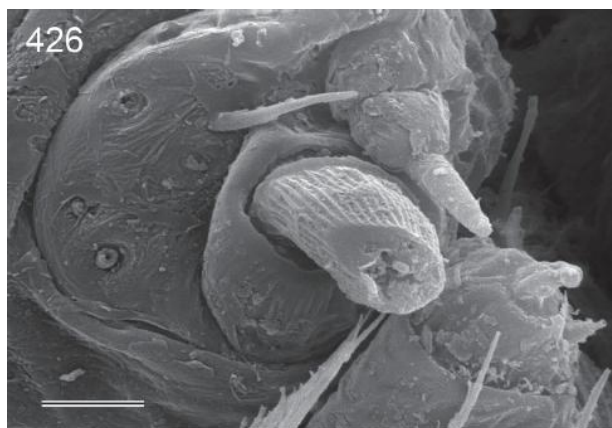


FIG. 426-429. *Leptopholcus tanikawai* (426, 427)
Male gonopore.

426. Male ALS. 427.