

Description of two new species of *Lycinus* (Araneae: Nemesiidae)

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ABSTRACT. Two new species of *Lycinus* Thorell, 1894 are described in this paper, *L. portoseguro* **sp. nov.** and *L. choros* **sp. nov.** *Lycinus portoseguro* **sp. nov.** is based on male and female from Porto Seguro, state of Bahia, Northeastern Brazil. This is the first record of a species of *Lycinus* from Brazil. Males of *L. portoseguro* **sp. nov.** differ from the remaining species of the genus by the presence of a retrolateral megaspine on tibia I and by the short embolus. Females can be distinguished by the scopulae divided on tarsi II. *Lycinus choros* **sp. nov.** is based on one male from La Serena, IV Region (Coquimbo), Chile. It is the eighth species described from this country. *L. choros* **sp. nov.** resembles *L. epipiptus* (Zapfe, 1963) by the longer embolus and differs from it by the short palpal tibia and by the scopulae undivided on male tarsi I-II.

KEY WORDS. Atlantic Forest; Chile; Diplothelopsinae; Mygalomorphae.

The Nemesiidae Simon, 1889 was raised to family status by RAVEN (1985) from the Nemesiidae group proposed by SIMON (1889). RAVEN (1985) transferred to the family genera previously described in other families and considered it as a senior synonym of Pycnothelidae Chamberlin, 1917. To date, Nemesiidae contains 350 species and 42 genera divided into six subfamilies (RAVEN 1985, PLATNICK 2010).

GOLOBOFF (1995) revised the species of Nemesiidae from Peru, Chile, Argentina and Uruguay, postponing the study of the Brazilian Nemesiidae, a very large and poorly studied group. Most of the recent papers on Nemesiidae taxonomy are restricted to Southern (LUCAS & INDICATTI 2006, INDICATTI *et al.* 2008), Southeastern (LUCAS *et al.* 2008) and Central Brazil (INDICATTI & LUCAS 2005). From Northeastern Brazil, only one species of Nemesiidae was described, *Pselligmus infaustus* Simon, 1892 from Arquipélago de Abrolhos, a group of five islands ca. 70 km from the coast of the state of Bahia (SIMON 1892).

Lycinus was established by THORELL (1894), with the type species, *L. longipes* Thorell, 1894, based on a male from Córdoba, Argentina. GOLOBOFF (1995: 148) emended the diagnosis of the genus mentioning that the “only possible autapomorphy for the genus is the male bulb being coniform and gradually tapering to form the embolus. It can be quickly distinguished from *Diplotheopsis* Tullgren, 1905 by having the posterior median spinnerets present, and from *Flamencopsis* Goloboff, 1995 and *Chilelopsis* Goloboff, 1995 by the female patella IV having strong 1-1-1 P spines”. The genus includes eight species, one from Argentina and seven from Chile (GOLOBOFF 1995, PLATNICK 2010).

In this study, two new species of *Lycinus* are described: *L. portoseguro* **sp. nov.** from Porto Seguro, state of Bahia, Northeastern Brazil. This is the first record of the genus from Brazil. *L. choros* **sp. nov.** from Choros, IV Region (Coquimbo), is the eighth species described of the genus from Chile.

MATERIAL AND METHODS

The examined material is deposited in the following institutions (abbreviation and curator in parentheses): Instituto Butantan, São Paulo (IBSP, I. Knysak), Museu de Zoologia da Universidade Federal da Bahia, Salvador (MZUFBA, T.K. Brazil) and Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires (MACN, C. Scioscia). Spine notation follows PETRUNKEVITCH (1925). All measurements are in millimeters and were taken with a millimetric ocular lens. The length of leg segments was measured between joints in dorsal view. Length and width of carapace, eye tubercle, labium and sternum are maximum values obtained. Total body length includes chelicerae but not the pedicel and spinnerets. All drawings were made with the aid of a camera lucida attached to a Leica MZ 12.5 stereomicroscope. Spermathecae were cleared with clove oil and illustrated in dorsal view. Abbreviations: (AME) anterior median eyes, (ALE) anterior lateral eyes, (PME) posterior median eyes, (PLE) posterior lateral eyes, (PLS) posterior lateral spinnerets, (d) dorsal, (v) ventral, (p) prolateral, (r) retrolateral, (ap) apical, (s) superior.

TAXONOMY

Lycinus portoseguro **sp. nov.**

Figs 1-13

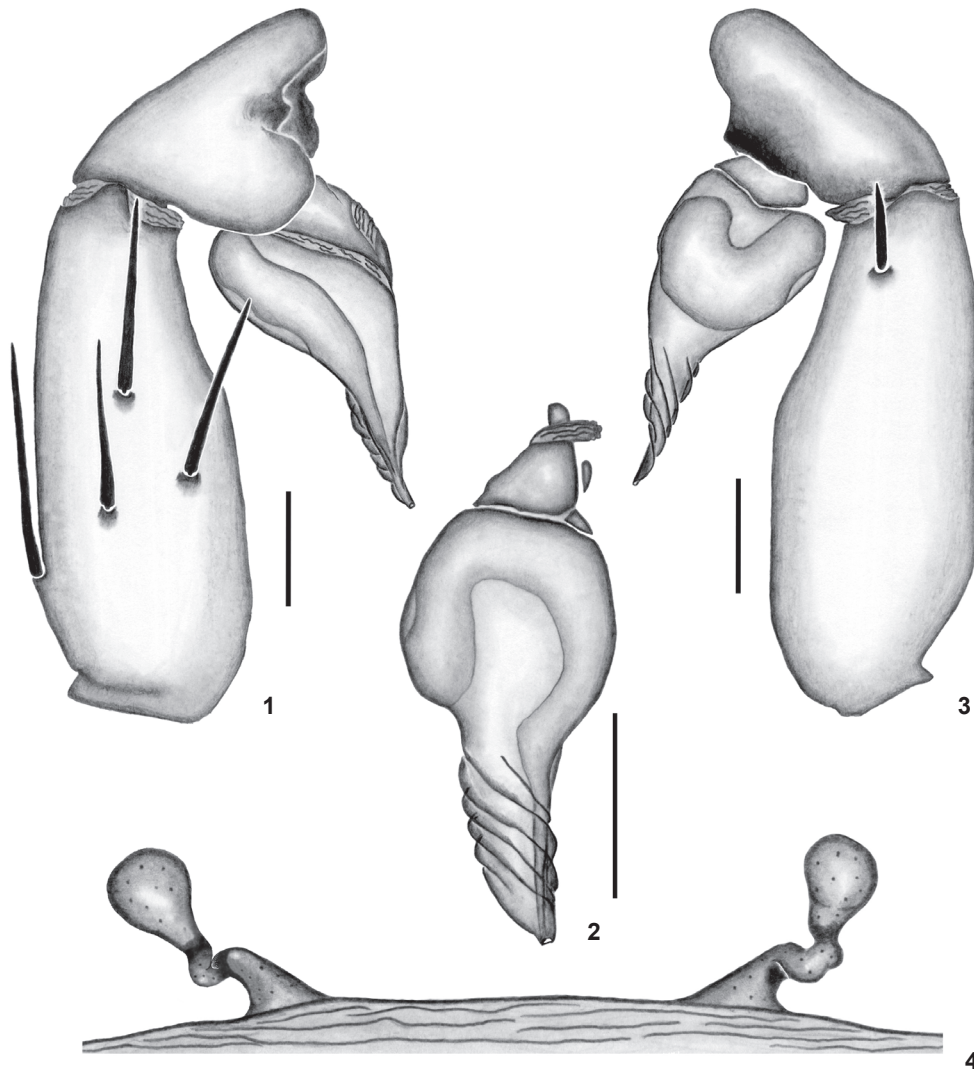
Types. Male holotype from BRAZIL, state of Bahia, Porto Seguro (Estação Vera Cruz, formerly Estação Veracel, 16°23'31”S, 39°10'19”W), 2006, J.P. Alves *leg.* (IBSP 112977). Paratypes with the same data as holotype, female (IBSP 112979) and two males (IBSP 112986; MZUFBA).

Diagnosis. Males of *L. portoseguro* **sp. nov.** differ from those of the remaining species of the genus by the presence of a retrolateral megaspine on tibia I (Figs 9 and 10) and by the

short embolus (Figs 1-3). Females can be distinguished by the scopulae divided on tarsi II (Fig. 11).

Description. Male (holotype). Coloration pattern: carapace (Fig. 5) and legs reddish-brown. Abdomen dark brown, with five transversal bands of yellow mottles, with brown hairs covering dorsum (Fig. 6). Total length 25.8. Carapace 12.0 long, 10.0 wide, fovea short 0.8 wide and slightly procurved (Fig. 5). Clypeus narrow, 0.54. Anterior eye row slightly procurved and posterior recurved. AME 0.46, ALE 0.40, PME 0.22 and PLE 0.40. Eye group trapezoidal, wider than long (Fig. 5). Basal segment of chelicerae with 12 teeth, each in one row on promargin, with ca. 30 basal smaller teeth. Rastellum with very strong setae. Intercheliceral tumescence large, pale yellow, covered with

few strong setae on base. Labium 1.1 long, 2.0 wide, with three cuspules (Fig. 7). Endites with 31 and 36 cuspules on internal basal angle (left and right, respectively). Serrula present. Sternum oval, 5.70 long, 4.90 wide (Fig. 7), profile in transverse section slightly domed, with six sternal sigilla, median and posterior away from margin by ca. one length, oval-elongated, posterior four times the size of anterior pair. Measurements: Palp: femur 5.5/patella 3.0/tibia 3.8/cymbium 2.1/total 14.4; legs: I: femur 11.2/patella 6.5/tibia 8.8/metatarsus 9.8/tarsus 5.5/total 41.8; II: 10.9/5.6/8.1/9.3/4.7/38.6; III: 10.0/4.7/7.4/10.8/5.0/37.9; IV: 13.0/5.4/10.7/13.5/5.4/48.0; spination: Palp: femur d0-0-0-1r-1-1-1r-1p-1-2-2, patella d1p-1p-1p, tibia d0-1p-0-0-0-0, p0-0-0-1-1-1-0-1, r0-0-0-0-0-1; legs: I: femur d0-0-



Figures 1-4. *Lycinus portoseguro* sp. nov. (1-3) Male holotype, left palpal bulb: (1) prolateral view; (2) ventral view; (3) retrolateral view. (4) Female paratype, spermathecae, dorsal view. Scale bars = 1 mm.



Figures 5-13. *Lycinus portoseguro* sp. nov. (5-10) Male holotype: (5) carapace, dorsal view; (6) abdomen, dorsal view; (7) sternum, ventral view; (8) abdomen, lateral view; (9-10) tibia I, megaspine (arrow); (9) retrolateral view; (10) ventral view. (11-13) Female paratype: (11) tarsi II, ventral view; (12) carapace, dorsal view; (13) abdomen, lateral view. Scale bars = 1 mm.

0-1-2-1-1r-1-2-1-2-1-1, patella p0-0-1-1-0, tibia v0-2-1-0-0-1-1r-1p-(1r megaspine + 2p ap), p0-1-0-1-0, r0-1-0-0-1-0, metatarsus v0-0-1r-1p-0-0-1r-1p-1-0-0-0-0-0-2ap, p1-0-1-0-1-0-1, r0-0-0-1-0-0-1-0-1; II: femur d0-0-1-1r-3-0-3-1-2-1-2-1, patella p0-1-0-1-0-1, tibia v1p-2r-0-0-3-0-0-3ap, p1-1-0-1-0, r0-1-0-1-0, metatarsus d0-1r-0-1p-0-1r-1p-0-0-0, v0-0-2-0-0-2-1-0-0-0-3ap, p1-0-0-1-0-0-1-0-0-1-0, r0-0-0-0-1-0-0-1-0-1; III: femur d0-1-2-1r-1-2-3-0, patella p0-1-1-1, r1-0-1-0, tibia d2-0-0-1-0-1-0-0, v0-2-0-0-2-0-0-3ap, p1-1-0-1-1, r0-1-0-0-1-0, metatarsus d0-1r-1p-1-1p-1-0-0-0-0-2, v0-2-0-2-3ap, p0-1-0-0-1-0-0-1-0-0, r0-1-0-0-1-0-0-1-0-0; IV: femur d0-1-1r-1-1p-0-1r-1-1p-0-1r-2-1p, patella p0-0-0-0-1-0, r0-1-0, tibia d2-0-1-0-1p-0, v2-0-2-0-3ap, p0-1-0-0-1-0-0-2-0-2-0, r0-1-0-0-1-0, metatarsus d1p-1p-1p-0-2, v0-2-0-1p-0-1r-1p-0-3ap, p1-0-1-0-0-1-1, r1-0-1-0-0. Pseudopreening combs on metatarsi III-IV. Tarsi II-IV flexible. Scopulae on all tarsi. Superior tarsal claws with two rows of 3-4 teeth on all tarsi. Third claw absent on all tarsi. Four spinnerets: PLS three-segmented: basal, median and apical (digitiform short) segments 0.9, 1.37, 1.5 long, respectively (Fig. 8). Palp with bulb coniform and gradually tapering to form the embolus (Figs 1-3). Male palpal bulb with diagonal keels (Figs 2 and 3).

Female (paratype IBSP 112979). Coloration as in male, with less brown hairs covering abdomen dorsally (Fig. 13). Total length 27.0. Carapace 10.0 long, 7.7 wide, fovea short 1.35 and procurved. Clypeus narrow, 0.35. Anterior eye row slightly procurved and posterior recurved. AME 0.44, ALE 0.42, PME 0.28 and PLE 0.46. Eye group trapezoidal, wider than long (Fig. 12). Basal segment of chelicerae with 11 and 13 teeth (left and right, respectively) in one row on promargin, with ca. 45 basal smaller teeth. Rastellum with few strong setae. Intercheliceral tumescence absent. Labium 1.9 long, 1.2 wide, with two cuspules. Endites with 90 and 95 cuspules on internal basal angle (left and right, respectively). Serrula absent. Sternum oval, 5.1 long, 4.7 wide, profile in transverse section slightly domed. Six sternal sigilla, median and posterior away from margin by ca. one length, oval-elongated, posterior four times the size of anterior pair. Measurements: Palp: femur 4.3/patella 2.7/tibia 3.2/cymbium 2.2/total 12.4; legs: I: femur 6.2/patella 4.4/tibia 4.7/metatarsus 3.7/tarsus 2.0/total 21.0; II: 5.6/3.8/3.9/3.6/2.1/19.0; III: 5.0/3.5/3.2/4.7/2.3/18.7; IV: 7.0/4.1/5.5/7.0/2.8/26.4; spination: Palp: tibia v0-0-1p-0-3ap; legs: I: metatarsus v2-1r-0-2ap; II: tibia v0-1-0-1-0, metatarsus v0-2-2-0-3ap; III: patella d0-0-1p-0-1p-1p-1p-0-0, p0-0-1-1, tibia d0-0-1-0, v1p-0-2-0-0-3ap, p0-1-0-1-0, metatarsus d1-2-0-1p-2-0-0-0-2, v0-2-0-2-0-3ap, p0-1-0-1-0; IV: tibia v1r-0-1r-0-3ap, p0-1-0-1, r0-1-0-1, metatarsus d1-1p-0-2-0-2, v0-2-0-1p-1r-1p-0-5ap, p1-1-0-1-0-1-0-1-0. Palp with one row with three prolateral teeth. Pseudopreening combs on metatarsi III-IV. Tarsi I-IV not flexible. Scopulae on tarsi and 3/4 anterior of metatarsi I. Scopulae divided on 3/4 of tarsi II by one band of 4-6 strong setae (Fig. 11) and 1/4 anterior of metatarsi II by one band of 6 strong setae. Scopulae on tarsi and metatarsi I-II symmetric. Superior tarsal claws with two rows of 2-3 teeth on all tarsi. Third claw on tarsi IV (about 1/8 of length

of superior tarsal claws). Four spinnerets: PLS three-segmented: basal, median and apical (digitiform short) segments 1.75, 1.0, 0.8 long, respectively. Genitalia with two slightly twisted copulation ducts and drop-shaped spermathecae (Fig. 4).

Variation. Males (n = 5): total length 21.5-25.8; carapace 10.0-12.3; abdomen 8.5-11.3; endites with 31-42 cuspules and 3-5 on labium.

Additional material examined. Same data as holotype, 1 male (IBSP 112987); 1 male, 23.X.2001, M.G.C. Costa *leg.* (IBSP 112778).

Distribution. Known only from the type locality.

Etymology. The species name is a noun in apposition, taken from the type locality.

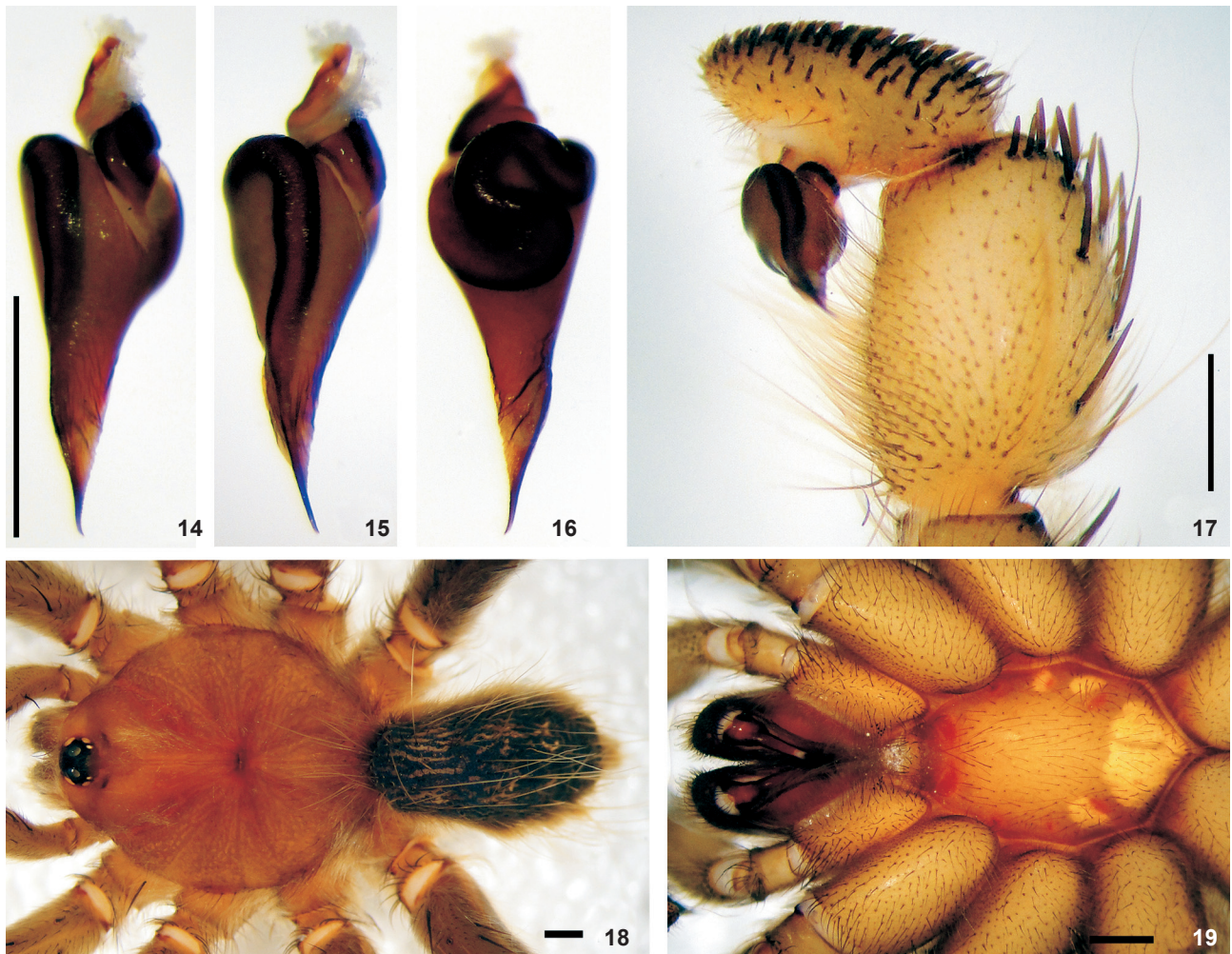
Lycinus choros sp. nov.

Figs 14-19

Type. Male holotype from Chile, IV Region (Coquimbo), (100 km N La Serena, Choros, 29°21'S, 71°10'W), 23.II.2006, A.A. Ojanguren-Affilastro & L. Compagnucci *leg.* (MACN 19699).

Diagnosis. *L. choros* sp. nov. resembles *L. epipiptus* (Zapfe, 1963) by the longer embolus and differs from it by the short palpal tibia (Fig. 17) and by the scopulae undivided on male tarsi I-II.

Description. Male (holotype). Coloration pattern: carapace yellowish-brown covered by golden setae (Fig. 18). Legs pale yellowish-brown. Abdomen dark brown dorsally, with 8-10 parallel yellow stripes, with short and long golden setae covering (Fig. 18). Total length 13.4. Carapace 7.3 long, 6.4 wide, fovea short 0.44, wide and straight (Fig. 18). Clypeus narrow, 0.32. Anterior and posterior eye row procurved. AME 0.44, ALE 0.36, PME 0.16 and PLE 0.26. Eye group trapezoidal, wider than long (Fig. 18). Basal segment of chelicerae with six teeth, each in one row on promargin, with ca. 15 basal smaller teeth. Rastellum with very strong setae. Intercheliceral tumescence large, pale yellow, without setae. Labium 0.7 long, 1.2 wide, without cuspules. Endites with nine cuspules, each on internal basal angle (Fig. 19). Serrula present. Sternum oval, 3.60 long, 3.10 wide (Fig. 19), profile in transverse section slightly domed. Six sternal sigilla, all away from margin by ca. one length, oval-elongated, posterior pair two times the size of anterior pair (Fig. 19). Measurements: Palp: femur 3.9/patella 1.5/tibia 2.4/cymbium 1.95/total 11.45; legs: I: femur 7.7/patella 3.5/tibia 6.2/metatarsus 7.3/tarsus 4.9/total 29.6; II: 7.4/3.3/6.1/7.3/4.9/29.0; III: 7.1/3.0/5.7/9.0/5.6/30.4; IV: 8.2/3.1/7.6/11.0/6.3/36.2; spination: Palp: femur d0-0-0-0-1-1-1-3-0-2, patella d0-1p-0-0-3, p0-1-0-0-0, tibia d1-1p-1r-2-1-4-1-2-1-2p, v0-0-0-0-0-1r; legs: I: femur d2-3-1-2-2-3-1, patella p0-1-0-1-0, r1-1-0, tibia d2-0-0-0-2-0, v2p-2r-0-0-0-1r-3-0-0-0-3ap, p1-1-0-1-1, r1-1-0-1-1, metatarsus d1-1r-0-1p-0-2-0, v0-1r-0-2-0-0-0-1ap, p1-0-1-0-1-1, r1-0-0-1-0-0; II: femur d0-2-2r-1r-3-1-2-1, patella p0-1-0-1, tibia d2-0-1-0-2-0, v4-0-3-0-3ap, p1-1-0-1-1, r0-1-0-1-0, metatarsus d0-1-1p-0-2-0, v2-1p-1r-0-0-1ap, p1-0-



Figures 14-19. *Lycinus choros* sp. nov., male holotype. (14-16) Left palpal bulb: (14) prolateral view; (15) ventral view; (16) retrolateral view; (17) palpal tibia, retrolateral view; (18) Body, dorsal view; (19) sternum, ventral view. Scale bars = 1 mm.

1-0-1, r1-0-0-1-0-0-1; III: femur d1-3-1r-1-1p-1-2-0, patella p0-1-0-1-0, r0-1-0-0, tibia d1-0-1-0-2-0, v3-0-0-2-0-0-3ap, p1-1-0-1-0, r1-1-0-1-0, metatarsus d2r-1p-1r-1p-0-1r-1p-0-2, v0-1p-1r-0-0-1p-1r-0-0-2ap, p0-1-0-0-1-0-0-0-1; IV: femur d0-1-3-1r-1-1r-2p-2, patella p0-1-1-1-0, r0-1-0-0, tibia d1-0-0-1-1-0-0-2-0, v3-0-2-0-0-3ap, p1-0-0-1-0-0-1-0-0, r 1-0-0-1-0-0-1-0-0, metatarsus d1-1r-1p-1r-1p-1r-1p-0-2, v0-0-1p-1r-0-0-0-1p-1r-1p-0-3ap, r0-1-0-0-1-0-0. Tarsi I-IV flexible. Scopulae divided by 1-2 bands of strong setae on tarsi and metatarsi I-III, IV divided by 1-3 bands of strong setae. Scopulae divided on all metatarsi, I-II present on 5/6, III on 2/5, IV on 1/4. Superior tarsal claws with two rows of 12-13 teeth on all tarsi. Third claw absent on all tarsi. Four spinnerets, PLS three-segmented: basal, median and apical (digitiform short) segments 0.28, 0.48, 0.44 long, respectively. Palpal tibia short and wide. Cymbial setae very thick, blunt, short, basally directed (Fig. 17). Palp with coniform

bulb gradually tapering to form the embolus (Figs 14-16) and with diagonal keels (Fig. 16).

Female. Unknown.

Distribution. Known only from the type locality.

Etymology. The species name is a noun in apposition, taken from the type locality.

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