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First record of *Homoeomma* Ausserer, 1871 in Chile and description of two new species

(Araneae, Theraphosidae)

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Two new species of *Homoeomma* Ausserer, 1871 from south-central Chile are described, diagnosed and illustrated based on males and females. Males of *Homoeomma chilensis* spec. nov. and *H. orellanai* spec. nov. differ from other species of the genus by the palpal bulb morphology. Females differ by the shape of spermathecae. Specimens were captured in regions of O'Higgins, Maule and Biobío, Chile. These are the first species of the genus recorded in the biogeographic province of Santiago, west of the Andes. This is a novel finding, given that until now, known species of *Homoeomma* are only present east of the Andes.

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Introduction

The family Theraphosidae is currently composed of 958 described species and the subfamily Theraphosinae comprises about 475 species in 48 genera (Schmidt 2003, WSC 2017). Their distribution range extends from the southern states of the USA in the north over the entire Central American to the south of the South American subcontinent, in the Neotropical ecozone.

Theraphosinae can be recognized by extended subtegulum, keels on palpal organ, and types of urticating hairs (Pérez-Miles & Weinmann 2010).

In Chile, few studies have been done on the subfamily Theraphosinae, on *Euathlus* genus (Pocock 1903), some *Grammostola* species (Schiapelli & Gerschman 1961), *Phrixotrichus* genus (Schiapelli & Gerschman 1963) and recent study about *Euathlus* genus (Perafán & Pérez-Miles 2014).

The genus *Homoeomma* Ausserer, 1871 comprises 13 species; two of these are distributed in Argentina, nine in Brazil, one in Colombia, two in Peru and one in Uruguay. The type species, *Homoeomma stradlingi* O. Pickard-Cambridge, 1881, is from Brazil (WSC 2017). These spiders are characterized by a small size, and their burrows are built several centimeters deep under large rocks (Gerschman & Schiapelli 1972, Costa & Pérez-Miles 2002). Species from this genus can be recognized by the presence of a tegular digitiform process on the male palpal bulb (Gerschman & Schiapelli 1972, Pérez-Miles et al. 1996) and the flexion of the metatarsus I between the tibial apophysis (Yamamoto et al. 2007). Species of this genus resemble those of *Plesiopelma* Pocock, 1901,

Melloleitoina Gerschmann de Pikelin & Schiapelli, 1960 and *Tmesiphantes* Simon, 1892 by the similar size and colour pattern. In addition, males of the four genera have papal bulbs with similar overall morphology (Yamamoto et al. 2007), and two species of *Homoeomma* were recently transferred to *Catanduba* (Yamamoto et al. 2012).

In this paper two new species of *Homoeomma* are described from Chile, based on male and female adults. In addition, this is the first record of the genus *Homoeomma* in Chile. Also, morphological diagnostic characteristics of the species, distribution and data on natural history are provided.

Materials and methods

Specimens were collected manually and stored in 80 % ethanol. Additionally, samples for future molecular studies were cold preserved in 96 % ethanol. We followed morphology terms for the genus *Homoeomma* given by Gerschman & Schiapelli (1972, 1973). For chaetotaxy, the methodology proposed by Petrunkevitch (1925) was used. Structure of palpal bulb was analysed according to Bertani (2000). Denomination of urticating setae followed Cooke et al. (1972).

Images were obtained through stereoscopic magnifiers Motic SMZ-140 and Zeiss Stemi SR with complements for Nikon Coolpix P600 camera. All measurements were taken along the central axis of structures, with an ocular micrometer on a stereomicroscope. Body, legs and palp were measured with a digital caliper model Mitutoyo CD-8" AX-B. Right appendages were measured in dorsal position. All measurements are given in millimeters. Total length does not include chelicerae or spinnerets.

The studied specimens were deposited in the arachnological collection of the Museo Nacional de Historia Natural (MNHN), Santiago, Chile; the Museo de Zoología de la Universidad de Concepción (MZUC-UCCC), Concepción, Chile; Facultad de Ciencias, Universidad de la República, Uruguay (FCE).

Geographical coordinates are expressed in UTM WGS84.

Abbreviations

AME	anterior median eyes
ALE	anterior lateral eyes
PB	prolateral branch of tibial apophysis
PI	prolateral inferior keel
PLE	posterior lateral eyes
PME	posterior median eyes
PS	prolateral superior keel
OQ	ocular quadrangle
RB	retrolateral branch of tibial apophysis
TA	tegular digitiform processes on the male palpal bulb

Systematics

Family Theraphosidae Thorell, 1869

Genus *Homoeomma* Ausserer, 1871

Type. *Homoeomma stradlingi* O. Pickard-Cambridge, 1881.

Generic diagnosis. Males of *Homoeomma* have a tegular apophysis on the base of the palpal bulb, the embolus shows an angle of 90° to 135° in relation to the axis of the bulb (except *Tmesiphantes*) and the flexion of the metatarsus I occurs between the branches of the tibial apophysis. Females differ from other theraphosids by shape of the spermathecae, without constriction in apex or granules.

Other material examined. *Homoeomma uruguayense* (Mello-Leitão, 1946), 1 male and 1 female, Uruguay, Río Negro (32°26'S, 56°12'W), Jun/2009, ECC (FCE-MY 1046).

Homoeomma chilensis Montenegro & Aguilera spec. nov.

Figs 1–4, Tables 1–2

http://zoobank.org/7D2331D2-ABFE-418F-8053-BD1468932252

Types. Holotype male (MZUC-UCCC Nº 43023), CHILE: Región del Maule, Provincia de Linares, Ancoa (19H 280444.19E, 6022522.79S), oct/15 J.P. Orellana col. Allotype female, (MZUC-UCCC Nº 43024), same data as holotype. – **Paratypes.** 1 male (MNHN Nº 7704) and 1 female (MNHN Nº 7704), Región del Maule, Provincia de Curicó, Sagrada Familia (35°00'00"S, 71°23'00"W), 25/Oct/2010 S. Esparza y A. Esparza col. 1 male (MZUC-UCCC Nº 43025), Región del Biobío, Provincia de Ñuble, Laguna de la Plata, San Fabian de Alico (19H 285654.42E, 5941355.34S), Ene/2014 P. Duran col. 1 female (MZUC-UCCC Nº 43026), Región Maule, Provincia de Cauquenes, Reserva Nacional los Ruiles (18H 725364.13E, 6031773.87S), 02/ene/2016. M.A. Aguilera col.

Additional material. 12 third instar spiderlings (MZUC-UCCC Nº 43027) from female (MZUC-UCCC Nº 43026), Región Maule, Provincia de Cauquenes, Reserva Nacional los Ruiles (18H 725364.13E, 6031773.87S), 02/ene/2016. M.A. Aguilera col.

Etymology. The species epithet refers to the country of origin, Chile.

Diagnosis. Males: *Homoeomma chilensis* spec. nov. differs from all other species of *Homoeomma* and from the geographically nearest *H. uruguayense* (Mello-Leitão, 1946), by the palpal bulb morphology with sharpened embolus, with embolus curved to

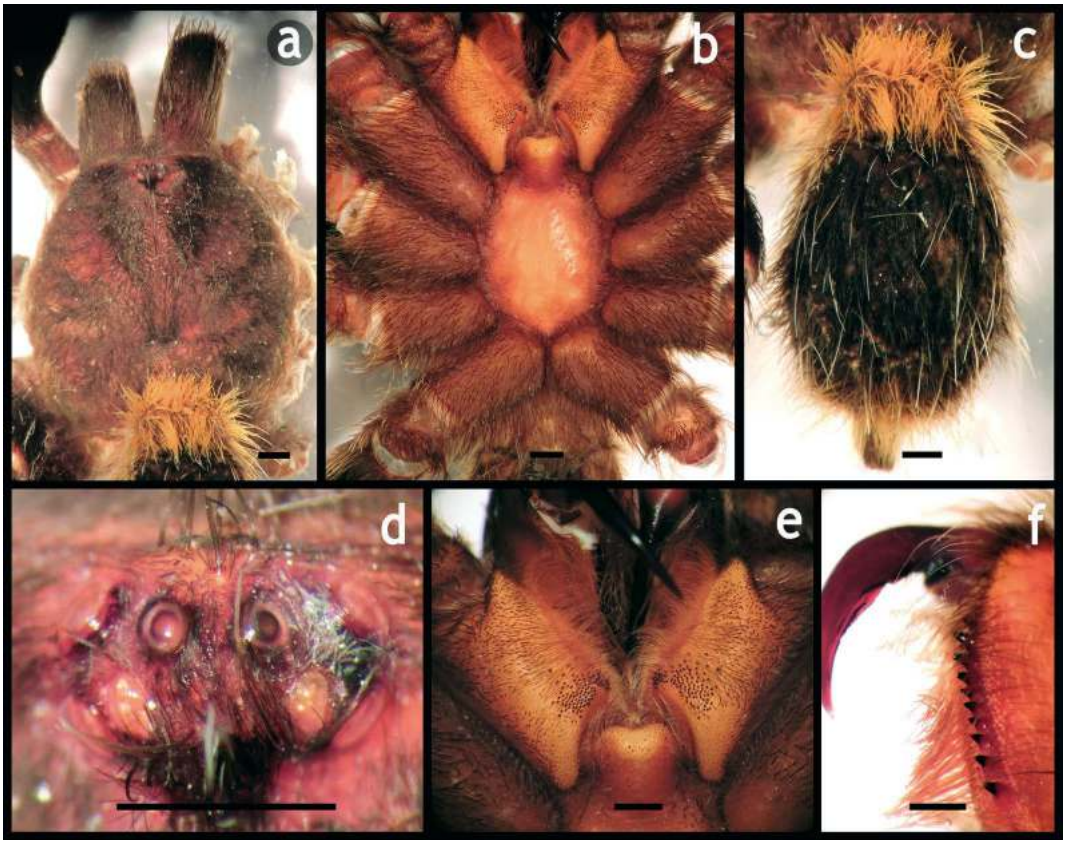

Fig. 1. *Homoeomma chilensis* spec. nov., male. **a.** Cephalothorax, dorsal view; **b.** cephalothorax, ventral view; **c.** abdomen, dorsal view; **d.** ocular quadrangle; **e.** endites and labium; **f.** right chelicerae, teeth on promargin. Scale bars = 1 mm.

the retrolateral side, which describes an angle of approximately 90° with the axis of the bulb and presents two small teeth on PI (Fig. 2d–f). **Females:** They can be distinguished by the shape of the spermathecae, with two separate seminal receptacles well sclerotized, basally trapezoidal in shape and with a quadrangular lobular projection (Fig. 3g). Males of *Homoeomma chilensis* spec. nov. resemble *H. montanum* (Mello-Leitao, 1923) by the shape of tegular apophysis on the base of the palpal bulb, but in *H. montanum* no teeth are present on the PI.

Description

Male (Holotype, MZUC-UCCC Nº 43023, Figs 1, 2 and 4b): Total length 18.48.

Coloration: Cephalothorax dark brown margin with lighter shaded setae. Chelicerae, palps and legs same colour as cephalothorax. Abdomen opaque black with anterior tuft of orange setae and other smaller tuft near the spinnerets. Coloration in alcohol: Cephalothorax, palps, chelicerae and legs are reddish brown; labium, sternum and endite reddish; abdomen dark brown with brown tuft (Fig. 1).

Cephalothorax: Carapace 8.61 long, 10.51 wide; subcircular, wider than long, slightly elevated. Eyes on a semi-raised ocular quadrangle. In dorsal view, anterior and posterior eye rows procurved, all eyes well developed. Eye size and inter-distances: AME circular 0.28, ALE oval 0.36, PME oval 0.28, PLE oval 0.36, AME-AME 0.24, AME-ALE 0.18, PME-PME 0.64, PME-PLE 0.08 (Fig. 1d). OQ, 0.8 long, 1.5 wide (Fig. 1d). Clypeus inconspicuous 0.36. Fovea deep, straight and transversal, 1.65 long (Fig. 1a). Palp: Piriform bulb (Fig. 2d–f), with a tegular apophysis at the base (TA). Embolus sharpened, with embolus curved to the retrolateral side, which describes an angle of approximately 90° with the axis of the bulb. Two keels well developed, with smooth PS and PI with two small teeth near the apex. Embolus api-

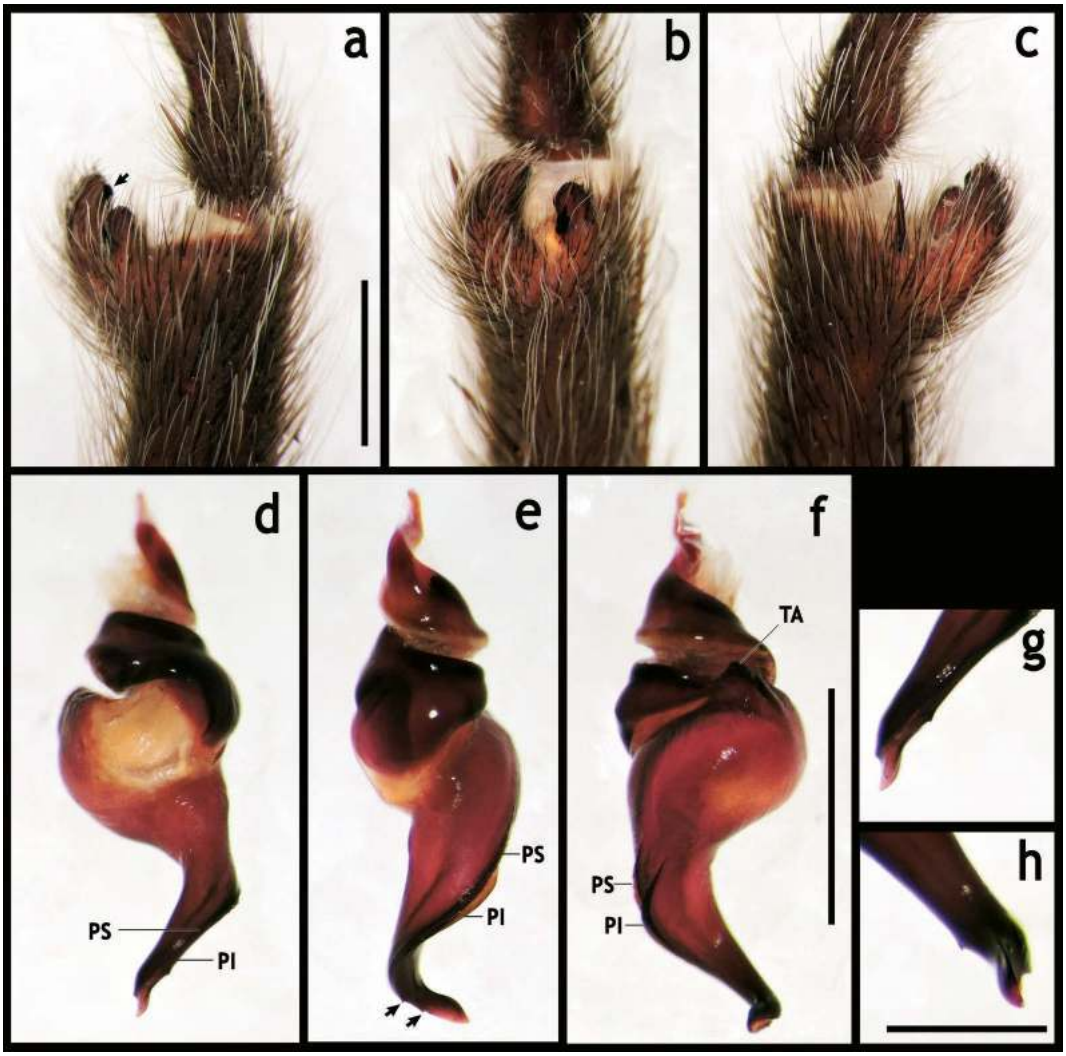

Fig. 2. *Homoeomma chilensis* spec. nov., male. **a.** Tibiae I apophysis, prolateral view (arrow show spine); **b.** tibiae I apophysis, ventral view; **c.** tibiae I apophysis, retrolateral view; **d.** right palp, prolateral view; **e.** right palp, ventral view (arrows show teeth); **f.** right palp, retrolateral view, scale bar = 1 mm; **g.** embolus apex prolateral view detail; **h.** embolus apex ventral view detail. Scale bar = 0.5 mm.

cally truncated (Fig. 2g–h). Chelicerae 5.44 long, with 10 short, conical and well developed teeth on the promargin. Variable tooth size, with 3–5 small inconspicuous spines between teeth one and two (Fig. 1f). Endites longer than wide, trapezoidal, with 120–132 cuspules in the inner proximal corner (Fig. 1e). Labium quadrangular, 1.70 long, 1.75 wide, with over 33–38 cuspules grouped anteriorly. Sternum subcircular, 4.56 long, 3.04 wide, with two submarginal oval sigilla (Fig. 1b).

Legs and palp measurements in Table 1: With numerous trichobothria and with 14 to 25 claviform setae on dorsal tarsi. Tarsi densely scopulated and divided by rows of setae, scopulae I–IV entire. Metatarsi scopulae slightly divided, metatarsi I and II one-half apical scopulated, III one-third apical scopulated, IV one-fifth apical scopulated. Tibia I with ventral apophysis, the RB bearing a stiff black thorn on upper third of the inner side, PB with a short spine inserted on inner side at the middle of the spur (Fig. 2a–c).

Spination: Femora, patellae, tarsi I–IV and palp, 0. Tibiae: Palp 0–2–1 P; I 0–1–1 P, 3–1–1 V; II 1–1–0 P, 3–2–3 V; III 1–0–1 P, 2–2–2 V, 1d R, 1–1–2 D; IV

1–1–1 P, 1–0–2 V, 1–1–0 R. Metatarsi: Palp 0 ; I 1–0–1 V; II 1–0–1 P, 2–2–2 V; III 1–1–1–1 P, 2–2–1–1 V, 1–1–1–2 R; IV 1–1–1 P, 2–2–2–3 V, 1–1–1–1–1–2 R.

Abdomen: 9.49 long, 5.57 wide, oval, longer than wide. Urticating setae type IV present and with urticating setae with an intermediate morphology between type III and IV present in the dorsolateral area.

Female (Allotype, MZUC-UCCC Nº 43024, Figs 3, 4a). Total length 29.37.

Coloration: Same colour as the male. In alcohol, darker than the male.

Cephalothorax: Carapace 6.20 long, 10.89 wide. Same shape as male, but larger (Fig. 3a). Eye sizes and inter-distances: AME circular 0.30, ALE oval 0.28, PME oval 0.20, PLE oval 0.18, AME-AME 0.22, AME-ALE 0.34, PME-PME 0.66, PME-PLE 0.10 (Fig. 3d). Ocular quadrangle (OQ) 1.45 long, 1.70 wide (Fig. 3d). Clypeus inconspicuous 0.1 long. Fovea: Deep, straight, transversal and wide 2.60 long (Fig. 3a). Palp thinner than the male; tarsus with a curved distal claw.

Chelicerae: 6.20 long, promargin with 11 short conical teeth well developed. Like males (Fig. 3c). Endites trapezoidal, with over 120 cuspules on the inner proximal corner (Fig. 3e). Labium quadrangular, 1.70 long, 1.65 wide, with over 23 cuspules grouped anteriorly (Fig. 3e). Sternum subcircular, 5.32 long, 5.19 wide, with two submarginal oval sigilla (Fig. 3b).

Legs and palp measurements in Table 2: With numerous trichobothria and with 8 to 21 claviform setae on dorsal tarsi. Tarsal scopula divided by rows of setae, scopulae I–IV entire. Metatarsi scopula slightly divided, metatarsi I one-half apical scopulated, II and III one-third apical scopulated, IV without scopula.

Spination: Femora, patellae, tarsi I–IV and palp, 0. Tibiae: Palp d3 V; I.1d V; II 0; III 1–0–1 P, 1–1–3 V, 1d R; IV 1–0–2 V, 1d R. Metatarsi: Palp 0; I 1d V; II 1–1–3 V; III 0–1–1 P,1–2–3 V, 0–1–1 R; IV 0–1–1 P, 1–1–1–2–3 V, 1–1–1–1–2 R.

Abdomen: 16.84 long, 11.65 wide, larger than male (Fig. 3f). Spermathecae with two separate seminal receptacles well sclerotized, basally trapezoidal in shape and a quadrangular lobular projection (Fig. 3g).

Distribution. Between the regions of Maule (35°S) and Biobio (37°S), from 300 m a.s.l. on the western slope of the Andes Mountains.

Natural history. This tarantula usually builds burrows in areas with abundant vegetation (Fig. 4f), and it can also be found near watercourses. Burrows are commonly found close to each other; in some cases even a few centimeters apart (Fig. 4e). The breeding season is between May and June, laying eggs about 10 or 12 weeks after mating, and spiderlings hatch in approximately 8 weeks.

The egg-sac is built with at least five layers of non-sticky silk, each one easily distinguishable. It is spherical, rough and soft-white (Fig. 4d), with more than 130 eggs. The spiderlings have light brown cephalothorax and legs, almost transparent with white abdomens, and after the second molt, a dorsal and circular black spot appears in abdomen. From the third instar, the dark coloration covers almost the entire abdomen (Fig. 4c).

This species spends much of the day hidden on its burrow, and therefore it is not easy to find. According to Costa & Pérez-Miles (2002), species of this genus usually build burrows several centimeters deep. However, burrows of *Homoeomma chilensis* spec. nov. are found no more than 5 cm deep (Fig. 4e) in cavities under rocks or tree trunks, with a lining of a cottony silk. It has been observed that spiders can feed on ground beetles (Carabidae), wasps (Vespidae), and other spiders.

Homoeomma orellanai Montenegro & Aguilera spec. nov.

Figs 5–8, Tables 3–4

http://zoobank.org/D3A64D24-D092-42C1-9A2E-EA33CCC4244C

Types. Holotype male (MZUC-UCCC Nº 45255), CHILE: Región de O'Higgins, Provincia de Colchagua, Termas del Flaco (34°57'28"S, 70°26'12"W), nov/2010 J.P. Orellana col. Allotype female, (MZUC-UCCC Nº 45256), same data as holotype. – **Paratypes.** 1 female

Table 1. *Homoeomma chilensis* spec. nov., male holotype: length of the legs and palpal segments.

	I	II	III	IV	Palp
Femur	9.11	8.48	7.22	10.38	5.82
Patella	5.32	4.30	3.92	7.09	3.92
Tibia	6.58	6.71	5.82	5.82	6.08
Metatarsus	5.95	6.08	5.95	9.37	–
Tarsus	4.05	4.56	4.30	4.56	2.78
Total	33.42	32.78	29.11	37.13	19.01

Table 2. *Homoeomma chilensis* spec. nov., female allotype: length of the legs and palpal segments.

	I	II	III	IV	Palp
Femur	8.35	7.72	6.71	8.35	6.58
Patella	5.57	4.56	4.18	4.94	3.92
Tibia	5.95	5.44	4.56	6.96	4.56
Metatarsus	4.68	4.94	5.57	7.97	–
Tarsus	3.29	4.68	3.29	3.54	4.94
Total	27.97	27.34	24.68	32.03	20.38

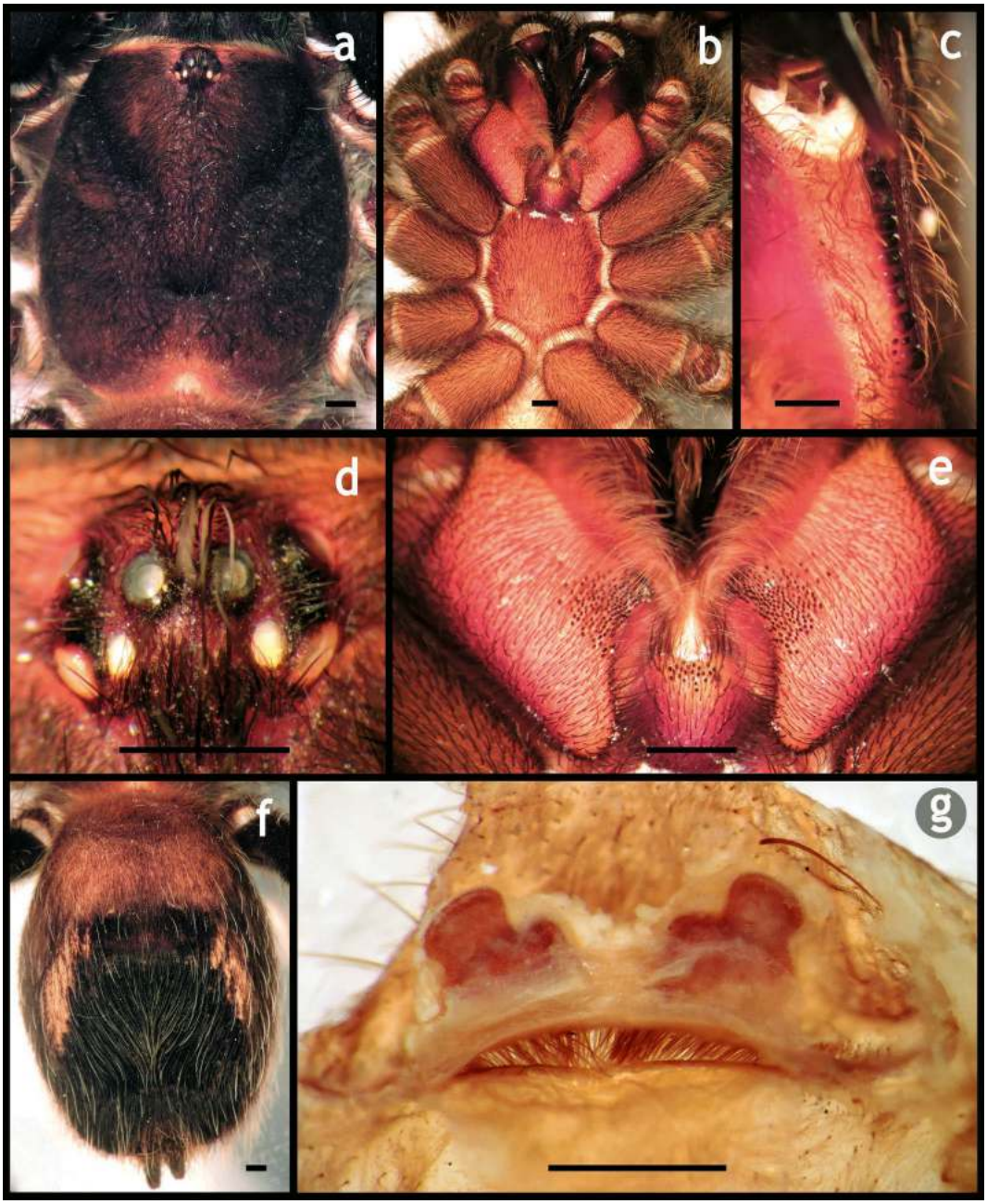

Fig. 3. *Homoeomma chilensis* spec. nov., female. **a.** Cephalothorax, dorsal view; **b.** cephalothorax, ventral view; **c.** right chelicerae, teeth on promargin; **d.** ocular quadrangle; **e.** endites and labium; **f.** abdomen, dorsal view; **g.** spermathecae, ventral view. Scale bars = 1 mm.

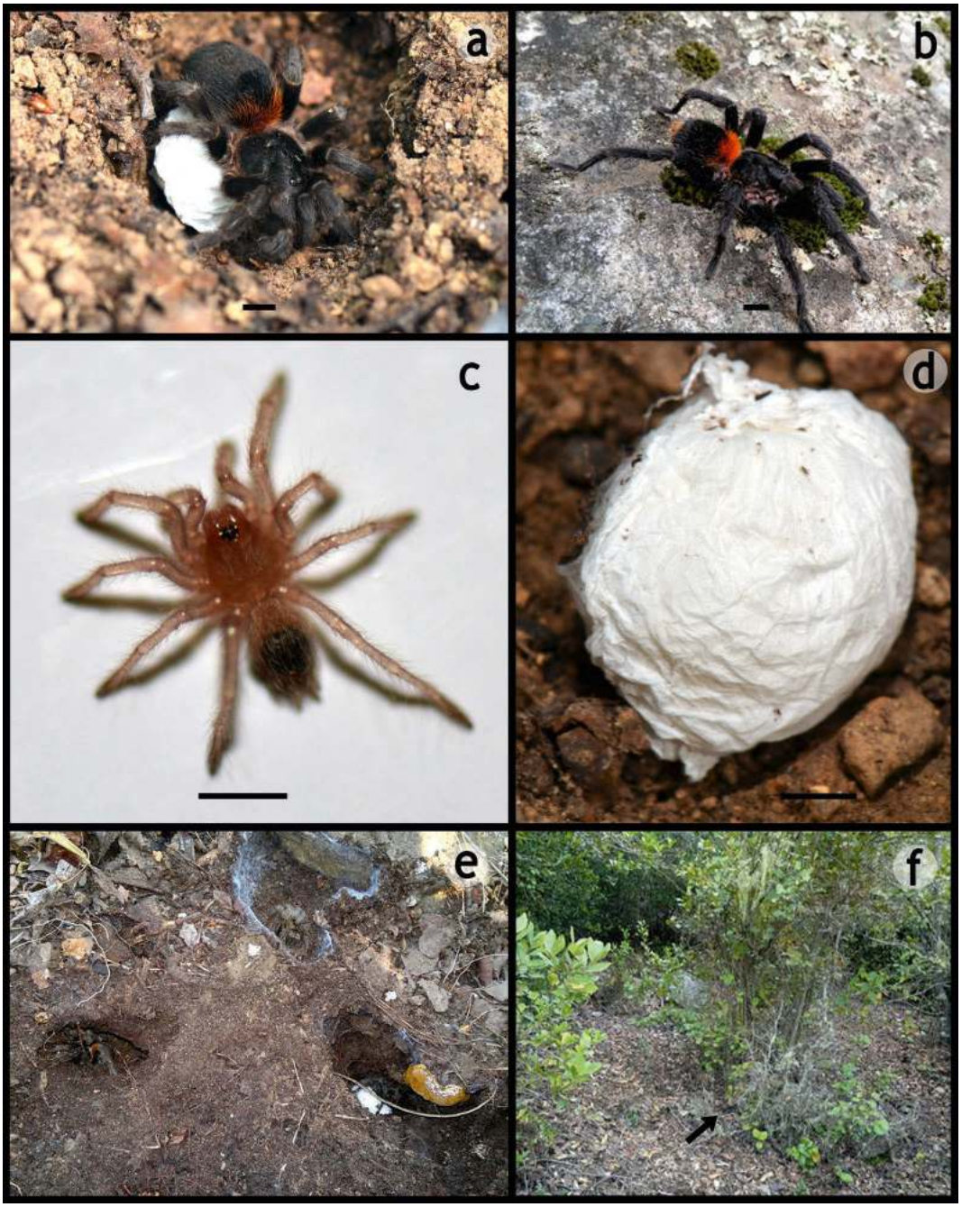

Fig. 4. *Homoeomma chilensis* spec. nov. **a.** Adult female with ootheca; **b.** adult male; **c.** spiderlings, third instar; **d.** egg-sac; **e.** three close burrows; **f.** habitat, arrow shows microhabitat where samples were found. Scale bars = 1 cm.

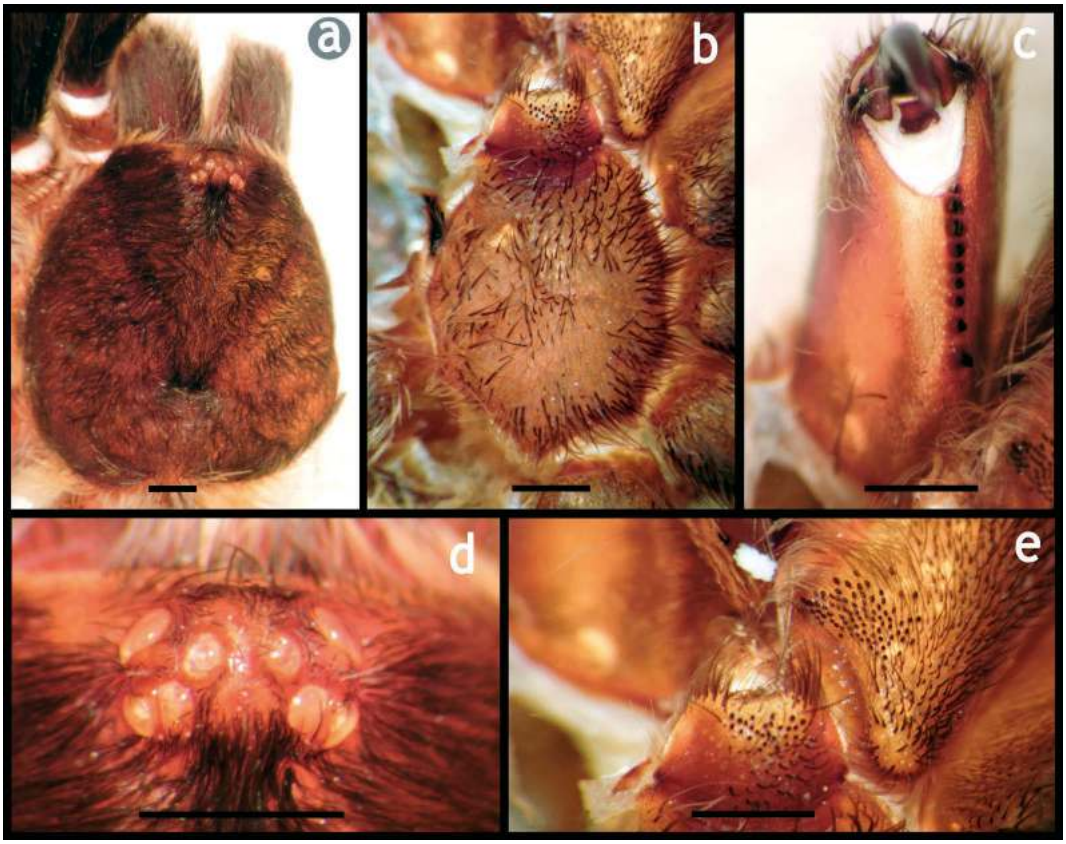

Fig. 5. *Homoeomma orellanai* spec. nov., male. **a.** Cephalothorax, dorsal view; **b.** cephalothorax, ventral view; **c.** right chelicerae, teeth on promargin; **d.** ocular quadrangle; **e.** endites and labium. Scale bars = 1 mm.

(MZUC-UCCC Nº 45257), same data as holotype. 1 male (MZUC-UCCC Nº 45258), Región del Maule, Provincia de Curicó, Cerro Isla Carlos Condell – Curicó (−34.979465°, −71.230623°), 02/may/2017 J. Sepúlveda.

Etymology. The species epithet refers to the collector of the species.

Diagnosis. Males: *Homoeomma orellnai* spec. nov. differs from all other species of *Homoeomma* and from the geographically nearest *Homoeomma chilensis* spec. nov. and *H. uruguayense* (Mello-Leitão, 1946), by the palpal bulb morphology with a thin embolus and a small tooth? on subapical PI (Fig. 6d–i). **Females:** They can be distinguished by the shape of the spermathecae, with two separate well-sclerotized seminal receptacles, basally quadrangular in shape with rounded corners; and a circular lobular projection (Fig. 7g).

Description

Male (Holotype, MZUC-UCCC Nº 45255, Figs 5–6 and 8b): Total length 14.02.

Coloration: Cephalothorax faded black, on margin with whitish setae. Chelicerae, palps and legs same colour as cephalothorax. Abdomen faded black with anterior tuft of yellowish orange setae and other smaller tuft near the spinnerets. Coloration in alcohol: Cephalothorax, palps, chelicerae and legs are reddish brown; labium, sternum and endite reddish; abdomen dark brown with brown tuft (Fig. 5).

Cephalothorax: Carapace 6.84 long, 6.46 wide; subcircular, wide as long, slightly elevated. Eyes on a semi-raised ocular quadrangle. In dorsal view, anterior eye rows procurved and posterior eye rows almost straight, all eyes well developed. Eye size and inter-distances: AME circular 0.16, ALE oval 0.20, PME oval 0.18, PLE oval 0.16, AME-AME 0.42, AME-ALE 0.388, PME-PME 0.72, PME-PLE 0.22 (Fig. 5d). OQ, 0.8 long, 1.20 wide (Fig. 5d). Clypeus inconspicu-

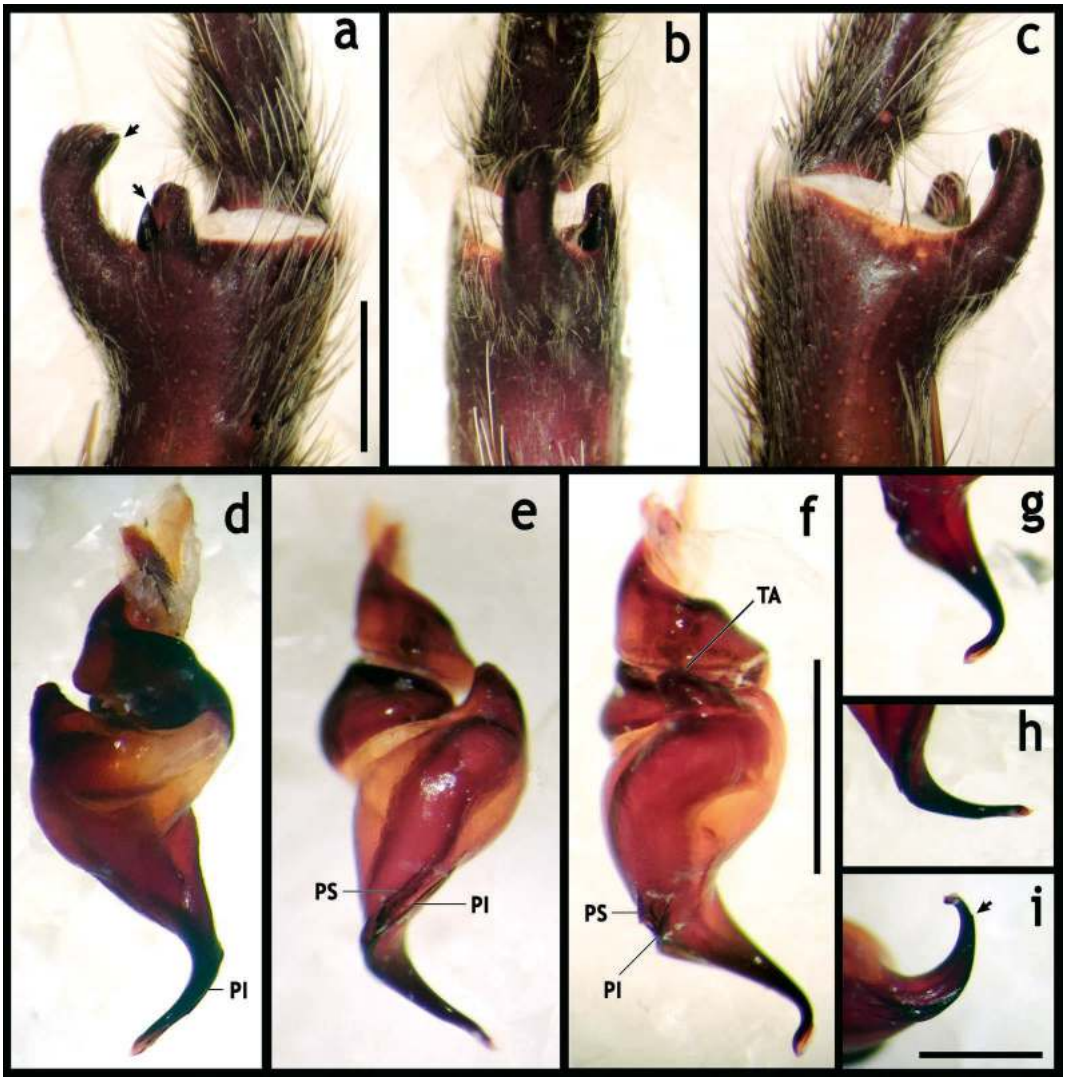

Fig. 6. *Homoeomma orellanai* spec. nov., male. **a.** Tibiae I apophysis, prolateral view (arrows show spines); **b.** tibiae I apophysis, ventral view; **c.** tibiae I apophysis, retrolateral view; **d.** right palp, prolateral view; **e.** right palp, ventral view; **f.** right palp, retrolateral view, scale bar = 1 mm; **g.** embolus apex ventral view detail; **h.** embolus apex retrolateral view detail; **i.** embolus apex apical view detail. Scale bar = 0.5 mm.

ous 0.06. Fovea deep, straight and transversal, 1.40 long (Fig. 5a). Palp: Piriform bulb (Fig. 6d–f), with a tegular apophysis at the base (TA). Embolus thin, with two keels well developed, and smooth PS and PI with one small tooth on subapical PI (Fig. 6i). Palp segment measurements are shown in Table 3.

Chelicerae 3.54 long, with 9 short, conical and well developed teeth on the promargin. Variable tooth size (Fig. 5c). Endites longer than wide, trapezoidal, with over 87 cuspules in the inner proximal corner (Fig. 5e). Labium wider than long, 1.05 long, 1.55 wide, with over 29 cuspules grouped anteriorly. Sternum subcircular, 3.67 long, 3.16 wide, with two submarginal oval sigilla.

Legs (Table 3): With numerous trichobothria and with 7 to 12 claviform setae on dorsal tarsi. Tarsal scopula divided by rows of setae, scopulae I–IV entire. Metatarsi scopulae slightly divided, metatarsi I one-half apical scopulated, II and III one-third apical scopulated, IV one-fifth apical scopulated. Tibia

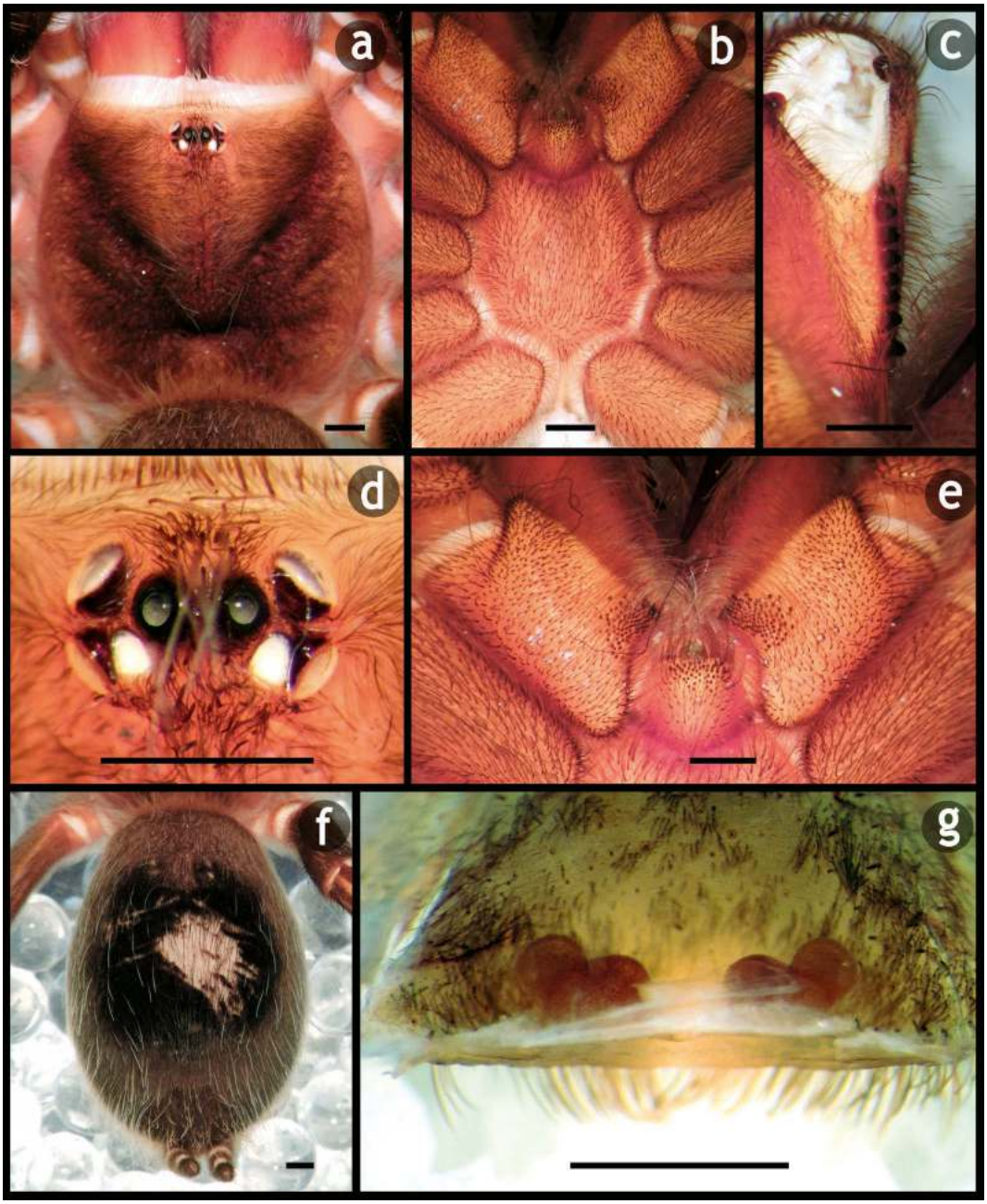

Fig. 7. *Homoeomma orellanai* spec. nov., female. **a.** Cephalothorax, dorsal view; **b.** cephalothorax, ventral view; **c.** right chelicerae, teeth on promargin; **d.** ocular quadrangle; **e.** endites and labium; **f.** abdomen, dorsal view; **g.** spermathecae, ventral view. Scale bars = 1 mm.

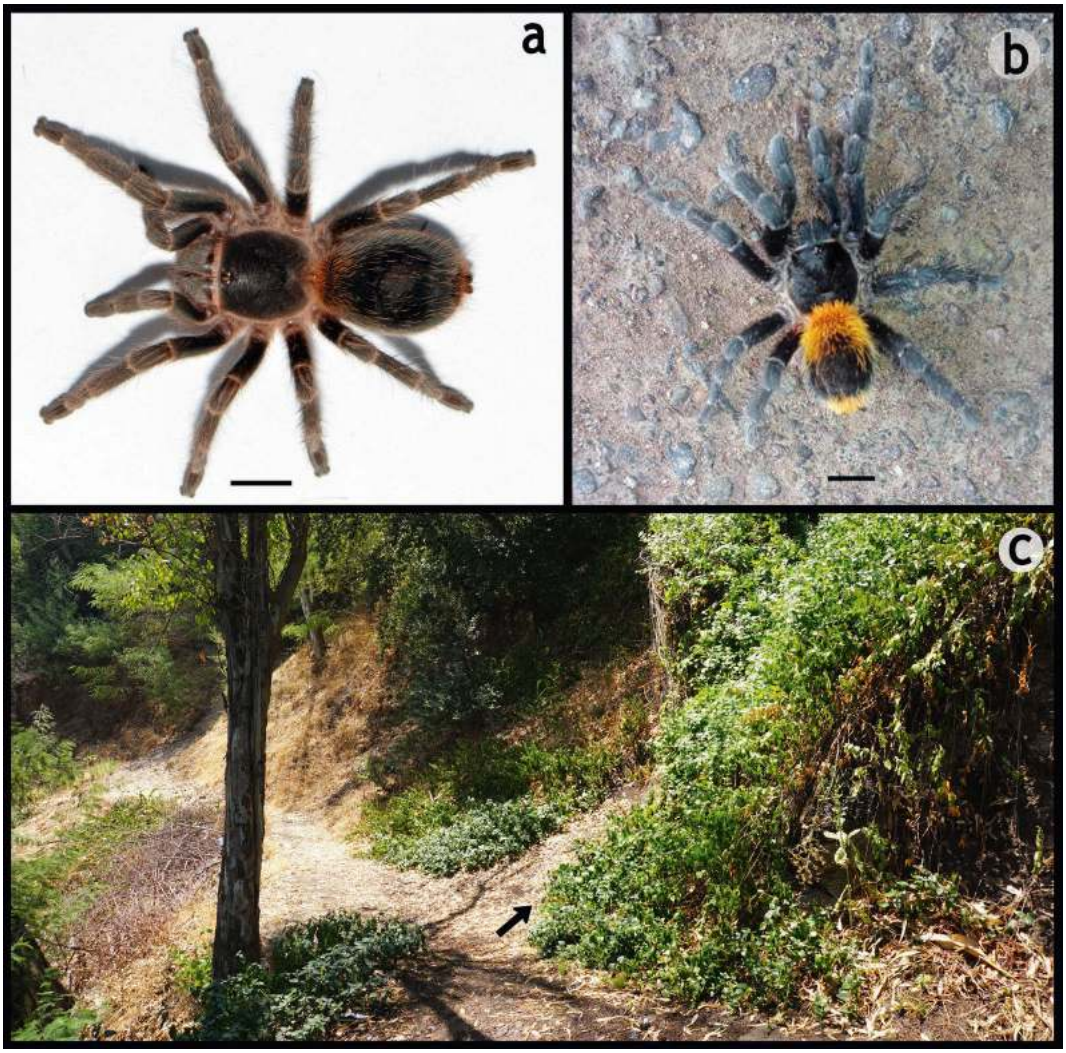

Fig. 8. *Homoeomma orellanai* spec. nov. **a.** Adult female; **b.** adult male; **c.** habitat, arrow shows microhabitat where sample was found. Scale bars = 5 cm.

I with ventral apophysis, the RB stiff black thorn on upper third of the inner side and other opposite on the outer side, PB with a spine inserted on the retrolateral base of the spur (Fig. 6a–c).

Spination: Femora, patellae, tarsi I–IV and palp, 0. Tibiae: Palp 0; I 0–1–1 P, 1d R; II 1–1–2– V, 1–1–1 R; III 0–1–0 P, 1–0–1 V, 1d R; IV 0–1–0 P, 2d V, 1d R. Metatarsi: Palp 0; I 1a P, 1d V, 1aR; II 0–1–0 P, 1–1–1 V, 1–1–0 R; III 1–1–0 P, 1–2–2 V, 0–1–1 R; IV 1–1–1 P, 1–1–3 V, 2–1–1–2 R.

Abdomen: 8.23 long, 5.95 wide, oval, longer than wide. Urticating setae type IV present and with urticating setae with an intermediate morphology between type III and IV present in the dorsolateral area.

Female (Allotype, MZUC-UCCC Nº 45256, Figs 7, 8a). Total length 19.87.

Coloration: Cephalothorax, chelicerae, palp, legs, and abdomen dark brown. Abdomen with anterior tuft of yellowish orange setae and another smaller tuft near the spinnerets. In alcohol, lighter than the male (Fig. 7).

Cephalothorax: Carapace 7.22 long, 7.22 wide, like male (Fig. 7a). Eye size and inter-distances: AME circular 0.16, ALE oval 0.34, PME oval 0.26, PLE

oval 0.30, AME-AME 0.44, AME-ALE 0.36, PME-PME 0.70, PME-PLE 0.22 (Fig. 7d). OQ 0.90 long, 1.25 wide (Fig. 7d). Clypeus inconspicuous 0.1 long. Fovea: Deep, straight, transversal and wide 1.70 long (Fig. 7a). Palp: Thinner than the male; tarsus with a curved distal claw.

Chelicerae: 4.05 long, promargin with 8 short conical teeth well developed. Like males (Fig. 7c). Endites trapezoidal, with over 120 cuspules on the inner proximal corner (Fig. 7e). Labium quadrangular, 1.80 long, 1.35 wide, with over 23 cuspules grouped anteriorly (Fig. 7e). Sternum subcircular, 4.05 long, 3.67 wide, with two submarginal oval sigillas (Fig. 7b).

Legs (Table 4): With numerous trichobothria and 10 to 26 claviform setae on dorsal tarsi. Tarsi densely scopulated and divided by rows of setae, scopulae I–IV entire. Metatarsi scopula slightly divided, metatarsi I one-half apical scopulated, II and III one-third apical scopulated, IV without scopula.

Spination: Femora, patellae, tarsi I–IV and palp, 0. Tibiae: Palp 1–1–3 V; I.1d V; II 0; III 0–1–2 P, 0–1–1–1 V, 1d R; IV 1–1–2 V, 0–1–1 R. Metatarsi: Palp 0; I 0–1–1 V; II 0–1–2 V; III 0–1–2 P,1–2–3 V, 0–1–1 R; IV 0–1–1 P, 2–2–2–3 V, 1–1–1–2 R.

Abdomen: 12.28 long, 8.73 wide. Larger than male (Fig. 7f). Spermathecae with two separate seminal receptacles well sclerotized, basally quadrangular in shape with rounded corners; and circular lobular projection (Fig. 7g).

Systematic comments

Species of *Homoeomma* resemble those of *Plesiopelma* Pocock, 1901, *Melloleitaoina* Gerschmann de Pikelin & Schiapelli, 1960 and *Tmesiphantes* Simon, 1892 because of the similar size, colour pattern; and given that males of these three genera have papal bulbs with similar overall morphology (Yamamoto et al. 2007). Recently, some species of *Homoeomma* were synonymized with *Cantanduba* (Yamamoto et al. 2012). Nonetheless, *Homoeomma* differs from those of *Tmesiphantes* by aspect of the posterior sternal sigilla, by the presence of a tegular apophysis on the base of the palpal bulb of males and by the flexion of the metatarsus I, which in *Homoeomma* bends between the tibial apophysis; and in females by a spermathecae shape, without constrictions near the apex. Males of *Homoeomma* differ from *Plesiopelma* by the absence of a small subapical tooth on the bulb and lack of retrolateral basal nodule on metatarsus I. Females differ from *Plesiopelma* by the spermathecae without presence of granules (Ferretti & Barneche 2013). Males of *Homoeomma* differ from those of *Cantanduba* by embolus shape and the angle between the embolus and bulb, also by the absence of a PS tooth in the middle of the embolus and by the absence of a triangular basal nodule on metatarsus I. Females differ by the absence of large number of spherical nodules on the spermathecae (Yamamoto et al. 2012). The Chilean species *H. chilensis* spec. nov. and *H. orellana* spec. nov. share all the diagnostic characteristics of *Homoeomma*.

Moreover, *H. chilensis* spec. nov. and *H. orellanai* spec. nov. resemble to *H. montanum* by the shape of tegular apophysis on the base of the palpal bulb in males, wider at base and thicker than in the other species of *Homoeomma* (Gerschman & Schiapelli, 1972). Males of *H. chilensis* spec. nov. and *H. orellanai* spec. nov. can be distinguished from *H. montanum* by embolus shape, tooth and apex; females can be characterized by the shape of their spermathecae.

Discussion

Known species of the genus *Homoeomma* inhabit preferably areas at the tropical Atlantic side of South America, mainly the Paranaense and Chacoan biogeographic regions, with some species in the Amazon and Paramo Punan regions. The genus was previously known from in Brazil, Uruguay, Colombia, Argentina and Peru (Gerschman & Schiapelli 1972, Morrone 2001, 2006, WSC 2017). From the present work, the geographical distribution of *H. chilensis*

Table 3. *Homoeomma orellanai* spec. nov., male holotype: length of the legs and palpal segments.

	I	II	III	IV	Palp
Femur	6.58	6.08	5.32	6.46	4.05
Patella	3.42	3.04	2.91	3.04	2.66
Tibia	4.56	3.92	3.67	4.94	4.30
Metatarsus	4.18	3.67	4.30	5.57	–
Tarsus	3.04	2.91	2.78	3.42	1.14
Total	0.00	0.00	0.00	0.00	13.16

Table 4. *Homoeomma orellanai* spec. nov., female allotype: length of the legs and palpal segments.

	I	II	III	IV	Palp
Femur	5.95	5.19	4.81	5.82	4.68
Patella	3.54	3.16	2.91	3.04	2.03
Tibia	4.05	3.80	3.04	4.68	3.29
Metatarsus	3.04	2.66	3.42	4.30	–
Tarsus	2.28	2.28	2.28	2.28	2.91
Total	0.00	0.00	0.00	0.00	0.00

spec. nov. and *H. orellanai* spec. nov. is restricted to south-central Chile, which corresponds to the Central Chilean Southern region, specifically to the biogeographic province of Santiago (Morrone 2001, 2006). This province is characterized by a Mediterranean climate with cold, rainy winters and warm, dry summers, having xeric vegetation and thorny bushes (Gajardo 1994).

As previously indicated, the genus *Homoeomma* is distributed mainly in the Atlantic side of the Andes, while *H. chilensis* spec. nov. and *H. orellanai* spec. nov. are known from the Pacific side of the Andes. Apparently, the great geographical barrier comprised by the Andean chain and the resulting climatic differences probably isolated those populations from that of the east of South America resulting in a vicariant event that leads to the speciation of these new species, therefore this finding does hypothesize that *Homoeomma* could have a continuous distribution to the west side of South America before the rise of the Andes. This is also supported by the presence of *H. pictum* and *H. peruvianum* on the west side of South America.

Finally, a phylogenetic analysis of *Homoeomma* is necessary to understand the internal relationships of species within the genus, and to establish radiation patterns.

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