



New species of the spider genera *Aysenia* and *Aysenoides* from Chile and Argentina: description and phylogenetic relationships (Araneae: Anyphaenidae, Amaurobioidinae)

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Abstract

New spider species of the genera *Aysenia* Tullgren and *Aysenoides* Ramírez are described and their phylogenetic relationships discussed. The new species *Aysenia paposo*, from the coastal desert in northern Chile is sister to *Aysenia araucana* Ramírez. The diagnosis of *Aysenia araucana* is updated and new somatic variability is reported for the species. We present new records for other species of *Aysenia* and *Aysenoides*. The new species *Aysenoides simoi*, from temperate forests in Chile and adjacent Argentina is sister to *Aysenoides nahuel*. The phylogenetic analysis confirmed the monophyly of both genera. The support values of the genera are relatively high, but some internal branches show low support values. The genus *Aysenia* is supported by three synapomorphies, two of these from leg spination and one from the male genitalia. *Aysenoides* is supported by three synapomorphies from male and female genitalia.

Key words: spiders, new species, South America, systematics

Introduction

The spider family Anyphaenidae is considered a monophyletic group whose main diagnostic features are the presence of spatulated claw tuft setae and a well-developed tracheal system (Ramírez 1995; 2003). Currently the family comprises 519 species grouped in 56 genera, most of them endemic to the Neotropics (Brescovit 1997; Ramírez 2003; Platnick 2013). Recent phylogenetic studies (Ramírez 1995; 2003) established that the family Anyphaenidae is composed by three subfamilies: the monotypic Malenellinae, plus Anyphaeninae and Amaurobioidinae, all reviewed at generic level (Brescovit 1997; Ramírez 2003). Ramírez (2003) presented a cladistic analysis of Amaurobioidinae, and distinguished two tribes: Gayennini, with 11 genera distributed mainly in South America, and Amaurobioidini with 10 genera, among which *Aysenia* Tullgren, and *Aysenoides* Ramírez, are endemic to Chilean temperate forests and adjacent areas in Argentina. The distribution of the tribe is mainly in South America, with the exception of *Amaurobioides* O. P.-Cambridge, which occurs in the sea-shores of Chile, South Africa, Australia, Tasmania and New Zealand (Forster 1970; Ramírez 2003; Opell *et al.* 2007). *Aysenia* and *Aysenoides* are sister groups, with a characteristically elongated body and third legs directed forward, as occurs in segestriids and some other tube-dwelling spiders. *Aysenoides* can be easily distinguished from *Aysenia* by their spherical spermathecae and a spine-shaped embolar process (Ramírez 2003). In the cladistic analysis presented by Ramírez (2003), the support values for the tribe Amaurobioidini and several internal clades were low, especially so for the intergeneric relationships. In a subsequent analysis Izquierdo & Ramírez (2008) added one species to each genus *Aysenia* and *Aysenoides*, in a recent revision of *Aysenia*, three species were added to that genus (González & Ramírez 2012). In both cases their phylogenetic analyses corroborated the monophyly of both genera upon the addition of those species. Little is known of the natural history of these two genera. They are relatively rare in

collections, and a substantial part of the records come from mechanical collection techniques, such as using beating trays, pitfall traps and canopy fogging. In this work we describe two new species *Aysenia paposo* and *Aysenoides simoi*, we updated the diagnosis of *Aysenia araucana* Ramírez and new somatic variability is reported for the species. Also we present new records for other five species of these genera. With this addition we conclude the study of all specimens of *Aysenoides* available to us, hence the genus can be considered as fully reviewed. We also present an updated phylogenetic analysis to determine the placement of these new species.

Material and methods

After dissection, female genitalia were placed in clove oil, observed and illustrated with a camera lucida on a compound microscope Olympus BH-2. All remaining images were obtained with a digital camera Leica DFC290 mounted on a stereoscopic microscope Leica M165 C, and the focal planes were composed with Helicon Focus 4.62 Pro (www.heliconsoft.com). Measurements are given in millimeters. The format for descriptions and morphological terms follows that of Ramírez (2003), with the interpretation of sclerites in the male copulatory bulb as in Ramírez (2007).

The scorings of the phylogenetic dataset were added to the dataset of *Aysenia* (González & Ramírez 2012); the data from the dataset of *Philisca* (Soto & Ramírez 2012) was also incorporated here. Only changes, whether additions or corrections, are reported here; the complete dataset and instructions to reproduce the analysis are available for download from <http://aracnologia.macn.gov.ar/biblio/suppl/> and the dataset is deposited in TreeBase with accession number 14374. The data matrix was analyzed under parsimony using implied weights (Goloboff 1993), following the same procedures as described in Soto & Ramírez (2012), and using TNT version 1.1-Aug.2011 (Goloboff *et al.* 2008a). As support measures we used Bremer support (Bremer 1994) and Jackknifing frequencies expressed as absolute frequencies (Goloboff *et al.* 2003). The constant of concavity for the weighting function was the same as determined in Ramírez (2003) ($k = 6$). Ramírez (2003), Lopardo (2005) and Goloboff *et al.* (2008b) found that mild concavity values produced higher topological congruence indices for many morphological and molecular datasets.

Abbreviations

AB	accessory bulb (female genitalia)
ALE	anterior lateral eyes
AME	anterior median eyes
ap	apical
bas	basal
C1	primary conductor (male copulatory bulb)
C2	secondary conductor (male copulatory bulb)
CD	copulatory duct (female genitalia)
d	dorsal
E	embolus (male copulatory bulb)
EBP	embolus basal process (male copulatory bulb)
FD	fertilization duct (female genitalia)
I, II, III, IV	first, second, third and fourth leg, respectively
iPMA	intermediate cusp of paramedian apophysis (male copulatory bulb)
LL	lateral lobes (female genitalia)
MA	median apophysis (male copulatory bulb)
p	prolateral
PMA	paramedian apophysis (male copulatory bulb)
pPMA	prolateral cusp of paramedian apophysis (male copulatory bulb)
r	retrolateral
rPMA	retrolateral cusp(s) of the paramedian apophysis (male copulatory bulb)
RTA	retrolateral tibial apophysis (male palp)

SD	sperm duct (male copulatory bulb)
T	tegulum (male copulatory bulb)
v	ventral
x	some positions of individual spines in a generalized pattern are replaced by “x”: “v x-p1-x” means “ventral median prolateral spine (p1)”, regardless of whether the specimen bears v 2-2-2 or v 0-p1-2. A complete explanation of spination pattern is given in Ramírez (2003).

Depositories with curators

AMNH	American Museum of Natural History, New York (Norman I. Platnick).
CASENT	California Academy of Sciences, San Francisco (Charles Griswold).
MACN-Ar	Collection of Arachnids, Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires (Cristina Scioscia).
MLP	Museo de La Plata (Luis Pereira).
MNHN	Museo Nacional de Historia Natural, Santiago de Chile (Mario Elgueta).

Taxonomy

Aysenia paposo new species

Figs 1–4

Type material. Male holotype from Chile, Antofagasta Region (II), Antofagasta Province, 8.1 km NNW Paposo, 24.93947° S, 70.49265° W, elev. 114 m, 27–29 Oct 2011, M.J. Ramírez, A. Ojanguren, J. Pizarro *et al.* (temporary preparations AJL-1 to 6; AJL-10; AJL-15), deposited in MNHN. Same data, male paratype, MACN-Ar 30292 (temporary preparation MJR-1405). Female paratype together with holotype.

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

Diagnosis. It is similar to *Aysenia araucana* Ramírez by having moderately wrapped copulatory ducts, long embolus and relatively small primary conductor, but can be distinguished by the long extension of the primary conductor in retrolateral view (shorter in *Aysenia araucana*), and the angle of the margin of tegulum and cymbium of about 90° in retrolateral view (Fig. 1d) (about 120° in *Aysenia araucana*, Ramírez 2003: fig. 25B), and the left-right copulatory ducts in the female vulva well separated, less coiled (Fig. 2c) (contiguous and clearly coiled in *Aysenia araucana*, Ramírez 2003: fig. 25E).

Description. *Male* (holotype): Prosoma length 1.93, width 1.03, narrowed in front (Fig. 1a). Tibia/metatarsus length: I, 1.23/1.07; II, 1.07/1.00; III, 0.60/0.70; IV, 1.13/0.83. Chelicerae strong, with thick anterior bristles (Fig. 1a) three contiguous teeth on retromargin and three on promargin. Sternum length 0.93, width 0.60. Spines: leg I, femur d 1-1-1, p d1ap; tibia v 2-2-2 (the x-p1-x displaced to prolateral), p 1-1-1 or 1-0-1, r 1-0-1; metatarsus v 2-0-2, p d1-d1-0-1, r 0-1-0, d 0-p1-0. II, femur = I; tibia v r1-r1-2, p d1-d1-d1; metatarsus v 2-0-2, p d1-d1-0-1 or 0-d1-0-1, d 0-1-0. III, femur d 1-1-1; tibia v 2ap; d 2bas; metatarsus v 2-r1-2 (x-r1-x advanced); p 0-1-1; r 1ap; d 0-p1-2. IV, femur = III; tibia v p1-p1-2, r 0-1-1; metatarsus v 2-2-2, p d1-1-1, r d1-0-1; d 0-p1-2. Third legs directed forward. Opisthosoma length 2.33, spiracle–epigastrium 1.17, spiracle–spinnerets 0.30. Color in ethanol (Fig. 1a, b): Prosoma brown, ocular region slightly darker. Chelicerae brown. Legs yellowish brown with coxae and trochanters slightly lighter. Labium, gnathocoxae and sternum dark brown. Opisthosoma brownish violet, dark, with three whitish dorsal spots, covered by white hairs, two patches of white hairs on posterior end. Venter dark brown. Palp (Fig. 1a, b; 3a–c): tibia short, width/length 1.06, RTA sharp, long, thin. Cymbial conductor wide, triangular. Tegulum basal. Sperm duct with two loops at dorsal anterior margin. Embolous long, basal process flat, rounded. Median apophysis apical, thin, hook-shaped. Primare conductor long, with narrow apex. Secondary conductor rounded. Paramedian apophysis with three sclerotized cusps, close to median apophysis.

Female (paratype): Prosoma length 1.97, width 0.97, wider at chelicerae bases and at leg III. Length of tibia/metatarsus: I, 0.83/0.70; II, 0.83/0.67; III, 0.50/0.53; IV, 0.87/0.67. Chelicerae strong, with thick anterior bristles, three teeth on retromargin, three on promargin. Length of sternum 0.93, with 0.60. Spines: leg I, femur d 1-1-1, p d1ap; tibia v 2-2-2 (the x-p1-x displaced to prolateral), p 1-1; metatarsus v 2bas, p 0-d1-0. II, femur = I; tibia v r1-r1-2, p 1-0-1; metatarsus v 2-r1-0, p 0-d1-0. III, femur d 1-1-1; tibia v 2ap; d 2-p1-0; metatarsus v 2-r1-2 (x-r1-x

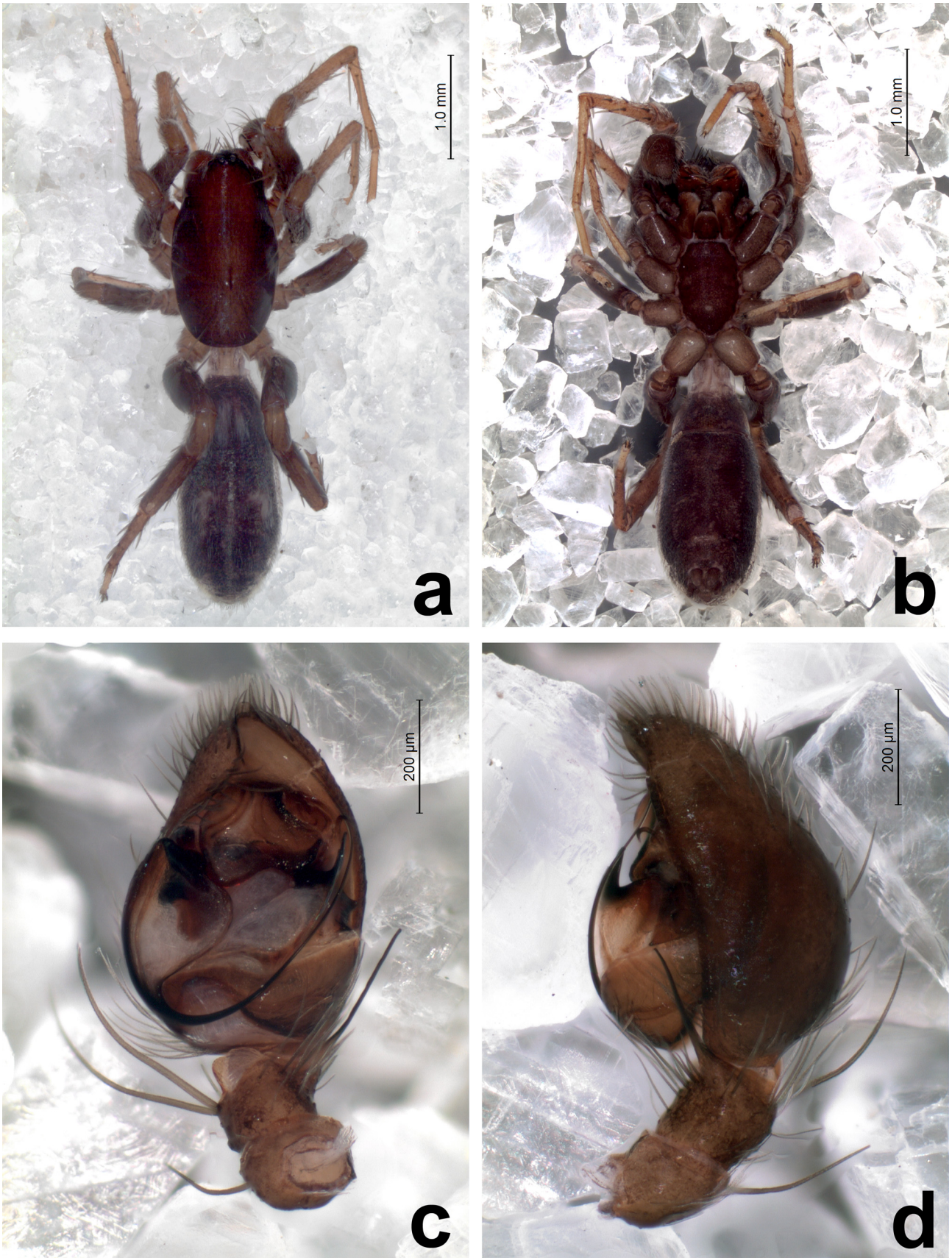


FIGURE 1. *Aysenia paposo* new species. a–d male holotype (a dorsal habitus; b ventral habitus c left palp, ventral view; d same, retrolateral view).

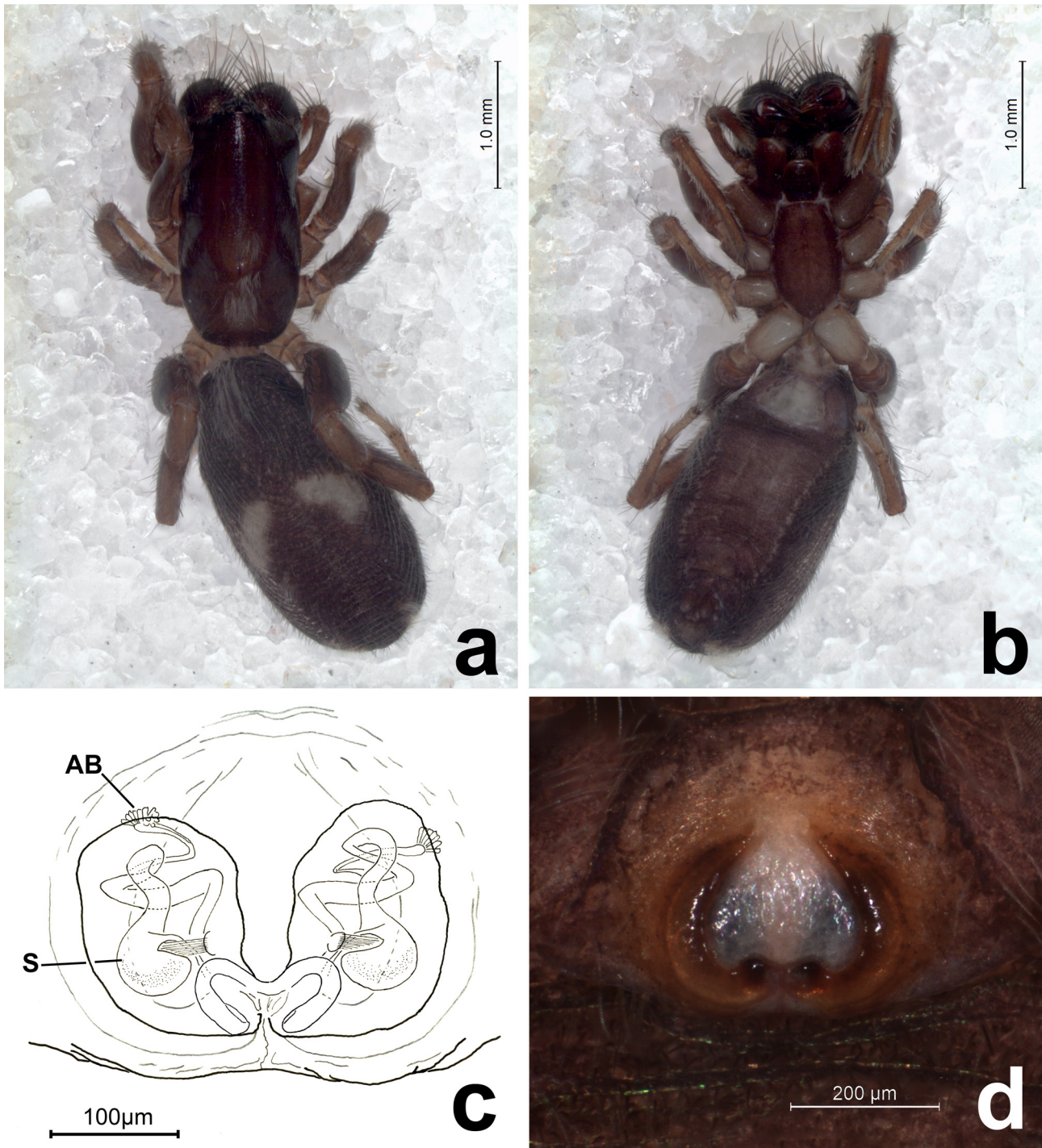


FIGURE 2. *Aysenia paposo* new species. **a–d** female paratype (**a** dorsal habitus; **b** ventral habitus **c** cleared vulva, dorsal view; **d** epigyne, ventral view).

advanced); p 0-1-0; r 1ap; d 0-p1-2. **IV**, femur =III; tibia v p1-p1-2, r 0-d1-d1; metatarsus v 2-p1-2, p 0-1-1, r d1-0-1; d 0-p1-2. Third legs directed forward. Opisthosoma length 2.67, spiracle-epigastrium 1.37, spiracle–spinnerets 0.17. Color in ethanol (Figs 2a, b): as in male. Epigyne: Lateral lobes elevated, slightly sclerotized, their limits with median field well defined (Fig. 2d). Copulatory ducts coiled. Accessory bulbs with long ducts. Spermathecae irregular, separate (Fig. 2c).

Variability. Spines in males: leg **I**, tibia r 0-1-0; metatarsus p 0-d1-0-1. **II**, tibia p 0-d1-d1. Color of male specimen, photographed alive in the field: prosoma, ocular region and chelicerae black. Femur and patella black, covered with white hairs, tibia, metatarsus and tarsus lighter. Opisthosoma black, with three whitish dorsal spots, covered by white hairs and two patches of white hairs on posterior end (Fig. 4).

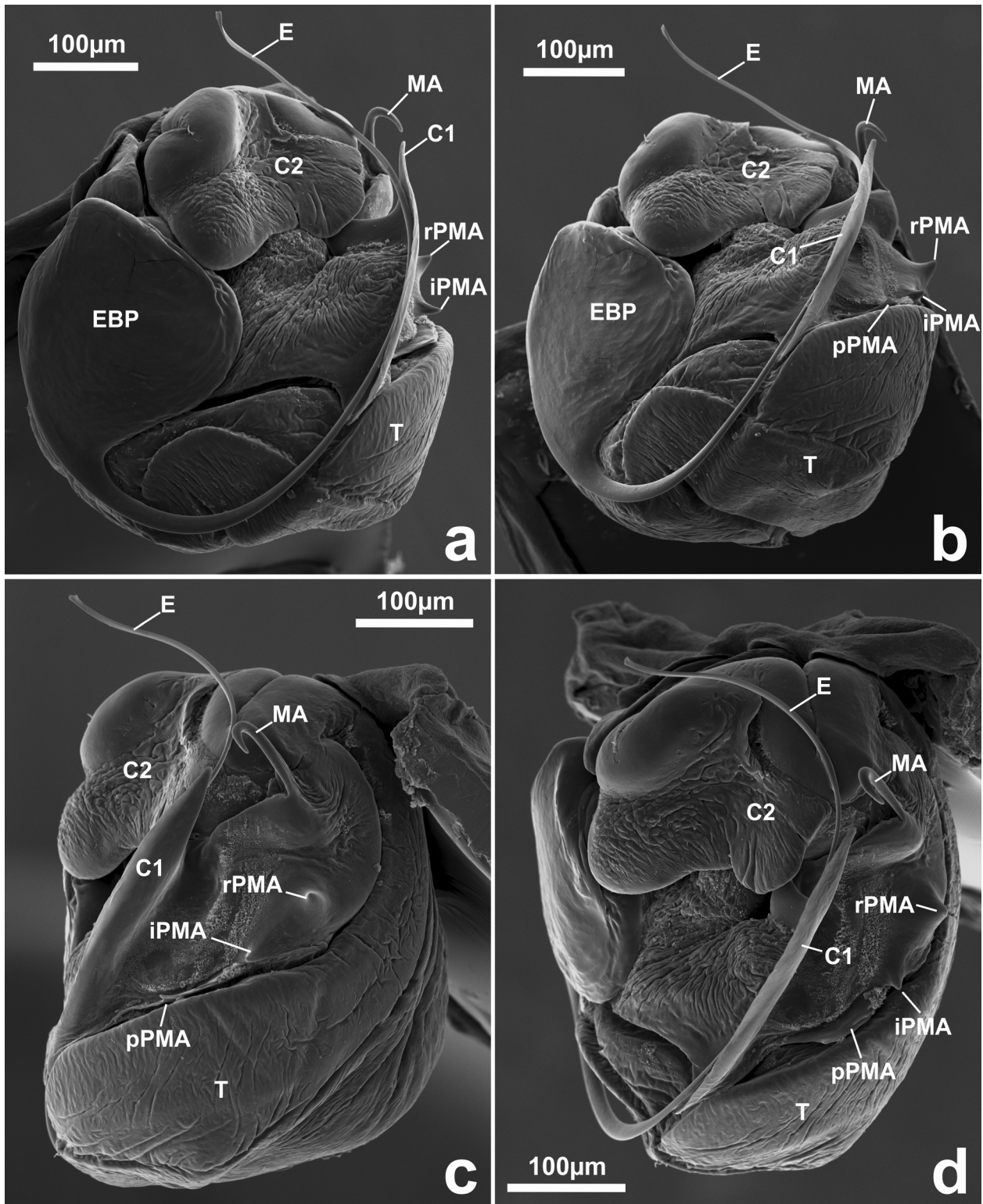


FIGURE 3. *Aysenia paposo* new species, (MACN-Ar 30292) Scanning electron microscope. **a** left male copulatory bulb, male, prolateral view; **b** same, ventral view; **c** same, retrolateral view; **d** same, apical view.

Natural history. Several specimens were collected in the coastal desert near Paposo, with abundant shrubs, in flowering time (Fig. 4c). They were found beating and fogging *Euphorbia lactiflua* Phil. (Fig. 4e), and on foliage and between rocks and leaf litter at the base of *Heliotropium* shrubs (Fig. 4d, probably *H. taltalense* (Phil.) Jonhst). No retreats could be observed.

Distribution. Only known from two localities of coastal desert in Antofagasta and Elqui provinces, separated by about 500 km.

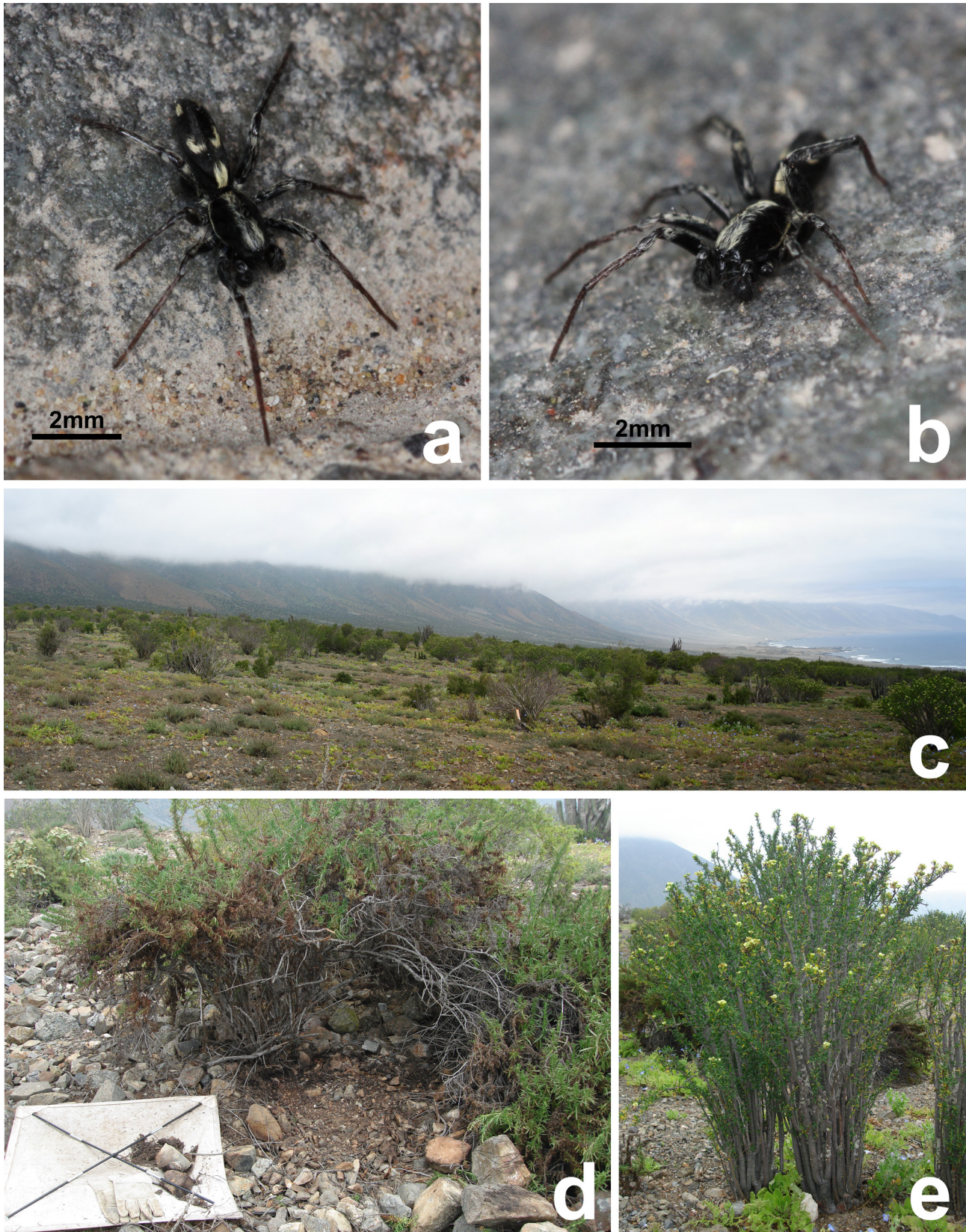


FIGURE 4. *Aysenia paposo* new species, and its habitat near Paposo, Chile. **a, b** Male specimen alive (MACN-Ar 30292), photo Sergio Rothmann Toro; **c** panoramic view of locality in coastal desert; **d** habitat between rocks and leaf litter at the base of *Heliotropium* shrub; **e** plants of *Euphorbia lactiflua*.

Other material examined. Chile, Antofagasta Region (II), Antofagasta Province: Same data as types, 1 male (MACN-Ar 30293); 1 male (MACN-Ar 28948) temporary preparations MAI-1007, MAI-4076. **Coquimbo Region (IV), Elqui Province:** Elqui, 20 km N La Serena, Rt. 5 Km 491 [approx. S 29.7759° W71.3108°], elev. 120 m, 7 Oct 1992, N. Platnick, P. Goloboff, K. Catley, 3 males (AMNH).

Aysenia araucana Ramírez

Fig. 5

Aysenia araucana Ramírez 2003: 65 (male holotype and female paratype from Chile, Biobío Region (VIII), Biobío Province, El Manzano, nr. Contulmo, ca. S38°01', W73°20', 3–5.III.1986, L. Peña; deposited in AMNH, re-examined). González & Ramírez 2012: 10.

Updated diagnosis. It is similar to *Aysenia paposo* new species by having moderately wrapped copulatory ducts, long embolus and relatively small primary conductor, but can be distinguished by the short extension of the primary conductor in retrolateral view, and the angle of the margin of tegulum and cymbium of about 120° (compare fig. 1d and Ramírez 2003: fig. 25B), and the left-right copulatory ducts in the female vulva contiguous and clearly coiled (compare fig. 2c and Ramírez 2003: fig. 25E).

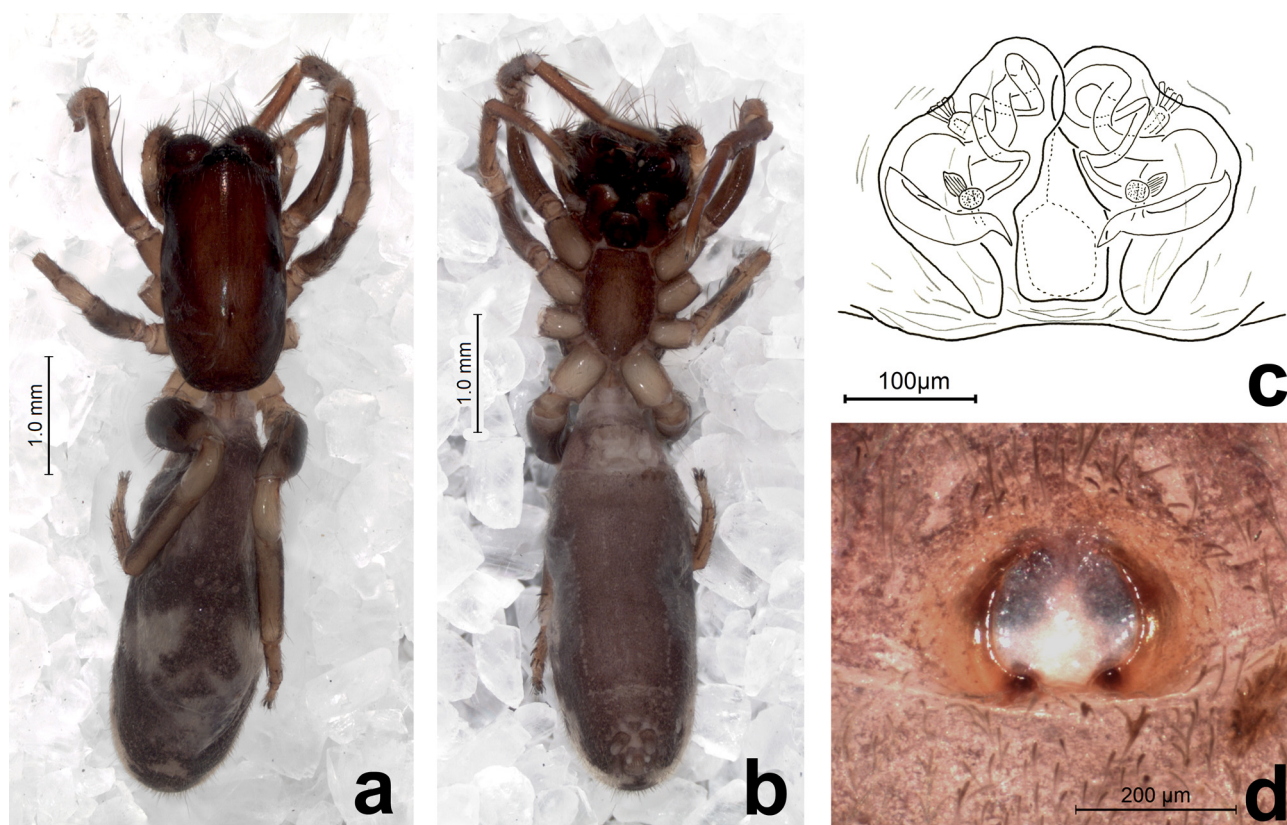


FIGURE 5. *Aysenia araucana* Ramírez, specimen from Cuesta de Cavilolén (MACN-Ar 30054). **a** dorsal habitus; **b** ventral habitus; **c** cleared vulva, dorsal view; **d** epigyne, ventral view.

Variability. In addition of the variations recorded in Ramírez (2003) and González & Ramírez (2012), we founded that some specimens have a more elongate carapace and abdomen than in the type series (compare Fig. 5 with illustrations on those references).

Distribution. Widely distributed through northern, central and southern Chile, from Atacama Region (II) to Osorno Province in Los Lagos Region (X).

New records. CHILE: Antofagasta Region (II), Antofagasta Province: Cerro Moreno, elev. 510 m [probably what today is Parque Nacional Morro Moreno, approx. S23.4969° W70.5672°], 8 Aug 1972, R. Calderón, 1 female, (AMNH). **Coquimbo Region (IV), Choapa Province:** Cuesta Cavilolén, S31.76669°,

W71.32727°, elev. 600m, 2 Nov 2011, M.J. Ramírez, A. Ojanguren, J. Pizarro *et al.*, 1 female (MACN-Ar 30054, temporary preparations CJG-3105; CJG-1324; AJL-7 to 9, 11). **Valparaíso Region (V), Petorca Province:** E La Ligua, relict forest, 27 Sep 1980, L.E. Peña, 1 female (AMNH, temporary preparation MJR-1302). **Maule Region (VII), Curicó Province:** 20 km E Potrero Grande, El Relvo, S 35° 11.13', W 70° 56.1', [approx. 930 m], fogging *Nothofagus dombeyi* (Mirb.) Oerst., 3 Feb 2004, J. E. Barriga, 2 females [2 immatures presumably of the same species] (MACN-Ar 30053).

Aysenia elongata Tullgren

Aysenia elongata Tullgren, 1902: 54. Ramírez 2003: 61. González & Ramírez 2012: 3.

New records. CHILE: Región (IX): Cautín Province: Parque Nacional Huerquehue, near Laguna Toro, NE Pucón (MJR-loc-81), forest with *Nothofagus*, *Araucaria*, *Chusquea*, elev. 1225 m S39.1432° W 71.71238°, 13 Feb 2012, M.J. Ramírez, M.A. Izquierdo, P. Michalik, C. Wirkner & K. Huckstorf, 1 female (MACN-Ar 29297); same data, 1 female (MACN-Ar 29188); same data, 1 female (MACN-Ar 29183; preparations MAI-1001, 4069). **Los Ríos Region (XIV): Valdivia Province:** Chaihuin, Reserva Costera Valdiviana, Las Garzas, S39°59.640' W73°35.197, elev. 360 m, 27 Feb 2008, 20.9°C fogging 150cc/l *Nothofagus nitida* (Phil.) Krasser, 11:00AM, Arias *et al.* UCB, (locality 101), 1 female (CASENT 9039025); same data, 15 females [1 immature] (CASENT 9039023); same data, S39°49.687' W73°35.227, (locality 100), 13 females [8 immatures] (CASENT 9039056); same data, 1 male 2 females (CASENT 9029772); same data (locality 102), 3 females [3 immatures] (CASENT 9039018); same data, 2 females (CASENT 9029768); Las Garzas Way, elev. 357m, 13 Jan 2007, 17°C, S39°59.669' W73°34.721', fogging *Nothofagus dombeyi* 35m, 03:27PM, Arias *et al.* Berkeley, (locality 67), 1 female (CASENT 9039097); same data, 20 females [34 immatures] (CASENT 9039080). **Los Lagos Region (X): Chiloé Province:** Chinquén S42°37.092' W074°06.073', elev. 15 m, 1 Mar 2008, fogging 150cc/l *Nothofagus nitida* 17:38PM, Arias *et al.* UCB, (locality 104), 1 female (CASENT 9034020); Chinquén, S42°37.098' W74°6.025', elev. 31m, 1 Mar 2008, 18°C, fogging 150cc/l *Nothofagus nitida*, 06:50PM, Arias *et al.* UCB, (locality 105), 1 male 5 females (CASENT 9029775); Chinquén, S42°37.002' W74°6.023', elev. 60 m, 4 Mar 2008, fogging 18.20°C, 150cc/l *Nothofagus nitida* and *Drymis winteri*, 12:50 PM, Arias *et al.* UCB, (locality 112), 19 females (CASENT 9029776); Río Cipresal, S42°35.181' W074°05.576', elev. 9 m, 2 Mar 2008, fogging 150cc/l *Nothofagus nitida* 03:15 PM Arias *et al.* UCB, 67 females (CASENT 9034063); Río Cipresal, S42°35.109' W074°05.492', elev. 4 m, 2 Mar 2008, fogging 150cc/l *Nothofagus nitida* 03:15 PM Arias *et al.* UCB, (locality 109), 5 females (CASENT 9034078).

Aysenia izquierdoi González & Ramírez

Aysenia izquierdoi González & Ramírez 2012: 18.

New records. CHILE: Los Ríos Region (XIV): Valdivia Province: Chaihuin, Reserva Costera Valdiviana, Las Garzas, S39°49.687' W73°35.227', elev. 360 m, 27 Feb 2008, 20.9°C fogging 150cc/l *Nothofagus nitida* 11:00AM, Arias *et al.* UCB, (locality 100), 1 male (CASENT 9029773). **Los Lagos Region (X): Chiloé Province:** Chinquén, S42°37.098' W74°6.025', elev. 31m, 1 Mar 2008, 18°C, fogging 150cc/l *Nothofagus nitida*, 06:50PM, Arias *et al.* UCB, (locality 105), 2 females [1 immature] (CASENT 9029774); Chinquén, S 42°37.117' W074°05.968', elev. 23 m, 1 Mar 2008, fogging 150cc/l *Nothofagus nitida*, 08:09PM, Arias *et al.* UCB, (locality 106), 1 female (CASENT 9034091); same data, 1 female (CASENT 9029779); Chinquén, S42°36.996' W74°06.008', elev. 60 m, 4 Mar 2008, 20.7°C, fogging, 150cc/l *Nothofagus nitida* and *Laurelia sempervirens* Tul., 12:55 PM, Arias *et al.* UCB, (locality 113), 1 female (CASENT 9029786); same data, 1 male 2 females (CASENT9029787); Río Cipresal S42°35.165' W074°05.557', elev. 10 m, 2 Mar 2008, fogging 150cc/l *Nothofagus nitida* 03:15PM Arias *et al.* UCB, (locality 107), 2 males (CASENT 9029780); Chinquén, S 42°37.002' W 74°6.023', elev. 60 m, 4 Mar 2008, 18.20°C, fogging 150cc/l *Nothofagus nitida* and *Drimys winteri* J.R.Forst. & G.Forst, 12:50 PM, Arias *et al.* UCB, (locality 112), 4 females (CASENT 9029777).

Aysenoides simoi new species

Figs 6–8

Type material. Male holotype from Chile, Araucanía Region (IX), Malleco Province, Nahuelbuta National Park, S 37°47', W 73°00', elev. 1200 m, 12 Feb 2005, J.E. Barriga T., fogging *Nothofagus dombeyi*. Female paratype from Chile, Libertador General Bernardo O'Higgins Region (VI), Curicó Province, 20 km Potrero Grande, El Relvo, S 35°11.14', W 70°56.1', elev. 1100 m, 8 May 2004, J.E. Barriga T., fogging *Nothofagus dombeyi* (temporary preparations AJL-12 to 14, 18 to 20; MAI-5), deposited in MNHN. Same data as holotype, male paratype MACN-Ar 30294 (temporary preparations AJL-16, 17).

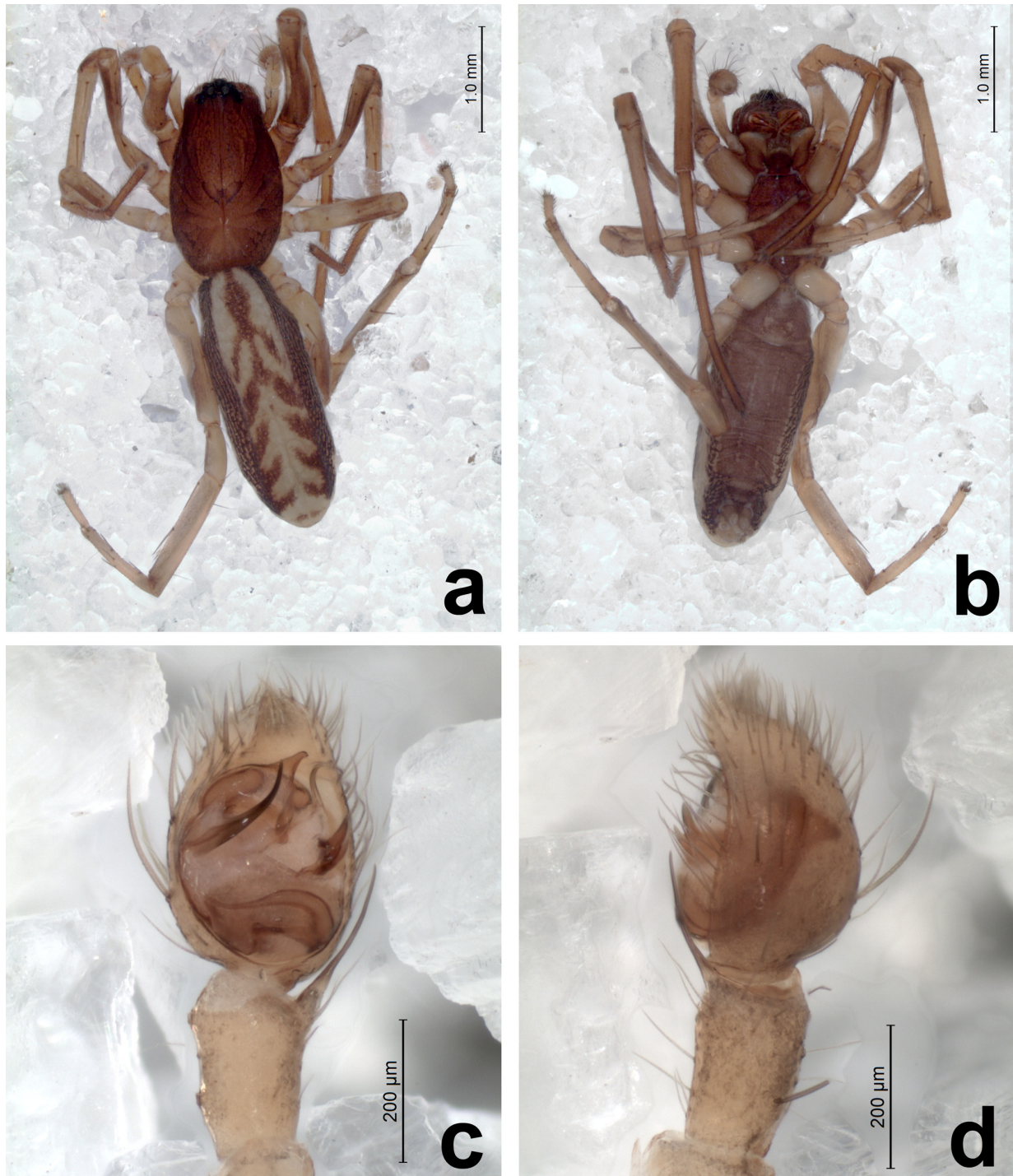


FIGURE 6. *Aysenoides simoi* new species. **a, b** male (MACN-Ar 30294) (**a** dorsal habitus; **b** ventral habitus) **c, d** male holotype (**c** left palp, ventral view; **d** same, retrolateral view).

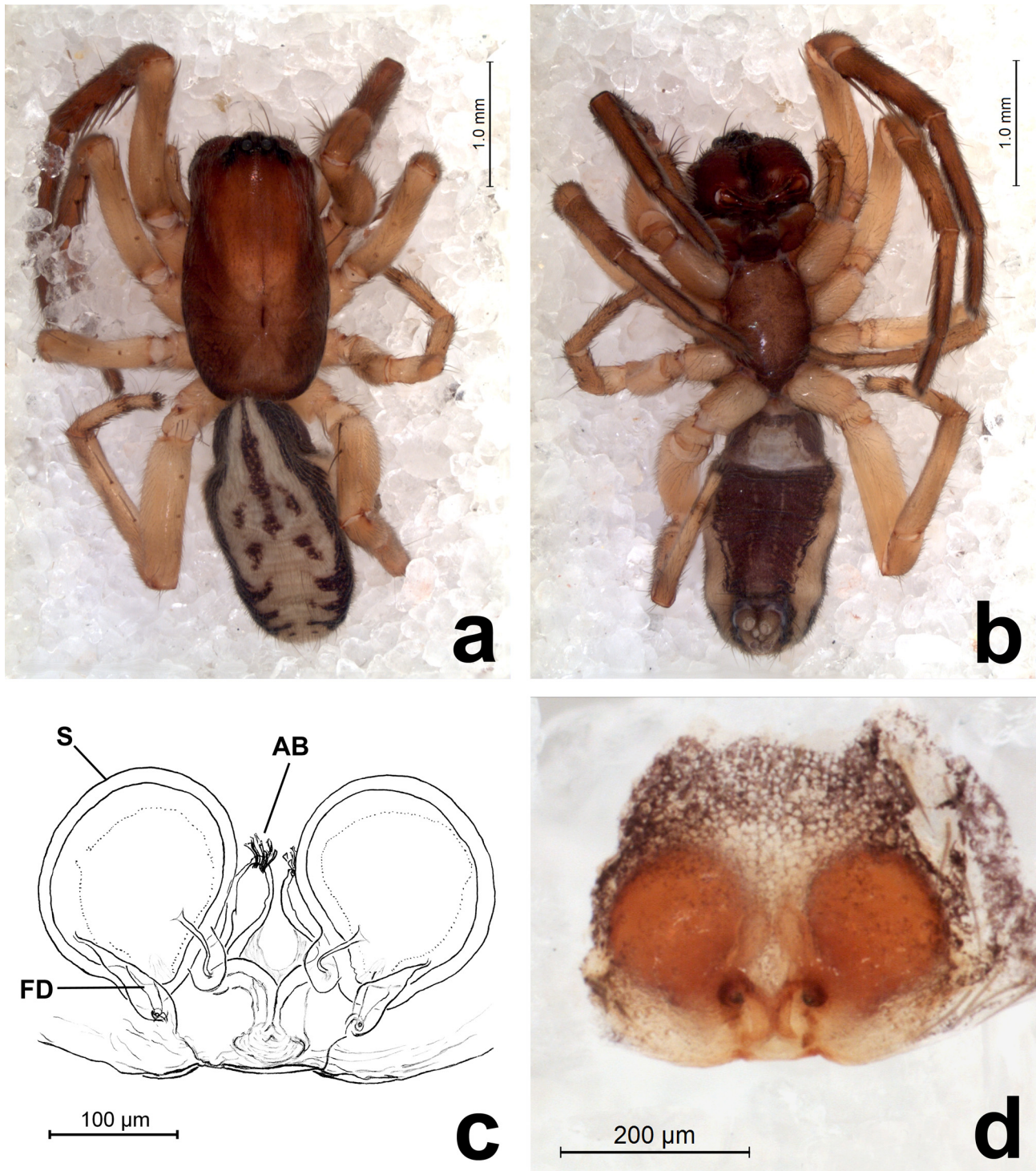


FIGURE 7. *Aysenoides simoi* new species. **a–d** female paratype (**a** dorsal habitus; **b** ventral habitus **c** cleared vulva, dorsal view; **d** epigyne, ventral view).

Etymology. The specific name is a patronym in honor of Miguel Simó, a Uruguayan arachnologist mentor of Álvaro Laborda.

Diagnosis. Males can be easily recognized from other *Aysenoides* species by the shape of the copulatory bulb, with a conspicuous paramedian apophysis with two contiguous cusps (Figs. 6c, d; 8); females differ by having two posterior central pouches with openings directed laterally in the epigyne (Figs 7c, d).

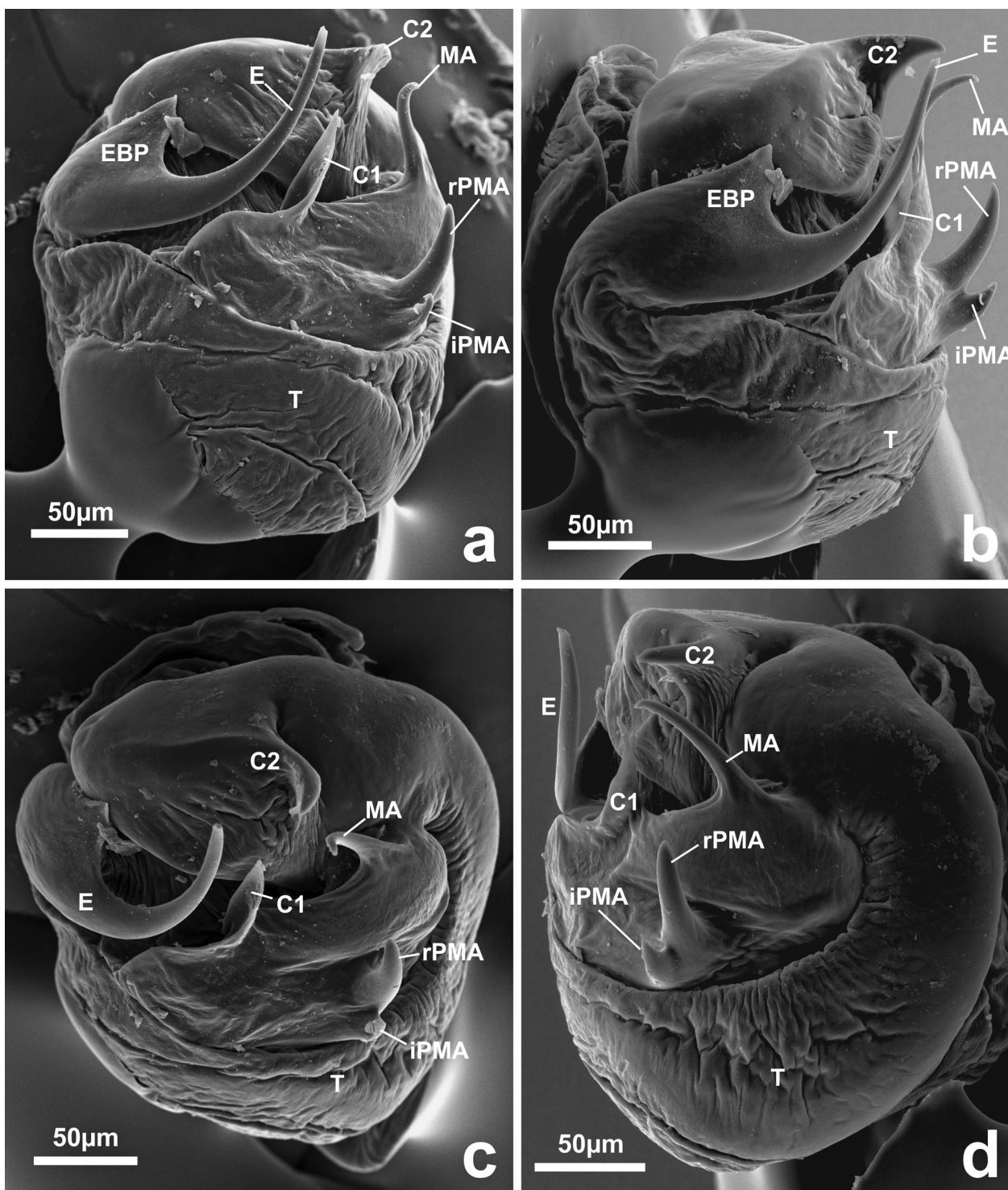


FIGURE 8. *Aysenoides simoi* new species, (MACN-Ar 30294) Scanning electron microscope. **a** left male copulatory bulb, ventral view; **b** same, retrolateral view; **c** same, apical view; **d** same, prolateral view.

Description. *Male* (holotype): Prosoma length 1.83, width 1.10, narrowed in front (Fig. 6a). Tibia/metatarsus length: I, 1.80/1.57; II, 1.30/1.03; III, 0.73/0.83; IV, 1.20/1.07. Chelicerae less robust than those of female, with three or four teeth on retromargin, three on promargin. Sternum length 1.00, width 0.67. Spines: leg **I**, femur d 1-1-1, p d2ap, r 0-1-0; tibia v 2-2-2 (the x-p1-x displaced to prolateral), p 1-1-1 or 1-0-1(1bas displaced to ventral); metatarsus v 2bas, p 0-d1-0. **II**, femur = I; tibia v r1-2-2, p d1-d1-1; metatarsus v 2bas, p d1-d1-0-1 or 0-d1-0-1. **III**, femur d 1-1-1, p d1ap; tibia v 0-p1-2, r 0- d1-d1, p d1-d1-d1; metatarsus v 2-p1-2, p 0-1-1; r 0-1-0; d 0-1-0. **IV**, femur = III; tibia v p1-p1-2, r 0-1-1; metatarsus v 2-p1-2, p 0-1-1, r d1-0-d1; d 0-p1-2. Third legs directed forward.

Opisthosoma length 2.67, spiracle–epigastrium 1.30, spiracle–spinnerets 0.23. Color in ethanol (Fig. 6a, b): Prosoma reddish-brown, paler on dorsal region. Ocular region dark, chelicerae reddish-brown. Sternum and labium light brown, gnathocoxae paler. Legs yellowish to cream. Opisthosoma with dorsal pattern of cream to yellow chevrons on dark brown background, sides dark brown with cream longitudinal band. Venter dark brown. Palp (Figs. 6c, d; 8a–c): Palp: tibia long, width/length 0.62, RTA long, acute. Cymbium relatively small, cymbial conductor wide. Sperm duct with two conspicuous loops at apical margin. Embolus with basal process short, hyaline. Median apophysis hyaline, slender, hook shaped. Primary conductor thin, hyaline. Secondary conductor triangular, with acute apex and membranous ventral area. Paramedian apophysis with two cusps, long heavily sclerotized, protruding over retrolateral border of cymbium in ventral view.

Female (paratype): Prosoma length 2.17, width 1.20, narrowed in front (Fig. 7a). Length of tibia/metatarsus: I, 1.10/1.03; II, 0.97/0.90; III, 0.63/0.70; IV, 1.10/0.87. Chelicerae strong, three teeth on retromargin, three on promargin. Length of sternum 1.10, with 0.70. Spines: leg I, femur d 1-1-1, p d2ap; tibia v 2-2-2 (the x-p1-x slightly displaced to prolateral) p 1bas (displaced to ventral); metatarsus v 2bas. II, femur d 1-1-1, p d1ap; tibia v r1-2-2 (x-p1-x less developed), p 1ap; metatarsus v 2bas. III, femur = II; tibia v 0-2-r1 or 0-p1-r1, p 1-1-0, r 1-1-0; metatarsus v 2-0-2, p 0-d1-1, r 0-d1-1, d 2ap. IV, femur d 1-1-1; tibia v p1-p1-2; metatarsus v 2-p1-2, p 2ap, r d1-d1-d1. Third legs directed forward. Opisthosoma length 2.33, spiracle–epigastrium 1.00, spiracle–spinnerets 0.17. Color in ethanol (Fig. 7a, b): as in male. Epigyne: Flat, slightly sclerotized, limits between lateral lobes and median field unclear. Two posterior, central pouches with openings directed laterally (Fig. 7d). Spermathecae spherical, accessory bulbs voluminous, contiguous (Fig. 7c).

Variability. Spines in males: Tibia I p 2-0-1, p 2-1-1, r 1bas, r 1-0-1. Tibia II v r1-2-2 (x-p1-x less developed), v 2-2-2 (p1-x-x and x-p1-x less developed), r 1ap. Tibia III v 0-2-2, v p1-2-r1, r d1-d1-d1. Tibia IV v p1-2-2 (x-r1-x less developed). Metatarsus I p 0-d1-d1. Metatarsus II r 0-1-0. Metatarsus III v 2-0-2, p 0-1-2, r 0-1-2. Metatarsus IV r d1-d1-d1, d 2ap. Spines in females: Tibia II v r1-r1-2, p 1-0-1. Metatarsus IV v 2-p1-p1, r 2ap, r d1ap.

Natural history. Some specimens were collected fogging the canopy of *Nothofagus dombeyi*.

Distribution. Known only from a few localities from Cautín and Curicó provinces in Chile and Neuquén province in Argentina.

Other material examined. ARGENTINA: Neuquén: Nahuel Huapi National Park, Isla Victoria, [probably Apr 1945], leg. Havrylenko, 2 females and 2 immatures (MLP). CHILE: Libertador General Bernardo O'Higgins Region (VII), Curicó Province: Las Tablas, East of Curicó, Feb 1985, L. E. Peña, 3 males (AMNH). Araucanía Region (IX), Cautín Province: 15–30 km S Cherquenco, 26 Feb 1989, L. E. Peña, 2 males (AMNH). Malleco Province: Malalcahuello, Way to Lonquimay, elev. 1236 m, S38°26.377' W71°30.540', 19 Jan 2007, 15°C, fogging *Nothofagus dombeyi* 35m, 09:47AM, Arias *et al.* Berkeley, 1 female (CASENT 9039001).

Aysenoides colecole Ramírez

Aysenoides colecole Ramírez 2003: 70.

New records. CHILE: Los Ríos Region (XIV): Valdivia Province: Chaihuin Reserva Costera Valdiviana, Las Garzas way, S39°59.669' W73°34.721', elev. 357m, 13 Jan 2007, 17°C, Fogging *Nothofagus dombeyi* 35m, 03:27PM, Arias *et al.* Berkeley, (locality 67), 1 female (CASENT 9039091); same data, 3 females 38 immatures (CASENT 9039081); Chaihuin, Reserva Costera Valdiviana, Las Garzas: S39°49.687' W73°15.227', elev. 360m, 27 Feb 2008, 17.3°C, Fogging 150cc/l *Nothofagus nitida* 11:00AM, Arias *et al.* UCB, (locality 100), 1 female (CASENT 9039066); same data, 1 female 1 immature (CASENT 9039059); S39°59.640' W73°35.197', elev. 360m, 27 Feb 2008, 20.9°C, Fogging 150cc/l *Nothofagus nitida*, 11.0AM, Arias *et al.* UCB, (locality 101), 3 females 1 immature (CASENT 9039022); same data, 1 female (CASENT 9039038); same data, (locality 102), 2 females 15 immatures (CASENT 9039016); same data, 4 females (CASENT 9029766). Los Lagos Region (X): Chiloé Province: Chinquen: S 42°37.092' W74°06.073', elev. 15m, 01 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 05:38PM, Arias *et al.* UCB, (locality 104), 1 female (CASENT 9034026); same data, 3 females (CASENT 9034027); S42°37.069' W74°05.951', elev. 60m, 04 Mar 2008, 22°C, Fogging 150cc/l *Nothofagus nitida* and *Amomyrtus luma* (Molina) D.Legrand & Kausel, 3:05 PM, Arias *et al.* UCB, (locality 114), 4 females (CASENT

9029782); Río Cipresal: S42°35.181' W074°05.576', elev. 9 m, 02 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 03:15 PM, Arias *et al.* UCB, (locality 108), 1 female (CASENT 9034049); same data, 19 females (CASENT 9034064); S42°35.109' W074°05.492', elev. 4 m, 02 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 03:15PM, Arias *et al.* UCB, (locality 109), 2 females 1 male (CASENT 9034080). **Llanquihue Province:** Parque, Comuna de Calbuco, In a low forest on the side of the access road to the ferry to Chiloé, S41°47.147' W73°27.176', elev. 9m, 14 Feb 2012, Ramírez, M.J., Izquierdo, M.A., Michalik, P., Wirknler, C. & Huckstorf, K., (MJR-loc-83), 1 male, (MACN-Ar 29272).

Aysenoides nahuel Izquierdo & Ramírez

Aysenoides nahuel Izquierdo & Ramírez 2008: 37.

Remarks. Izquierdo and Ramírez (2008) report a record of this species from Las Trancas, and placed that locality in the Ñuble Province in the Region of Biobío (IX); the place is actually located in the Ranco Province in Los Rios Region (XIV).

Distribution. Southern forest in Chile, from Maule Region (VII) to Chiloé Province in Los Lagos Region (X).

New records. CHILE: Los Ríos Region (XIV): Valdivia Province: Chaihuin, Reserva Costera Valdiviana, Las Garzas way, S39°59.669' W73°34.721', elev. 357m, 13 Jan 2007, 17°C, Fogging *Nothofagus dombeyi* 35m, 03:27PM, Arias *et al.* Berkeley, (locality 67), 1 male (CASENT 9039087); same data, 1 female (CASENT 9039095); same data, 1 male (CASENT 9039083); Chaihuin, Reserva Costera Valdiviana, Las Garzas: S39°59.687' W73°35.227', elev. 360m, 26 Feb 2008, 17°C, Fogging 150cc/l *Nothofagus nitida*, 07:30PM, Arias *et al.* UCB, (locality 99), 1 female 2 immatures (CASENT 9039043); same data, 2 females (CASENT 9029770); S39°49.687' W73°15.227', elev. 360m, 27 Feb 2008, 17.3°C Fogging 150cc/l *Nothofagus nitida*, 11:00AM, Arias *et al.* UCB, (locality 100), 5 females 3 immatures (CASENT 9039060); S39°59.640' W73°35.197', elev. 360m, 27 Feb 2008, 20.9°C, Fogging 150cc/l *Nothofagus nitida*, 11:00AM, Arias *et al.* UCB (locality 101), 1 female (CASENT 9039030); same data, 1 female (CASENT 9039037); same data, (locality 102), 2 females (CASENT 9029767). **Los Lagos Region (X): Chiloé Province:** Chinquen: S42°37.092' W074°06.073' elev. 15m, 01 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 17:38PM, Arias *et al.* UCB, (locality 104), 1 female (CASENT 9034017); same data, 1 female (CASENT 9034023); S42°36.996' W74°06.008', elev. 60m, 04 Mar 2008, 20.7°C, Fogging 150cc/l *Nothofagus nitida* and *Amomyrtus luma*, 12:55PM, Arias *et al.* UCB, (locality 113), 1 female (CASENT 9029784); Río Cipresal, S42°35.109' W074°05.492', elev. 4 m, 02 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 03:15PM, Arias *et al.* UCB, (locality 109), 1 female (CASENT 9034074); same data, 1 female (CASENT 9034075).

Aysenoides parvus Ramírez

Aysenoides parvus Ramírez 2003: 72.

New records. CHILE: Los Ríos Region (XIV): Valdivia Province: Chaihuin, Reserva Costera Valdiviana, Las Garzas way, S39°59.669' W73°34.721', elev. 357m, 13 Jan 2007, 17°C, Fogging *Nothofagus dombeyi* 35m, 03:27PM, Arias *et al.* Berkeley, (locality 67), 1 female (CASENT 9039084); Chaihuin, Reserva Costera Valdiviana, Las Garzas: S39°59.687' W73°35.227', elev. 360m, 26 Feb 2008, 17°C, Fogging 150cc/l *Nothofagus nitida*, 07:30PM, Arias *et al.* UCB, (locality 99), 1 female (CASENT 9039046); S39°49.687' W73°15.227', elev. 360m, 27 Feb 2008, 17.3°C Fogging 150cc/l *Nothofagus nitida*, 11:00AM, Arias *et al.* UCB, (locality 100), 2 females (CASENT 9039061); S39°59.640' W73°35.197', elev. 360m, 27 Feb 2008, 20.9°C, Fogging 150cc/l *Nothofagus nitida*, 11:00AM, Arias *et al.* UCB, (locality 101), 1 female (CASENT 9039036); same data, 1 female (CASENT 9039027); Reserva, Costera Valdiviana, 15.03 km WSW Corral, S39°59.656', W73°35.206', elev. ca. 345m, general collecting in native forest dominated by *Nothofagus*, 27 Feb 2008, H. Wood and C. Griswold, (locality CL-013), 1 female (CASENT 9027776). **Los Lagos Region (X): Chiloé Province:** Chinquen, S42°37.092' W74°06.073', elev. 15m, 01 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 05:38PM, Arias *et al.* UCB, (locality 104), 1 female (CASENT 9034030); same data, 1 male (CASENT 9034036); Río Cipresal:

S42°35.181' W74°05.576', elev. 9m, 02 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 03:15PM, Arias *et al.* UCB, (locality 108), 1 female (CASENT 9034051); S42°35.109' W74°05.492', elev. 4 m, 02 Mar 2008, Fogging 150cc/l *Nothofagus nitida*, 03:15PM, Arias *et al.* UCB, (locality 109), 2 females (CASENT 9034076); Isla Chiloé, outside of P. N. Chiloé, 1.69km N Cucao, S42°37.028', W74°05.948', elev.ca. 30m, beating vegetation in disturbed native forest, 1 Mar 2008, C. Griswold, (locality CL-016), 1 male (CASENT 9030062); N shore of Lago Huillinco, close to P.N. Chiloé, 8.43 km SE Cucao, S42°39.722' W74°00.637', elev. 5m, 3–4 Mar 2008, disturbed native forest sifting leaf litter and rotten wood, H. Wood and C. Griswold, (locality CL-019), 2 females 4 immatures (CASENT 9028100); same data (locality CL-124), 1 female [3 immatures] (CASENT 9035353).

Comparative morphology

Our examination of the copulatory bulb of *Aysenia paposo* under electron microscope (Fig. 3) revealed a similar conformation as found in *Aysenia barrigai* Izquierdo & Ramírez and *Aysenia elongata*, of a flattened secondary conductor (C2), which appeared as the general pattern in *Aysenia*, and three cusps on the paramedian apophysis (pPMA, iPMA, and rPMA) (see González & Ramírez 2012: figs. 4, 9). On this light, we have reconsidered the homology of PMA cusps in the closely related genus *Aysenoides*. The electron microscope images of *Aysenoides simoi* (Fig. 8) revealed a similar morphology, but lacking the pPMA cusp juxtaposed to the primary conductor (C1), as found in *Aysenoides colecole* (Ramírez 2007: fig. 7) and other species of the genus. We have also revised the distribution of spines on the tibiae I of some *Aysenia* species, as follows: *Aysenia grismadoi* González & Ramírez: v 2-2-2 (the x-p1-x displaced to prolateral), p d1-0-0-d1-0. *Aysenia izquierdoi*: v 0-0-p1-2 (the p1 homologous to x-p1-x, displaced to prolateral), p 1-1. *Aysenia huayun* González & Ramírez: v 0-p1-2 (the x-p1-x, displaced to prolateral). We have revised the scoring of characters in the phylogenetic matrix accordingly (see complete matrix in TreeBase).

Cladistic analysis and conclusions

Table 1 shows the complete vectors of character scorings for the species here described. The heuristic search strategies using ratchet parsimony and implied weighting (constant of concavity $k = 6$) produced a single optimal tree in 55 out of 100 replicates (TNT commands: *piwe = 6; ratchet: iter 50; collapse 3; mult = ratchet repl 100 tbr hold 10; bb = fillonly;*), and a search using new technologies (Goloboff *et al.* 2008a) driven to hit 100 times the best tree coincided with the same result. With such a number of hits to the same best tree, it is likely that the optimal tree was found. The tree has four trichotomies, one of them in *Aysenoides* (plus two in *Sanogasta*, and one at the base of Gayennini). When the searches are made without collapsing of unsupported branches, these polytomies produce 81 equally optimal dichotomous trees.

The strict consensus tree and support values for the tribe Amaurobioidini and internal branches of *Aysenia* and *Aysenoides* are shown in the Figure 9. This study reproduced virtually the same cladogram for all the representatives of the tribe Amaurobioidini as obtained by Izquierdo & Ramírez (2008) and González & Ramírez (2012), except for the resolution of a few clades with very low support, involving the placement of *Gamakia* Ramírez, *Negayan* Ramírez and *Coptoprepes* Simon, all near the base of the tribe.

The synapomorphies of *Aysenia*, *Aysenoides* and their internal clades are listed in Table 2. We obtained a similar configuration of support values as in the recent analysis of González & Ramírez (2012), with most intergeneric branches poorly supported. The internal relationships of *Aysenoides* obtained by Izquierdo & Ramírez (2008) with the species known at that time are reproduced here. The relationships among *Aysenia* species did however change, precisely in the resolution of groups of very low support, involving *A. cylindrica*, *A. barrigai* and *A. araucana*. Not surprisingly, the new species *A. paposo* appears sister to *A. araucana*, which is morphologically very similar and both occur in coastal deserts in northern Chile. While two groups of *Aysenia* obtained good support values and can be regarded as well supported and resolved (*A. araucana* and *A. paposo*, and a cluster of small elongate species with reduced spination, composed by *A. grismadoi*, *A. elongata*, *A. izquierdoi* and *A. huayun*), the remaining of the relationships within the genus should be considered as tentative. The new species *Aysenoides simoi* appears as the sister species of *A. nahuel*. The male genitalia of this last species is quite distinctive, but they are otherwise quite similar in morphology and coloration, and have been shown to co-occur in the canopy of *Nothofagus dombeyi* in a locality in Curicó Province.

TABLE 1. Vectors of character scorings for the tree new species described here, following character numbers as in González & Ramírez (2012). Polymorphic terminals are coded as [01] = a, [23] = b.

	2	11	21	31
<i>Aysenia paposo</i> sp. n.	1 - 0 0 0 1 1 1	0 1 2 1 0 0 1 1 1 0	0 2 1 0 0 0 0 1 0 0	0 0 0 1 1 0 0 0 0 0
<i>Aysenoides simoi</i> sp. n.	1 - 0 0 0 0 1 0 1	0 1 2 1 0 0 1 1 1 0	0 b 1 0 0 0 0 1 0 0	0 0 0 1 1 0 0 0 0 0
	41	51	61	71
<i>Aysenia paposo</i> sp. n.	? ? 0 1 1 0 0 0 1 0	1 0 0 0 1 0 - 0 0 0	a 1 0 0 0 0 0 0 1 1	0 - 0 0 0 0
<i>Aysenoides simoi</i> sp. n.	? ? 0 1 1 0 0 0 1 0	1 0 0 0 1 1 ? 0 0 0	0 1 0 0 0 0 1 0 1 1	1 ? 0 1 0 0
	100	110	120	130
<i>Aysenia paposo</i> sp. n.	1 1 1 0 0 0 0 0 0 0	0 - - 0 0 0 0 0 0	0 0 0 1 0 0 0 0 1 0	0 0 0 0 ? 0 0 0 0 1
<i>Aysenoides simoi</i> sp. n.	1 0 1 4 0 0 0 0 0 0	0 ? ? 0 0 0 0 0 0	0 0 1 0 0 0 0 0 1 0	1 0 0 0 ? 0 0 0 0 1
	140	150	160	170
<i>Aysenia paposo</i> sp. n.	1 1 1 1 0 1 0 0 a 0	0 0 0 1 0 1 1 1 a a	1 0 0 0 0 0 0 0 0 0	1 1 1 0 1 0 0 0 1 a
<i>Aysenoides simoi</i> sp. n.	1 1 1 1 0 1 0 0 0 0	0 0 a 1 1 1 1 1 a a	a 0 0 0 0 0 a 0 1 a	a 1 1 a 0 0 0 1 1
	180	190	200	368
<i>Aysenia paposo</i> sp. n.	0 0 1 1 1 1 0 1 0 1	0 1 1 1 1 1 a a 1 1	1 0 1 1 1 1 1	1 0 0 1 1 0 0 - 0 0
<i>Aysenoides simoi</i> sp. n.	0 1 a a a 0 1 0 1	a 1 1 1 1 1 0 0 a 1	a a 1 a a a	1 0 0 1 0 0 0 - 0 0
	378	388	398	408
<i>Aysenia paposo</i> sp. n.	0 0 0 0 0 0 - 0 0	0 0 - 0 1 0 0 0 0 0	1 1 0 0 0 0 0 0 0 1	0 - 0 0 0 0 - 0 1 0
<i>Aysenoides simoi</i> sp. n.	0 0 0 0 0 0 - 0 0	0 0 - 0 1 0 0 0 0 0	1 1 0 0 0 0 0 0 0 1	0 ? 0 0 0 0 ? 0 0 0 ?
	418	428	438	
<i>Aysenia paposo</i> sp. n.	0 0 1 0 0 - 0 0 0 0	0 0 0 1 0 - 0 0 0 0	- 0 0 0 0 0 0 0 0	0 0 0
<i>Aysenoides simoi</i> sp. n.	? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ?	- - 0

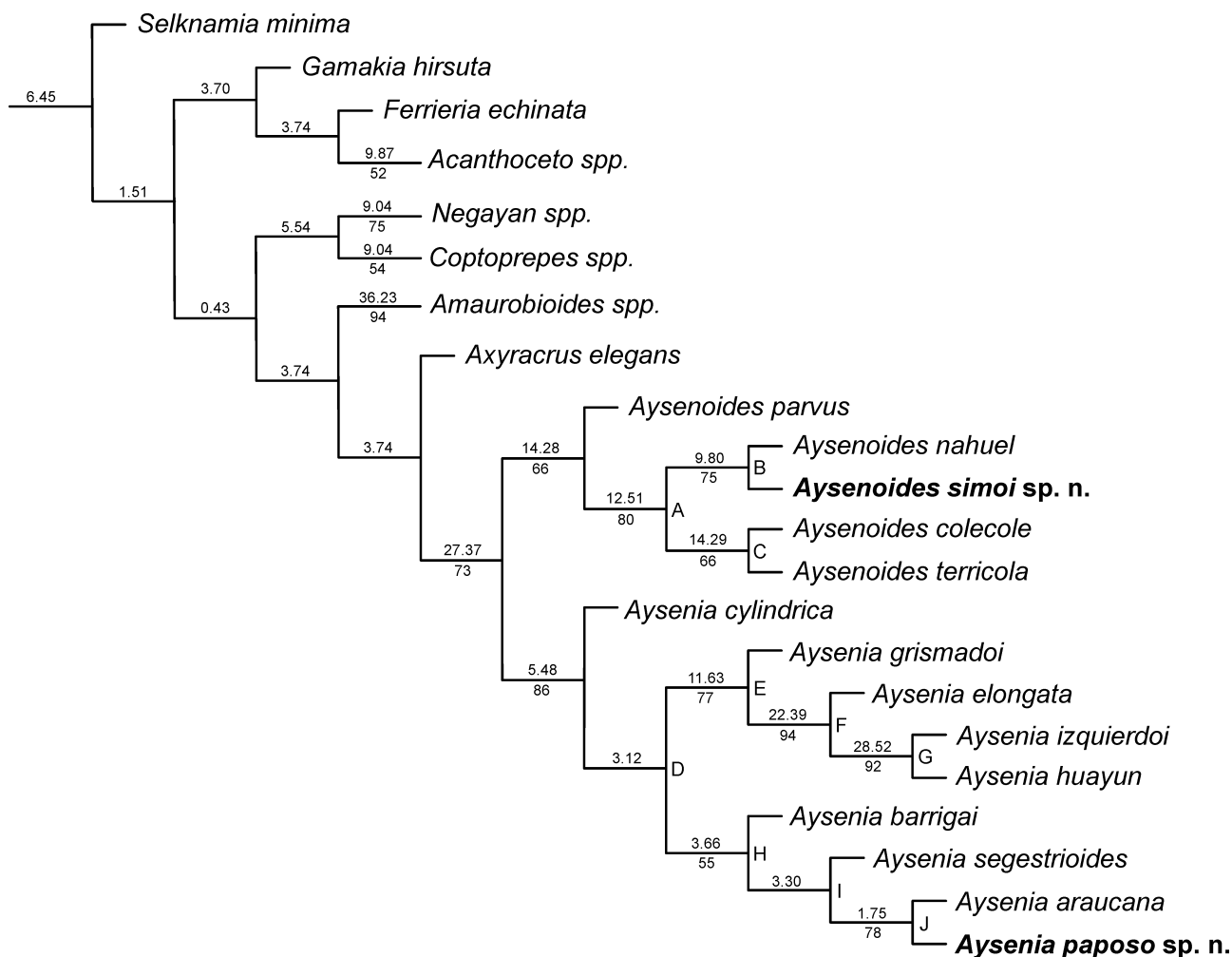


FIGURE 9. Phylogenetic hypothesis of *Aysenia* and *Aysenoides* species and outgroups. Support values for groups expressed as Bremer support in units of fit x 100 (top) and jackknifing absolute frequency (bottom) for the tribe Amaurobioidini. Only the basal branch is shown for outgroup genera with more than one species (indicated by “spp.”). Constant of concavity K = 6, Fit = 82.37627, length = 1147.

TABLE 2. Synapomorphies of *Aysenia* and *Aysenoides* and some internal groups (only changes from González and Ramírez 2012 are reported). See Fig. 9 for denomination of clades.

Aysenoides	Shape of the embolar process (103): flattened → spine like CD slender (122): absent → present Spermathecae spherical (130): absent → present
Clade A	SD loop on MA (56): absent → present Shape of MA (67): thick → slender Spine metatarsus IV v x-r1-x (196): present → absent
Clade B	rPMA cusp shape (71): short → conspicuous protruding Spine tibia II v-x-p1-x (154): absent → present a2 pPMA (416): present → absent
Clade C	a2 C1 translucent lamina (405): absent → present
<i>Aysenoides parvus</i>	Ocular area black (11): absent → present Number retromarginal teeth (22): three → two Cymbial conductor terminal (50): terminal → subterminal Preening comb (176): absent → present a2 C1 apex close to MA (406): absent → present

.....continued on the next page

TABLE 2. (Continued)

<i>Aysenoides terricola</i>	Anterior eye row (13): recurved → straight Spine metatarsus I v x-p1-x (146): absent → present Spine metatarsus I v x-r1-x (147): absent → present Spine tibia II p x-1 (158): present → absent Spine metatarsus III d x-p1-x (183): present → absent Spine metatarsus IV d x-x-p1 (204): present → absent
<i>Aysenoides colecole</i>	Ocular area black (11): absent → present Ratio AME/ALE (18): AME=ALE → AME<ALE Male chelicerae (19): smaller → strong Preening comb (176): absent → present
<i>Aysenoides nahuel</i>	Male chelicerae (19): smaller → strong Palpal claw blunt (33): absent → present Scopulae on anterior tibiae (35): present → absent a2 C1 connected to rPMA (397): unconnected → connected
<i>Aysenoides simoi</i> sp. n.	PMA cusps additional to pPMA-rPMA (three or more total) (70): absent → present Membranous area on rPMA base (74): absent → present
<i>Aysenia</i>	Spine tibia III v x-p1-x (168): present → absent Spine metatarsus III r x-1-x (181): present → absent a2 C2 size (372): well defined → small
Clade D	PMA cusps additional to pPMA-rPMA (three or more total) (70): absent → present Spine metatarsus IV v x-r1-x (196): present → absent
Clade E	Shape of MA (67): thick → slender Spine tibia II p x-1 (158): present → absent Spine tibia III v x-x-r1 (171): present → absent Spine metatarsus III p x-x-1 (179): present → absent Spine metatarsus IV r x-x-1 (202): present → absent
Clade F	Spine tibia II v x-x-p1 (156): present → absent Spine tibia II v x-x-r1 (157): present → absent Spine metatarsus III p x-1-x (178): present → absent Spine metatarsus III r x-x-1 (182): present → absent Spine metatarsus III d x-x-p1 (184): present → absent Spine metatarsus III d x-x-r1 (185): present → absent Spine metatarsus IV p x-1-x (198): present → absent
Clade G	Depressions on LL (118): absent → present Spine tibia I v p 1-x-x (139): present → absent Spine tibia I v r 1-x-x (140): present → absent Spine tibia I v x-r1-x (143): present → absent Spines metatarsus I v 2bas (145): present → absent Spine metatarsus I v x-p1-x (146): absent → present Spine tibia II v x-r1-x (155): present → absent Spine metatarsus II p x-1-x (160): present → absent Spine metatarsus IV d x-x-r1 (205): present → absent Spine tibia IV p v thick group (444): absent → present
Clade H	Carapace <i>Amaurobioides</i> like (9): absent → present
Clade I	Embolus very long (101): normal → very long CD wrapped (123): absent → present
Clade J	Spine metatarsus IV d x-p1-x (203): absent → present
<i>Aysenia cylindrica</i>	Spine metatarsus III d x-x-r1 (185): present → absent
<i>Aysenia grismadoi</i>	Spine metatarsus I v x-r1-x (147): absent → present Spine metatarsus III v x-r1-x (174): absent → present
<i>Aysenia elongata</i>	Anterior eye row (13): recurved → procurved or straight Tibia I sinuous (30): absent → present Spines tibia I v ap (144): 2ap → 0ap Spines metatarsus III and IV v ap (175): 2 → 1 Preening comb (176): absent → present

TABLE 2. (Continued)

<i>Aysenia izquierdoi</i>	CD wrapped (123): absent → present Spine tibia IV v p1-x-x (187): present → absent Spine tibia IV v x-p1-x (189): present → absent
<i>Aysenia huayun</i>	Posterior eye row (14): recurved → procurved or straight Ratio AME/ALE (17): AME<ALE → AME=ALE Scopulae on posterior tibiae (36): absent → present Spine metatarsus II p d1-x-x (159): absent → present Spines tibia III and IV displaced ventral (165): absent → present Spine tibia III v x-r1-x (169): absent → present Retromarginal distal teeth (445): similar to others → compressed, near fang articulation
<i>Aysenia barrigai</i>	No autapomorphies
<i>Aysenia segestrioides</i>	CD extremely wrapped (124): absent → present FD advanced (133): absent → present Spine metatarsus III p x-x-1 (179): present → absent Spine metatarsus IV d x-x-p1 (204): present → absent
<i>Aysenia araucana</i>	No autapomorphies
<i>Aysenia paposo</i> sp. n.	Spine metatarsus III v x-r1-x (174): absent → present

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