

Description of the male of *Cybaeodamus lycosoides* (Nicolet), with new distributional data for *C. meridionalis* Lise, Ott & Rodrigues (Araneae, Zodariidae)

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Abstract: The male of the Chilean zodariid spider *Cybaeodamus lycosoides* (Nicolet, 1849) is described and illustrated for the first time. New records for this species are provided, including the first from Peru, as also new localities from Argentina for *C. meridionalis* Lise, Ott & Rodrigues.

Keywords: Spiders, taxonomy, Chile, Peru, Argentina, new records.

Resumen: El macho de la araña zodariida chilena *Cybaeodamus lycosoides* (Nicolet, 1849) se describe e ilustra por primera vez. Se aportan nuevos registros para esta especie, incluyendo los primeros para Perú, como también nuevas localidades de Argentina para *C. meridionalis* Lise, Ott & Rodrigues, 2009.

Palabras clave: Arañas, taxonomía, Chile, Perú, Argentina, nuevos registros.

INTRODUCTION

The genus *Cybaeodamus* Mello-Leitão, 1938 currently includes eight valid species (World Spider Catalog, 2015) distributed in South America, from northeastern Brazil to southern Argentina. The genus was recently reviewed by Lise *et al.* (2009), who described four new species: *C. meridionalis*, from Brazil and Argentina; *C. taim*, from Brazil, Argentina and Uruguay, and *C. brescoviti* and *C. tocantins*, from Brazil. Moreover, Dankittipakul *et al.* (2012) transferred *Storena lentiginosa* Simon to *Cybaeodamus*.

Males of this genus are recognized by the presence of two tegular apophyses on the male palpus (distal and lateral) of which the distal one is large and complex; females have a large epigynum with a strongly sclerotized area at the sides; the chelicerae of both sexes are densely setose.

The only species known from Chile is *Cybaeodamus lycosoides* (Nicolet, 1849), known only by the female, and without specific locality data. In recent times, this species was collected during arthropod inventories made in different areas in the coastal desert from North-Central Chile and Central-South Peru. Among that material, several males were found, which allow us to describe them for the first time. We also we

provide new distributional data from Argentina for the species *C. meridionalis* Lise, Ott & Rodrigues, 2009.

MATERIAL AND METHODS

The material examined is deposited in the arachnological collections of the following: Museo Argentino de Ciencias Naturales, Buenos Aires (MACN-Ar, C. L. Scioscia), Muséum National d'Histoire Naturelle, Paris (MNHN, C. Rollard), and Museo de Entomología "Klaus Raven Büller" of the Universidad Nacional Agraria La Molina, Lima (MEKRB, M. Deza). Photographs of the preserved specimens were taken with a digital camera Leica DFC 290 mounted on a stereomicroscope Leica M165 C, and the focal planes were composed with Helicon Focus 4.62 Pro (www.heliconsoft.com). We report GPS coordinates of the localities when available; otherwise, we provide approximate coordinates (denoted with "ca.") calculated with Google Earth (<http://earth.google.com>) from label data. Descriptions and nomenclature of the male palp follow Lise *et al.* (2009) and Jocqué (1991). All measurements are in millimeters.

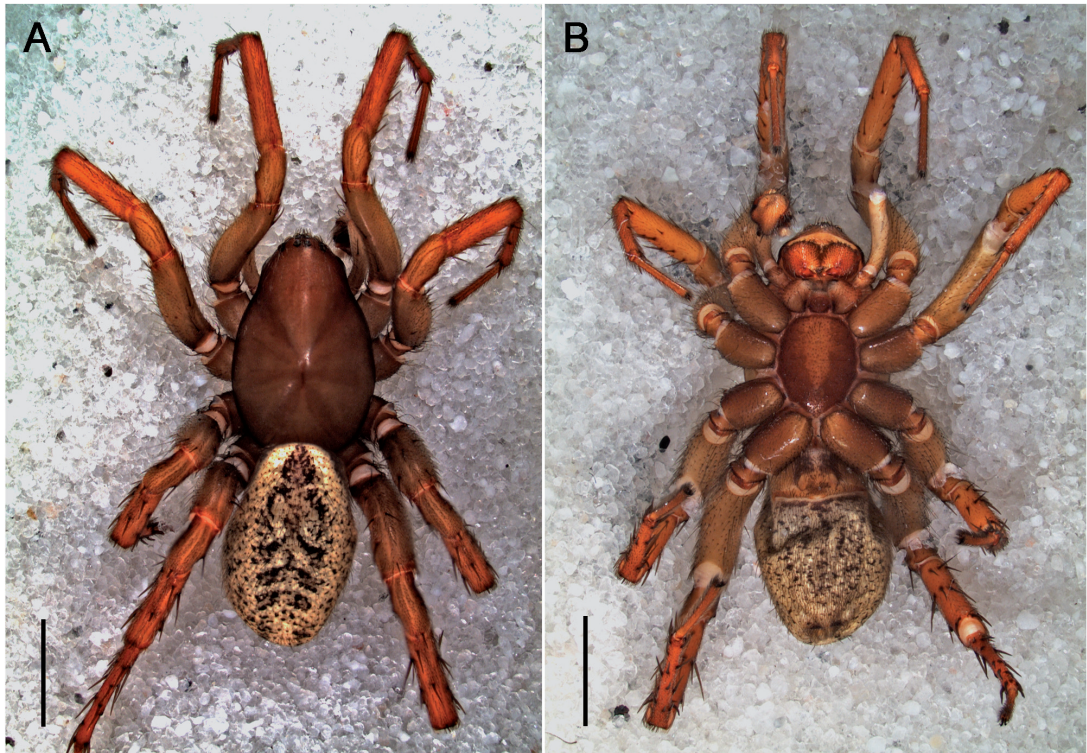


Fig. 1. *Cybaeodamus lycosoides* (Nicolet, 1849), male from Punta de Choros (MACN-Ar 17621), habitus. A, dorsal. B, ventral. Scale bars: 2.5 mm.

TAXONOMY

Family Zodariidae Thorell, 1881

Genus *Cybaeodamus* Mello-Leitão, 1938

Cybaeodamus lycosoides (Nicolet, 1849)
(Figures 1–4)

Drassus lycosoides Nicolet, 1849: 453 (female).

Storena lycosoides: Simon, 1889: 218.

Cybaeodamus lycosoides: Jocqué, 1991: 50; Lise, Ott & Rodrigues, 2009: 266, f. 48–49.

Type Material. Female holotype from “Chili”, without data (see Lise et al. 2009: 266; MNHN 9954). Examined.

Material examined. CHILE: IV Región, Coquimbo, Punta de Choros, Sitio 2, 26°70'46" S, 67°59'074" W: 2 ♀, (MACN-Ar 17620), 03.VI.2005, P. Augusto coll.; 1 ♂, (MACN-Ar 17621), 4.VI.2005, L. Espinoza coll. PERU: Dept. Lima, Prov. Lima, dist. La Molina, Univ. Nac. Agraria La Molina (pitfalls in cotton fields), S 12°06', W 76°57', 243 m: 1 ♂, (MEKRB, UA-524/2005), 10.VIII.2005, M. Deza coll.; 2 ♂, (MEKRB, UA-273/2010), II.

2010, M. Deza & J. Andía coll.; Depto. Ica, Prov. Pisco, Sector Figueroa, 10.VI.2008, J. Andía coll. 1 ♂ (asparagus fields, MEKRB).

Diagnosis. Males of *C. lycosoides* are very similar to the those of *C. ornatus* by general morphology of the palp, the cusps on coxae IV and the ventral patch of thickened setae on the abdomen, but differ by the shape of the distal tegular apophysis, with the two branches similar in size (Figs. 3A, C); the distal branch is much longer than the proximal branch in *C. ornatus*, and also by the retrolateral tibial apophysis, that bears a tiny dorsal tooth (Fig. 4A). For the female see Lise et al., 2009 (figs. 48, 49, 52, 53), and Jocqué, 1991 (fig. 87).

Male description (MACN-Ar 17621). Total length 9.98. Carapace 5.20 long, 3.40 wide, 1.67 high. Sternum 2.40 long, 1.80 wide. Carapace broadly oval, narrower at the cephalic region (Fig. 2A); general color reddish brown with dark margins; glabrous, with only a few white setae on cephalic region. Chelicerae reddish brown, densely setose (Fig. 2D). Endites subtri-

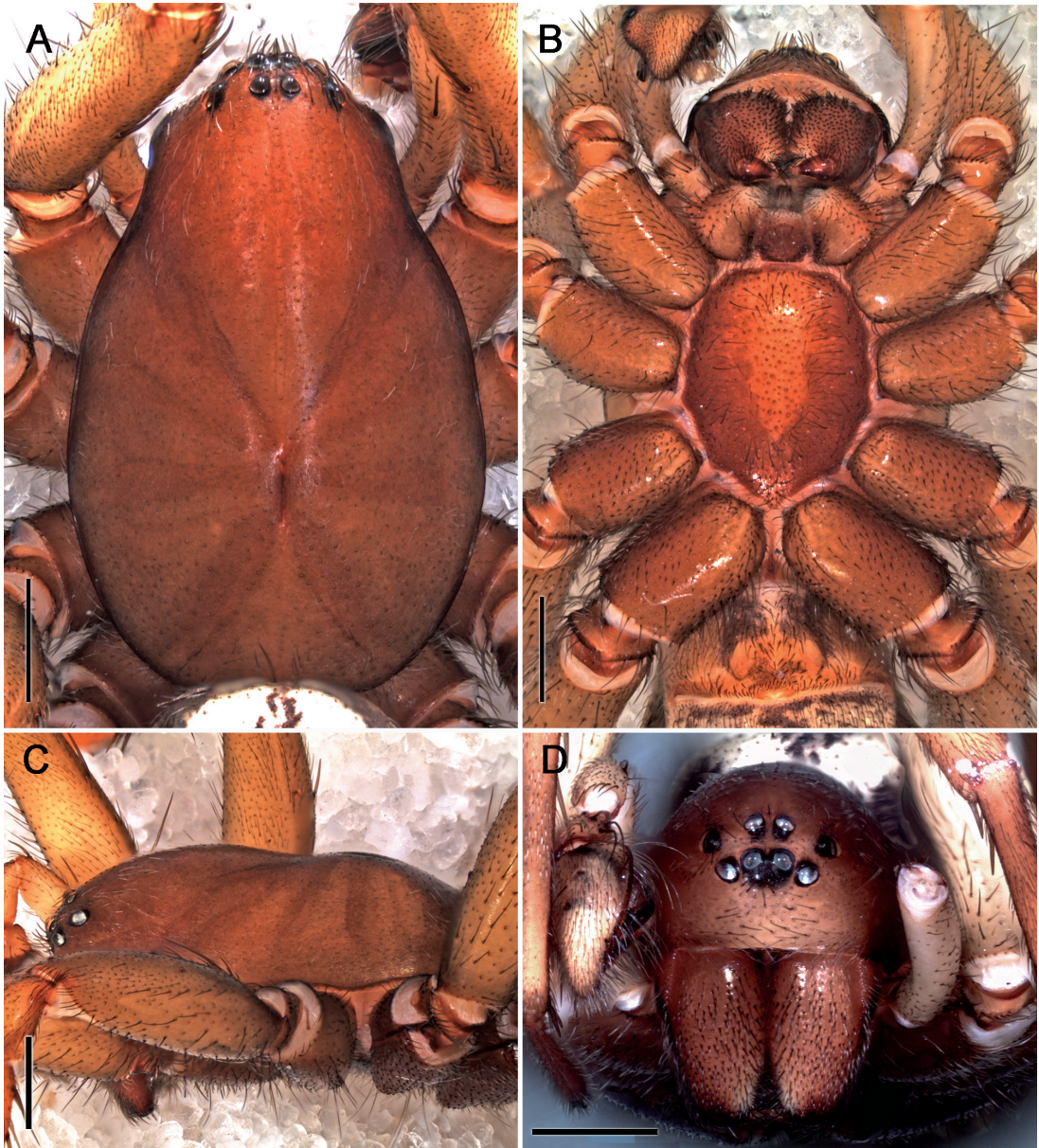


Fig. 2. *Cybaeodamus lycosoides* (Nicolet, 1849), male from Punta de Choros (MACN-Ar 17621), prosoma. A, dorsal. B, ventral. C, lateral. D, frontal. Scale bars: 1 mm.

angular, reddish brown, with whitish tip (Fig. 2B). Labium reddish brown. Sternum reddish brown with lighter central area, setae most abundant at margins (Fig. 2B). Anterior and posterior eye rows slightly procurved (Fig. 2D). Abdomen 5.07 long, 3.07 wide, 2.93 high. Color: background pale yellow with small black dots at sides and venter; the dots converge along the cardiac area in a chevron-like pattern with

a more definite dark patch on the anterior part (Fig. 1A). Legs: coxae, trochanters and femora reddish-brown, with faint longitudinal lighter stripes; distal articles orangish brown. Leg formula 4123. Measurements I/II/III/IV: femur 3.47/3.33/3.00/3.87; patella 1.40/1.40/1.33/1.53; tibia 2.73/2.07/1.87/2.80; metatarsus 2.60/2.47/2.47/3.47; tarsus 1.87/1.53/1.60/1.80. Total 12.07/10.80/10.27/13.47. Spination: femora

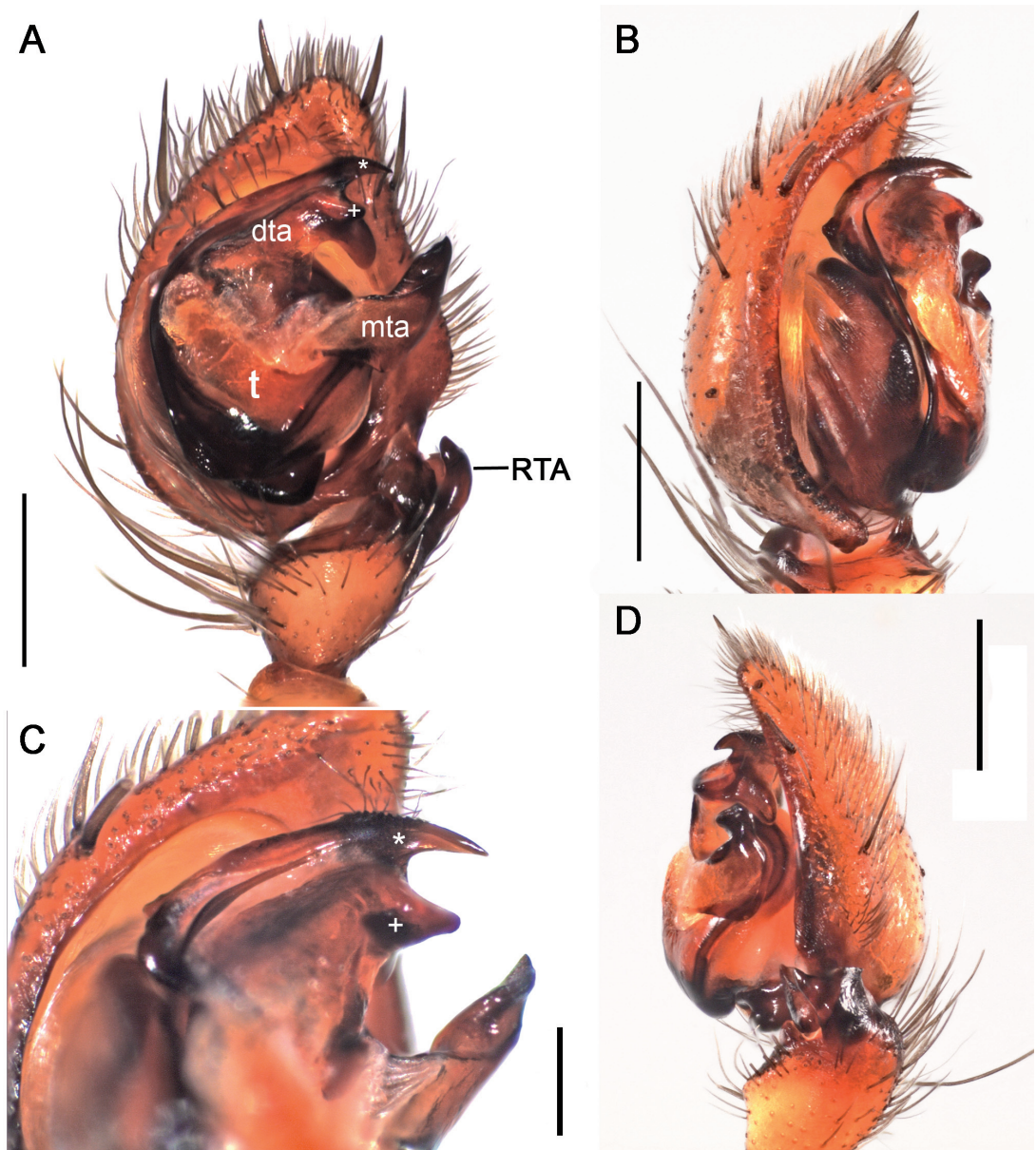


Fig. 3. *Cybaeodamus lycosoides* (Nicolet, 1849), male from Punta de Choros (MACN-Ar 17621), left palp. A, ventral. B, prolateral. C, ventral-prolateral, close-up of the distal tegular apophysis. D, retrolateral. Abbreviations: dta, distal tegular apophysis; mta, median tegular apophysis; t, tegulum. Scale bars: 7-8, 10: 0.5 mm; 9: 0.2 mm.

I-II d1-1 pl1 III-IV d8; patellae III-IV rl1; tibiae I v8 pl2-2-1 II v8 III v2-2-2 pl2-2-1 rl0-1-1 d1-1-1 IV v2-2-2 pl1-1-1-1 rl3 d1-1-1; metatarsi I v2-1-2-2 II v2-2-1-2 III 18 dispersed, IV 25 dispersed. Variation: femora IV d7 (in the same specimen).

Variation. Males (5). Total length: 9.98 – 12.64; carapace: 5.00 – 6.13 (specimens from Peru are larger).

Natural history. *Cybaeodamus lycosoides* inhabits primarily under stones and logs, in arid areas: transitional coastal desert in Chile, and coastal valleys and Loma-vegetation in Peru. In both countries, this species was also found associated with agroecosystems (Alcayaga *et al.*, 2013).

Distribution. Pacific coast of Chile (Coquimbo and Atacama) and Peru (Lima and Ica).

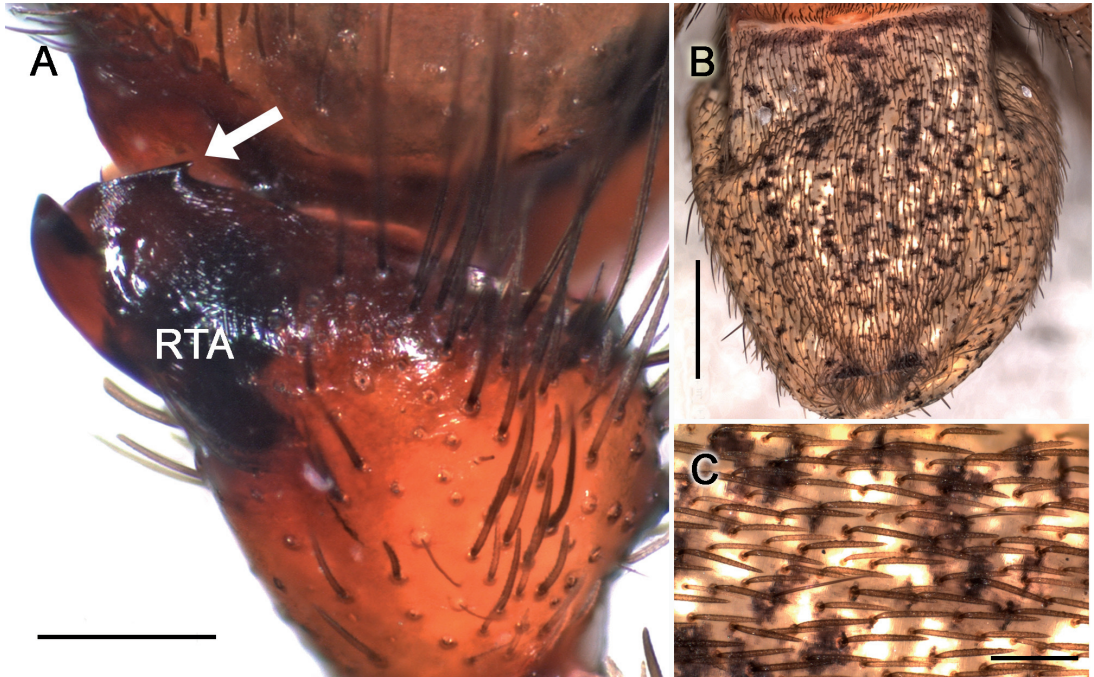


Fig. 4. *Cybaeodamus lycosoides* (Nicolet, 1849), male from Punta de Choros (MACN-Ar 17621). A, left palp RTA, dorsal-retrolateral (arrow to the tiny tooth). B, abdomen, ventral. C, Detail of ventral patch of thickened setae. Scale bars: 11, 13: 0.2 mm; 12, 1 mm.

Cybaeodamus meridionalis Lise, Ott & Rodrigues, 2009
(Fig. 5)

Cybaeodamus meridionalis Lise, Ott & Rodrigues, 2009: 260, f. 1-20

Type locality: BRAZIL, Rio Grande do Sul: Xangrilá.

New records. ARGENTINA: **Corrientes:** San Cayetano: Estación Biológica de Corrientes (EBCo), S 27° 33'00.9", W 58° 40'41.3", elev. 62 m, 11–16.XI.2007, savanna with *Trithrinax* palms, pitfall, C. Grismado & L. Compagnucci coll., 2♂ (MACN-Ar 13184, preparations CJG 1484, 3003). **Santa Fe:** San Justo: Ruta Nac. 11, 9 km S Videla, S 31.025681° W 60.701673° (GPS, +10m), elev. 44 m (GPS), 19.III.2014, grassland, hand collecting, M. Ramírez, C. Grismado, L. Piacentini & M. González Márquez coll. (MJR-Loc-158) 1 ♀, (MACN-Ar 31354; photos MJR 45-53, tissue sample preparation CJG-3315); Calchaquí: Laguna El Cristal (ca. S 30° 01' W 60° 06'), 7.XII.2010, pitfall, I. Ortega Insaurralde et al. coll. 1 ♂, 2♀; (MACN-Ar 27476). **Entre Ríos:** Paraná: La Picada, S 31° 40' W 60° 11', I-IV.2004,

soybean and edges with spontaneous vegetation, pitfall, F. Weyland coll., 1♂ (MACN-Ar 33553); Colón: Parque Nacional El Palmar (ca. S 31° 52' W 58° 18'), 22–23.XI.2003, grassland with *Butia yatay* palms, pitfall, C. Grismado, A. Ojanguren & F. Labarque coll., 2♂, 1♀, 3 immatures (MACN-Ar 33554); Parque Nacional Predelta, "Campo Sarmiento", 6 km S Diamante, S 32.12182° W 60.62525° (GPS, +100m), elev. 39m, 30.IV.2013, grassland at sides of "Chilcal", hand collecting, M. Ramírez, L. Piacentini, M. González Márquez, A. Laborda & S. Aisen coll. (MJR-Loc-141), 1 sub-adult ♂ (MACN-Ar 30814).

Natural history. The Argentine specimens here listed were collected in areas belonging to the Chaco Biogeographic Province (records from Corrientes) and to the northern, ecotonal areas of the Pampean Biogeographic province (*sensu* Morrone, 2014) bordering with the former. They were found in habitats ranging from savannas and grasslands with different palm species to cultivated, disturbed areas. Most of the specimens were obtained with pitfall traps, but the female from San Justo, Santa Fe (Fig. 5) was found by manual searching the bases of grasses in an area with a mixture of natural and adventitious

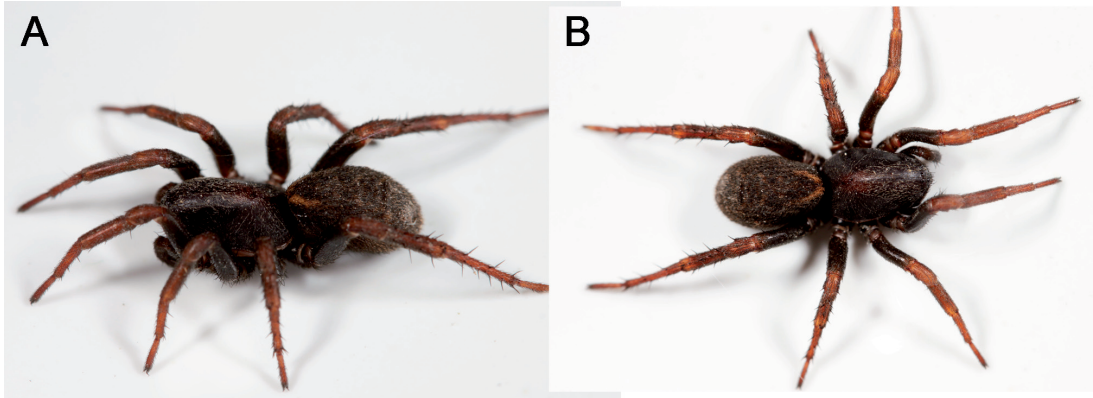


Fig. 5. *Cybaeodamus meridionalis* Lise, Ott & Rodrigues, 2009. Living female from San Justo, Santa Fe. A, lateral view, B, dorsal view (photos: Martín J. Ramírez).

vegetation along the roadside. The female from Parque Nacional El Palmar shows the distal part of a male embolus inserted into the epigynum .

CONCLUSIONS

The male of the Chilean zodariid spider *Cybaeodamus lycosoides* is described for the first time, and new records are provided, including the first one from Peru. In addition, we provide new localities for the species *Cybaeodamus meridionalis*, previously known from the Brazilian states of Rio Grande do Sul, Distrito Federal, Minas Gerais, São Paulo, Santa Catarina, and Mato Grosso do Sul, and the provinces of Jujuy and Salta, in northwestern Argentina (Lise *et al.* 2009). These new records allow us to extend the known range of the latter species to central-eastern Argentina (Corrientes, Santa Fe, and Entre Ríos provinces). A few ecological data are provided for both species, suggesting a relatively wide range of habitat preferences, including some type of tolerance to disturbed, cultivated areas.

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of Argentina (APN), the Dirección de Recursos Naturales, Subdirección de Fauna y Flora de la Provincia de Corrientes, and the Subsecretaría de Recursos Naturales, Secretaría de Medio Ambiente de la Provincia de Santa Fe. This study was supported by a grant from ANPCyT PICT 2011-1007 to Martín Ramírez.

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