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# The genus Grammostola Simon 1892 (Araneae: Theraphosidae): a new species from western Argentina, new synonymy and distributional data

Nelson Ferretti[a], Gabriel Pompozzi[b], Alda González[a] & Fernando Pérez-Miles[c]

[a] Centro de Estudios Parasitológicos y de Vectores CEPAVE (CCT-CONICET- La Plata) (UNLP), La Plata, Argentina

[b] Dpto. de Biología, Bioquímica y Farmacia, Universidad Nacional del Sur, Bahía Blanca, Argentina

[c] Facultad de Ciencias, Sección Entomología, Montevideo, Uruguay

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# The genus *Grammostola* Simon 1892 (Araneae: Theraphosidae): a new species from western Argentina, new synonymy and distributional data

Nelson Ferretti[a]*, Gabriel Pompozzi[b], Alda González[a] and Fernando Pérez-Miles[c]

[a]*Centro de Estudios Parasitológicos y de Vectores CEPAVE (CCT- CONICET- La Plata) (UNLP), La Plata, Argentina;* [b]*Dpto. de Biología, Bioquímica y Farmacia, Universidad Nacional del Sur, Bahía Blanca, Argentina;* [c]*Facultad de Ciencias, Sección Entomología, Montevideo, Uruguay*

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*Grammostola diminuta* sp. nov. (Araneae: Theraphosidae) is described from northwestern Argentina; *Grammostola vachoni* Schiapelli and Gerschman 1961 is considered a senior synonym of *Grammostola fossor* syn. nov. Schmidt 2001 on the basis of material examined from the collection of the Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" (MACN-Ar). The geographic distribution of *G. vachoni* is extended on the basis of new records. Additionally, we present new diagnoses and new distributional data for *Grammostola chalcothrix* Chamberlin 1917, *Grammostola inermis* Mello-Leitão, 1941 and *Grammostola pulchripes* (Simon 1891).

http://www.zoobank.org/urn:lsid:zoobank.org:act:D9D0702F-1317-420B-BBFF-890104A66998

**Keywords:** tarantulas; neotropical; Taxonomy; geographic distribution



## Introduction

Theraphosid spiders currently comprise 121 genera and 939 species (Platnick 2012) and so form the most speciose family of Mygalomorphae, as well as including the largest spiders ever described. The subfamily Theraphosinae is endemic of the New World and has the highest species richness of the family. The genus *Grammostola* Simon 1892 inhabits temperate South America and currently includes 20 species described from Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay (Platnick 2012). This genus represents a taxonomic challenge despite some recent publications (Schmidt 1994a, 1999, 2001; Ferretti et al. 2011).

Schmidt (2001) described *Grammostola fossor* Schmidt 2001 as a new fossorial species from Río Negro Province, Argentina on the basis of male and female specimens collected in 1998 from Cerro Colorado, Sierra Colorada. This locality is approximately 150 km from where *Grammostola vachoni* Schiapelli and Gerschman 1961 is distributed (Ferretti et al. 2011). In a recent study of specimens from the Museo Argentino de Ciencias Naturales Bernardino Rivadavia (MACN-Ar) collection, we compared specimens of *Grammostola* from southern Argentina with the types of *Grammostola vachoni* and *Grammostola fossor*. Here, we propose a new synonymy between *G. vachoni* and

*Corresponding author. Email: nferretti@conicet.gov.ar

*G. fossor* and present new distributional data for *G. vachoni* in Argentina. We also found specimens of *Grammostola* from northwestern Argentina that did not fit with any species currently described in this genus. They are described herein as a new species, *Grammostola diminuta* sp. nov. The distribution records of some species of *Grammostola* in Argentina are doubtful or unknown because the only distributional data known for some species is based on their type localities (Chamberlin 1917; Mello-Leitão 1941; Schiapelli and Gerschman 1961). Additionally, some of these distribution records involve widespread areas (e.g countries or even continents) without information about specific points (Simon 1897; Schiapelli and Gerschman 1961; Schmidt and Bullmer 2001). Furthermore, we present new distributional data for *Grammostola chalcothrix* Chamberlin 1917, *Grammostola inermis* Mello-Leitão 1941 and *Grammostola pulchripes* (Simon 1891).



## Material and methods

Abbreviations: ALE = anterior lateral eyes, AME = anterior median eyes, D = dorsal, MACN-Ar = Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Argentina, MCZ = Museum of Comparative Zoology, Harvard University, United States, MLP = Museo de La Plata, Argentina, MNHN = Muséum National d'Histoire Naturelle, Paris, France, P = prolateral, PB = prolateral branch of tibial apophysis, PI = prolateral inferior keel, PLE = posterior lateral eyes, PME = posterior median eyes, PS = prolateral superior keel, R = retrolateral, RB = retrolateral branch of tibial apophysis, SMF = Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt-am-Main, Germany, V = ventral.

Spine notation follows Petrunkevitch (1925). Palpal bulb structure classification follows Bertani (2000). Classification of urticating hairs follows Cooke et al. (1972). All measurements are given in millimetres and were made with digital dial callipers with an error of 0.01 mm, rounded up to one significant decimal where appropriate and an Olympus stereoscopic microscope equipped with a calibrated ocular micrometer scale. Error factors are given as standard deviations (SD). Photographs of preserved material were taken with a NIKON Coolpix p5100. The geographic coordinates for specimens from museum collections were determined using the Global Gazetteer (Falling Rains Genomics, www.fallingrain.com) and a gazetteer extension from Argentina implemented in DIVA-GIS 7.4 (Hijmans et al. 2011). Distribution maps were made using GLOBAL MAPPER ver. 11.0 (www.globalmapper.com).

## Taxonomy

### ***Grammostola*** Simon 1892

*Sorata* Strand 1907. Considered a junior synonym by Raven 1985: 159.

*Lasiopelma* Simon 1892. Considered a junior synonym by Schmidt 1994b: 5, against Raven 1985.

*Polyspinosa* Schmidt 1999: 14. Replacement name for *Polyspina* Schmidt 1994a: 3, type (by monotypy) *P. schulzei* Schmidt 1994a, preoccupied. Considered a junior synonym by Bertani and Fukushima 2004: 330.

*Type species: Eurypelma pulchripes* Simon 1891.

***Grammostola diminuta*** sp. nov.
(Figures 1, 2, Tables 1, 2)

*Type material*

Holotype: male: ARGENTINA: Ascha, Aimogasta, La Rioja, Julián Caceres Freyre leg., March 1947 (MACN-Ar 30311). Paratype female: ARGENTINA: Aimogasta, La Rioja, Julián Caceres leg., 29 April 1945 (MACN-Ar 30312).

*Other material examined*

ARGENTINA: Catamarca Province: 1 ♀, Catamarca, 11 December 1943, no collector data (MACN-Ar 30316); 1 ♀, same locality, 11 December 1943, no collector

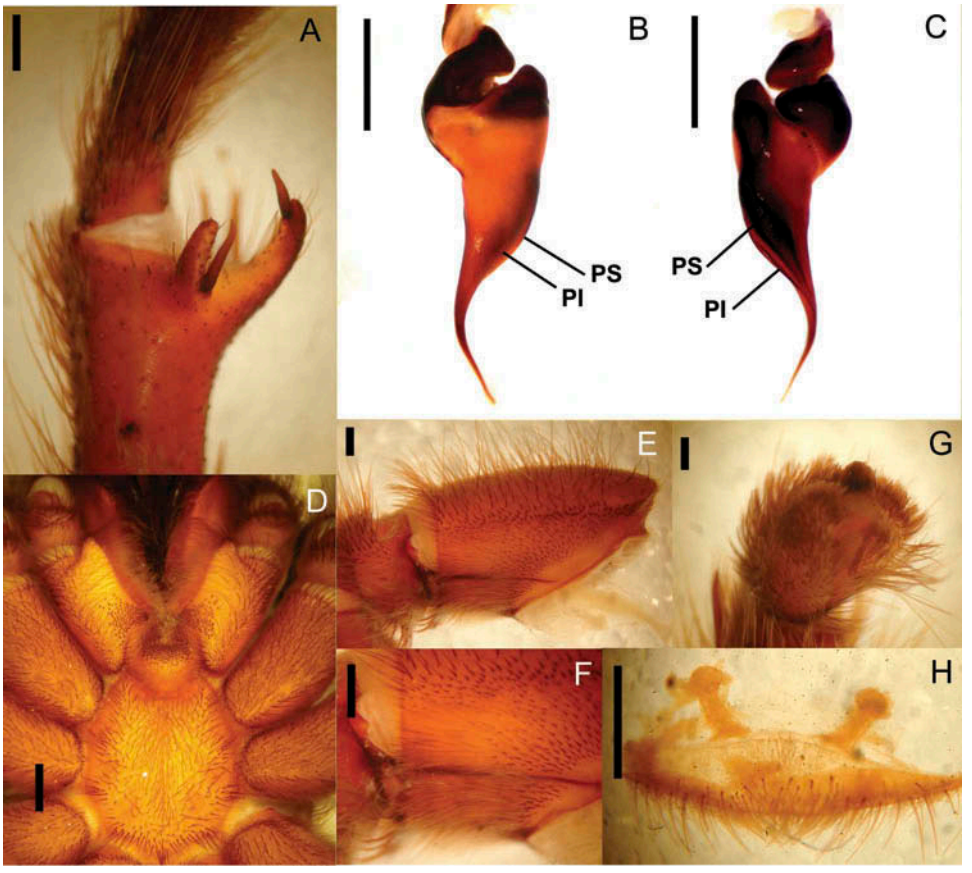


Figure 1. *Grammostola diminuta* sp. nov., male (A–G). (A) Tibial apophysis; (B) palpal bulb, retrolateral; (C) palpal bulb, prolateral; (D) sternum, ventral view; (E) prolateral face of coxa I; (F) prolateral face of coxa I, close up to the stridulatory setae; (G) palp, prolateral view. *Grammostola diminuta* sp. nov., female. (H) Spermathecae, dorsal view. PS = prolateral superior keel, PI = prolateral inferior keel. Scale bars = 1 mm.

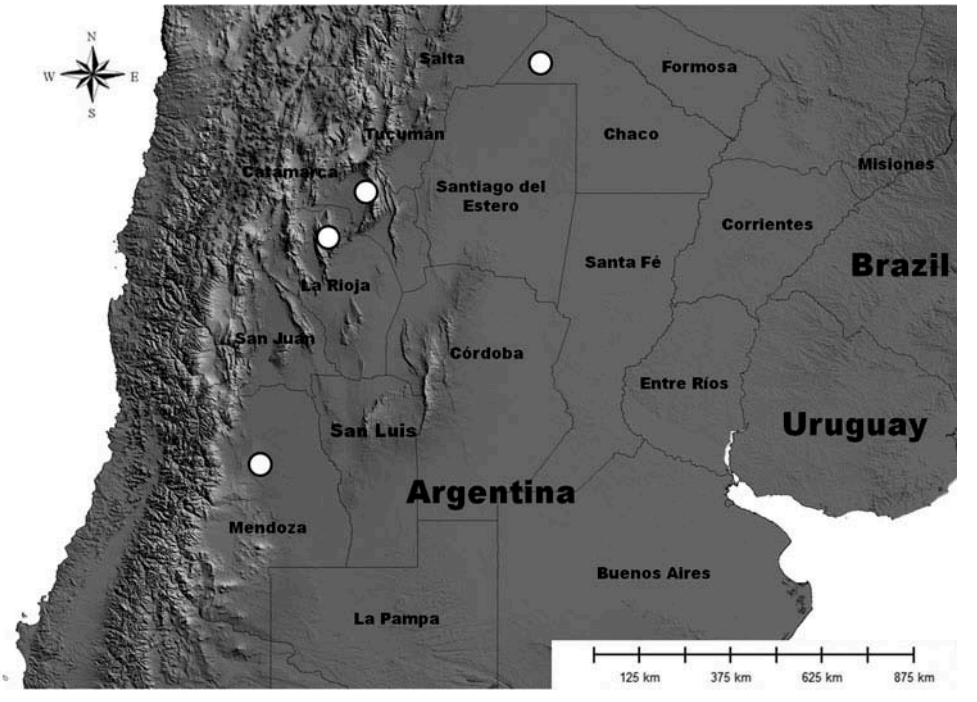


Figure 2. Distribution map of *Grammostola diminuta* sp. nov.

data (MACN-Ar 30316); 1 ♂, same locality, 1946, Schaefer leg., (MACN-Ar 30317). Chaco Province: 1 ♂, 1949, Cramwell leg. (MACN-Ar 2837); 1 ♂, 1949, Cramwell leg. (MACN-Ar 2837); 1 ♂, 1949, Cranwell leg. (MACN-Ar 2837). La Rioja Province: 1 ♂, Ascha, Aimogasta, March 1947, Julian Cáceres Freyre leg. (MACN-Ar 2208); 2 ♂, same locality, 1949, J. Cramwell leg. (MACN-Ar 30315); 2 ♂, Aimogasta, 29 September 1945, Julian Cáceres Freyre leg. (MACN-Ar 30313); 1 ♂, Finca Ascha, Sierra Velasco, Aimogasta, no date, Julian Cáceres Freyre legs. (MACN-Ar 30314). Mendoza Province: 1 ♂, Ñacuñan, 12 September 1975, Arturo Roig Alsina leg. (MACN-Ar 30318).

*Etymology*

The specific epithet is an adjective that in Spanish means "very small", considering that this is the smallest known species of *Grammostola*.

*Diagnosis*

This species differs from other species of *Grammostola* by its small size, about 25 mm of body length (excluding chelicerae and spinnerets). Males can be recognized from all *Grammostola* species by a small bristle of erected and stiff setae at the palpal tarsi (Figure 1G). Additionally, it differs from *G. burzaquensis* by the absence of the smooth setae on the prolateral and retrolateral aspects of legs and retrolateral palpal maxillae,

and by the presence of curved spermathecal receptacles (Ferretti et al. 2011). It can be distinguished from *G. vachoni* by its small size, the shape of the palpal bulb and the absence of the stiff spiniform setae on the prolateral and retrolateral aspects of legs and retrolateral palpal maxillae. It differs from *G. inermis* Mello-Leitão, 1941 by its small size, the shape of the palpal bulb and the shape of the spermathecae with curved receptacles (Schiapelli and Gerschman 1961).

*Description*

*Male holotype:* colour (in alcohol): carapace and legs light brown, abdomen dark brown. Total length, not including chelicerae or spinnerets 23.7. Cephalothorax 11.1 long, 10.6 wide. Anterior eyes row procurved, posterior row recurved. Eye sizes and inter-distances: AME 0.22, ALE 0.28, PME 0.15, PLE 0.20, AME–AME 0.37, AME–ALE 0.15, PME–PME 0.70, PME–PLE 0.05, ALE– PLE 0.16. Eye tubercle: length 1.1, width 1.5; clypeus 0.6. Fovea: deep straight, 2.0 long. Labium: length 1.5, width 1.8, with approximately 104 cuspules, although cuticular holes indicate 116 originally. Maxillae: each with approximately 127 cuspules spread over internal face. Sternum: length 5.1, width 4.7 (Figure 1D).

Chelicerae with seven large teeth on promargin and three small teeth on retromargin. Long spiniform setae on prolateral, retrolateral coxal faces of legs I–IV, retrolateral palpal maxillae (Figure 1E, F). Tarsi I–IV fully scopulate. Metatarsi I scopulate on three-quarters, metatarsi II scopulate on apical half, metatarsi III scopulate on one-third, metatarsi IV scopulate on apical quarter. Urticating hair types III and IV present.

*Spination.* Femora and Patellae of I–IV and palp, 0. Tibiae: palp 1-2-1-2 P, 1 V; I 1-1-2-2 P, 1–1 R, 2 V; II 1-1-1 P, 1–1 R, 1-2-1 V; III 1-1-1-1 P, 1–1 R, 2–1 V; IV 1-1-1 P, 1–1 R, 1 V. Metatarsi: I 1-1-1 V, 1 R; II 1–1 P, 1 R, 1–1 V; III 1-2-1-1 P, 1–2 R, 1–1 V; IV 1-1-1-1-1-1 R, 1-1-1-1 P, 1-1-1 V. Tarsi I–IV, palps 0.

Tibia I with ventral apophysis, the PB bearing a long stiff black thorn on inner side, slightly curved at tip and longer than the spur, RB with a long spine subapically (Figure 1A). Length of legs and palpal segments in Table 1. Male palpal bulb pyriform with PI and PS developed, curved and long embolus, bent at the mid-portion (Figure 1B, C).

*Female paratype:* colour (in alcohol): same as in male. Total length, not including chelicerae or spinnerets 27.9. Cephalothorax 13.3 long, 12.4 wide. Anterior eyes row procurved, posterior row recurved. Eye sizes and inter-distances: AME 0.39,

Table 1. Length of leg and palpal segments of male *Grammostola diminuta* sp. nov.

| | I | II | III | IV | Palp |
|---|---|---|---|---|---|
| Fe | 11.7 | 10.0 | 10.3 | 11.7 | 6.5 |
| Pa | 4.2 | 5.3 | 4.2 | 4.4 | 3.3 |
| Ti | 10.9 | 7.6 | 7.7 | 9.1 | 6.0 |
| Mt | 8.4 | 8.0 | 8.8 | 11.5 | – |
| Ta | 5.5 | 4.8 | 5.4 | 5.7 | 2.0 |
| Total | 40.7 | 35.7 | 36.8 | 42.4 | 15.8 |

Table 2. Length of leg and palpal segments of female *Grammostola diminuta* sp. nov.

| | I | II | III | IV | Palp |
|---|---|---|---|---|---|
| Fe | 7.9 | 8.2 | 6.3 | 8.3 | 6.2 |
| Pa | 3.0 | 3.5 | 3.6 | 4.1 | 2.1 |
| Ti | 5.7 | 6.2 | 4.8 | 6.6 | 4.6 |
| Mt | 4.5 | 4.6 | 5.1 | 9.0 | – |
| Ta | 3.2 | 3.9 | 3.5 | 3.5 | 4.3 |
| Total | 24.3 | 26.4 | 23.3 | 31.5 | 17.2 |



ALE 0.33, PME 0.23, PLE 0.22, AME–AME 0.35, AME–ALE 0.23, PME–PME 0.90, PME–PLE 0.07, ALE– PLE 0.08. Eye tubercle: length 1.4, width 1.8; clypeus 0.8. Fovea: deep straight, 2.0 long. Labium: length 2.0, width 2.5, with approximately 114 extant cuspules, although cuticular holes indicate 123 originally. Maxillae: each with approximately 140 cuspules spread over internal face. Sternum: length 5.0, width 4.7.

Chelicerae with five large teeth on promargin. Long spiniform setae on prolateral and retrolateral coxal faces of legs I–IV and retrolateral palpal maxillae. Tarsi I–IV fully scopulate, tarsus III divided by a row of one setae, tarsus IV divided by row of three setae. Metatarsi I fully scopulate, metatarsi II scopulate on three-quarters, metatarsi III scopulate on apical half, metatarsi scopulate on two-thirds. Length of legs and palpal segments in Table 2. Urticating hair types III and IV present.

*Spination.* Femora and patellae of I–IV and palp, 0. Tibiae: palp 2-1-1 P; I 1 V; II 1–1 V; III 1 R, 1–1 P, 1–1 V; IV 1 R, 1 P, 1 V. Metatarsi: I 1–1 V; II 1–1 R, 1 V; III 1–1 R, 1 V, 1–2 P; IV 1-2-1 R, 2-1-2 P, 1-1-1 V. Tarsi I–IV and palps 0. Two curved spermathecal receptacles (Figure 1H).

### *Variation*

Twelve males: total length 22.6–28.2 (24.85 ± 1.37); cephalothorax length 10.1–12.5 (11.73 ± 0.71); cephalothorax width 9–11.1 (10.43 ± 0.63). Three females: total length 21.3–27.9 (24.5 ± 3.30); cephalothorax length 9.2–13.3 (10.97 ± 2.11); cephalothorax width 8.4–12.4 (9.8 ± 2.25).

### *Remarks*

The size of *Grammostola* species from Argentina ranged from the small *G. burzaquensis* Ibarra-Grasso 1946 (about 32 mm of total length) to *G. pulchripes* (about 80 mm in total length), thus *G. diminuta* sp. nov. is the smallest species known of the genus.

### *Distribution*

Western Argentina along the eastern Andes (Mendoza, La Rioja and Catamarca Provinces). Also, *G. diminuta* is present in north-central Argentina (Chaco Province) (Figure 2).

***Grammostola vachoni*** Schiapelli and Gerschman 1961

*Grammostola vachoni* Schiapelli and Gerschman 1961: 204, figs 5, 6; Schmidt 2003a: 12, figs 1–3; Ferretti et al. 2011: 8, figs 3–7, 10–14, 16–17, 19, 21–22, 26–28.
*Grammostola fossor* Schmidt, 2001: 3, figs 4–7. New synonymy.

*Type material*

*Grammostola vachoni*: Holotype: male: ARGENTINA, Tandil, Buenos Aires, 26 April 1950, St. B. Andrae leg. (MACN-Ar 7152), examined. *Grammostola fossor*: Holotype: male: ARGENTINA, Río Negro (40°40′ S, 68°0′ W), Cerro Colorado, Sierra Colorada, 1998, Soraka leg. (SMF 39213), examined.

*Other material examined*

ARGENTINA: Córdoba Province: 1 ♀, Córdoba capital, January 1956, Leuget leg. (MACN-Ar 634); 1 ♂, Los Cocos, March 1956, Jacubsen leg. (MACN-Ar, without number); 1 ♂, Miramar, 12 September 1960, Salvetti leg. (MACN-Ar 111); 1 ♂, Punilla, November 1966, Martinez leg. (MACN-Ar, without number). La Rioja Province: 1 ♂, Iliar, February 1941, Gomez leg. (MACN-Ar 113); 1 ♂, La Rioja capital, December 1966, Yiboff leg. (MACN-Ar, without number); 1 ♂, Patquía, May 1966, Yiboff leg. (MACN-Ar, without number). Mendoza Province: 1 ♀, Agreló, March 1946, no leg. (MACN-Ar 828); 1 ♀, Dept. Lavalle, 3 January 1941, Willink leg. (MACN-Ar 817). San Luis Province: 1 ♂, Naschel, November 1964, Luchini leg. (MACN-Ar, without number); 1 immature, Río Quinto, Saladillo, 21 November 1964, García, Funes and Casal legs. (MACN-Ar, without number); 1 ♂, San Jerónimo, November 1973, Williner and Viana legs. (MACN-Ar, without number); 1 ♂, San Jerónimo, January 1974, Viana and Williner legs. (MACN-Ar, without number). Santiago del Estero Province: 1 ♂, Sol de Julio, no date, Campos leg. (MACN-Ar, without number). Río Negro Province: 2 ♀, Lamarque (Choele Choel), 15 December 1959, Fritz leg. (MACN-Ar, without number).

*Diagnosis*

*Grammostola vachoni* can be recognized by the following combination of characters: presence of short stiff and long spiniform setae on prolateral and retrolateral coxal aspects of legs I–III, prolateral coxae IV and retrolateral palpal maxillae; male palpal bulb pyriform with narrow bulb base, PI and PS developed, curved and long embolus, bent at the mid portion and strongly bent at the apical portion (Figure 3A, B); two short and curved spermathecal receptacles; coloration (*in vivo*) black with prominent lines on patella and numerous long yellowish setae on ventral faces of all legs (Ferretti et al. 2011) (Figure 3D).

*Remarks*

The male holotype of *G. fossor* has all characteristics of *G. vachoni*: the spurs of the tibial apophyses of the male and the palpal bulb morphology; the presence of short and long spiniform setae on prolateral and retrolateral coxal faces of legs I–III, prolateral

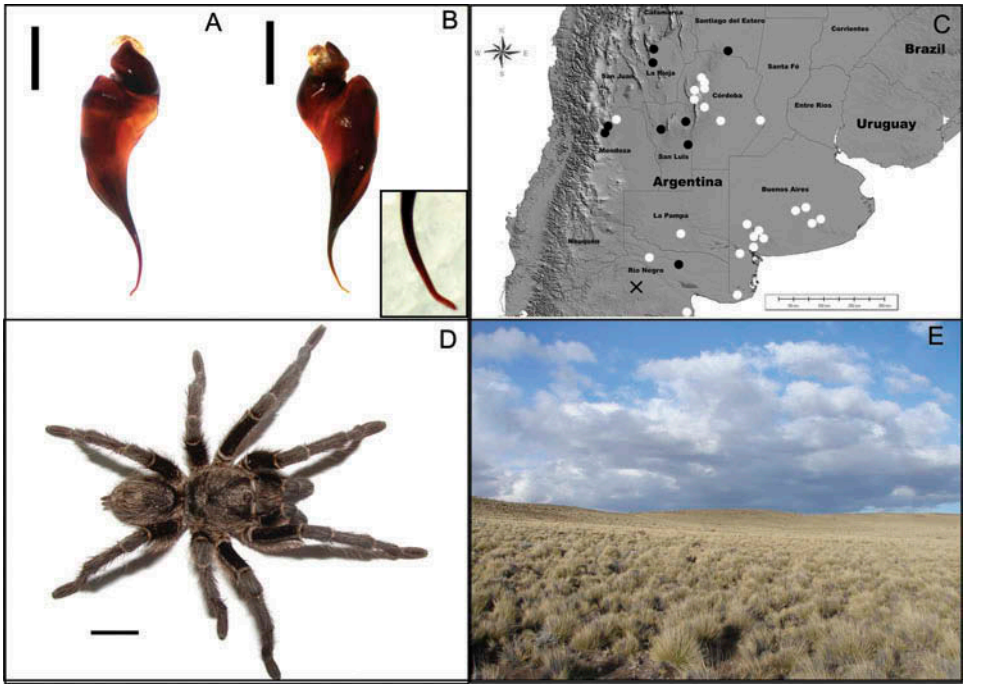


Figure 3. *Grammostola vachoni*. (A) Male (MACN-Ar 7152), palpal bulb, retrolateral; (B) male (MACN-Ar 7152), palpal bulb, prolateral; (C) distribution map; white dots = previous distributional data from Ferretti et al. (2011) and black dots = new distributional data; black cross = type locality of *Grammostola fossor*; (D) live habitus of adult male *Grammostola vachoni*. Scale bar = 1 cm. (E) Habitat of *G. vachoni* in Río Negro Province, Argentina, area next to the type locality of *G. fossor*. Photo: M. Sotelo.

coxae IV and retrolateral palpal maxillae. Hence, we decided to propose *Grammostola fossor* Schmidt 2001 as a junior synonym of *Grammostola vachoni* Schiapelli and Gerschman 1961.

*Distribution*

Previously known from mountains and southeast of Córdoba, Mendoza; in hilly systems of Ventania and Tandilia and meadows in southern Buenos Aires Province; in a hilly system of La Pampa; north and central Río Negro (Figure 3E) and northeast of Chubut (Ferretti et al. 2011). In this contribution: south of Santiago del Estero Province, where some of the mountainous system of the Sierras Pampeanas extended to this Province; mountainous systems of La Rioja Province and San Luis Province (Figure 3C).

### ***Grammostola chalcothrix*** Chamberlin 1917

*Grammostola chalcothrix* Chamberlin 1917: 46, pl. 3, figs 5–7; Schiapelli and Gerschman, 1961: 203 figs 11, 12 (removed from *G. iheringi*); Smith, 1986: 62,

fig. 86; Smith, 1987: 62, fig. 86; Peters, 2000: 133, fig. 411; Schmidt, 2003b: 165, fig. 370; Peters, 2003: 186, figs 744, 745.

*Grammostola iheringi* Bücherl 1951: 120 (subsequently rejected).

*Type material*

Holotype: male: ARGENTINA: Rosario, Davis leg., no date (MCZ 41), examined.

*Other material examined*

ARGENTINA: Chaco Province: 1 ♂, General Pinedo, 1946, Cranwell, Seria and Guidi legs. (MACN-Ar, without number). Córdoba Province: 2 ♂, Agua de Oro, March 1940, De Carlo leg. (MACN-Ar, without number); 1 ♂, Ascochinga, March 1966, J. Fernández leg. (MACN-Ar, without number); 1 ♂, Arroyito, no date, no collector data (MACN-Ar, without number); 3 ♂, Calamuchita, March 1957, Viana leg. (MACN-Ar, without number); 1 ♂, Córdoba, January 1956, Leuget leg. (MACN-Ar, without number); 1 ♂, same locality, January 1997, no collector data (MACN-Ar, without number); 1 ♂, General Deheza, 22 October 1961, no collector data (MACN-Ar, without number); 1 ♂, Laguna de Pocho, 2 February 1943, no collector data (MACN-Ar); 1 ♂, Los Cocos, September 2007, Rumboll leg. (MACN-Ar, without number); 2 ♂, Lucio Mansilla, 12 November 1959, no collector data (MACN-Ar, without number); 1 ♂, Miramar, 23 September 1959, Salvetti leg. (MACN-Ar, without number); 1 ♂, Villa Carlos Paz, March 1958, Ruano leg. (MACN-Ar, without number); 1 ♂, Virgilio, 18 September 1950, no collector data (MACN-Ar, without number). La Rioja Province: 1 ♂, La Rioja, December 1966, Yiboff leg. (MACN-Ar, without number); 1 ♂, same locality, 1971, no collector data (MACN-Ar, without number). San Juan Province: 1 ♂, Valle Fértil, February 1973, Williner and Viana legs. (MACN-Ar without number). Santa Fé Province: 2 ♂, El Nochero, 31 September 1962, no collector data (MACN-Ar, without number); 1 ♂, Las Rosas, November 1966, Napp leg. (MACN-Ar without number). Santiago del Estero Province: 2 ♂, Campo Gallo, December 1940, Ávalos leg. (MACN-Ar without number); 6 ♂, Santiago del Estero, no date, Gómez leg. (MACN-Ar, without number); 1 ♂, same locality, 2 April 1936, D. Sessim leg. (MACN-Ar, without number); 1 ♀, same locality, 2 August 1973, Yiboff leg. (MACN-Ar, without number); 2 ♂, Colonia Dora, Decemeber 1940, Birabén leg. (MACN-Ar without number); 1 ♂, La Puerta, September 1945, Jiménez leg. (MACN-Ar, without number); 1 ♂, Los Juríes, December 1940, Ávalos leg. (MACN-Ar without number).

*Diagnosis*

*Grammostola chalcothrix* can be recognized by the following combination of characters: presence of long spiniform setae on prolateral and retrolateral coxal aspects of legs I–III, prolateral coxae IV and retrolateral palpal maxillae; male palpal bulb pyriform with PI developed and PS well developed, slightly curved and very long embolus (Figure 4A, B); two long and curved spermathecal receptacles (Schiapelli and Gerschman 1961).

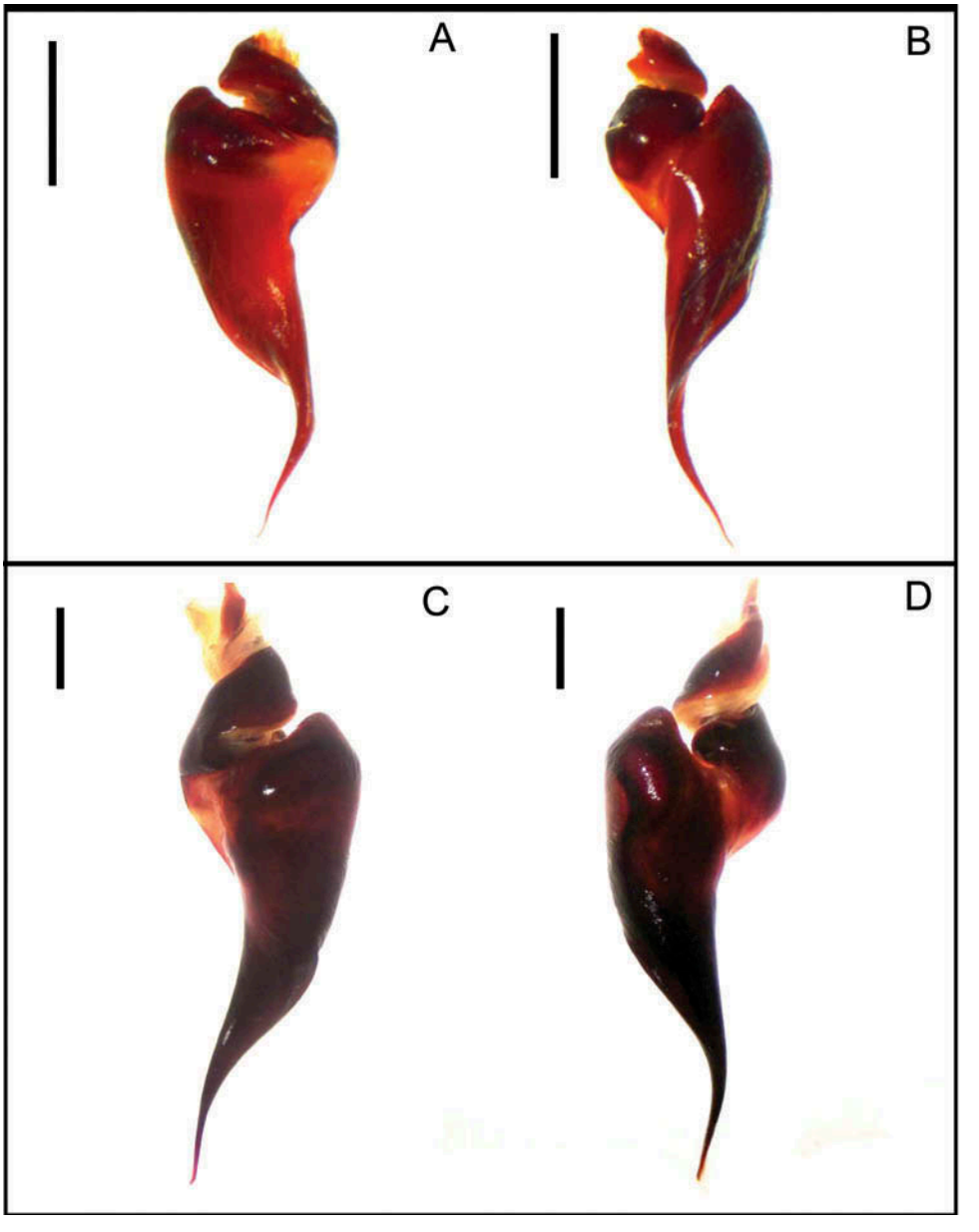


Figure 4. *Grammostola chalcothrix* (A, B): (A) Male (MCZ 41), palpal bulb, retrolateral; (B) male (MCZ 41), palpal bulb, prolateral. *Grammostola inermis* (C, D): (C) Male (MLP 14605), palpal bulb, retrolateral; (D) male (MLP 14605), palpal bulb prolateral.

*Distribution*

Previously known from Santa Fé (Rosario) and Córdoba Province with no locality data (Schiapelli and Gerschman 1961; Schmidt 1999). In this contribution (Figure 5A): southern Chaco Province, central Santiago del Estero Province, Córdoba Province

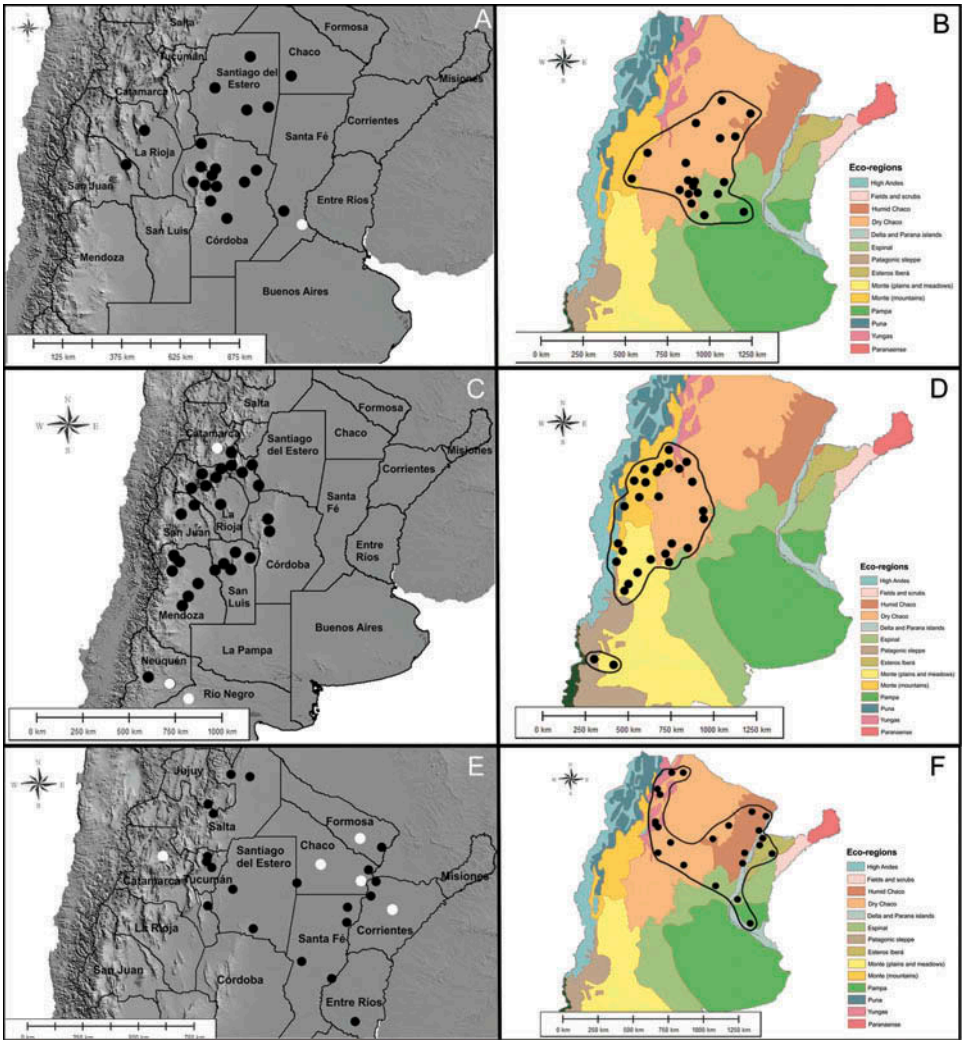


Figure 5. Distribution maps; white dots = previous distributional and black dots = new distributional data. *Grammostola chalcothrix* (A, B): (A) distributional records; (B) distribution according to the eco-regions proposed for Argentina. *Grammostola inermis* (C, D): (C) distributional records; (D) distribution according to the eco-regions proposed for Argentina. *Grammostola pulchripes* (E, F): (E) distributional records; (F) distribution according to the eco-regions proposed for Argentina.

(mountain ranges and meadows) and southern Santa Fé Province, comprising the regions of dry Chaco, Espinal and Pampa. To the west, it is also present in La Rioja and San Juan Provinces, at the limits of dry Chaco and Monte regions (Figure 5B).

### ***Grammostola inermis*** Mello-Leitão 1941

*Grammostola inermis* Mello-Leitão, 1941: 101, pl. 2, fig. 2, 2a; Schiapelli and Gerschman, 1961: 202, figs 1, 2 (restored to species); Schmidt, 2003b: 166, fig. 380.

*Grammostola australis* Gerschman and Schiapelli, 1948: 7, figs 8, 9. Consider a junior synonymy by Schiapelli and Gerschman, 1961: 202, figs 1, 2.
*Grammostola spatulata inermis*: Bücherl, 1951: 123 (reduced to subspecies).
*Grammostola spatulata australis*: Bücherl, 1951: 124 (reduced to subspecies).

*Type material*

Holotype: male: ARGENTINA: Belén, Catamarca Province, M. Birabén leg. no date (MLP 14605), examined.

*Other material examined*

ARGENTINA: Catamarca Province: 2 ♀, Andalgalá, 22 April 1972, Enders leg. (MACN-Ar, without number); 1 ♂, Portezuelo, 29 March 1959, Cei leg. (MACN-Ar, without number); 1 ♂, Recreo, no date, Cáceres leg. (MACN-Ar, without number); 1 ♂, San Fernando del Valle de Catamarca, January 1946, Schaefer leg. (MACN-Ar, without number); 1 ♂, Siján, 2 July 1960, Ahumada leg. (MACN-Ar, without number). Córdoba Province: 1 ♂, Bialet Massé, 6 March 1957, E. Bermejo leg. (MACN-Ar, without number); 1 ♂, Los Cocos, March 1956, Jacobsen leg. (MACN-Ar, without number). La Rioja Province: 1 ♂, Aimogasta, January 1958, Cáceres and Freyre legs. (MACN-Ar, without number); 1 ♂, same locality, February 1961, Cáceres leg. (MACN-Ar, without number); 1 ♂, Angúlos, March 1949, Tognen leg. (MACN-Ar, without number); 1 ♂, Anillaco, no date, Ward leg. (MACN-Ar, without number); 1 ♂, Ascha, 1958, Cranwell leg. (MACN-Ar, without number); 1 ♂, same locality, June 1958, Cáceres and Freyre legs. (MACN-Ar, without number); 1 ♂, Chilecito, February 1974, Tognen leg. (MACN-Ar, without number); 1 ♂, Cuestas de Miranda, March 1940, Cranwell leg. (MACN-Ar, without number); 1 ♂, Guayapa, April 1963, Yiboff leg. (MACN-Ar, without number); 1 ♂, Iliar, 27 September 1942, Gómez leg. (MACN-Ar, without number); 2 ♂, Patquía, February 1962, Yiboff leg. (MACN-Ar, without number); 1 ♂, same locality, April 1963, Galiano leg. (MACN-Ar, without number). Mendoza Province: 1 ♂, El Sosneado, February 1973, Williner and Viana legs. (MACN-Ar, without number); 1 ♂, Mendoza, November 1937, Viechi leg. (MACN-Ar, without number); 1 ♂, same locality, 24 March 1940, Roven leg. (MACN-Ar, without number); 4 ♂, Nihuil, January 1972, Williner and Viana legs. (MACN-Ar, without number); 1 ♂, Ñacuñan, 21 September 1975, A. Roig leg. (MACN-Ar, without number); 1 ♀, San Rafael, January 1972, Viana and Williner legs. (MACN-Ar, without number); 1 ♂, Tupungato, 12 October 1942, Obustal leg. (MACN-Ar, without number); 1 ♂, Villavicencio, January 1941, Umana leg. (MACN-Ar, without number). Neuquén Province: 2 ♂, Covunco, March 1941, Maldonado leg. (MACN-Ar, without number); 1 ♂, Cutral-Có, February 1951, Julio Pérez leg. (MACN-Ar, without number); 1 ♂, Plaza Huincul, December 1942, de Ferraris leg. (MACN-Ar, without number). San Juan Province: 1 ♂, Ischigualasto, April 1966, no collector data (MACN-Ar, without number); 1 ♂, Tucunuco, February 1973, Williner and Viana legs. (MACN-Ar, without number). San Luis Province: 1 ♂, Desaguadero, November 1947, Schiapelli leg. (MACN-Ar, without number); 1 ♂, La Vía, no date, no collector data (MACN-Ar, without number); 3 ♂, Naschel, November 1964, Luchini leg. (MACN-Ar, without number); 1 ♂, same locality, 1970, Luchini leg. (MACN-Ar, without number); 1 ♂, San Francisco, 19 October 1940, no

collector data (MACN-Ar, without number); 1 ♀, 1 ♂, San Gerónimo, February 1972, Viana leg. (MACN-Ar, without number); 2 ♂, same locality, January 1974, Viana and Williner legs. (MACN-Ar, without number); 2 ♀, San Luis, no date, no collector data (MACN-Ar, without number).

*Diagnosis*

*Grammostola inermis* can be recognized by the presence of smooth setae on prolateral and retrolateral coxal faces of legs I–IV and retrolateral palpal maxillae; PB bearing a small black thorn on inner side and a group of two to four small thorns apical, RB with a long spine subapical; male palpal bulb pyriform with narrow mid-portion of the bulb base, PI and PS weakly developed, straight and short embolus (Figure 4C, D); two long and straight spermathecal receptacles (Schiapelli and Gerschman 1961).

*Distribution*

Previously known from Catamarca (Belén) and the Argentinean Andean zone from Catamarca to Neuquén Provinces with no locality data (Schiapelli and Gerschman 1961; Schmidt 1999). In this contribution (Figure 5C): south of Catamarca Province, central La Rioja, San Juan and Mendoza Provinces; also in San Luis and Córdoba Provinces (restricted to the mountain ranges), involving the regions of Monte, dry Chaco, Puna and High Andes. To the south, is present at the Neuquén Province, in the regions of Patagonic Steppe and Monte (Figure 5D).

### ***Grammostola pulchripes*** (Simon 1891)

*Eurypelma pulchripes* Simon, 1891, fig. 311.
*Grammostola pulchripes* Simon, 1892: 163.
*Grammostola aureostriata* Schmidt and Bullmer, 2001: 173, figs 1–7; Schmidt, 2001: 5, Figures 3, 8; Peters, 2003: 184, figs 734–737; Schmidt, 2003b: 125, Figure 101; Schmidt, 2005a: 3, figs 1–2; Schmidt, 2005b: 36, figs 1–2; Peters, 2005: 62, figs 194–199. First synonymized by Gabriel, 2009: 9, pl. 2.

*Type material*

*Grammostola pulchripes*: Holotype: male: ARGENTINA: (MNHN AR 4811), not examined. *Grammostola aureostriata*: Holotype: male: PARAGUAY, ARGENTINA: October 1999, M. Baumgarten leg. (SMF, without number), not examined. Paratype: female: ARGENTINA: Chaco Province, Resistencia, March 2000, M. Baumgarten leg. (SMF, without number), not examined.

*Other material examined*

ARGENTINA: Chaco Province: 1 ♀, Avia Terai, October 1972, Espínola leg. (MACN-Ar, without number); 1 ♂, Gancedo, 3 October 1960, Cadra leg. (MACN-Ar, without number); 1 ♀, Las Palmas, July 1960, Jacobsen leg. (MACN-Ar, without

number); Corrientes Province: 1 ♂, Empedrado, 15 January 1965, Williner leg. (MACN-Ar, without number); 1 ♂, Laguna Iberá, 1946, Hanke leg. (MACN-Ar 14); 1 ♂, Puna, November 1948, Barros leg. (MACN-Ar 118); 1 ♂, San Cosme, 1937, Whurtz leg. (MACN-Ar 36). Entre Ríos Province: 2 ♂, Cantera vieja, El Palmar, 27 April 1975, Canevari, Cranwell and Ortiz legs. (MACN-Ar, without number); 1 ♂, Lazo, Gualeguay, November 1949, Bachman leg. (MACN-Ar 114); 1 ♀, Puerto Curtiembre, no date, no leg. (MACN-Ar, without number). Formosa Province: 2 ♀, 3 ♂, Formosa, Februay 1970, no collector data (MACN-Ar, without number); 1 ♂, Monte Pindó, no date, J. Esteban leg. (MACN-Ar, without number); 1 ♂, Pirané, 30 November 1938, no collector data (MACN-Ar, without number). Jujuy Province: 1 ♀, Pericó del Carmen, January 1940, no collector data (MACN-Ar, without number). Salta Province: 1 ♂, General Güemes, 21 May 1964, Canifero leg. (MACN-Ar, without number); 1 ♀, Hickman, 28 January 1947, Vellard leg. (MACN-Ar, without number); 1 immature, same locality, March 1959, Martinez leg. (MACN-Ar, without number); 1 ♂, Orán, 2 June 1960, no collector data (MACN-Ar, without number); Santa Fe Province: 1 ♂, Campo Redondo, 20 May 1957, no collector data (MACN-Ar 120); 1 ♀, Moisés Ville, September 1933, J. L. Garro leg. (MACN-Ar 24); 1 ♀, Reconquista, no date, Cranwell leg. (MACN-Ar, without number). Santiago del Estero Province: 1 ♂, Parayacu, Sumampa, no date, Maldonado Bruzzone leg. (MACN-Ar 51); 1 ♂, Santiago del Estero, 25 October 1963, Haurylenko leg. (MACN-Ar, without number); 1 ♂, same locality, no date, Gomez leg. (MACN-Ar 47); 2 ♂, Villa La Punta, Choya, 18 February 1981, Donadio leg. (MACN-Ar, without number). Tucumán Province: 1 ♀, Lilliam, no date, no collector data (MACN-Ar, without number); 1 ♀, Tafí Viejo, no date, no collector data (MACN-Ar, without number); 1 ♀, Tapia, January 1948, O. Buschio leg. (MACN-Ar, without number).

*Diagnosis*

*Grammostola pulchripes* is characterized by the combination of a large body size (adult specimens of about 50–80 mm in total length), yellow golden stripes on the patella and tibia of all legs (Figure 6), smooth setae on the prolateral and retrolateral aspects of legs and retrolateral palpal maxillae, PB with a stiff spine and a small thorn on inner side, RB with two small spines apical.

*Distribution*

Previously known from Chaco (Resistencia), Catamarca, Corrientes and Formosa Provinces with no locality data (Schiapelli and Gerschman 1961; Schmidt 1999; Gabriel 2009). In this contribution (Figure 5E): south of Entre Ríos Province, east of Formosa, Chaco, Santiago del Estero and central and north of Santa Fé Provinces involving the regions of Espinal, Esteros del Iberá, Pampa, wet and dry Chaco. It is also present in east of Catamarca Province, central Tucumán, Salta and Jujuy, corresponding to the Yungas region (Figure 5F).

## Discussion

The genus *Grammostola* clearly needs a taxonomic revision because there is inconsistency and homogeneity of the characters exhibited by this group of spiders (Schiapelli

Figure 6. Live habitus of adult female *Grammostola pulchripes*. Scale bar = 1 cm.

and Gerschman 1961). The description of this new species represents another record from the genus in the Andean zone of Argentina. The environment where this new species is present comprises the Chaco and Monte ecoregions. The new species corresponds to the smallest species known of the genus, even smaller than the little *G. burzaquensis* (Ferretti et al. 2011). The type locality where *Grammostola fossor* was found in Río Negro Province (Argentina) comprises a basaltic plateau with a relief of volcanic cones and mountains of about 1900 m above sea level. This area is approximately 150 km from where *G. vachoni* is distributed (Ferretti et al. 2011). *Grammostola vachoni* is present in the mountainous and hilly system of central Argentina, although some distributional records correspond to some meadows.

*Grammostola chalcothrix* is restricted to central Argentina, distributed mainly in arid zones, such as the dry Chaco, Monte and with few records in the Espinal and Pampa eco-regions. This species is sympatric with *G. inermis* and *G. vachoni* in the mountain ranges of Córdoba Province (Pampean ranges). *Grammostola inermis* is distributed mainly in the Andean zone and also extending to the east reaching the mountain ranges of Córdoba and San Luis (Pampean ranges). This species showed a disjunctive distribution with southwestern records in Neuquén Province, eastern Andes. It is probable that this species shows a continuous distribution through the Andes, but this gap may correspond to the absence of sampling data. Finally, the distribution of *G. pulchripes* in Argentina seems to be restricted to areas with high humidity, such as wet Chaco and eastern Espinal eco-regions, and also this species can be found in high-altitude jungles, such as the Yungas in northern Argentina. The

intermediate area between wet Chaco and Yungas showed few distributional records, and this species only occurs in the southern portion of the dry Chaco (Santiago del Estero and Tucumán Provinces). The northern region of the dry Chaco seems to be a distributional gap for *G. pulchripes*.

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