

New species of *Eupalaestrus* from Argentina (Araneae, Theraphosidae, Theraphosinae)

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ABSTRACT. A new species of *Eupalaestrus* Pocock, 1901 from northern Argentina is described and illustrated. Males and females of *Eupalaestrus lae* sp. nov. differ from those all other species of the genus by the color with distinct two parallel longitudinal stripes on the femora, patellae, tibiae and one longitudinal stripe reaching half of metatarsi; the presence of a thickened femur and tibia IV; a straight embolus of the male palpal bulb and retrolateral keel pronounced. Specimens were captured in Chaco province, inhabiting unflooded flat grasslands open areas inside forest in transitional Chaco eco-region.

KEYWORDS. Taxonomy, Natural History, Neotropical, Chaco.

RESUMEN. Nueva especie de *Eupalaestrus* de Argentina (Araneae, Theraphosidae, Theraphosinae). Una nueva especie de *Eupalaestrus* Pocock, 1901 del norte de Argentina es descrita e ilustrada. Machos y hembras de *Eupalaestrus lae* sp. nov. difieren del resto de las especies de género por el color con dos líneas paralelas longitudinales distintivas en fémures, patelas y tibias y una línea longitudinal alcanzando la mitad del metatarso; la presencia del fémur y tibia IV ensanchados; un embolo recto en el bulbo palpal del macho y una quilla retrolateral pronunciada. Los especímenes se capturaron en la provincia de Chaco, habitando un pastizal abierto no inundable dentro de bosques en la eco-región de Chaco transicional.

PALABRAS-CLAVE. Taxonomía, Historia Natural, Neotropical, Chaco.

Theraphosidae is a family of spiders with 932 described species (PLATNICK, 2012), comprising more than one third of the mygalomorph species (CODDINGTON & LEVI, 1991). It is distributed throughout all tropical and many subtropical areas in all continents and includes many of the largest spider species. Very little is known on the biology of the Theraphosidae, and its taxonomy is in a chaotic state (RAVEN, 1990).

The genus *Eupalaestrus* Pocock, 1901 comprises four species recorded in Guyana, Brazil, Paraguay, Uruguay and Argentina (PLATNICK, 2012). The type species, *Eupalaestrus pugilator* Pocock, 1901 was described by original designation and monotypy. *Eurypelma campestratum* Simon, 1891 is based on specimens from Paraguay. SIMON (1903) transferred it to *Eupalaestrus campestratus* (Simon, 1891). *Lasiadora weijenberghi* Thorell, 1894 was described by based on males from Córdoba province, Argentina. MELLO-LEITÃO (1941) synonymized it with *Weyenberghia weijenberghi* and later SCHIAPELLI & GERSCHMAN DE PIKELIN (1979) transferred it to *Pterinopelma weijenberghi*. Finally, PÉREZ-MILES (1992) transferred *Pterinopelma weijenberghi* to *Eupalaestrus weijenberghi* (Thorell, 1894). *Eupalaestrus spinosissimus* Mello-Leitão, 1923 was originally described based on specimens from Rio de Janeiro, Brazil. Later, BÜCHERL (1947) described *E. tarsicrassus* with a female from São José dos Campos, São Paulo, Brazil. Finally *E. tarsicrassus* was considered a junior synonym of *E. spinosissimus*, but unfortunately the male still unknown (BERTANI, 2001). The last species described in this genus was *E. guyanus* (Simon, 1892) of Guyana resulting from the transfer of *Eurypelma guyanum* Simon, 1892 to *Eupalaestrus* (GABRIEL, 2009).

In a recent survey carried out in Presidencia Roque Sáenz Peña, Chaco province, Argentina, a new species of *Eupalaestrus* was discovered and is herein described.

MATERIAL AND METHODS

The following abbreviations are utilized: A, male palpal bulb apical keel; ALE, anterior lateral eyes; AME, anterior median eyes; d, dorsal; OQ, ocular quadrangle (including lateral eyes); p, prolateral; PI, male palpal bulb prolateral inferior keel; PLE, posterior lateral eyes; PME, posterior median eyes; PS, male palpal bulb prolateral superior keel; r, retrolateral; R, male palpal bulb retrolateral keel; SA, male palpal bulb subapical keel; v, ventral. The material studied are deposited in the arachnological collection of the Museo de La Plata (MLP, Luis Pereira), Buenos Aires, Argentina. Spine notation follows PETRUNKEVITCH (1925). Palpal bulb structure classification follows BERTANI (2000). Urticating hairs classification follows COOKE *et al.* (1972). We made measurements using a stereomicroscope equipped with a calibrated ocular micrometer scale and a digital caliper with an error of 0.01 millimeters rounded up to one significant decimal where appropriate. Images of the specimens were obtained under a stereomicroscope with a mounted digital camera. All measurements are in millimeters.

Eupalaestrus lae sp. nov.

(Figs 1-7, 9)

Type material. Holotype ♂, Argentina, Chaco, Presidencia Roque Sáenz Peña (26°51'79"S 60°26'15"W),

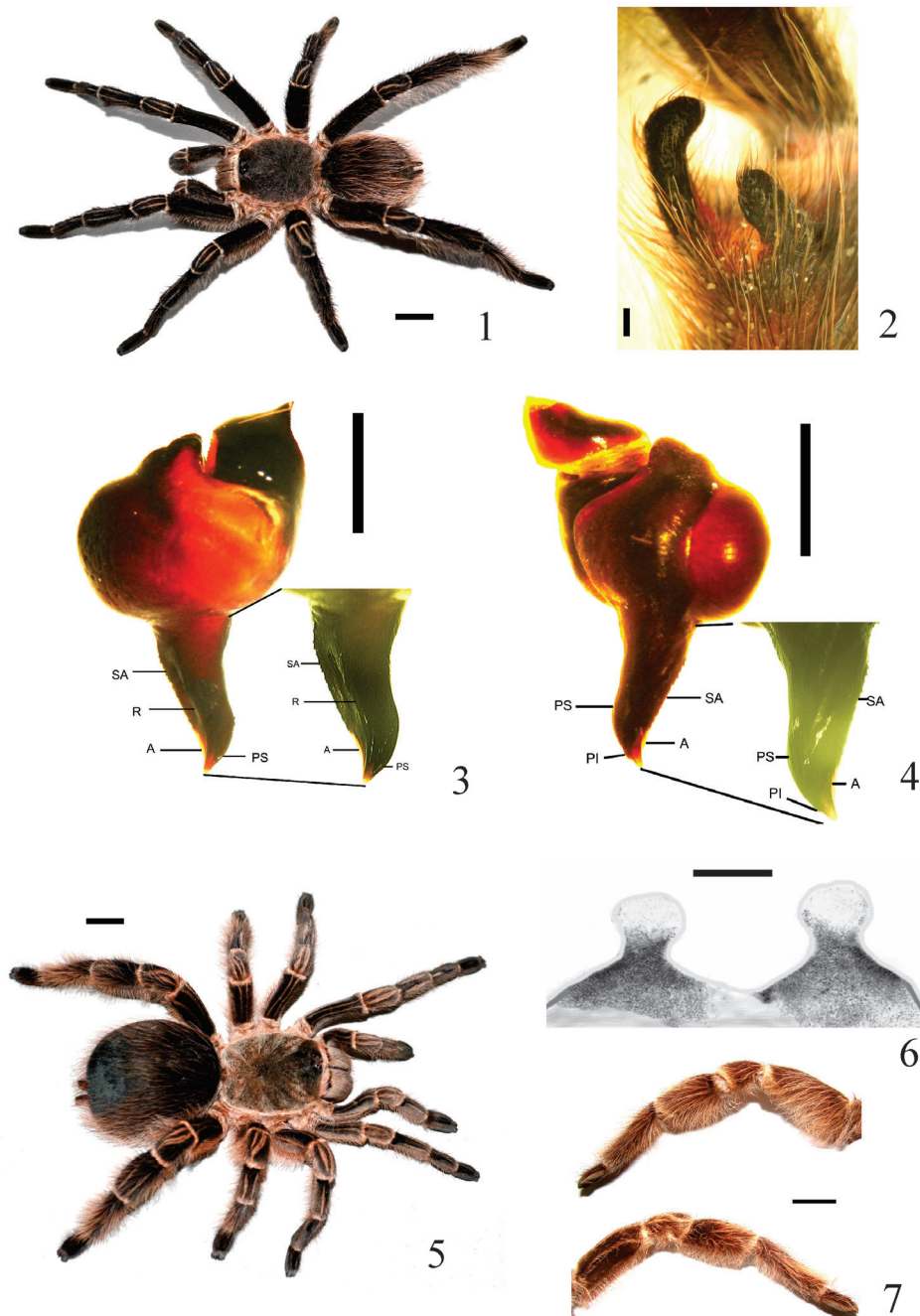
X.2006, J. Barneche col. (MLP 19030). Paratypes: with same data as holotype, ♂ (MLP 19031), ♀ (MLP 19032).

Etymology. This species is named in honor of J. Barneche's daughter, Lara.

Diagnosis. Males and females of *Eupalaestrus larae* sp. nov. differ from those all other species of the genus by the color with distinct two parallel longitudinal stripes on the femora, patellae, tibiae and one longitudinal stripe reaching half of metatarsi (Figs 1, 5). *Eupalaestrus larae* sp. nov. differs from *E. weijenberghi* by the thickened femur III; from *E.*

spinosissimus by the absence of stiff setae on tibia and metatarsus IV and from *E. guyanus* by the less circular main body of the male palpal bulb (illustrated by GABRIEL, 2009). *Eupalaestrus larae* sp. nov. resembles *E. campestratus* by the color pattern and the thickened tibia IV but differs from this species by the presence of a thickened femur and tibia IV (Fig. 7) and by the straighter embolus of the male palpal bulb and retrolateral keel pronounced (Figs 3, 4) (illustrated by BERTANI, 2001).

Male holotype (MLP 19030) (Fig. 1). Total length, not including chelicerae and spinnerets, 45.72.



Figs 1-7. *Eupalaestrus larae* sp. nov.: 1, holotype male, habitus; 2, right male spur; male palpal bulb: 3, retrolateral; 4, proximal; 5, paratype female, habitus; 6, spermathecae, ventral view; 7, female femur and tibia IV. Scales, figs 1, 5, 7: 1 cm; figs 2-4, 6: 1 mm.

Carapace length, 20.94, width, 18.42. Anterior eye row slightly procurved, posterior recurved. Eyes sizes and interdistances: AME 0.36, ALE 0.34, PME 0.24, PLE 0.29, AME-AME 0.69, AME-ALE 0.25, PME-PME 1.42, PME-PLA 0.12, ALE-PLA 0.40, OQ length, 1.79, width, 2.5, clypeus, 0.57. Fovea short, deep, recurved, width, 1.87. Labium length, 3.58, width, 3.27, with 138 cuspules. Maxillae with 139 cuspules in a group on the proximal prolateral angle. Sternum length 9.38, width 7.65, with many long setae. Chelicerae with 12 teeth on basal promargin, 14 basal retrolateral teeth smaller. Spination: femora I-IV and palp 0. Patellae I-IV and palp 0. Tibia I, 1-1p; II, 1v, 1-1d; III, 1-1p, 1-1r; IV, 1-1v, 1p, 1r; palp, 2-2-2-1p, 2r. Metatarsi I, 1v, 1p; II, 2-1-1v, 1-1p; III, 1-1-1-1v, 1-1-1p, 1-1r; IV, 1-1v, 1-1-1-1-2p, 1-1r. Tarsi I-IV and palp 0. Scopulae: entire and dense on tarsi I-IV. Metatarsi I and II fully scopulate, III, 1/2 scopulated, IV 1/3. Length of legs and palpal segments are given in Table I. Tibia and femur IV thickened. Tibial apophysis with two branches originating from a common base, retrolateral not constricted in the middle bearing a short strong black thorn and the prolateral hardly curved at tip (Fig. 2). Male palpal bulb pyriform, embolus long. Prolateral keels present, the PS forming the embolus edge distally and not pronounced; SA represented by a denticulate row extending by almost the entire embolus length; R present, pronounced (Figs 3, 4). Types I and III urticating hairs present. Sternum, coxae and legs ventrally covered by many long hairs. Carapace black bordered by short pinkish hairs, legs black with pinkish hairs dorsally on coxae and trochanters. Abdomen black covered by long reddish hairs. Leg rings very distinct on the apex of femora and patellae. Longitudinal stripes on the femora slightly distinct and very distinct on patellae, tibiae and metatarsi (Fig. 1).

Female (Paratype, MLP 19032) (Fig. 5). Total length, not including chelicerae and spinnerets, 64.40. Carapace length, 25.09, width, 22.01. Anterior eye row slightly procurved, posterior recurved. Eyes sizes and interdistances: AME 0.32, ALE 0.45, PME 0.23, PLE 0.36, AME-AME 0.70, AME-ALE 0.32, PME-PME 1.41, PME-PLA 0.12, ALE-PLA 0.53, OQ length, 1.72, width, 2.50, clypeus, 0.65. Fovea short, deep, recurved, width, 4.67. Labium length, 3.94, width, 3.63, with 121 cuspules. Maxillae with 157 cuspules in a group on the proximal prolateral angle. Sternum length 11.64, width 10.16, with many long setae. Chelicerae with 10 teeth on basal promargin, 18 basal retrolateral teeth smaller. Spination: femora I-IV and palp 0. Patellae I-IV and palp 0. Tibia I, 2v, 1p; II, 1p, 1-1r; III, 2v, 1p; IV, 1-1v, 1p, 1r; palp, 2v, 1-1p, 1-1r. Metatarsi I, 2v; II, 1-1v, 1p, 1r; III, 1-1-2v, 1p; IV, 2-1-2-2v, 1p, 1-1r. Tarsi I-IV and palp 0. Scopulae: entire and dense on tarsi I-IV. Metatarsi I and II fully scopulate, III, 3/4 scopulated, IV 1/3. Length of legs and palpal segments are given in Table II. Tibia and femur IV thickened (Fig. 7). Spermathecae short separated by a weakly sclerotized area (Fig. 6). Types I

and III urticating hairs present. Sternum, coxae and legs ventrally covered by many long hairs. Carapace black bordered by short pinkish hairs, legs black with pinkish hairs dorsally on coxae and trochanters. Abdomen black covered by long reddish hairs. Leg rings very distinct on the apex of femora and patellae. Longitudinal stripes on the femora slightly distinct and very distinct on patellae, tibiae and metatarsi (Fig. 5).

Additional material examined. ARGENTINA, Chaco: Tres Naciones (near Tres Isletas, 20°20'45"S, 60°24'90"W), 2♀, X.2006, J. Barneche col. (MLP 19033). Tres Estacas (27°04'18"S, 61°31'33"W), ♂ (MLP 19034), 2♀ (MLP 19035), 3 juveniles (MLP 19036), I.2012, J. Barneche col.

Distribution. Known from central and western Chaco province, near Santiago del Estero province, Argentina.

Natural history. Spiders were observed in the field exhibiting a noticeable aggregation, with many specimens in a few square meters. At night, they usually stay outside the burrow waiting for a prey and can be easily found. *Eupalaestrus laeae* sp. nov. inhabit the eco-region of transitional Chaco, between humid and dry Chaco. Specimens were found in unflooded flat grasslands open areas inside forest habitat (Fig. 8). Moreover, this species is abundant in modified and disturbed habitats such as golf fields (Jorge Barneche, pers. obs.). Burrows (Fig. 9) are deep and can easily exceed the 50 centimeters; the entrances can vary from 32.92 mm to 36.81 mm according to the spider size and sex and temperatures inside burrows can range from 30 to 33°C while the outside temperature in their typical habitat can reach values of 37 to 39°C in summer. *Eupalaestrus laeae* sp. nov. is a sympatric species with the theraphosid *Acanthoscurria chacoana* Brèthes 1909, and both species can be found in the same habitat, but *A. chacoana* inhabit inside the forest and construct their

Tab. I. *Eupalaestrus laeae* sp. nov., length of leg and palpal segments of male.

	I	II	III	IV	Palp
Femur	18.8	15.5	14.9	18.3	11.0
Patella	9.2	8.4	8.0	8.6	8.6
Tibia	13.5	12.3	11.7	15.8	8.7
Metatarsus	12.9	13.0	14.7	22.6	-
Tarsus	9.4	9.7	9.1	10.7	4.5
Total	61.9	59.1	58.5	76.1	32.9

Tab. II. *Eupalaestrus laeae* sp. nov., length of leg and palpal segments of female.

	I	II	III	IV	Palp
Femur	16.1	14.2	13.1	16.4	12.4
Patella	9.3	9.1	7.9	10.3	7.6
Tibia	11.8	9.9	9.4	12.9	8.5
Metatarsus	10.9	10.3	11.4	17.6	-
Tarsus	8.2	7.9	7.7	8.8	9.3
Total	56.5	51.5	49.7	66.3	38.0



Figs 8, 9. *Eupalaestrus larae* sp. nov. in Chaco region: 8, habitat; 9, female at burrow entrance in the type locality.

burrows under logs or in base of trunks. An analogous situation occurs in Uruguay and Brazil, where two sympatric theraphosid species of the genus *Eupalaestrus* and *Acanthoscurria* occupy the same habitat in grasslands (PÉREZ-MILES *et al.*, 2005) and in Pantanal Matogrossense (Rogerio Bertani, pers. comm.).

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