

Artículos

On the spider genus *Spanioplanus* (Araneae: Linyphiidae): three new species from Uruguay and Argentina

Sobre el género *Spanioplanus* (Araneae: Linyphiidae): tres nuevas especies de Uruguay y Argentina

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Abstract: Three new species of the genus *Spanioplanus* Millidge (Araneae: Linyphiidae) are described: *Spanioplanus juru* n. sp. (male and female) from riparian forests and psammophilus scrublands in Uruguay, *Spanioplanus holmbergi* n. sp. (male and female) and *Spanioplanus olejniki* n. sp. (female) from riparian forests and hilly systems in central-eastern Argentina. Photographs and illustrations of somatic and sexual characters of the species are provided. Furthermore, data of the natural history and a distribution map for these species are presented together with an updated diagnosis of the genus. These findings document a higher species number of this previously monotypic genus and expand its known distribution in South America.

Keywords: Erigoninae, Faunistics, Neotropics, Taxonomy.

Resumen: Se describen tres nuevas especies del género *Spanioplanus* Millidge: *Spanioplanus juru* n. sp. (macho y hembra), de bosques riparios y matorrales psamófilos de Uruguay, *Spanioplanus holmbergi* n. sp. (macho y hembra) y *Spanioplanus olejniki* n. sp. (hembra) de bosques riparios y sistemas serranos en el centro-este de Argentina. Se proporcionan fotografías e ilustraciones de caracteres somáticos y sexuales de las especies. Además, se presentan datos de historia natural y un mapa de distribución para estas especies. Complementariamente se provee una diagnosis actualizada del género. Estos hallazgos revelan un mayor número de especies de este género previamente monotípico y amplían su distribución conocida en América del Sur.

Palabras clave: Erigoninae, Faunística, Neotrópico, Taxonomía.

INTRODUCTION

Until now, the spider genus *Spanioplanus* Millidge, 1991 remained monotypic, only known by the species *Spanioplanus mitis* Millidge, 1991 from Peru and Venezuela (Miller, 2007; World Spider Catalog, 2025). The plate-like tailpiece of the radix, narrowest distally and posteriorly and the presence of an embolic basal lobe distinguish *Spanioplanus* males from other Neotropical erigonines, while a rounded ventral plate without a median invagination and a dorsal plate with a ventral notch are diagnostic characters of females (Millidge, 1991; Miller, 2007). The genus was studied in the phylogeny of Miller & Hormiga (2004) where its location in Erigoninae was confirmed, and its sister relationship with *Gongylidiellum* Simon, 1884 was also proposed. Recent fieldwork carried out by the authors in Uruguay and Argentina resulted in the description of three new species, as well as the reevaluation of diagnostic characters of the genus. In addition, records of these new species provided new information about the distribution of the genus in South America.

MATERIALS AND METHODS

Specimens examined are preserved in 70 % ethanol and deposited at the Arachnological Collections of Facultad de Ciencias, Universidad de la República, Montevideo, Uruguay (FCE-Ar, curator: M. Simó) and Museo Argentino de Ciencias Naturales “Bernardino Rivadavia” (MACN-Ar, curator: Martín J. Ramírez). The morphological examination was performed using a stereomicroscope (Leica M205 A) and a binocular microscope (Nikon YS100). Female genitalia and male palps were immersed in methyl salicylate (Holm, 1979; Hormiga, 2000) for examination of internal structures. Digital illustrations were made using a tablet (Wacom Intuos Pro pen) and an illustration software (SketchBook v.8.7.1 <https://sketchbook.com>) following Cala-Riquelme (2021). Detailed micro-photographs were obtained with stereomicroscope (Leica M205 A), attached with camera (Leica DMC 2900 enabled with a Leica LAS-X-Z) and SW software. At MACN laboratory, incident light images were taken with camera (Leica DFC 295 digital) mounted on a stereomicroscope (Leica M205 A). Male and female genitalia were cleared with clove oil (Levi, 1965) and illustrated using digital camera (Nikon DXM1200) mounted on compound microscope (Olympus BH2) with camera lucida. Higher-magnification images were taken using scanning electron microscope (SEM, JEOL 5900) at Facultad de Ciencias, Universidad de la República. Spider corporal structures used in SEM were cleaned with ultrasonic baths (Álvarez-Padilla & Hormiga, 2007) and sputter-

coated with gold. Photographs were edited using Gimp software (<https://gimp.org>) and plates were made in Inkscape software (<https://inkscape.org>). Morphological measurements are in millimeters and were performed using the stereomicroscope's ruler tool (Leica M205 A). Descriptions are based on Miller (2007) format, and terminology follows Millidge (1991), Hormiga (2000), Miller (2007) and Dupérré (2013). Left palp of males were used for descriptions and illustrations (if the right palp was illustrated, images were flipped by consistency). A distribution map of the species was made using SimpleMappr (Shorthouse, 2010).

Abbreviations used in the text and figures: ALE, anterior lateral eyes; AME, anterior median eyes; BL, basal lobe of embolus; CD, copulatory duct; CG, retrobasal cymbial groove; CO, copulatory opening; DL, distal lobe of radix; DP, dorsal plate of epigynum; DSA, distal suprategular apophysis; DT, dorsal cymbial tubercle; E, embolus; EM, embolic membrane; F, fundus; FD, fertilization duct; MT, mesal tooth of radix; PC, paracymbium; PLE, posterior lateral eyes; PLT, prolateral tooth; PME, posterior median eyes; PTA, prolateral tibial apophysis; R, radix; RTA, retrolateral tibial apophysis; S, spermatheca; SD, sperm duct; SPT, suprategulum; ST, subtegulum; T, tegulum; TmI, trichobothrium position on metatarsus I; TP, tailpiece of the radix; VP, ventral plate of epigynum; VT, ventral cymbial tubercle.

RESULTS

Taxonomy

Linyphiidae Blackwall, 1859

Spanioplanus Millidge, 1991

Type species: *Spanioplanus mitis* Millidge, 1991

Spanioplanus mitis Millidge, 1991: 144, figs. 589-591.

Composition. Four species, including the three new species described here. All representatives are exclusive from South America (Argentina, Peru, Uruguay and Venezuela).

Diagnosis. *Spanioplanus* differs from other Neotropical Erigoninae genera by the presence of an X-shaped radix (Figs. 1d, 4b, 6c, 8a; Miller, 2007: figs. 85A, D, 86A) and an embolic membranous basal lobe (Fig. 4d; Miller, 2007: fig. 85D) in the male palp. Females differ by a sinuous or indented posterior margin of the dorsal plate of the epigynum (Figs. 4f, 8c, d; Miller 2007: figs. 71G, 85E) and a rounded ventral plate without median invagination (Figs. 2f, 4e, 5f; Miller 2007: figs. 71G, 85E).

Spanioplanus juru Cajade, Hagopíán & Simó new species

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Figs. 1-4, 9, 10.



Figure 1.

Spanioplanus juru n. sp.: male holotype FCE-Ar 12467. a, habitus, dorsal, b, same, lateral, c, same, ventral; d-e, left palp: d, prolateral, e, ventral, f, retrolateral. Scale bar a applies to b and c, d applies to e and f.



Figure 2

Spanioplanus juru n. sp.: female. a, habitus, dorsal, b, same, lateral, c, same, ventral, d, carapace, anterior, e, mouthparts, ventral, f, epigynum, ventral. Scale bar a applies to b and c.

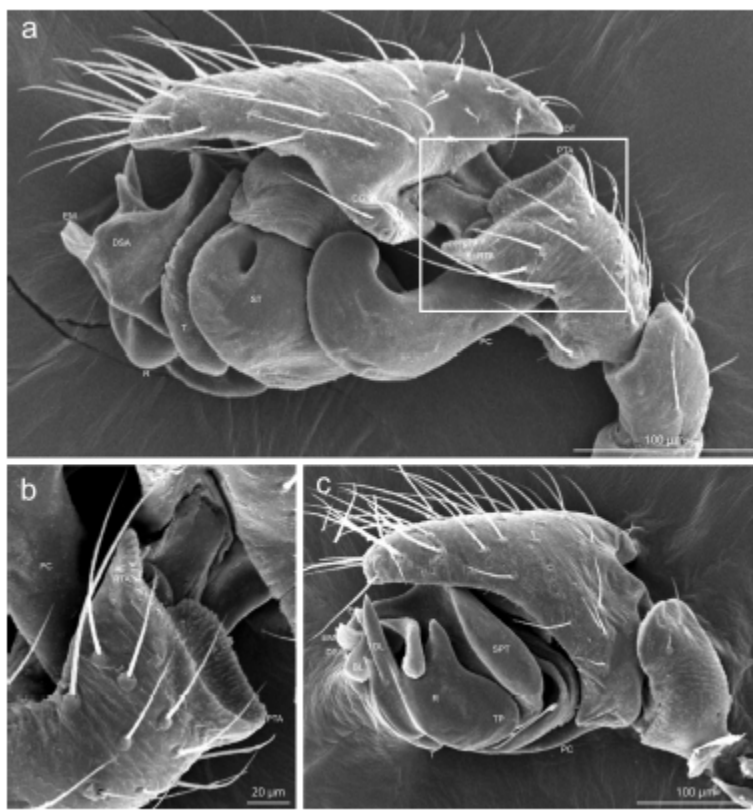


Figure 3.

Spanioplanus juru n. sp.: male palp SEM images. a, retrolateral. b, tibia detail showing possible stridulatory organ (enclosed box of Fig. 3a), c, prolateral.

Type material. *Holotype*. URUGUAY: Cerro Largo. Paso Arriera, Paraje Palleros, -32.0082222°, -54.4641111°, Hagopían D. coll., 10.Nov.2019, collected manually in leaf litter, in remnants of riparian forest, surrounded by wetlands and rice crops, 1M (FCE-Ar 12467). *Paratypes*. URUGUAY: Río Negro. Establecimiento El Matorral, -33.0199722°, -57.5652222°, Simó M. coll., 4-6.Aug.2019, collected with pitfall trap in riparian forest, 1F (FCE-Ar 10255); Río Negro. Establecimiento El Matorral, -32.9885°, -57.5413056°, Simó M. & Laborda Á. coll., 28.Nov.2019, collected with pitfall trap in riparian forest, 1F (FCE-Ar 13046); Río Negro. Establecimiento El Matorral, -32.9959167°, -57.5417778°, Hagopían D. coll., 28.Nov.2019, collected manually in leaf litter of riparian forest, 1M (FCE-Ar 12759).

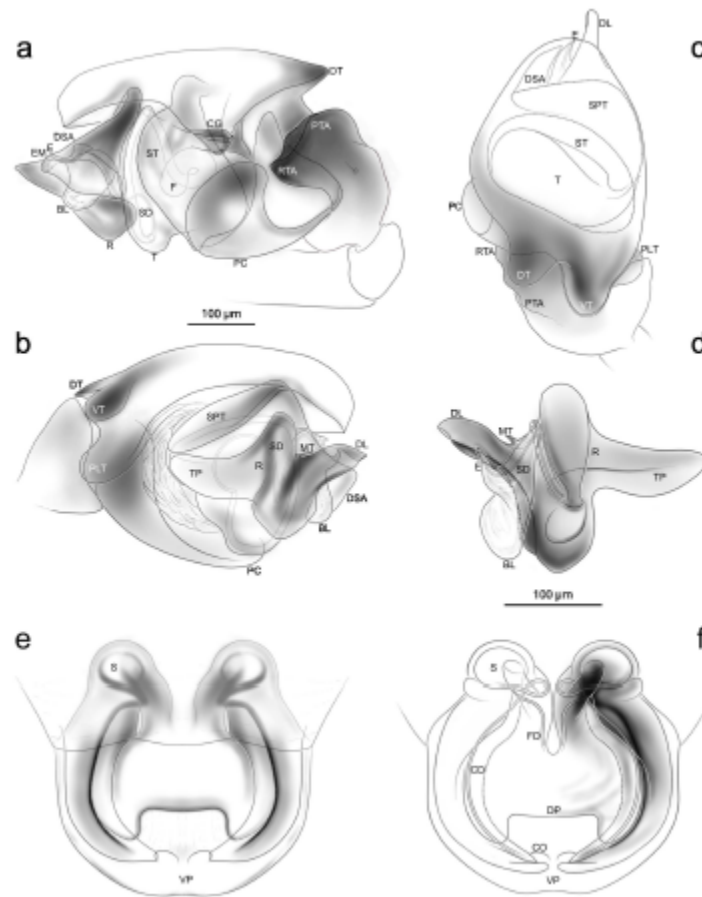


Figure 4.

Spanioplanus juru n. sp.: a-d, male palp. e, f, epigynum. a, retrolateral, b, prolateral, c, dorsal, d, embolic division removed (retrolateral), e, ventral, f, dorsal. Scale bar a applies to b & c. Scale bar d applies to e & f.

Additional material examined. URUGUAY: Canelones: INIA Las Brujas, -34.6614361°, -56.3404139°, Brussa, Da Silva & Muñoz coll., 29.Oct.2014, collected with pitfall trap in “espinillar”, 1M (FCE-Ar 5895); Marindia, -34.7802778°, -55.8261111°, Stanley E. & Rodríguez V. coll., 30.Mar.2012, collected with pitfall trap in psammophilus scrublands, 1F (FCE-Ar 16227); Cerro Largo: Arévalo, -32.4833333°, -55.1099167°, Hagopíán D. coll., 31.Oct.2019, collected manually in leaf litter of riparian forest, 1M (FCE-Ar 12810); Paso Arriera, Paraje Palleros, -32.0052778°, -54.4901389°, Hagopíán D. coll., 10.Nov.2019, collected manually in leaf litter of riparian forest, 1M (FCE-Ar 12799); Same data, Simó M. & Hagopíán D. coll., collected manually in leaf litter and with pitfall trap, 2F (FCE-Ar 12798); Río Negro: Establecimiento El Matorral, -33.0163611°, -57.5545833°, Simó M. & Laborda Á. coll., 28.Nov.2019, collected with pitfall trap in riparian forest, 1M (FCE-Ar 13042).

Etymology. The species epithet is a noun in apposition from the Guaraní language “juru”, that means “beak”, in reference to the characteristic dorsal cymbial process.

Diagnosis. Males of *Spanioplanus juru* n. sp. can be distinguished from other congeners by having a proximal dorsal cymbial process (Figs. 1d, f, 3a, c, 4a-c). Females of *S. juru* n. sp. differs from others of the genus by the presence of posterolateral lobes in dorsal plate (Fig. 4e, f).

Description. *Male holotype* (FCE-Ar 12467). Total length 1.85. Carapace 0.93 long, 0.73 wide, light orange (Fig. 1a-c). Abdomen beige (Fig. 1a-c). Clypeus 0.17 high, without cuticular pores. AME diameter 0.052, ALE 0.069, PME 0.072, PLE 0.086, AME separation 0.40 times their diameter, AME-ALE separation 0.30 times one ALE diameter, PME separation 0.61 times their diameter, PME-PLE separation 0.53 times one PLE diameter. Sternum 0.49 long, 0.42 wide, orange. Coxa IV separation 0.81 times their width. Chelicerae brown, with frontal mesal spur. Cheliceral stridulatory organ ~17 striae, striae evenly spaced with median plain patch, with five promarginal teeth, six retromarginal teeth (in two groups, one proximal and five distal). Legs orange, dorsal tibial macrosetae 2-2-2-1, TmIV absent, tibia I length 0.62, metatarsus I length 0.45, tarsus I length 0.37; tibia I 6.74 times longer than thick; TmI 0.36. Pedicel with margin of sternite and pleurites separated. Palpal coxae without tubercles (Fig. 1c). Palpal tibia with one prolateral and one retrolateral trichobothria. Prolateral tibial apophysis with scaly dorsal surface; retrolateral tibial apophysis truncated, scaly (Figs. 1f, 3a, 4a). Cymbium with broad retrobasal groove, a proximal dorsal process (dorsal cymbial tubercle) which fits inside the prolateral tibial apophysis concavity facing to a scraper-like crests (Figs. 3a, 4a, c), and a proximal peg-like dorsoprolateral process (ventral cymbial tubercle). Paracymbium robust, J-shaped (Figs. 1f, 3a, 4a). Subtegulum ectal to tegulum; fundus perpendicular to axis of palpal bulb (Figs. 1f, 3a, 4a). Protegulum not extending out from tegulum (Figs. 1f, 3a, 4a); junction between tegulum and suprattegulum with membranous division; distal suprattegular apophysis robust, widest distally (Figs. 1f, 3a, 4a). Radix narrowest anteriorly and posteriorly; mesal tooth and distal lobe present (Figs. 1f, 3b, 4b). Embolic membrane present. Embolus curved, short and membranous with tonged-like membranous basal lobe, sperm duct does not enter radix (Fig. 4a, b, d).

Description. *Female paratype* (FCE-Ar 10255). Total length 1.91. Carapace 0.90 long, 0.65 wide, brownish orange with grey border (Fig. 2a-c). Abdomen grey (Fig. 2a-c). Clypeus 0.13 high. AME diameter 0.047, ALE 0.069, PME 0.060, PLE 0.067, AME separation 0.45 times their diameter, AME-ALE separation 0.14 times one ALE diameter, PME separation 0.63 times their diameter, PME-PLE separation 0.49 times one PLE diameter. Sternum 0.45 long, 0.43

wide, brownish grey. Coxa IV separation 1.11 times their width. Chelicerae brown, with frontal mesal spur, with six promarginal teeth (in two groups, one alone and five together) (Fig. 2d, e), four retromarginal teeth. Legs orange, tibial macrosetae 2-2-2-1, TmIV absent, tibia I length 0.55, metatarsus I length 0.45, tarsus I length 0.34; tibia I 5.91 times longer than thick; TmI 0.32. Pedicel with margin of sternite and pleurites separated. Palpal tibia with one prolateral, one retrolateral trichobothrium; palpal tarsus with one dorsomesal macroseta, two mesal, one ventromesal and one ventroectal macrosetae. Epigynum projects out from the abdomen, spermathecae ovoid (Fig. 4e, f). Copulatory ducts with one loop near the spermathecae, origin mesally from it, and follow an arced path (next to the margin of the dorsal plate) to the copulatory openings (Fig. 4f). Copulatory openings (close together) on dorsal surface of epigynum next to posterior margin (Fig. 4f). Fertilization ducts arise mesally from spermathecae (Fig. 4f). Ventral plate rounded (Figs. 1f, 4e, f). Dorsal plate marginally lobed (Fig. 4f).

Variation: Total length (4 males) 1.6-1.9. Total length (3 females) 1.6-1.9. Some specimens (both females and males) have lighter or darker abdomen. One of the females examined (FCE-Ar 12798) has the posterolateral lobes of the dorsal plate less developed and a sinuous margin between lobes.

Distribution: Known for Uruguay (Canelones, Cerro Largo and Río Negro Departments) (Fig. 10).

Natural history: *Spanioplanus juru* n. sp. was collected in riparian forests of the Negro River (Fig. 9a), park forests of *Vachellia caven* (Molina) Seigler & Ebinger ("espinillares") and southern psammophilus scrublands in Uruguay, associated with leaf litter. Specimens were collected manually and with pitfall traps. In SEM images, males' palps were impregnated with some diatoms, suggesting that this species may live in the proximity of the water bodies.

***Spanioplanus holmbergi* Carrión & Grismado new species**

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AC76-81FF47E51063

Figs. 5-6, 8a-c, 9, 10

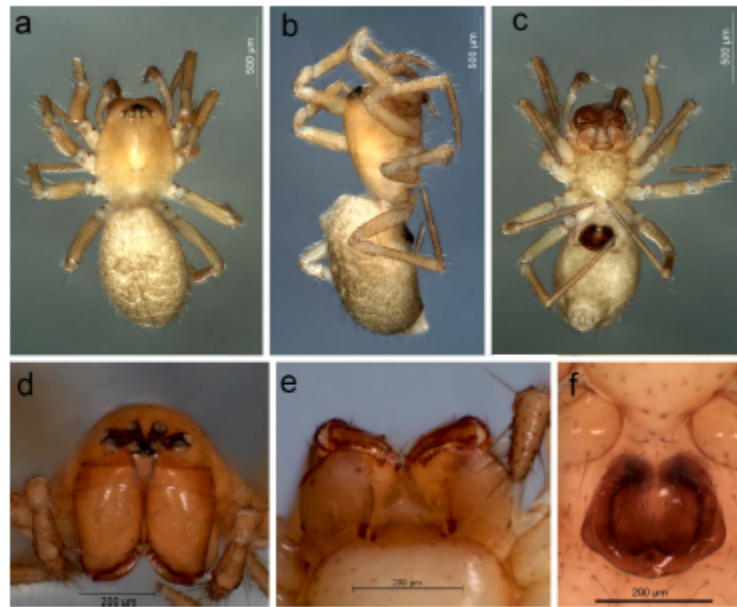


Figure 5.

Spanioplanus holmbergi n. sp.: a-c, female holotype MACN-Ar 38127. d-f, female paratype MACN-Ar 38640. a, habitus, dorsal, b, same, lateral, c, same, ventral; d, carapace, anterior, e, mouthparts, ventral, f, epigynum, ventral.

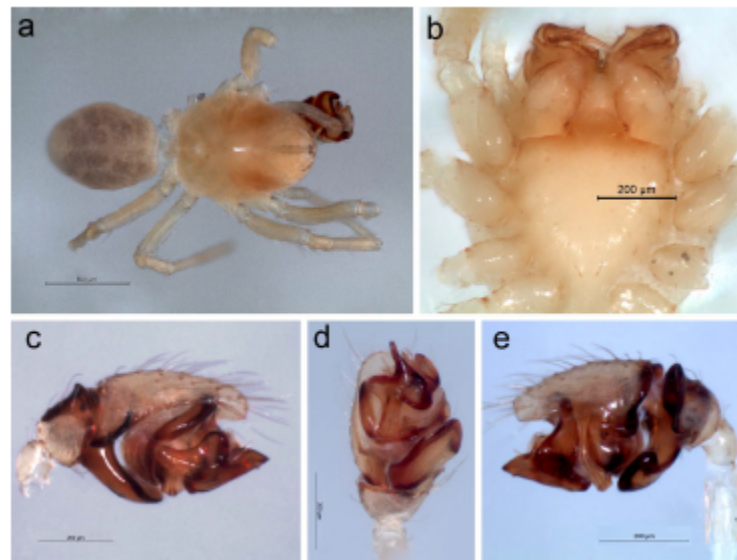


Figure 6.

Spanioplanus holmbergi n. sp.: male MACN-Ar 38617: a, habitus, dorsal, b, cephalothorax, ventral; c-e, right palp (inverted): c, prolateral, d, ventral, e, retrolateral.

Type material. *Holotype*. ARGENTINA: Buenos Aires Province: Partido de Tandil: Tandil: Cerro del Libertador General San Martín (“El Cerrito”), -37.3329°, -59.1197083°, elev. 200 m, Porta, A. O. coll., 26.May.2013, under stones, 1F (MACN-Ar 38127). *Paratype*. ARGENTINA: Ciudad Autónoma de Buenos Aires: Comuna 1: Reserva Ecológica Costanera Sur, Canal Viamonte, -34.5963889°,

-58.3508333° (Google Earth) Grismado, C.J.; Zapata, L. & Grismado, A. coll., 27.Oct.2009, sifting litter, 1F (MACN-Ar 38640, voucher CJG-1642).

Additional material examined. ARGENTINA: Buenos Aires Province: Partido de Tornquist: Sierra de la Ventana: Cerro Negro, -38.1333333°, -61.7833333° (Google Earth), Cesari coll., Apr.1979, 1M (MACN-Ar 38617, voucher CJG-1725/26).

Remarks. The females and the male were not collected in the same locality, they are here matched tentatively because Tandil and Sierra de la Ventana are relatively close and share many species typical of their hilly environments. This fact and the poor condition of the only known male prevent us designating it as type. Additional collections in both hilly systems would test this pairing hypothesis.

Etymology. The species epithet is a patronymic in honor of Eduardo Ladislao Holmberg (1852-1937), the first arachnologist of Argentina.

Diagnosis. Females of *Spanioplanus holmbergi* n. sp. resemble those of *S. mitis* by the notched dorsal epigynal plate but differ by the angular lateral margins of the ventral plate (Fig. 8c; Miller, 2007: figs. 71G, 85E). The male of *S. holmbergi* n. sp. resembles those of *S. mitis* by the cymbium with a short retrobasal groove, and by lacking the proximal dorsal cymbial process (present in *S. juru* n. sp.) (Fig. 8b; Miller, 2007: figs. 85B, 86B); it differs from *S. mitis* by the mesal tooth of radix longer and translucent (Fig. 6c), and by a tiny triangular projection on the margin of the distal lobe of radix (Fig. 8a, b; Miller, 2007: figs. 85B, 86B).

Description. *Female holotype* (MACN-Ar 38127, Figs. 5a-c). Total length 1.66. Carapace 0.73 long, 0.57 wide, yellowish brown, gradually lighter backwards. Abdomen cream, with light olive-brown reticulations, diffusing laterally; venter uniform cream. Clypeus 0.09 high. AME diameter 0.029, ALE 0.050, PME 0.042, PLE 0.041, AME separation 0.55 times their diameter, AME-ALE separation 0.54 times one ALE diameter, PME separation 0.69 times their diameter, PME-PLE separation 0.43 times one PLE diameter. Sternum 0.42 long, 0.39 wide, yellowish brown. Coxa IV separation 0.84 times their width. Chelicerae light brown, with six promarginal teeth, five retromarginal teeth (decreasing in size distally). Legs yellowish brown, dorsal tibial macrosetae 1-0-1-0, TmIV absent, tibia I length 0.46 metatarsus I length 0.38, tarsus I length 0.29; tibia I 5.54 times longer than thick; TmI 0.34. Epigynum projects out from the abdomen, ventral plate with angular lateral margins (Figs. 5f, 8c). Internal genitalia (Fig. 8c): spermathecae more or less reniform; copulatory ducts running parallel near the margin of the ventral epigynal plate, entering in the spermathecae after a loop; copulatory openings (close together) on dorsal surface of epigynum, at the middle of the posterior margin of the ventral plate; fertilization ducts

arise mesally from spermathecae, slightly curved, converging, and posteriorly directed: dorsal plate indented.

Description. *Male* (MACN-Ar 38617, poorly preserved). Total length 1.64. Carapace 0.79 long, 0.63 wide, light orange, with two reddish anterolateral patches (Fig. 6a). Abdomen light gray with diffuse darker spots (Fig. 6a). Clypeus 0.12 high. AME diameter 0.035, ALE 0.050, PME 0.057, PLE 0.043, AME separation 0.77 times their diameter, AME-ALE separation 0.48 times one ALE diameter, PME separation 0.63 times their diameter, PME-PLE separation 0.76 times one PLE diameter. Sternum 0.47 long, 0.42 wide, orange. Coxa IV separation 1.27 times their width (Fig. 6b). Chelicerae light brown. Leg measurements not possible (most articles lost or seriously damaged). Palp (Figs. 6c-e, 8a-b): prolateral tibial apophysis with scaly dorsal surface; retrolateral tibial apophysis blunt, also scaly. Cymbium with short retrobasal groove, a proximal dorsal process facing the scaly margin of the dorsal tibia (Fig. 8b). Paracymbium robust, J-shaped. Subtegulum ectal to tegulum, disc-shaped; fundus perpendicular to axis of palpal bulb. Protegulum not discernible, junction between tegulum and suprattegulum with membranous division; distal suprattegular apophysis robust, truncated distally. Radix narrowest anteriorly and posteriorly, with a deep ventral notch; mesal tooth long, translucent, and distal lobe flattened, with a tiny ventral triangular projection (Figs. 6 c, 8a); embolic membrane inconspicuous. Embolus short, curved to dorsal, sperm duct does not enter radix.

Variation: The female paratype illustrated in Fig. 5d-f present a more reddish general cuticular pigmentation on the prosoma.

Distribution: Argentina. Known for the hilly systems in southern Buenos Aires Province (Tandil and Sierra de la Ventana) and from an urban natural reserve in Buenos Aires city (Fig. 10).

Natural history: The holotype was collected under stones in a partially disturbed locality, while the paratype was obtained sifting litter in gallery riparian forest (Fig. 9b).

***Spanioplanus olejniki* Carrión & Grismado new species**

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Figs. 7, 8d, 9, 10.

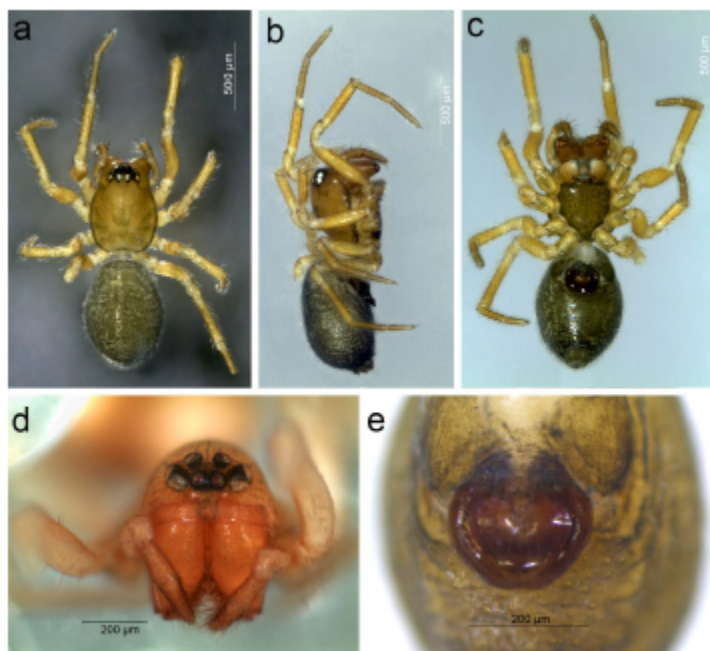


Figure 7.

Spanioplanus olejniki n. sp.: a-c, female paratype MACN-Ar 46688, d, female MACN-Ar 36946, e, female holotype MACN-Ar 36927. a, habitus, dorsal, b, same, lateral, c, same, ventral, d, carapace, anterior, e, epigynum, ventral.

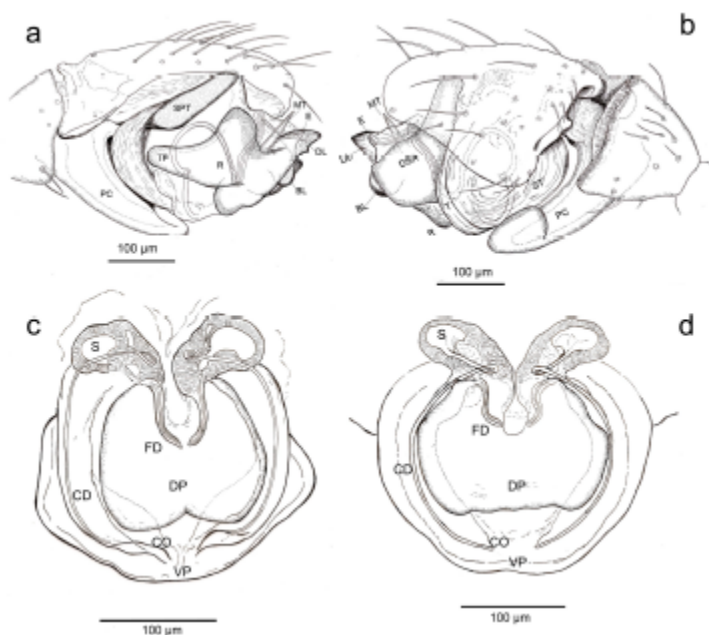


Figure 8.

Spanioplanus genus. Genitalia: a-b *Spanioplanus holmbergi* n. sp., male MACN-Ar 38617. a, left palp, prolateral, b, same, retrolateral (slightly inclined to dorsal); c, *Spanioplanus holmbergi* n. sp., female paratype, epigynum, cleared, dorsal; d, *Spanioplanus olejniki* n. sp., female paratype MACN-Ar 46689, epigynum, cleared, dorsal.

Type material. *Holotype*. ARGENTINA: Buenos Aires Province: San Pedro: Parque Histórico Natural Vuelta de Obligado, -33.598256°, -59.809827° (Google Earth), elev. 14 m, on “camalotes” (*Eichhornia* sp.) at banks of Paraná river, Carrión N. & Olejnik N. coll., 24.May.2009, 1F (MACN-Ar 36927). *Paratypes*. Same data as the holotype, 1F (MACN-Ar 46686, voucher CJG-1641/1723). Ciudad Autónoma de Buenos Aires: Reserva Ecológica Lago Lugano, trail on northeastern margin of Arroyo (stream) Cildáñez, -34.67836°, -58.44238° (Google Earth), Zapata L. & Chieffo F. coll., 15.Jun.2021, vegetation in ravine next to the stream, beating (LVZ-loc-061), 1F (MACN-Ar 46688); same locality, sector northwest of the visitor center, -34.67982°, -58.44217° (Google Earth), Zapata L. coll., 14.Jun.2021, “chilcal” and “espinal”, beating tray (LVZ-loc-058), 1F (MACN-Ar 46689).

Additional material examined. ARGENTINA: Buenos Aires Province: San Pedro: Parque Histórico Natural Vuelta de Obligado, -33.598256°, -59.809827° (Google Earth), elev. 14 m, leaf litter, Carrión N. & Olejnik N. coll., 11.Apr.2009, 1F (MACN-Ar 36946, voucher CJG-1593); Ciudad Autónoma de Buenos Aires: Reserva Ecológica Lago Lugano, north area, -34.67911°, -58.44268° (Google Earth), Zapata L. coll., 16-17.Jun.2021, “espinal” with *Vachellia caven*, *Lycium cestroides*, *Schinus longifolia*, *Trixis praestans*, etc., beating (LVZ-loc-065), 1F (MACN-Ar 46687).

Etymology. The species epithet is a patronym in honor to Nicolás Olejnik, Argentine naturalist, friend, and active collaborator in the fieldwork at the type locality -where this species was collected for the first time- as well as in many other campaigns.

Diagnosis. Females of *Spanioplanus olejniki* n. sp. resemble those of *S. juru* n. sp. and *S. mitis* in having rounded epigynal ventral plate; but differs in the shape of the dorsal plate: it lacks the notch on the posterior margin (present in *S. mitis*) (Figs. 7e,8d; Miller, 2007: figs. 71G, 85E), and also lacks the posterolateral lobes (present in *S. juru* n. sp.) (Fig 8d; Figs. 2f, 4e, f).

Description. *Female paratype* (MACN-Ar 46686). Total length 1.54. Carapace 0.74 long, 0.54 wide, olive brown, with faint dark markings in front and behind fovea and radially disposed bands to the carapace margin, that is rebordered with dark. Abdomen gray with small, irregularly spaced light spots. Clypeus 0.11 high, without cuticular pores. AME diameter 0.032, ALE 0.060, PME 0.042, PLE 0.058, AME separation 0.68 times their diameter, AME-ALE separation 0.25 times one ALE diameter, PME separation 0.69 times their diameter, PME-PL separation 0.39 times one PLE diameter. Sternum 0.39 long, 0.35 wide, dark brown. Coxa IV separation 1.27 times their width. Chelicerae orange brown (Fig. 7d), with five retromarginal teeth, and five promarginal teeth (in two groups, one proximal and four distal). Legs yellow brown, dorsal tibial macrosetae 2-2-2-1, TmIV absent, tibia I length 0.38, metatarsus I length 0.33,

tarsus I length 0.28 tibia I 6.74 times longer than thick; TmI 0.36. Epigynum projects out from the abdomen, ventral plate nearly circular (Fig. 7e). Internal genitalia (Fig. 8d): spermathecae elongated, diverging; copulatory ducts running parallel near the margin of the ventral epigynal plate, entering in the spermathecae after a loop: copulatory openings (close together) on dorsal surface of epigynum, at the middle of the posterior margin of the ventral plate; fertilization ducts arise mesally from spermathecae, sinuous, converging, and posteriorly directed; dorsal plate not indented, truncated.



Figure 9.

***Spanioplanus* genus. Habitats.** a, *Spanioplanus juru* n. sp., riparian native forest (Cerro Largo, Uruguay); b, *Spanioplanus holmbergi* n. sp., riparian native forest (Reserva Ecológica Costanera Sur, Buenos Aires, Argentina); c, *Spanioplanus olejniki* n. sp., coast of Paraná River at Parque Histórico Natural Vuelta de Obligado (Buenos Aires, Argentina).

Distribution: Argentina. Known for riparian habitats in two localities in Buenos Aires province and Buenos Aires city (Fig. 10).

Natural history: *Spanioplanus olejniki* n. sp. was found in the type locality (Fig. 9c) in floating vegetation (“camalotes” *Eichhornia* sp.), and in Lago Lugano, in different riparian formations near an artificial lagoon. Some specimens were collected with beating tray.

DISCUSSION

Until the present contribution, the genus *Spanioplanus* was known only by the type species *S. mitis* Millidge 1991 from the ecoregion Humid Montane Forest (*sensu* Britto, 2017) in the Yungas Province (*sensu* Morrone et al., 2022) from Peru. Also, the species was reported for the montane forests of Cordillera de la Costa, which belongs to the Venezuelan Province (*sensu* Morrone et al., 2022), that run parallel to the Caribbean Sea. These records from central Peru and northern Venezuela show that the species has a wide geographic distribution (Millidge, 1991; Miller, 2007). The new species reported in the present study, increased the knowledge of the genus in the Neotropics by raising the number of known species from one to four, expanding the geographic distribution to the Pampean and Esteros de Iberá Provinces, with the southernmost records of the genus, and providing some data about the natural history of the species. As well as *S. mitis*, *S. juru* n. sp. is associated with leaf litter in the ground strata of forests (Miller, 2007) and of psammophilus scrublands. One female of *S. holmbergi* n. sp. was also collected in a similar microhabitat at Buenos Aires city, Argentina; however, this species habitat seems not to be exclusively leaf litter, because other specimens were found in different habitats (under stones, in hills) in Tandil and Sierra de la Ventana in Buenos Aires Province. Finally, all specimens of *S. olejniki* n. sp. were recorded in riparian places, including floating vegetation.

Males of all known species of *Spanioplanus* have scaly tegument on the inner surface of the retrolateral and prolateral tibial apophysis (Figs. 3a, b, 4a, 8b; Miller 2007: fig. 86F), with a presumably stridulatory function, similar to the surface present in the tibial apophysis of other Erigoninae species like: *Valdiviola trisetosa* (Miller, 2007: fig. 36B, E), *Onychembolus subalpinus* (Miller, 2007: fig. 58E), *Sphecozone bicolor* (Miller, 2007: fig. 158D), *Intecymbium antarcticum* (Miller 2007: fig. 167B, E) and *Tmeticus tolli* (Hormiga, 2000: fig. 68E). Rovner (1975) described the stridulatory organ type *b* at the male pedipalpal tibio-tarsal joint for Nearctic wolf spider species. It consists of a tarsal process which scrapes against a tibial file-like structure. Later, Fernández-Montraveta et al. (2000) reported this stridulatory organ for other wolf spider species from the Palearctic region and Fernández-Montraveta and Simó (2002) for the Neotropics. However, the functional significance of this male pedipalpal device in *Spanioplanus* requires further studies on ultrastructure and behaviour for testing homology and stridulation respectively.

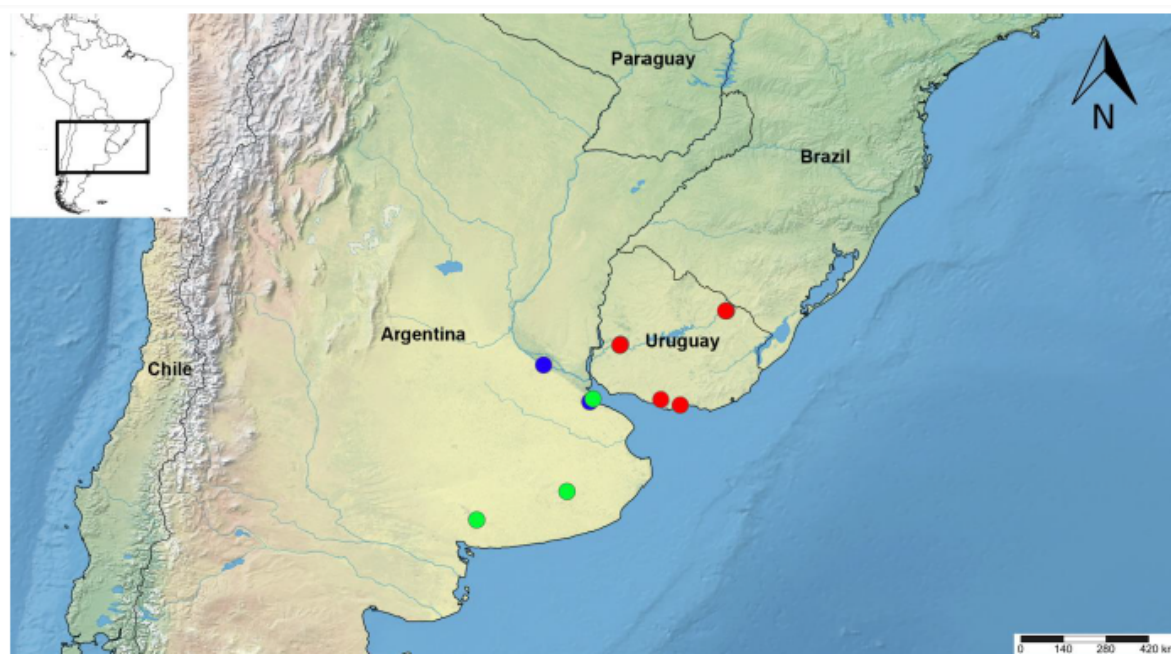


Figure 10.

Distribution of the described species. References= red circles: *Spanioplanus juru* n. sp., green circles: *Spanioplanus holmbergi* n. sp., blue circles: *Spanioplanus olejniki* n. sp.

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