

First record of the ant-like jumping spider genus *Simprulla* Simon (Salticidae: Sarindini) from Colombia

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Abstract. A first record of the jumping spider genus *Simprulla* Simon (Salticidae: Sarindini) from Colombia is presented, with new records of *S. nigricolor* Simon, 1901 from the Atlántico and Bolívar Departments in tropical low and dry forest ecosystems. A map with the known distribution of this genus in the Neotropical region is included.

Keywords. Atlántico, Bolívar, Caribbean coast

Introduction

The clade Amycoida represents a large part of the jumping spider diversity of South America, including 430 species grouped into 63 genera and 9 tribes (Maddison & Hedin 2003; Maddison, 2015; World Spider Catalog, 2017). Of these tribes, the Sarindini is one of two major groups of ant-like amycoids with 36 species and 7 genera, including the genus *Simprulla* Simon, 1901. This genus includes two species described from Brazil and Panama (*S. nigricolor* Simon, 1901) and Argentina (*S. argentina* Mello-Leitão, 1940).

The species of the genus *Simprulla* can be distinguished from other genera in the tribe Sarindini by the following characters: prosoma wide in relation to length, with cephalic and thoracic regions less clearly separated, legs short and thick with few spines, and leg I shorter than leg IV (Galiano, 1964). This genus was revised by Galiano (1964) who described the two species, provided new diagnostic illustrations and synonymized the genus *Donatinus* Chickering, 1946 (known only by the holotype female of *D. niger* Chickering, 1946 from Panama) with *Simprulla*.

Here we present new records of *S. nigricolor* from the Caribbean coast of Colombia, from the Atlántico and Bolívar Departments, from two conserved tropical dry forests. These records (with males and females together from the same locations) give new data that supports the presumption of Galiano (1964) that *Donatius niger* is the female of *S. nigricolor*. A map with the known distribution of the genus in the Neotropical region is included.

Materials and methods

The material examined was deposited in the Arachnological Collection of the Instituto de Ciencias Naturales, Universidad Nacional de Colombia (ICN-Ar, Eduardo Flórez), Bogotá, Colombia. Multifocal photographs of sexual characters were taken with a Leica MC-170 HD digital camera attached to a Leica M205A stereomicroscope, and then composited with image stacking software (Leica Application Suite version 4.6.0). For visualization of female genitalia the epigynal plate was dissected and cleared in 10% KOH. The map was prepared with the Geographic Information System QGIS “Nødebo” version 2.16.0 (<http://www.qgis.org/es/site/>).

***Simprulla Simon, 1901* (Simon, 1901a: 74)**

Type species. *Simprulla nigricolor* Simon, 1901. (Simon 1901a: 74)

Note. For diagnosis and further taxonomic information, see Galiano (1963: 450, pl. 37, figs. 8-9; 1964: 419-423, pl. 1 figs. 1-7).

***Simprulla nigricolor* Simon, 1901**

Figures 1-7

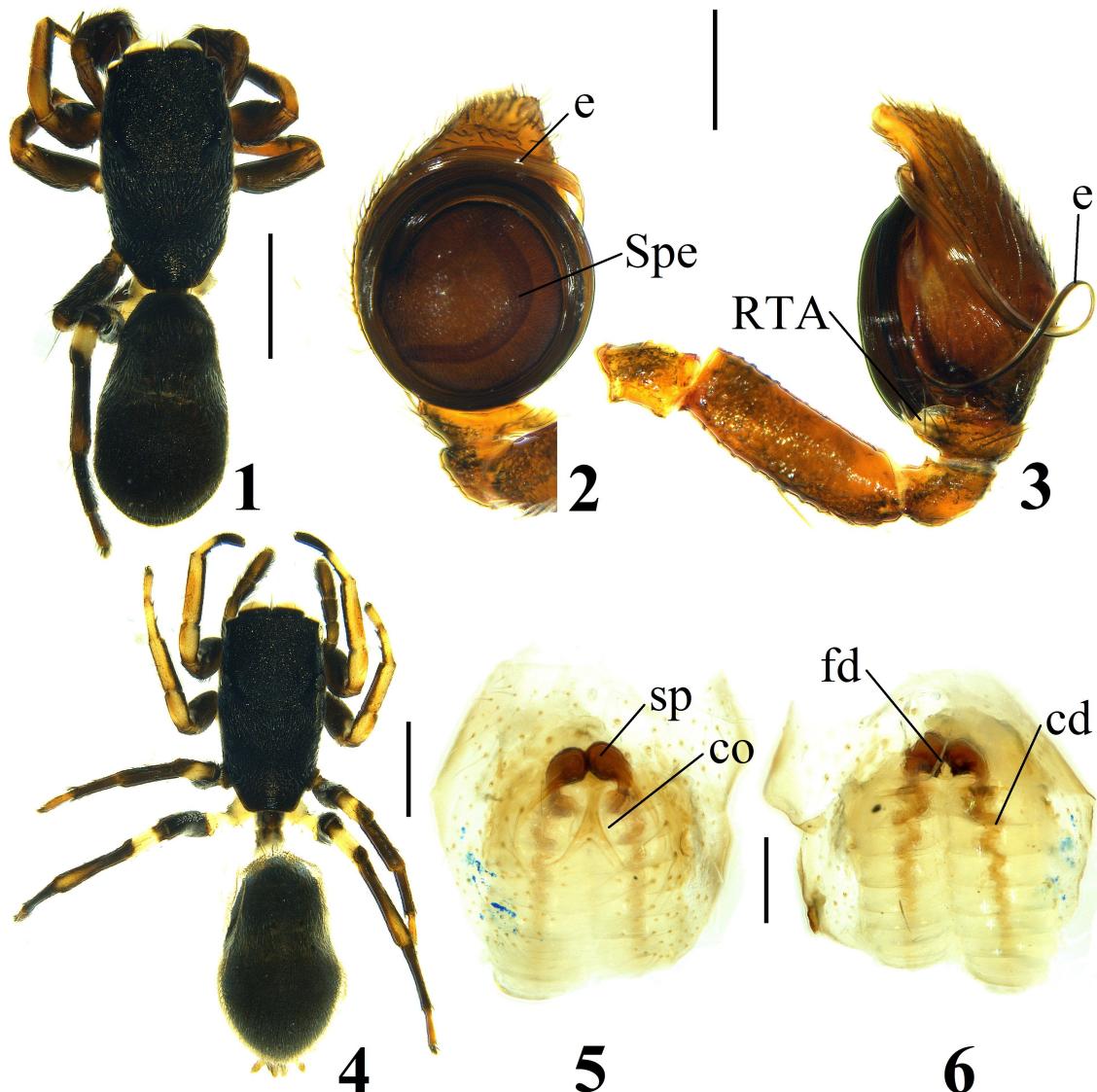
Simprulla nigricolor Simon, 1901a: 74 (male holotype from Fonteboa, Amazonas, Brazil, deposited in MNHN, not examined). Simon, 1901b: 519, 521, 523, figs. 623(D)-624(E). Mello-Leitão, 1933: 84. Galiano, 1963: 450, pl. 37, figs. 8-9 (redescription of the male holotype). Galiano, 1964: 420, pl. 1, figs. 8-9 (redescription of the female). Jackowska & Prószyński, 1975: 42, fig. 4d. World Spider Catalog, 2017.

Donatius niger Chickering, 1946: 440, figs. 404-406 (female holotype from Canal Zone Biological Area, Panamá, deposited in MCZ, not examined). Species and genus synonymized by Galiano (1964: 420).

Material examined. 1♂ and 1♀, from Colombia, Bolívar, San Jacinto, Reserva Campesina La Flecha, 9.852°N, 75.175°W, 324 m above sea level, 9 OCT 2016, L. Martínez (ICN-Ar 8326); 1♂ and 1 juvenile from Colombia, Atlántico, Usiacurí, Reserva Campesina La Montaña, 10.766°N, 75.042°W, 177-250 m above sea level, APR 2016, L. Martínez (ICN-Ar 8225).

Note. For diagnosis and further taxonomic information, see Galiano (1963: 450; 1964: 420).

Distribution and Natural History. Known from Panama (Canal Zone Biological Area), Colombia (Atlántico, Bolívar), and Brazil (Amazonas). This species was collected by beating low vegetation in a tropical low-dry ecosystem, in a fragment of secondary forest, with an average yearly precipitation close to 1790 millimeters, average temperature 28°C, and average relative humidity 83.5%. Previously *S. nigricolor* was known from the Brazilian subregion of the Neotropical region (Guatuso-Talamanca, Guajira, Magdalena and Imerí provinces), while *S. argentina* is known only from the Chacoan subregion (Chacoan province) and the South American transition zone (Monte province) (Morrone, 2014) (Figure 7).



Figures 1-6. *Simprulla nigricolor* Simon. **1**, Male, habitus. **2**, Same, left palp, ventral view. **3**, Same, retrolateral view. **4**, Female, habitus. **5**, Same, epigyne, cleared, ventral view. **6**, Same, dorsal view. Scale: 2.0 mm (1, 4), 0.5 mm (2-3), 0.2 mm (5-6). Abbreviations: e=embolus, cd=copulatory duct, co=copulatory opening, fd=fertilization duct, sp=spermatheca, Spe=spermophore, RTA=retrolateral tibial apophysis.



Figure 7. Known distribution of the species of the genus *Simprulla* in the Neotropical region.

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References

- Chickering, A. M. 1946.** The Salticidae of Panama. Bulletin of the Museum of Comparative Zoology at Harvard College 97: 1-474.
- Galiano, M. E. 1963.** Las especies americanas de arañas de la familia Salticidae descriptas por Eugène Simon: Redescripciones basadas en los ejemplares típicos. Physis, Revista de la Sociedad Argentina de Ciencias Naturales (C) 23: 273-470.
- Galiano, M. E. 1964.** Salticidae (Araneae) formiciformes. III. Revisión del género *Simprulla* Simon, 1901. Physis, Revista de la Sociedad Argentina de Ciencias Naturales (C) 24: 419-423.

- Jackowska, B. and J. Prószyński.** 1975. In search of the natural system of ant-like Salticidae. Proceedings of the 6th International Arachnological Congress: 39-43.
- Maddison, W. P. and M. C. Hedin.** 2003. Jumping spider phylogeny (Araneae: Salticidae). Invertebrate Systematics 17: 529-549.
- Maddison, W. P.** 2015. A phylogenetic classification of jumping spiders (Araneae: Salticidae). Journal of Arachnology 43: 231-292.
- Mello-Leitão, C. F. de.** 1933. Ensaio sobre as myrmarachninhas do Brasil. Boletim do Museu Nacional do Rio de Janeiro 9: 39-102.
- Morrone, J. J.** 2014. Biogeographical regionalization of the Neotropical region. Zootaxa 3782 (1): 1-110.
- Simon, E.** 1901a. Etudes arachnologiques. 31e Mémoire. L. Descriptions d'espèces nouvelles de la famille des Salticidae (suite). Annales de la Société Entomologique de France 70: 66-76.
- Simon, E.** 1901b. Histoire naturelle des araignées. Paris 2, 381-668.
- World Spider Catalog.** 2017. Natural History Museum Bern, online at <http://wsc.nmbe.ch>, version 18.0, accessed on 28 February 2017.