

Scientific Note/Comunicação Científica

Social wasps (Polistinae) from Pampa Biome: South Brazil, Northeastern Argentina and Uruguay

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Abstract. This study aimed to determine social wasps' species from Pampa Biome. Were examined samples of social wasps from south-central of Rio Grande do Sul state (Brazil), parts of Buenos Aires, Entre Rios, Corrientes, Cordoba, Santa Fé and La Pampa provinces (Argentina) and in Uruguay maintained in the Coleção Entomológica de Santa Cruz do Sul (Santa Cruz do Sul-Brazil), American Museum of Natural History (New York - USA), Natural History Museum (London-United Kingdom) and Muséum National d'Histoire Naturelle (Paris-France). Thirty species were recorded: *Agelaia* (01), *Brachygastra* (01), *Mischocyttarus* (04), *Polistes* (15), *Polybia* (08) and *Protonectarina* (01).

Keywords: Grasslands; *Polistes*; *Polybia*; Rio Grande do Sul; Vespidae.

Vespas sociais do Bioma Pampa: sul do Brasil, nordeste da Argentina e Uruguai.

Resumo. Este estudo objetivou determinar as espécies de vespas sociais provenientes do Bioma Pampa. Foram examinadas vespas sociais provenientes de coletas da região centro-sul do Rio Grande do Sul (Brasil), parte das províncias de Buenos Aires, Entre Rios, Corrientes, Cordoba, Santa Fé e La Pampa (Argentina) e Uruguai depositadas na Coleção Entomológica de Santa Cruz do Sul (Santa Cruz do Sul-Brazil), American Museum of Natural History (Nova Iorque-USA), Natural History Museum (Londres-Reino Unido) e Muséum National d'Histoire Naturelle (Paris-França). Trinta espécies foram registradas: *Agelaia* (01), *Brachygastra* (01), *Mischocyttarus* (04), *Polistes* (15), *Polybia* (08) e *Protonectarina* (01).

Palavras-chave: Pastagens; *Polistes*; *Polybia*; Rio Grande do Sul; Vespidae.

The Pampa biome is an extensive natural grassland region located between the south of Brazil, Northeastern Argentina and Uruguay (SUERTEGARAY & SILVA 2009). This region includes some very fragile environments and is of common sense that the presence of grasslands and the hindering of forest expansion over the area are, nowadays, greatly influenced by the human activities. On the other hand, these activities have great negative influence on the conservation of the natural areas and the biodiversity of the region (ROESCH *et al.* 2009).

In Brazil, the Pampa is restricted to south-central part of Rio Grande do Sul state, with an area of 176,496 km² (IBGE 2004). This corresponds to 63% of the state territory and 2.07% of the Brazilian territory. In Argentina, Pampa occupy parts of Buenos Aires, Entre Rios, Corrientes, Cordoba, Santa Fé and the Northeastern La Pampa provinces with an area of 468,000 km² (APN 1998). In Uruguay, Pampa cover all its territory.

Knowledge about the Pampa richness and composition of terrestrial arthropods is extremely precarious and with large gaps, according to an assessment carried out to define the status

of knowledge of Brazilian biodiversity (LEWINSOHN 2006). With the fauna of social wasps, this scenario is not very different, as the information about this taxon in the different environments of this Biome, when not completely absent, is insufficient.

The social wasps (Vespidae: Polistinae) comprise 26 genera and 958 species widely distributed mostly in the Neotropical region (PICKETT & CARPENTER 2010). These wasps play an important role and are important components for complex interactions with other organisms in Neotropical ecosystems (SOMAVILLA *et al.* 2015).

Due to the lack of information about the social wasps of this biome and being a legally protected area, the objective of this study is to provide a species inventory, which may eventually support future studies on wasps' biology and conservation.

Samples of social wasps collected in the year 2008 and 2009 in the South of Rio Grande do Sul state (Brazil) and in Uruguay, in 2010 were examined. In addition, we examined specimens from:

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CECSC: Coleção Entomológica de Santa Cruz do Sul in Rio Grande do Sul – Brazil;

AMNH: American Museum of Natural History, New York – United States of America;

NHM: Natural History Museum, London – United Kingdom;

MNHN: Muséum National d'Histoire Naturelle, Paris – France.

Thirty species in six genera were recorded: *Agelaia* (01), *Brachygastra* (01), *Mischocyttarus* (04), *Polistes* (15), *Polybia* (08) and *Protonectarina* (01).

Social wasps' species recorded from Pampa:

Agelaia multipicta (Haliday)

Distribution: **Brazil:** Rio Grande do Sul: Caçapava do Sul, Canguçu, Encruzilhada do Sul, Rio Pardo (CECSC). **Uruguay:** Montevideo (AMNH).

Brachygastra lecheguana (Latreille)

Distribution: **Brazil:** Rio Grande do Sul: Bagé, Caçapava do Sul, Camaquã, Dom Pedrito, Quaraí, Rio Pardo, Santana do Livramento, Santiago, São Gabriel, Uruguaiana (CECSC). **Uruguay:** Maldonado, Montevideo (CECSC, AMNH). **Argentina:** Buenos Aires, Corrientes, Entre Rios (AMNH).

Mischocyttarus drewseni de Saussure

Distribution: **Brazil:** Rio Grande do Sul: Alegrete, Bagé, Butiá, Caçapava do Sul, Cachoeira do Sul, Dom Pedrito, Encruzilhada do Sul, Quaraí, Rio Pardo, Santana do Livramento, São Gabriel, Uruguaiana (CECSC). **Argentina:** Buenos Aires, Corrientes, Entre Rios (AMNH).

Mischocyttarus lilae Willink

Distribution: **Argentina:** Corrientes (AMNH).

Mischocyttarus rivulorum Richards

Distribution: **Argentina:** Entre Rios (AMNH).

Mischocyttarus rotundicollis (Cameron)

Distribution: **Brazil:** Rio Grande do Sul: Rio Pardo, São Gabriel (CECSC). **Uruguay:** Montevideo (AMNH).

Polistes actaeon Haliday

Distribution: **Brazil:** Rio Grande do Sul: Rio Pardo, São Gabriel (UNISC). **Argentina:** Corrientes, Entre Rios (AMNH, MNH).

Polistes biguttatus Haliday

Distribution: **Brazil:** Rio Grande do Sul: Encruzilhada do Sul (CECSC).

Polistes billardieri Fabricius

Distribution: **Brazil:** Rio Grande do Sul: Bagé, Caçapava do Sul, Cachoeira do Sul, Dom Pedrito, Santiago (CECSC). **Uruguay:** Montevideo (MNHN). **Argentina:** Corrientes, Entre Rios (AMNH, MNH, MNHN).

Polistes brevifissus Richards

Distribution: **Brazil:** Rio Grande do Sul: Bagé, Quaraí, Santana do Livramento, Santiago, São Gabriel (CECSC). **Uruguay:** Maldonado, Montevideo (CECSC, AMNH). **Argentina:** Buenos Aires (AMNH).

Polistes buyssoni Brethes

Distribution: **Argentina:** Buenos Aires (AMNH).

Polistes canadensis (Linnaeus)

Distribution: **Brazil:** Rio Grande do Sul by RICHARDS (1978). **Uruguay:** Montevideo (MNHN). **Argentina:** Buenos Aires, Corrientes (AMNH).

Polistes carnifex Fabricius

Distribution: **Brazil:** Rio Grande do Sul: Cachoeira do Sul, Capão do Leão, Rio Pardo (CECSC). **Uruguay:** Montevideo (MNHN).

Polistes cavapyta de Saussure

Distribution: **Brazil:** Rio Grande do Sul: Caçapava do Sul, Quaraí, Rio Pardo (CECSC). **Uruguay:** Montevideo (AMNH). **Argentina:** Buenos Aires, Corrientes, Entre Rios (AMNH, MNHN).

Polistes cavapytiformis Richards

Distribution: **Brazil:** Rio Grande do Sul: Butiá, Cachoeira do Sul, Rio Pardo (CECSC).

Polistes cinerascens de Saussure

Distribution: **Brazil:** Rio Grande do Sul: Bagé, Caçapava do Sul, Encruzilhada do Sul, Pantano Grande, Quaraí, Rio Pardo, Santana do Livramento, São Gabriel (CECSC). **Uruguay:** Maldonado (CECSC). **Argentina:** Buenos Aires, Entre Rios (AMNH, MNH).

Polistes consobrinus de Saussure

Local de ocorrência: **Brazil:** Rio Grande do Sul: Encruzilhada do Sul (CECSC). **Uruguay:** Maldonado, Montevideo (CECSC, MNHN). **Argentina:** Buenos Aires, Entre Rios (AMNH, MNH).

Polistes ferreri de Saussure

Distribution: **Brazil:** Rio Grande do Sul: Butiá, Caçapava do Sul, Cachoeira do Sul, Encruzilhada do Sul (CECSC). **Uruguay:** Maldonado, Montevideo (CECSC, AMNH). **Argentina:** Buenos Aires (AMNH, MNH).

Polistes lanio (Fabricius)

Distribution: **Brazil:** Rio Grande do Sul: Caçapava do Sul, Encruzilhada do Sul (CECSC). **Argentina:** Corrientes (AMNH).

Polistes simillimus Zikán

Distribution: **Brazil:** Rio Grande do Sul: Bagé, Encruzilhada do Sul, Quaraí, São Gabriel (CECSC). **Argentina:** Buenos Aires, Entre Rios (AMNH, MNH).

Polistes versicolor (Olivier)

Distribution: **Brazil:** Rio Grande do Sul: Caçapava do Sul, Camaquã, Pantano Grande, Rio Pardo, Santana do Livramento (CECSC). **Uruguay:** Maldonado (CECSC). **Argentina:** Buenos Aires, Entre Rios (AMNH).

Polybia fastidiosuscula de Saussure

Distribution: **Brazil:** Rio Grande do Sul: Encruzilhada do Sul, Rio Pardo (CECSC). **Argentina:** Corrientes (AMNH).

Polybia ignobilis (Haliday)

Distribution: **Brazil:** Rio Grande do Sul: Caçapava do Sul, Cachoeira do Sul, Encruzilhada do Sul, Pantano Grande, Quaraí, Rio Pardo, Uruguaiana. (CECSC). **Uruguay:** Maldonado,

Montevideo (CESC, AMNH). **Argentina:** Buenos Aires, Corrientes, Entre Rios (AMNH).

Polybia occidentalis (Olivier)

Distribution: **Argentina:** Corrientes, Entre Rios (AMNH).

Polybia paulista H. von Ihering

Distribution: **Argentina:** Corrientes (AMNH).

Polybia platycephala Richards

Distribution: **Brazil:** Rio Grande do Sul: Bagé, Encruzilhada do Sul (CESC).

Polybia ruficeps Schrottky

Distribution: **Argentina:** Buenos Aires, Corrientes (AMNH).

Polybia scutellaris (White)

Distribution: **Brazil:** Rio Grande do Sul: Alegrete, Bagé, Boa Vista das Missões, Caçapava do Sul, Cachoeira do Sul, Dom Pedrito, Encruzilhada do Sul, Pantano Grande, Rio Pardo, Santana do Livramento, São Gabriel (CESC). **Uruguay:** Maldonado, Montevideo (CESC, AMNH). **Argentina:** Buenos Aires, Corrientes, Entre Rios (AMNH).

Polybia sericea (Olivier)

Distribution: **Brazil:** Rio Grande do Sul: Bagé, Caçapava do Sul, Dom Pedrito, Encruzilhada do Sul, Pantano Grande, Rio Pardo, São Gabriel, Uruguiana (CESC). **Uruguay:** Montevideo

(AMNH). **Argentina:** Buenos Aires, Corrientes, Entre Rios (AMNH).

Protonectarina sylveirae (de Saussure)

Distribution: **Brazil:** Rio Grande do Sul: Caçapava do Sul (CESC).

Polistes species, mainly *P. billardieri*, *P. canadensis*, *P. carnifex* and *P. versicolor* were distributed to the three countries where the pampa biome is present. These species are widely distributed in the Neotropics, some even occurring from the south of the United States to the south of South America. Another four species *P. cavapyta*, *P. cinerascens*, *P. consobrinus* and *P. ferreri* were also collected in the three countries and have this distribution restricted to South America.

Some species of Epiponini, like *Polybia*, mainly *P. ignobilis*, *P. scutellaris*, *P. sericea* and *Brachygastra lecheguana* and *Agelaia multipicta* were distributed to the three countries where the pampa biome is present and these species are widely distributed in South America, mainly in other biomes of Brazil. However, the most of *Mischocyttarus* species are more restricted to certain biomes, having smaller distribution there are one or a few localities. The same happens with *Protonectarina sylveirae*.

Despite the small area of the Biome pampa and few collection efforts in this environment, some species of social wasps distributed in these sites deserve special attention because the more restricted distribution and possibility of finding cryptic species.

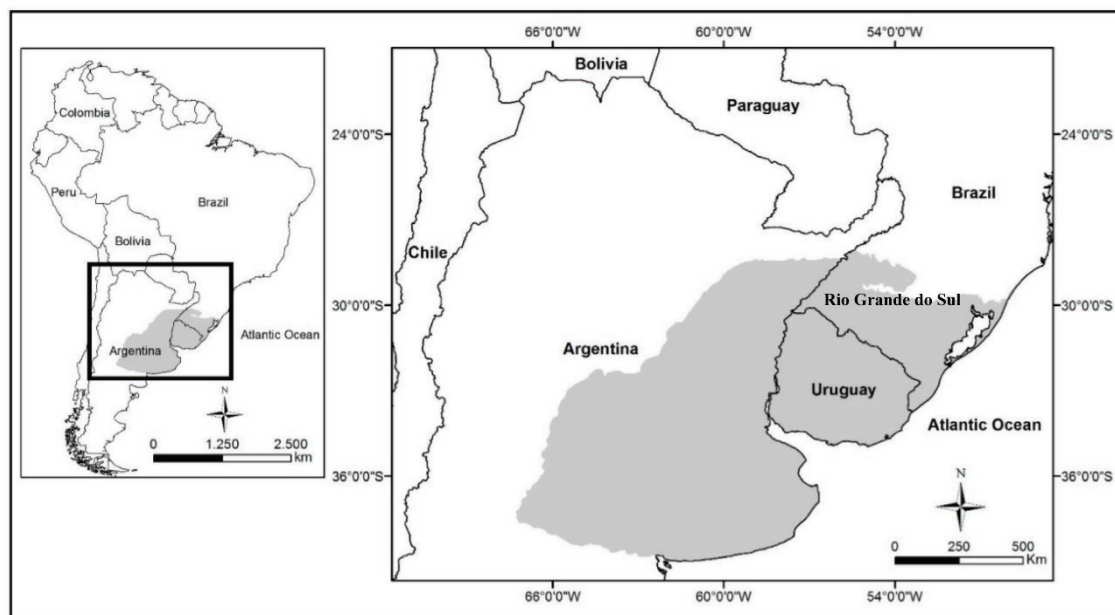


Figure 01. Location of the Pampa biome in South Brazil, Northeastern Argentina and Uruguay (grey-shaded area) (SCOTTÁ & FONSECA 2015).

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