Check List
Journal of Species Lists and Distribution

ISSN 1809-127X (online edition)
www.checklist.org.br


**NOTES ON GEOGRAPHIC DISTRIBUTION**

# Diptera, Sarcophagidae, *Microcerella argentina* (Lopes, 1982): Distribution extension

Pablo R. Mulieri [*] and Juan C. Mariluis

*National Council of Scientific and Technical Research (CONICET), Departamento Vectores, ANLIS Dr. Carlos G. Malbrán. Avenida Vélez Sarsfield 563, (1281). Buenos Aires, Argentina.*

[*] Corresponding author. E-mail: mulierii@yahoo.com

Sarcophaginae (Diptera) is large family with a worldwide distribution, and the Neotropical region has the most diversified sarcophagid fauna (Lopes 1969; Pape 1996). The New World genus *Microcerella* Macquart includes seventy four described species (Mariluis 2006). In this context, several *Microcerella* species are monotypic (Pape 1990), poorly represented in museum collections, and little is known about their life cycle, geographic distribution or habitat association.

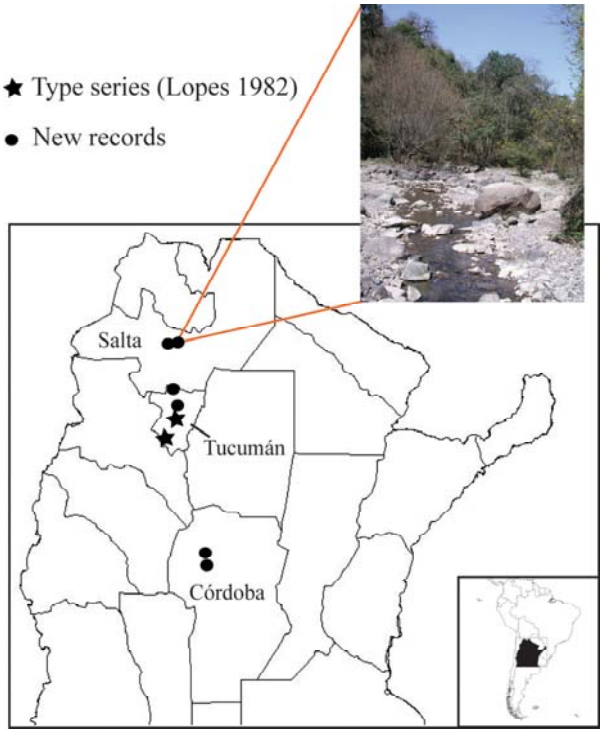


**Figure 1.** Map of northwestern Argentina showing the distribution of *Microcerella argentina* based on the original localities of type material (Lopes 1982a) and the present new records. The photograph shows the habitat of the species in Quebrada San Lorenzo, province of Salta.

The genus *Boetia* was stated by Dodge (1965), with *Boetia curiosa* being the type species. Two decades later, Lopes (1982a) described *Boetia argentina* based on two male specimens from province of Tucumán (Argentina), deposited in Biosystematic Research Institute (currently the Canadian National Collection of Insects, CNC), Ottawa, Canada (the holotype) and *Museu Nacional da Universidade Federal do Rio de Janeiro* (MNRJ), Rio de Janeiro, Brazil (paratype). More recently, Pape (1990) proposed the generic name *Boetia* as synonym of *Microcerella*. At present, the female and the life cycle habits of *Microcerella argentina* are unknown.

This study provides new site records for *M. argentina*, hence filling gaps and expanding its known geographic distribution. Our new data are based on taxonomical surveys made by J. C. Mariluis and P. R. Mulieri in northwestern Argentina during several collecting trips.

Male specimens collected were dissected using the technique described by Lopes (1973) and Dahlem and Naczi (2006) to allow the examination of aedeagal and other genital structures. This was done by placing a pin on the anterior surface of cerci and pushing back to spread the genitalia (Dahlem and Naczi 2006). The specimens were kept in dry conditions during 2-3 days to permanently expose the genitalia for subsequent studies. Specimens identification was ensured using the key of Microcerellini genera provided by Lopes (1982b), followed by the detailed examination of the male genitalia compared to original description (Lopes 1982a). All collected specimens were deposited in the collection of *Departamento Vectores, ANLIS Dr. Carlos G. Malbrán*.

Our current findings show that *M. argentina* is widely distributed in six new localities from three provinces of Argentina (Figure 1). Individuals of *M. argentina* were also recorded from areas belonging to the Yungas region, in provinces of Tucumán and Salta (Table 1). In Argentina, the Yungas cloud forest is discontinuously distributed in Salta, Jujuy, Tucumán, and Catamarca, on the oriental slopes of the Andes, and has an altitudinal range of 400 to 3000 m above sea level (Cabrera 1971).

In addition, the two new records of *M. argentina* from the province of Córdoba were from the district of Chaco Serrano. All specimens, including the holotype, were registered at 800-1500 m above sea level at sites placed near to wooded areas or riparian vegetation associated to mountain water streams (Table 1).

These records are relevant since they are the first for *M. argentina* in Córdoba and Salta provinces and extend the known distribution of the species both north and the south of its original distribution. Thus, the present distribution of *M. argentina* follows a mountain corridor constituted by the Yungas cloud forest on the Sub Andean chains of Salta and Tucumán provinces, and the Sierra Comechingones in Córdoba (Figure 1). Finally, we remark that a similar pattern of geographical distribution in association with these highland areas were previously described for other calyptrate species (e. g. *Compsomyiops verena*, Calliphoridae) (Mariluis and Mulieri 2003).

**Table 1.** Specimen data of *Microcerella argentina* collected in northwestern Argentina (References: HT = holotype, PT = paratype).

| Specimens | Date | Location (locality, province) | Altitude | Habitat / Region | Source |
|---|---|---|---|---|---|
| 1 ♂ (HT) | 1-X-1968 | Alpachiri, Tucumán | 1000 m | watercourse / Yungas | Lopes (1982a) |
| 1 ♂ (PT) | 1-I-1957 | Famailiá, Tucumán | - | Yungas | Lopes (1982a) |
| 1 ♂ | III-1979 | San Pedro de Colalao, Tucumán | 1190 m | Yungas | Mariluis leg. |
| 1 ♂ | I-2001 | Capilla del Monte, Córdoba | 1000 m | Chaco Serrano | Mariluis leg. |
| 1 ♂ | IX-2005 | Mt. San Javier, Tucumán | 800 m | wood / Yungas | Mulieri leg. |
| 1 ♂ | VIII-2008 | Mt. San Bernardo, Salta | 1500 m | wood / Yungas | Mulieri leg. |
| 1 ♂ | VIII-2008 | Quebrada San Lorenzo, Salta | 1500 m | watercourse / Yungas | Mulieri leg. |
| 1 ♂ | X-2008 | Huerta Grande, Córdoba | 900 m | watercourse / Chaco Serrano | Mulieri leg. |

**Acknowledgements:** We thank Natalia Flores for her valuable assistance in field work.

## Literature Cited

Cabrera, A.L. 1971. Fitogeografía de la República Argentina. Boletín de la Sociedad Argentina de Botánica 14: 1-42.

Dahlem, G.A. and R.F.C. Naczi. 2006. Flesh flies (Diptera: Sarcophagidae) associated with North American pitcher plants (Sarraceniaceae), with descriptions of three news species. Annals of the Entomological Society of America 99(2): 218-240.

Dodge, H.R. 1965. Neotropical Sarcophaginae with impressed scutellum (Diptera, Sarcophagidae). Annals of the Entomological Society of America 58: 252-259.

Lopes, H.S. 1969. Family Sarcophagidae; p. 1-88 *In* N. Papavero (ed.). A catalogue of the Diptera of the Americas south of the United States. São Paulo: Departamento de Zoologia Secretaria da Agricultura.

Lopes, H.S. 1973. Collecting and rearing sarcophagid flies (Diptera) in Brazil during forty years. Anales Academia Brasileira de Ciéncias 45(2): 279-291.

Lopes, H.S. 1982a. On Microcerellini (Diptera, Sarcophagidae) with four new species of *Boettia*. Revista Brasileira de Biologia 42(3): 607-617.

Lopes, H.S. 1982b. The genera of Microcerellini (Diptera, Sarcophagidae) Revista Brasileira de Biologia 42(2): 359-369.

Mariluis, J.C. 2006. Description of a new species of *Microcerella* (Diptera: Sarcophagidae) from Argentinean Patagonia. Zootaxa 1124: 47-53.

Mariluis, J.C. and P.R. Mulieri. 2003. The Distribution of the Calliphoridae in Argentina (Diptera). Revista de la Sociedad Entomológica Argentina 62(1-2): 81-106.

Pape, T. 1990. Revisonary notes on American Sarcophaginae (Diptera: Sarcophagidae). Tijdschrift voor Entomologie 133: 43-74.

Pape, T. 1996. Catalogue of Sarcophagidae of the world (Insecta: Diptera). Memoirs on Entomology International 8: 1-558.

Received: January 2009
Revised: August 2009
Accepted: September 2009
Published online: October 2009
Editorial responsibility: André Victor L. Freitas