

A new solifugae species of *Mummucina* Roewer, 1934 (Solifugae, Mummuciidae) from the Northwest of Argentina

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Abstract

A new species of Mummuciidae, *Mummucina puna* sp. nov. (male and female) from Northwest Puna eco-region of Salta province, Argentina, is described and illustrated. A key and distribution map of known species of the genus *Mummucina* are provided.

Key words: Sun spiders, new species, dry desert, Puna eco-region

Introduction

The solifugid family Mummuciidae Roewer, 1934 comprises 19 species known to the Americas, belonging to eight genera: *Cordobulgida* Mello-Leitão, 1938; *Gaucha* Mello-Leitão, 1924; Mello-Leitão, 1937; *Metacleobis* Roewer, 1934; *Mummucia* Simon, 1879; *Mummucina* Roewer, 1934; *Mummucipes* Roewer, 1934 and *Uspallata* Mello-Leitão, 1938. *Mummucina* is a genus distributed in the west of South America and comprises five species: *M. colinalis* Kraus, 1966 (male and female), and *M. romero* Kraus, 1966 (female) from Chile; *M. exlineae* Mello-Leitão, 1943 (female), and *M. masculina* Lawrence, 1954 (male) from Peru, and *M. titschacki* Roewer, 1934 (female) from Ecuador. This genus is characterized by the absence of dorso-apical spine-like setae on tibiae of legs II and III and by the presence of nine (1. 2. 2. 4) latero-ventral spine-like setae on tarsi of legs II and III, 12 (2.2. 2-2. 4) latero-ventral spine-like setae on tarsi of leg IV, and three anterior teeth on the cheliceral fixed finger (Roewer 1934; Muma 1971).

The species of *Mummucina* are distinguished by colouration and markings, cheliceral dentition and body size (Muma 1971). This genus has not been recorded in Argentina, but the material collected from arthropods in the Prepuna-Puna of northwestern Argentina allowed us to record several solifugids species of Mummuciidae and Ammotrechidae, and a new species of *Mummucina*. This new species was collected from the Central Andean Dry Puna eco-region, Salta province, Argentina. This eco-region is a cold desert situated between 3000 and 4000 m a.s.l., limited by the Andes mountain range to the east and west. This area is characterized by high levels of endemism and is currently undergoing a degradation process due to erosion, overexploitation of ligneous and cactaceous species, and mining activity (Bertonatti & Corcuera 2000).

In this paper we describe and illustrate *Mummucina puna* sp. nov. (male and female), and provide the first record of the genus *Mummucina* in Argentina. We provide a species key for the genus and a map of its distribution using known distributional records.

Material and methods

Study area and sampling: The new species was collected from three sampling sites in the Argentine Puna eco-

Female paratypes (Colouration in 70% ethanol): same as the male but paler. Other morphological characters as in male, except for the following feature: chelicerae (Fig.11) with stridulatory apparatus on mesal view with seven ridges (Fig. 10).

Measurements (largest female paratype). Total body length, 15.4. Chelicerae, 3.3 long, 1.1 wide. Propeltidium, 2.1 long, 2.6 wide. Opisthosoma, 9.5 long, 3.4 wide. Length of pedipalpi, 6.7. Total length of legs (I–IV): 5.3, 3.9, 5.5, 10.2. Genital operculum triangular (0.23 long, 0.77 wide) with straight side edges, the posterior edge slightly curved (Fig. 12).

Remarks. While 65% of the specimens (14 males and three females) had five ectal fondal teeth, two males showed supernumerary teeth (6 and 7), and six specimens (two males, three females and one immature) had four teeth. In the new species here described we found clubbed setae with terminal pores on the pedipalpi (Fig. 6), similar to those observed by Cushing and Casto (2012) for different types of setae recorded in Daesiidae and Ceromidae solifugids. This type of setae might function as chemoreceptors.

Other examined material. ARGENTINA: Salta province: Route 51, 4 km northwest of Las Cuevas ($24^{\circ}21'25''S$ $66^{\circ}04'36''W$, 3600 m a.s.l.): 7 males, 19/VIII/2006; male, 15/V/2006, Cols. González Reyes A.X. & J. A. Corronca, IEBI-MCN (UNSa). Cuesta de Muñano ($24^{\circ}19'38''S$ $66^{\circ}06'39''W$, 3898 m a.s.l.): female and immature, 22/XI/2005; male, 15/V/2006; male, 24/II/2006, Cols. González Reyes A.X. & J. A. Corronca, IEBI-MCN (UNSa). Route 51 at 10 km north of Muñano ($24^{\circ}18'05''S$ $66^{\circ}08'14''W$, 3980 m a.s.l.): 3 males, 19/VIII/2006; female, 24/II/2006, Cols. González Reyes A.X. & J. A. Corronca, IEBI-MCN (UNSa).

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References

- Bertonatti, C. & Corcuera, J. (2000) *Situación Ambiental Argentina 2000*. Fundación Vida Silvestre, Buenos Aires, Argentina, 577 pp.
- Cushing, P. & Casto, P. (2012) Preliminary survey of the setal and sensory structures on the pedipalps of camel spiders (Arachnida: Solifugae). *The Journal of Arachnology*, 40, 123–127.
<http://dx.doi.org/10.1636/b11-71.1>
- Kraus, O. (1966) Solifugen aus Chile (Arach.). *Senckenbergiana Biologica*, 47 (3), 181–184.
- Kury, A. & Nogueira, A. (1999) Annotated check list of type specimens of Arachnida in the Museu Nacional Rio de Janeiro i. Scorpiones, Pseudoscorpiones and Solifugae. *Publicações Avulsas do Museu Nacional Rio de Janeiro*, 77, 1–19.
- Lawrence, R.F. (1954) Some Solifugae in the collection of the British Museum (Natural History). *Proceedings of the Zoological Society of London*, 124 (1), 111–124.
<http://dx.doi.org/10.1111/j.1096-3642.1954.tb01483.x>
- Maury, E.A. (1970) Sobre la presencia de *Gaucha fasciata* Mello-Leitão, 1924 en la Argentina. *Physis*, 79, 357–362.
- Mello-Leitão, C. de. (1924) A new South American Solpugid. *Revista Chilena de Historia Natural Pura y Aplicada*, 28, 140–143.
- Mello-Leitão, C. de. (1937) Notes sur quelques solifuges de l'Amérique du Sud. *Annaes da Academia Brasileira de Ciencias*, 9, 83–86.
- Mello-Leitão, C. de. (1938) Solífugos de Argentina. *Anales del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"*, 40, 1–30.
- Mello-Leitão, C. de. (1943) Arácnidos recogidos en el Ecuador y el Perú por la señora H. E. Frizell Don. *Comunicaciones Zoológicas del Museo de Historia Natural de Montevideo*, 1 (5), 1–8.
- Muma, M.H. (1971) The Solpugids (Arachnida: Solpugida) of Chile with descriptions of a new family, new genera, and new species. *American Museum Novitates*, 2476, 1–23.

- Muma, M.H. (1976) A review of solpugid families with an annotated list of Western Hemisphere solpugids. *Publications of the Office of Research Western New Mexico University*, 2 (1), 1–33.
- Reboratti, C. (2006) Situación ambiental en las ecorregiones Puna y Altos Andes. In: Brown, A.D., Martínez Ortíz, U., Acerbi, M. & Corcuera, J. (Eds.), *La Situación Ambiental Argentina 2005*. Fundación Vida Silvestre Argentina, Buenos Aires, Argentina, pp. 28–31.
- Roewer, C.F. (1934) Solifugae, Palpigradi. In: Bronn, H.G. (Ed.), *Klassen und Ordnungen des Tierreichs. 5: Arthropoda. IV: Arachnoidea. Vol. 5 (IV) (4) (4–5)*. Akademische Verlagsgesellschaft M.B.H., Leipzig, pp. 481–723.
- Simon, E. (1879) Essai d'une classification des Galéodes, remarques synonymiques et description d'espèces nouvelles ou mal connues. *Annales de la Société Entomologique de France*, 5 (9), 93–154.