



<http://dx.doi.org/10.11646/zootaxa.3835.4.10>

<http://zoobank.org/urn:lsid:zoobank.org:pub:430E4226-DEE4-467C-9B33-ECDF268E6E47>

A new species of *Galendromimus* Muma from Brazil (Acari: Phytoseiidae), with a review of the tribe Galendromimini Chant & McMurtry

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Abstract

The genus *Galendromimus* Muma and the tribe Galendromimini Chant & McMurtry are redefined to accommodate a new species, *Galendromimus (Galendromimus) roraimensis* sp. n., described in this paper based on specimens collected in the state of Roraima, northern Brazil. The new species differs from other *Galendromimus* mainly by having dorsal shield seta z3 present. A dichotomous key to separate the species of Galendromimini is presented.

Key words: biological control, predatory mites, taxonomy

Introduction

The Phytoseiidae is one of the most extensively studied families of mites. It contains about 2,700 described species (Demite *et al.* 2014a, b). Some species in this family have been extensively used for the control of mite and insect pests (Gerson *et al.* 2003; McMurtry *et al.* 2013).

The subfamily Cydnodromellinae was proposed by Chant & Yoshida-Shaul (1986) to include *Cydnodromella* Muma, including *C. alveolaris* (De Leon), *C. borinquensis* (De Leon), *C. negevi* (Swirski & Amitai), *C. pilosus* (Chant), *C. sanctus* (De Leon) and *C. tunapunensis* (De Leon), and the monotypic genus *Platyseiella* Muma, with *P. platypilis* (Chant). A few years later, another species was included in *Cydnodromella*, *C. barretoae* (Yoshida-Shaul & Chant 1991).

Chant & McMurtry (1994) transferred *Platyseiella* to the Phytoseiinae and considered *C. pilosus* (the type of *Cydnodromella*) to belong to *Galendromimus* Muma, making *Cydnodromella* a junior synonym of *Galendromimus*. They then placed other species of *Cydnodromella* in different genera. *Cydnoseius* Muma was restored to include *C. negevi*, *Silvaseius* Chant & McMurtry was erected to accommodate *S. barretoae*, and the remaining species were placed in *Galendromimus* Muma, which was restored with *G. alveolaris* as its type species. Those three genera were then grouped to constitute a new tribe, Galendromimini, in the subfamily Typhlodrominae. A new genus, *Breviseius* Moraes, Barbosa & Castro was added to this tribe by Moraes *et al.* (2013). With the modifications published in the literature since then, the tribe now accommodates the genera *Breviseius* (one species), *Cydnoseius* (three species and five junior synonyms), *Galendromimus* (six species) and *Silvaseius* (one species). *Galendromimus* was originally described to contain only the type species. Species placed in this genus today are known only from the Americas, namely Brazil, Colombia, Costa Rica, Mexico, USA (Florida) and the Caribbean islands of Cuba, Jamaica, Marie Galante, Martinique, Puerto Rico and Trinidad (Demite *et al.* 2014b).

This paper describes and illustrates a new species of the genus *Galendromimus*, redefines the subgenus, genus and tribe to which it belongs, and presents a key for the separation of the species of Galendromimini.

Key to the world species of Galendromimini

The following key is partially based on Chant & McMurtry (2007). *Typhlodromus schusteri* Yousef & El-Brollosy belongs to *Cydnoseius*; however, it was not included in the key because it could not be separated from *C. negevi*, of which it could be a junior synonym (R.I.A.M. Abo-Shnaf & G.J. Moraes, unpublished).

1. Setae *S2* and *S4* present 2
- Setae *S2* and *S4* absent 5
2. Seta *Z1* absent *Breviseius* Moraes, Barbosa & Castro ... *B. sennae* Moraes, Barbosa & Castro
- Seta *Z1* present *Cydnoseius* Muma ... 3
3. Leg IV without macrosetae *C. muntius* Schicha & Corpuz-Raros
- Leg IV with macrosetae 4
4. Dorsal shield scale like reticules; sternal and ventrianal shields reticulate; genital shield reticulate laterally and smooth centrally *C. negevi* (Swirski & Amitai)
- Anterior half of dorsal shield transversely striate and posterior half with transversely elongate reticules; ventral shields smooth *C. vitis* Basha, Yousef, Ibrahim & Mostafa
5. Seta *z3* absent; *Z1* absent and *R1* present *Silvaseius* Chant & McMurtry ... *S. barretoae* (Yoshida-Shaul & Chant)
- Seta *z3* present/absent; *Z1* present and *R1* absent *Galendromimus* Muma ... 6
6. Setae *J2* and *JV3* absent; *JV4* and *ZV3* present; calyx of spermatheca cup-shaped; *JV5* stout and serrate *Galendromimus* (*Nothoseius*) De Leon ... *G. (N.) borinquensis* (De Leon)
- Seta *J2* present/absent, seta *JV3* present; *JV4* and *ZV3* absent; calyx of spermatheca variable; *JV5* setiform, smooth or serrate *Galendromimus* (*Galendromimus*) Chant & McMurtry ... 7
7. Seta *S5* absent 8
- Seta *S5* present *alveolaris* species group ... 9
8. Seta *z3* present *roraimensis* species group...*G. (G.) roraimensis* sp. n.
- Seta *z3* absent *sanctus* species group...*G. (G.) sanctus* De Leon
9. Seta *J2* absent; *JV5* serrated *G. (G.) paulista* Zacarias & Moraes
- Seta *J2* present; *JV5* smooth 10
10. Peritreme extending to level of *r3* *G. (G.) alveolaris* (De Leon)
- Peritreme extending to level of *j1* 11
11. With many distinct “pits” on the central region of the dorsal shield; *r3* on unsclerotised cuticle *G. (G.) multipoculi* Zacarias, Moraes & McMurtry
- Without “pits” on the central region of the dorsal shield; *r3* on dorsal shield *G. (G.) tunapunensis* De Leon

Acknowledgements

We are very grateful to J.A. McMurtry (University of California, Riverside, Oregon, USA) for his valuable suggestions during the preparation of this manuscript; to T.M.M.G. de Castro (Universidade Estadual de Roraima, Rorainópolis, Roraima State, Brazil) and A.L. Marsaro Jr. (Embrapa Trigo, Passo Fundo, Rio Grande do Sul State, Brazil) for providing us the specimens described in this work. Financial support was provided by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) (Process # 578190/2008-7). P.R. Demite is a postdoctoral fellow FAPESP (Process # 2011/08941-3), and A.C. Lofego, M.G.C. Gondim Jr. and G.J. de Moraes are CNPq-Brazil researchers.

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