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 are 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. boricuensis* (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 *Galendromus* Muma, making *Cydnodromella* a junior synonym of *Galendromus*. They then placed other species of *Cydnodromella* in different genera. *Cydnoseius* Muma was restored to include *C. negevi*, *Silvaeiuseius* 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 *Silvaeiuseius* (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 ........................................................................ 6
- Seta Z1 present ................................................................................
  - Leg IV without macrosetae ............................................................. 7
  - Leg IV with macrosetae .................................................................. 8
3. Dorsal shield scale like reticules; sternal and ventralian shields reticulate; genital shield reticulate laterally and smooth centrally ................................................................. 9
- Anterior half of dorsal shield transversely striate and posterior half with transversely elongate reticules; ventral shields smooth ................................................................. 10
4. JV3 absent .................................................................................. 11
- JV3 present ........................................................................................
  - JV5 smooth .................................................................................. 12
  - JV5 serrated ................................................................................... 13
5. JV5 present; JV4 and Z1 absent; calyx of spermatheca cup-shaped; JV5 stout and serrate ................................................................. 14
- JV5 absent .................................................................................... 15
6. JV4 and Z1 absent ......................................................................... 16
- JV4 present and JV5 absent .............................................................. 17
- JV4 and JV5 present; JV5 setiform, smooth or serrate ......................... 18
7. JV5 alveolaris species group .............................................................. 19
- JV5 roraimensis species group ........................................................ 20
  - JV5 stout and serrate .................................................................... 21
  - JV5 smooth .................................................................................. 22
8. JV5 present; JV4 and Z1 absent; calyx of spermatheca variable; JV5 setiform, smooth or serrate ................................................................. 23
- JV5 absent .................................................................................... 24
9. JV4 present; JV5 serrate .................................................................. 25
- JV4 absent .................................................................................... 26
10. Peritreme extending to level of r3 ....................................................... 27
- Peritreme extending to level of j1 ....................................................... 28
11. Without “pits” on the central region of the dorsal shield; r3 on unsclerotised cuticle ................................................................. 29
- With many distinct “pits” on the central region of the dorsal shield; r3 on sclerotised cuticle ................................................................. 30

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References

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http://dx.doi.org/10.2307/3493102

http://dx.doi.org/10.11646/zootaxa.3795.5.6


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