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A new species of *Xystonotus* Wolcott, 1900 (Acari, Hydrachnidia, Mideopsidae) from bromeliad phytotelmata in Brazilian Atlantic rainforest

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The rosette architecture of some bromeliad species traps water and organic matter from the canopy in leaf axils (forming phytotelmata) and harbors many species of invertebrate animals (Frank & Lounibos 2009). Some water mites are adapted to live in phytotelmata; typically recorded from water-filled tree holes, bromeliad tanks, and a range of plant axils. Karl Viets (1939) was the first acarologist who discovered *Micruracaropsis phytotelmaticola* (Viets, 1939) in the water contained in the leaf bases of epiphytic Bromeliaceae in Surinam. Later on, Orghidan *et al*. (1977) described *Arrenurus bromeliacearum* Orghidan, Gruia & Viña Bayés, 1977 from phytotelmata in Cuba. Orghidan & Gruia (1987) reported *Arrenurus andrewfieldi* Orghidan & Gruia, 1983 from phytotelmata of epiphytic bromeliad *Vriesea platynema* in Venezuela. Smith & Harvey (1989) described *Arrenurus kitchingi* Smith & Harvey, 1989 from water-filled tree holes in Queensland, Australia. The same authors (Smith & Harvey 1989) also reported that members of genus *Thyopsis* occur in water-filled tree holes in Ohio, USA. Rosso de Ferradás & Fernández (2001) reported two *Arrenurus* species from water accumulated in *Guzmania mucronata* (Bromeliaceae) in Venezuela, *A. andrewfieldi* Orghidan & Gruia, 1983 and *A. caquetiorum* Rosso de Ferradás & Fernández, 2001.

After the revision of the family by Pešić *et al*. (2013), *Xystonotus* Wolcott, 1900 is recognized as separate genus. In addition to the northern hemisphere nominate subgenus, the genus includes *Mixomideopsis* Cook, 2001 with two species from South Africa and Madagascar (Pešić *et al*. 2013). Members of this genus are found mostly in streams, often in mosses, under stones and in gravel substrata, in springs, especially in helocrenes, rarely in standing waters such as lakes and ponds. Some species have adapted to the hyporheic interstitial (Cook 1976). The nominate subgenus is Holarctic in distribution with 13 species known from North America (Cook 1976), one species widespread in Western, Central and Southern Europe and one species from South Iran (Asadi & Pešić 2010). Only one species was collected in the neotropics, from a spring at a high elevation (3200 m) in Mexico State, Mexico (Cook 1980).

Specimens of the present study were collected during an expedition organized of the Ph.D. thesis' research of A. Z. Gonçalves dealing with ecology of the bromeliad phytotelmata, to the State Park of Ilha do Cardoso (PEIC), an island located in the subtropical area of the Atlantic rainforest, São Paulo State. The study site consists of the rainforest formation called *restinga* (forest formations on sandy, acidic and nutrient-poor substrates at the Brazilian Atlantic coast) characterized by low canopy cover (5–8 m) and high densities of bromeliads in the understore. Mites were collected from phytotelmata of *Vriesea procera* (Martius ex Schultes f.) Wittmack, a small epiphyte bromeliad species (Fig. 2C). Each leaf of the bromeliad was carefully dissected and washed, and all detritus and water was collected in white trays. Mites and other fauna were extracted and fixed in 80% alcohol. The holotype will be deposited at the Acari Collection of the Departamento de Zoologia e Botânica (DZSJRP), São Paulo State University, Sao José do Rio Preto, São Paulo, Brazil; one paratype (conserved in Koenike fluid) is deposited in the Zoological Collection of the Department of Biology, University of Montenegro, Podgorica.

All measurements are given in μm. The following abbreviations are used: Cx-I = first coxae, Cxgl–2 = coxoglandularia 2, dL = dorsal length, H = height, L = length, I–L-6 = Leg 1, sixth segment (tarsus), P-1 = palp, first segment, vL = ventral length, W = width.

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