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First report of the genus *Parabonzia* Smiley (Acari: Cunaxidae) in South America

Guilherme Riquelme[a,b], Tatiane Marie Martins Gomes de Castro[c], Jeferson Luiz de Carvalho Mineiro[b], Mário Eidi Sato[b]

[a] Universidade Estadual de Campinas (UNICAMP), Instituto de Biologia, CEP 13083-862, Campinas, SP, Brasil.
[b] Instituto Biológico, APTA, Alameda dos Vidoeiros, 1097, CEP 13101-680, Campinas, SP, Brasil.
[c] Universidade Estadual de Roraima, Campus de Rorainópolis, Av. Senador Hélio Campos, Centro, CEP 69373-000, Rorainópolis, RR, Brasil.

Short note

ABSTRACT

We report the predatory mite *Parabonzia xinningensis* Chen & Jin, 2020 (Acari: Cunaxidae), collected from leaves of *Citrus sinensis* (L.) Osbeck (Rutaceae) in the municipality of Mogi Mirim, state of São Paulo, Brazil. This is the first record of a mite of the genus *Parabonzia* for the country and for South America.

Keywords *Parabonzia*; record; *Citrus*; Cunaxidae

Cunaxidae (Acari: Prostigmata) is composed exclusively of free-living predatory mites, which feed on a wide range of organisms, such as other mites, insects, nematodes and fungi (Walter and Kaplan 1991; Den Heyer 2009). Currently, the family is comprised of 463 species distributed in 32 genera worldwide (Skvarla 2025). Most of South America has not been surveyed for Cunaxidae and diversity in many areas is unknown. However, Brazil has received the most attention, with 22 of the worldwide genera recorded in the country (Wurlitzer *et al.* 2020; Wurlitzer *et al.* 2021; Rocha and Ferla 2025).

Four of the six cunaxid subfamilies have been reported in Brazil: Bonzinae, Coleoscirinae, Cunaxinae and Cunaxoidinae. The subfamily Bonzinae is composed of only two genera, *Bonzia* Oudemans and *Parabonzia* Smiley, and is represented in South America by only one species: *Bonzia flechtmanni* Rocha, Rodrigues & Ferla, 2015, which was described from Brazil.

The genus *Parabonzia* is composed of only 10 species, which have been reported from China, Russia, the Philippines, South Africa, the United States, and Mexico (Den Heyer 1975; Smiley 1975; Corpuz-Raros 1996; Lin and Zhang 1998; Mejía-Recamier and Palacios-Vargas 2016; Khaustov 2020; Chen *et al.* 2022).

In February 2025, the authors collected leaves of *Citrus sinensis* (L.) Osbeck (Rutaceae) var. Valencia in the municipality of Mogi Mirim, in the state of São Paulo. The citrus leaves were collected and placed in paper bags, which were then placed in an isopropylene box containing artificial ice to reduce mite activity, for transport to the laboratory. To extract the mites, leaf samples were placed in plastic trays and immersed in a 0.1% detergent and water solution for five minutes, followed by gentle agitation. The leaves were removed, and the solution was passed through a sieve (0.038 mm mesh). The mites retained on the sieve were mounted on microscope slides in Hoyer's medium for later identification.

The mites were examined using a Differential Interference Contrast (DIC) microscope, model Nikon Eclipse Ni-U. Photomicrographs were taken using a Nikon DS-Fi2 digital camera attached to the DIC microscope, editing the images using the NIS-Elements software. The authors identified an adult female of *Parabonzia xinningensis* Chen & Jin, 2020, using the

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Corresponding author
Guilherme Riquelme:
guilherme01.riquelme96@gmail.com

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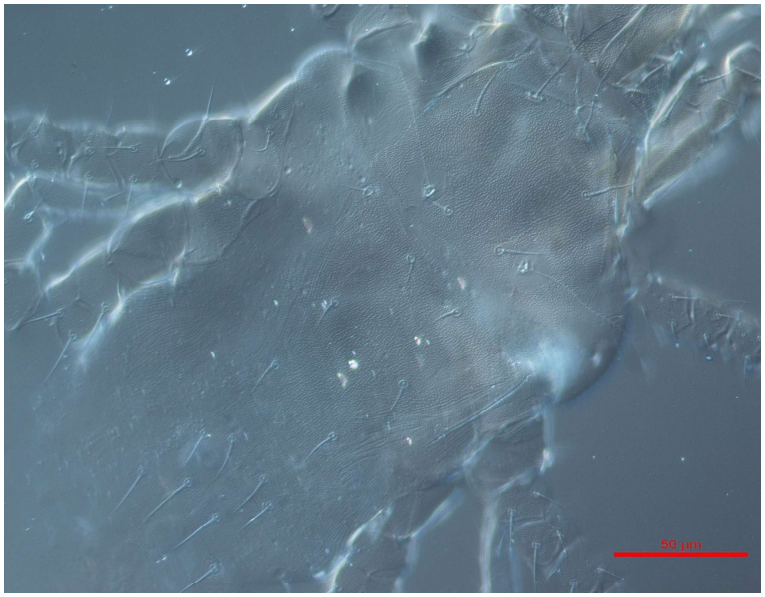

Figure 1 Dorsal view of the Brazilian specimen of *Parabonzia xinningensis*.

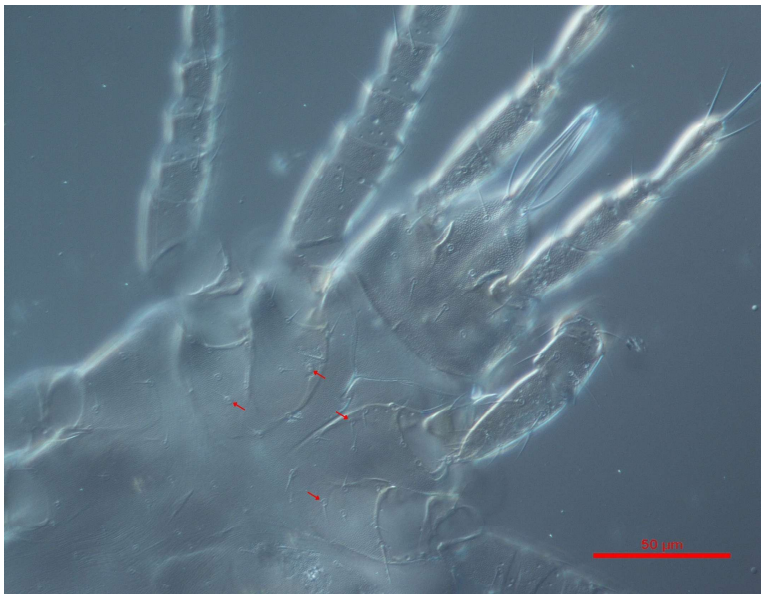

Figure 2 Ventral view of the Brazilian specimen of *Parabonzia xinningensis*. The red arrows indicate the additional pairs of setae present on coxa I and coxa II.

taxonomic keys published by Skvarla *et al.* (2014) and Chen *et al.* (2022) (Figures 1 and 2). This is the first report of the genus *Parabonzia* for Brazil and the South American continent.

The Brazilian specimen differs from the specimens described from China by Chen *et al.* (2020) by the presence of two additional pairs of tactile setae, one pair present on coxa I and the other pair on coxa II.

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ORCID

Guilherme Riquelme https://orcid.org/0009-0006-7919-7310
Tatiane Marie Martins Gomes de Castro https://orcid.org/0000-0002-4152-8763
Jeferson Luiz de Carvalho Mineiro https://orcid.org/0000-0003-4029-646X
Mário Eidi Sato https://orcid.org/0000-0001-5947-7717

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