



First field record of banana and papaya consumption by of *Mischonyx cuspidatus* (Opiliones: Gonyleptidae)

Primer registro de campo del consumo de plátano y papaya por *Mischonyx cuspidatus* (Opiliones: Gonyleptidae)

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Abstract.- Here we firstly report Banana and papaya as food resources for the Neotropical Harvestmen *Mischonyx cuspidatus* (Roewer 1913), in an urban area in southeastern Brazil. Our occasional observations illustrate and suggest that this species has a generalist and opportunistic diet.

Key words: Harvestmen, food, non-prey food, fruit.

Resumen.- Aquí reportamos por primera vez el plátano y la papaya como recursos alimenticios para el cosechador neotropical *Mischonyx cuspidatus* (Roewer 1913), en un área urbana en el sureste de Brasil. Nuestras observaciones ocasionales ilustran y sugieren que esta especie tiene una dieta generalista y oportunista.

Palabras clave: Cosechador, alimento, alimento no-presa, fruta.

Harvestmen (Arachnida: Opiliones) are arachnids that have an opportunistic omnivorous diet, although they are primarily carnivorous (Acosta & Machado, 2007; Gnaspini, 1996). They are also known to consume different fungi and products of plant origin (Nyffeler et al., 2023).

Mischonyx cuspidatus (Roewer 1913) (Opiliones: Gonyleptidae) is a neotropical species with synanthropic habits (Mestre & Pinto-da-Rocha, 2004). It feeds on insects, vertebrate feces, and fruits (Curtis & Machado, 2007; Mestre & Pinto-da-Rocha, 2004). However, there is a lack of information regarding its feeding habits in altered environments. Thus, the aim of this study was to document the use of banana (*Musa* sp., Musaceae) and papaya (*Carica papaya*, Caricaceae) as food

resources by this harvestman in an urban area.

Materials and methods

The records occurred by chance between 4 and 9 January 2025, in a household garden of an urban area in the municipality of Ritópolis (21°01'24.17'S / 44°19'11.81'W), Minas Gerais state, Southeastern Brazil. Observations were made between 21:00 and 23:15 hours. At least three individuals of *Mischonyx cuspidatus* were recorded feeding on fruit pulp in a masonry structure 150 cm above the ground (Figure 1).

Results, discussion and conclusions

The feeding on banana and papaya by *M. cuspidatus* seems to have been opportunistic and occasional. Thus, *Mischonyx cuspidatus*



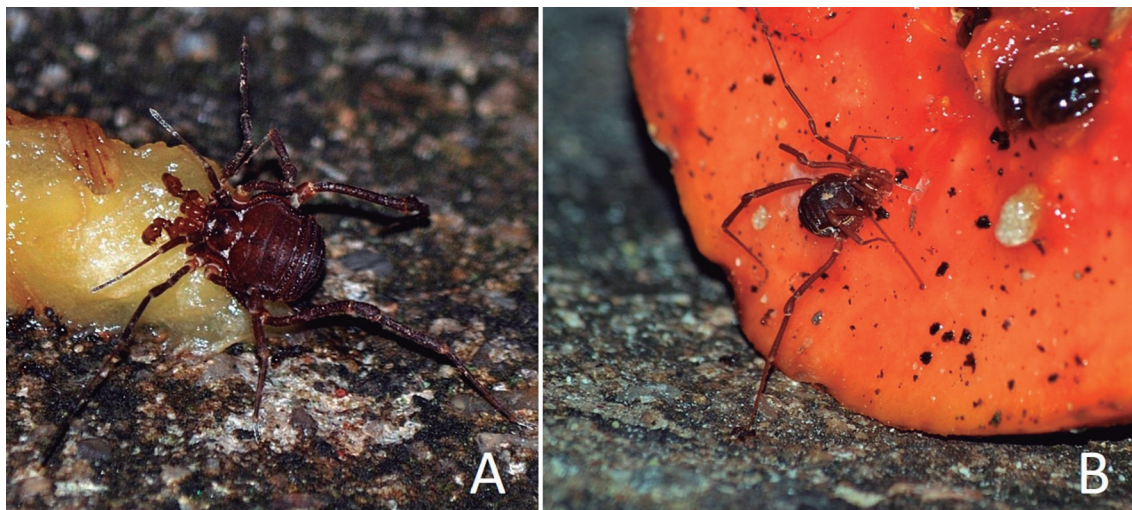


Figure 1. Fruits consumed by *Mischonyx cuspidatus* in an urban area of southeastern Brazil. **A)** banana *Musa* sp. **B)** papaya *Carica papaya*.

exploited a seasonal and unusual food resource, although it is known that several harvestmen species incorporate various plant-based items into their diet (Nyffeler et al., 2023).

The use of bananas as food by *M. cuspidatus* had previously been recorded, but under experimental conditions in captivity during behavioral studies (Dias et al., 2020; Segovia et al., 2019), as well as for *Heteromitobates discolor* Soerensen 1884 (Costa et al., 2016) and *Vonones ornatus* (Say 1821) (Punzo et al., 2007). Additionally, there is a record of *Paroligolophus agrestis* (Meade 1855) utilizing rotten banana as a food resource in an urban area in Germany (Wijnhoven, 2008). Thus, our study demonstrates that *M. cuspidatus* also consumes banana pulp as a food resource under field conditions, representing the first record of banana consumption by harvestmen in non-experimental conditions in the Neotropical region. Given that bananas are widely cultivated in various parts of the world, it is likely that other harvestmen species also feed on this resource in nature, as the use of fruits by these arachnids has been observed on different continents (see Nyffeler et al., 2023).

Regarding papaya consumption, there are also few reports, such as for *Acanthopachylus*

aculeatus (Kirby 1819) in Uruguay (Capocasale & Bruno-Trezza, 1964) and *Promitobates ornatus* (Mello-Leitão 1922) in Brazil (Nyffeler et al., 2023). Thus, we provide the first evidence of the use of this fruit as a food resource by *M. cuspidatus*.

Bananas and papayas are frequently cultivated on a small scale in residential backyards throughout the year in the study region. They also serve as food for birds and marmosets monkeys, which often drop fruit remnants on the ground, which could potentially be utilized as food by harvestmen. As such, the consumption of this type of fruit may represent an important nutritional supplement for these arachnids, although it is a limited source of energy (Nyffeler et al. 2023). Although harvestmen are generalist omnivores (Nyffeler et al., 2023), many species appear to exhibit a preference for carnivory (Acosta & Machado, 2007). Therefore, non-prey food might be especially important in ecosystems with low prey density for arachnids, such as urban areas (Lundgren, 2009).

Since the observations reported in this study were occasional, further research may reveal the frequency and importance of these and other cultivated fruits in urban environments

for the diet of harvestmen.

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