



## A new species of *Neocypholaelaps* Vitzthum (Acari: Ameroseiidae), with notes on the cheliceral lobes and ventral pore-like structures of mites of this family

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### Abstract

*Neocypholaelaps kreiteri* n. sp. is described based on the morphology of adult females, males, deutonymphs, protonymphs and larvae collected on inflorescences of *Cocos nucifera* L. (Arecaceae) in La Réunion Island, Indian Ocean. This is the first species of *Neocypholaelaps* reported from that island. It is most similar to *N. cocos* Evans, 1963 and *N. stridulans* Evans, 1955. A discussion is presented about the presence of cheliceral lobes and the absence of pilus dentilis on the fixed cheliceral digit of ameroseiid species, relating that to what has been reported for the Melicharidae and the Phytoseiidae. A discussion is also presented about the identity of a pore-like structure positioned anteriorly of the genital lyrifissures (*iv5*) in many ameroseiids. These are interpreted as being a pore that in many ameroseiids and in other Gamasina are often indistinctly and located close to the posteromesal margin of coxae IV, on the posterior end of the exopodal shield.

**Key words:** taxonomy, morphology, coconut palm, inflorescences

### Introduction

The genus *Neocypholaelaps* Vitzthum includes 21 species reported mostly from Africa, Asia and Oceania (Womersley, 1956; Evans, 1963; Ishikawa, 1968; Gupta, 1969; Mo, 1969; Elsen, 1972; Delfinado-Baker & Baker, 1983; Baker & Delfinado-Baker, 1985; Delfinado-Baker *et al.*, 1989; Narita *et al.*, 2011), except for a single species described from Brazil (Moraes & Narita, 2010). There is no previous record of *Neocypholaelaps* species from La Réunion Island, located in the Indian Ocean, about 800 kilometres east of Madagascar.

In a survey conducted in La Réunion in 2011 to determine the mite species on coconut palms (*Cocos nucifera* L., Arecaceae), a large number of specimens of *Neocypholaelaps* was found on inflorescences, causing no visible damage. This species was determined to be new to science, similar to *Neocypholaelaps cocos* Evans, 1963 and *Neocypholaelaps stridulans* Evans, 1955.

The main objective of this paper is to describe that new species, based on all post-embryonic stages. Additionally, a discussion is presented about the occurrence of membranous lobes on the fixed cheliceral digit of mites of the three families of Mesostigmata in which this structure has been reported, Ameroseiidae, Melicharidae and Phytoseiidae. A discussion is also presented about the identity of a pore-like structure commonly found in ameroseiids in a position unusual for other families of the same order.

### Material and methods

The mites were mounted in Hoyer's medium for examination under phase contrast microscopy and differential interference contrast microscopy. A comparison with the descriptions and redescriptions of *Neocypholaelaps* described so far indicated that the specimens collected belonged to an undescribed species. Taxonomically relevant structures of all post-embryonic stages of this species were measured with the help of a graduated eye-piece, and