Neocaeculus orientalis sp. nov. (Acari, Trombidiformes, Caeculidae) from Thailand

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Abstract
A new species of the predatory mite family Caeculidae, N. orientalis sp. nov., is described and illustrated, based on adult and all active immature instars from moss and forest litter of various localities in Thailand. Neocaeculus orientalis sp. nov. differs from its congeners in uniquely having the adult femur I divided but femora II–IV entire, adult coxal setation of 5-1-2-1 (4a excluded), and heterogeneous coxal setae. It is the first Neocaeculus species known to have no seta vi (= po) in all stages. A comparison of the diagnostic characters of known Neocaeculus species is given.

Key words: Neocaeculus, Caeculidae, Prostigmata, new species, predatory mites, ontogeny, Thailand

Introduction
The family Caeculidae is a group of predatory mites characterized by their large (ca. 1000-3000 μm long), heavily sclerotized body with characteristically arranged idiosomal plates and leg I usually equipped with spine-like setae on its anterior face (Walter et al. 2009). Due to the latter, they are also called “rake-legged mites”. Caeculids are usually found in dry exposed habitats such as beaches, beach vegetation, tree bark, rocky niches in desert and mountain habitats (Coineau 1974a; Walter et al. 2009). However, their ambush behavior and camouflage integument may make them hardly noticeable. This family currently comprises about 100 known species, including two species from fossil amber, in seven genera: Allocacculus Franz, Andocaeculus Coineau, Caeculus Dufour, Microcaeculus Franz, Neocaeculus Coineau, and Procaeculus Jacot (Coineau & Poinar 2001; Taylor et al. 2013).

A key to genera and a checklist of the world species of Caeculidae were recently provided by Taylor et al. (2013). Coineau (1967) proposed the genus Neocaeculus for N. luxtoni Coineau, 1967 from New Zealand. Later, Coineau and Enns (1969) described two new species from Australia: N. kneepfleri Coineau & Enns, 1969 and N. bornemisszai Coineau & Enns, 1969. Coineau (1974a) briefly described one more new species from South Africa: N. lamorali Coineau, 1974a, and also assigned the South American species, N. bruchi (Berlese, 1916)—from Caeculus—to Neocaeculus. In the same year, Coineau (1974b) described two new species from Australia: N. johnstoni Coineau, 1974b and N. womersleyi Coineau, 1974b. Recently, three more new species of Neocaeculus were described from this continent by Taylor et al. (2013) and Taylor (2014): N. imperfectus Taylor et al., 2013, N. kimmeae Taylor, 2014 and N. nudonates Taylor, 2014. The complete ontogeny of Neocaeculus species is known only in N. luxtoni and N. kneepfleri (Coineau 1967; Coineau & Enns 1969). In this paper, we describe all active instars of the first member of the genus known outside Southern Hemisphere: N. orientalis sp. nov. from moss and forest soil and litter of various localities in Thailand. This is also the first record of family Caeculidae in Thailand.

Material and methods
Mites were collected by hand or extracted from soil and leaf-litter samples using Tullgren funnels for seven days.