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Two new feather mites of the genus *Neocalcealges* Orwig (Analgoidea: Trouessartiidae) from the Sichuan province of China

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Abstract

Two new species of the feather mite genus *Neocalcealges* Orwig 1968 (Analgoidea: Trouessartiidae) are described from passerine birds (Passeriformes) from the Sichuan province of China: *Neocalcealges davidi* **sp. nov.** from *Alcippe davidi* Styan (Leiothrichidae) and *N. chrysotis* **sp. nov.** from *Lioparus chrysotis* (Blyth) (Paradoxornithidae). We provide a key to all described species of *Neocalcealges*.

Key words: bird mites, Acari, Astigmata, new taxa

Introduction

The feather mite family Trouessartiidae includes 11 genera, most of which are associated with perching birds (Passeriformes) (Gaud & Atyeo 1996). The genus *Neocalcealges* Orwig, 1968 was established in the revision of selected genera of Trouessartiidae and originally contained six species (Orwig 1968). Together with four other trouessartiid genera it is characterized by having the ambulacra of legs III and IV asymmetrically developed. *Neocalcealges* is morphologically most similar to *Calcealges* Gaud, 1952 but differs in the following characters: setae *d2* are setiform and short in *Neocalcealges* vs long and strong in *Calcealges*; coxal apodemes I are fused into a "V" or "U" shape in both sexes vs free in *Calcealges*; and coxal fields III are open in males vs closed in *Calcealges* (Gaud 1952; Orwig 1968).

Of the six species that have been assigned to date to the genus *Neocalcealges*, five were collected from laughing thrushes and babblers (Leiothrichidae and Timaliidae), and *N. cuspilobus* Orwig 1968 was collected from fairy flycatchers (Stenostiridae) as well as from hosts of the two above-mentioned families (Orwig 1968). Herein, we add two new species of *Neocalcealges* from passerines of the families Leiothrichidae and Paradoxornithidae in China and provide a key to all described species.

Material and methods

Birds were captured in Dujiangyan City, Sichuan Province, China by ornithologists working under corresponding permits issued by Chinese authorities. One of us (ZW) removed mites from two bird specimens, which accidentally died during the process of capturing, and placed them in tubes with 96% ethanol. Mites were cleared in lactic acid, slide-mounted in Hoyer's medium, and dried for 4 days at 50°C on a slide warmer. Drawings were made at 200× or 400× using a 1× a drawing tube attached to a Leica DMLB compound microscope with differential interference contrast (DIC) lighting. Measurements were made at 200× and 400× using a calibrated ocular micrometer.

In species descriptions, all measurements are given in micrometers (μm). Idiosomal length was measured from the anterior margin of the propodonotum to the posterior end of the opisthosomal lobes. Widths of the idiosoma and hysteronotal shield were measured at the level of setae *cp*. The length of the propodonotal shield was measured

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closed to setae *h2*. . . . . *N. inauditus* Orwig, 1968

5. Male: distance between setae *g* 23–29 µm, terminal lamellae rounded. Female: distance between supranal cleft and copulatory aperture 12–18 µm . . . . . *N. segregatus* Orwig, 1968
- Male: distance between setae *g* 15–17 µm, terminal lamellae truncate. Female: distance between supranal cleft and copulatory aperture 29–33 µm. . . . . *N. angustus* Orwig, 1968
6. Male: terminal lamellae each with 3 or more indentations. Female with setae *h1* located posterior to end of supranal cleft, close to setae *h2* 7
- Male: terminal lamellae each with 2 indentations. Female with setae *h1* located anterior to end of supranal cleft, far from setae *h2*. . . . . *N. emarginatus* Orwig, 1968
7. Male: terminal lamellae each with 4–7 indentations (Fig. 3A). Female:distance from copulatory aperture to supranal concavity 42–57 µm (Fig. 6A). . . . . *N. davidi* **sp. nov.**
- Male: terminal lamellae each with 3 indentations (Fig. 3B). Female: distance from copulatory aperture to supranal concavity 62–75 µm (Fig. 2A). . . . . *N. chrysotis* **sp. nov.**

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