

A new species of the genus *Allonychiurus* from China (Collembola: Onychiuridae)

XIN SUN¹, HAIJUAN YAN^{1,2} & JIAN-XIU CHEN^{1,3}

¹School of Life Science, Nanjing University, Nanjing 210093, Jiangsu, P. R. China

²Pesticide Evaluation Lab, Jiangsu Academy of Agriculture Science, Nanjing 210093, Jiangsu, P. R. China

³Corresponding author.

E-mail: ¹xunxin198604@gmail.com; ²yanhaijuan@gmail.com; ³chenjx@nju.edu.cn.

Abstract

The genus *Allonychiurus* Yoshii, 1995 is briefly introduced and a new Chinese species, *Allonychiurus megasomus* sp. nov., from Jiangsu Province, is described. The new species is diagnosed as having 32/133/33343 dorsal pso, 11/000/01110 ventral pso, 0/000/10000 ventral parapseudocelli (psx), 2/012/22222 dorsal sensilla, PAO consisting of 18–22 compound vesicles, Abd. IV with median setae a_0 and p_0 , Abd. V with m_0 , tibiotarsus with 11 setae in the distal whorl, unguiculus without basal lamella and ventral tube with 8+8 setae. It is easily separated from other known species in the genus by the combination of above characters. The status of the species in the genus is discussed.

Key words: taxonomy, *flavescens*-group, *Allonychiurus megasomus* sp. nov., generic revision

Introduction

Onychiurus Gervais s. l. was divided into two groups on the basis of the form of the postantennal organ, being simple in *Protaophorura* Absolon but compound in *Onychiurus* s. s. (Börner 1909). In 1948, Bagnall erected 2 new genera from within *Onychiurus* s. s. (*Pseudonychiurus* and *Paronychiurus*). Weiner (1989) distinguished a “*flavescens*-group” on the basis of habitus and type of chaetotaxy within the genus *Paronychiurus*. Later, Yoshii (1995) established a new subgenus, *Allonychiurus*, for *Onychiurus flavescens* Kinoshita, 1916, within *Onychiurus* which corresponded to “*flavescens*-group” of Weiner (1989). Weiner (1996) raised the subgenus to generic status.

The genus *Allonychiurus* was characterized by Yoshii and the diagnosis modified by Weiner (1996) as follows: postantennal organ (PAO) consisting of compound vesicles, head with posterior pseudocelli (pso), seta d_0 and 2+2 sensilla, sensory clubs in Ant. III organ straight or slightly curved, mulberry-like, Ant. IV with 1 microsensillum (ms), labral setal formula as 4/3, 4, 2, furcal rudiment as a finely granulated area and 4 small setae in two rows present behind the furcal rudiment, tibiotarsus with 11 setae in distal whorl, Abd. VI dorsally with 3 rows of setae, setae a_0 and p_0 present, and anal spines inserted on distinct papillae.

So far, 24 species have been reported in the genus *Allonychiurus* (Bellinger et al. 1996–2009). However, the status of several species need to be reviewed as they may not belong to the genus. For example, the species *edinensis* (Bagnall, 1935) and *subedinensis* (Arbea & Jordana, 1985) probably belong to the genus *Spinonychiurus* Weiner, 1996 because they do not possess cephalic seta d_0 ; the species *borensis* (Beruete et al., 1994), *donjiensis* (Lee & Kim, 1994), *hangchowensis* (Stach, 1964), *indicus* (Choudhuri, 1965), *jindoensis* (Lee & Kim, 1994), *mediaseta* (Lee, 1974), *pseudocellitriadis* (Lee, 1974), *sensitivus* (Handschin, 1928) and *vandeli* (Cassagnau, 1960) have fewer than 11 tibiotarsal setae in the distal whorl; the species *foliatus* (Rusek, 1967) and *mariangeae* (Thibaud & Lee, 1994) possess a different type of sensory club in Ant. III organ; the