



Six new species of *Thalassaphorura* (Collembola, Onychiuridae) from southern China, with a key to world species of the genus

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Abstract

The diagnosis of *Thalassaphorura* Bagnall, 1949 is updated and a key to the world species of the genus is given. *Thalassaphorura* is recorded for the first time in the Guangxi province, where it is well diversified and usually dominant in Collembola communities. Eight species were collected, including 6 species new to science that are described in this paper (*Thalassaphorura bapen* sp. nov., *T. grandis* sp. nov., *T. pomorskii* sp. nov., *T. reducta* sp. nov., *T. tiani* sp. nov. and *T. tibiotarsalis* sp. nov.) and two widespread species newly recorded from China (*T. petaloides* and *T. encarpata*). Half of the species (*T. encarpata*, *T. grandis* sp. nov., *T. petaloides* and *T. pomorskii* sp. nov.) were only represented by females and are assumed to be parthenogenetic, the four other ones are bisexual.

Key words: distribution, parthenogenesis, pseudopores, taxonomy

Introduction

Seventeen species of Onychiuridae have been described from China. During recent sampling campaigns in the karsts of Guangxi, Onychiuridae appeared numerically dominant among Collembola communities of the forest soils, both in litter and in deeper soil layers. Most of the species contacted belong to the genus *Thalassaphorura*, the only genus of Onychiuridae recorded so far from Guangxi. The diversity of *Thalassaphorura* is quite impressive, with 6 new species described in this work, and 2 widespread species, *encarpata* (Denis, 1931) and *petaloides* (Rusek, 1981), in only four surveyed sites (Fig. 1).

Bagnall (1949) established the genus *Thalassaphorura* for *Onychiurus thalassophilus* Bagnall, 1937, the genus *Allaphorura* for *Onychiurus franzi* Stach, 1946 and the genus *Handschiniella* for *Onychiurus zschokkei* Handschin, 1919. In 1989, Yoshii & Suhardjono erected *Parthenaphorura* as a subgenus of *Onychiurus* for the species *bogoriensis*. In 1992, Yoshii & Suhardjono established the genus *Jailolaphorura* as a subgenus of *Onychiurus* for the species *jailolonis*. In 1995, Yoshii synonymised *bogoriensis* with *O. (Parthenaphorura) cryptopygus*. Weiner (1996) sunk *Handschiniella* and *Parthenaphorura* into *Allaphorura*, and stressed the similarity between *Jailolaphorura* and *Allaphorura*. Pomorski synonymized *Allaphorura* with *Thalassaphorura* in 1998 and summarized its diagnosis. Bellinger *et al.* 1996–2010, placed *Jailolaphorura jailolonis* in *Thalassaphorura* according to a personal communication of Pomorski in 2002. Following these successive synonymisations, *Allaphorura*, *Handschiniella*, *Parthenaphorura* and *Jailolaphorura* are all synonyms of *Thalassaphorura*.

So far, among the 36 species of the genus known in the world (Bellinger *et al.* 1996–2010), 5 were reported from China: *T. dinghuensis* (Lin & Xia, 1985) from Guangdong, *T. orientalis* (Stach, 1964) and *T. qixiaensis* Yan *et al.* 2006 from Jiangsu, *T. tamurai* (Yue & Yin, 2000) from Shanghai, and *T. yodai* (Yosii, 1966) from Yunnan. The present record of *Thalassaphorura* from Guangxi is the first one for this province, and all the species collected are new for China.