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Contribution to the eyed *Sinella* from China: two new species and additional reports on nine known species (Collembola: Entomobryidae)

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Abstract

Two new 1+1 eyed species of *Sinella* Brook, 1882, *S. uniseta* sp. nov. and *S. abietis* sp. nov., are described from China. New collection records are reported for nine known species: *S. qufuensis* Chen & Christiansen, 1993, *S. quinocula* Chen & Christiansen, 1993, *S. affluens* Chen & Christiansen, 1993, *S. wui* Wang & Christiansen, 2000, *S. umesaoi* Yosii, 1940, *S. gei* Pan, Zhang & Shi, 2012, *S. sunae* Pan, Zhang & Shi, 2012, *S. gracilis* Zhang, 2013 and *S. transoculata* Pan & Yuan, 2013. Additions to original description, such as clypeal chaetae, chaetae along cephalic groove, and S-chaetotaxy, are provided for above known species. A key to the eyed species of *Sinella* from China is given.

Key words: new records, clypeal chaetotaxy, S-chaetotaxy, key

Introduction

In our recent field expeditions, a good number of species of *Sinella* Brook, 1882 were collected from China, with some known species rediscovered. So far, a total 23 eyed and 11 blind species of the genus have been reported from China (Pan & Yuan, 2013). Here, two new eyed species are described, new collection records for nine known species also provided. The modern taxonomy of *Sinella* was mainly contributed by Deharveng (1990), Chen & Christiansen (1993), and Zhang *et al.* (2009, 2011). Zhang (2013) introduced two useful diagnostic characters in the genus, clypeal chaetae and chaetae along cephalic groove. Specialized chaetotaxy (S-chaetotaxy) on terga was newly shown to be diversified from species to subfamilial levels in Entomobryidae (Zhang & Deharveng, 2015). These new characters are described for several species presented in this study. A key to the eyed species of *Sinella* from China is also given.

Material and methods

Specimens were mounted, after clearing in Nesbitt's fluid, under a coverslip in Hoyer's solution, and were studied using Nikon 80i and SMZ-1000 microscopes. Photographs were enhanced with Photoshop CS2/PC (Adobe Inc.). The Ant. III organ is described after Chen & Christiansen (1993). Dorsal body chaetae are designated following Szeptycki (1979) and Zhang *et al.* (2011). The number of macrochaetae is given by half-tergite in the descriptions. All material is deposited in the collections of the Department of Entomology, College of Plant Protection, Nanjing Agricultural University (NJAU), P. R. China.

Abbreviations: Th.I–III—thoracic segment I–III; Abd.I–VI—abdominal segment I–VI; Ant.I–IV—antennal segment I–IV; mac—macrochaeta, -ae; mic—microchaeta, -ae; S—antennal S-chaeta, -ae; ms—S-microchaeta, -ae (microsensillum, -a); sens—ordinary S-chaeta, -ae on terga.