



Synopsis of the genus *Capnia* (Plecoptera: Capniidae) from China

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Abstract

A winter stonefly species of the family Capniidae, *Capnia qilianshana* **sp. nov.**, is described as new to science from Gansu, China. Its relationship with closely related species is discussed. An unassociated female based on a single specimen from Sichuan province is presented.

Key words: Plecoptera, Capniidae, *Capnia qilianshana*, new species, China

Introduction

Capnia Pictet, 1841 is the largest genus with 111 species from the Holarctic and Oriental Regions (DeWalt *et al.* 2009). It is the only known winter stonefly genus in Capniidae from China. Kimmins (1947) described four stoneflies from Himalayan Tibet: *Capnia cordata*, *C. montivaga*, *C. pedestris*, and *C. tibetana*, of which *C. montivaga* was described based on a single female. Others have contributed to the knowledge of these species (Harper 1977; Jewett, 1975; Zwick & Sivec 1980; Sivec 1981). Du (1999) noted that the genus was also distributed in Yunnan and Sichuan provinces of China, but he did not present any data in detail for those known species. A revision of the genus in the Oriental Region is badly needed to verify the faunistic affinities of the inclusive species and reveal the species diversity and distribution patterns of the genus. In the present paper, a new species and an unassociated female are described from Gansu and Sichuan. A key to males of the genus *Capnia* from China is provided. The studied material is deposited in the Entomological Museum of China Agricultural University (CAU), Beijing, and all of the specimens are preserved in 95% ethanol. The morphological terminology follows that of Nelson & Baumann (1989), Baumann, Gaufin & Surdick (1977) and Kawai (1967).

Taxonomy

A key to males of *Capnia* from China

(*Capnia montivaga* unknown)

1. Wings absent; subgenital plate without vesicle (Fig. 7 in Kimmins 1947) *C. pedestris*
- Wings present; subgenital plate with vesicle 2
2. Epiproct distinctly enlarged medially in lateral view (Fig. 10 in Kimmins 1947) *C. tibetana*
- Epiproct nearly parallel medially in lateral view 3
3. Epiproct with acute apex and slightly hooked ventrally in lateral view (Fig. 9 in Kimmins 1947; Fig. 5: e–f in Zwick & Sivec 1980) *C. cordata*