



A new species of *Componeuriella* Ulmer, 1939 (Ephemeroptera: Heptageniidae) from Thailand

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Abstract

A new species of *Componeuriella* Ulmer, 1939 is described based on male and female imagos, nymphs and eggs from Ratchaburi province, western Thailand. *Componeuriella braaschi* sp. nov. is closely related to *C. thienemanni* Ulmer, 1939, from Java and Sumatra, but differs in the larval stage by the maxilla bearing only 8–9 comb-shaped setae on the crown, two strong medial setae on the glossa, gills V–VII apically acutely pointed and the posterior margin of the abdominal terga without distinct rows of submarginal microdenticles. In the male imaginal stage, the new species differs from *C. thienemanni* by having more reduced spines on the penis lobes and the titillators being directed outwards and strongly pointed at their apices.

Key words: Mayfly, Thailand, *Componeuriella braaschi* sp. nov.

Introduction

The genus *Componeuriella* Ulmer, 1939 was established to include the type species, *Componeuriella thienemanni* Ulmer, 1939, based on male imagos and nymphs from the Sunda Islands (Ulmer 1939). Braasch & Soldán (1986) tentatively redescribed the adult and larval stages of Ulmer's species under the name *C. thienemanni* (?) (Ulmer, 1939) based on material collected in Vietnam. They considered the adults of *C. thienemanni* to be congeneric with *Componeuria spectabilis* Eaton, 1881 adults and therefore synonymized *Componeuriella* under *Componeuria* Eaton, 1881. This synonymy was subsequently accepted by Webb et al. (2006) in their reevaluation of *Componeuria*. The species *C. thienemanni* was later reported from Thailand by Boonsoong & Braasch (2013). In a recent revision of the genus *Componeuria*, Sartori (2014) revalidated the genus *Componeuriella*, and proposed morphological criteria to distinguish both genera. Moreover, he placed the species recorded from Thailand as *C. thienemanni* under the name *Componeuriella* sp.1 because of differences between the Thai and the Sumatra populations. Only limited material was available at that time, thus Sartori (2014) did not describe the presumably new species in detail.

Based on recently collected series of reared specimens from Thailand, we describe in detail and formally name *Componeuriella* sp.1 as a new species based on the male imago, female imago and nymph stages.

Material and methods

Specimens were collected from headwater streams in Ratchaburi and Kanchanaburi provinces, western Thailand. Nymphs were collected with a D-frame net and individual black wing-pad nymphs were reared in earthenware pots with net covers. The earthenware pots aid in reducing water temperature. Subimagos were kept in the net covers

Diagnosis. In the male imaginal stage, *Compsoeuriella braaschi* n. sp. is very similar to *C. thienemanni*, from which it can be separated by having more reduced spines on the penes lobes and by having the titillators strongly pointed at apex and directed outwards. In the nymphs, the new species can be differentiated from *C. thienemanni* by the following characters: 1) the maxilla bears 8–9 comb-shaped setae on the crown (*C. thienemanni* bears 12 comb-shaped setae); 2) the row of setae and bristles on the ventral side of the labrum is much longer than in *C. thienemanni*; 3) the glossae of the labium are more conical than in *C. thienemanni*; 4) the dorsal surface of the glossae bears two setae (*C. thienemanni* bears a single pointed seta); and 5) the posterior margins of the abdominal terga lack distinct rows of microdenticles. The general structure of the egg chorionic surface of *C. braaschi* is quite similar to *C. thienemanni* (Sartori 2014), but KCTs are randomly scattered on entire egg surface in *C. braaschi*, whereas the KCTs are more densely distributed near each pole in *C. thienemanni*.

Compsoeuriella langensis (Braasch & Boonsoong 2010) can be distinguished from the new species by penial characters, completely brown-tinged hind wings, and shape of the glossae, tarsal claws and inner margin of fore femora (Braasch & Boonsoong 2010; Sartori 2014).

Etymology. The specific epithet honors Dietrich Braasch (Potsdam, Germany), who has contributed greatly to the knowledge of Southeast Asian Ephemeroptera.

Biological notes. The nymphs of *Compsoeuriella braaschi* n. sp. were collected by sweeping the submerged bank habitat (Fig. 4), with particular attention given to twigs, woody debris and leaves. The stream (width 6–7 m, water current 0.50 m/s, depth 15–20 mm at the time of collection) had a substrate composed of sand, pebbles and gravel.

Discussion

Our knowledge of the composition of *Compsoeuriella* in Southeast Asia is still fragmentary. Following the revision proposed by Sartori (2014), the species described under the genus name *Compsoeuriella* need further study. At the moment, the genus is known from Thailand (*C. braaschi* sp. nov. and *C. langensis*), the Philippines (*C. tagbanua*), Java and Sumatra (*C. thienemanni*). The genus is also reported under the name *Compsoeuriella thienemanni* from Vietnam (Braasch & Soldán 1986) and Borneo (Webb *et al.* 2006), but only direct comparison of these material to *bona fide* *Compsoeuriella thienemanni* can solve the question of their identities. The report from Borneo was based on male imagoes caught in Sabah (East Malaysia) (Webb *et al.* 2006); recently, some nymphs were collected in the Sultanate of Brunei (M. Sartori, pers. obs.) that may help shed light on the identity of the species on this island.

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