



## *Neoperlops vietnamellus*, a rare stonefly from Vietnam (Plecoptera: Perlidae)

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### Abstract

A rare perlid stonefly, *Neoperlops vietnamellus*, **sp. nov.**, is described from Vietnam. Descriptions and figures of key characters are provided for the male and female adult, nymph, and egg stages. The male adult of *N. vietnamellus* can be distinguished from other congeners by its unique distribution of patches of sensilla basiconica posteromesally on the abdominal terga VII–IX, by the absence of sensilla basiconica on the anterior processes of the hemiterga, and by the absence of prominent spines along ventral edge of the hemiterga. The female adult has a slightly protruding subgenital plate on the abdominal sternum VIII as a strongly sclerotized mesal tab. The nymphs can be distinguished by the distinct M-line marking on the head, relatively long cerci, and a lack of dense swimming hairs on cerci. The egg chorion surface is completely smooth, and the anchor features a number of long filaments.

**Key words:** *Neoperlops vietnamellus*, Perlidae, Plecoptera, description, Vietnam

### Introduction

The stonefly genus *Neoperlops* (Perlidae: Perlinae: Perlini) was initially established by Banks (1939). Illies (1966) synonymized *Neoperlops* with *Neoperla* Needham, but Zwick (1984) re-established the genus. Sivec *et al.* (1988) also treated *Neoperlops* as a valid genus in the key to the world genera of Perlinae.

The genus *Neoperlops* is known only in China and Vietnam, whereas the related genus *Tetropina* Klapálek has been recorded from Indonesia (Borneo), peninsular Malaysia, and possibly in mainland Southeast Asia (Sivec *et al.* 1988, Dudgeon 1999). Zwick (1984) re-described two species in *Neoperlops*, *N. gressitti* Banks and *N. obscuripennis* Banks, and considered that only these two species were valid. These two species have been recorded from China (Du *et al.* 1999), and most recently Stark & Sivec (2008) confirmed the presence of *N. obscuripennis* from the Lao Cai province of northern Vietnam, describing both the putative male and nymphal stages.

In this study, one new species of *Neoperlops* is described from Vietnam based on specimens of adult male, female, nymph, and egg.

### Material and methods

Specimens were collected from mountain streams in Vietnam between 2002–2004 and are now housed in the Aquatic Insect Collection of Seoul Women's University (SWU-AIC). All materials are preserved in 80% ethyl alcohol. The morphological terminology follows Sivec *et al.* (1988). The abbreviations used in this study are as follows: alt. (altitude), NP (National Park), Prov. (Province), VVN (Van Vinh Nguyen), DHH (Duc Huy Hoang), and TKTC (Thi Kim Thu Cao).