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A new species of *Choroterpes* (Ephemeroptera: Leptophlebiidae) from a tropical stream of south India

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Abstract

Choroterpes alagarensis new species (type locality: Alagar hill, Madurai) (Ephemeroptera: Leptophlebiidae) is described from male and female imago, sub imago and nymphs. This species is found in leaf packs, woody debris, pebbles and boulders and occurs in slow flowing stream areas.

Key words: *Choroterpes*, new species, tropical stream

Introduction

An assessment of the current condition and impacts of water resource development in forests streams and rivers of India is essential on the basis of aquatic macroinvertebrate community structure especially mayfly larvae. Among the mayflies, *Choroterpes* is an extremely widespread genus whose range in India between Tamil Nadu and Karnataka (Anbalagan et al., 2004; Dinakaran and Anbalagan, 2007). *Choroterpes* may be abundant in a variety of substrates (Dinakaran and Anbalagan, 2006). However, the present study describes a mayfly species from a small tropical stream of Alagar hill, Tamil Nadu, south India which would contribute to the knowledge on the distribution of *Choroterpes* and other mayflies in south India.

Study area. Alagar hill. Reserve forests of Alagar hill ($10^0$14'180''N and $77^0$58'567''E) are 22km Northeast of Madurai city. There are two springs Garudathirtham (350m), a seasonal one, the other, the perennial Nuburagangai (425 m). The specimen was collected from the Nuburagangai stream. The monthly mean temperature is 27.5^0. The maximum temperature goes up to 41^0C during daytime in the summer (April and May) and night temperature is 29^0C. In the cool season (December) the day temperature is 29^0C and night temperature is 22^0C. The rainfall regime is erratic. This area comes under dissymmetric rainfall regime with the bulk of the rains during the retreating northeast monsoon (October–November). Some rain is also received during the southwest monsoon (June–August).

Material and methods

Nymphs were collected by manually from the boulders, pebbles leaf litter and woody debris. Rearing was done in the field using plastic cups with screened windows, as described in Edmunds et al. (1976). Adults were collected at yellow light. Physico-chemical parameters were estimated by APHA (1995). Altitude, latitude and longitude location were taken through GPS (Global Positioning System: Garmin –12 maps). Specimens are deposited in Centre for Research in Aquatic Entomology Laboratory (CRE), The Madura College, Madurai, India.

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