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Biodiversity and distribution of Trichoptera species along the Tapee River, Surat Thani Province, southern Thailand

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Abstract

The Tapee River is one of the most important rivers in southern Thailand. The river crisscrosses from Khao Luang National Park, Nakhon Si Thammarat province to Surat Thani province and flows to the Thai Gulf. To study the biodiversity and distribution of Trichoptera species along the Tapee River, insects were collected by light trapping every 3 months from April 2004−February 2005. The results show that 105 species were found in 35 genera of 15 families. The most abundant families of Trichoptera in the Tapee River were Hydropsychidae, Leptoceridae, and Ecnomidae. The more widespread Trichoptera species included *Ecnomus atevalus* Malicky & Chantaramongkol, *Dipseudopsis knappi* Schmid & Denning, *D. robustior* Ulmer, *Aethaloptera sexpunctata* (Kolenati), *Amphipsyche meridiana* Ulmer, *Cheumatopsyche cognita* (Ulmer), *Macrostemum fenestratum* (Albarda), *Ceraclea idaia* Malicky & Chaibu, *Oecetis tripunctata* (Fabricius), and *Parasetodes respersellus* (Rambur). The upper Tapee River Trichoptera species included *Rhyacophila petersorum* Schmid & Denning, *R. tantichodoki* Malicky & Chantaramongkol, *Ugandatrichia kerdmuang* Malicky & Chantaramongkol, *Chimarra* spp., *Pseudoneureclipsis* spp., *Psychomyia* spp., *Cheumatopsyche charites* Malicky & Chantaramongkol, *Diplectrona* spp., *Hydropsyche* spp., *Hydromanicus inferior* Chantaramongkol & Malicky, *Goera* spp., *Ganonema fuscipenne* (Albarda), *Goerodes abruptum* Banks, and *Marilia* spp. The lower Tapee River Trichoptera species included *Ecnomus talenoi*, *E. paget*, *Polymorphanisus* spp., and *Oecetis bengalica*. The number of Trichoptera species was higher upstream and lower downstream.

Key words: Caddisflies, Tropical stream

Introduction

Thailand is one of the countries in the oriental region where the biodiversity is high. The biodiversity of aquatic insects in Thailand, especially caddisflies, has been intensively studied in last 2 decades. More than 900 species had been reported. The studies of Thai Trichoptera had been conducted mainly in northern Thailand. Most publications concerning the caddisflies in Thailand have been taxonomic (e.g., Malicky & Chantaramongkol 1999, Thapanya *et al.* 2004, Malicky & Prommi 2006). However, there have been some publications using caddisflies as bioindicators for environmental assessment and studies of caddisflies species along the Ping tributary, northern Thailand (Luadee *et al.* 2002, Luadee & Chantaramongkol 2002, Chaibu *et al.* 2002). Malicky & Chantaramongkol (1993) studied the altitudinal distribution of Trichoptera species in Doi Inthanon National Park, northern Thailand between 400–2300 m a.s.l.. The Trichoptera species were

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