



## Two new species of *Rhyacophila* (Trichoptera, Rhyacophilidae) from Nepal

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### Abstract

Two new species of the *Rhyacophila* genus (Trichoptera, Rhyacophilidae), *Rhyacophila lakatosi* n. sp. in the *R. naviculata* Group and *Rhyacophila hollosii* n. sp. in the *R. curvata* Group, from Nepal are described and illustrated with drawings of the genitalia.

**Key words:** Trichoptera, *Rhyacophila*, new species, Ganesh Himal, Mt. Kalinchok, Central Nepal

### Introduction

The genus *Rhyacophila* Pictet, 1834, was considered as type genus of a family Rhyacophilidae by Stephens (1836). Martynov (1924) included the Rhyacophilidae in his suborder Annulipalpia. Ross (1967) presented phylogenetic characters for the classification of Trichoptera and included a paraphyletic Rhyacophiloidea superfamily in the Integripalpia suborder Schmid (1980, 1998), however, hypothesized that this superfamily was monophyletic and included it in the Annulipalpia. Weaver (1984) and Weaver & Morse (1986) established 2 infraorders within the Annulipalpia, where the free-living predator Rhyacophiloidea superfamily was included in the Spicipalpia infraorder. Based on the latter 2 works, this Spicipalpia infraorder was later treated as a separate suborder by Morse (1997a, 1997b). Ivanov (1997) considered that the Rhyacophiloidea was a paraphyletic taxon and allied to the Annulipalpia suborder. Kjer *et al.* (2002) found that the monophyly of Spicipalpia was weakly supported in the combined, equally weighted analysis, and Spicipalpia was paraphyletic in the differentially weighted analysis.

Schmid (1963) and Schmid & Botosaneanu (1966) described species of the *Himalopsyche* genus from Sikkim, India, some of which also occur in Nepal. Kimmins (1952, 1964) reported the Trichoptera result of an expedition to India and of 2 expeditions to Nepal by The Natural History Museum, London, in 1952, 1954 and 1961–62. Ito (1986) described 3 Lepidostomatidae species from Nepal. Malicky (1997, 2004) reported new Trichoptera species from Bardia National Park, Nepal. Mey (1999) outlined the distribution of the genus *Rhyacophila* in the islands of SE Asia. Kiss & Malicky (2003) published data related to 85 species, including 13 *Rhyacophila* species, from Nepal. Melnitsky (2005) reported several new *Rhyacophila* species from Western Nepal. Malicky (2006) published a preliminary list of 302 caddisfly species from Nepal, including 26 *Rhyacophila* species.

### Material and methods

Dr. Márton Hreblay collected caddisfly species on his Lepidoptera expedition to the Nepalese region of the Himalayas in the 1990s, and donated the imagines of the Trichoptera species to the author. *Rhyacophila lakatosi* n. sp., which is similar to *Rhyacophila kyadongpa* Schmid, 1970, in the *R. naviculata* Group (Branch *R. naviculata* Schmid 1970), and *Rhyacophila hollosii* n. sp., which is similar to *Rhyacophila chungpa* Schmid, 1970, in the *R. curvata* Group (Branch *R. divaricata* Schmid 1970), are new to science. These species were caught by light trapping between the altitudes of 1850 m and 3300 m in the Ganesh Himal, Gorka District, Central Nepal with the Budhi Gandaki River and its tributaries flowing through it, in Mt. Kalinchok, Dolakha District, Central Nepal with