

## Aquatic Insects of Palung Khola, Makwanpur District, Nepal

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### Abstract

The present study deals with aquatic insects of Palung Khola. The survey conducted from September, 2002 to March, 2004 enumerated 21 genera of aquatic insects belonging to 19 families spread over 7 orders

*Key words:* Aquatic insects, Palung Khola

### Introduction

Palung Khola flows in the Palung valley which is 63 km far from Kathmandu, the capital city of Nepal. This river mingles with Kulekhani River after leaving the valley. The valley is situated at an altitude of 173m above the sea level. The majority aquatic insects occurring in freshwater inhabit different substrates *viz.* stones, muds, logs etc. Aquatic insects are of economic importance as they form fish food and indicator organisms for identifying the ecological characteristic of streams (Ward and Whipple, 1953).

Atkinson (1974) has compiled insect fauna of the Himalayas which has included Coleoptera, Orthoptera, Hemiptera, Hymenoptera, Diptera and Neesoptera from Nepal, Tibet and Burma. Stanley (1975) has described stoneflies from North-West Punjab Himalaya and Mt. Makalu, Nepal Himalaya. Mishra (1976) has given account of aquatic insects. Harper (1977) made studies on Plecoptera from Nepal. Malla (1978) have described 61 species of aquatic insects from various water bodies of Kathmandu valley. Alexandar (1971) has described 8 new species of Tipulidae (Diptera) from Kumaon, Assam

and India. Dubey (1971) has described 8 new species of Ephemeroptera from North-West Himalayas. In the same year, Dubey has described one new species *i.e.* *Ephemera paramodi* from Nepal.

### Materials and methods

During insect collection, stones were taken out from the river and their under surface was searched carefully. The larvae and nymphs were lifted with the help of forceps and brushes then washed in a collecting jar. In stagnant water, the nets were swept along the bottom or through the water-weeds. The water temperature was noted during collection time. Collected insects were preserved in 70% alcohol. Before preserving, natural colour of insects was noted. Preserved specimens were identified by the use of analytical keys.

### Results and discussion

A total number of 21 insects belonging to 19 genera were documented (Table 1) from Palung Khola. They belong to 19 families under 7 orders. Among them 8 (Ephemeroptera), 2 (Plecoptera), 1 (Hemiptera), 3 (Coleoptera), 2

**Table 1.** Aquatic insects of Palung Khola

S.N.	Order	Family	Genus
1.	Ephemeroptera	Baetidae	<i>Baetis</i> sp.
		"	<i>Blastrus</i> sp.
		Heptagenidae	<i>Cinygma</i> sp.
		"	<i>Eperous</i> sp.
		Caenidae	<i>Caenis</i> sp.
		Ephemerellidae	<i>Torleya</i> sp.
		Leptophlebiidae	<i>Habrophlebia</i> sp.
		Ecdyonuridae	<i>Ecdyonurus</i> sp.
2	Plecoptera	Perlidae	<i>Neoperla</i> sp.
		Nemouridae	<i>Nemoura</i> sp.
3	Hemiptera	Corixidae	<i>Corixa</i> sp.
4	Coleoptera	Chrysomelidae	<i>Donacia</i> sp.
		"	<i>Hydrophilus</i> sp.
5	Trichoptera	Dytiscidae	<i>Dytiscus</i> sp.
		Hydropsychidae	<i>Hydropsyche</i> sp.
		Rhyacophylidae	<i>Rhyacophila</i> sp.
6	Lepidoptera	Pyralidae	<i>Arzama</i> sp.
7	Diptera	Symulidae	<i>Simulium</i> sp.
		Tipulidae	<i>Antocha</i> sp.
		Chironomidae	<i>Chironomus</i> sp.
		Rhagionidae	<i>Atherix</i> sp.

(Trichoptera), 1 (Lepidoptera), and 4 (Diptera) (Table 1). The present finding, though very confined, correlates with the previous studies made by Malla *et al.* (1978) and Mishra (1976). Harper (1977) has described Plecoptera and described 11 species. Stanley (1975) has described stoneflies. Atkinson (1974) has compiled insect fauna of Himalayas from Nepal, Tibet and Burma. Subba and Pandey (2005) have made a contribution on aquatic biodiversity of Upper Mustang.

The purpose of the present work was to document the aquatic insects from Palung Khola. Insects identified in this work were *Baetis* sp., *Blastrus* sp., *Cinygma* sp., *Eperous* sp., *Caenis* sp., *Torleya* sp., *Habrophlebia* sp., *Ecdyonurus* sp., *Neoperla* sp., *Nemoura* sp., *Corixa* sp., *Donacia* sp., *Hydrophilus* sp., *Dytiscus* sp., *Hydropsyche* sp., *Rhyacophila* sp., *Arzama* sp., *Simulium*

sp., *Antocha* sp., *Chironomus* sp. and *Alterix* sp.

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