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**Research Article**

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**Macrofauna of Rajang River, Sarawak, Malaysian Borneo****Shabdin Mohd. Long**

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**ABSTRACT.** Surveys were carried out in the main Rajang River and its tributaries to record the community structure of macrofauna. Samplings were done in nine sampling stations using Van Veen Grab sampler and modified kick nets. Six phyla of macrofauna (Mollusca, Annelida, Arthropoda, Nematoda, Brachiopoda and Echinodermata) were recorded in which include 22 species of gastropods, three species of bivalves, 16 species of polychaetes, 10 species of oligochaetes, 51 species of insects, six species of crustacean, one species of nematode, one species of branchiopod and one species of echinoderm. The species number of aquatic insects group was high at freshwater stations while annelids groups were found to be dominant at the estuarine stations. The density of macrofauna ranged from 70-1550 individuals per m<sup>2</sup>. The Shannon–Weaver diversity and Pielou’s evenness indices ranged from 2.19-3.60 and 0.56-0.85 respectively. Based on the taxa richness values, the conditions of the aquatic ecosystem in Rajang River tributaries are good indicating recovery process in post-logging areas upstream of the sampling stations. However, water in the main Rajang River is loaded with fine silt and almost permanently turbid suggesting possible effects either detrimentally or otherwise to the range of resident fauna within the river system.

**Keywords:** Macrofauna, food chain, taxa richness.

**INTRODUCTION**

The Rajang River is the main drainage system for central Sarawak in Malaysian Borneo. It is also the longest river in Sarawak, originating from the Nieuwenhuis Mountain Range and the upper Kapuas Mountains, flowing to the South China Sea (Figure 1).

Lotic environments are more heterogenous and are known to support an extraordinary array of species (Hilsenhoff, 1991; Abang *et al.*, 1995) most of which are macrofauna. Unlike fish, the diversity of macrofauna in most parts of the world, particularly the tropics, is poorly known. Most macrofaunas are small and difficult to identify; the great diversity and abundance only add to the neglect. With the dearth of studies on macrofauna, many of them are being lost as their habitats deteriorate; some without ever being discovered and made known to science.

Very few studies were done on the lotic macrofauna in Sarawak. Reports include that of the SAMA Consortium (1982) on the molluscs of the genera *Paludomus* and *Clea* in the Pelagus area. Eleven orders of macrofauna were recorded in the upper Balui River and its tributaries, namely Mollusca, Ephemeroptera, Odonata, Plecoptera, Trichoptera, Coleoptera, Hemiptera, Diptera, Nemertea, Nematomorpha and Oligochaeta (Tan *et al.*, 1995). Five orders