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A Comparison of Aquatic Insect Communities in Typical Mid-stream Habitats between Tropical Vietnamese and Temperate Korean Streams

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A comparative investigation on aquatic insect communities was conducted to provide biodiversity data on tropical streams in Southeast Asia (Dak Pri stream in southern Vietnam) with a reference temperate stream in Northeast Asia (Gapyeong stream in central Korea). Field investigations were conducted in typical mid-stream habitats of the streams in April and May in 2003, respectively. Aquatic insects were quantitatively sampled (three duplicates at each riffle, run, and pool) and microhabitat factors such as water temperature, substrate, and food resources were also measured for comparisons.

As a result, the aquatic insect community of Dak Pri stream was composed of 109 species, 91 genera, 45 families, and 9 orders, while that of Gapyeong stream was 62 species, 49 genera, 30 families, and 7 orders. Based on the quantitative data, species diversity index (H') was higher in Dak Pri stream (4.01) than in Gapyeong stream (3.27). In addition, some groups of aquatic insects such as Coleoptera, Ephemeroptera, Odonata, Trichoptera, and Diptera were more diverse in the Vietnamese stream, while Plecoptera was more diverse in the Korean stream. It is postulated that more diverse macrohabitats and food resources in the tropical stream may yield more abundant and diverse aquatic insect community comparing with the temperate Korean stream.