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Research Article

Plecoptera community of two small streams of Shillong, Meghalaya, North-East India

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ABSTRACT

A study on diversity and ecology of Plecoptera larvae was carried out at two small streams, Wahdienglieng and Umrisa of Shillong, Meghalaya, North-east India for the year 2014 and 2015. The total number of families and genera recorded during the study were 3 families and 8 genera. During the first year at Wahdienglieng, the Principal Component Analysis (PCA) revealed that the high weighted variables are total alkalinity, pH, electrical conductivity, water temperature and sand while at Umrisa, free carbon dioxide and *electrical* conductivity were strong variables. The next year at Wahdienglieng, PCA showed pH as the highly weighted variable while at Umrisa, the PCA indicated dissolved oxygen, water temperature and rainfall as influential variables. The CCA (Canonical Correspondence Analysis) dendrogram revealed that *Indonemoura* spp and *Kamimuria* spp have positive impact with sandy substratum in Wahdienglieng; while *Amphinemura* spp showed positive correlation with dissolved oxygen in Umrisa during the first year. In the next year, water temperature showed positive relation with *Indonemoura* spp and *Tetropina* spp at Wahdienglieng and Umrisa, respectively. The presence of Plecoptera larvae in these streams indicated that the water is unpolluted and the substratum type enabled the larvae to reside at various microhabitats with diverse species.