

**Land use effects on Ephemeroptera, Plecoptera, and Trichoptera (EPT)
communities in RanauBeluran District, Sabah, Malaysia**

ABSTRACT

Ephemeroptera, Plecoptera, and Trichoptera (EPT) are particularly sensitive and well suited as bioindicators for monitoring stream health. This study aims to investigate the EPT communities between disturbed and undisturbed areas of Ranau-Beluran District. Based on National Water Quality Standards of Malaysia, the sampled streams were categorized as Class I and II of water classes. Nonparametric MannWhitney test showed that only canopy cover was significantly different between disturbed and undisturbed sites. The sampled insects were dominated by Ephemeroptera (80.42%), followed by Plecoptera (14%) and Trichoptera order (5.58%). The Leptophlebiid family was the most abundant (44.82%). Family richness, the Simpson's and Shannon-Weiner diversity indices all showed similar trends, EPT diversity being lower in disturbed sites. The diversity of EPT was strongly related to canopy cover.