

Abstract:

The objective of this research was to survey macroinvertebrate communities along the Tang Sorkh River from July 2013 until August 2014 at five sampling sites. Samples were collected using a surber sampler(30 × 30 cm) every two months. Organisms fixed in formalin 4%, then they were transported to laboratory. Therefore, macroinvertebrate were separated and identified as much as possible. In this study, physical and chemical water variables including current velocity, temperature, depth, width, dissolve oxygen, conductivity, pH, Alkalinity, TSS were assessed. Also grain size of bed sediment and total organic matter was measured. In addition, diversity and biotic indices were used to determine the water quality of Tang Sorkh River. The results 5 classes, 9 orders and 20 families existance in this river. The dominant families were *Hydropsychidae* (Trichoptera), *Simuliidae* (Diptera) and *Baetidae* (Ephemeroptera). The highest and lowest diversity recorded in station 1 and 4 based on shanon-wiener and simpson indices. According to the Hilsenhoff, ASPT, BMWP and EPT indices, station 1 have suitable water quality and aquaculture potential. Although other stations have different water quality. As a conclusion, further work is required to determine the accuracy and performance of these metrics for ecological assessment of this river.

Key words: Macroinvertebrate communities, Grain size, Diversity index, Biotic index, Tang Sorkh River.



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**Identification and determination of macro benthic
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