

Diversity and habitat characteristics of local freshwater Gastropoda (Caenogastropoda) from Sarawak, Malaysia

ABSTRACT

Background and Objective: Gastropoda communities are the most diverse class of mollusc and considered as foremost constituent in the freshwater ecosystems and fisheries economy. However, there is knowledge gap and documentation of freshwater gastropods (Caenogastropoda) in Malaysia particularly in Sarawak. Therefore, this study was performed to identify the species composition and to determine the diversity and abundance of freshwater gastropods communities from selected Bintulu, Sarawak freshwater ecosystems. **Materials and Methods:** Number of individual and gastropod species were count randomly at triplicate quadrat (1×1 m) from 5 sampling location in Bintulu, Sarawak Malaysia. Data of identified species was analyzed for diversity index and correlation with water parameters. **Results:** Present study revealed a total of 5 species from Pachychilidae and Thiaridae families at the 5 sampling locations. *Melanoides tuberculata* was the most abundant species. Shannon indices and Simpson's indices revealed the species diversity and richness were highest at station 3 compared to the other four study locations. Abiotic parameters (dissolved oxygen, pH, water temperature, turbidity and conductivity) indicated significantly difference ($p < 0.05$) among the stations. Dissolved oxygen indicates highly positive relation with the diversity of gastropods. **Conclusion:** New distribution of local freshwater gastropod from Sarawak has been documented and dissolved oxygen level in the water as one measure to assess diversity of freshwater gastropods in the environment.

Keyword: Abiotic factors; Borneo; Freshwater habitat; Gastropod and diversity