

Funding information: KEF (Commission for Development Research) and Schure-Beijerinck-Popping Fund of the Royal Netherlands Academy of Arts and Sciences

ABSTRACT

Most tropical rivers especially in the Asian region, are severely impacted by various human perturbations, and the diverse habitats in streams support rich invertebrate and vertebrate communities. It is hypothesized that the fish assemblages and their dietary structure in two tropical streams differ because they flow through different terrains and are exposed to different climatic conditions. In the wet zone stream, which is geomorphological more complex, fish faunal diversity showed significant longitudinal variations, and sustains endemic fish species. In the diets of fish, taxonomic composition was different along the longitudinal gradients, but dietary taxa richness in the two streams was virtually similar having 32 dietary taxa in wet zone stream and 36 taxa in dry zone stream. In the wet zone stream, we observed a lower proportion of specialist feeding species than those in the dry zone stream. Trophic indices of individual species in fish assemblages ranging from herbivory to carnivory also indicate structuring of fish communities along the longitudinal gradients of the two streams based on dietary structure. The main differences between the fish assemblages in the wet zone compared to the dry zone were the higher number of endemic species and the lower percentage of specialist feeders with higher trophic indices. The outcome of this study hopefully contributes to plan future biodiversity conservation management schemes under various river basin development strategies.