Better Unfed Than Dead: Encapsulating the Diel Vertical Migration of Zooplankton in Lake Wood, Zamboanga Del Sur, Mindanao Island, Philippines

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Zooplankton are key ecosystem component in the pelagic food web, intermediary between primary producers and higher trophic consumers, and thus essential for the functioning of the pelagic community. Despite several costs and consequential trade-offs, zooplankton move vertically in a water column on a daily cycle to avoid visual predators (i.e. fish) that prey them. They ascend during the night to shallower depths and return back to the deeper, darker layer during the day – a phenomenon known as diel vertical migration (DVM). Although tropical lakes are ideal for investigating diel vertical migration of lake zooplankton, it is surprising that only few studies are carried out in these systems, particularly in the Philippines. Thus, the purpose of this work is to elucidate the dynamics of the daily vertical migration of zooplankton and the environmental factors, and to uncover the factor that governs their migration behavior. Here, the DVM of several zooplankton taxa and an important endemic zooplanktivore Rasbora sp., locally known as 'porang', will be studied in a 738-hectare threatened ultraoligotrophic lake in Mindanao Island (Lake Wood) for two months. Zooplankton, including the environmental parameters, will be sampled in the deepest part of the lake at several depths twice a month at full moon and new moon. Expected results will show the migration amplitude of different zooplankton taxa and Rasbora sp. in each lunar period. Also, the correlation between the distribution of zooplankton groups and the environmental factors will be presented. Finally, the present work would serve as a baseline data in developing programs towards the protection of the lake, in particular, the conservation of endemic 'porang'.