D-04 The zooplankton community of the Kotmale reservoir

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The zooplankton community of the Kotmale reservoir was studied with the aim of identifying its constituent groups/species, their distribution, abundance and monthly variations.

The plankton comprised mainly of crustacea; copepoda and cladocera while Rotifera had the largest number of species. Of the copepods, nauplii larvae formed the highest densities and *Thermocyclops* sp. was the dominant cyclopid. Eight species of Cladocerans formed 16.75% of the total zooplankton, with *Ceriodaphnia cornuta* as the principal component. Only one Ostracod belonging to genus *Cypris* was encounted. *Keratella tropica* was the dominant rotifer while *Brachionus* formed the prominent genus. In the zooplankton community, 2 prominent peaks in biomass maxima were observed: one in May 1994 with the dominance of Nauplii larvae and the other in March 1996, with a large number of rotifers. The least density in July 1995 correlate with high rainfall of the month.

Similar to phytoplankton, the highest zooplankton densities were recorded from the shallow upstream regions. There was an inverse relationship between the *Microcystis aeruginosa* and the Cladoceran densities. The zooplankton generally preferred the 0-10 m depth while a downward movement during the noon was observed, which is believed to be a strategy to avoid predators that relay on sight feeding.

The zooplankton consisted of only about 1% of the total plankton and it was found that the highest zooplankton densities do not always correlate with that of the phytoplankton. Most of the zooplankton encounted belongs to typical limnetic forms, found throughout the tropics. Fish predation effects the species composition, as the fish selectively fed on larger forms like the cladocerans.