D-58: Trophic plasticity and variation in the diet of commercially important fish in Kotmale reservoir

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Commercially important fish in Kotmale reservoir include *Oreochromis mossambicus, Cyprinus carpio, Puntius sarana* and *Tor khudree*. Each type contributed 71-88%, 8-11%, 2-6% and 0-2% respec. to the monthly total catch.

During low water level, when phytoplankton and zooplankton densities were high, all fish types turned more towards a phytophagous and zoophagous feeding habit. *O. mossambicus* fed on cladocerans mainly, while others preferred cyclopods too. All fish types fed *Microcystis* along with green algae. Values of selectivity index and forage ratio indicated that *O. mossambicus* preferred *Staurastrum, Microcystis* and *Peridinium*, but did not consume these selectively all the time. During high water level the diet changed. *Cyprinus carpio* and *Puntius* depended mainly on fragments of higher plants, seeds and zooplankton along with detritus. *O. mossambicus* switched to more of phytophagy and detritivory habit and the zoophagy became insignificant in certain months.

Individual variation in the diet was less prominent in *O. mossambicus*. Percentage occurrence of each food item varied widely in the individuals of the same sample, but the composition did not vary much. Some had more mineral particles indicating feeding at bottom layers. However, variation of diet in carps and *Puntius* sp. was more prominent. While some fed mainly on seeds, others fed on fragments of higher plants along with zooplankton. They consumed what was in the immediate vicinity.