

D-55: Composition and population dynamics of plankton in Rantambe reservoir

H A A Hettiarachchi, Swarna Piyasiri
(Dept of Zoology, Univ of Sri Jayewardenepura, Nugegoda)

Rantambe (7°11" - 7°14"N and 80°5" - 81°01"E) is an oligomictic reservoir constructed under the Accelerated Mahaweli Project.

The morphometric data relevant to the study were: surface area 1.8 km², maximum depth 30 m, shoreline 12.84 km, shoreline development 5.44, maximum length 2,250 m, maximum width 1,094 m, volume (f.s.l.) 21 mcm mean river flow 111.30 m/sec and hydro catchment area 3,118 km². Uma Oya and Mahaweli River were the major inlets.

During the study period, sampling was carried out once a month in 3 major stations (with 5 sub stations). The euphotic limit was 5.7 m : 0.2 and the oxygen stratification was of a Clinograde type.

The dominant phytoplankton group found in the reservoir was Chlorophyceae which consisted of 16 species. Of them *Straurastrum* dominated the reservoir phytoplankton. *Pediastrum* density was fairly high whereas *Macrasterias* was very low. Cyanophyceae was the second dominant group with low numbers of *Microcystis* & *Anabaena* species. However the highest phytoplankton density was found in station 1 and the lowest in station 2. Therefore, phytoplankton may be brought into the reservoir through the Mahaweli river (via Randenigala) than Uma Oya.

The dominant zooplankton group of the reservoir was copepoda. However from March to April, *Brachionus* sp. (Rotifera) dominated the zooplankton population. The copepods of the reservoir comprised of *Ectocyclops*, *Diaptomus* & *Limnocalanus* sp. The second dominant group, rotifera was comprised mainly of *Brachionus falcatus* and *Keratella tropica*. But *B. donneri* and *G. stylifer* dominated from March to April. Of the Cladocerans *Bosminopsis deitersi* was the most abundant species. However the highest zooplankton density was found in station 1 and the lowest density in station 3. Therefore zooplankton may be brought into the reservoir through Uma Oya than through Mahaweli River (via Randenigala).