

**THE LIMNOLOGY OF IHALAGAMA WEWA,
A MINOR PERENNIAL RESERVOIR IN THE WET ZONE OF
SRI LANKA, WITH SPECIAL REFERENCE TO
PRODUCTION OF *Oreochromis
mossambicus* and *Etroplus suratensis***

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Summary

1. The limnology and the biology of fishes in Ihalagama Wewa, a fresh water man made minor reservoir in the wet zone of Sri Lanka, were studied from Nov. 1977 to Oct. 1979.
2. The seasonal variations of temperature, transparency, conductivity, dissolved oxygen content, free carbon dioxide content, alkalinity and pH of the water were measured. There were very little seasonal fluctuations in the temperature, free CO₂ content and dissolved oxygen content of the water. Conductivity was very low and ranged from 75 $\mu\text{S cm}^{-1}$ to 275 $\mu\text{S cm}^{-1}$ while the secchi disc transparency varied between 60 cm and 90 cm.
3. The highest abundance of phtoplankton was observed in the dry months. The dominant phytoplankton were green algae while the most abundant zooplankton were copepods.
4. Extensive growth of *Salvinia molesta* causing a dense cover over the water surface was evident throughout the year. This extensive growth of *Salvinia* may be responsible for the low primary productivity of the lake as well as the low dissolved oxygen concentration of the water.
5. The morphometrics, food and feeding and fecundity of the species of fish present in the lake were studied. Of the 16 species of fish present in the lake, *Puntius filamentosus*, *P. amphibius*, *P. dorsalis* and *Esomus danrica* may compete for food with *Etroplus suratensis* while *Etroplus maculatus*, *P. dorsalis* and *E. danrica* may compete for food with *O. mossambicus*. Generally the degree of competition is higher with *E. suratensis* than with *O. mossambicus*.