M.S. 32. MADHUSOODANA KURUP, B.–Studies on the systematics Biology of the fishes of the Vembanad Lake–1983–Dr. C.T. Samuel.

A detailed investigation on the Systematics, Distribution and Ecology of all fish species of the Vembanad lake was carried out during the period from October 1978 to September 1980 and biological studeis were conducted on selected species of commercially important fishes of the lake during the period from January to December, 1980.

150 species of fishes belonging to 100 genera and 56 families were identified from the Vembanad lake.

Among the physico-chemical parameters studied, the pattern of the variation of temperature was bimodal.

The occurrence, season and frequency of the 139 species of fishes recorded from the lake are presented.

An attempt was made to correlate the distribution and abundance of fishes with the fluctuating physico-chemical paramoters of lake. The result shows that salinity is the most significant controlling factor on the type of fish fauna of the lake and their distribution and abundance, both seasonally and geographically.

Mass mortality of fishes were frequently observed from Eloor-Varapuzha regions of the lake during February to May.

The biology of the two commercially important fish species of Vembanad lake viz. *Daysciaena albida* (Cuvier) and *Torres filamentosus* Cuvier are investigated.

The analyses of the food feeding habits of *D. albida* of the lake reveal that prawns, teleosts, juvenile crabs, amphipods and isopods formed the major part of the diet.

The food of *G. filamentosus* was represented mainly by amphipods, isopods, polychaetes, juvenile crabs, filamentous algae and diatoms.

In *G. filamentosus*, the regression coefficients between males and females are insignificant at 5% level.

The breeding biology of *D. albida and G. filamentosus* of Vemband lake was studied.

The spawning season of *D. albide* was found to be during the months from July to November.

This is confirmed by the percentage occurrence of fully mature specimens and high ISI values.

Individuals *D. albide and G. filamensosus* spawn only once within a definite spawning period.