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A PRELIMINARY STUDY OF THE FISHERY AND BREEDING PATTERN OF SELECTED FISHES IN THE POLGOLLA RESERVOIR, KANDY

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Polgolla reservoir was constructed under the Accelerated Mahaweli Development Program (AMDP) mainly for hydropower generation and irrigation purposes, although minor scale fishing has been established. The objectives of this study were to determine the contribution of different fish species to the catch and to assess the maturity stage of the abundant species in the catch. Fishermen catches were monitored weekly over a six-month period in order to evaluate the catch composition. In the laboratory, gonads of dissected specimens were examined to estimate Gonosomatic Index (GSI). Fishermen were interviewed to gather information about fishery in the reservoir. The findings revealed, there are only six dugout canoes engaged in fishing and they mainly used nylon gill nets as fishing gear. Gill nets were set during daytime although usually they are set overnight in other reservoirs. Cast net fishing and hook and line fishing were also carried out sporadically in this reservoir. It was further revealed that, fishermen used the beating technique more frequently to increase the catch.

During the study period, nine species of fish belonging to five families were found in the catches. Analysis of the catches showed that the exotic species *Oreochromis mossambicus* and *O.niloticus* contribute greatly (71.9%) to the catch and the indigenous species to a lesser extent (28.1%). This pattern is common in many other reservoirs in Sri Lanka. Among the indigenous species, *Puntius dorsalis* was the most abundant species in the catch. GSI values of *P.dorsalis* was high (15.03) during May and decreased (10.98) by October. The development stage V of the gonads was observed during all six months, revealing that they spawned throughout this period. The number of fish with stage V gonads decreased from May to October while that of sage IV increased from July to October. *O.mossambicus* and *O.niloticus* also showed continuous spawning as they contain stage IV gonads during the study period

It was further revealed that fishermen use nets comprising prohibited mesh sizes, which lead to the capture of smaller fish. This reduces the recruitment of fish in the reservoir, resulting lower yields in future. Thus, management strategies for fishing are essential for long term survival of fishes and the fishery in the Polgolla reservoir.