

**PRELIMINARY STUDIES ON THE DIVERSITY OF  
FISH IN KOMARI LAGOON; AMPARA DISTRICT,  
SRI LANKA**

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**2017**

## ABSTRACT

Coastal lagoons are highly diverse ecosystems. The heterogeneity of physico- chemical parameters and diversity of fauna and fauna that become heterogeneous with space and time can be used to assess the ecological status of lagoon. This study was conducted to measure the water quality and fish diversity of Komari lagoon in Ampara District, Sri Lanka. Fish diversity and the physico-chemical parameters like pH, salinity, temperature, conductivity, specific gravity, turbidity (clearance) and dissolved oxygen of water of the lagoon were measured from September 2017 to December 2017 by sampling in 5 sampling sites. In present study, 08 fish species were identified in the lagoon. The fish species identified were; *Glossogobius giuris*, *Ambassis ambassis*, *Gerres limbatus*, *Mystus gulio*, *Anabas testudineus*, *Etroplus suratensis*, *Oreochromis niloticus*, *Oreochromis mossambicus*. Fish diversity was measured using Shannon-Weiner index. The highest value for Shannon-Weiner index (1.33936) was recorded at site C (6°97'71.1" N and 81°85'51.24" E) and lowest value (0.973821) was recorded at site E (6°98'74.05" N and 81°85'65.53" E). The correlation between diversity indices and water quality parameters were identified by subjecting them to the Pearson correlation statistical method. The DO was negatively correlated with indices (p value = 0.047, Pearson correlation = -0.883) while other water quality parameters didn't show any significant correlation with diversity. Water quality parameters were not significantly correlated with species abundance (p value > 0.05 at 95% confidence level). Therefore, water quality parameters don't effect on distribution of species among sites.

**Key words:** Komari Lagoon, Fish Diversity, Water Quality