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**The effect of human impacts on the distribution of molluscs in Lunuwila Ela, Galle.**

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The world is in the midst of a biodiversity crisis. Now the rate of species extinction is faster than ever before. Many reasons are responsible for this extinction including human impacts. Among major taxonomic groups that recorded extinctions, upto 42% are molluscs. Molluscs are one of the most divers and dominant animal groups among macro-invertebrates. As they have many ecological and economical importances, it is important to identify threats affect on their distribution. The current study was conducted to determine the effect on human impacts on the distribution of molluscans groups in selected area of Lunuwila Ela, Galle. The study was continued up to six months from January to June 2007. Both temporal and spatial data were recorded to determine the human impact on the distribution of mollusks. A constructed anicut across the stream was considered as the barrier for the distribution of fauna and the community structure of the mollusks on both sides of the anicut was studied. The mean values of nine different water quality parameters and community indices were recorded. Among calculated water quality parameters for two sides, the highest difference showed in salinity (19.0770 ppt in site B - 26.074 ppt in site A) and the lowest difference showed in Alkalinity (0.0065 mmolL<sup>-1</sup> in site B - 0.0092 mmolL<sup>-1</sup> in site A). Five parameters [Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), Salinity (SAL), Hardness (HARD) and Total Dissolved Solids (TDS)] showed significant difference between two sides. Five molluscan genera (*Faunus*, *Gangetia*, *Thiaria*, *Neritina*, *Ostria*) and one unidentified genus were recorded from both sides of the anicut. Among them five genera were identified from the upper side of the stream and three genera were identified from the lower side of the stream. Genus *Faunas* and *Gangetia* were common to both sides. The species abundance also showed a significant difference between two sides ( $P < 0.5$ ). High abundance and low diversity values were recorded from the lower part of the stream. Jaccard coefficient (Sj) indicated low similarity between two sites ( $P < 0.5$ ). The results derived from this study indicated the distribution pattern of molluscan groups has changed in this stream due to a human impact.

*Keywords:* mollusca, distribution pattern, human impact, community structure