AII 10 Relative growth pattern of of *Macrobrachium idae* (Heller 1862) population in Nilwala River estuary and its temporal fluctuation of abundance relevant to salinity levels of the habitat

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Freshwater prawn *Macrobrachium idea* is considered as a potential species for aquaculture with its rich protein content. The objective of this study was to identify the relative growth pattern of *M. idae* and temporal fluctuation of its abundance in relation to salinity levels of the habitat.Samples were collected from *M. idae* population in Nilwala River, Matara on monthly basis for one year period from February 2010 to January 2011. Relative growth pattern was determined using 50 males and 50 females of *M. idae* individuals. For body structure, data was collected using thirty two morphometric characteristics according to truss network system and for major and minor 2nd pereiopod, ten morphometric characteristics were used. Relative growth pattern of morphometric parameters was analyzed using regression analysis method. Results indicated 20 body structure characteristics and all characteristics of the major and minor 2nd pereiopod were significantly different between two sexes ($p<0.05$). Meristic characters (rostral teeth) between two sexes were tested using Mann-Whitney test and no significance reported. To determine the temporal fluctuation of abundance relevant to salinity levels of the habitat, total of 8581 individuals were collected and analysis were conducted based on three groups: males, non gravid female and gravid females. Results indicated the availability of males (47.06%), non gravid (30.01%) and gravid females (22.93%) throughout the study period. The highest salinity level was recorded in March, withthe lowest total abundance of the prawn species. Three groups did not show significant correlations ($p>0.05$) with salinity levels recorded, however, there is a trend of decrease in population with the increase in salinity. This information isimportant in conservation programs when planning management strategies for wild populations.

Keywords: *Macrobrachium idae*, Nilwala river, relative growth, population abundance, salinity levels