

**STOCK IDENTIFICATION OF BULLET
TUNA (*Auxis rochei*) IN SRI LANKAN
WATERS BY COMPARING
MORPHOLOGICAL CHARACTERS**

M.K WANNIARACHCHIGE

**Aquatic Resources Technology Degree Programme
Faculty of Animal Science and Export Agriculture
Uva Wellassa University**

2014

Abstract

Over fishing of the fishery resources and usage of incorrect fishing efforts are threaten to the capture fishery in Sri Lanka. To avoid this problem it is essential to have good fishery management. For that aspect identification of stock is more important in managing fishery resources properly. As the objective of present study, morphological study is more vital to identification of fish stock. The present study was carried out for the identification of fish stock by comparing selected morphological variables of bullet tuna (*Auxis rochei*) samples which were collected from Negombo, Beruwala and Galle within a week. A total of 122 fish specimens were randomly collected and 28 morphological variables were measured. 18 morphometric variables were measured by using measuring board and venire caliper to nearest 1 cm. Meristic variables were directly counted. Analyze was carried out separately for morphometric and meristic data. Standardized morphometric data and raw meristic data were taken to the analysis. MANOVA test was performed to check the significance level of variables among Negombo, Beruwala and Galle and Principal Component Analysis (PCA) was performed to identify the relationship of variables of sample collection sites. All statistical analysis was carried out using SPSS 19 statistical software. Accepted level of significance was 0.05 (Significance<0.05) All analyzed morphological data have 0.000 of significance level. The present study was concluded that the samples which were collected form Negombo, Beruwala and Galle were belonging to the different stocks.