

**D-02 : INTERRELATIONSHIP AMONG THE SPECIES OF THE GENUS  
Puntius (Teleostei : Cyprinidae) AS INDICATED BY THEIR  
MORPHOLOGY, MORPHOMETRY AND MERISTICS**

*A S Kotalawala*

*Dept. of Zoology, University of Sri Jayewardenepura.*

In previous studies of Sri Lankan Cyprinids some morphological, meristic and morphometric characters were used to describe the species. However a detailed comprehensive study with statistical analysis has not been carried out as yet. The purpose of the present study is to provide a detailed study of morphology, meristics and morphometry of species of *Puntius* initially with a view later on to encompass other genera and subfamilies so as to obtain an overview of the family Cyprinidae.

Twelve species of *Puntius* collected were identified according to Deraniyagala (1952) and Munro (1955). For meristic counts both formalin preserved and cleared specimens were used. Measurements of each formalin preserved specimen were made using a caliper. The simple measurements were transformed into a series of ratios. ANOVA tests were done for twenty ratios and four meristic characters using Sheffe's Range Test to indicate which species were significantly different.

Statistical analyses demonstrate that the counts of gill rakers, vertebrae, lateral lines scales, pectoral fin rays and most of the morphometric ratios are significantly different, among the species studied and could be used successfully in separating species. The rearranged percentage similarity matrix indicate that the 12 species of *Puntius* fall into four clusters : Cluster one includes *P. amphibius*, *P. chola* and *P. filamentosus*; cluster two includes *P. pleurotaenia* and *P. sarana*; cluster three includes *P. ticto*, *P. cumingi* and *P. nigrofasciatus*; Cluster four includes *P. dorsalis*, *P. bimaculatus*, *P. vittatus* and *P. titteya*.