

## MORPHOMETRIC APPROACHES AS TOOLS IN REVEALING THREE-CLOSELY RELATED CATFISH SPECIES (CLARIIDAE)

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### ABSTRACT

African catfish (*Clarias gariepinus*) was introduced into Malaysia for aquaculture purposes. They often used to produce a hybrid with indigenous catfish (*C. batrachus*, *C. macrocephalus*) due to their rapid growth rate. There are difficulties in differentiating these three species in their morphology. An experimental study was conducted to identify morphometric characteristics between these three species. Specimens of each species (*C. gariepinus*, *C. batrachus* and *C. macrocephalus*) were collected and analysed in term of their morphological differences. Seventeen characters have been used for conventional morphometric measurements. Truss morphometric characters for the body consist of 36 characters. Five meristic characters were counted. All data were converted into a ratio and undergo Discriminant Function Analysis. Meristic data also tested by non-parametric Kruskal-Wallis. All analysis were using SPSS 20V. Conventional morphometrics suggested three characters (Head Width, Anal Fin Base Length and Outer mandibular barbell length) to differentiate the three species. Meristic characters showed significant differences in dorsal fin rays, anal fin rays and caudal fin rays. Conventional and truss agreed on similar morphological characteristics in species identification. Meristic counting can be used as additional characteristics in identifying these three species.

**Keywords:** Aquaculture, Catfish, Morphometric, Truss, Meristic

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