Title : Comparative anatomy of osteocranium in some catfishes (*Clarias macrocephalus*, *Clarias gariepinus* and *Clarias macrocephalus* x *Clarias gariepinus*)

Author(s) :
1. Ms. Pornchita Pitakdusadee — **Student ID :** 640510335
2. — **Student ID :**
3. — **Student ID :**

Major : Zoology

Advisor(s) :
1. Assistant Professor Dr. Monruedee Chaiyapo
2.
3.

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The morphological structure of the osteocranium in different species of catfishes varies significantly and plays a crucial role in both evolutionary adaptation and species classification. The purpose of this study were to examine and compare the cranial bone of three catfish species *Clarias macrocephalus* (native catfish), *Clarias gariepinus* (African catfish), and their hybrid (*Clarias macrocephalus* × *Clarias gariepinus*).To study in anatomy of the fish skull, the head of a catfish was detached from its body and subsequently processed using a warm water maceration technique. Additionally, the skulls were immersed in a hydrogen peroxide solution for several hours to eliminate soft tissue and bleach the skull. Subsequently, cranial bones were photographed using a digital camera and examinate in accordance with established anatomical manuals to identify the corresponding bones accurately. The results revealed significant variations in skull morphology among the three species, particularly the size shape of neurocranium. Notable differences were observed in the frontal bone, sphenotic bone, pterotic bone,

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supraoccipital bone, occipital bone, and jaw structure. Morphological analysis revealed that *Clarias gariepinus* has the largest and most robust skull, while *Clarias macrocephalus* has a smaller and more delicate cranial structure. The hybrid catfish exhibited intermediate cranial characteristics between its parental species. This study indicates that osteocranium morphology can be an effective taxonomic tool for identifying species within the Clariidae family and contributes to the understanding of phylogenetic relationships and evolutionary studies of catfish.

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