

Universiti Teknologi MARA

**Description of Ariid catfishes based
on the Shape of Teeth Patches**

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ABSTRACT

The purpose of this project report is to develop a prototype of image descriptions for Malaysian fishes of Ariid catfishes based on the shape of teeth patches in digital form. Normally, all descriptions of Malaysian fishes especially Ariid catfishes are done by human understanding and observation. Using contour based approach, image of teeth patches of Ariid catfishes was represented by its' shape. The teeth patches are situated on the roof of the mouth of Ariid catfishes and act as morphological character used in species description. The shape of the teeth patches is described in terms of feature description using Chain code or Freeman code. Then, the type of appropriate species of Ariid catfishes can be described in digital form. Shape is a very important characteristic and shape feature is studied for this fish image description. From the interviews, reading and review the appropriate sources of information such as books, journals and research papers, the prototype of image descriptions of Ariid catfishes based on the shape of teeth patches is designed based on a research design. The research design is used for guiding the implementation of the prototype development. It is used to construct the implementation process in order to complete this image descriptions prototype successfully. The major contributions from this work are that description species of fishes based on shape of teeth patches can be introduced to Malaysian fishes department and also increase the domain knowledge of using shape representation in image descriptions.

Key: Shape feature, shape based representation, Ariid catfishes, teeth patches, Chain code

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