

## Histological study of maxillary barbels in *Silurus triostegus* and *Heteropneustes fossilis* (SILURIFORMES) fishes collected from Basra City waters

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### Abstract

In this study the maxillary barbels were investigated in *Silurus triostegus* (Heckel, 1843) and *Heteropneustes fossilis* (Bloch, 1794) which collected from Basra (Shatt Al Arab) waters. After histological preparations, the histological results revealed that in the two species, the barbels showed epithelium, dermis, muscle layers, tastes buds, blood vessels, nerve fibers and cartilage. The thickness of epithelium differs between the two species also the shape of taste buds. The cartilage occupies the core of the barbel and consider to be primitive cartilage with chondrocytes and matrix. Two types of muscles were distinguished in the studied species smooth and skeletal muscles..

### Introduction

Fishes have many and various appendices that extended from the skin, like barbels which differ in location or in structure and developed in many species independently as an accessory structure that being important in feeding. Barbels are found in many families in marine and freshwater fishes for example Acipenseridae, Mullidae, Siluriformes and Cobitidae [1]. Barbels in fishes are different in number in some fishes they reach to 11 paired or unpaired barbels on jaws, lips and head. Also, inside the same species there is barbels variation because of sexually dimorphic or polymorphic among individuals of either sex [2,3].

The taste buds present widely over many parts of fish body and barbel is one of these parts, the taste buds concentrated on barbels epidermis in the anterior edge [4-8]. It is obviously that all siluriform fishes have barbels with the numbers of pair ranging from one to four, the barbels are different also in form, there from most minute to as long as body length, in hagfish (Myxiniiformes) the most notable are the three pairs (nasal barbels, maxillary barbels and mandibular barbels) around mouth and nostril [9-11].

The barbel can be classified as a barbel with and without cartilage axial, the skeleton rod found among Siluridae, Cobitidae and Pristiphoridae, while genus *Cyprinus* had barbels