Gorgan University of Agricultural Sciences and Natural Resources

Utilization and Cultivation of Aquatics, Vol. 10(2), 2021
http://japu.gau.ac.ir
DOI: 10.22069/japu.2021.15110.1561

Investigation of shape, structure and function of scales in some fish species

S.A.A. Hedayati[*1], T. Bagheri[2] and M. Yazarloo[3]

[1]Associate Prof., Dept. of Fisheries and Aquatic Ecology, Faculty of Fisheries and Environmental Sciences, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran,
[2]Assistant Prof., Offshore Water Research Center, Iranian Fisheries Science Research Institute, Agricultural Research, Education and Extension Organization, Chabahar, Iran,
[3]Ph.D. Student of Aquatic Ecology, Faculty of Fisheries and Environmental Sciences, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran
Received: 11.18.2020; Accepted: 12.23.2020

Abstract

In the present study, the methods and tools of studying the structures and the surface microstructures of the scales, the ecophysiological structures of the scales and the species diversity of the scales have been investigated in sharks, rays, eels and catfishes. The scales on the fish shield was typically found only as a few rows of large teeth on the body of the fish and sometimes deformed and become thorns. A placoid scales typically consist of a broad, rectangular base plate that sinks into the top layer of the dermis and a sharp point or spike that protrudes posteriorly from the surface of the epidermis. Although some eels do not have distinct scales, many eels have small, elliptical cycloid scales that attach to the skin. Catfish generally do not have clear, uniform scales and their bodies are often naked. In some species, the skin is covered with mucus, which is covered in skin respiration, and in some, the skin is covered with bone plates called scute. Finally, except for catfish, the existence of clear structure of skin scales was confirmed in all of studies species.

Keywords: Aquatic, Biodiversity, Physiology, Scales, Skin

*Corresponding author: hedayati@gau.ac.ir