



## **A comparative study of osteology of two Flowerhorn and Oscar fishes with a farming and nurturing approach**

Salajegheh Tazerji S. <sup>1\*</sup>; Rahimi P. <sup>2</sup>; Baes M. <sup>3</sup>; Aghaei A. <sup>4</sup>

1-Young Researchers and Elites club, Science and Research Branch, Islamic Azad University, Tehran, Iran

2-Doctorate student of Veterinary Medicine, Faculty of Veterinary Medicine, Science and Research Branch, Islamic Azad University, Tehran, Iran

3-Aquatic Animal Health and Diseases Specialist, Faculty of Veterinary Medicine, Tehran University, Tehran, Iran. (The owner of DR. Fish clinic)

4-Doctorate student of Veterinary Medicine, Faculty of Veterinary Medicine, Shabestar, Islamic Azad University, Shabestar, Iran

\*Corresponding author's email: sina.salajegheh@gmail.com

### **Abstract:**

The comparison of morphometric specifications, enumeration, and osteology of two fishes from the family of Chichlidae, i.e. Flowerhorn and Oscar can be used as an important specification for taxonomic studies. Cognition of the osteological specifications of the fishes like the skull structure has applications in understanding the biological properties like farming and nurturing. In this research, the focus on skull structure and spine order has been performed besides collecting the complete bones and preparing the model in one of the ornamental aquaculture farms in Tehran province and taking images using the X-ray. The results showed there is an intermittent ascending trend with the advance from the posterior vertebrae toward the anterior vertebrae and with different slopes in various areas in intervertebral distances in Flowerhorn. In the case of Oscar, disorganization was observed in the determination of the distances. Significant growth was observed at the beginning of the calculations and while moving in the direction of Caudocranial, but in the following, the amount of this ascending slope was reduced. In the following, this progress was minimized and after the final decrease of distances, the increase in the distances was observed again and in the final change that occurs in initial vertebrae the reduction in intervertebral distance is observed again. After finding the order of the vertebrae distances and their relationships, the comparative study of skull structure osteology of these precious fishes was carried out. The proper approaches for farming and nurturing these fishes were presented according to their osteological properties.

**Keywords:** Osteology, Flowerhorn, Oscar, Nutrition