



## **A study of the Digestive Tract of Hybrid Malaysian Mahseer (*Barbonymus gonionotus* ♀ × *Tor tambroides* ♂) During the Larval Stage**

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### **Abstract**

Hybrid Malaysian mahseer is a crossbreed between the male Malaysian mahseer, *Tor tambroides* and female silver barb, *Barbonymus gonionotus* through induced breeding. Newly hatched larvae were reared in three 120 L aquaria at a stocking density of 5 larvae per liter. The development in digestive tract, histology and functional capabilities were observed daily from 1 to 9 DAH (day after hatching) and at 2-day intervals until 25 DAH by means of light and scanning electron microscopy (SEM), and histology. The study was carried out for a better understanding of its digestive capability and the prediction of commencing a weaning period. A tubal digestive tract was extended to the anus by 3 DAH that coincided with the mouth opening and the start of exogenous feeding. A functional stomach was observed at 7 DAH with the relative gut index (RGI) of  $10.7 \pm 0.06$ . A layer of supranuclear protein was observed with lipoprotein at the outer layer of the digestive tract starting from 7 DAH. The morpho-histological results of this study indicated that hybrid Malaysian mahseer larvae should be able to digest, ingest and absorb an artificial diet beginning from 7 DAH. At this stage, the hybrid larvae could be gradually or perhaps totally weaned to an artificial diet of a suitable particle size.

**Keywords:** carp, digestive capability, histology, weaning, gut index.