

**External and internal morphology, and feeding ability of yellow seahorse hippocampus kuda (Bleeker, 1852) early juveniles**

**ABSTRACT**

**Aim:** Despite their well-known strategy of brooding in male pouches, survival of early juveniles of seahorses still represents a significant bottleneck to its population survival. This study aimed to address the feeding and digestive efficiency of early *Hippocampus kuda* in order to improve their survival. **Methodology:** The external and gut morphology of *H. kuda* juveniles in the immediate period after being released from the brood pouch (0–9 day-afterbirth) were examined and described through histological and microscopic. **Results:** Unlike premature seahorses with a round-shaped yolk sac attached to their semi-transparent body, the normal newborns had no external yolk sac but some yolk residues were observed internally. Although the mouth gape size, mouth area, height and tail length grew bigger and longer in the older juveniles, the intestine length increased isometrically with height. Ingested live food was poorly digested in early juveniles and some *Artemia nauplii* were found to be still alive in the excreta. **Interpretation:** Overall, the results indicated that the early feeding of *H. kuda* was highly inefficient. Depletion of remnant yolk in *H. kuda* suggested partial lecithotrophy during the first two days. These findings provide an important insight for developing nursing methods for this seahorse species.

**Keyword:** Critical period; Digestive tract; Histology; Lecithotrophy; Mass mortality