

Foraging dependency of Barbour's seahorse *Hippocampus barbouri* (Jordan and Richardson 1908) juveniles on photoperiod and light intensity

ABSTRACT

Aim: To determine the effect of photoperiod and light intensity on the growth and survival of *H. barbouri* juveniles. **Methodology :** In the first experiment, three photoperiod ratios were tested 8L:16D (Light: Dark), 12L:12D and 16L:8D. Light-emitting diode (LED) of approximate intensity of 2100 lx was used. In the second experiment, three light intensities were used: 700, 1400 and 2100 lx. Both experiments were conducted for 4 weeks. **Results :** At the end of 4 week culture period, the highest survival of *H. barbouri* juveniles was 80 % under photoperiod of 12L:12D, followed by 66.67 % under 8L:16D, and the lowest 56.67 % under 16L:8D. The results showed that photoperiod of 12L:12D produced the best height 37.71 mm and weight 0.165 g of *H. barbouri* juveniles. As for the experiment on light intensity, the highest survival of *H. barbouri* juveniles was 86.67 % under 1400 lx, followed by 80 % under 2100 lx, and the lowest 60 % under 700 lx. At the end of the experiment, the light intensity of 1400 and 2100 lx showed the maximum growth with respect to height 35.31 and 37.71 mm and weight 0.133 and 0.165 g. **Interpretation :** The overall results suggested that *H. barbouri* juveniles could be cultured under photoperiod of 12L:12D and light intensity of 1400 to 2100 lx for conducive growth and survival.

Keyword: *Hippocampus barbouri*; Light intensity; Photoperiod