

ABSTRACT

This study assessed the growth, survival and changes in food selection of juvenile *Hippocampus comes* fed either *Artemia salina*, *Pseudodiaptomus* sp. or the mixture of both from 0-30 days after birth (DAB). The height (Hr), weight (W), head length (Ls), snout depth (Ds), and orbital diameter (Do) of 30 DAB seahorses fed *Pseudodiaptomus* diet ($H=40.28 \pm 2.95$ mm, $W=0.20 \pm 0.07$ g, $L=7.48 \pm 1.72$ mm, $Ds=1.62 \pm 0.14$ mm, and $Do=0.67 \pm 0.01$ mm) and mixed diets ($H=41.51 \pm 0.89$ mm, $W=0.21 \pm 0.02$ g, $L=8.92 \pm 0.13$ mm, $Ds=1.59 \pm 0.05$ mm, and $Do=0.69 \pm 0.01$ mm) were significantly higher than those fed *Artemia* diet ($H=18.6 \pm 0.0$ mm, $W=0.019 \pm 0.001$ g, $L=4.6 \pm 0.0$ mm, $D=1.0 \pm 0.0$ mm, and $Do=0.42 \pm 0.00$ mm) ($P < 0.05$). The onset of mortality of the seahorse was delayed in the mixed diet until they were 6 DAB, while it was at 3 DAB in the *Artemia* and the *Pseudodiaptomus* diets. Survival in all treatments did not vary significantly in 0 to 4 DAB and 13 to 30 DAB seahorses ($P > 0.05$). The seahorses readily fed on *A. salina* nauplii and *Pseudodiaptomus* sp. nauplii in the single diets. They preyed exclusively on *Pseudodiaptomus* sp., rejecting *A. salina*, when fed mixed diet, but shifted from nauplii, with food electivity index (E) range from -0.07 to -0.47 to adult *Pseudodiaptomus* sp. ($E=-0.17 \pm 0.42$ to 0.42 ± 0.03) as they grew older. Feeding *Artemia*, *Pseudodiaptomus* and mixed diets to *H. comes* resulted to similar survival, but diets with *Pseudodiaptomus* sp. resulted to better growth than with *A. salina*, proving the importance of copepod as prey item of seahorse. A diet with *Pseudodiaptomus* sp. is most suitable in rearing 0-30 DAB juvenile *H. comes*.