

Comparisons in prosomal width and body weight among early instar stages of Malaysian horseshoe crabs, *Carcinoscorpius rotundicauda* and *Tachypleus gigas* in the laboratory

ABSTRACT

The three Southeast Asian horseshoe crab species are diminishing not only locally but also regionally and protection of them is now an urgent matter. Two species of horseshoe crab, *Tachypleus gigas* and *Carcinoscorpius rotundicauda*, were artificially inseminated, and the eggs were incubated at $28\pm 1^{\circ}\text{C}$ and in the salinity of 33 ± 2 ppt. The fertilized eggs hatched after 42 days and 41 days with hatching rates of 98.1 and 98.9% for *T. gigas* and *C. rotundicauda*, respectively. This study reveals that in the identical laboratory condition, *C. rotundicauda* underwent more frequent molting than *T. gigas*. After 328 days of rearing, 63.8 and 22.9% of *C. rotundicauda* larvae had molted to the 6th and 7th instars, respectively, while 56.6 and 20.1% of *T. gigas* at the end of 355 days of rearing had molted to the 5th and 6th instars, respectively, but only 0.6% had molted to the 7th instar. There is a wide variation in the molting rate among larvae obtained from synchronized inseminated eggs and reared under uniform laboratory conditions.

Keyword: Horseshoe crab; Inseminated