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**Development and growth from newly settled first crab stage to sexual maturation and observation on reproductive biology of the Harlequin Anemone Crab *Lissocarcinus laevis***

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The harlequin anemone crab, *Lissocarcinus laevis*, is a high value marine ornamental species but has never been captive bred previously. This study monitored the development and growth of captive bred *L. laevis* individually from newly settled first stage crab (C1) till egg production in females at crab stage 6 (C6) in laboratory. The crabs were kept at  $26.5^{\circ}\text{C}\pm 2^{\circ}\text{C}$  and salinity of 34, they were fed frozen mysis shrimp, brine shrimp, prawns and mussel meat to satiation daily and their molting, growth and morphological changes observed and recorded. The results showed that the average duration of crab stage C1 to C6 of *L. laevis* was 6.4, 8.4, 12.5, 15.4, 18.0 and 22.3 days, respectively. Over the period, the average carapace length (CL) and width (CW) of the crabs increased from  $3.1 \pm 0.2$  mm to  $11.0 \pm 1.3$  mm and  $3.2 \pm 0.3$  mm to  $12.9 \pm 1.6$  mm, respectively. The correlation between CL(y) and CW (x) can be expressed by the equation  $y=0.5+0.81x$ . Sexual dimorphism became apparent at the 3<sup>rd</sup> crab stage (C3). When male and female were put together, the mating behavior was observed at the 5<sup>th</sup> crab stage onward and the females were found spawning and carrying eggs at 6<sup>th</sup> crab stage. The copulation between male and female crabs on average lasted 2.5 minutes and female crabs normally spawned in 2-4 days after mating. The color of newly laid eggs were orange in color but gradually become dark-brown and dark grey after 8-9 days and hatching occurred in 10-12 days after spawning. The female crabs normally laid a new batch of eggs in 2-3 hours after larval hatching.

**Biography**

Xinhai Wang completed his Master degree in 1982, Assistant professor. His research is mainly in Breeding and developmental biology of aquatic animals.

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