

Determining of gonad maturation stages in the freshwater crab (*Sodhiana iranica*)

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Abstract

The aim of this research was determining of gonad maturation stages during oogenesis cycle in the freshwater crab (*Sodhiana iranica*). A total of 25 female crabs were collected from a fresh water spring Eelood located in 25 km in Bastak city, Hormozgan province, southern Iran from April to July 2013. Matured females were anesthetized using cooling technique and then their ovaries were removed, fixed in Bouin's fluid and dehydrated with ascending alcoholic series, cleared in xylene and then embedded in paraffin. The tissue sections were provided in 5-7 μ m thickness, and stained with Hematoxylin- Eosin technique. Statistical analysis was carried out using One-way ANOVA at significance level $\alpha=0.05$. An H-shaped ovary consisting of a pair of ovarian sacs was located in the cephalothorax on the dorsal side of the stomach. Based on the microscopic observations, stage of oogenesis were classified into four phases: 1) Differentiating phase Including oogonia and Primary oocyte, 2) previtellogenic phase including previtellogenic oocyte, 3) vitellogenic phase including primary vitellogenic oocyte, secondary vitellogenic oocyte and tertiary vitellogenic oocyte and, 4) mature phase including mature egg. During the oogenesis in crab *Sodhiana iranica*, the size of oocyte increased, the wall thickness reduced and its yolk content increased.

Keywords: Freshwater crab, Oogenesis, *Sodhiana iranica*.