



Rearing trials of *Halla parthenopeia* under laboratory conditions (Polychaeta: Oenonidae)

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Abst ract

A small scale attempt to maintain and rear the worm *Halla parthenopeia* in laboratory conditions was conducted. Five bivalve species (*Paphia undulata*, *Cerastoderma glaucum*, *Venerupis pullastra*, *Ruditapes decussata*, and *Gafrarium pectinatum*) were used to investigate preferred food item, feeding rate and growth of the worm. *Halla parthenopeia* are capable of using different types of clams, although they grew better with *Paphia undulata* and *C. glaucum* as food items. The highest average daily predation rates in case of *P. undulata* as a prey were 1.73, 2.13 and 2.57 individuals per predator per day for small, medium and large groups of *H. parthenopeia*, respectively. The daily predation rate on *C. glaucum* was low with an average: 0.50, 0.63 and 0.73 individuals per predator per day for the small, medium and large worm groups, respectively. The daily growth rate of *H. parthenopeia* increased when it was fed *P. undulata* (average: 0.083, 0.071 and 0.038 g/day for small, medium and large worm groups respectively), compared to an average of 0.044, 0.034 and 0.020 g/ day for small, medium and large worm groups, respectively, when worms were fed with *C. glaucum*. The biochemical composition of three different sizes of the worm was also determined. Protein was the highest biochemical constituent with an average of 51% of the dry weight, followed by lipids with an average of 25.88% of the dry weight; meanwhile carbohydrate was present at an average of 20.72%. Our findings indicate that growth of *H. parthenopeia* can be improved when fed with a suitable prey item and suggest that it is feasible to successfully culture this protein-rich worm in captivity.



Reproductive biology of the highly commercial polychaetes in the Suez Canal

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Abst ract

The reproductive biology of the commercial seabait polychaete species *Perinereis nuntia brevicirris*, *Lumbrineris funchalensis* and *Halla parthenopeia* was investigated from samples obtained from the Suez Canal, Egypt, to determine sex-ratio, reproductive maturity stages, spawning season, and fecundity. Samples were collected monthly from January 2002 to February 2003. The results of sex-ratio indicated that males of the three studied worms outnumbered females through the whole study period. Based upon histological features of the coelomic contents, four maturity stages were described in females of *P. nuntia brevicirris*, three stages were described for females of *L. funchalensis* and three stages for females of *H. parthenopeia*. The spawning season of *P. nuntia brevicirris* was found to take place during spring and *L. funchalensis* does not have a defined breeding season, while *H. parthenopeia* has two reproductive periods, one in May and the second in November and lasted to January. Fecundity was estimated by counting the number of oocytes per each female—it showed that *P. nuntia brevicirris* is more fecund (mean $\bar{x} \pm SD$ 208.358 $\pm$ 2080 oocyte/female) than *L. funchalensis* and *H. parthenopeia* (mean $\bar{x} \pm SD$ 2660 $\pm$ 654 and 142,068 $\pm$ 2005 oocyte/female respectively). This study is the first to document aspects of the reproductive biology of the highly commercial polychaetes in the Suez Canal and adds to our knowledge for understanding their reproductive patterns and strategies.