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# Feeding behavior of *anadara antiquata* (linnaeus, 1758) under hatchery production in Zanzibar

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**Feeding behavior of *Anadara antiquata* (Linnaeus, 1758) under hatchery production in Zanzibar**

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**Master of Science (Marine Sciences)**

**University of Dar es Salaam, College of Natural and Applied Sciences, 2013**

Hatchery-based farming of *Anadara antiquata* is a promising approach for increasing food production and restoring wild populations. Basic knowledge of feeding behavior of *A. antiquata* is necessary for successful seed production in the hatchery. An experimental trial was conducted to evaluate the effect of three temperatures (28°, 30°, and 33° C) and two salinities (33 and 40) on filtration rates (FR) using two algae species, *Chaetoceros neogracile* (*Chaet B*) and *Thalassiosira weissflogii* (*TW*), and two shellfish size classes (40mm and 55mm shell length). The indirect method was used to measure FR. The cockles for this study were collected from the intertidal zone of Fumba village during low spring tide. All experiments were performed at the Institute of Marine Sciences (IMS), Zanzibar. The result indicated that *Anadara antiquata* showed variable FR in all combinations, but its best filtering response was found at temperatures around 33° C, and salinity around 33. The highest FR value recorded was 54.5 ml/min/individual. Temperature, salinity, and size of individual significantly affected the FR of *A. antiquata* independently of each other. The FR was higher for *TW* compared to *Chaet B*, although the difference was not significant. The combination of temperature-salinity and temperature-size of the *A. antiquata* also significantly affected the FR. The FR was higher in the combination of 33° C, salinity 33 using algae species *TW* for bigger individuals. This finding could help with broodstock maintenance and conditioning in the hatchery, and would be useful to calculate the daily feed ration.