

CORRELATIONS OF MULTILOCUS HETEROZYGOSITY TO GROWTH RATE, OXYGEN CONSUMPTION, AND MORPHOLOGICAL CHARACTERISTICS IN *CERASTODERMA EDULE*

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A single population of 3-year *Cerastoderma edule* was used to investigate correlations between multilocus heterozygosity (MLH) and I) fitness-related traits, *i.e.*, growth and oxygen consumption rates; II) morphological traits, *i.e.*, shell weight, flesh weight, shell length, shell height, shell width, and ligament length; III) sex and the presence of parasites. MLH was scored from the six enzymes determined by seven polymorphic loci. MLH did not correlate to growth rate, which was bias-corrected from the difference in recruitment time. Despite this result, significant correlations were detected between MLH and shell length, shell width and shell height. This indicated the potential bias of the difference in recruitment time to the growth/MLH correlation. A weak but significant correlation between MLH and oxygen consumption rate was also detected, but not consistent through all sample sets. There was no difference between male and female in the mentioned aspects. *Gymnophallus* sp infected six percents of the specimens. These infected cockles consumed more oxygen than the uninfected ones. A summary of various studies concerning MLH/ fitness-related correlations is presented. I suggest that this kind of correlation is very weak. It is inconsistent (requires a certain condition) and should not be considered as a major selective component.