GMR Genetics and Molecular Research
Online Journal
ISSN:1676-5680

Research Note

Single primer-based DNA amplification as a suitable and low-cost tool for assessing genetic diversity in mangrove crabs

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Genet. Mol. Res. 10 (4): 4084-4092 (2011)
Received May 20, 2011
Accepted October 5, 2011
Published November 9, 2011
DOI http://dx.doi.org/10.4238/2011.November.9.2

ABSTRACT. We used single primer-based DNA markers to assess genetic variability of the mangrove crab, *Ucides cordatus*, collected from four different localities from Pará to Santa Catarina States in Brazil (almost 5000 km distant). Five primers were chosen based on the consistency of the amplified bands and the polymorphism of each locus. A total of 78 loci were amplified in 76 samples; high polymorphism rates were detected in the entire sample (80.8%) and within each locality (73.5-79.5%). Analysis of molecular variance demonstrates significant differences between localities ($P < 0.001$); however, the Φ_{ST} value (0.078) indicates a low level of genetic differentiation, which suggests that *U. cordatus* larvae can spread over large distances. The variation was distributed among the samples, and most of it was attributed to differences among individuals within localities. Cluster analysis, based on the Jaccard similarity coefficient, and the Mantel test gave similar

results to the analysis of molecular variance data. Despite the low level of population structuring, these markers could be used for studying *U. cordatus* diversity, due to the high level of polymorphism.

Key words: Crab; Population genetics; Diversity; DNA amplification; Molecular markers

