

Genetic diversity of banana prawns *Fenneropenaeus merguensis* in Malaysian waters using microsatellite markers

ABSTRACT

Aim:To characterize the wild populations of the prawns genetically by using microsatellite markers. **Methodology:** Prawns from 11 selected populations were sampled from wild and cultured areas of Peninsular and East Malaysia. Out of thirty primers designed for the species including cross amplified primers, only 22 were successfully polymorphic markers. Throughout populations, observed heterozygosity values was lower than the expected which indicates a probability of a deficit in the heterozygosity. Low heterozygosity suggest that mixture and intermingling probably might have occurred among the population of banana prawns in Malaysia. **Results:** The F values significantly showed genetic differentiation among the populations . The UPGMA dendrogram grouped the populations according to their geographical origins. Endau Rompin and Sedili were clustered together, while Sarawak and Kelantan populations were sub clustered by themselves. As expected, Kuala Selangor, the cultured population, however, was clustered in a group by itself. **Interpretation:** The results of this study would help the farmers in selecting noninbred and to identify genetically distant or close populations for improvement of brood stock management procedure.

Keyword: *Fenneropenaeus merguensis*; Heterozygosity; Microsatellite markers; Population studies