Genetic diversity and population structure of Terapon jarbua (Forskål, 1775) (Teleostei, Terapontidae) in Malaysian waters

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Abstract

A background study is important for the conservation and stock management of a species. Terapon jarbua is a coastal Indo-Pacific species, sourced for human consumption. This study examined 134 samples from the central west and east coasts of Peninsular (West) Malaysia and East Malaysia. A 1446-bp concatenated dataset of mtDNA COI and Cyt b sequences was used in this study and 83 haplotypes were identified, of which 79 are unique haplotypes and four are shared haplotypes. Populations of T. jarbua in Malaysia are genetically heterogenous as shown by the high level of haplotype diversity ranging from 0.9167–0.9952, low nucleotide diversity ranging from 0.0288–0.3434, and high F ST values (within population genetic variation). Population genetic structuring is not distinct as shown by the shared haplotypes between geographic populations and mixtures of haplotypes from different populations within the same genetic cluster.
dispersal power of *T. jarbua* through its high mobility and rapid adaptability to a newly colonized area. Further studies can be conducted using larger sample size and temporal replicates, samples collected from other areas of geographical distributions, and sequence data from other mtDNA genes or information based on nuclear DNA. This research contributed useful data for future large scale biogeographical and taxonomic studies of this species.

**Animal ethics**

The fish species that was employed in this study is not categorized as endangered species under the IUCN list and all the samples were collected from fish markets and landing sites.

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**References**


