Molecular Barcoding Reveals Possible Existence of Sympatric Species of *Emerita emeritus* in South Coast of Cilacap Central Java

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Abstract	Cilacap Regency resides in the southern part of Central Java. It faces the Indian Ocean and has a quite long coastline with sandy beaches as the favorable habitats for mole crabs. Careful examinations on previously identified as Emerita emeritus samples from Cilacap, the mole crabs showed slight morphological differences to Emerita emeritus Linnaeus. We assume that our samples are sympatric species of E. emeritus complex rather than E. emeritus Boyko. A length of 560 bp fragments of the cytochrome oxidase 1 was sequenced. Homology test resulted in 83 - 86% sequences similarity to E. emeritus sequence available in GenBank (KR047035). Our samples also had high genetic distances (0.152 0.155) to the sequence of KR047035. The phylogenetic tree showed a clear separation between our samples and reference sequence (Emerita emeritus KR047035) with a quite long branch. Those all three kinds of data prove that our Emerita samples are most likely not belong to previously identified Emerita emeritus Boyko although it shows only slight morphological differences. These results indicate that possible cryptic species of Emerita emeritus or E. emeritus complex inhabits sandy beaches in Cilacap coast. It has been described that cryptic species are common in aquatic organisms. However, we need more samples to examine and strengthen our finding.
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