

Morphological and Molecular Analysis of Selected Fast-Growing Blue Swimming Crab (*Portunus pelagicus*) in South of Sulawesi

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Abstract : Blue Swimming crab (*Portunus pelagicus*) is an important commercial species throughout the subtropical waters and as such constitutes part of the fisheries resources. Data are lacking on the morphological variations of selected fast-growing crabs reared in a pond. This study aimed to analyze the morphological and molecular character of a selected fast-growing crab reared in ponds in South of Sulawesi. The crab seeds were obtained from local fish-trap and hatchery. A study on the growth was carried out in the population of crabs. The dimensions analyzed were carapace width (CW) measured after 3 months of grow out. Morphological character states were examined based on the pattern of spots on the carapace. Molecular analysis was performed using RAPD (Random Amplified Polymorphic DNA). Genetic distance was analysed using TFPGA (Tools for Population Genetic Analyses) version 1.3. The results showed that there were variations in the growth of crabs. These crabs clustered morphologically into three quite distinct groups. The crab with white spots irregularly spread over its carapace was the largest size while the crab with large white spots scattered over the carapace was the smaller size (3%). The crab with small white spots scattered over the carapace was the smallest size found in this study. Molecular analysis showed that there are morphologically and genetically different between groups of crabs. Genetic distances among crabs ranged from 0.1527 to 0.5856. Thus, this study provides information the use of white spots pattern over carapace as indicators to identify the type of blue swimming crabs.

Keywords : crab, portunus pelagicus, morphology, RAPD, Carapace

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