

Identification of *Penaeus merguensis* (De Man, 1888) stocks in the western coastal waters of Sri Lanka by morphometric analysis.

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ABSTRACT

Penaeus merguensis (De man, 1888) is an important constituent of shrimp catches of Sri Lanka. It is mainly recorded in the shrimp catches from the trawl nets, trammel nets, cast nets, and traps in the seas off Sri Lanka. This study was carried out to investigate the morphometric relationships with the view of identification of its stocks in the marine waters along the West Coast of Sri Lanka. The study is based on 7 morphometric characters such as carapace length, abdominal segment length, telson length, inner uropod length, inner uropod width, 5th periapod length and total length. The samples consisting more than 100 individuals representing both sexes were collected from commercial trawl catches of four shrimp landing sites of the west coast of Sri Lanka namely, Negombo, Kalpitiya, Chilaw and Hendala from March to June 2004. Each morphometric character was regressed against carapace length and multiple comparisons of slopes were carried out. Morphometric analysis indicated poor separation between females of four sites compared to males. Males of four sites show significant differences with respect to few characters such as last abdominal segment length and Inner uropod length. Results indicated that the existence of separate stocks of *Penaeus merguensis* in the western coastal waters of Sri Lanka seems to be unlikely.