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Morphometric analysis of the mud crab Hexapanopeus paulensis Rathbun, 1930 (Decapoda, Xanthoidea) from the southeastern coast of Brazil

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Abstract

In this study, we estimated the size at onset of maturity (carapace width, CW50) and analyzed the relative growth of some body parts and the heterochely of the mud crab Hexapanopeus paulensis. A total of 800 crabs were collected, from January 1998 to December 1999, on the southeastern coast of Brazil. Each specimen was sexed and measured. CW50 was estimated to be 6.7 mm in males and 6.3 mm in females. Carapace length growth was negatively allometric in both sexes. Cheliped length and height was positively allometric for both males and females. Gonopod growth was isometric (b = 1) and negatively allometric (b < 1) in both juvenile and adult males, respectively. Abdomen relative growth was positively allometric (b > 1) for both juvenile and adult females. In males and females, the right cheliped was larger and higher than the left cheliped. Such heterochely may be related to the feeding habits of H. paulensis. Most xanthoid crabs, including the studied species, feed upon mollusks with dextral shells, which require complicated handling. In this sense, the heterochely in H. paulensis might facilitate the food manipulation.

Keywords

Hexapanopeus paulensis, Panopeidae, sexual maturity, sexual secondary characters, bycatch, Ubatuba, southeastern, Brazil.