Abstract

The influence of tidal and diel changes on the exchange of Petrolisthes armatus planktonic larvae was studied at the Catuama inlet, which represents an intermediate system of marine and estuarine environments in the Northeast Brazil. To characterize the larval abundance and vertical distribution, samplings were carried out in August 2001 at neap tide and 3 stations, with 3 hours interval over 24 hours. Samples were taken at three or two depths at each station, with a plankton pump coupled to a 300 µm mesh size net. Petrolisthes armatus zoea I and II showed a mean of 26.3 ± 83.6 and 12 ± 38.8 ind m⁻³, respectively. During flood tides, the larvae were more concentrated in the midwater and surface, which avoided the transport to internal regions. In contrast, during ebb tides when the larvae were distributed in the three layers, the higher concentrations were found in the bottom, which avoided a major exportation. The diel dynamic of the larval fluxes was characterized by vertical migration behavior associated to the tidal regime, which suggested that the development of this decapod apparently occurs in the inner shelf (instead of the outer shelf) off this peculiar ecosystem.

Keywords
Northeast Brazil, decapod larvae, Petrolisthes armatus, estuarine inlet, transport, zooplankton.