ABSTRACT

Englbrecht, N. and M.J. Roberts (2005)

Do embayments along the Eastern Cape coast offer sanctuaries for chokka squid (*Loligo vulgaris reynaudii*) paralarvae

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It has been shown that currents along the exposed western region of the chokka squid spawning grounds (Tsitsikamma coast) are mainly eastward and potentially transport larvae into the eastern Agulhas Bank where they can be drawn off the shelf and lost into the Agulhas Current retroflection region. Kromme Bay (St Francis Bay) in contrast is also commonly utilized by chokka squid for spawning, but appears to offer a more protected environment conducive to the retention of paralarvae. This was investigated using current meter data and thermistor array data collected in the middle of the bay. Analtsis show a general southwestward flow in the embayment for the surface and bottom layers during the summer months which changes to a distinct north-eastward flow in winter. Thermistor data show that in summer, cold bottom water moves into the embayment resulting in intense stratification of the water column. The south-westward flow in Kromme Bay is opposite to the Tsitsikamma current. Small craft ADCP surveys and surface tracked drifters undertaken more recently showed that a westward flow sweeps through the entire bay when the greater coastal flow is westward but that an anticlockwise circulation prevails when the outside flow is eastward. The latter does not commonly occur which implies that the embayments along the eastern region of the chokka squid spawning grounds do not offer a sanctuary for squid paralarvae.