

ABSTRACT

Dorfler, K., Roberts, M. J. and D. Baird (1999).

The influence of benthic turbidity and surface waves on squid catches.

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The inshore and offshore regions of the Eastern Cape are well documented as spawning grounds for chokka squid (*Loligo vulgaris raynaudii*). The environments of these regions are highly contrasting and one of the more important parameters responsible for this difference is turbidity. The inshore regions at times experience the presence of a benthic nepheloid layer – which it is believed – inhibits spawning inshore. Squid catches depend on successful inshore spawning. A study to determine the characteristics and dynamics of these turbidity events has been initiated and hopes to strengthen postulations on squid spawning strategies along the South African coast.. The study comprises of 1) ship surveys over the Eastern Agulhas Bank , 2) time series CTD transects in St Francis Bay and 3) continuous monitoring of turbidity and wave height in St Francis Bay. Two south coast surveys extending from Cape Agulhas to Port Alfred were preformed on board the FRS Africana in April 1992 and April 1999. Turbidity events were located specifically inshore in both surveys, with maximum turbidity occurring in the Cape Recife and Cape St Francis bays as well as in the Cape St Blaize region. These areas are prominent spawning grounds. Offshore shelf regions displayed clear waters. A more extensive and specific study is presently underway in the Kromme Bay (Cape St Francis). Time series data along two set transects, one situated within the bay and the second west of Seal Point, was obtained using a portable CTD with a turbidity sensor attached. Date to date shows that turbidity ids generally higher within Kromme Bay. Previously obtained continuous monitoring data shows that turbidity occurs not only during an upwelling event, but also in isothermal conditions, and that wave activity is a definite cause. This continuous study has been resumed within Kromme Bay.