

ABSTRACT

Lamont, T., Barlow, R.G., Roberts, M.J. and C.P. Whittle (2005)

Investigating the circulation of the Delagoa Bight using surface drifters and satellite sea surface temperature and chlorophyll – *a* concentration maps

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During July to September 2004, a coelacanth training and research expedition was conducted along the east coast of Africa. A key oceanographic objective was to perform synoptic surveys on the shallow shelf centered on 34°E, 26°S, known as the Delagoa Bight. This region is recognized as a location for the frequent formation of lee eddies. Oceanographic parameters such as temperature, salinity, dissolved oxygen, fluorescence, and nutrient were measured, and primary and secondary production work was incorporated. In order to track surface currents in Delagoa Bight, satellite drogues were released along the 26°S line from close inshore to about 36°E. Drogue tracks were overlaid on sea surface temperature (SST) and Chlorophyll – *a* concentration (Chl-*a*) satellite maps to facilitate the interpretation of surface flow patterns depicted by the drogue tracks. One of the drogue tracks illustrates a persistent cyclonic feature within the Delagoa Bight. This drogue was trapped within the lee eddy for about a month before it followed the Agulhas Current southwards to the retroflexion, returning to the South Indian Ocean with the Agulhas Return Current. The overlay of the drogue track data onto the satellite maps lends greater credibility to flow interpretations commonly inferred from SST and Chl-*a* maps.