

ABSTRACT

Boyd, A.J., Roberts, M.J., Verheye, H. and Taunton-Clark, J. (1993)

**The effect of currents on biota off South Africa's south and west coast:
Selected case studies.**

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This paper looks at selected data sets where the influence of currents on the distribution of various species of marine biota is likely to have been significant. Currents were measured from ships using ADCP (Acoustic Doppler Current Profiler) and/or inferred from satellite images and hydrography. Anchovy egg distributions for November Spawner Biomass surveys and the January 1992 Agulhas Boundary Processes cruise provided the broadest data base, particularly regarding the convergent current system on the western Agulhas Bank and the losses (exports) of non-motile biota from the shelf system. On the other hand zooplankton data collected on the same cruises complemented these pictures by providing insights into drift on the central Agulhas Bank, and the utilization of currents by copepods. The likely influence of the Agulhas Current on the spawning success of squid in St Francis Bay is also examined, as is the relationship between the southward migration of anchovy recruits from St Helena Bay and the coastal flow patterns west of Cape Columbine. The unifying theme is the matching of cause and effect in the above examples.