



Monsoonal forcing results in seasonal upwelling with very high surface productivity and development of an intense oxygen minimum layer (OMZ) in the northwestern Arabian Sea. Recent international research, much of it described in past and future special issues of Deep-Sea Research Part II, is driven by a realisation of the possible significance of high biogeochemical fluxes between the ocean and atmosphere in this region with affects on global climate, both present and past. However, the importance of the benthic system remains poorly understood. Conditions of permanent hypoxia combined with high organic input where the OMZ impinges on the continental margin in particular generate highly unusual, and possibly biogeochemically important, processes, compared to other deep-sea areas.

This volume contributes towards a better understanding of the benthic biological structure and dynamics of the deep Arabian Sea in relation to data on the geochemical and physical setting. Many of the papers focus on a transect through the OMZ on the Oman margin down to the adjacent abyssal basin. These papers describe a programme of benthic and sediment sampling, bottom photography and measurements of the physical and chemical properties of the sediment and water column undertaken by an international group of scientists during cruise 211 of R.R.S. Discovery in October-November 1994. These contributions are disparate, reflecting the varied interests of the participants, and range from studies of sediment geochemistry, geotechnics and bioturbation to benthic community structure, morphology, lifestyle and evolution in relation to the OMZ and the high organic input. The volume as a whole will demonstrate the extreme conditions under which deep-sea organisms exist in the Arabian Sea, and their unusual biochemical evolutionary, physiological and genetic responses to these conditions.

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