

Transit voyage ss2011_t03

The Distribution of Pelagic and Benthic Fauna Along Australia's Southern Seaboard

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Contribution to Australia's national benefit

Determination of the amount, distribution and types of plastics present in Australian waters (Reisser) will allow us to estimate the potential impact of plastic refuse on the Australian marine environment.

The inventory of benthic macro fauna obtained, combined with the ongoing analysis of their stable isotope signatures and that of surface particulate organic matter, contributes to the first National Research Priority (Goal 6) by providing a baseline for future investigations/research and by detailing the trophic status/interactions in understudied marine habitats.

The swath mapping undertaken, is key to the ongoing and generally serendipitous mapping of the Australian marine habitat (see Kloser et al., 2006 for details¹).

The deployment of the CPR (McLeod) provides essential information about the distribution of zooplankton around Australia.

As a result of this voyage:

1. We have a better understanding of The distribution of buoyant plastics in Australia's offshore waters, the isotopic signatures (C¹³/N¹⁵) of both surface and sediment POM and the nature of the seafloor (at the 500 m isobath) along Australia's southern seaboard.
2. We have found That there is a considerable amount of buoyant plastics present in offshore waters and identified some interesting deep water reefs off Esperance.

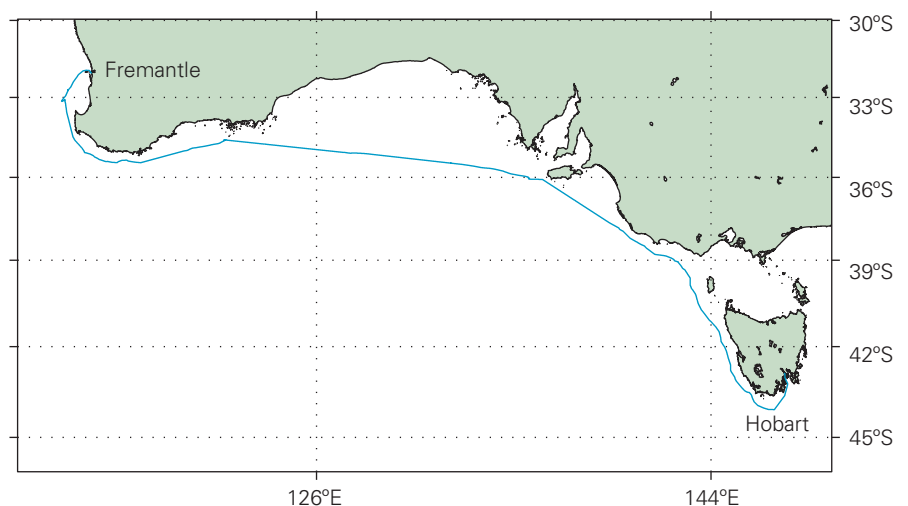
3. We have mapped The 500 m isobath along the whole continental shelf of the southern seaboard of Australia, from Hobart to Fremantle.
4. We have commenced a program of examining the trophic relationships (links) between surface POM and benthic productivity (Holmes). Quantifying the distribution, amount and types of buoyant plastic debris in Australian waters (Reisser).

Itinerary

Departed Hobart, 18:00
Friday 12 August 2011

Arrived Fremantle, 05:00
Tuesday 23 August 2011

> Voyage track ss2011_t01



¹ Kloser, R.J., Williams, A., and Butler, A.J., 2006, Exploratory surveys of seabed habitats in Australia's deep ocean using remote sensing – needs and realities, in Todd, B.J., and Greene, H.G., eds., Mapping the Seafloor for Habitat Characterization: Geological Association of Canada, Special Paper 47, p. 93-110.